



Fluid Handling Sourcebook



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and Ismatec®
peristaltic
pumps**

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Customer Approved

Fluid Handling

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Why **MASTERflex**® Peristaltic Pumps?



- 1 Easy**
- Quick installation
 - Low maintenance
 - Easy tubing changeover
- 2 Durable**
- Trusted for over 45 years
 - Broad chemical compatibility
- 3 Versatile**
- From research to process
 - Handles just about any fluid
 - Multichannel capabilities

- 4 Customizable**
- Configurable systems
 - Many tubing options
 - Easy scale-up
- 5 Accurate**
- Flow ranges from 0.0006 mL/min to 42 L/min
 - Rigorous design and testing standards
 - Tubing is custom manufactured to precise tolerances

Selecting a **Masterflex**® Pump: As Easy As

Application Requirements

- What is my required flow rate?
- What chemical am I pumping?
- Do conditions such as viscosity or back pressure play an important role in my decision?

Base a Pump Series on Your Flow Rate

- Use the table below to find the pump series that best fits your flow rate needs

Complete Your System

- L/S and I/P pump series are divided into three components—pump head, tubing, and drive
- Select the three components from the same series or choose a complete preconfigured system

| Masterflex pump series | Features | Flow range | Speed | | Remote control capability | Multichannel capabilities | Page(s) |
|------------------------|--|------------------------|-------|----------|---------------------------|---------------------------|---------|
| | | | Fixed | Variable | | | |
| C/L ® | Compact, low-flow pump that easily fits on benchtop or mounts within a panel | 0.002 to 43 mL/min | | ✓ | Yes | Yes | 3 |
| L/S ® | High-accuracy drives for precise flow control and dispensing | 0.00001 to 3400 mL/min | ✓ | ✓ | Yes | Yes | 4-23 |
| I/P ® | Powerful systems that provide better protection from possible hazards such as dust and water | 0.0006 to 26 LPM | ✓ | ✓ | Yes | Yes | 24-31 |
| B/T ® | Highest flow rates—ideal for large batch fluid transfer with excellent hazard protection | 0.71 to 42 LPM | ✓ | ✓ | Yes | Yes | 32-34 |

Custom **OEM** Pump Systems

When an off-the-shelf pump just won't cut it, you need a solution custom-built for your requirements

With more than 100 years of combined experience, our design engineers will partner with you to create the exact pump you need. Contact our Application Specialists to get started!

C/L® Variable-Speed Compact Pumps

Pump in even the tightest spaces!

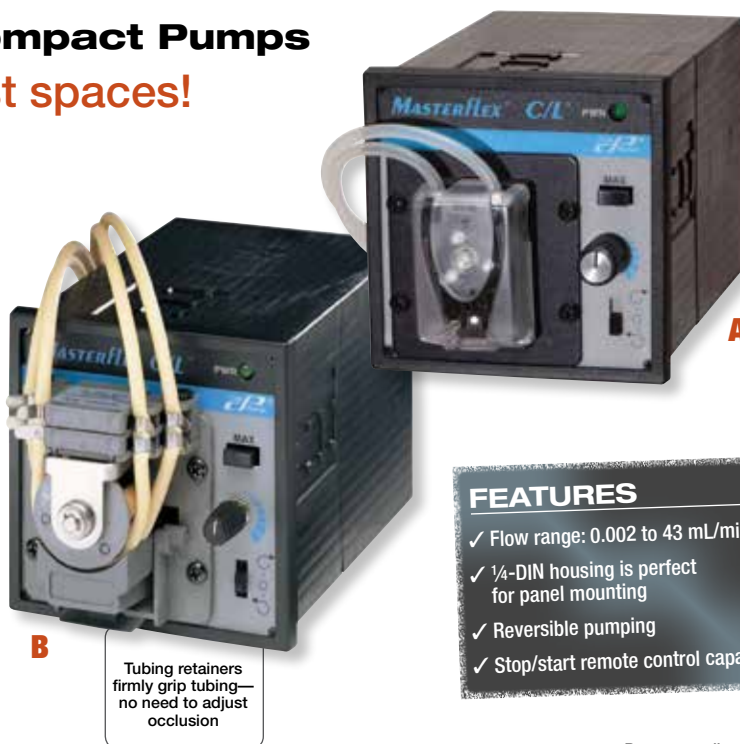
- Pump fluids in either direction—easily switchable reversing motor
- Stop/start remotely via contact closure
- MAX button quickly primes or purges tubing
- Both pumps include 5 ft (1.5 m) of 0.89-mm ID Tygon® E-LFL tubing.

A. C/L Single-Channel Pumps

- Quick and easy tubing changes—open cover and release occlusion bed in one motion
- Pump from 0.002 to 43 mL/min
- Pump head made from polyphenylene sulfide, acetal, and copolyester; stainless steel rollers

B. C/L Dual-Channel Pumps

- Pump from 0.002 to 12.3 mL/min per channel, depending on drive and tubing
- Pump head made of polyphenylene sulfide and stainless steel; rollers made of acetal co-polymer



FEATURES

- ✓ Flow range: 0.002 to 43 mL/min
- ✓ ¼-DIN housing is perfect for panel mounting
- ✓ Reversible pumping
- ✓ Stop/start remote control capabilities

Power supplies are:



| rpm | Speed control (repeatability) | Number of channels | Number of rollers | Reversible motor | IP rating | Dimensions—¼ DIN (L x W x H) | Power | | Catalog number | Price |
|--|-------------------------------|--------------------|-------------------|------------------|-----------|---|------------------|-------------------|-----------------------------|-------|
| | | | | | | | VAC, Hz | Amps | | |
| A. C/L single-channel compact pumps | | | | | | | | | | |
| 1.7 to 10 | ±5% | 1 | 4 | Yes | IP22 | 7" x 3¾" x 3½" (17.8 x 9.5 x 8.9 cm) | 90 to 260, 50/60 | 110 mA at 115 VAC | PG-77122-04 | |
| | | | | | | | 12 VDC† | — | PG-77122-06 | |
| 13 to 80 | | | | | | | 90 to 260, 50/60 | 175 mA at 115 VAC | PG-77122-14 | |
| | | | | | | | 12 VDC† | — | PG-77122-16 | |
| 50 to 300 | | | | | | | 90 to 260, 50/60 | 400 mA at 115 VAC | PG-77122-24 | |
| | | | | | | | 12 VDC† | — | PG-77122-26 | |
| B. C/L dual-channel compact pumps | | | | | | | | | | |
| 1 to 6 | ±5% | 2 | 6 | Yes | IP22 | 7½" x 3¾" x 3½" (19 x 9.5 x 8.9 cm) | 90 to 260, 50/60 | 110 mA at 115 VAC | PG-77120-32 | |
| | | | | | | | 12 VDC† | — | PG-77120-52 | |
| 10 to 60 | | | | | | | 90 to 260, 50/60 | 175 mA at 115 VAC | PG-77120-42 | |
| | | | | | | | 12 VDC† | — | PG-77120-62 | |

†Power supply not included with 12 VDC models.

[PG-77120-03](#) Brackets for panel mounting. Set of 2

[PG-77200-07](#) Replacement power supply, 100 to 240 VAC, for pump 77122-24

[PG-77120-11](#) Replacement power supply, 100 to 240 VAC, for pumps 77122-04, -14; 77120-32 and -42










Microbore Pump Tubing Ordering Information

| Tube ID (mm) | Tygon® E-Lab | Silicone (platinum-cured) | Silicone (peroxide-cured) | PharMed® BPT | Tygon E-LFL (long flex life) | Viton® | Puri-Flex™ | C-Flex® | Solvent/hydrocarbon |
|---------------|-----------------------------|-----------------------------|-----------------------------|-----------------------------|------------------------------|-----------------------------|-----------------------------|-----------------------------|-----------------------------|
| 0.19 | PG-06460-10 | — | — | — | — | — | PG-96418-10 | PG-95718-10 | PG-95712-10 |
| 0.25 | PG-06460-12 | — | — | PG-95809-12 | — | — | PG-96418-12 | PG-95718-12 | PG-95712-12 |
| 0.51 | PG-06460-18 | PG-95590-18 | — | PG-95809-18 | PG-06449-18 | — | PG-96418-18 | PG-95718-18 | PG-95712-18 |
| 0.89 | PG-06460-26 | PG-95590-26 | PG-07625-26 | PG-95809-26 | PG-06449-26 | PG-97632-26 | PG-96418-26 | PG-95718-26 | PG-95712-26 |
| 1.14 | PG-06460-30 | PG-95590-30 | PG-07625-30 | PG-95809-30 | PG-06449-30 | PG-97632-30 | PG-96418-30 | PG-95718-30 | PG-95712-30 |
| 1.42 | PG-06460-34 | PG-95590-34 | PG-07625-34 | PG-95809-34 | PG-06449-34 | PG-97632-34 | PG-96418-34 | PG-95718-34 | PG-95712-34 |
| 2.06 | PG-06460-42 | PG-95590-42 | PG-07625-42 | PG-95809-42 | PG-06449-42 | PG-97632-42 | PG-96418-42 | PG-95718-42 | PG-95712-42 |
| 2.79 | PG-06460-48 | PG-95590-48 | PG-07625-48 | PG-95809-48 | PG-06449-48 | PG-97632-48 | PG-96418-48 | PG-95718-48 | PG-95712-48 |
| Quantity/pack | 30.4 m (100 ft) | 15.2 m (50 ft) | 15.2 m (50 ft) | 30.4 m (100 ft) | 30.4 m (100 ft) | 15.2 m (50 ft) | 15.2 m (50 ft) | 15.2 m (50 ft) | 15.2 m (50 ft) |
| Price/pk | | | | | | | | | |

Flow Rates in mL/min

| rpm | Microbore pump tubing size (ID) | | | | | | | | |
|-----------|---------------------------------|-----------------|----------------|---------------|---------------|--------------|--------------|--------------|--|
| | 0.19 mm | 0.25 mm | 0.51 mm | 0.89 mm | 1.14 mm | 1.42 mm | 2.06 mm | 2.79 mm | |
| 1 to 6 | 0.002 to 0.013 | 0.0028 to 0.017 | 0.012 to 0.07 | 0.036 to 0.20 | 0.057 to 0.34 | 0.08 to 0.49 | 0.15 to 0.88 | 0.22 to 1.3 | |
| 1.7 to 10 | 0.002 to 0.013 | 0.004 to 0.022 | 0.015 to 0.087 | 0.041 to 0.25 | 0.064 to 0.39 | 0.09 to 0.57 | 0.18 to 1.05 | 0.28 to 1.65 | |
| 10 to 60 | 0.02 to 0.13 | 0.03 to 0.18 | 0.12 to 0.70 | 0.36 to 2.1 | 0.55 to 3.3 | 0.8 to 4.9 | 1.5 to 8.9 | 2.1 to 12.3 | |
| 13 to 80 | 0.017 to 0.10 | 0.03 to 0.18 | 0.12 to 0.70 | 0.33 to 2.0 | 0.52 to 3.1 | 0.75 to 4.5 | 1.4 to 8.5 | 1.8 to 11.0 | |
| 50 to 300 | 0.06 to 0.38 | 0.11 to 0.67 | 0.43 to 2.6 | 1.2 to 7.4 | 1.9 to 11.5 | 2.8 to 17.0 | 5.3 to 32 | 7.2 to 43 | |

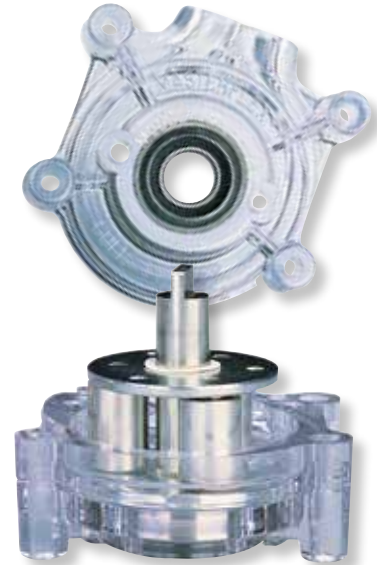
L/S® Pump Heads Selection Guide

| Description | Flow rates (mL/min) | Multichannel or stackable | Special features | Page number |
|---|--------------------------------------|------------------------------|---|--|
| Standard | | | | |
|  | 0.001 to 2900 mL/min | Yes, stack up to 4 heads | <ul style="list-style-type: none"> ✓ Highest precision, yet economical ✓ Accurate, repeatable fluid transfer ✓ Each head dedicated to one tubing size | 4 |
| Easy-Load® II | | | | |
|  | 0.001 to 2900 mL/min | Yes, stack up to 4 heads | <ul style="list-style-type: none"> ✓ Easy tubing changes ✓ Automatic retention ✓ Adjustable occlusion | 5 |
| Easy-Load® 3 | | | | |
|  | 0.001 to 2900 mL/min | Yes, stack up to 4 heads | <ul style="list-style-type: none"> ✓ Easy tubing changes ✓ Automatic retention ✓ Same side tubing entry/exit ✓ Install and stack without tools or hardware | 6 |
| Easy-Load® | | | | |
|  | 0.001 to 2300 mL/min | Yes, stack up to 4 heads | <ul style="list-style-type: none"> ✓ Load or change multiple tubing sizes quickly and easily ✓ Low maintenance ✓ Models available for ATEX Zone 2 applications | 6 |
| High-Performance | | | | |
|  | 0.006 to 3400 mL/min | No | <ul style="list-style-type: none"> ✓ Highest flow rate of any L/S pump head ✓ Up to 150 psi with L/S HP (High-Pressure) pump tubing ✓ ATEX Zone 2 applications model available | 7 |
| Multichannel | | | | |
|  | 0.00005 to 2300 mL/min (per channel) | Yes, stack up to 32 channels | <ul style="list-style-type: none"> ✓ Synchronous flow from up to 32 channels without cartridges ✓ Two-stop tubing sets are easy to load with no adjustment needed | 8 |
| PTFE-Tubing | | | | |
|  | 0.001 to 65 mL/min | No | <ul style="list-style-type: none"> ✓ Uses rigid PTFE-tubing ✓ Pressures up to 100 psi ✓ Transfer aggressive solvents ✓ High purity | 9 |
| Multichannel Cartridge | | | | |
|  | 0.00001 to 1700 mL/min (per channel) | Yes, 1 to 12 channels | <ul style="list-style-type: none"> ✓ Synchronous flow rates ✓ Run up to 12 channels on a single pump head ✓ Easy tubing changes ✓ Holds tubing securely in place | ColeParmer.com |
| PTFE-Diaphragm | | | | |
|  | 10.0 to 800 mL/min | No | <ul style="list-style-type: none"> ✓ PTFE and borosilicate glass are the only wetted parts ✓ Up to 100 psi (6.9 bar) ✓ Accurate metering ✓ Handles aggressive fluids | 9 |

L/S® Standard Pump Heads

Ideal for accurate and repeatable fluid transfer applications

- Available with PC housing with CRS or SS rotor, or PPS housing with SS rotor
- PC housing allows you to see pump in operation; PPS housing and SS rotors have excellent chemical resistance



FEATURES

- ✓ Best overall pump head performance
- ✓ Designed and optimized for one tubing size
- ✓ Stack up to four heads

A. Standard Pump Heads for Precision Tubing

- Flow rates: 0.001 to 2300 mL/min
- Perfect for common fluid transfer applications
- Select a pump head for one of the following precision tubing sizes: L/S 13, L/S 14, L/S 16, L/S 17, L/S 18

B. Standard Pump Heads for High-Performance Precision Tubing

- Flow rates: 0.033 to 2900 mL/min
- Accepts our high-performance precision tubing—choose these pump heads for better pressure generation, suction lift, viscous fluid transfer, and longer tubing life
- Select a pump head for one of the following high-performance tubing sizes: L/S 15, L/S 24, L/S 35, L/S 36



| Pump tubing size | mL per rev | Flow rates in mL/min | | Catalog number** | | |
|--|------------|----------------------|--------------|-----------------------------|-----------------------------|-----------------------------|
| | | 0.02 to 100 rpm | 6 to 600 rpm | PC housing | | PPS housing |
| | | | | CRS rotor | SS rotor | SS rotor |
| A. Standard pump heads for precision pump tubing | | | | | | |
| L/S 13 | 0.06 | 0.001 to 6 | 0.36 to 36 | PG-07013-20 | PG-07013-21 | PG-07013-52 |
| L/S 14 | 0.21 | 0.004 to 21 | 1.3 to 130 | PG-07014-20 | PG-07014-21 | PG-07014-52 |
| L/S 16 | 0.8 | 0.016 to 80 | 4.8 to 480 | PG-07016-20 | PG-07016-21 | PG-07016-52 |
| L/S 17 | 2.8 | 0.059 to 280 | 17 to 1700 | PG-07017-20 | PG-07017-21 | PG-07017-52 |
| L/S 18 | 3.8 | 0.077 to 380 | 23 to 2300 | PG-07018-20 | PG-07018-21 | PG-07018-52 |
| Price | | | | | | |
| B. Standard pump heads for high-performance precision pump tubing | | | | | | |
| L/S 15 | 1.7 | 0.033 to 170 | 10 to 1000 | PG-07015-20 | PG-07015-21 | PG-07015-52 |
| L/S 24 | 2.8 | 0.057 to 280 | 17 to 1700 | PG-07024-20 | PG-07024-21 | PG-07024-52 |
| L/S 35 | 3.8 | 0.077 to 380 | 23 to 2300 | PG-07035-20 | PG-07035-21 | — |
| Price | | | | | | |
| L/S 36 | 4.8 | 0.096 to 480 | 29 to 2900 | PG-07036-30 | PG-07036-31 | — |
| Price | | | | | | |

*PC = polycarbonate PPS = polyphenylene sulfide
CRS = cold-rolled steel SS = stainless steel

**Maximum system pressure = L/S 13, L/S 14, L/S 15, L/S 16, L/S 24: 40 psi (2.7 bar); L/S 17, L/S 36: 20 psi (1.4 bar); L/S 18: 15 psi (1.0 bar); L/S 35: 35 psi (2.4 bar)

Mounting Hardware

Stack up to four L/S Standard pump heads on one drive (see drive specifications for recommended number of heads). Hardware is stainless steel.

| Heads to be mounted | Catalog number | Price/st |
|---|-----------------------------|----------|
| Hardware for Standard Heads L/S 13 to 35 | | |
| One | PG-07013-04 | |
| Two | PG-07013-05 | |
| Three | PG-07013-08 | |
| Four | PG-07013-09 | |
| Hardware for Standard Heads L/S 36 | | |
| One | PG-07036-01 | |
| Two | PG-07036-02 | |

L/S® Easy-Load® II Pump Heads

No more slipping of tubing—automatic retention holds it securely in place

- Reduced pulsation and improved pressure performance and mechanical stability with standard four-roller rotor
- Pump heads made of durable PPS housing
- Choice of rotors—economical CRS rotors or SS rotors for better chemical resistance and durability
- Don't let pressure get to you. Choose models with adjustable occlusion—tighten for higher pressure, loosen for longer tubing life

A. Pump Heads for Precision Pump Tubing (not shown)

- Wide flow range for wider range of applications from 0.06 to 2300 mL/min

B. Pump Heads for High-Performance Precision Pump Tubing

- Pump viscous liquids and get better pressure generation and suction lift

C. Two-Channel Pump Heads for Precision Pump Tubing

- No need to stack heads, get two channels in one head!



C



B

FEATURES

- ✓ Load tubing easily
- ✓ Accepts several tubing sizes for a wide flow range
- ✓ Stack up to four heads

What's included: single-channel mounting hardware and a 15" (38-cm) length of silicone pump tubing. Pump head comes ready to mount to drive. Hardware for mounting two or more heads is available below.

ISO9001:2008
CERTIFIED SUPPLIER



| Pump tubing size accepted | mL per rev | Flow rates in mL/min | | Maximum system pressure† psi (bar) | Catalog number‡ | | | | | |
|--|------------|----------------------|--------------|------------------------------------|-----------------|----------|----------------------|--|-------------|--|
| | | 1 to 100 rpm | 6 to 600 rpm | | Fixed occlusion | | Adjustable occlusion | | | |
| | | | | | CRS rotor | SS rotor | SS rotor | | | |
| Cat. no. | Price | Cat. no. | Price | Cat. no. | Price | Cat. no. | Price | | | |
| A. Easy-Load II pump heads for precision pump tubing (not shown) | | | | | | | | | | |
| L/S 13 | 0.06 | 0.06 to 6 | 0.36 to 36 | 40 (2.7) | PG-77200-50 | | PG-77200-60 | | PG-77201-60 | |
| L/S 14 | 0.21 | 0.21 to 21 | 1.3 to 130 | 40 (2.7) | | | | | | |
| L/S 16 | 0.8 | 0.8 to 80 | 4.8 to 480 | 40 (2.7) | | | | | | |
| L/S 25 | 1.7 | 1.7 to 170 | 10 to 1000 | 35 (2.4) | | | | | | |
| L/S 17 | 2.8 | 2.8 to 280 | 17 to 1700 | 20 (1.4) | | | | | | |
| L/S 18 | 3.8 | 3.8 to 380 | 23 to 2300 | 15 (1.0) | | | | | | |
| B. Easy-Load II pump heads for high-performance precision pump tubing | | | | | | | | | | |
| L/S 15 | 1.7 | 1.7 to 170 | 10 to 1000 | 40 (2.7) | PG-77200-52 | | PG-77200-62 | | PG-77201-62 | |
| L/S 24 | 2.8 | 2.8 to 280 | 17 to 1700 | 40 (2.7) | | | | | | |
| L/S 35 | 3.8 | 3.8 to 380 | 23 to 2300 | 35 (2.4) | | | | | | |
| L/S 36 | 4.8 | 4.8 to 480 | 29 to 2900 | 20 (1.4) | | | | | | |
| C. Two-channel Easy-Load II pump heads for precision pump tubing | | | | | | | | | | |
| L/S 13 | 0.06 | 0.06 to 6 | 0.36 to 36 | 40 (2.7) | PG-77202-50 | | PG-77202-60 | | — | |
| L/S 14 | 0.21 | 0.21 to 21 | 1.3 to 130 | 40 (2.7) | | | | | | |
| L/S 16 | 0.8 | 0.8 to 80 | 4.8 to 480 | 40 (2.7) | | | | | | |
| L/S 25 | 1.7 | 1.7 to 170 | 10 to 1000 | 35 (2.4) | | | | | | |

†Actual performance varies depending on pump tubing formulation—values shown are for firm pump tubing.

‡CRS = cold-rolled steel SS = stainless steel

Mounting Hardware for Easy-Load II Heads

Mount up to four L/S Easy-Load II pump heads on a single drive; see individual drive specifications for maximum number of heads to be mounted. Mounting hardware is stainless steel.

| Heads to be mounted | Catalog number | Price/st |
|---------------------|----------------|----------|
| One | PG-77200-01 | |
| Two | PG-77200-02 | |
| Three | PG-77200-03 | |
| Four | PG-77200-04 | |

Application Solution



Challenge: A printing press manufacturer was looking for a set of eight pumps to integrate into their new digital printing press model. Each pump would dispense a different color of ink during print runs, and the pumps needed to be kept separate to adjust the ink on demand. The press design required flexibility with placement of actual pump and its control. Because of the solvents used with the ink, chemical compatibility was of prime importance.

Solution: The L/S Precision Variable-Speed Modular Pump System 77913-12 (see page 16) suited the printing press design perfectly. Because of the modular construction, the pump itself could be integrated into the press while the controller could be mounted separately and remain easily accessible for last-minute adjustment of ink flow rate. The manufacturer opted for the Easy-Load II pump head 77200-62 for quick tubing changes, so that the press would experience minimal downtime for maintenance. The printer identified Tygon® Chemical tubing as best suited for the solvents used in their inks.

L/S® Easy-Load® 3 Pump Heads

No tools or hardware needed

- Mount and stack heads in seconds with twist-lock mounting feature
- CRS rotor is more economical while SS offers greater durability and chemical resistance
- Mount up to four pump heads without tools or hardware when using mounting plate
- Included mounting plate adapts Easy-Load 3 pump heads to L/S drives

FEATURES

- ✓ Same side tubing entry/exit for space-limited applications
- ✓ Automatic tubing retention
- ✓ Stack up to four heads



ISO9001:2008
CERTIFIED SUPPLIER

| Pump tubing sizes accepted | mL per rev | Flow rates in mL/min | | Maximum system pressure† psi (bar) | Catalog number‡ | |
|--|------------|----------------------|--------------|------------------------------------|-----------------|-------------|
| | | 1 to 100 rpm | 6 to 600 rpm | | CRS rotor | SS rotor |
| Easy-Load 3 pump heads for precision pump tubing | | | | | | |
| L/S 13 | 0.06 | 0.06 to 6 | 0.36 to 36 | 40 (2.7) | PG-77800-50 | PG-77800-60 |
| L/S 14 | 0.22 | 0.22 to 22 | 1.3 to 130 | 40 (2.7) | | |
| L/S 16 | 0.8 | 0.8 to 80 | 4.8 to 480 | 40 (2.7) | | |
| L/S 25 | 1.7 | 1.7 to 170 | 10 to 1000 | 35 (2.4) | | |
| L/S 17 | 2.8 | 2.8 to 280 | 17 to 1700 | 20 (1.4) | | |
| L/S 18 | 3.8 | 3.8 to 380 | 23 to 2300 | 15 (1.0) | | |
| Easy-Load 3 pump heads for high-performance precision pump tubing | | | | | | |
| L/S 15 | 1.7 | 1.7 to 170 | 10 to 1000 | 30 (2.0) | PG-77800-52 | PG-77800-62 |
| L/S 24 | 2.8 | 2.8 to 280 | 17 to 1700 | 30 (2.0) | | |
| L/S 35 | 3.8 | 3.8 to 380 | 23 to 2300 | 25 (1.7) | | |
| L/S 36 | 4.8 | 4.8 to 480 | 29 to 2900 | 20 (1.4) | | |
| Price | | | | | | |

†Actual performance varies depending on pump tubing formulation—values shown are for firm pump tubing.

‡CRS = cold-rolled steel SS = stainless steel

PG-77800-00 Replacement mounting kit, for mounting Easy-Load 3 pump head to Masterflex L/S pump drives. Includes mounting plate and four screws

Wait!

There's More at ColeParmer.com

Find all the product specs you need!

L/S® Easy-Load® Pump Heads

Save time with fast tubing changes and reduced maintenance

- No need to remove head to change tubing
- PPS housing offers improved chemical resistance; SS rotor offers increased durability and chemical resistance
- Get four separate pumping channels by mounting up to four heads on one drive
- ATEX Zone 2 approved models rated to EEx II 3 G c II C T6
- Ready to use—include single-channel mounting hardware and 15" (38 cm) of silicone tubing

FEATURES

- ✓ Fixed occlusion averaged for several tubing sizes
- ✓ Stack up to four heads
- ✓ ATEX Zone 2 rated models available



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ATEX
Zone 2
07516-40, -42

| Pump tubing sizes accepted | mL per rev | Flow rates in mL/min | | Maximum system pressure psi (bar) | Catalog number‡ | | | |
|--|------------|----------------------|--------------|-----------------------------------|-------------------|-------------|-------------------|---------------------------|
| | | 1 to 100 rpm | 6 to 600 rpm | | White PPS housing | | Black PPS housing | ATEX-approved PPS housing |
| | | | | | CRS rotor | SS rotor | SS rotor | SS rotor |
| Easy-Load pump heads for precision pump tubing | | | | | | | | |
| L/S 13 | 0.06 | 0.06 to 6 | 0.36 to 36 | 40 (2.7) | PG-07516-00 | PG-07516-10 | PG-07518-60 | PG-07516-40 |
| L/S 14 | 0.21 | 0.21 to 21 | 1.3 to 130 | 40 (2.7) | | | | |
| L/S 16 | 0.8 | 0.8 to 80 | 4.8 to 480 | 40 (2.7) | | | | |
| L/S 25 | 1.7 | 1.7 to 170 | 10 to 1000 | 35 (2.4) | | | | |
| L/S 17 | 2.8 | 2.8 to 280 | 17 to 1700 | 20 (1.4) | | | | |
| L/S 18 | 3.8 | 3.8 to 380 | 23 to 2300 | 15 (1.0) | | | | |
| Easy-Load pump heads for high-performance precision pump tubing | | | | | | | | |
| L/S 15 | 1.7 | 1.7 to 170 | 10 to 1000 | 40 (2.7) | PG-07516-02 | PG-07516-12 | PG-07518-62 | PG-07516-42 |
| L/S 24 | 2.8 | 2.8 to 280 | 17 to 1700 | 40 (2.7) | | | | |
| Price | | | | | | | | |

†PSF = polysulfone PPS = polyphenylene sulfide CRS = cold-rolled steel SS = stainless steel

Mounting Hardware for Easy-Load Heads

Stack up to four L/S Easy-Load pump heads on one drive. Order mounting hardware based on number of mounted pump heads. Hardware is stainless steel.

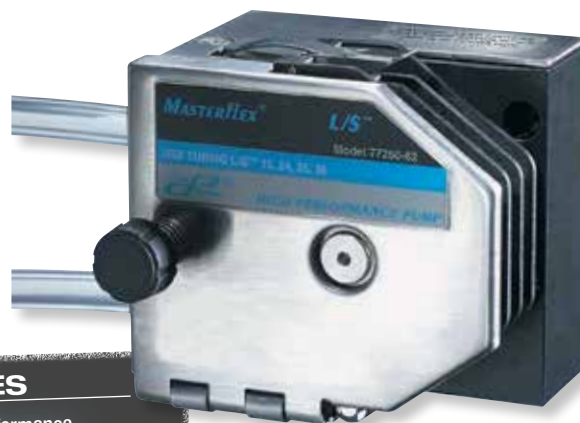
| Heads to be mounted | Catalog number | Price/st |
|---------------------|----------------|----------|
| One | PG-07013-04 | |
| Two | PG-07013-05 | |
| Three | PG-07013-08 | |
| Four | PG-07013-09 | |

L/S® High-Performance Pump Heads

Highest flow rate and pressure generation of any L/S pump head

- Offers better suction lift, viscous fluid transfer, and long tubing life—at pressures up to 150 psi (10.2 bar)
- Mount pump head upright or on its side—design allows tubing to enter/exit the same side of the pump head
- Rollers, bearings, rotor plates, and rotor shaft are made of stainless steel (SS); occlusion bed is made from polyphenylene sulfide (PPS) for excellent chemical resistance
- Compatible with all L/S drives listed in this catalog that accept two or more pump heads
- Accepts high-performance precision pump tubing sizes: L/S 15, L/S 24, L/S 35, L/S 36, and our high-pressure pump tubing: L/S 14HP, L/S 15HP, L/S 16HP and L/S 24HP
- Tubing enters/exits the same side of pump head for easy connection to tubing inlet and outlet
- ATEX Zone 2 approved model 77250-82; rated to EEx II 3 G c II C T6

What's included: mounting hardware and a 15" (38-cm) length of L/S 35 pump tubing.



FEATURES

- ✓ Load high-performance precision tubing easily
- ✓ Pressures up to 150 psi with L/S HP tubing
- ✓ Not stackable
- ✓ ATEX Zone 2 rated models available

ISO9001:2008
CERTIFIED SUPPLIER



ATEX
Zone 2
77250-82



| Pump tubing size | mL per rev | Flow rates in mL/min | | Maximum system pressure psi (bar) | High-Performance pump head | | ATEX-approved High-Performance pump head | |
|------------------|------------|----------------------|-----------------|-----------------------------------|----------------------------|-------|--|-------|
| | | 0.02 to 100 rpm | 6 to 600 rpm | | Catalog number | Price | Catalog number | Price |
| L/S 14HP† | 0.3 | 0.006 to 30 | Not recommended | 150 (10.2) | PG-77250-62 | | PG-77250-82 | |
| L/S 16HP† | 0.9 | 0.018 to 90 | Not recommended | 125 (8.5) | | | | |
| L/S 15HP† | 1.7 | 0.033 to 170 | Not recommended | 100 (6.8) | | | | |
| L/S 24HP† | 2.4 | 0.048 to 240 | Not recommended | 80 (5.5) | | | | |
| L/S 15 | 1.8 | 0.036 to 180 | 11 to 1100 | 40 (2.7) | | | | |
| L/S 24 | 3.0 | 0.060 to 300 | 18 to 1800 | 40 (2.7) | | | | |
| L/S 35 | 4.3 | 0.086 to 430 | 26 to 2600 | 35 (2.4) | | | | |
| L/S 36 | 5.8 | 0.116 to 580 | 34 to 3400 | 20 (1.4) | | | | |

†L/S 14HP, L/S 15HP, L/S 16HP and L/S 24HP pump tubing is for use only with the L/S High-Performance pump head mounted on any L/S 100 rpm drive capable of running two or more pump heads. **Note:** High-Performance pump heads are not stackable.

L/S High-Pressure Pump Tubing Ordering Information

| Pump tubing formulation | | L/S 14HP | L/S 16HP | L/S 15HP | L/S 24HP |
|-------------------------|---|--|--|--|--|
| PharMed® BPT |  | PG-05664-14 25 ft (7.6 m) | PG-05664-16 25 ft (7.6 m) | PG-05664-15 25 ft (7.6 m) | PG-05664-24 25 ft (7.6 m) |
| Norprene® |  | — | PG-06504-16 25 ft (7.6 m) | PG-06504-15 25 ft (7.6 m) | — |

Teky's Tips

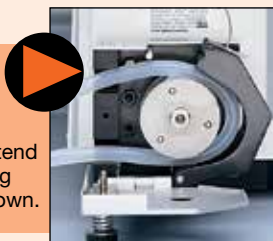


Loading the High-Performance Pump Head

Rotate tubing retainer knob counterclockwise to release retainer, then lift latch to open.



Insert tubing into occlusion bed so that the tubing ends extend out of the tubing entrance as shown.



Snap the latch closed. Pull the tubing snug around the rotor, close the cover, and rotate the tubing retainer knob clockwise to secure tubing.



Mounted upright

L/S® Multichannel Pump Heads

Get low-pulsation synchronous flow in multiple channels without cartridges

- Load the tubing, latch the occlusion bed, and run the pump—two-stop tubing gives you optimal tension with no adjustment
- Stackable two, four, or eight-channel heads for up to 24 channels
- Six roller heads deliver low-pulsation flow; three-roller heads offer higher flow rates
- Heads for L/S precision pump tubing accept two-stop tubing set sizes L/S 13, L/S 14, and L/S 16; heads for L/S high-performance precision pump tubing accept two-stop tubing set sizes L/S 15, L/S 24, and L/S 35
- Compatible with L/S drives that accept two or more pump heads; 1/10 hp min



FEATURES

- ✓ Stackable for up to 24 synchronous flow channels
- ✓ Models for L/S two-stop tubing sets available
- ✓ Durable stainless steel and anodized aluminum construction



Stack heads for even more channels!

What's included: mounting hardware and hex key tool.



| Number of channels | Number of rollers | Max channels with stacked heads† | | Catalog number | Price |
|--|-------------------|----------------------------------|---------------|-----------------------------|-------|
| | | 100 rpm drive | 600 rpm drive | | |
| A. L/S Multichannel pump heads for precision pump tubing, sizes L/S 13, L/S 14, L/S 16 | | | | | |
| 4 | 6 | 24 | 12 | PG-07535-04 | |
| 8 | | | | PG-07535-08 | |
| B. L/S Multichannel pump heads for high-performance precision pump tubing, sizes L/S 15, L/S 24, L/S 35 | | | | | |
| 2 | 3 | 12 | 6 | PG-07536-02 | |
| 4 | | | | PG-07536-04 | |

†Maximum channel capacity depends on drive torque capability and tubing formulation used.

L/S Two-Stop Precision Tubing Sets Ordering Information for 07535- and 07536-series pump heads

| Pump tubing formulation | L/S Precision pump tubing | L/S Precision pump tubing | | | L/S High-performance precision pump tubing | | |
|---|---------------------------|--|--|--|--|--|--|
| | | L/S 13 | L/S 14 | L/S 16 | L/S 15 | L/S 24 | L/S 35 |
| Tygon® E-LFL | | PG-06447-13 pk of 8 | PG-06447-14 pk of 8 | PG-06447-16 pk of 8 | PG-06447-15 pk of 4 | PG-06447-24 pk of 4 | PG-06447-35 pk of 4 |
| Silicone (platinum-cured) | | PG-06421-13 pk of 8 | PG-06421-14 pk of 8 | PG-06421-16 pk of 8 | PG-06421-15 pk of 4 | PG-06421-24 pk of 4 | PG-06421-35 pk of 4 |
| BioPharm Plus Silicone (platinum-cured) | | PG-96116-13 pk of 8 | PG-96116-14 pk of 8 | PG-96116-16 pk of 8 | PG-96116-15 pk of 4 | PG-96116-24 pk of 4 | PG-96116-35 pk of 4 |
| PharMed® BPT | | PG-96114-13 pk of 8 | PG-96114-14 pk of 8 | PG-96114-16 pk of 8 | PG-96114-15 pk of 4 | PG-96114-24 pk of 4 | PG-96114-35 pk of 4 |
| Chem-Durance® Bio | | PG-96117-13 pk of 8 | PG-96117-14 pk of 8 | PG-96117-16 pk of 8 | PG-96117-15 pk of 4 | PG-96117-24 pk of 4 | PG-96117-35 pk of 4 |
| Viton® | | PG-96428-13 pk of 8 | PG-96428-14 pk of 8 | PG-96428-16 pk of 8 | PG-96428-15 pk of 4 | PG-96428-24 pk of 4 | PG-96428-35 pk of 4 |

Flow Rates per Channel in mL/min with L/S Two-Stop Precision Pump Tubing Sets above

| Drive rpm | Precision pump tubing | | | High-performance precision pump tubing | | |
|-----------|-----------------------|------------|------------|--|------------|------------|
| | L/S 13 | L/S 14 | L/S 16 | L/S 15 | L/S 24 | L/S 35 |
| 1 to 100 | 0.045 to 4.5 | 0.16 to 16 | 0.47 to 47 | 1.6 to 160 | 2.8 to 280 | 3.8 to 380 |
| 6 to 600 | 0.27 to 27 | 0.96 to 96 | 2.8 to 280 | 10 to 1000 | 17 to 1700 | 23 to 2300 |

Application Solution



Challenge: A pharmaceutical manufacturer needed to dispense volumes of 300 mL in 15 seconds or less repeating three times per minute; and 20 mL in 2 seconds or less repeating 20 times per minute. The desired accuracy target for both applications was ±1.5%. The efficiency of simultaneously pumping multiple channels was critical.

Solution: The manufacturer now uses a Masterflex L/S digital drive with an L/S four-channel pump head 07536-04. Size L/S 15 two-stop silicone tubing (06421-15) met the smaller flow requirement; while size L/S 35 two-stop silicone tubing (06421-35) met the larger flow requirement. Careful calibration of the drive, and the synchronous multichannel flow capability of the pump head enabled the manufacturer to meet the accuracy target.

L/S® PTFE-Tubing Pump Head

Ideal for high-purity fluids and aggressive organic solvents

- Pump fluids at pressures up to 100 psi (6.9 bar)
- Use for applications including filtration, chemical injection, and high-purity sampling
- PTFE tubing is the only wetted part; anodized aluminum and acetal body; stainless steel rotor assembly
- Compatible with L/S drives that accept two or more pump heads (1/10 hp min); For best results, run at 1 to 300 rpm

FEATURES

- ✓ PTFE is the only wetted part—safely transfer aggressive organic solvents
- ✓ Adjustable occlusion for higher pressure or longer tubing life
- ✓ Use with rigid tubing for pressures up to 100 psi (6.9 bar)
- ✓ Not stackable



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| Flow rates (mL/min at 1 to 300 rpm) | | Maximum continuous pressure | Max suction lift | Avg tubing life (100 rpm, 0 psi) | Number of rollers | Catalog number | Price |
|-------------------------------------|----------------|-----------------------------|------------------|----------------------------------|-------------------|-----------------------------|-------|
| 4-mm OD tubing | 6-mm OD tubing | | | | | | |
| 0.06 to 17 | 0.25 to 65 | 100 psi (6.9 bar) | 8 ft (2.4 m) | 500 hours | Six | PG-77390-00 | |

PTFE-Tubing Sets include two 15" (38 cm) lengths and cannot be substituted with ordinary PTFE tubing.

[PG-77390-50](#) PTFE-tubing set. 2-mm ID, 4-mm OD. Set of 2

[PG-77390-60](#) PTFE-tubing set. 4-mm ID, 6-mm OD. Set of 2

Compression Fittings adapt tubing sets to your system.

For 4-mm OD PTFE-Tubing Sets

[PG-31321-61](#) Straight connector, 40 psi (2.8 bar) max

[PG-06605-53](#) PTFE extension tubing, 4-mm OD. Pack of 25 ft (7.6 m)

For 6-mm OD PTFE-Tubing Sets

[PG-31321-64](#) Straight connector, 135 psi (9.2 bar) max

[PG-06605-54](#) PTFE extension tubing, 6-mm OD. Pack of 25 ft (7.6 m)

L/S® PTFE-Diaphragm Pump Heads

Ideal for accurate chemical feed/metering and high-purity, high-pressure applications, or both

- Turns a L/S drive into a chemically inert diaphragm pump—PTFE material resists even the most aggressive chemicals
- High metering accuracy—maintain ±2% repeatability
- Self-priming—wet or dry
- Intermittent pressure capabilities: maintains consistent flow performance up to 100 psi (6.9 bar)
- Compatible with L/S drives that accept two or more pump heads; recommended operating speed range is 40 to 400 rpm

FEATURES

- ✓ Designed for demanding chemical compatibility and high-purity applications
- ✓ Maintain ±2% repeatability across varying system pressures and fluid viscosities
- ✓ Maintain a constant flow up to 75 or 100 psi



Check valve increases metering accuracy while maintaining pump prime.

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Specifications

Repeatability: ±2%

Max fluid temperature: 149°F (65°C)

Drive requirements: minimum 1/10 hp

Cracking pressure: <1 psi (68 mbar)

Wetted parts: PTFE diaphragm, body, valve seat, and spring; PTFE ball check in 07090-42, borosilicate glass ball check in 07090-62

| Flow rate at 40 to 400 rpm | | Max pressure, psi (bar) | | Metering pressure range | Max suction lift | | Max dead volume | Intake/discharge ports | Catalog number | Price |
|----------------------------|-------------|-------------------------|--------------|------------------------------|------------------|---------------|-----------------|------------------------|-----------------------------|-------|
| mL/min | GPH | Continuous | Intermittent | | Dry | Wet | | | | |
| 80 to 800 | 1.3 to 12.7 | 50 (3.4) | 75 (5.0) | 3 to 50 psi (0.2 to 3.4 bar) | 24" (61 cm) | 16 ft (4.9 m) | 16 mL | 1/4" NPT(M) | PG-07090-42 | |
| 10 to 100 | 0.16 to 1.6 | 75 (5.0) | 100 (6.9) | | 10" (25.4 cm) | 10 ft (3 m) | 2 mL | | | |

[PG-07090-43](#) Service kit for 07090-42; includes diaphragm, check valves, installation tool and instructions

[PG-07090-45](#) Check valve for 07090-42

[PG-07090-63](#) Service kit for 07090-62; includes diaphragm, check valves, installation tool and instructions














































































[PG-07090-65](#) Check valve for 07090-62

L/S® Precision Pump Tubing

Ensure optimal performance from your Masterflex pump

- Custom extruded to fit Masterflex pumps
- Engineered for long life in peristaltic pump applications

| Tubing size | L/S 13 | L/S 14 | L/S 16 | L/S 25 | L/S 17 | L/S 18 |
|---------------------------------------|-------------------|--------------------|-------------------|--------------------|--------------------|--------------------|
| Inner diameter | 0.8 mm (0.03") | 1.6 mm (0.06") | 3.1 mm (0.12") | 4.8 mm (0.19") | 6.4 mm (0.25") | 7.9 mm (0.31") |
| Hose barb size | 1.6 mm (1/16") | 1.6 mm (1/16") | 3.2 mm (1/8") | 4.8 mm (3/16") | 6.4 mm (1/4") | 9.5 mm (3/8") |
| Flow range (approximate) [†] | 0.06 to 36 mL/min | 0.21 to 130 mL/min | 0.8 to 480 mL/min | 1.7 to 1000 mL/min | 2.8 to 1700 mL/min | 3.8 to 2300 mL/min |

| Pump tubing formulation | Compatible pump head | L/S 13 | L/S 14 | L/S 16 | L/S 25 | L/S 17 | L/S 18 |
|---|--|--|---|---|---|---|---|
| Silicone (platinum-cured) |  |  |  |  |  |  |  |
| <ul style="list-style-type: none"> - Complies with USP Class V, EP, FDA, REACH, RoHS, ADCF - Low protein binding, fungus resistant, phthalate and latex-free - Accommodates a wide temperature range | <ul style="list-style-type: none"> ✓ Standard ✓ Easy-Load® ✓ Easy-Load II ✓ Easy-Load 3 ✓ Multi cartridge | 7.6 m (25 ft)/pk PG-96410-13 | 7.6 m (25 ft)/pk PG-96410-14 | 7.6 m (25 ft)/pk PG-96410-16 | 7.6 m (25 ft)/pk PG-96410-25 | 7.6 m (25 ft)/pk PG-96410-17 | 7.6 m (25 ft)/pk PG-96410-18 |
| Silicone (peroxide-cured) |  |  |  |  |  |  |  |
| <ul style="list-style-type: none"> - Complies with USP Class VI, EP, FDA, 3A, REACH, RoHS, ADCF - Greater physical compression capability - Economical, longer tubing life | <ul style="list-style-type: none"> ✓ Standard ✓ Easy-Load ✓ Easy-Load II ✓ Easy-Load 3 ✓ Multi cartridge | 7.6 m (25 ft)/pk PG-96400-13 | 7.6 m (25 ft)/pk PG-96400-14 | 7.6 m (25 ft)/pk PG-96400-16 | 7.6 m (25 ft)/pk PG-96400-25 | 7.6 m (25 ft)/pk PG-96400-17 | 7.6 m (25 ft)/pk PG-96400-18 |
| BioPharm Silicone (platinum-cured) |  |  |  |  |  |  |  |
| <ul style="list-style-type: none"> - Complies with USP Class VI, EP, FDA, 3A, REACH, RoHS, ADCF - Low absorption; excellent biocompatibility - Very low extractable; weather, ozone, corona, radiation resistant | <ul style="list-style-type: none"> ✓ Standard ✓ Easy-Load ✓ Easy-Load II ✓ Easy-Load 3 ✓ Multi cartridge | 7.6 m (25 ft)/pk PG-96420-13 | 7.6 m (25 ft)/pk PG-96420-14 | 7.6 m (25 ft)/pk PG-96420-16 | 7.6 m (25 ft)/pk PG-96420-25 | 7.6 m (25 ft)/pk PG-96420-17 | 7.6 m (25 ft)/pk PG-96420-18 |
| BioPharm Plus Silicone (platinum-cured) |  |  |  |  |  |  |  |
| <ul style="list-style-type: none"> - Complies with USP Class VI, EP, FDA, REACH, RoHS, ADCF - Ultra-smooth—minimizes particle entrapment - Very low extractable—ideal for lab, biotech, and pharmaceutical | <ul style="list-style-type: none"> ✓ Standard ✓ Easy-Load ✓ Easy-Load II ✓ Easy-Load 3 ✓ Multi cartridge | 7.6 m (25 ft)/pk PG-96440-13 | 7.6 m (25 ft)/pk PG-96440-14 | 7.6 m (25 ft)/pk PG-96440-16 | 7.6 m (25 ft)/pk PG-96440-25 | 7.6 m (25 ft)/pk PG-96440-17 | 7.6 m (25 ft)/pk PG-96440-18 |
| Puri-Flex™ |  |  |  |  |  |  |  |
| <ul style="list-style-type: none"> - Complies with USP Class VI, FDA, 3A, REACH, RoHS, ADCF - Heat sealable, weldable, and economical - Long pump life when compared to silicone or many other TPE tubings | <ul style="list-style-type: none"> ✓ Standard ✓ Easy-Load ✓ Easy-Load II ✓ Easy-Load 3 ✓ Multi cartridge | 7.6 m (25 ft)/pk PG-96419-13 | 7.6 m (25 ft)/pk PG-96419-14 | 7.6 m (25 ft)/pk PG-96419-16 | 7.6 m (25 ft)/pk PG-96419-25 | 7.6 m (25 ft)/pk PG-96419-17 | 7.6 m (25 ft)/pk PG-96419-18 |
| C-Flex® |  |  |  |  |  |  |  |
| <ul style="list-style-type: none"> - Complies with USP Class VI, EP, REACH, RoHS, ADCF - Heat sealable, weldable, economical - Better resistance to pH fluctuations | <ul style="list-style-type: none"> ✓ Standard ✓ Easy-Load ✓ Easy-Load II ✓ Easy-Load 3 ✓ Multi cartridge | 7.6 m (25 ft)/pk PG-06424-13 | 7.6 m (25 ft)/pk PG-06424-14 | 7.6 m (25 ft)/pk PG-06424-16 | 7.6 m (25 ft)/pk PG-06424-25 | 7.6 m (25 ft)/pk PG-06424-17 | 7.6 m (25 ft)/pk PG-06424-18 |
| C-Flex® ULTRA |  |  |  |  |  |  |  |
| <ul style="list-style-type: none"> - Complies with USP Class VI, EP, REACH, RoHS, ADCF - Longest life of any C-Flex formulation - Lowest spallation and reduced residue | <ul style="list-style-type: none"> ✓ Standard ✓ Easy-Load ✓ Easy-Load II ✓ Easy-Load 3 ✓ Multi cartridge | — | 7.6 m (25 ft)/pk PG-06434-14 | 7.6 m (25 ft)/pk PG-06434-16 | 7.6 m (25 ft)/pk PG-06434-25 | 7.6 m (25 ft)/pk PG-06434-17 | 7.6 m (25 ft)/pk PG-06434-18 |
| PharMed® BPT |  |  |  |  |  |  |  |
| <ul style="list-style-type: none"> - Complies with USP Class VI, EP, FDA, NSF, REACH, RoHS - >10,000 hours of tubing life; sealable, weldable - Ideal for tissue and cell culture work | <ul style="list-style-type: none"> ✓ Standard ✓ Easy-Load ✓ Easy-Load II ✓ Easy-Load 3 ✓ Multi cartridge | 7.6 m (25 ft)/pk PG-06508-13 | 7.6 m (25 ft)/pk PG-06508-14 | 7.6 m (25 ft)/pk PG-06508-16 | 7.6 m (25 ft)/pk PG-06508-25 | 7.6 m (25 ft)/pk PG-06508-17 | 7.6 m (25 ft)/pk PG-06508-18 |
| PharmaPure® |  |  |  |  |  |  |  |
| <ul style="list-style-type: none"> - Complies with USP Class VI, EP, FDA, REACH, RoHS - Nontoxic and nonhemolytic biocompatible - Long life even under pressure with VERY low spallation | <ul style="list-style-type: none"> ✓ Easy-Load ✓ Easy-Load II | 7.6 m (25 ft)/pk PG-06435-13 | 7.6 m (25 ft)/pk PG-06435-14 | 7.6 m (25 ft)/pk PG-06435-16 | 7.6 m (25 ft)/pk PG-06435-25 | 7.6 m (25 ft)/pk PG-06435-17 | 7.6 m (25 ft)/pk PG-06435-18 |
| GORE® STA-PURE® Series PCS |  |  |  |  |  |  |  |
| <ul style="list-style-type: none"> - Complies with USP Class VI - Long life—even under pressures up to 100 psi - Excellent flow stability | <ul style="list-style-type: none"> ✓ Standard ✓ Easy-Load ✓ Easy-Load II | — | 35.6 cm (14")/pk PG-96211-14 | 35.6 cm (14")/pk PG-96211-16 | 35.6 cm (14")/pk PG-96211-25 | 35.6 cm (14")/pk PG-96211-17 | 35.6 cm (14")/pk PG-96211-18 |
| GORE® STA-PURE® Series PFL |  |  |  |  |  |  |  |
| <ul style="list-style-type: none"> - Complies with USP Class VI - Long life—even under pressures up to 100 psi - Excellent biocompatibility and flow stability | <ul style="list-style-type: none"> ✓ Standard ✓ Easy-Load ✓ Easy-Load II | — | 35.6 cm (14")/pk PG-96212-24 | 35.6 cm (14")/pk PG-96212-35 | 35.6 cm (14")/pk PG-96212-36 | 35.6 cm (14")/pk PG-96212-17 | 35.6 cm (14")/pk PG-96212-18 |

[†]Determined under the following conditions: Using a 1 to 600 rpm drive; 0 psi at inlet, 0.5 psi at outlet; water temperature at 22°C (72°F).

Benchtop Tubing Cutter

Steel blade makes right-angle cuts in several sizes of Masterflex tubing:

C/L® 2.06 mm, 2.79 mm OD
L/S® sizes 13, 14, 15, 16, 17, 18, 24, 25, 35, 36
I/P® sizes 26, 73



[PG-06438-10](#) Benchtop tubing cutter











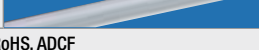
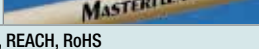



| Tubing size | L/S 13 | L/S 14 | L/S 16 | L/S 25 | L/S 17 | L/S 18 | |
|---|---|-----------------------------|-----------------------------|-----------------------------|-----------------------------|---|-----------------------------|
| Inner diameter | 0.8 mm (0.03") | 1.6 mm (0.06") | 3.1 mm (0.12") | 4.8 mm (0.19") | 6.4 mm (0.25") | 7.9 mm (0.31") | |
| Hose barb size | 1.6 mm (1/16") | 1.6 mm (1/16") | 3.2 mm (1/8") | 4.8 mm (3/16") | 6.4 mm (1/4") | 9.5 mm (3/8") | |
| Flow range (approximate) [†] | 0.06 to 36 mL/min | 0.21 to 130 mL/min | 0.8 to 480 mL/min | 1.7 to 1000 mL/min | 2.8 to 1700 mL/min | 3.8 to 2300 mL/min | |
| Pump tubing formulation | Compatible pump head | | | | | | |
| Chem-Durance® Bio | | | | | | | |
| <ul style="list-style-type: none"> Complies: USP Class VI, FDA, REACH, RoHS Excellent chemical compatibility and biocompatibility Excellent pump life and durability under pressure | <ul style="list-style-type: none"> ✓ Easy-Load® ✓ Easy-Load II | PG-06442-13 | PG-06442-14 | PG-06442-16 | PG-06442-25 | PG-06442-17 | PG-06442-18 |
| Solve-Flex® | | | | | | | |
| <ul style="list-style-type: none"> Complies with USP Class VI Excellent chemical resistance, especially with solvents Fluoropolymer-lined tubing with low spallation | <ul style="list-style-type: none"> ✓ Easy-Load ✓ Easy-Load II | — | — | — | — | 3.6 m (12 ft)/pk PG-96446-17 | — |
| Tygon® E-LFL | | | | | | | |
| <ul style="list-style-type: none"> Complies with USP Class VI, EP, FDA, EU Food, REACH, RoHS, ADCF Longest life of all Tygon formulations Broad chemical resistance | <ul style="list-style-type: none"> ✓ Standard ✓ Easy-Load ✓ Easy-Load II ✓ Easy-Load 3 ✓ Multi cartridge | PG-06440-13 | PG-06440-14 | PG-06440-16 | PG-06440-25 | PG-06440-17 | PG-06440-18 |
| Tygon E-Food (B-44-4X) | | | | | | | |
| <ul style="list-style-type: none"> Complies with FDA, EU Food, NSF, 3A, REACH, RoHS, ADCF Smooth inner surface unaffected by commercial sanitizers Nontoxic; will not affect taste or odor | <ul style="list-style-type: none"> ✓ Standard ✓ Easy-Load ✓ Easy-Load II ✓ Easy-Load 3 ✓ Multi cartridge | PG-06418-13 | PG-06418-14 | PG-06418-16 | PG-06418-25 | PG-06418-17 | PG-06418-18 |
| Tygon E-Lab (E-3603) | | | | | | | |
| <ul style="list-style-type: none"> Complies with USP Class VI, FDA, EU Food, NSF, REACH, RoHS, ADCF Ideal for general transfer applications Nonaging, nonoxidizing, low gas permeability | <ul style="list-style-type: none"> ✓ Standard ✓ Easy-Load ✓ Easy-Load II ✓ Easy-Load 3 ✓ Multi cartridge | PG-06509-13 | PG-06509-14 | PG-06509-16 | PG-06509-25 | PG-06509-17 | PG-06509-18 |
| Tygon Fuel & Lubricant (F-4040-A) | | | | | | | |
| <ul style="list-style-type: none"> Complies with REACH, RoHS, ADCF Formulated to transport hydrocarbons, petroleum products, and distillates Low gas permeability | <ul style="list-style-type: none"> ✓ Standard ✓ Easy-Load ✓ Easy-Load II ✓ Easy-Load 3 ✓ Multi cartridge | PG-06401-13 | PG-06401-14 | PG-06401-16 | PG-06401-25 | PG-06401-17 | PG-06401-18 |
| Tygon Chemical (2001) | | | | | | | |
| <ul style="list-style-type: none"> Complies with FDA 21 CFR 175.300, REACH, RoHS, ADCF Best chemical resistance of Tygon formulations Plasticizer-free with low gas permeability | <ul style="list-style-type: none"> ✓ Easy-Load ✓ Easy-Load II | PG-06475-13 | PG-06475-14 | PG-06475-16 | PG-06475-25 | PG-06475-17 | PG-06475-18 |
| Norprene® (A-60 G) | | | | | | | |
| <ul style="list-style-type: none"> Complies with NSF, REACH, RoHS Up to 10,000 hours of tubing life Excellent choice for pressure/vacuum applications | <ul style="list-style-type: none"> ✓ Standard ✓ Easy-Load ✓ Easy-Load II ✓ Easy-Load 3 ✓ Multi cartridge | PG-06404-13 | PG-06404-14 | PG-06404-16 | PG-06404-25 | PG-06404-17 | PG-06404-18 |
| Norprene Food (A 60 F) | | | | | | | |
| <ul style="list-style-type: none"> Complies with FDA, 3A, NSF, REACH, RoHS Ideal for high-temperature food applications Resists heat, ozone, acids, and alkalis | <ul style="list-style-type: none"> ✓ Standard ✓ Easy-Load ✓ Easy-Load II ✓ Easy-Load 3 ✓ Multi cartridge | PG-06402-13 | PG-06402-14 | PG-06402-16 | PG-06402-25 | PG-06402-17 | PG-06402-18 |
| Viton® | | | | | | | |
| <ul style="list-style-type: none"> Complies with FDA, ADCF Perfect for applications where FDA and chemical compatibility is needed Resists corrosives, solvents, and oils at elevated temperatures | <ul style="list-style-type: none"> ✓ Standard ✓ Easy-Load ✓ Easy-Load II ✓ Easy-Load 3 ✓ Multi cartridge | PG-96412-13 | PG-96412-14 | PG-96412-16 | PG-96412-25 | PG-96412-17 | PG-96412-18 |

[†]Determined under the following conditions: Using a 1 to 600 rpm drive; 0 psi at inlet, 0.5 psi at outlet; water temperature at 22°C (72°F).

L/S® High-Performance Precision Pump Tubing

Thicker wall compared to our Precision pump tubing

- Best choice for applications involving pressure, suction lift, viscous fluids, or long tubing life

| | | Tubing size | L/S 15 | L/S 24 | L/S 35 | L/S 36 |
|---|---|---|---|---|---|---|
| | | Inner diameter | 4.8 mm (0.19") | 6.4 mm (0.25") | 7.9 mm (0.31") | 9.7 mm (0.38") |
| | | Hose barb size | 4.8 mm (3/16") | 6.4 mm (1/4") | 9.5 mm (3/8") | 9.5 mm (3/8") |
| | | Flow range (approximate) [†] | 1.7 to 1000 mL/min (1.8 to 1100 mL/min) | 2.8 to 1700 mL/min (3.0 to 1800 mL/min) | 3.8 to 2300 mL/min (4.3 to 2600 mL/min) | 4.8 to 2900 mL/min (5.8 to 3400 mL/min) |
| Pump tubing formulation | Compatible pump head |  |  |  |  | |
| Silicone (platinum-cured) |  | <ul style="list-style-type: none"> ✓ Standard ✓ Easy-Load® ✓ Easy-Load II ✓ Easy-Load 3 ✓ High-Performance | 7.6 m (25 ft)/pk PG-96410-15 | 7.6 m (25 ft)/pk PG-96410-24 | 7.6 m (25 ft)/pk PG-96410-35 | 7.6 m (25 ft)/pk PG-96410-36 |
| <ul style="list-style-type: none"> – Complies with USP Class V, EP, FDA, REACH, RoHS, ADFC – Low protein binding, fungus resistant, phthalate and latex-free – Accommodates a wide temperature range | | | | | | |
| Silicone (peroxide-cured) |  | <ul style="list-style-type: none"> ✓ Standard ✓ Easy-Load ✓ Easy-Load II ✓ Easy-Load 3 ✓ High-Performance | 7.6 m (25 ft)/pk PG-96400-15 | 7.6 m (25 ft)/pk PG-96400-24 | 7.6 m (25 ft)/pk PG-96400-35 | 7.6 m (25 ft)/pk PG-96400-36 |
| <ul style="list-style-type: none"> – Complies with USP Class VI, EP, FDA, 3A, REACH, RoHS, ADFC – Greater physical compression capability – Economical, longer tubing life | | | | | | |
| BioPharm Silicone (platinum-cured) |  | <ul style="list-style-type: none"> ✓ Standard ✓ Easy-Load ✓ Easy-Load II ✓ Easy-Load 3 ✓ High-Performance | 7.6 m (25 ft)/pk PG-96420-15 | 7.6 m (25 ft)/pk PG-96420-24 | 7.6 m (25 ft)/pk PG-96420-35 | 7.6 m (25 ft)/pk PG-96420-36 |
| <ul style="list-style-type: none"> – Complies with USP Class VI, EP, FDA, 3A, REACH, RoHS, ADFC – Low absorption; excellent biocompatibility – Very low extractable; weather, ozone, corona, radiation resistant | | | | | | |
| BioPharm Plus Silicone (platinum-cured) |  | <ul style="list-style-type: none"> ✓ Standard ✓ Easy-Load ✓ Easy-Load II ✓ Easy-Load 3 ✓ High-Performance | 7.6 m (25 ft)/pk PG-96440-15 | 7.6 m (25 ft)/pk PG-96440-24 | 7.6 m (25 ft)/pk PG-96440-35 | 7.6 m (25 ft)/pk PG-96440-36 |
| <ul style="list-style-type: none"> – Complies with USP Class VI, EP, FDA, REACH, RoHS, ADFC – Ultra-smooth—minimizes particle entrapment – Very low extractable—ideal for lab, biotech, and pharmaceutical | | | | | | |
| Puri-Flex™ |  | <ul style="list-style-type: none"> ✓ Standard ✓ Easy-Load ✓ Easy-Load II ✓ Easy-Load 3 ✓ High-Performance | 7.6 m (25 ft)/pk PG-96419-15 | 7.6 m (25 ft)/pk PG-96419-24 | 7.6 m (25 ft)/pk PG-96419-35 | 7.6 m (25 ft)/pk PG-96419-36 |
| <ul style="list-style-type: none"> – Complies with USP Class VI, FDA, 3A, REACH, RoHS, ADFC – Heat sealable, weldable, and economical – Long pump life when compared to silicone or many other TPE tubings | | | | | | |
| C-Flex® |  | <ul style="list-style-type: none"> ✓ Standard ✓ Easy-Load ✓ Easy-Load II ✓ Easy-Load 3 ✓ High-Performance | 7.6 m (25 ft)/pk PG-06424-15 | 7.6 m (25 ft)/pk PG-06424-24 | 7.6 m (25 ft)/pk PG-06424-35 | 7.6 m (25 ft)/pk PG-06424-36 |
| <ul style="list-style-type: none"> – Complies with USP Class VI, EP, REACH, RoHS, ADFC – Heat sealable, weldable, economical – Better resistance to pH fluctuations | | | | | | |
| C-Flex® ULTRA |  | <ul style="list-style-type: none"> ✓ Standard ✓ Easy-Load ✓ Easy-Load II ✓ Easy-Load 3 ✓ High-Performance | 7.6 m (25 ft)/pk PG-06434-15 | 7.6 m (25 ft)/pk PG-06434-24 | 7.6 m (25 ft)/pk PG-06434-35 | 7.6 m (25 ft)/pk PG-06434-36 |
| <ul style="list-style-type: none"> – Complies with USP Class VI, EP, REACH, RoHS, ADFC – Longest life of any C-Flex formulation – Lowest spallation and reduced residue | | | | | | |
| PharMed® BPT |  | <ul style="list-style-type: none"> ✓ Standard ✓ Easy-Load ✓ Easy-Load II ✓ Easy-Load 3 ✓ High-Performance | 7.6 m (25 ft)/pk PG-06508-15 | 7.6 m (25 ft)/pk PG-06508-24 | 7.6 m (25 ft)/pk PG-06508-35 | 7.6 m (25 ft)/pk PG-06508-36 |
| <ul style="list-style-type: none"> – Complies with USP Class VI, EP, FDA, NSF, REACH, RoHS – >10,000 hours of tubing life; sealable, weldable – Ideal for tissue and cell culture work | | | | | | |
| PharmaPure® |  | <ul style="list-style-type: none"> ✓ Easy-Load ✓ Easy-Load II | 7.6 m (25 ft)/pk PG-06435-15 | 7.6 m (25 ft)/pk PG-06435-24 | — | — |
| <ul style="list-style-type: none"> – Complies with USP Class VI, EP, FDA, REACH, RoHS – Nontoxic and nonhemolytic biocompatible – Long life even under pressure with VERY low spallation | | | | | | |
| Gore® STA-PURE® Series PCS |  | <ul style="list-style-type: none"> ✓ Standard ✓ Easy-Load ✓ Easy-Load II | 35.6 cm (14")/pk PG-96211-15 | 35.6 cm (14")/pk PG-96211-24 | 35.6 cm (14")/pk PG-96211-35 | 35.6 cm (14")/pk PG-96211-36 |
| <ul style="list-style-type: none"> – Complies with USP Class VI – Long life—even under pressures up to 100 psi – Excellent flow stability | | | | | | |
| Gore® STA-PURE® Series PFL |  | <ul style="list-style-type: none"> ✓ Standard ✓ Easy-Load ✓ Easy-Load II | 35.6 cm (14")/pk PG-96212-15 | 35.6 cm (14")/pk PG-96212-24 | 35.6 cm (14")/pk PG-96212-35 | 35.6 cm (14")/pk PG-96212-36 |
| <ul style="list-style-type: none"> – Complies with USP Class VI – Long life—even under pressures up to 100 psi – Excellent biocompatibility and flow stability | | | | | | |

[†]Value in () obtained by High-Performance pump head. Flow range determined under the following conditions: Using a 1 to 600 rpm drive; 0 psi at inlet, 0.5 psi at outlet; water temperature at 22°C (72°F).

DON'T RISK IT!



Our chemical compatibility database provides important information on chemical resistance—check it out at ColeParmer.com/ChemChart

| Pump tubing formulation | | Compatible pump head | L/S 15 | L/S 24 | L/S 35 | L/S 36 |
|--|--|--|--|--|--|--|
| | | | | | | |
| | | | 4.8 mm (0.19") | 6.4 mm (0.25") | 7.9 mm (0.31") | 9.7 mm (0.38") |
| | | | 4.8 mm (3/16") | 6.4 mm (1/4") | 9.5 mm (3/8") | 9.5 mm (3/8") |
| | | | 1.7 to 1000 mL/min (1.8 to 1100 mL/min) | 2.8 to 1700 mL/min (3.0 to 1800 mL/min) | 3.8 to 2300 mL/min (4.3 to 2600 mL/min) | 4.8 to 2900 mL/min (5.8 to 3400 mL/min) |
| Chem-Durance® Bio | | ✓ Easy-Load® ✓ Easy-Load II | 15.2 m (50 ft)/pk PG-06442-15 | 15.2 m (50 ft)/pk PG-06442-24 | 15.2 m (50 ft)/pk PG-06442-35 | 15.2 m (50 ft)/pk PG-06442-36 |
| <ul style="list-style-type: none"> Complies: USP Class VI, FDA, REACH, RoHS Excellent chemical compatibility and biocompatibility Excellent pump life and durability under pressure | | | | | | |
| Solve-Flex® | | ✓ Easy-Load ✓ Easy-Load II | — | 3.6 m (12 ft)/pk PG-96446-24 | — | — |
| <ul style="list-style-type: none"> Complies with USP Class VI Excellent chemical resistance, especially with solvents Fluoropolymer-lined tubing with low spallation | | | | | | |
| Tygon® E-LFL | | ✓ Standard ✓ Easy-Load ✓ Easy-Load II ✓ Easy-Load 3 ✓ High-Performance | 7.6 m (25 ft)/pk PG-06440-15 | 7.6 m (25 ft)/pk PG-06440-24 | 7.6 m (25 ft)/pk PG-06440-35 | 7.6 m (25 ft)/pk PG-06440-36 |
| <ul style="list-style-type: none"> Complies with USP Class VI, EP, FDA, REACH, RoHS, ADF Longest life of all Tygon formulations Broad chemical resistance | | | | | | |
| Tygon E-Food (B-44-4X) | | ✓ Standard ✓ Easy-Load ✓ Easy-Load II ✓ Easy-Load 3 ✓ High-Performance | 15.2 m (50 ft)/pk PG-06418-15 | 15.2 m (50 ft)/pk PG-06418-24 | 15.2 m (50 ft)/pk PG-06418-35 | 15.2 m (50 ft)/pk PG-06418-36 |
| <ul style="list-style-type: none"> Complies with FDA, NSF, 3A, and EU Food regulations (10/2011) Smooth inner surface unaffected by common commercial sanitizers Nontoxic | | | | | | |
| Tygon E-Lab (E-3603) | | ✓ Standard ✓ Easy-Load ✓ Easy-Load II ✓ Easy-Load 3 ✓ High-Performance | 15.2 m (50 ft)/pk PG-06509-15 | 15.2 m (50 ft)/pk PG-06509-24 | 15.2 m (50 ft)/pk PG-06509-35 | 15.2 m (50 ft)/pk PG-06509-36 |
| <ul style="list-style-type: none"> Complies with USP Class V, EP, FDA, REACH, RoHS, ADF Ideal for general transfer applications Clear for easy monitoring; nontoxic, nonaging, nonoxidizing | | | | | | |
| Tygon Fuel & Lubricant (F-4040-A) | | ✓ Standard ✓ Easy-Load ✓ Easy-Load II ✓ Easy-Load 3 ✓ High-Performance | 15.2 m (50 ft)/pk PG-06401-15 | 15.2 m (50 ft)/pk PG-06401-24 | 15.2 m (50 ft)/pk PG-06401-35 | 15.2 m (50 ft)/pk PG-06401-36 |
| <ul style="list-style-type: none"> Complies with USP Class V, EP, FDA, REACH, RoHS, ADF For transferring hydrocarbons, gasoline, kerosene, and heating oil Very low gas permeability | | | | | | |
| Tygon Chemical (2001) | | ✓ Easy-Load ✓ Easy-Load II | 15.2 m (50 ft)/pk PG-06475-15 | 15.2 m (50 ft)/pk PG-06475-24 | — | — |
| <ul style="list-style-type: none"> Complies with USP Class V, EP, FDA, REACH, RoHS, ADF Best chemical resistance of Tygon formulations Plasticizer-free with low gas permeability | | | | | | |
| Norprene® (A-60 G) | | ✓ Standard ✓ Easy-Load ✓ Easy-Load II ✓ Easy-Load 3 ✓ High-Performance | 15.2 m (50 ft)/pk PG-06404-15 | 15.2 m (50 ft)/pk PG-06404-24 | 15.2 m (50 ft)/pk PG-06404-35 | 15.2 m (50 ft)/pk PG-06404-36 |
| <ul style="list-style-type: none"> Complies with NSF, REACH, RoHS Up to 10,000 hours of tubing life Excellent choice for pressure/vacuum applications | | | | | | |
| Norprene Food (A 60 F) | | ✓ Standard ✓ Easy-Load ✓ Easy-Load II ✓ Easy-Load 3 ✓ High-Performance | 15.2 m (50 ft)/pk PG-06402-15 | 15.2 m (50 ft)/pk PG-06402-24 | 15.2 m (50 ft)/pk PG-06402-35 | 15.2 m (50 ft)/pk PG-06402-36 |
| <ul style="list-style-type: none"> Complies with FDA, 3A, NSF, REACH, RoHS Ideal for high-temperature food applications Resists heat, ozone, acids, and alkalis | | | | | | |
| Viton® | | ✓ Standard ✓ Easy-Load ✓ Easy-Load II ✓ Easy-Load 3 ✓ High-Performance | 7.6 m (25 ft)/pk PG-96412-15 | 7.6 m (25 ft)/pk PG-96412-24 | 7.6 m (25 ft)/pk PG-96412-35 | 7.6 m (25 ft)/pk PG-96412-36 |
| <ul style="list-style-type: none"> Complies with FDA, ADF Perfect where FDA and chemical compatibility is needed Resists corrosives, solvents, and oils at elevated temperatures | | | | | | |

Pulse Dampener

Virtually eliminates pulsation in output flow. Five pairs of fittings and PTFE-pipe thread tape are included. Accepted tubing: all L/S® sizes, I/P® 26, nominal from 1/16" to 3/8" ID (1.6 to 9.5 mm ID).



Fittings included (tubing ID x NPT(M) thread): 1/16" x 1/8", 1/8" x 1/8", 3/16" x 1/8", 1/4" x 1/8", and 3/8" x 1/8". Dampener connections: 1/8" NPT(F). Dead volume: 190 mL. Max pressure: 60 psi (4.3 bar). Polyethylene body.

| Description | Catalog number | Price |
|----------------|-----------------------------|-------|
| Pulse dampener | PG-07596-20 | |

Custom-Engineered OEM Pumps Designed for You

With more than 100 years combined experience, our design engineers will partner with you to create the exact pump you need.

Product Development Process



Concept

Complete product specifications developed according to your needs



Design

Innovative solution created with our advanced systems



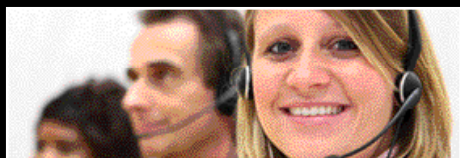
Engineering

Product prototype and fabrication for your approval



Testing

Tested under actual conditions; products comply with UL, ETL, and CE under ISO:9001 and ISO:13485 standards



Service

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L/S® Fixed-Speed Drives

Get consistent, repeatable flow rates

- Stackable drives are ideal for field or lab use
- Lighted power switch on front of drive lets you know that pump is running
- Accept five different pump head types: Standard, Easy-Load®, Easy-Load II, Easy-Load 3, and Cartridge



Drive 07540-01 shown with Easy-Load II pump head 77200-62

FEATURES

- ✓ Flow rates: 0.06 to 290 mL/min
- ✓ General, intermittent-duty fluid transfer applications

What's included:
6-ft (1.8-m) line cord.
115 VAC models:
US standard plug;
230 VAC models:
European plug.

Flow Rates in mL/min^{††}

| rpm | Precision pump tubing | | | | | |
|-----|--|--------|--------|--------|--------|--------|
| | L/S 13 | L/S 14 | L/S 16 | L/S 25 | L/S 17 | L/S 18 |
| | Standard [†] , Easy-Load, Easy-Load II, Easy-Load 3 | | | | | |
| | Cartridge [‡] | | | | | |
| 1 | 0.06 | 0.21 | 0.8 | 1.7 | 2.8 | 3.8 |
| 2 | 0.12 | 0.42 | 1.6 | 3.4 | 5.6 | 7.6 |
| 6 | 0.36 | 1.3 | 4.8 | 10 | 17 | 23 |
| 12 | 0.72 | 2.5 | 9.6 | 20 | 34 | 46 |
| 20 | 1.2 | 4.2 | 16 | 34 | 56 | 76 |
| 30 | 1.8 | 6.3 | 24 | 50 | 84 | 110 |
| 60 | 3.6 | 13 | 48 | 100 | 170 | 230 |

| rpm | High-performance precision pump tubing | | | |
|-----|--|--------|--------|--------|
| | L/S 15 | L/S 24 | L/S 35 | L/S 36 |
| | Standard, Easy-Load II, Easy-Load 3 | | | |
| | Easy-Load | | | |
| 1 | 1.7 | 2.8 | 3.8 | 4.8 |
| 2 | 3.4 | 5.6 | 7.6 | 9.6 |
| 6 | 10 | 17 | 23 | 29 |
| 12 | 20 | 34 | 46 | 58 |
| 20 | 34 | 56 | 76 | 96 |
| 30 | 50 | 84 | 110 | 140 |
| 60 | 100 | 170 | 230 | 290 |

[†]Standard pump head is not available for L/S 25.

[‡]Cartridge heads are available for microbore tubing.

^{††}Motor rpm and flow rates for the 230 VAC, 50 Hz economy drives are approximately % of values shown.



| rpm | Speed control | Pump heads accepted | Motor size | IP rating | Dimensions (L x W x H) | Catalog number | Price |
|------------------------------|--------------------|---------------------|--|-----------|--|----------------|-------|
| 115 VAC, 60 Hz models | | | | | | | |
| 1 | None ^{††} | 2 | Sub-fractional (<1/25 hp) ^{†††} | IP22 | 6" x 5 1/4" x 4 5/8" (15.2 x 13.4 x 11.9 cm) | PG-07540-01 | |
| 2 | | | | | | PG-07540-02 | |
| 6 | | | | | | PG-07540-06 | |
| 12 | | | | | | PG-07540-12 | |
| 20 | None ^{††} | 2 | | | | PG-07540-20 | |
| 30 | | | | | | PG-07540-30 | |
| 60 | | | | | | PG-07540-60 | |
| 230 VAC, 50 Hz models | | | | | | | |
| 1 | None ^{††} | 2 | Sub-fractional (<1/25 hp) ^{†††} | IP22 | 6" x 5 1/4" x 4 5/8" (15.2 x 13.4 x 11.9 cm) | PG-07542-01 | |
| 2 | | | | | | PG-07542-02 | |
| 5 | | | | | | PG-07542-06 | |
| 10 | | | | | | PG-07542-12 | |
| 17 | None ^{††} | 2 | | | | PG-07542-20 | |
| 25 | | | | | | PG-07542-30 | |
| 50 | | | | | | PG-07542-60 | |

^{††}Drive speed may vary ±15%, subject to fluctuations in line voltage and frequency.

^{†††}Maximum power required is 70 W or less.

L/S® Compact Variable-Speed Pumps

Make low-flow pumping easy!



FEATURES

- ✓ Flow rates: 1.8 to 220 mL/min
- ✓ Remote start/stop via contact closure on back of pump
- ✓ Stack for smaller overall footprint

- No confusing menus—easy-to-use speed controller and reversing switch get you pumping quicker
- No stress loading of tubing—new easy-loading Miniflex™ pump head with automatic tubing retention keeps tubing in place
- Easier on the budget—complete system accepts continuous tubing, no need to buy two-stop tubing
- Dual-channel model delivers synchronous flow from two separate channels

These easy-to-use complete pumps offer a wide occlusion angle, which prevents fluid backflow up to the rated pressure of the tubing. Prime or flush tubing quickly by depressing the MAX button. Self-lubricating thermoplastic polyester rollers are low friction and long wearing for smooth operation and long life.

What's included: L/S Miniflex pump head and dual-voltage (115/230 VAC) benchtop power supply.

Flow Rates in mL/min

| rpm | Precision pump tubing | | | |
|-------------------------------------|-----------------------|-----------|-----------|---------------------|
| | L/S 13 | L/S 14 | L/S 16 | L/S 25 [†] |
| Single-channel pump 77240-20 | | | | |
| 35 to 200 | 1.8 to 10 | 6.3 to 36 | 21 to 118 | 40 to 220 |
| Dual-channel pump 77240-30 | | | | |
| 35 to 200 | 1.8 to 10 | 6.3 to 36 | 21 to 118 | — |

[†]Recommended for use with silicone or C-Flex® formulations only.



Specifications

Speed control (repeatability): ±5%
Reversible motor: yes

Dimensions (L x W x H): 8 5/8" x 5 1/4" x 4 1/2" (22 x 13.3 x 11.4 cm)
Power: 90 to 260 VAC, 50/60 Hz

| Number of channels | rpm | IP rating | Catalog number | Price |
|--------------------|-----------|-----------|----------------|-------|
| 1 | 35 to 200 | IP22 | PG-77240-20 | |
| 2 | | | PG-77240-30 | |

Accessories

PG-77200-07 Replacement power supply, dual-voltage 115/230 VAC

PG-17050-01 NIST-traceable calibration with data for peristaltic pump drive

L/S® Variable-Speed Economy Modular Drives

Versatile with a wide flow range and simple controls

- Separate motor and controller are connected via a 6-ft (1.9 m) cable—place components where convenient or where space allows
- Single-turn speed control and on/off switch with green power indicator—maintain speed setting while turning pump on and off
- The 1/10-hp reversible motor has soft start and back EMF for ±2% speed control
- Painted steel housing is IP33 rated for protection from vertically falling water
- 115 VAC models are ETL and cETL listed; 230 VAC models are CE marked in compliance with EU standards



FEATURES

- ✓ Flow rates: 0.06 to 3400 mL/min
- ✓ Variable speed—1 to 100 or 6 to 600 rpm
- ✓ Convenient modular design

A perfect upgrade from a fixed-speed drive, these variable-speed drives offer a wider rpm range, ±2% speed regulation, and ETL and CE listings. For added versatility, drives accept all L/S pump heads.

What's included: 6-ft (1.8-m) line cord—115 VAC: US standard plug; 230 VAC: IEC 320/CEE22 socket. Please specify country of destination when ordering.

Flow Rates in mL/min (flow rates in parentheses can only be obtained with the High-Performance pump head—see page 7)

| rpm | Precision pump tubing | | | | | | High-performance precision pump tubing | | | |
|----------|---|--------------|------------|-------------|-------------|-------------|---|---------------------------|---------------------------|---------------------------|
| | L/S 13 | L/S 14 | L/S 16 | L/S 25 | L/S 17 | L/S 18 | L/S 15 | L/S 24 | L/S 35 | L/S 36 |
| | Standard†, Easy-Load, Easy-Load II, Easy-Load 3 | | | | | | Multichannel‡, Standard†, Easy-Load II, Easy-Load 3, High-Performance | | | |
| 6 to 600 | Cartridge, Multichannel | | | Cartridge | | | Easy-Load | | | |
| 1 to 100 | 0.06 to 0.36 | 0.21 to 1.30 | 0.8 to 4.8 | 1.7 to 10.0 | 2.8 to 17.0 | 3.8 to 23.0 | 1.7 to 10.0 (1.1 to 11.0) | 2.8 to 17.0 (1.8 to 18.0) | 3.8 to 23.0 (2.6 to 26.0) | 4.8 to 29.0 (3.4 to 34.0) |

†The Standard pump head is not available for L/S 25. ‡Multichannel head is not available for L/S 36. Multichannel and Cartridge heads are available for microbore tubing.

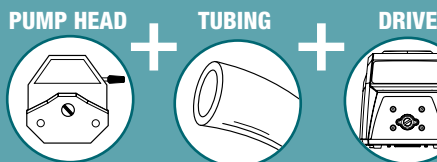
ISO9001:2008
CERTIFIED SUPPLIER



| rpm | Speed control (resolution) | Pump heads accepted | Motor size | IP rating | Dimensions (L x W x H) | Power (50/60 Hz) | | Catalog number | Price |
|----------|----------------------------|---------------------|----------------|---------------------------------|---|------------------|----------------|-----------------------------|-------|
| | | | | | | VAC | Amps | | |
| 6 to 600 | ±2% | 2 | 1/10 hp (75 W) | Controller: IP33 Motor: IP21 | Controller: 8" x 6.4" x 3.4" (20.4 x 16.4 x 8.7 cm) Motor: 7.8" x 3.8" x 4.5" (19.8 x 9.7 x 11.5 cm) | 90 to 130 | 2.2 at 115 VAC | PG-07559-00 | |
| | | | | | | 190 to 260 | 1.2 at 230 VAC | PG-07559-05 | |
| 1 to 100 | ±2% | 4 | 1/10 hp (75 W) | Controller: IP33 Motor: IP21 | Controller: 8" x 6.4" x 3.4" (20.4 x 16.4 x 8.7 cm) Motor: 7.8" x 3.8" x 4.5" (19.8 x 9.7 x 11.5 cm) | 90 to 130 | 2.2 at 115 VAC | PG-07559-10 | |
| | | | | | | 190 to 260 | 1.2 at 230 VAC | PG-07559-15 | |

[PG-17050-01](#) NIST-traceable calibration with data for peristaltic pump drive

Choose a Complete System
One catalog number includes all 3!



| System | Flow range | What's included | | | Power | Catalog number | Price |
|--------|-------------------|--------------------------|---|---|----------------------|-----------------------------|-------|
| | | Pump head | Tubing | Drive | | | |
| | 4.8 to 480 mL/min | Easy-Load® 3 77800-60 | C-Flex® ULTRA L/S 16 tubing 06434-16 10 ft (3 m) | Modular drive 07559-00 6 to 600 rpm | 115 VAC, 50/60 Hz | PG-77913-02 | |
| | | | | Modular drive 07559-05 6 to 600 rpm | 230 VAC, 50/60 Hz | PG-77913-07 | |
| | 17 to 1700 mL/min | Easy-Load II 77200-62 | C-Flex ULTRA L/S 24 tubing 06434-24 10 ft (3 m) | Modular drive 07559-00 6 to 600 rpm | 115 VAC, 50/60 Hz | PG-77913-12 | |
| | | | | Modular drive 07559-05 6 to 600 rpm | 230 VAC, 50/60 Hz | PG-77913-17 | |

L/S® Variable-Speed Economy Console Drives

Economical variable-speed drive with a wide flow range

- Pump head flow rate: 0.42 to 2900 mL/min; cartridge head flow rate: 0.0035 to 1700 mL/min
- Separate single-turn speed control and on/off switch with green power indicator. Maintain speed setting while turning on/off
- The 1/20-hp unidirectional motor has soft start and back EMF for ±5% speed control. Smooth operation and long service life.
- 115 VAC models: UL and cUL listed; 230 VAC models: CE compliant



FEATURES

- ✓ Flow rates: 0.0035 to 2900 mL/min
- ✓ Variable speed from 7 to 600 rpm
- ✓ Low-flow metering or general fluid transfer

Drives accept nine different pump head types: Standard, Easy-Load®, Easy-Load II, Easy-Load 3, Multichannel, High-Performance, Cartridge, PTFE-tubing, and PTFE-diaphragm. Drives 07554-90 and -95 are not recommended for use with the PTFE-tubing and PTFE-diaphragm pump heads.

What's included: 6-ft (1.8-m) line cord—115 VAC: US standard plug; 230 VAC: IEC 320/CEE22 socket. Please specify country of destination when ordering.

Flow Rates in mL/min (flow rates in parentheses can only be obtained with the High-Performance pump head—see page 7)

| rpm | Precision pump tubing | | | | | | High-performance precision pump tubing | | | |
|-----------|--|------------|------------|------------|------------|------------|--|--------------------------|--------------------------|---------------------------|
| | L/S 13 | L/S 14 | L/S 16 | L/S 25 | L/S 17 | L/S 18 | L/S 15 | L/S 24 | L/S 35 | L/S 36 |
| | Standard†, Easy-Load®, Easy-Load® II, Easy-Load® 3 | | | | | | Multichannel‡, Standard, Easy-Load II, Easy-Load 3, High-Performance | | | |
| | Cartridge, Multichannel | | | Cartridge | | | Easy-Load | | | |
| 20 to 600 | 1.2 to 36 | 4.2 to 130 | 16 to 480 | 34 to 1000 | 56 to 1700 | 76 to 2300 | 34 to 1000 | 56 to 1700 | 76 to 2300 | 96 to 2900 |
| 7 to 200 | 0.42 to 12 | 1.4 to 43 | 5.6 to 160 | 12 to 330 | 20 to 570 | 27 to 770 | 12 to 330 (13 to 370) | 20 to 570 (21 to 600) | 27 to 770 (30 to 870) | 34 to 970 (41 to 1130) |

†The Standard pump head is not available for L/S 25.

‡Multichannel head is not available for L/S 36. Multichannel and Cartridge heads are available for microbore tubing.



| rpm | Speed control | Pump heads accepted | Motor size | IP rating | Dimensions (L x W x H) | Power (50/60 Hz) | | Catalog number | Price |
|------------|---------------|---------------------|----------------|-----------|---|-----------------------------|------|-----------------------------|-------|
| | | | | | | VAC | Amps | | |
| 20 to 600 | ±5% | 1 | 1/20 hp (37 W) | IP22 | 9" x 7" x 5 1/4" (22.9 x 18.1 x 13.3 cm) | 90 to 130 | 1.5 | PG-07554-90 | |
| 180 to 260 | | 0.8 | | | | PG-07554-95 | | | |
| 90 to 130 | | 1.5 | | | | PG-07554-80 | | | |
| 180 to 260 | | 0.8 | | | | PG-07554-85 | | | |

[PG-17050-01](#) NIST-traceable calibration with data for peristaltic pump drive

PUMP HEAD

+

TUBING

+

DRIVE

Choose a Complete System

One catalog number includes all 3!

| System | Flow range | What's included | | | Power | Catalog number | Price |
|--------|-------------------|--------------------------|---|--|----------------------|-----------------------------|-------|
| | | Pump head | Tubing | Drive | | | |
| | 16 to 480 mL/min | Easy-Load® 3 77800-60 | C-Flex® ULTRA L/S 16 tubing 06434-16 10 ft (3 m) | Console drive 07554-90 20 to 600 rpm | 115 VAC, 50/60 Hz | PG-77910-30 | |
| | | | | Console drive 07554-95 20 to 600 rpm | 230 VAC, 50/60 Hz | PG-77910-35 | |
| | 56 to 1700 mL/min | Easy-Load II 77200-62 | C-Flex ULTRA L/S 24 tubing 06434-24 10 ft (3 m) | Console drive 07554-90 20 to 600 rpm | 115 VAC, 50/60 Hz | PG-77910-20 | |
| | | | | Console drive 07554-95 20 to 600 rpm | 230 VAC, 50/60 Hz | PG-77910-25 | |

L/S® Precision Variable-Speed Modular Drives

Place where convenient—ideal for limited spaces, hoods, or isolation chambers

- Three-digit LED display shows motor rpm—confirm speed setting at a glance
- Remote control capabilities: speed, direction, and start/stop
- ±0.25% speed control for precise flow regulation—ideal for metering applications

A. Modular Drives with Benchtop Controller

- Splash-resistant ABS plastic controller housing is IP33 rated; drive housing is epoxy finished steel, IP33 rated
- Remote control capabilities via a DB9 female connector on back of controller

B. Washdown Modular Drives with Wall-Mount Controller

- Wall-mount controller housing is powder-coated aluminum, IP66 / NEMA 4X rated for washdown; powder-coated steel drive housing is IP66 / NEMA 4X rated for washdown
- Remote control capabilities via weather-resistant connection on controller



FEATURES

- ✓ Flow rates: 0.06 to 3400 mL/min
- ✓ Easy up-front control of speed, direction, and start/stop
- ✓ Reversible motor—purge tubing before or after pumping; pump fluid in either direction



B
Models 07557-60 and -70 include wall-mount controller

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| rpm | Speed control (resolution) | Pump heads accepted | Motor size | IP rating | Dimensions (L x W x H) | Power (50/60 Hz) | | Catalog number | Price |
|---|---|---------------------|----------------|-----------|---|------------------|--------------------------------|-----------------------------|-------|
| | | | | | | VAC | Amps | | |
| A. Precision modular drives with benchtop controller | | | | | | | | | |
| 6 to 600 | ±0.25% (1 rpm at 600 rpm; 0.1 rpm at 100 rpm) | 2 | 1/10 hp (75 W) | IP33 | Controller: 10 1/2" x 8 1/4" x 5" Drive: 10 3/4" x 4 3/8" x 4 1/2" | 90 to 260 | 2.2 at 115 VAC, 1.1 at 230 VAC | PG-07557-00 | |
| 1 to 100 | | 4 | | | | | | PG-07557-10 | |
| B. Precision washdown modular drives with washdown wall-mount controller | | | | | | | | | |
| 6 to 600 | ±0.25% (1 rpm at 600 rpm; 0.1 rpm at 100 rpm) | 2 | 1/10 hp (75 W) | IP66 | Controller: 9" x 11 3/4" x 4 1/2" Drive: 15 9/16" x 7" x 6" | 90 to 260 | 2.2 at 115 VAC, 1.1 at 230 VAC | PG-07557-60 | |
| 1 to 100 | | 4 | | | | | | PG-07557-70 | |

[PG-07557-51](#) Extension cable, 9 ft (2.7 m); extend distance between motor and controller

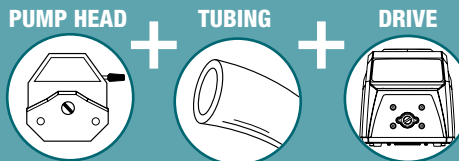
[PG-07595-47](#) Cable assembly, for benchtop modular drives; DB9 male connector and 25 ft (7.9 m) cable with stripped wire terminal ends. Use for remote control

[PG-77300-32](#) Cable assembly, for washdown modular drives; 18-pin round connector and 25 ft (7.9 m) cable with stripped wire terminal ends. Use for remote control

[PG-17050-01](#) NIST-traceable calibration with data for peristaltic pump drive

Choose a Complete System

One catalog number includes all 3!



| System | Flow range | What's included | | | Power | Catalog number | Price |
|--------|-------------------|-----------------------|--|-------------------------------------|-------------------------|-----------------------------|-------|
| | | Pump head | Tubing | Drive | | | |
| | 4.8 to 480 mL/min | Easy-Load® 3 77800-60 | C-Flex® ULTRA L/S 16 tubing 06434-16 10 ft (3 m) | Modular drive 07557-00 6 to 600 rpm | 90 to 260 VAC, 50/60 Hz | PG-77913-60 | |
| | 17 to 1700 mL/min | Easy-Load II 77200-62 | C-Flex ULTRA L/S 24 tubing 06434-24 10 ft (3 m) | Modular drive 07557-00 6 to 600 rpm | 90 to 260 VAC, 50/60 Hz | PG-77913-70 | |
| | 17 to 1700 mL/min | Easy-Load II 77200-62 | C-Flex ULTRA L/S 24 tubing 06434-24 10 ft (3 m) | Modular drive 07557-60 6 to 600 rpm | 90 to 260 VAC, 50/60 Hz | PG-77913-80 | |

L/S® Precision Variable-Speed Console Drives

Don't lose control of your metering applications—digital display gives you repeatable control

- Accurate and repeatable settings with 3-digit LED display of rpm
- Pump fluid in either direction with reversible motor—perfect for purging tubing
- Save space and increase productivity by stacking 2 or 4 pump heads on the same drive to create a multichannel pump system
- Maximize processes in a minimal footprint by stacking splash-resistant, IP33-rated drives
- Two ways to control speed, direction, and start/stop—use either the membrane keypad or remote control capabilities
- Customize for your application—drives accept nine pump head types: Standard, Easy-Load®, Easy-Load® II, Easy-Load® 3, Multichannel, High-Performance, Cartridge, PTFE-Tubing, and PTFE-Diaphragm

FEATURES

- ✓ Flow rates: 0.06 to 3400 mL/min
- ✓ Variable speed from 1 to 600 rpm
- ✓ Reversible motor accepts up to four pump heads



Flow Rates in mL/min (flow rates in parentheses can only be obtained with the High-Performance pump head—see page 7)

| rpm | Precision pump tubing | | | | | | High-performance precision pump tubing | | | |
|----------|---|------------|------------|------------|------------|------------|---|-------------------------|-------------------------|-------------------------|
| | L/S 13 | L/S 14 | L/S 16 | L/S 25 | L/S 17 | L/S 18 | L/S 15 | L/S 24 | L/S 35 | L/S 36 |
| | Standard†, Easy-Load, Easy-Load II, Easy-Load 3 | | | | | | Multichannel‡, Standard†, Easy-Load II, Easy-Load 3, High-Performance | | | |
| | Cartridge, Multichannel | | | Cartridge | | | Easy-Load | | | |
| 6 to 600 | 0.36 to 36 | 1.3 to 130 | 4.8 to 480 | 10 to 1000 | 17 to 1700 | 23 to 2300 | 10 to 1000 (11 to 1100) | 17 to 1700 (18 to 1800) | 23 to 2300 (26 to 2600) | 29 to 2900 (34 to 3400) |
| 1 to 100 | 0.06 to 6 | 0.21 to 21 | 0.8 to 80 | 1.7 to 170 | 2.8 to 280 | 3.8 to 380 | 1.7 to 170 (1.8 to 180) | 2.8 to 280 (3.0 to 300) | 3.8 to 380 (4.3 to 430) | 4.8 to 480 (5.8 to 580) |

†The Standard pump head is not available for L/S 25. ‡Multichannel head is not available for L/S 36. Multichannel and Cartridge heads are available for microbore tubing.

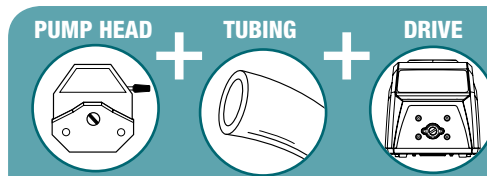


| rpm | Speed control (resolution) | Pump heads accepted | Motor size | IP rating | Dimensions (L x W x H) | Power (50/60 Hz) | | Catalog number | Price |
|----------|---|---------------------|----------------|-----------|---|------------------|--------------------------------|----------------|-------|
| | | | | | | VAC | Amps | | |
| 6 to 600 | ±0.25% (1 rpm at 600 rpm; 0.1 rpm at 100 rpm) | 2 | 1/10 hp (75 W) | IP33 | 10" x 8.5" x 8.5" (25.4 x 21.6 x 21.6 cm) | 90 to 260 | 1.8 at 115 VAC, 1.2 at 230 VAC | PG-07528-10 | |
| 3 to 300 | | 2 | | | | | | PG-07528-20 | |
| 1 to 100 | | 4 | | | | | | PG-07528-30 | |

Accessories

- [PG-07595-45 Connector](#), DB9 male. Use for 4 to 20 mA remote control
- [PG-07595-47 Cable assembly](#), DB9 male connector and 25-ft (7.9-m) cable with stripped wire terminal ends. Use for remote control
- [PG-77595-35 Foot switch](#), DB9 male

- [PG-07528-80 Handheld remote controller](#); for remote control of start/stop, route tubing through handle for dispensing into containers
- [PG-17050-01 NIST-traceable calibration](#) with data for peristaltic pump drive



Choose a Complete System
One catalog number includes all 3!

| System | Flow range | What's included | | | Power | Catalog number | Price |
|--------|-------------------|--------------------------|--|--|-------------------------|-----------------------------|-------|
| | | Pump head | Tubing | Drive | | | |
| | 4.8 to 480 mL/min | Easy-Load® 3 77800-60 | C-Flex® ULTRA L/S 16 tubing 06434-16 10 ft (3 m) | Precision console drive 07528-10 6 to 600 rpm | 90 to 260 VAC, 50/60 Hz | PG-77916-10 | |
| | 17 to 1700 mL/min | Easy-Load II 77200-62 | C-Flex® ULTRA L/S 24 tubing 06434-24 10 ft (3 m) | | | PG-77916-20 | |

L/S® Digital Miniflex® Pumps

Small footprint, yet delivers accurate flow over a wide range

- Icon-driven menu allows quick, intuitive programming and setup
- Flow range of 0.004 to 315 mL/min (depending on model and tubing size selected)
- Copy dispense function for filling and dispensing applications
- Tubing calibration ensures accuracy
- Open-head sensor stops drive when pump head is opened
- Remote control of speed, direction, and start/stop/prime via 25-pin connector on back of drive
- Pump head accepts continuous lengths of tubing for clean flow paths
- Dual-channel model delivers synchronous flow from two separate channels; single-channel model delivers highest flow rate
- Automatic tubing retention makes tube loading quick and easy

NEW



FEATURES

- ✓ Flow rates: 0.004 to 315 mL/min
- ✓ Intuitive icon-driven programming
- ✓ Tubing calibration for accuracy
- ✓ Single- or dual-channel models

This compact, stackable pump features a durable ABS housing that is easy to wipe down and keep clean. The Miniflex pump head features a wide occlusion angle that prevents fluid backflow up to the rated pressure of the tubing. Self-lubricating thermoplastic polyester rollers are low friction and long wearing for smooth operation and long life.

What's included: L/S Miniflex pump head and universal-voltage (90 to 260 VAC) benchtop power supply with IEC320/CEE22 socket. Pump is shipped with cord/plug assembly specific to country of destination.

Flow Rates in mL/min

| rpm | Precision pump tubing | | | |
|-------------------------------------|-----------------------|-------------|-------------|-------------|
| | L/S 13 | L/S 14 | L/S 16 | L/S 25 |
| Single-channel pump 07525-20 | | | | |
| 0.1 to 300 | 0.004 to 12 | 0.014 to 42 | 0.05 to 162 | 0.11 to 315 |
| Dual-channel pump 07525-40 | | | | |
| 0.1 to 300 | 0.004 to 12 | 0.014 to 42 | 0.05 to 162 | — |



Small footprint pump fits where you need it.

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| Number of channels | rpm | Speed control (repeatability) | Reversible motor | IP rating | Dimensions (L x W x H) | Power (50/60 Hz) | | Catalog number | Price |
|--------------------|------------|-------------------------------|------------------|-----------|---|------------------|------------------------------------|-----------------------------|-------|
| | | | | | | VAC | Amps | | |
| 1 | 0.1 to 300 | ±0.1% | Yes | IP33 | 9.4" x 5.5" x 6.2" (23.9 x 14.0 x 15.7 cm) | 90 to 260 | 0.34 at 115 VAC, 0.2 at 230 VAC | PG-07525-20 | |
| 2 | | | | | | | | PG-07525-40 | |

Accessories

[PG-07523-92](#) Foot switch, momentary start/stop; DB25 male; 6-ft (1.8-m) cable

[PG-07523-95](#) Cable assembly, DB25 male connector and 25-ft (7.9-m) cable with stripped wire ends

[PG-07523-97](#) Handheld remote controller, DB25 male, route tubing through handle for dispensing applications; 6-ft (1.8-m) cable

[PG-77220-20](#) Replacement single-channel Miniflex pump head

[PG-77220-30](#) Replacement dual-channel Miniflex pump head

[PG-07525-90](#) Replacement power supply, 90 to 260 VAC

[PG-17050-01](#) NIST-traceable calibration with data for peristaltic pump drive

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Technical Resources to help you choose

L/S® Variable-Speed Digital Drives

Versatile, worry-free operation

- Brushless, maintenance-free motor provides $\pm 0.1\%$ speed control accuracy with 6000:1 turndown ratio
- Bright graphical LCD offers easy programming, four operating modes, and seven languages
- Get more accurate dispensing with preprogrammed calibration
- Change based on your needs—drives accept all L/S pump heads for more pumping versatility
- Choose how you want to dispense: volume, copy cycles, or time
- Operate remotely via DB25 female connector

FEATURES

- ✓ Flow rates: 0.001 to 3400 mL/min
- ✓ Variable speed from 0.02 to 600 rpm
- ✓ Programmable, reversible motor accepts up to four pump heads
- ✓ Ensure dispensing accuracy with antidrip function
- ✓ Hands-free dispensing via time interval dispense cycles

Four operating modes for more functionality: continuous run, time dispense, copy dispense, and volume dispense



Flow Rates in mL/min (flow rates in parentheses can only be obtained with the High-Performance pump head—see page 7)

| rpm | Precision pump tubing | | | | | | High-performance precision pump tubing | | | |
|-------------|---|--------------|-------------|--------------|--------------|--------------|--|--------------------------------|--------------------------------|--------------------------------|
| | L/S 13 | L/S 14 | L/S 16 | L/S 25 | L/S 17 | L/S 18 | L/S 15 | L/S 24 | L/S 35 | L/S 36 |
| | Standard†, Easy-Load, Easy-Load II, Easy-Load 3 | | | | | | Multichannel‡, Standard, Easy-Load II, Easy-Load 3, High-Performance | | | |
| | Cartridge, Multichannel | | | Cartridge | | | Easy-Load | | | |
| 0.1 to 600 | 0.006 to 36 | 0.021 to 130 | 0.08 to 480 | 0.17 to 1000 | 0.28 to 1700 | 0.38 to 2300 | 0.17 to 1000 (0.18 to 1100) | 0.28 to 1700 (0.30 to 1800) | 0.38 to 2300 (0.43 to 2600) | 0.48 to 2900 (0.57 to 3400) |
| 0.02 to 100 | 0.001 to 6 | 0.004 to 21 | 0.016 to 80 | 0.033 to 170 | 0.057 to 280 | 0.077 to 380 | 0.033 to 170 (0.036 to 183) | 0.057 to 280 (0.057 to 300) | 0.077 to 380 (0.086 to 433) | 0.096 to 480 (0.113 to 566) |

†The Standard pump head is not available for L/S® 25.

‡Multichannel head is not available for L/S 36. Multichannel and Cartridge heads are available for microbore tubing.

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| rpm | Speed control (resolution) | Pump heads accepted | Motor size | IP rating | Dimensions (L x W x H) | Power (50/60 Hz) | | Catalog number | Price |
|-------------|---|---------------------|-------------------|-----------|--|------------------|-----------------------------------|-----------------------------|-------|
| | | | | | | VAC | Amps | | |
| 0.1 to 600 | $\pm 0.1\%$ (0.1 rpm at 600 rpm; 0.01 rpm at 100 rpm) | 2 | 1/10 hp (75 W) | IP33 | 10" x 8.5" x 8.5" (25.4 x 21.6 x 21.6 cm) | 90 to 260 | 2.2 at 115 VAC, 1.1 at 230 VAC | PG-07522-20 | |
| 0.02 to 100 | | 4 | | | | | | PG-07522-30 | |

Accessories

- [PG-07523-92](#) Foot switch, momentary start/stop; 6-ft (1.8-m) cable
- [PG-07523-94](#) DB25 male connector. Use to create your own cable
- [PG-07523-95](#) Cable assembly, DB25 male connector and 25 ft (7.9 m) cable with stripped wire ends for remote control

- [PG-07523-97](#) Handheld remote controller; route tubing through handle for dispensing into containers
- [PG-17050-01](#) NIST-traceable calibration with data for peristaltic pump drive

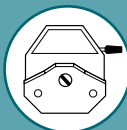
Wait! There's More...

See pages 4–9 for L/S pump heads and pages 10–13 for L/S tubing.

PUMP HEAD

TUBING

DRIVE



Choose a Complete System
One catalog number includes all 3!

| System | Flow range | What's included | | | Power | Catalog number | Price |
|--------|---------------------|--------------------------|---|---|----------------------------|-----------------------------|-------|
| | | Pump head | Tubing | Drive | | | |
| | 0.08 to 480 mL/min | Easy-Load® 3 77800-60 | C-Flex® ULTRA L/S 16 tubing 06434-16 10 ft (3 m) | Digital drive 07522-20 0.1 to 600 rpm | 90 to 260 VAC, 50/60 Hz | PG-77921-65 | |
| | 0.28 to 1700 mL/min | Easy-Load II 77200-62 | C-Flex ULTRA L/S 24 tubing 06434-24 10 ft (3 m) | | | PG-77921-75 | |

L/S® Digital Console Process Drives Transfer, dispense, and meter in lab, process and washdown environments

- IP66 and NEMA 4X rated. Sealed housing and sealed keypad are protected from dust, water, and chemicals in the wash-down environment—simply hose down to clean.
- Available with either a 316 SS or a powder-coat steel housing
- Flow rate: 0.001 to 3400 mL/min with L/S tubing depending on drive rpm and tubing size
- Graphical LCD shows six different parameters: motor rpm, flow rate, dispense volume, cumulative volume, dispense interval time, and copy number.
- Brushless, maintenance-free motor with $\pm 0.1\%$ speed control accuracy and a 6000 to 1 turndown ratio
- Dispense by: volume—in milliliters (0.001 to 99,999), liters, and gallons; copy—1 to 99,999 dispense cycles. Set time interval of on/off cycles; 1 sec to 99 hr, 59 min, 59 sec.
- Remote control capabilities via 31-pin circular waterproof connection

FEATURES

- ✓ Flow rates: 0.001 to 3400 mL/min
- ✓ Variable speed
- ✓ IP66 and NEMA 4X rated
- ✓ Programmable, reversible motor accepts two or four pump heads and offers remote functionality



Drive 07575-30 shown with L/S High-Performance pump head 77250-62

What's included: 6-ft (1.8-m) line cord—features IEC 320/CEE 22 connector coupler; watertight cord connection. Please specify destination country when ordering; drive is shipped with country-specific plug/cord set.



| rpm | Speed control (resolution) | Pump heads accepted | Motor size | IP rating | Dimensions (L x W x H) | Power (50/60 Hz) | | Catalog number | Price |
|---|----------------------------|---------------------|----------------|-----------|---|------------------|-----------------------------------|-----------------------------|-------|
| | | | | | | VAC | Amps | | |
| Digital process drive with 316 stainless steel housing | | | | | | | | | |
| 0.1 to 600 | $\pm 0.1\%$ | 2 | 1/10 hp (75 W) | IP66 | 12" x 9" x 9 5/16" (30.5 x 22.9 x 23.6 cm) | 90 to 260 | 2.2 at 115 VAC, 1.1 at 230 VAC | PG-07575-30 | |
| 0.02 to 100 | | 4 | | | | | | PG-07575-35 | |
| Digital process drive with powder-coat steel housing | | | | | | | | | |
| 0.1 to 600 | $\pm 0.1\%$ | 2 | 1/10 hp (75 W) | IP66 | 12" x 9" x 9 5/16" (30.5 x 22.9 x 23.6 cm) | 90 to 260 | 2.2 at 115 VAC, 1.1 at 230 VAC | PG-07575-40 | |
| 0.02 to 100 | | 4 | | | | | | PG-07575-45 | |

[PG-07575-84](#) Washdown foot switch, momentary start/stop; 6-ft (1.8-m) cable

[PG-17050-01](#) NIST-traceable calibration with data for peristaltic pump drive

[PG-07575-80](#) Cable assembly, 31-pin round connector and 25-ft (7.9-m) cable with stripped wire ends for remote control

Choose a Complete System

One catalog number includes all 3!

PUMP HEAD + TUBING + DRIVE



| System | Flow range | What's included | | | Power | Catalog number | Price |
|--------|---------------------|------------------------------|---|---|----------------------------|-----------------------------|-------|
| | | Pump head | Tubing | Drive | | | |
| | 0.28 to 1700 mL/min | Easy-Load® II 77200-62 | C-Flex® ULTRA L/S 24 tubing 06434-24 10 ft (3 m) | Digital console process drive with 316 SS housing 07575-30 0.1 to 600 rpm | 90 to 260 VAC, 50/60 Hz | PG-77975-25 | |
| | 0.28 to 1800 mL/min | High-Performance 77250-62 | C-Flex ULTRA L/S 24 tubing 06434-24 10 ft (3 m) | | | PG-77975-35 | |
| | 0.28 to 1700 mL/min | Easy-Load II 77200-62 | C-Flex ULTRA L/S 24 tubing 06434-24 10 ft (3 m) | Digital console process drive with powder-coat steel housing 07575-40 0.1 to 600 rpm | 90 to 260 VAC, 50/60 Hz | PG-77975-45 | |

L/S® Computer-Compatible Digital Drives

Automate your process by interfacing drives with a computer

- Flow rate: 0.001 to 3400 mL/min with L/S tubing
- Interface drive to your PC via DB9 serial or USB connector
- Graphical LCD shows four operating modes: continuous run, time dispense, copy dispense, and volume dispense. View pump performance continually
- Antidrip function ensures dispensing accuracy
- Remote control capabilities via DB25 female connector on drive
- Menu driven interface—select one of seven languages for programming and operation

FEATURES

- ✓ Flow rates: 0.001 to 3400 mL/min
- ✓ Variable speed from 0.02 to 600 rpm
- ✓ Programmable, reversible motor accepts up to four pump heads
- ✓ Remote functionality



Drive 07551-20 shown with L/S High-Performance pump head 77250-62

Drives offer analog remote control options and simple programming—ideal for automated process applications. Precise PWM speed control ($\pm 0.1\%$) maximizes accuracy and efficiency while the brushless motor gives you quiet, maintenance-free reliability.

What's included: 6-ft (1.8-m) line cord with IEC 320/EE22 socket. Shipped with country-specific plug/cord set; please specify ultimate destination when ordering.

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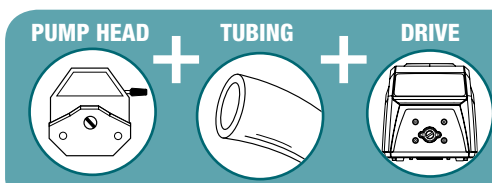
| rpm | Speed control (resolution) | Pump heads accepted | Motor size | IP rating | Dimensions (L x W x H) | Power (50/60 Hz) | | Catalog number | Price |
|-------------|---|---------------------|-------------------|-----------|--|------------------|-----------------------------------|-----------------------------|-------|
| | | | | | | VAC | Amps | | |
| 0.1 to 600 | $\pm 0.1\%$ (0.1 rpm at 600 rpm; 0.01 rpm at 100 rpm) | 2 | 1/10 hp (75 W) | IP33 | 10" x 8 1/2" x 8 1/2" (25.4 x 21.6 x 21.6 cm) | 90 to 260 VAC | 2.2 at 115 VAC, 1.1 at 230 VAC | PG-07551-20 | |
| 0.02 to 100 | | 4 | | | | | | PG-07551-30 | |

[PG-07523-92](#) **Foot switch**, momentary start/stop; 6-ft (1.8-m) cable
[PG-07523-94](#) **DB25 male connector**. Use to create your own cable
[PG-07523-95](#) **Cable assembly**, DB25 male connector and 25-ft (7.9-m) cable with stripped wire ends for remote control

[PG-07523-98](#) **Tilt bail**, use to securely elevate front of drive
[PG-07523-97](#) **Handheld remote controller**, DB9; for on/off control; route tubing through handle for filling and dispensing applications
[PG-17050-01](#) **NIST-traceable calibration** with data for peristaltic pump drive

Wait! There's More...

See pages 4-9 for L/S pump heads, and pages 10-13 for L/S tubing.



Choose a Complete System
One catalog number includes all 3!

| System | Flow range | What's included | | | Power | Catalog number | Price |
|--------|---------------------|--------------------------|---|---|--------------------------|-----------------------------|-------|
| | | Pump head | Tubing | Drive | | | |
| | 0.08 to 480 mL/min | Easy-Load® 3 77800-60 | C-Flex® ULTRA L/S 16 tubing 06434-16 10 ft (3 m) | Computer-compatible drive 07551-20 0.1 to 600 rpm | 115/230 VAC, 50/60 Hz | PG-77924-55 | |
| | 0.28 to 1700 mL/min | Easy-Load II 77200-62 | C-Flex® ULTRA L/S 24 tubing 06434-24 10 ft (3 m) | | | PG-77924-65 | |

I/P® Easy-Load® Pump Heads

Minimize downtime with faster tubing changes

- Optimize pressure capabilities and tubing life with adjustable occlusion
- Less maintenance and quieter operation with included tang boot
- No more loose pump heads—five-screw mounting for more secure attachment
- Adjust flow rate to your needs—can pump from 0.6 to 13 LPM
- PPS housing with CRS or SS rotor available. CRS rotors have sealed bearings; SS rotors have PTFE-sealed bearings



| Pump tubing sizes accepted | mL per rev | Flow rates (LPM) at indicated rpm | | | Maximum system psi (bar) | Catalog number† | | | |
|----------------------------|------------|-----------------------------------|------|-----------|--------------------------|-----------------------------|-----------------------------|-----------------------------|-----------------------------|
| | | 100 | 540 | 20 to 650 | | White PPS housing | | Black PPS housing | |
| | | | | | | CRS rotor | SS rotor | SS rotor | SS rotor |
| I/P 26 | 6.15 | 0.6 | 3.2 | 0.12 to 4 | 40 (2.7) | PG-77602-00 | PG-77602-10 | PG-77601-60 | PG-77602-80 |
| I/P 73 | 12.3 | 1.2 | 6.8 | 0.2 to 8 | | | | | |
| I/P 82 | 20.0 | 2.0 | 11.0 | 0.4 to 13 | 20 (1.4) | | | | |
| Price | | | | | | | | | |

†PSF = polysulfone PPS = polyphenylene sulfide CRS = cold-rolled steel SS = stainless steel

[PG-77601-96](#) Dual-channel mounting hardware for two pump heads, stainless steel

FEATURES

- ✓ Load tubing without removing pump head from drive
- ✓ Automatic tubing retention
- ✓ Stack up to two pump heads
- ✓ ATEX Zone 2 rated model available

I/P® High-Performance Pump Heads

Get higher flow rates and pressure ratings

- Easily transfer viscous fluids
- Pump up to 19 LPM for higher volume processing
- Durable design for longer life—made of stainless steel rollers, bearings, rotor plates, and rotor shaft. Occlusion bed is made of thermoset polyester
- Compatible with I/P drives that accept two or more pump heads; pump head is not stackable



| Pump tubing sizes accepted | mL per rev | Flow rates (LPM) at 20 to 650 rpm | Maximum system psi (bar) | Catalog number† | |
|----------------------------|------------|-----------------------------------|--------------------------|------------------------------------|---|
| | | | | Polyester and SS housing, SS rotor | ATEX-approved; polyester and SS housing, SS rotor |
| I/P 70 | 12.3 | 0.26 to 8 | 40 (2.7) | PG-77600-62 | PG-77600-82 |
| I/P 88 | 26.2 | 0.4 to 17 | 35 (2.4) | | |
| I/P 89 | 29.2 | 0.52 to 19 | 20 (1.4) | | |
| Price | | | | | |

†SS = stainless steel

FEATURES

- ✓ Easy to load tubing
- ✓ Adjustable tubing retention
- ✓ “C”-shaped design—tubing enters/exits the same side
- ✓ ATEX Zone 2 rated model available

Wait!

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I/P® High-Performance Precision Pump Tubing

Thicker wall compared to our Precision pump tubing

- Best choice for applications involving pressure, suction lift, viscous fluids, or long tubing life

| Tubing size | I/P 70 | I/P 88 | I/P 89 |
|---------------------------|-----------------------------------|------------------------------------|------------------------------------|
| Inner diameter | 9.5 mm (0.37") | 12.7 mm (0.5") | 15.88 mm (0.62") |
| Hose barb size | 9.5 mm (3/8") | 12.7 mm (1/2") | 15.88 mm (5/8") |
| Flow range (approximate)† | 0.01 to 8 LPM 0.002 to 2.1 GPM | 0.02 to 17 LPM 0.005 to 4.5 GPM | 0.03 to 19 LPM 0.007 to 5.0 GPM |





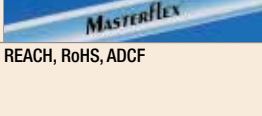


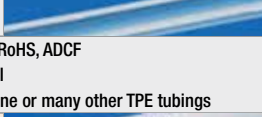
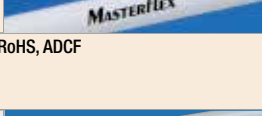
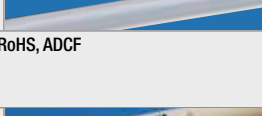
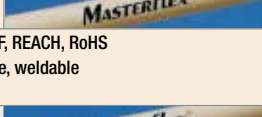
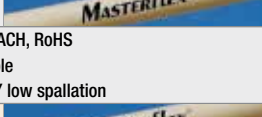
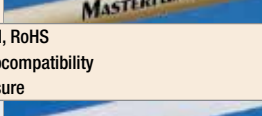

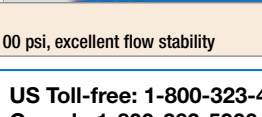
| Pump tubing formulation | Compatible pump head | | | |
|--|--|---|---|---|
| Silicone (platinum-cured) |  |  |  |  |
| <ul style="list-style-type: none"> – Complies with USP Class V, EP, FDA, REACH, RoHS, ADF – Fungus-resistant; phthalate- and latex-free | | | | |
| BioPharm Silicone (platinum-cured) |  |  |  |  |
| <ul style="list-style-type: none"> – Complies with USP Class VI, EP, FDA, 3A, REACH, RoHS, ADF – Lower absorption; excellent biocompatibility | | | | |
| BioPharm Plus Silicone (platinum-cured) |  |  |  |  |
| <ul style="list-style-type: none"> – Complies with USP Class VI, EP, FDA, 3A, REACH, RoHS, ADF – Ultra-smooth—minimizes particle entrapment | | | | |
| Puri-Flex™ |  |  |  |  |
| <ul style="list-style-type: none"> – Complies with USP Class VI, FDA, REACH, RoHS, ADF – Heat sealable, weldable, and economical; long pump life vs silicone | | | | |
| C-Flex® |  |  |  |  |
| <ul style="list-style-type: none"> – Complies with USP Class VI, EP, REACH, RoHS, ADF – Heat sealable, weldable, economical; better resistance to pH fluctuations | | | | |
| PharMed® BPT |  |  |  |  |
| <ul style="list-style-type: none"> – Complies with USP Class VI, EP, FDA, NSF, REACH, RoHS – >10,000 hours of tubing life, sealable, weldable | | | | |
| Chem-Durance® Bio |  |  |  |  |
| <ul style="list-style-type: none"> – Complies with USP Class VI, FDA, REACH, RoHS – Excellent biocompatibility, chemical compatibility, pump life, durability | | | | |
| Tygon® E-LFL |  |  |  |  |
| <ul style="list-style-type: none"> – Complies with USP Class VI, EP, FDA, EU Food, REACH, RoHS, ADF – Longest life of all Tygon formulations | | | | |
| Tygon® E-Food (B-44-4X) |  |  |  |  |
| <ul style="list-style-type: none"> – Complies with FDA, EU Food, NSF, 3A, REACH, RoHS, ADF – Smooth inner surface unaffected by commercial sanitizers | | | | |
| Tygon® E-Lab (E-3603) |  |  |  |  |
| <ul style="list-style-type: none"> – Complies with USP Class VI, FDA, EU Food, NSF, REACH, RoHS, ADF – General transfer applications; nonaging, nonoxidizing, low gas permeability | | | | |
| Norprene® (A-60 G) |  |  |  |  |
| <ul style="list-style-type: none"> – Complies with NSF, REACH, RoHS – Up to 10,000 hours of tubing life; best for pressure/vacuum applications | | | | |
| Norprene Food (A-60 F) |  |  |  |  |
| <ul style="list-style-type: none"> – Complies with FDA, 3A, NSF, REACH, RoHS – For high-temperature food applications; resists heat, ozone, acids, and alkalis | | | | |
| Gore® STA-PURE® Series PCS |  |  |  |  |
| <ul style="list-style-type: none"> – Complies with USP Class VI – Long life—even under pressures up to 100 psi, excellent flow stability | | | | |
| Gore® STA-PURE® Series PFL |  |  |  |  |
| <ul style="list-style-type: none"> – Complies with USP Class VI – Long life—even under pressures up to 100 psi, excellent flow stability | | | | |




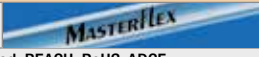







†Determined under the following conditions: Using a 1 to 650 rpm drive; 0 psi at inlet, 0.5 psi at outlet; water temperature at 22°C (72°F).

I/P® Precision Pump Tubing

Engineered for long life in peristaltic pumps

- Custom extruded to fit Masterflex pumps, ensuring optimal performance
- Lot-to-lot consistency for superior accuracy and repeatability

| | | Tubing size | I/P 26 | I/P 73 | I/P 82 |
|--|---|--|---|---|--|
| | | Inner diameter | 6.4 mm (0.25") | 9.5 mm (0.37") | 12.7 mm (0.5") |
| | | Hose barb size | 6.4 mm (¼") | 9.5 mm (⅜") | 12.7 mm (½") |
| | | Flow range (approximate)* | 0.01 to 4 LPM 0.002 to 1.1 GPM | 0.01 to 8 LPM 0.002 to 2.1 GPM | 0.02 to 13 LPM 0.005 to 3.5 GPM |
| Pump tubing formulation | Compatible pump head |  |  |  | |
| Silicone (platinum-cured) |  | ✓ Standard ✓ Easy-Load® | 7.6 m (25 ft)/pk PG-96410-26 | 7.6 m (25 ft)/pk PG-96410-73 | 7.6 m (25 ft)/pk PG-96410-82 |
| <ul style="list-style-type: none"> - Complies with USP Class V, EP, FDA, REACH, RoHS, ADF - Fungus-resistant; phthalate- and latex-free - Accommodates a wide temperature range | | | | | |
| Silicone (peroxide-cured) |  | ✓ Standard ✓ Easy-Load | 7.6 m (25 ft)/pk PG-96400-26 | 7.6 m (25 ft)/pk PG-96400-73 | 7.6 m (25 ft)/pk PG-96400-82 |
| <ul style="list-style-type: none"> - Complies with USP Class VI, EP, FDA, 3A, REACH, RoHS, ADF - Greater physical compression capability - Economical, longer tubing life | | | | | |
| BioPharm Silicone (platinum-cured) |  | ✓ Standard ✓ Easy-Load | 7.6 m (25 ft)/pk PG-96420-26 | 7.6 m (25 ft)/pk PG-96420-73 | 7.6 m (25 ft)/pk PG-96420-82 |
| <ul style="list-style-type: none"> - Complies with USP Class VI, EP, FDA, 3A, REACH, RoHS, ADF - Lower absorption; excellent biocompatibility - Very low extractables and weather, ozone, corona, radiation resistant | | | | | |
| BioPharm Plus Silicone (platinum-cured) |  | ✓ Standard ✓ Easy-Load | 7.6 m (25 ft)/pk PG-96440-26 | 7.6 m (25 ft)/pk PG-96440-73 | 7.6 m (25 ft)/pk PG-96440-82 |
| <ul style="list-style-type: none"> - Complies with USP Class VI, EP, FDA, 3A, REACH, RoHS, ADF - Ultra-smooth—minimizes particle entrapment - Very low extractables—ideal for lab, biotech pharma applications | | | | | |
| Puri-Flex™ |  | ✓ Standard ✓ Easy-Load | 7.6 m (25 ft)/pk PG-96419-26 | 7.6 m (25 ft)/pk PG-96419-73 | 7.6 m (25 ft)/pk PG-96419-82 |
| <ul style="list-style-type: none"> - Complies with USP Class VI, EP, REACH, RoHS, ADF - Heat sealable, weldable, and economical - Long pump life when compared to silicone or many other TPE tubings | | | | | |
| C-Flex® |  | ✓ Standard ✓ Easy-Load | 7.6 m (25 ft)/pk PG-06424-26 | 7.6 m (25 ft)/pk PG-06424-73 | 7.6 m (25 ft)/pk PG-06424-82 |
| <ul style="list-style-type: none"> - Complies with USP Class VI, EP, REACH, RoHS, ADF - Heat sealable, weldable, economical - Better resistance to pH fluctuations | | | | | |
| C-Flex® ULTRA |  | ✓ Standard ✓ Easy-Load | 7.6 m (25 ft)/pk PG-06434-26 | 7.6 m (25 ft)/pk PG-06434-73 | 7.6 m (25 ft)/pk PG-06434-82 |
| <ul style="list-style-type: none"> - Complies with USP Class VI, EP, REACH, RoHS, ADF - Longest life of any C-Flex formulation - Lowest spallation and reduced residue | | | | | |
| PharMed® BPT |  | ✓ Standard ✓ Easy-Load | 7.6 m (25 ft)/pk PG-06508-26 | 7.6 m (25 ft)/pk PG-06508-73 | 7.6 m (25 ft)/pk PG-06508-82 |
| <ul style="list-style-type: none"> - Complies with USP Class VI, EP, FDA, NSF, REACH, RoHS - Over 10,000 hours of tubing life, sealable, weldable - Ideal for tissue and cell culture work | | | | | |
| PharmaPure® |  | ✓ Easy-Load | 7.6 m (25 ft)/pk PG-06435-26 | 7.6 m (25 ft)/pk PG-06435-73 | 7.6 m (25 ft)/pk PG-06435-82 |
| <ul style="list-style-type: none"> - Complies with USP Class VI, EP, FDA, REACH, RoHS - Nontoxic and nonhemolytic biocompatible - Long life even under pressure with VERY low spallation | | | | | |
| Chem-Durance® Bio |  | ✓ Easy-Load | 15.2 m (50 ft)/pk PG-06442-26 | 15.2 m (50 ft)/pk PG-06442-73 | 15.2 m (50 ft)/pk PG-06442-82 |
| <ul style="list-style-type: none"> - Complies with USP Class VI, FDA, REACH, RoHS - Excellent chemical compatibility and biocompatibility - Excellent pump life, durable under pressure | | | | | |
| GORE® STA-PURE® Series PCS |  | ✓ Standard ✓ Easy-Load | 0.6 m (2 ft)/pk PG-96211-26 | 0.6 m (2 ft)/pk PG-96211-73 | 0.6 m (2 ft)/pk PG-96211-82 |
| <ul style="list-style-type: none"> - Complies with USP Class VI - Long life—even under pressures up to 100 psi, excellent flow stability | | | | | |
| GORE® STA-PURE® Series PFL |  | ✓ Standard ✓ Easy-Load | 0.6 m (2 ft)/pk PG-96212-26 | 0.6 m (2 ft)/pk PG-96212-73 | 0.6 m (2 ft)/pk PG-96212-82 |
| <ul style="list-style-type: none"> - Complies with USP Class VI - Long life—even under pressures up to 100 psi, excellent flow stability | | | | | |

| | | Tubing size | I/P 26 | I/P 73 | I/P 82 |
|---|---|--|---|---|---|
| | | Inner diameter | 6.4 mm (0.25") | 9.5 mm (0.37") | 12.7 mm (0.5") |
| | | Hose barb size | 6.4 mm (¼") | 9.5 mm (¾") | 12.7 mm (½") |
| | | Flow range (approximate) [†] | 0.01 to 4 LPM 0.002 to 1.1 GPM | 0.01 to 8 LPM 0.002 to 2.1 GPM | 0.02 to 13 LPM 0.005 to 3.5 GPM |
| Pump tubing formulation | | Compatible pump head |  |  |  |
| Tygon® E-LFL |  | <ul style="list-style-type: none"> ✓ Standard ✓ Easy-Load® | 7.6 m (25 ft)/pk | 7.6 m (25 ft)/pk | 7.6 m (25 ft)/pk |
| <ul style="list-style-type: none"> Complies with USP Class VI, EP, FDA, EU Food, REACH, RoHS, ADFC Longest life of all Tygon formulations Broad chemical resistance | PG-06440-26 | | PG-06440-73 | PG-06440-82 | |
| Tygon E-Food (B-44-4X) |  | <ul style="list-style-type: none"> ✓ Easy-Load | 15.2 m (50 ft)/pk | 15.2 m (50 ft)/pk | 15.2 m (50 ft)/pk |
| <ul style="list-style-type: none"> Complies with FDA, EU Food, NSF, 3A, REACH, RoHS, ADFC Smooth inner surface unaffected by commercial sanitizers Nontoxic, will not affect taste or odor | PG-06418-26 | | PG-06418-73 | PG-06418-82 | |
| Tygon E-Lab (E-3603) |  | <ul style="list-style-type: none"> ✓ Standard ✓ Easy-Load | 15.2 m (50 ft)/pk | 15.2 m (50 ft)/pk | 15.2 m (50 ft)/pk |
| <ul style="list-style-type: none"> Complies with USP Class VI, FDA, EU Food, NSF, REACH, RoHS, ADFC Ideal for general transfer applications Nonaging, nonoxidizing, low gas permeability | PG-06509-26 | | PG-06509-73 | PG-06509-82 | |
| Tygon Fuel & Lubricant (F-4040-A) |  | <ul style="list-style-type: none"> ✓ Easy-Load | — | 15.2 m (50 ft)/pk | 15.2 m (50 ft)/pk |
| <ul style="list-style-type: none"> Complies with REACH, RoHS, ADFC Special formulation to transport hydrocarbons, petroleum products, distillates Very low gas permeability | — | | PG-06401-73 | PG-06401-82 | |
| Tygon Chemical (2001) |  | <ul style="list-style-type: none"> ✓ Easy-Load | 15.2 m (50 ft)/pk | 15.2 m (50 ft)/pk | 15.2 m (50 ft)/pk |
| <ul style="list-style-type: none"> Complies with FDA 21 CFR 175.300, REACH, RoHS, ADFC Best chemical resistance of any Tygon formulation Plasticizer-free and low gas permeability | PG-06475-26 | | PG-06475-73 | PG-06475-82 | |
| Norprene® (A-60 G) |  | <ul style="list-style-type: none"> ✓ Standard ✓ Easy-Load | 15.2 m (50 ft)/pk | 15.2 m (50 ft)/pk | 15.2 m (50 ft)/pk |
| <ul style="list-style-type: none"> Complies with NSF, REACH, RoHS Up to 10,000 hours of tubing life Best choice for pressure/vacuum applications | PG-06404-26 | | PG-06404-73 | PG-06404-82 | |
| Norprene Food (A 60 F) |  | <ul style="list-style-type: none"> ✓ Standard ✓ Easy-Load | 15.2 m (50 ft)/pk | 15.2 m (50 ft)/pk | 15.2 m (50 ft)/pk |
| <ul style="list-style-type: none"> Complies with FDA, 3A, NSF, REACH, RoHS Ideal for high-temperature food applications Resists heat, ozone, acids, and alkalis | PG-06402-26 | | PG-06402-73 | PG-06402-82 | |
| Viton® |  | <ul style="list-style-type: none"> ✓ Standard ✓ Easy-Load | 7.6 m (25 ft)/pk | 7.6 m (25 ft)/pk | — |
| <ul style="list-style-type: none"> Complies with FDA, ADFC Perfect where FDA and chemical compatibility are needed Resists corrosives, solvents, and oils at elevated temperatures | PG-96412-26 | | PG-96412-73 | — | |

[†]Determined under the following conditions: Using a 1 to 650 rpm drive; 0 psi at inlet, 0.5 psi at outlet; water temperature at 22°C (72°F).

Overlook Filler/Dispensing Nozzles

- Maximize the speed, precision, and accuracy of dispensing and filling applications
- Minimize splashing and dripping when dispensing into narrow- or wide-mouth containers
- Dimensional tolerances of ±0.05% for assured repeatability



| Tubing ID | Catalog number | Price |
|-----------|-----------------------------|-------|
| 1/32" | PG-30619-06 | |
| 1/16" | PG-30619-01 | |
| 1/8" | PG-30619-07 | |
| 3/16" | PG-30619-02 | |
| 1/4" | PG-30619-08 | |
| 5/16" | PG-30619-03 | |
| 3/8" | PG-30619-09 | |
| 1/2" | PG-30619-04 | |
| 5/8" | PG-30619-10 | |
| 3/4" | PG-30619-05 | |

Benchtop Tubing Cutter

Steel blade makes right-angle cuts in several sizes of Masterflex tubing:



C/L® 2.06 mm, 2.79 mm OD
L/S® sizes 13, 14, 15, 16, 17, 18, 24, 25, 35, 36
I/P® sizes 26, 73

[PG-06438-10](#) Benchtop tubing cutter

I/P® Precision Process Drives

Powerful, low-maintenance drives keep you pumping

- Don't worry about moisture, chemicals, or dust—IP55-rated nonchip epoxy-coated steel housing
- Goes where you need it—compact and light enough to carry with one hand, powerful enough to drive two pump heads
- Get up to speed quickly—easy to adjust speed knob and LED display for improved repeatability



| Motor speed (rpm) | Speed control (repeatability) | Pump heads accepted | Motor size | Power (50/60 Hz) | | Catalog number | Price |
|---|-------------------------------|---------------------|------------------|------------------|--------------------------------|-----------------------------|-------|
| | | | | VAC | Amps | | |
| Variable-speed brushless process drive; 14"L x 10"W x 9"H (35.6 x 25.4 x 22.9 cm) | | | | | | | |
| 33 to 650 | ±0.25% (2% of max rpm) | 2 | 1/3 hp (0.25 kW) | 90 to 260 | 4.5 at 115 VAC, 2.6 at 230 VAC | PG-77410-10 | |
| Variable-speed brushless process drive with remote input/output; 14"L x 10"W x 9"H (35.6 x 25.4 x 22.9 cm) | | | | | | | |
| 33 to 650 | ±0.25% (2% of max rpm) | 2 | 1/3 hp (0.25 kW) | 90 to 260 | 4.5 at 115 VAC, 2.6 at 230 VAC | PG-77411-00 | |

[PG-07595-43](#) Washdown foot switch for model 77411-00

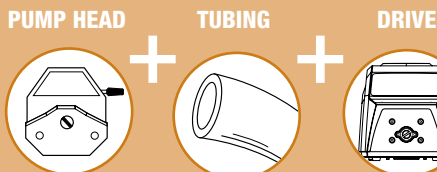
[PG-77300-32](#) Remote cable kit. Required for model 77411-00 to operate the remote inputs and outputs



FEATURES

- ✓ Flow rates: 0.2 to 19 LPM
- ✓ Accuracy of ±0.25% speed control
- ✓ LED display
- ✓ Reversible motor and remote control capabilities
- ✓ Accept up to 2 pump heads

Choose a Complete System
One catalog number includes all 3!



| System | Flow range | What's included | | | Power | Catalog number | Price |
|--------|---------------|---------------------------|--|--|-------------------------|-----------------------------|-------|
| | | Pump head | Tubing | Drive | | | |
| | 0.4 to 8 LPM | Easy-Load® 77602-10 | C-Flex® ULTRA I/P 73 tubing 06434-73 10 ft (3 m) | Brushless process drive 77410-10 33 to 650 rpm | 90 to 260 VAC, 50/60 Hz | PG-77963-10 | |
| | 0.7 to 17 LPM | High-Performance 77600-62 | Tygon® E-LFL I/P 88 tubing 06440-88 3 ft (1 m) | Brushless process drive 77410-10 33 to 650 rpm | 90 to 260 VAC, 50/60 Hz | PG-77963-20 | |

Application Solution



Challenge: A research institute needed to produce neutrons for scientific research by striking a liquid mercury target with a stream of protons. To set up neutron production, the research team had to pump mercury from a reservoir into a smaller receptacle quickly and efficiently. Likewise, the researchers required a pumping technology that would not allow the transfer equipment to become contaminated. Due to the hazardous nature of mercury, the pumping operation had to be carried out under a fume hood at a distance from the operator.

Solution: The researchers opted to use the Masterflex I/P brushless drive 77411-00 with the Easy-Load pump head 77602-10 (page 24) for its efficient and rapid pumping capabilities. The customer opted to use Tygon E-LFL tubing (page 26); as the only part of the pump system coming into contact with the mercury, it was easy to replace when contaminated, while preserving the integrity of the rest of the system. The I/P process drive also offers remote input/output, making it ideal to position in the fume hood while allowing the researcher to operate the pump from a safe distance away.

I/P® Precision Variable-Speed Modular Drives

Place motor and controller where convenient with modular design

- Easy control of speed, direction, and start/stop with membrane keypad
- Ideal for metering and critical transfer applications

A. Modular Drive with Benchtop Controller

- Splash-resistant ABS plastic controller housing is IP33 rated; drive housing is epoxy finished steel, IP33 rated
- 6-ft (1.8-m) cable connects drive and controller; optional extension cable is available
- Remote control via DB9 female connector on controller



A.
07591-20

B. Washdown Modular Drive with Wall-Mount Controller

- Wall-mount controller housing is powder-coated aluminum, IP66 / NEMA 4X rated for washdown; powder-coated steel drive housing is IP66 / NEMA 4X rated for washdown
- 6-ft (1.8-m) cable connects drive and controller; optional extension cable is available
- Remote control via weather-resistant connection on controller

FEATURES

- ✓ Flow rates: 0.036 to 19 LPM
- ✓ Accuracy of ±0.25% speed control
- ✓ LED display
- ✓ Reversible motor
- ✓ Remote control capabilities
- ✓ Accept up to 2 pump heads



B.
Model 07591-30 includes wall-mount controller.

What's included: 6-ft (1.8-m) line cord with IEC 320/CEE22 socket. These models are shipped with country-specific plug/cord set; please specify ultimate destination when ordering.



| rpm | Speed control (resolution) | Pump heads accepted | Motor size | IP rating | Dimensions (L x W x H) | Power (50/60 Hz) | | Catalog number | Price |
|---|----------------------------|---------------------|----------------|-----------|---|------------------|-----------------------------------|-----------------------------|-------|
| | | | | | | VAC | Amps | | |
| A. Precision modular drive with benchtop controller | | | | | | | | | |
| 6 to 650 | ±0.25% (1 rpm at 650 rpm) | 2† | 1/8 hp (149 W) | IP33 | Controller: 10 3/8" x 8 3/8" x 5 1/2" Drive: 13 7/8" x 5 1/2" x 6 1/2" | 90 to 260 | 4.4 at 115 VAC, 2.2 at 230 VAC | PG-07591-20 | |
| B. Precision washdown modular drive with wall-mount controller | | | | | | | | | |
| 6 to 650 | ±0.25% (1 rpm at 650 rpm) | 2† | 1/8 hp (149 W) | IP66 | Controller: 10 1/8" x 11" x 4 3/4" Drive: 14 1/4" x 7" x 6 1/2" | 90 to 260 | 4.4 at 115 VAC, 2.2 at 230 VAC | PG-07591-30 | |

†Drive accepts two pump heads when loaded with silicone or C-Flex® tubing.

PG-07557-51 Extension cable, 9 ft (2.7 m); extend distance between motor and controller

PG-07595-47 Cable assembly for benchtop drive 07591-20; DB9 male connector and 25-ft (7.9-m) cable with stripped wire terminal ends. Use for remote control

PG-77300-32 Cable assembly for washdown drive 07591-30; 18-pin round connector and 25-ft (7.9-m) cable with stripped wire terminal ends. Use for remote control

PG-17050-01 NIST-traceable calibration for peristaltic pump drive

PUMP HEAD

+

TUBING

+

DRIVE

Choose a Complete System

One catalog number includes all 3!

| System | Flow range | What's included | | | Power | Catalog number | Price |
|--------|---------------|---------------------|--|--|-------------------------|-----------------------------|-------|
| | | Pump head | Tubing | Drive | | | |
| | 0.06 to 8 LPM | Easy-Load® 77602-10 | C-Flex® ULTRA I/P 73 tubing 06434-73 10 ft (3 m) | Modular drive 07591-20 6 to 650 rpm | 90 to 260 VAC, 50/60 Hz | PG-77962-20 | |
| | 0.06 to 8 LPM | Easy-Load 77601-10 | C-Flex ULTRA I/P 73 tubing 06434-73 10 ft (3 m) | Washdown modular drive 07591-30 6 to 650 rpm | 90 to 260 VAC, 50/60 Hz | PG-77962-30 | |

I/P® Digital Console Process Drives

Maintenance-free drives built for process applications

- Graphical LCD shows four operating modes: continuous run, timed dispense, copy dispense, volume dispense
- Dispense by mL—volume in mL of each dispense, 0.001 to 9999 mL; Copy—1 to 9,999 dispense cycles; or SEC—time interval of on/off cycles (1 sec to 99 hr, 59 min, 59 sec per cycle)

Model 77420-10 features a 316 stainless steel housing with an anodized aluminum base. Ideal for pharmaceutical, dairy, biotech, and food and beverage applications.

Model 77420-20 features a powder-coated steel housing with anodized aluminum base. Use in process, manufacturing, and water-treatment applications where stainless steel is not a critical requirement.

What's included: 6-ft (1.8-m) line cord with IEC 320/CEE22 socket. These models are shipped with country-specific plug/cord set; please specify ultimate destination when ordering.



FEATURES

- ✓ Flow rates: 0.0006 to 19 LPM
- ✓ Accuracy of ±0.1% speed control
- ✓ Four-line graphical display
- ✓ Reversible motor
- ✓ IP66-rated for easy washdown
- ✓ Accept up to 2 pump heads

77420-10 shown with I/P High-Performance pump head 77600-62

ISO9001:2008
CERTIFIED SUPPLIER



| rpm | Speed control (resolution) | Pump heads accepted | Motor size | IP rating | Dimensions (L x W x H) | Power (50/60 Hz) | | Catalog number | Price |
|---|----------------------------|---------------------|----------------|-----------|--|------------------|--------------------------------|-----------------------------|-------|
| | | | | | | VAC | Amps | | |
| Digital process drive with 316 stainless steel housing | | | | | | | | | |
| 0.1 to 650 | ±0.1% | 2 | 3/8 hp (280 W) | IP66 | 16 ¹¹ / ₁₆ " x 11 ¹ / ₈ " x 12 ⁷ / ₈ " | 90 to 260 | 4.5 at 115 VAC, 2.5 at 230 VAC | PG-77420-10 | |
| Digital process drive with powder-coat steel housing | | | | | | | | | |
| 0.1 to 650 | ±0.1% | 2 | 3/8 hp (280 W) | IP66 | 16 ¹¹ / ₁₆ " x 11 ¹ / ₈ " x 12 ⁷ / ₈ " | 90 to 260 | 4.5 at 115 VAC, 2.5 at 230 VAC | PG-77420-20 | |

[PG-07575-84](#) Washdown foot switch, momentary start/stop; 6-ft (1.8-m) cable

[PG-07575-80](#) Cable assembly, 31-pin round connector and 25-ft (7.9-m) cable with stripped wire ends for remote control

[PG-17050-01](#) NIST-traceable calibration for peristaltic pump drive

Wait!

There's More at ColeParmer.com

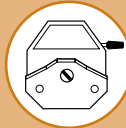
Find all the product specs you need!

Choose a Complete System
One catalog number includes all 3!

PUMP HEAD

TUBING

DRIVE



| System | Flow range | What's included | | | Power | Catalog number | Price |
|--------|------------------|---------------------|--|--|-------------------------|-----------------------------|-------|
| | | Pump head | Tubing | Drive | | | |
| | 0.001 to 8.0 LPM | Easy-Load® 77602-10 | C-Flex® ULTRA I/P 73 tubing 06434-73 10 ft (3 m) | Digital process drive with 316 SS housing 77420-10 0.1 to 650 rpm | 90 to 260 VAC, 50/60 Hz | PG-77964-20 | |
| | 0.001 to 8.0 LPM | Easy-Load 77602-10 | C-Flex® ULTRA I/P 73 tubing 06434-73 10 ft (3 m) | Digital process drive with powder-coat steel housing 77420-20 0.1 to 650 rpm | 90 to 260 VAC, 50/60 Hz | PG-77964-30 | |

I/P® Variable-Speed Modular Digital Dispensing Drives

Get precise digital dispensing with virtually no maintenance

- Graphical LCD shows four operating modes: continuous run, timed dispense, copy dispense, and volume dispense
- Programmable dispense interval lets you set the delay between dispense cycles for convenient, automated dispensing by time or by volume
- Brushless motor gives you quiet, maintenance-free reliability

A. Modular Drive with Benchtop Controller

- Splash-resistant ABS plastic controller housing is IP33 rated; drive housing is epoxy finished steel, IP33 rated
- 6-ft (1.8-m) cable connects drive and controller; optional extension cable is available
- Remote control capabilities via a DB25 female connector on controller

B. Washdown Modular Drive with Wall-Mount Controller

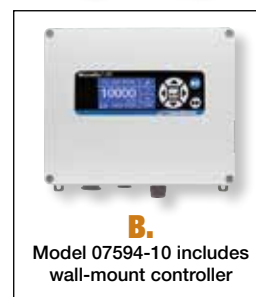
- Wall-mount controller housing is powder-coated aluminum, IP66 / NEMA 4X rated for washdown; powder-coated steel drive housing is IP66 / NEMA 4X rated for washdown
- 6-ft (1.8-m) cable connects drive and controller; optional extension cable is available
- Remote control capabilities via weather-resistant 31-pin round connection on controller



A.
07594-00

FEATURES

- ✓ Flow rates: 0.0006 to 19 LPM
- ✓ Accuracy of ±0.1% speed control
- ✓ Four-line graphical display
- ✓ Antidrip, reversible motor
- ✓ Remote control capabilities
- ✓ Accept up to 2 pump heads



B.
Model 07594-10 includes wall-mount controller

What's included: 6-ft (1.8-m) line cord with IEC 320/CEE22 socket. Shipped with country-specific plug/cord set; please specify ultimate destination when ordering.

ISO9001:2008
CERTIFIED SUPPLIER



07594-10



| rpm | Speed control (resolution) | Pump heads accepted | Motor size | IP rating | Dimensions (L x W x H) | Power (50/60 Hz) | | Catalog number | Price |
|--|----------------------------|---------------------|----------------|-----------|--|------------------|-----------------------------------|-----------------------------|-------|
| | | | | | | VAC | Amps | | |
| A. Digital modular dispensing drive with benchtop controller | | | | | | | | | |
| 0.1 to 650 | ±0.1% (0.1 rpm at 650 rpm) | 2 | 3/4 hp (280 W) | IP33 | Controller: 10 1/2" x 8 1/4" x 5" Drive: 15 1/16" x 7" x 6" | 90 to 260 | 4.5 at 115 VAC, 2.5 at 230 VAC | PG-07594-00 | |
| B. Digital washdown modular dispensing drive with wall-mount controller | | | | | | | | | |
| 0.1 to 650 | ±0.1% (0.1 rpm at 650 rpm) | 2 | 3/4 hp (280 W) | IP66 | Controller: 9" x 11 3/4" x 4 1/2" Drive: 15 1/16" x 7" x 6" | 90 to 260 | 4.5 at 115 VAC, 2.5 at 230 VAC | PG-07594-10 | |

[PG-77301-82](#) Extension cable, 9 ft (2.7 m); extend distance between motor and controller

[PG-07523-95](#) Cable assembly for benchtop drive 07594-00; DB25 male connector and 25-ft (7.9-m) cable (stripped wire ends) for remote control

[PG-07575-80](#) Cable assembly for washdown drive 07594-10; 31-pin round connector and 25-ft (7.9-m) cable with stripped wire ends for remote control

[PG-17050-01](#) NIST-traceable calibration for peristaltic pump drive

PUMP HEAD + TUBING + DRIVE



Choose a Complete System
One catalog number includes all 3!

| Flow range | What's included | | | Power | Catalog number | Price |
|----------------|---------------------|--|---|-------------------------|-----------------------------|-------|
| | Pump head | Tubing | Drive | | | |
| 0.001 to 8 LPM | Easy-Load® 77602-10 | C-Flex® ULTRA I/P 73 tubing 06434-73 10 ft (3 m) | Digital dispensing drive 07594-00 0.1 to 650 rpm | 90 to 260 VAC, 50/60 Hz | PG-77970-40 | |
| 0.001 to 8 LPM | Easy-Load 77602-10 | C-Flex ULTRA I/P 73 tubing 06434-73 10 ft (3 m) | Digital washdown dispensing drive 07594-10 0.1 to 650 rpm | 90 to 260 VAC, 50/60 Hz | PG-77970-50 | |

Application Solution

Challenge: A customer is pouring hot wax into containers that hold from 50 grams to 3 pounds. Another peristaltic pump was used to pump the wax, but it was slow. The customer needs to put the containers on a conveyor belt and wants to operate the pump with a remote control feature so that the operator does not get too close to the wax. Intervals of 1 to 2 seconds between filling sessions is required, so this needs to be controlled by the pump as well.

Solution: The larger I/P pump system 77970-50 fulfills the customer's needs to accurately dispense wax into a range of container capacities in quick succession with time-controlled intervals. Plus, the option to remotely control the pump allows the operator to be a safe distance away.

B/T® Fixed- and Variable-Speed Pumps

Achieve the highest flow rates of any Masterflex pump—up to 42 LPM (11.1 GPM)

- Interlock switch shuts off power when pump head is opened
- Washdown pumps handle the toughest process and production applications, then clean up with ease
- Gentle peristaltic action is ideal for pumping shear-sensitive or viscous fluids (up to 10,000 cps)
- Rotor and occlusion bed design allow easier tube loading and prevent “tubing roll” during operation

A. Fixed-Speed Pumps

- Economical and easy to operate
- Reversible motor: purge before or after pumping, pump fluid in either direction
- IP55-rated motor—wash off dirt and debris

B. Air-Powered Pump

- Use in locations where electricity is unsafe or impractical
- Includes pressure regulator—control your compressor air to match pump requirements
- 24 cfm (0.68 m³), 100 psi (6.9 bar) minimum air required, supply your own compressor to power pump
- IP56-rated motor protects against dust and strong water jets
- Rated for ATEX Zone 2 EEx II 3 G c IIC T6; NEC Class 1, Division 2, Groups A, B, C, D, T6

C. Variable-Speed Modular Pump

- Place washdown controller wherever it's convenient
- Controller with 16-ft (4.9-m) cord mounts on pump or wall
- IP56-rated motor protects against dust and strong water jets
- Reversible motor: purge before or after pumping, pump fluid in either direction

D. Variable-Speed Modular Digital Pump

- High-volume filling and dispensing
- Dispense by volume or time, or pump continuously
- Separate motor and controller by up to 6 feet (1.8 meters) for convenient operation
- IP56-rated controller and motor protect against dust and water

What's included: a Rapid-Load® pump head, 3 ft (1 m) of Tygon® E-LFL B/T 91 tubing 06440-91, and a 6-ft (1.8-m) power cord (115 VAC: US standard plug; 230 VAC: European plug) for models “A, C, D.”



A



B

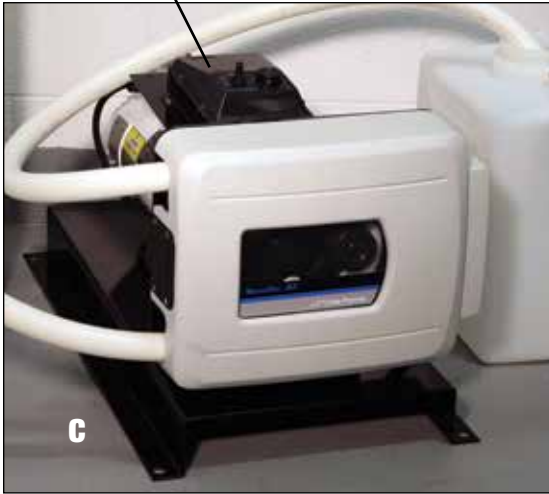
Application Solution



Challenge: A dairy farm that produces more than 7 million liters (1.9 million gallons) of milk annually needed a pump for transferring raw milk from a storage tank to its treatment and bottling line. The dairy farm absolutely required a pump system whose wetted parts were in compliance with regulatory guidelines, but also wanted a system that would minimally agitate the milk during the transfer operation. The dairy was considering other sanitary pumps, such as a rotary lobe pump, for the application. While the pump would not see continual use, it must be ready to operate on demand.

Solution: The customer chose the B/T fixed speed pump 77111-30 along with Tygon® E-Food tubing. Because the milk only touched the tubing and not any of the pump's mechanical parts, the dairy was assured of compliance with regulatory guidelines and protected against contamination. The fixed speed pump offers high flow rates for efficient pumping but also ensures minimal agitation to the fluid. Finally, when compared with the stainless steel rotary lobe pump, the B/T system was much less expensive.

Detachable wall-mount controller for variable-speed pump 77111-60



Flow Rates in LPM (GPM)

| rpm | PerfectPosition® pump tubing | |
|-----------|------------------------------|-------------------------|
| | B/T 87 | B/T 91 |
| 321 | 18.9 (5.0) | 42 (11.1) |
| 271 | 16.0 (4.2) | 35 (9.4) |
| 35 to 321 | 1.9 to 17.7 (0.5 to 4.7) | 4.0 to 37 (1.06 to 9.8) |
| 12 to 321 | 0.71 to 18.9 (0.19 to 5.0) | 1.4 to 42 (0.4 to 11.1) |

ISO9001:2008
CERTIFIED SUPPLIER



77111-30, -37

77111-37, -67, -77, -80

Zone 2 77111-80

77111-30, -37

Except 77111-30, -37

| Key | Motor type | Motor size | rpm | IP rating | Mounting type | Dimensions (L x W x H) | Power | | Catalog number | Price |
|-----|--------------------------------|----------------|-----------|---------------------------------|---------------|---|---|-------------|----------------|-------|
| | | | | | | | VAC (Hz) | Amps | | |
| A | Fixed-speed | 1 hp (0.75 kW) | 321 | IP55 | Direct-drive | 27" x 15.8" x 15.1" (68.6 x 40 x 38.4 cm) | 115 (60) | 12.6 | PG-77111-30 | |
| | | | 271 | | | | 220 (50) | 6.3 | | |
| B | Variable-speed, air powered | ¾ hp (0.56 kW) | 35 to 321 | IP56 | Direct-drive | 27" x 15.8" x 15.1" (68.6 x 40 x 38.4 cm) | Requires 24 cfm (0.68 m³) 100 psi (6.9 bar) minimum | | PG-77111-80 | |
| C | Variable-speed (±5%) | ½ hp (0.37 kW) | 12 to 321 | Controller: IP56 Drive: IP56 | Direct-drive | 27" x 15.8" x 17.4" (68.6 x 40 x 44.2 cm) | 115 (50/60) | 6.5 | PG-77111-60 | |
| D | Variable-speed digital (±0.3%) | ¾ hp (0.56 kW) | 12 to 321 | | Direct-drive | Controller: 9" x 11" x 4½" (22.9 x 27.9 x 11.4 cm) Drive: 27" x 15¼" x 15" (68.6 x 40.0 x 38.4 cm) | 230 (50/60) | 3.3 | PG-77111-67 | |
| | | | | | | 90 to 130 (50/60) | 10.5 | PG-77111-70 | | |
| | | | | | | 190 to 260 (50/60) | 5.7 | PG-77111-77 | | |

PG-77300-32 Remote cable, required for remote control operation of models 77111-70 and -77; 25 ft (7.6 m)

PG-77111-90 Bracket for digital controller on models 77111-70 and -77

Application Solution



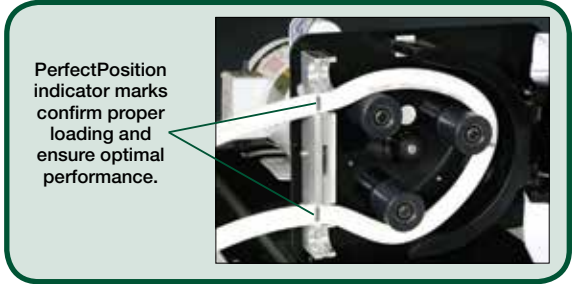
Challenge: A pharmaceutical company needs to pump diluents, which they use to adjust the final concentration of their injectable drugs, from a large 100-L tank where it is mixed and stored, into 10-L totes they can easily transport to their production lines. They want to dispense exactly 10 L into each tote, and they want to do so quickly.

Solution: We recommend using the B/T digital pump (77111-70, -77) because it dispenses large volumes precisely and quickly. The controller and drive are both washdown IP56-rated; an important feature for the extremely clean pharmaceutical production environment. Plus, the easy-opening cover swings away to allow for CIP or SIP protocols. Using size B/T 91 pump tubing will provide the company with a ±1% accuracy at a dispense volume of 10 L, ensuring that very little diluent is lost during the dispensing process.

B/T® PerfectPosition® Pump Tubing

Position more easily—retention marks indicate exact placement

- Optimized for use in B/T pumps to provide the pumping life, flow, and repeatability that you expect



| Tubing size | B/T 87 | B/T 91 |
|---------------------------------------|------------------------------------|---------------------------------|
| Inner diameter | 12.7 mm (0.5") | 19.0 mm (0.75") |
| Hose barb size | 12.7 mm (½") | 19.0 mm (¾") |
| Flow range (approximate) [†] | 0.67 to 18.9 LPM (0.17 to 5.0 GPM) | 1.4 to 42 LPM (0.4 to 11.1 GPM) |

| Pump tubing formulation | Description |  |  |
|--|---|--|---|
|  Silicone (platinum-cured) | <ul style="list-style-type: none"> – Complies with USP Class V, EP, FDA, REACH, RoHS, ADFC – Low protein binding, fungus-resistant, phthalate and latex free – Accommodates a wide temperature range | PG-96510-87 | PG-96510-91 |
|  Silicone (peroxide-cured) | <ul style="list-style-type: none"> – Complies with USP Class VI, EP, FDA, 3A, REACH, RoHS, ADFC – Greater physical compression capability – Economical, long life | PG-96400-87 | PG-96400-91 |
|  BioPharm Plus Silicone (platinum-cured) | <ul style="list-style-type: none"> – Complies with USP Class VI, EP, FDA, 3A, REACH, RoHS, ADFC – Ultra-smooth inner surface minimizes particle entrapment – Very low extractable—ideal for lab, biotech pharma applications | PG-96445-87 | PG-96445-91 |
|  Puri-Flex™ | <ul style="list-style-type: none"> – Complies with USP Class VI, FDA, REACH, RoHS, ADFC – Heat sealable, weldable, and economical – Long pump life compared to silicone or many TPE tubings | PG-96419-87 | PG-96419-91 |
|  C-Flex® | <ul style="list-style-type: none"> – Complies with USP Class VI, EP, REACH, RoHS, ADFC – Heat sealable, weldable, economical – Better resistance to pH fluctuations | PG-06424-87 | PG-06424-91 |
|  PharMed® BPT | <ul style="list-style-type: none"> – Complies with USP Class VI, EP, FDA, NSF-51, REACH, RoHS – Over 10,000 hours of tubing life, sealable, weldable – Ideal for tissue and cell culture work | PG-06507-87 | PG-06507-91 |
|  PharmaPure® | <ul style="list-style-type: none"> – Complies with USP Class VI, EP, FDA, REACH, RoHS – Nontoxic and nonhemolytic biocompatible – Long life even under pressure with VERY low spallation | PG-06437-87 | PG-06437-91 |
|  Chem-Durance® Bio | <ul style="list-style-type: none"> – Complies with USP Class VI, FDA, REACH, RoHS – Excellent chemical compatibility and biocompatibility – Excellent pump life and durability under pressure | PG-06443-87 | PG-06443-91 |
|  Tygon® E-LFL | <ul style="list-style-type: none"> – Complies with USP Class VI, EP, FDA, EU Food, REACH, RoHS, ADFC – Longest life of all Tygon formulations – Broad chemical resistance | PG-06440-87 | PG-06440-91 |
|  Tygon® E-Food (B-44-4X) | <ul style="list-style-type: none"> – Complies with FDA, EU Food, NSF-51, 3A, REACH, RoHS, ADFC – Smooth inner surface unaffected by commercial sanitizers – Nontoxic, will not affect taste or odor | PG-06418-87 | PG-06418-91 |
|  Norprene® Food (A-60-F) | <ul style="list-style-type: none"> – Complies with FDA, 3A, NSF-51, REACH, RoHS – Ideal for high-temperature food applications – Resists heat, ozone, acids, and alkalis | PG-06399-87 | PG-06399-91 |

[†]Determined under the following conditions: Using a 11 to 321 rpm drive; 0 bar (0 psi) at inlet, 0.03 bar (0.5 psi) at outlet; water temperature at 22°C (72°F).

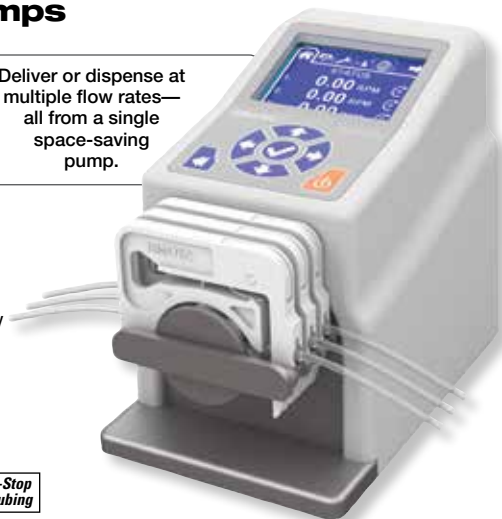
Reglo Independent Channel Control (ICC) Pumps

Pump each channel at different speeds and directions!

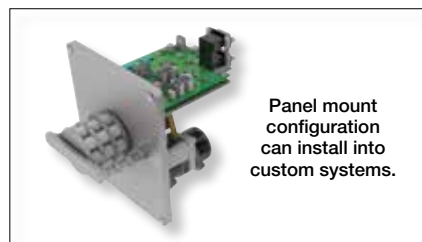
- Each pump performs the job of up to four separate pumps
- **New!** Additional options in channel and roller configurations allow balanced pulsation control at desired flow rate
- USB interface for quick computer connections using redesigned graphical user-interface

These two-, three- and four-channel peristaltic pumps let you individually control the flow and direction of each channel from the intuitive keypad or via your computer—expanding your benchtop pumping capabilities with a single compact unit! Pump delivers continuous pumping or precision dispensing up to 43 mL/min with the capability of bidirectional flow in each channel. Plus, independent channel calibration minimizes tube-to-tube differences, resulting in high calibration accuracy.

Deliver or dispense at multiple flow rates—all from a single space-saving pump.



3-Stop Tubing
See pages 39–40.



Panel mount configuration can install into custom systems.

Minicartridges

- [PG-78016-98](#) Replacement Click'n'go™ tubing cassette, POM-C
- [PG-78016-96](#) Click'n'go™ tubing cassette, PVDF

Specifications

Speed: 0.1 to 100 rpm **Accuracy:** ±1% **Pressure:** up to 14.5 psi (1.0 bar)



| Channels | Rollers | Tubing | Power (VAC, Hz) | Catalog number | Price |
|--------------------------|---------|------------|-------------------|-----------------------------|-------|
| Benchtop pumps | | | | | |
| 2 | 6 | Three-stop | 100 to 240, 50/60 | PG-78001-58 | |
| | 8 | | | PG-78001-60 | |
| | 12 | | | PG-78001-62 | |
| 3 | 6 | Three-stop | 100 to 240, 50/60 | PG-78001-68 | |
| | 8 | | | PG-78001-70 | |
| | 12 | | | PG-78001-72 | |
| 4 | 6 | Three-stop | 100 to 240, 50/60 | PG-78001-78 | |
| | 8 | | | PG-78001-80 | |
| | 12 | | | PG-78001-82 | |
| Panel-mount pumps | | | | | |
| 2 | 8 | Three-stop | 100 to 240, 50/60 | PG-78001-43 | |
| 3 | 8 | | | PG-78001-45 | |
| 4 | 8 | | | PG-78001-47 | |
| 4 | 12 | | | PG-78001-49 | |

Reglo Compact Multichannel Pumps

No more inconsistent results

- Consistent flow and reduced tubing wear for improved results
- Very small footprint for a stand-alone “smart” pump
- Easy channel changes—Click'n'go™ minicartridges snap in place

A. Reglo Analog Pumps. Speed is adjustable in 1% steps (2 to 100%) via 2-digit potentiometer. Control speed remotely. Start/stop pump or change direction via contact closure; monitor speed through frequency output.

B. Reglo Digital Programmable Pumps. Continuously pump or dispense in any of four modes—flow rate, time, batches, or drip-free. Pumps feature analog input and output controls, as well as an RS-232 interface for control by a computer. Remote control capable.



B
Reglo Digital pump 78017-00 is fully programmable.

| Flow range per channel (mL/min) | Channels | Rollers | Speed (rpm) | Tubing | 115 VAC, 50/60 Hz | | 230 VAC, 50/60 Hz | |
|--|----------|---------|-------------|------------|-----------------------------|-------|-----------------------------|-------|
| | | | | | Cat. no. | Price | Cat. no. | Price |
| A. Reglo Analog pumps | | | | | | | | |
| 0.005 to 68 | 2 | 6 | 3.2 to 160 | Three-stop | PG-78016-00 | | PG-78016-02 | |
| 0.004 to 57 | | 8 | | | PG-78016-10 | | PG-78016-12 | |
| 0.003 to 38 | | 12 | | | PG-78017-25 | | PG-78017-27 | |
| 0.003 to 43 | 4 | 6 | 2.0 to 100 | Three-stop | PG-78017-30 | | PG-78017-32 | |
| 0.003 to 35 | | 8 | | | PG-78016-30 | | PG-78016-32 | |
| 0.002 to 24 | | 12 | | | PG-78017-35 | | PG-78017-37 | |
| B. Reglo Digital programmable pumps with calibrating function | | | | | | | | |
| 0.003 to 68 | 2 | 6 | 3.2 to 160 | Three-stop | PG-78016-40 | | PG-78016-42 | |
| 0.002 to 57 | | 8 | | | PG-78017-00 | | PG-78017-02 | |
| 0.002 to 38 | | 12 | | | PG-78016-45 | | PG-78016-47 | |
| 0.002 to 43 | 4 | 6 | 2.0 to 100 | Three-stop | PG-78017-40 | | PG-78017-42 | |
| 0.002 to 35 | | 8 | | | PG-78017-10 | | PG-78017-12 | |
| 0.001 to 24 | | 12 | | | PG-78017-20 | | PG-78017-22 | |



See pages 39–40.

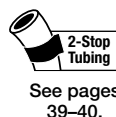
Minicartridges

Optional adjustable-occlusion minicartridge to manually vary pressure on each channel.

- [PG-07624-64](#) Optional adjustable occlusion cassette with pressure lever, POM-C
- [PG-07624-96](#) Replacement Click'n'go cassette, PVDF

IPC Low-Flow High-Accuracy Pumps Fewer tubing changes

- Planetary drive for less pulsation and longer tubing life
- Smooth rotation and accurate liquid flow provided by eight SS rotors
- Easy repeatability with four-digit LED
- Simple to use—automatic occlusion cartridges provide reproducible results
- Five modes for pumping or dispensing including flow rate, time, batches, drip-free, and volume
- Control via keypad, computer, or remote control
- IP and IP-N pumps available online



Choose from 4, 8, 12, 16 and 24 channel configurations for application flexibility.

Specifications

Accuracy: better than $\pm 1\%$ **Pressure**
 Click'n'go cassettes: up to 14.5 psi (1 bar)
 Pressure lever cassettes: up to 22 psi (1.5 bar)

| Flow range per channel (mL/min) | Channels | Rollers | Speed (rpm) | Cassette style | Tubing | 115 VAC, 50/60 Hz | | 230 VAC, 50/60 Hz | |
|---------------------------------|----------|---------|---------------|---------------------------------------|----------|-----------------------------|-------|-----------------------------|-------|
| | | | | | | Cat. no. | Price | Cat. no. | Price |
| IPC-N models | | | | | | | | | |
| 0.0004 to 11 | 4 | 8 | 0.11 to 11.25 | Click'n'go | Two-stop | PG-78001-00 | | PG-78001-06 | |
| | 8 | | | | | PG-78001-10 | | PG-78001-16 | |
| | 12 | | | | | PG-78001-20 | | PG-78001-26 | |
| | 16 | | | | | PG-78001-30 | | PG-78001-36 | |
| | 24 | | | | | PG-78001-40 | | PG-78001-46 | |
| 0.0004 to 11 | 8 | 8 | 0.11 to 11.25 | Pressure lever (adjustable occlusion) | Two-stop | PG-78000-11 | | PG-78000-17 | |
| | 16 | | | | | PG-78000-31 | | PG-78000-37 | |
| | 24 | | | | | PG-78000-41 | | PG-78000-47 | |
| IPC models | | | | | | | | | |
| 0.002 to 44 | 4 | 8 | 0.4 to 45 | Click'n'go | Two-stop | PG-78001-02 | | PG-78001-08 | |
| | 8 | | | | | PG-78001-12 | | PG-78001-18 | |
| | 12 | | | | | PG-78001-22 | | PG-78001-28 | |
| | 16 | | | | | PG-78001-32 | | PG-78001-38 | |
| | 24 | | | | | PG-78001-42 | | PG-78001-48 | |
| 0.002 to 44 | 4 | 8 | 0.4 to 45 | Pressure lever (adjustable occlusion) | Two-stop | PG-78000-03 | | PG-78000-09 | |
| | 8 | | | | | PG-78000-13 | | PG-78000-19 | |
| | 12 | | | | | PG-78000-23 | | PG-78000-29 | |
| | 16 | | | | | PG-78000-33 | | PG-78000-39 | |
| | 24 | | | | | PG-78000-43 | | PG-78000-49 | |

Order extra cartridges and adapters for fast tubing changes.

[PG-78001-95](#) Replacement Click'n'go™ cartridge, POM-C
[PG-78001-90](#) Repl. adjust. occlusion cartridge with pressure lever

[PG-07618-71](#) Replacement adapters hold two-stop color-coded tubing in cartridge. Two adapters required per cartridge. Pack of 12

Reglo Quick™ Pump Reduce downtime with easy tubing changeovers

- Wide opening angle makes tube bed easily accessible for quick tubing changes
- Four-roller head achieves flow rates up to 230 mL/min
- Compact design frees valuable space on your benchtop
- Input/output control adds versatility

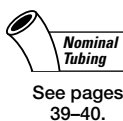


Head allows alternate placement of tubing.



Pump Tubing Flow Range Information

| Tubing ID in. (mm) | Wall thickness in. (mm) | Flow rate (mL/min) | |
|-----------------------|----------------------------|--------------------|-----|
| | | Min | Max |
| 1/8 (3.2) | 1/16 (1.6) | 2.1 | 103 |
| 3/16 (4.8) | 1/16 (1.6) | 4.6 | 230 |



| Flow range per channel | Channels | Rollers | Speed | Tubing | Power | | Catalog number | Price |
|------------------------|----------|---------|----------------|--------|-------------------|-------------------|-----------------------------|-------|
| | | | | | 115 VAC, 50/60 Hz | 230 VAC, 50/60 Hz | | |
| 2.1 to 230 mL/min | 1 | 4 | 3.2 to 160 rpm | Pump | | | PG-78018-00 | |
| | | | | | | | PG-78018-02 | |

ecoline Pumps

Save space—pumps stack easily

- Durable stainless steel housing and four stabilizing feet for easier stacking
- Simple setup and operation—start, stop, and reverse flow with a single switch

Pumps are controllable remotely via an analog input signal (0 to 5 VDC, 0 to 10 VDC, 0 to 20 mA, or 4 to 20 mA); start/stop drive or reverse direction via contact closure (eight-pin DIN). Input signals from your existing instruments actuate drive functions.

A–C. Single-Channel Pumps

- Minimize tubing wear and ensure automatic centering with convex roller

D. Minicartridge Pumps

- No adjustments needed—spring-loaded cassettes for optimal occlusion at all times
- Get consistent, low-pulse flow with 6 or 12 rollers



| Key | Flow range per channel (mL/min) | Channels | Rollers | Speed | Tubing | 115 VAC, 60 Hz | | 230 VAC, 50 Hz | |
|--|---------------------------------|----------|---------|----------------|------------------------|----------------|-------|----------------|-------|
| | | | | | | Cat. no. | Price | Cat. no. | Price |
| Single-channel pumps | | | | | | | | | |
| A | 1.7 to 5400 | 1 | 2 | 3.5 to 350 rpm | Pump (pgs 39–40) | PG-78022-10 | | PG-78022-12 | |
| B | 1.6 to 5000 | | 3 | | | PG-78022-20 | | PG-78022-22 | |
| C | 0.25 to 1300 | | 3 | | | PG-78022-30 | | PG-78022-32 | |
| Minicartridge pumps with Click'n'go cassettes | | | | | | | | | |
| D | 0.01 to 130 | 8 | 6 | 3.5 to 350 rpm | Three-stop (pgs 39–40) | PG-78022-40 | | PG-78022-42 | |
| | 0.0075 to 75 | 4 | 12 | | | PG-78022-60 | | PG-78022-62 | |

Accessories

- [PG-07624-64](#) Optional adjustable occlusion cassette with pressure lever, POM-C
- [PG-78016-98](#) Replacement Click'n'go™ cassette, POM-C
- [PG-07610-25](#) Foot switch, momentary contact
- [PG-17050-01](#) NIST-traceable calibration with data for peristaltic pump drive

BVP and MCP Quick-Couple Drives

Create a custom system with interchangeable pump heads

- Mount pump heads quickly with turn-and-lock mounting system
- Select from interchangeable tubing pump heads to achieve flow rates from 0.003 to 3700 mL/min



REQUIRED System Components

- 1) Quick-couple drive 37
- 2) Pump head 38
- 3) Tubing 39–40

BVP Standard and Process Drives

- Prime, flush, or prevent overflow with Max/Slow toggle switch

MCP Standard and Process Programmable Digital Drives

- Save time—recall and store up to four programs
- Preprogrammed with tubing sizes and heads for faster setup
- Use the RS-232 interface to automate your lab or operate independently via the keypad—RS-232 in for remote operation; RS-232 out for cascading pumps



BVP Process washdown drive 78003-10

MCP Standard programmable digital drive 78002-00



78003-05, -08, -10, -12 only

Specifications

Duty cycle: continuous

| Model | BVP Standard drive | | BVP Process washdown drive | | MCP Standard drive | | MCP Process washdown drive | |
|-----------------------------|--|-------------|--|-------------|---|-------------|--|-------------|
| | PG-78002-10 | PG-78002-12 | PG-78003-10 | PG-78003-12 | PG-78002-00 | PG-78002-02 | PG-78003-05 | PG-78003-08 |
| Programmable | No | | No | | Yes | | Yes | |
| Speed | 2.4 to 240 rpm (indicated as 1 to 99.9%) | | 1 to 240 rpm | | 1 to 240 rpm | | 1 to 240 rpm | |
| Resolution | 0.1% via 3-digit potentiometer | | 0.1 rpm | | 0.1 rpm | | 0.1 rpm | |
| Flow range/channel | 0.003 to 3700 mL/min | | 0.001 to 3700 mL/min | | 0.001 to 3700 mL/min | | 0.001 to 3700 mL/min | |
| Flow rate settings | — | | — | | µL/min, mL/min, L/min | | µL/min, mL/min, L/min | |
| Remote control capabilities | Speed control: 0 to 5 VDC, 0 to 10 VDC, 0 to 20 mA, 4 to 20 mA Speed output: 0 to 10 VDC or 0 to 12 kHz Start/stop, rotation direction | | Speed control: 0 to 5 VDC, 0 to 10 VDC, 0 to 20 mA, 4 to 20 mA Speed output: 0 to 10 VDC or 0 to 7.2 kHz Start/stop, rotation direction, autostart | | RS-232 (1 in, 1 out), 1 analog Speed control: 0 to 5 VDC, 0 to 10 VDC, 0 to 20 mA, 4 to 20 mA Speed output: 0 to 10 VDC or 0 to 12 kHz Start/stop, rotation direction, autostart | | RS-232 (1 in, 1 out), 1 analog Speed control: 0 to 5 VDC, 0 to 10 VDC, 0 to 20 mA, 4 to 20 mA Speed output: 0 to 10 VDC or 0 to 7.2 kHz Start/stop, rotation direction, autostart | |
| IP rating | IP30 | | IP65 | | IP30 | | IP65 | |
| Power | 115 VAC, 50/60 Hz | | 115 VAC, 50/60 Hz | | 115 VAC, 50/60 Hz | | 115 VAC, 50/60 Hz | |
| Price | | | | | | | | |

Pump Heads for Quick-Couple Drives

A. Washdown Pump Heads

Dismantle for easy cleaning—ideal for hygienic applications. Convex rollers and concave tube-bed maintain the integrity of material being pumped. Coated aluminum with stainless steel rollers.

| Flow range (mL/min) | Channels | Rollers | Tubing | Wall thickness | Max pressure | Catalog number | Price |
|---------------------|----------|---------|-----------------------|----------------|------------------|-----------------------------|-------|
| 0.49 to 3700 | 1 | 2 | Pump (pages 39–40) | 1.6 mm | 22 psi (1.5 bar) | PG-78002-11 | |
| 3.6 to 3100 | 1 | 2 | | 2.4 mm | 36 psi (2.5 bar) | PG-78002-13 | |
| 0.45 to 3400 | 1 | 3 | | 1.6 mm | 22 psi (1.5 bar) | PG-78002-16 | |
| 3.3 to 2900 | 1 | 3 | | 2.4 mm | 36 psi (2.5 bar) | PG-78002-14 | |

B. Minicartridge Pump Heads

Minimize pulsation with more rollers. Get up to 24 channels with 78002-50 and 07623-00 below. Get up to 16 channels of the smoothest flow with 78002-90 and 07623-30 below.

| Flow range (mL/min) | Channels | Rollers | Tubing | Max pressure | Catalog number | Price |
|---------------------|--------------|---------|-----------------------------|------------------------------------|-----------------------------|-------|
| 0.002 to 100 | 8 (up to 24) | 6 | Three-stop (pages 39–40) | 14.5 psi (1.0 bar) [†] | PG-78002-50 | |
| 0.001 to 57 | 4 (up to 16) | 12 | | | PG-78002-90 | |

[†]22 psi (1.5 bar) achievable with pressure lever cassettes.

[PG-07623-00](#) Eight-channel extension pump head. Use up to two with 78002-50 to get 24 channels

[PG-07623-30](#) Four-channel extension pump head. Use up to three with 78002-90 to get 16 channels

C. Standard Cartridge Pump Heads

Ideal pump head for multichannel applications at higher flow rates. Click'n'go™ cartridges allow quick and easy tubing changes.

| Flow range (mL/min) | Channels | Rollers | Tubing | Max pressure | Catalog number | Price |
|---------------------|----------|---------|---------------------------|------------------------------------|-----------------------------|-------|
| 0.002 to 230 | 8 | 8 | Two-stop (pages 39–40) | 14.5 psi (1.0 bar) [†] | PG-78002-34 | |
| | 12 | | | | PG-78002-36 | |

[†]22 psi (1.5 bar) achievable with pressure lever cassettes.

D. Tubing Bed Pump Heads

Ideal for delicate substances which require gentle occlusion setting. Spring-loaded tubing bed adjusts occlusion for optimum pressure and tubing.

| Flow range (mL/min) | Channels | Rollers | Tubing | Max pressure | Catalog number | Price |
|---------------------|----------|---------|-----------------------|---------------------|-----------------------------|-------|
| 1.1 to 1110 | 2 | 6 | Pump (pages 39–40) | 22 psi (1.5 bar) | PG-07611-10 | |
| 0.09 to 530 | 3 | | | | PG-07611-15 | |

E. Quick-Change Pump Heads

Hinged tube-bed allows rapid tube change-over. Easily accessible pump head. Self-centering tube-track results in longer tubing-life. Stainless steel rollers.

| Flow range (mL/min) | Channels | Rollers | Tubing | Max pressure | Catalog number | Price |
|---------------------|----------|---------|-----------------------|---------------------|-----------------------------|-------|
| 0.08 to 880 | 1 | 3 | Pump (pages 39–40) | 22 psi (1.5 bar) | PG-78002-22 | |
| 0.44 to 2800 | | | | | PG-78002-20 | |

F. High-Viscosity Pump Head

Ideal for media with high viscosity or with a certain level of solid content. Accepts tubing with 1.6-mm and 2.4-mm wall thickness (for elevated differential pressures). Stainless steel rollers. Pressure on tubing adjustable via rollers.

| Flow range (mL/min) | Channels | Rollers | Tubing | Max pressure | Catalog number | Price |
|---------------------|----------|---------|-----------------------|--------------|-----------------------------|-------|
| 0.41 to 3600 | 1 | 3 | Pump (pages 39–40) | 36 psi | PG-78002-60 | |

G. Masterflex® Easy-Load® Pump Heads

Allows for fast and easy tubing changes. Accepts Masterflex L/S® pump tubing (see pages 10–13). Requires mounting plate below.

| Flow range (mL/min) | Channels | Rollers | Tubing | Max pressure | Catalog number | Price |
|---------------------|-------------|---------|---|--------------|-----------------------------|-------|
| 3.4 to 672 | 1 (up to 2) | 3 | L/S 15, L/S 24 | 20 psi | PG-07516-12 | |
| 0.12 to 912 | | | L/S 13, L/S 14, L/S 16, L/S 17, L/S 18, L/S 25 | | PG-07516-10 | |

[PG-78020-90](#) Mounting plate for Masterflex Easy-Load pump head

[PG-07013-05](#) Mounting hardware to stack two Easy-Load pump heads



2- and 3-Stop Color-Coded Tubing for Ismatec® Pumps

Don't confuse your tubing—color-coded for easy identification

STEP 1: Choose a tubing material & select the catalog number prefix.

Make sure to choose 2-stop or 3-stop tubing based on what your pump uses!

STEP 3: Complete your system with extension tubing.

Connect stopped and extension tubing with barbed fittings or splicing.

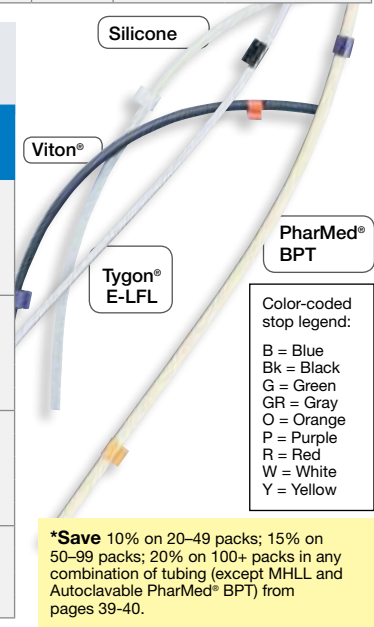
| Material | Description | Suffixes for the available sizes | Tubes/ pk (length) | 2-Stop Tubing | | 3-Stop Tubing | | Extension Tubing | | |
|---------------------------------|--|--|--------------------------|-----------------------------|---------------|-----------------------------|---------------|-----------------------------|---------------|---|
| | | | | Cat. no. prefix | Price/ pk* | Cat. no. prefix | Price/ pk* | Cat. no. prefix | Length/ pk | Price/ pk* |
| Tygon® E-LFL | <ul style="list-style-type: none"> Complies with USP Class VI, EP, FDA, EU food, REACH, RoHS, ADFC Longest life of all Tygon formulations Broad chemical resistance | 10, 12, 14, 18, 22, 24, 26, 28, 30, 31, 33, 34, 36, 37, 40, 42, 43, 47, 48 | 12 (16") | PG-96449-XX | | PG-96450-XX | | PG-06449-XX | 100 ft | |
| Tygon® E-Food | <ul style="list-style-type: none"> Complies with FDA, EU Food, NSF, 2A, REACH, RoHS, ADFC Smooth inner surface; nontoxic | 10, 12, 18, 26, 30, 34, 42, 48 | 12 (16") | PG-96457-XX | | PG-96458-XX | | PG-06457-XX | 100 ft | |
| Tygon® E-Lab | <ul style="list-style-type: none"> Complies with USP Class VI, EP, FDA, EU Food, NSF, REACH, RoHS, ADFC Ideal for general transfer applications Nonaging/nonoxidizing, low gas permeability | 10, 12, 14, 16, 18, 19, 22, 24, 26, 27, 28, 29, 30, 31, 32, 34, 36, 38, 39, 40, 42, 46, 48 | 12 (16") | PG-96460-XX | | PG-96461-XX | | PG-06460-XX | 100 ft | |
| Silicone (peroxide cured) | <ul style="list-style-type: none"> Complies with USP Class VI, EP, FDA, 3A, REACH, RoHS, ADFC Greater physical compression capability Economical, long tubing life | 22, 24, 26, 28, 30, 32, 34, 36, 38, 40, 42, 44, 46, 48 | 6 (16") | PG-07616-XX | | PG-07624-XX | | PG-07625-XX | 50 ft | |
| Silicone (platinum cured) | <ul style="list-style-type: none"> Complies with USP Class V, EP, FDA, REACH, RoHS, ADFC Low protein binding, fungus-resistant, phthalate and latex free | 22, 24, 26, 28, 30, 32, 34, 36, 38, 40, 42, 44, 46, 48 | 6 (16") | PG-95602-XX | | PG-95603-XX | | PG-95612-XX | 50 ft | |
| Viton® | <ul style="list-style-type: none"> Complies with FDA, ADFC Resists corrosives, solvents, and oils at elevated temperatures | 26, 30, 34, 38, 42, 46, 48 | 12 (12") | PG-97628-XX | | PG-97629-XX | | PG-97632-XX | 50 ft | |
| PharMed® BPT | <ul style="list-style-type: none"> Complies with USP Class VI, EP, FDA, NSF, REACH, RoHS Over 10,000 hours of tubing life, sealable, weldable | 10, 12, 14, 18, 22, 24, 26, 28, 30, 32, 34, 36, 38, 40, 42, 44, 46, 48 | 12 (16") | PG-95723-XX | | PG-95714-XX | | PG-95809-XX | 100 ft | |
| Autoclavable PharMed® BPT | <ul style="list-style-type: none"> Ideal for tissue and cell culture work | 12, 32, 48 | 6 (16") | PG-95692-XX | | PG-95693-XX | | | | |
| PVC Solvent/ hydrocarbon | <ul style="list-style-type: none"> Resistant to ozone and UV light Resists to cracking, swelling, hardening Ideal for fuels, distillates, lubricants, and glycol-based coolants | 10, 12, 14, 18, 22, 24, 26, 28, 30, 32, 34, 36, 38, 40, 42, 44, 46, 48 | 12 (16") | PG-95606-XX | | PG-95605-XX | | PG-95712-XX | 50 ft | |
| MHLL | <ul style="list-style-type: none"> Suitable for acetone, MEK, and other highly aggressive chemicals Long life and outstanding fatigue resistance | 24, 30, 36, 42, 48 | 6 (16") | PG-96427-XX | | PG-96425-XX | | | | None (PharMed BPT recommended for extension tubing; see 95809-XX above) |

STEP 2:

Find your desired flow rate and select the catalog number suffix (see page 40 for more).

| Flow rate† (mL/min) with Fixed-Speed Pumps (ColeParmer.com) | | | | | | | | Catalog number suffix | ID (mm) | Color-coded stops |
|---|--------------------|--------------------|--------------------|--------------------|--------------------|--------------------|--------------------|-----------------------|---------|-------------------|
| 78012-00, 78012-05 | 78012-20, 78012-25 | 78012-30, 78012-35 | 78012-40, 78012-45 | 78012-50, 78012-55 | 78012-60, 78012-65 | 78012-80, 78012-85 | 78012-90, 78012-95 | | | |
| 0.047 | 0.14 | 0.047 | 0.093 | 0.056 | 0.11 | 0.17 | 0.056 | -10 | 0.19 | O/R |
| 0.081 | 0.24 | 0.08 | 0.16 | 0.1 | 0.19 | 0.29 | 0.1 | -12 | 0.25 | O/B |
| 0.19 | 0.56 | 0.19 | 0.37 | 0.22 | 0.43 | 0.65 | 0.22 | -14 | 0.38 | O/G |
| 0.25 | 0.75 | 0.25 | 0.5 | 0.29 | 0.58 | 0.86 | 0.29 | -16 | 0.44 | G/Y |
| 0.34 | 1 | 0.34 | 0.67 | 0.38 | 0.77 | 1.2 | 0.38 | -18 | 0.51 | O/Y |
| 0.52 | 1.6 | 0.52 | 1 | 0.6 | 1.2 | 1.8 | 0.6 | -22 | 0.64 | O/W |
| 0.73 | 2.2 | 0.73 | 1.5 | 0.84 | 1.7 | 2.5 | 0.84 | -24 | 0.76 | Bk/Bk |
| 1 | 2.9 | 1 | 2 | 1.1 | 2.3 | 3.4 | 1.1 | -26 | 0.89 | O/O |
| 1.3 | 3.8 | 1.3 | 2.5 | 1.5 | 2.9 | 4.4 | 1.5 | -28 | 1.02 | W/W |
| 1.6 | 4.7 | 1.6 | 3.1 | 1.8 | 3.6 | 5.4 | 1.8 | -30 | 1.14 | R/R |
| 2 | 5.9 | 2 | 3.9 | 2.3 | 4.6 | 6.9 | 2.3 | -32 | 1.3 | GR/GR |
| 2.3 | 6.8 | 2.3 | 4.6 | 2.7 | 5.4 | 8 | 2.7 | -34 | 1.42 | Y/Y |
| 2.6 | 7.7 | 2.6 | 5.1 | 3 | 6 | 9.1 | 3 | -36 | 1.52 | Y/B |
| 2.9 | 8.8 | 2.9 | 5.8 | 3.5 | 6.9 | 10 | 3.5 | -38 | 1.65 | B/B |
| 3.5 | 10 | 3.5 | 7 | 4.2 | 8.4 | 13 | 4.2 | -40 | 1.85 | G/G |
| 4.1 | 12 | 4.1 | 8.2 | 5 | 10 | 15 | 5 | -42 | 2.06 | P/P |
| 4.8 | 14 | 4.8 | 9.5 | 5.8 | 12 | 17 | 5.8 | -44 | 2.29 | P/Bk |
| 5.5 | 16 | 5.5 | 11 | 6.6 | 13 | 20 | 6.6 | -46 | 2.54 | P/O |
| 6.2 | 19 | 6.2 | 12 | 7.4 | 15 | 22 | 7.4 | -48 | 2.79 | P/W |

†Flow ranges (mL/min) are nominal. Actual flow depends on factors such as occlusion, fluid viscosity, temperature, and pressure



***Save 10% on 20–49 packs; 15% on 50–99 packs; 20% on 100+ packs in any combination of tubing (except MHLL and Autoclavable PharMed® BPT) from pages 39–40.**

Continued on next page...

STEP 2 (continued): Find your desired flow rate and select the catalog number suffix.

| Flow ranges† (mL/min) with indicated pump system (page 35 and ColeParmer.com) | | | | | | | | | | | | | Catalog number suffix | ID (mm) | Color-coded stops |
|---|--------------------|--------------------|--------------------|--------------------|--------------------|--------------------|--------------------|--------------------|--------------------|--------------------|--------------------|--------------------|-----------------------|---------|-------------------|
| 78016-00, 78016-02 | 78016-10, 78016-12 | 78016-30, 78016-32 | 78016-40, 78016-42 | 78017-00, 78017-02 | 78017-10, 78017-12 | 78017-20, 78017-22 | 78017-25, 78017-27 | 78017-30, 78017-32 | 78017-35, 78017-37 | 78017-45, 78017-47 | 78022-40, 78022-42 | 78022-60, 78022-62 | | | |
| 0.009-0.45 | 0.008-0.37 | 0.005-0.23 | 0.005-0.45 | 0.004-0.37 | 0.003-0.23 | 0.003-0.21 | 0.007-0.34 | 0.006-0.28 | 0.005-0.21 | 0.004-0.34 | 0.01-0.98 | 0.0075-0.75 | -10 | 0.19 | O/R |
| 0.015-0.76 | 0.013-0.65 | 0.009-0.41 | 0.008-0.76 | 0.007-0.65 | 0.005-0.41 | 0.004-0.38 | 0.012-0.61 | 0.01-0.48 | 0.008-0.38 | 0.007-0.61 | 0.017-1.7 | 0.013-1.3 | -12 | 0.25 | O/B |
| 0.035-1.7 | 0.03-1.5 | 0.019-0.94 | 0.017-1.7 | 0.015-1.5 | 0.01-0.94 | 0.009-0.88 | 0.028-1.4 | 0.022-1.1 | 0.018-0.88 | 0.014-1.4 | 0.038-3.8 | 0.031-3.1 | -14 | 0.38 | O/G |
| 0.046-2.3 | 0.04-2 | 0.025-1.3 | 0.023-2.3 | 0.02-2 | 0.013-1.3 | 0.012-1.2 | 0.038-1.9 | 0.029-1.4 | 0.024-1.2 | 0.019-1.9 | 0.05-5 | 0.041-4.1 | -16 | 0.44 | G/Y |
| 0.061-3.1 | 0.054-2.7 | 0.034-1.7 | 0.031-3.1 | 0.027-2.7 | 0.017-1.7 | 0.016-1.6 | 0.05-2.5 | 0.038-1.9 | 0.031-1.6 | 0.025-2.5 | 0.067-6.7 | 0.055-5.5 | -18 | 0.51 | O/Y |
| 0.096-4.8 | 0.084-4.2 | 0.052-2.6 | 0.048-4.8 | 0.042-4.2 | 0.026-2.6 | 0.024-2.4 | 0.077-3.9 | 0.06-3 | 0.048-2.4 | 0.039-3.9 | 0.1-10 | 0.085-8.5 | -22 | 0.64 | O/W |
| 0.13-6.7 | 0.12-5.8 | 0.073-3.6 | 0.067-6.7 | 0.058-5.8 | 0.036-3.6 | 0.33-3.3 | 0.11-5.3 | 0.084-4.2 | 0.067-3.3 | 0.053-5.3 | 0.15-15 | 0.12-12 | -24 | 0.76 | Bk/Bk |
| 0.18-9 | 0.16-7.9 | 0.098-4.9 | 0.09-9 | 0.079-7.9 | 0.049-4.9 | 0.044-4.4 | 0.14-7.1 | 0.11-5.7 | 0.088-4.4 | 0.071-7.1 | 0.2-20 | 0.15-15 | -26 | 0.89 | O/O |
| 0.23-12 | 0.2-10 | 0.13-6.3 | 0.12-12 | 0.1-10 | 0.063-6.3 | 0.056-5.6 | 0.18-9 | 0.15-7.3 | 0.11-5.6 | 0.09-9 | 0.26-26 | 0.2-20 | -28 | 1.02 | W/W |
| 0.29-14 | 0.25-12 | 0.16-7.8 | 0.14-14 | 0.12-12 | 0.078-7.8 | 0.067-6.7 | 0.22-11 | 0.18-9 | 0.13-6.7 | 0.11-11 | 0.32-32 | 0.24-24 | -30 | 1.14 | R/R |
| 0.37-18 | 0.31-16 | 0.2-10 | 0.18-18 | 0.16-16 | 0.1-10 | 0.083-8.3 | 0.26-13 | 0.23-11 | 0.17-8.3 | 0.13-13 | 0.4-40 | 0.29-29 | -32 | 1.3 | GR/GR |
| 0.43-21 | 0.37-18 | 0.23-11 | 0.21-21 | 0.18-18 | 0.11-11 | 0.094-9.4 | 0.3-15 | 0.27-13 | 0.19-9.4 | 0.15-15 | 0.47-47 | 0.33-33 | -34 | 1.42 | Y/Y |
| 0.48-24 | 0.41-20 | 0.26-13 | 0.24-24 | 0.2-20 | 0.13-13 | 0.1-10 | 0.33-17 | 0.3-15 | 0.21-10 | 0.17-17 | 0.53-53 | 0.36-36 | -36 | 1.52 | Y/B |
| 0.56-28 | 0.47-23 | 0.29-15 | 0.28-28 | 0.23-23 | 0.15-15 | 0.12-12 | 0.37-19 | 0.35-17 | 0.23-12 | 0.19-19 | 0.61-61 | 0.41-41 | -38 | 1.65 | B/B |
| 0.67-34 | 0.56-28 | 0.35-17 | 0.34-34 | 0.28-28 | 0.17-17 | 0.13-13 | 0.43-21 | 0.42-21 | 0.27-13 | 0.21-21 | 0.73-73 | 0.47-47 | -40 | 1.85 | G/G |
| 0.79-40 | 0.66-33 | 0.41-20 | 0.4-40 | 0.33-33 | 0.2-20 | 0.15-15 | 0.49-24 | 0.5-25 | 0.3-15 | 0.24-24 | 0.87-87 | 0.53-53 | -42 | 2.06 | P/P |
| 0.92-46 | 0.76-38 | 0.48-24 | 0.46-46 | 0.38-38 | 0.24-24 | 0.17-17 | 0.55-27 | 0.58-29 | 0.34-17 | 0.27-27 | 1-100 | 0.6-60 | -44 | 2.29 | P/Bk |
| 1.1-53 | 0.88-44 | 0.55-27 | 0.53-53 | 0.44-44 | 0.27-27 | 0.19-19 | 0.62-31 | 0.66-33 | 0.39-19 | 0.31-31 | 1.2-120 | 0.68-68 | -46 | 2.54 | P/O |
| 1.2-59 | 0.99-50 | 0.62-31 | 0.59-59 | 0.5-50 | 0.31-31 | 0.21-21 | 0.69-34 | 0.74-37 | 0.43-21 | 0.34-34 | 1.3-130 | 0.75-75 | -48 | 2.79 | P/W |

Teky's Tips



How to order 2- and 3-stop tubing

Step 1: Choose a tubing material and select the corresponding catalog number prefix from the table on page 39. Make sure to choose 2-stop or 3-stop tubing based on what your pump uses!

Step 2: Find your pump system and desired flow rate and select the catalog number suffix from the tables on pages 39-40.

Step 3: Complete your system with extension tubing from page 39. You can connect stopped tubing and extension tubing with hose barb fittings or by splicing together.

| Flow ranges† (mL/min) with indicated pump system (page 36 and ColeParmer.com) | | | | | | Catalog number suffix | ID (mm) | Color-coded stops |
|---|------------|------------|------------|------------|------------|-----------------------|---------|-------------------|
| IPC-N models | IPC models | 78002-34 | 78002-36 | 78002-50 | 78002-90 | | | |
| 0.0007-0.066 | 0.003-0.26 | 0.004-0.94 | 0.004-0.94 | 0.003-0.67 | 0.003-0.51 | -10 | 0.19 | O/R |
| 0.001-0.1 | 0.005-0.41 | 0.008-1.8 | 0.008-1.8 | 0.005-1.1 | 0.004-0.91 | -12 | 0.25 | O/B |
| 0.003-0.22 | 0.009-0.86 | 0.019-4.5 | 0.019-4.5 | 0.011-2.6 | 0.009-2.1 | -14 | 0.38 | O/G |
| 0.003-0.28 | 0.011-1.1 | 0.025-6.1 | 0.025-6.1 | 0.014-3.5 | 0.012-2.8 | -16 | 0.44 | G/Y |
| 0.004-0.38 | 0.015-1.5 | 0.034-8.2 | 0.034-8.2 | 0.019-4.6 | 0.016-3.8 | -18 | 0.51 | O/Y |
| 0.006-0.58 | 0.023-2.3 | 0.053-13 | 0.053-13 | 0.03-7.2 | 0.024-5.8 | -22 | 0.64 | O/W |
| 0.009-0.81 | 0.032-3.2 | 0.074-18 | 0.074-18 | 0.042-10 | 0.033-8 | -24 | 0.76 | Bk/Bk |
| 0.011-1.1 | 0.044-4.4 | 0.1-24 | 0.1-24 | 0.057-14 | 0.044-11 | -26 | 0.89 | O/O |
| 0.014-1.4 | 0.057-5.7 | 0.13-31 | 0.13-31 | 0.073-18 | 0.056-13 | -28 | 1.02 | W/W |
| 0.017-1.7 | 0.07-7 | 0.16-38 | 0.16-38 | 0.09-22 | 0.067-16 | -30 | 1.14 | R/R |
| 0.022-2.2 | 0.089-8.9 | 0.2-47 | 0.2-47 | 0.11-27 | 0.083-20 | -32 | 1.3 | GR/GR |
| 0.026-2.6 | 0.11-11 | 0.23-55 | 0.23-55 | 0.13-32 | 0.094-23 | -34 | 1.42 | Y/Y |
| 0.03-3 | 0.12-12 | 0.26-62 | 0.26-62 | 0.15-36 | 0.1-25 | -36 | 1.52 | Y/B |
| 0.035-3.5 | 0.14-14 | 0.3-71 | 0.3-71 | 0.17-42 | 0.12-28 | -38 | 1.65 | B/B |
| 0.43-4.3 | 0.17-17 | 0.36-86 | 0.36-86 | 0.21-50 | 0.13-32 | -40 | 1.85 | G/G |
| 0.52-5.2 | 0.21-21 | 0.43-100 | 0.43-100 | 0.25-59 | 0.15-37 | -42 | 2.06 | P/P |
| 0.062-6.2 | 0.25-25 | 0.51-120 | 0.51-120 | 0.29-69 | 0.17-41 | -44 | 2.29 | P/Bk |
| 0.075-7.5 | 0.3-30 | 0.63-150 | 0.62-150 | 0.33-79 | 0.19-46 | -46 | 2.54 | P/O |
| 0.088-8.8 | 0.35-35 | 0.74-180 | 0.74-180 | 0.37-89 | 0.21-52 | -48 | 2.79 | P/W |

†Flow ranges (mL/min) are nominal. Actual flow depends on factors such as occlusion, fluid viscosity, temperature, and pressure.

Pump Tubing for Ismatec® Pumps

| ID (mm) | OD (mm) | Wall (mm) | Tygon® E-Lab | | | Silicone (peroxide cured) | | | Silicone (platinum cured) | | | Norprene® | | | Viton® | | |
|---------|---------|-----------|--------------|-------|-----------|---------------------------|-------|-----------|---------------------------|-------|-----------|-------------|-------|-----------|-------------|-------|-----------|
| | | | Cat.no. | Ft/pk | Price/pk* | Cat.no. | Ft/pk | Price/pk* | Cat.no. | Ft/pk | Price/pk* | Cat.no. | Ft/pk | Price/pk* | Cat.no. | Ft/pk | Price/pk* |
| 0.8 | 4.0 | 1.6 | PG-06509-13 | 50 | | PG-96400-13 | 25 | | PG-95802-01 | 25 | | PG-06404-13 | 50 | | PG-96412-13 | 25 | |
| 1.6 | 4.8 | 1.6 | PG-06407-72 | 50 | | PG-96400-14 | 25 | | PG-96410-14 | 25 | | PG-06410-01 | 50 | | PG-96412-14 | 25 | |
| 3.2 | 6.4 | 1.6 | PG-06407-76 | 50 | | PG-06411-67 | 25 | | PG-95802-05 | 25 | | PG-06410-02 | 50 | | — | — | — |
| 4.8 | 8.0 | 1.6 | PG-06407-78 | 50 | | PG-06411-03 | 25 | | PG-95802-09 | 25 | | PG-06410-04 | 50 | | PG-96412-25 | 25 | |
| 6.4 | 9.5 | 1.6 | PG-06407-80 | 50 | | PG-06411-71 | 25 | | PG-95802-12 | 25 | | PG-06410-05 | 50 | | PG-96412-18 | 25 | |
| 6.4 | 11.1 | 2.4 | PG-06509-24 | 50 | | PG-06411-72 | 25 | | PG-95802-13 | 25 | | PG-06410-06 | 50 | | PG-96412-24 | 25 | |
| 8.0 | 11.2 | 1.6 | PG-06407-83 | 50 | | PG-06411-75 | 25 | | PG-95802-15 | 25 | | PG-06410-08 | 50 | | PG-06434-05 | 25 | |
| 9.5 | 12.7 | 1.6 | PG-06407-86 | 50 | | PG-06411-12 | 25 | | PG-95802-18 | 25 | | PG-06410-10 | 50 | | PG-06434-06 | 25 | |
| 11.1 | 14.3 | 1.6 | PG-06407-87 | 50 | | — | — | — | — | — | — | PG-06410-13 | 50 | | — | — | — |
| 12.8 | 16.0 | 1.6 | PG-06407-90 | 25 | | PG-06411-80 | 25 | | PG-95802-21 | 25 | | PG-06410-14 | 50 | | PG-06434-07 | 25 | |
| 16.0 | 22.4 | 3.2 | — | — | — | PG-06411-58 | 25 | | PG-95802-25 | 25 | | PG-06410-17 | 50 | | PG-06434-08 | 25 | |

| ID (mm) | Flow ranges (mL/min) with indicated pump system†† | | | | | | | | | |
|---------|---|---------------|---------------|---------------|--------------|-----------------------------|-------------|-------------|-------------|--|
| | Available at ColeParmer.com | | | | | Available at ColeParmer.com | | | | |
| | 78025-00, -05 | 78022-10, -12 | 78022-20, -22 | 78022-30, -32 | 07611-10‡ | 07611-15‡ | 78002-20‡ | 78002-22‡ | 78002-60‡ | |
| 0.8 | — | — | — | 0.25 to 25 | — | 0.22 to 22 | — | 0.072 to 17 | — | |
| 1.6 | — | 1.7 to 170 | 1.6 to 160 | 0.9 to 90 | — | 0.63 to 63 | 0.44 to 100 | 0.026 to 62 | 0.41 to 99 | |
| 3.2 | — | 6.6 to 660 | 5.9 to 590 | 3.5 to 350 | 2.6 to 260 | 2.4 to 240 | 1.7 to 400 | 1.0 to 240 | 1.5 to 370 | |
| 4.8 | — | 15.0 to 1500 | 13.0 to 1300 | 7.7 to 770 | 5.5 to 550 | 5.3 to 530 | 3.6 to 860 | 2.2 to 530 | 3.4 to 830 | |
| 6.4 | 37 to 3700 | 25.0 to 2500 | 23.0 to 2300 | 13.0 to 1300 | 8.9 to 890 | — | 6.0 to 1400 | 3.7 to 880 | 6.2 to 1500 | |
| 8.0 | — | 37.0 to 3700 | 34.0 to 3400 | — | 11.1 to 1110 | — | 8.8 to 2100 | — | 9.5 to 2300 | |
| 9.5 | 80 to 8000 | 48.0 to 4800 | 44.0 to 4400 | — | — | — | 12 to 2800 | — | 13 to 3000 | |
| 11.1 | — | 54.0 to 5400 | 50.0 to 5000 | — | — | — | — | — | 15 to 3600 | |
| 12.8 | 100 to 10000 | — | — | — | — | — | — | — | — | |
| 16.0 | 130 to 13000 | — | — | — | — | — | — | — | — | |

††Note: Lower flow rates achievable with digital drives. ‡Flow rate with Digital Drive 78002-10; lower flow rate achievable with Programmable Drive 78002-00.



Cole-Parmer® Complete Drum and Container Pumps

All-in-one system includes pump tube and motor

- Equipped with variable-speed control motors (except air and explosion-proof models) for added safety and control
- Maintenance is reduced with no mechanical seals
- Run dry capability

Drum and container pumps are engineered to safely transfer a variety of liquids from drums, tanks and small storage vessels. Materials such as PP, PVDF, CPVC and 316 SS provide excellent chemical resistance against corrosive liquids. Order optional dispensing nozzle from "Accessories" for added control.

What's included: electric motor with 16-ft power cord and pump tube, except models 70613-70, -75, -80, -85 which include an air motor and tube.



Close-up of variable-speed control found on the motors



Pump shown with barrel adapter, strainer, wall mounting bracket, and nozzle with 6 ft of PVC hose (order optional accessories for added control)



Specifications

rpm: 10,000 **Port:** 1" (25 mm) hose barb **Run dry:** yes **Atex compliant:** II 2 G EEx de IIA T6



All except 70613-60, -65



Zone 2 70613-60, -65 and 70604-23, -52, and -62 only

| Max flow rate GPM (LPM) | Max viscosity | Motor type | hp | scfm range† | Power (VAC, Hz) | Tube length | Tube materials | Max temperature | Wetted materials | Catalog number | Price |
|-------------------------|---------------|------------|-----|-------------|-----------------|--------------|----------------|-----------------|-------------------------|-----------------------------|-------|
| 35 (132) | 1500 cp | ODP | 1 | — | 110, 60 | 39" (99 cm) | PP | 130°F (55°C) | PP, carbon, Hastelloy® | PG-70613-00 | |
| | | | 1 | — | 230, 50 | 39" (99 cm) | | | | PG-70613-05 | |
| | | | 1 | — | 110, 60 | 47" (119 cm) | | | | PG-70613-10 | |
| | | | 1 | — | 230, 50 | 47" (119 cm) | | | | PG-70613-15 | |
| 35 (132) | 1500 cp | TEFC | 1 | — | 110, 60 | 39" (99 cm) | PVDF | 175°F (80°C) | PVDF, carbon, Hastelloy | PG-70613-20 | |
| | | | 1 | — | 230, 50 | 39" (99 cm) | | | | PG-70613-25 | |
| | | | 1 | — | 110, 60 | 47" (119 cm) | | | | PG-70613-30 | |
| | | | 1 | — | 230, 50 | 47" (119 cm) | | | | PG-70613-35 | |
| 35 (132) | 1500 cp | TEFC | 1 | — | 110, 60 | 39" (99 cm) | CPVC | 190°F (90°C) | CPVC, carbon, Hastelloy | PG-70613-40 | |
| | | | 1 | — | 230, 50 | 39" (99 cm) | | | | PG-70613-45 | |
| | | | 1 | — | 110, 60 | 47" (119 cm) | | | | PG-70613-50 | |
| | | | 1 | — | 230, 50 | 47" (119 cm) | | | | PG-70613-55 | |
| 33 (125) | 750 cp | XPRF | 3/4 | — | 230, 50 | 39" (99 cm) | 316 SS | 175°F (80°C) | 316 SS, carbon, PTFE | PG-70613-60 | |
| | | | 3/4 | — | 230, 50 | 47" (119 cm) | | | | PG-70613-65 | |
| 32 (121) | 750 cp | Air | 3/4 | 28 | — | 39" (99 cm) | 316 SS | 175°F (80°C) | 316 SS, carbon, PTFE | PG-70613-70 | |
| | | | 3/4 | 28 | — | 47" (119 cm) | | | | PG-70613-75 | |
| | | | 1/2 | 22 | — | 39" (99 cm) | | | | PG-70613-80 | |
| | | | 1/2 | 22 | — | 47" (119 cm) | | | | PG-70613-85 | |

†at 90 psi

Replacement Pump Tubes

Replacement tubes do not include barrel adapter and mouting bracket; order separately at right.

| Tube length | Tube material | Catalog number | Price |
|--------------|---------------|-----------------------------|-------|
| 39" (99 cm) | PP | PG-70604-42 | |
| 47" (119 cm) | | PG-70604-44 | |
| 39" (99 cm) | 316 SS | PG-70604-52 | |
| 47" (119 cm) | | PG-70604-54 | |
| 39" (99 cm) | PVDF | PG-70604-62 | |
| 47" (119 cm) | | PG-70604-64 | |
| 39" (99 cm) | CPVC | PG-70604-66 | |
| 47" (119 cm) | | PG-70604-68 | |

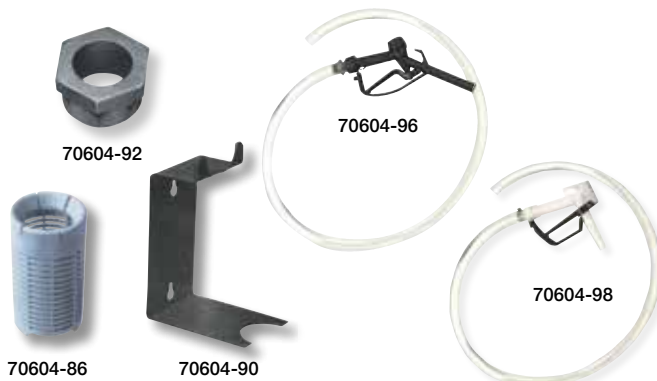
Replacement Motors

| Motor type | scfm range† | Power (VAC, Hz) | Catalog number | Price |
|------------|-------------|-----------------|-----------------------------|-------|
| ODP | — | 110, 60 | PG-70604-03 | |
| | — | 230, 50 | PG-70604-06 | |
| XPRF | — | 230, 50 | PG-70604-23 | |
| | — | 110, 60 | PG-70604-13 | |
| TEFC | — | 230, 50 | PG-70604-16 | |
| | — | 110, 60 | PG-70604-25 | |
| Air | 28 | — | PG-70604-20 | |
| | 22 | — | PG-70604-20 | |

†at 90 psi

Accessories

- [PG-70604-86 Strainer](#); PP, 2mm opening
- [PG-70604-88 Strainer](#); SS, 2mm opening
- [PG-70604-90 Wall mounting bracket](#); provides pump storage
- [PG-70604-96 Nozzle](#); PP, with 6 ft (1.8 m) of PVC hose
- [PG-70604-98 Nozzle](#); PVDF, with 6 ft (1.8 m) of PVC hose
- [PG-70604-92 Replacement barrel adapter](#); PP, provides vertical stabilization



Cole-Parmer® Console Drive

Optimize performance of long-term applications

- 100:1 speed-control range controls flow over a wide range
- Separate on-off switch maintains speed (flow) setting when drive is powered down
- Maximum continuous-duty flow rates possible with Micropump® A-mount pump heads
- Gradual, one-second acceleration for smooth flow rate changes

Simple variable speed control provides flow control for many fluid handling applications from filtration to chemical injection.

What's included: a 6-ft (1.8-m) modular line power cord; the 115 VAC model has a US standard plug and the 230 VAC model has an IEC 320/GEE 22 connector (specify country to obtain correct plug).



Cole-Parmer®



Specifications

Duty cycle: continuous
Remote control (input): none
Remote control (output): none
Max system temperature: 104°F (40°C)

| Motor | | | Power | | Catalog number | Price |
|------------|------|------|-------|-------|----------------|-------|
| rpm | hp | Type | VAC | Hz | | |
| 50 to 5000 | 0.07 | PMDC | 115 | 50/60 | PG-75211-10 | |
| | | | 230 | 50/60 | | |

Ismatec® Compact Programmable Digital Drive

Dispense by flow rate, volume, time, or number of cycles

- No more dripping—program pump to draw back fluid
- Control via a PC with RS-232 interface
- Get more accuracy with calibration of flow rate and dispensing volume



IP44-rated housing protects internal components from damage. Multiple operating modes allow for continuous pumping by drive speed, flow rate, volume, time, volume within a pre-set time or interval dispensing by volume with a pause or time with a pause. The number of dispensing cycles may also be into the pump. Pump is capable of reversible rotation (only with cavity style pump heads that indicate reversible operation). Both dispensing and pause time settings are from 0.1 seconds up to 999 hours.

What's included: an adapter plate for mounting Micropump® A pump heads (except 07003-02, 07003-04, 73004-00, 73004-02, and 73004-04), a driving magnet and a 6-ft (1.8-m) power cord with US standard plugs.

Specifications

Duty cycle: continuous from 50 to 5000 rpm
Remote control (input):
Speed control: RS-232 (DB9F) for pump control via PC. 9600 baud, 8 bit, 1 stopbit, no parity
On/off control: TTL contact (for footswitch)
0 to 10 kHz for speed monitoring
Remote control (output):
RS-232 (DB9M) for cascading of up to 8 pumps
Max temperature: 104°F (40°C)

| Motor rpm | Power | | Catalog number | Price |
|------------|-----------|----------|----------------|-------|
| | VAC | Hz | | |
| 50 to 5000 | 90 to 264 | 47 to 63 | PG-78008-10 | |

PG-07617-90 Replacement adapter plate; for mounting Micropump A-mount pump heads (except models 07003-02, 07003-04, 73004-00, 73004-02, 73004-04)

Micropump® A-Mount Gear Pump Heads

- Achieve leak-free, pulseless flow
- Magnetic drive and static seals keep fluids securely inside and potential contaminants out



| Flow rates (mL/min)† | | Wetted parts | | Catalog number | Price |
|----------------------|-------------|--------------|----------|----------------|-------|
| at 50 rpm | at 5000 rpm | Body | Gears | | |
| 0.85 | 85 | 316 SS | Graphite | PG-07002-25 | |
| 4.60 | 460 | 316 SS | PEEK | PG-73003-14 | |
| | | | PPS | PG-07002-14 | |
| 13.05 | 1305 | 316 SS | PEEK | PG-73004-00 | |
| 29.00 | 2900 | 316 SS | PEEK | PG-73004-02 | |
| | | | PPS | PG-07003-02 | |
| 58.50 | 5850 | 316 SS | PEEK | PG-73004-04 | |
| | | | PPS | PG-07003-04 | |

†Flow rates based on water at room temperature and no back pressure.



Programmable digital drive 78008-10 with Micropump pump head 07002-14 (pump head not included)

Catalyst™ FH10, FH15, and FH30 Peristaltic Pumps

Get quick setup and repeatable low flow rates

NEW

- Compact, stackable pumps feature a durable steel housing with chip-resistant epoxy-based paint
- Max button runs pump at 100% speed—use to prime or flush tubing
- Remote control connections on back of pump; start/stop pump with a contact closure
- Separate single-turn speed control and cw/off/ccw switch with green LED power indicator—maintain speed setting when you turn pump on/off or reverse direction



A. Catalyst FH10 Single-Channel Pumps

- Flow: 0.002 to 50 mL/min depending on tubing size and drive rpm
- Pumps accept continuous lengths of tubing for a clean, uninterrupted flow path with no fittings
- A single motion opens pump head cover and releases occlusion bed for quick and easy tubing changes
- Polyphenylene sulfide (PPS), acetal, and copolyester pump head with four stainless steel (SS) rollers

B. Catalyst FH15 Single-Channel and FH30 Dual-Channel Pumps

- Flow: 0.8 to 105 mL/min depending on tubing size and drive rpm
- Dual-channel model delivers synchronous flow from two separate channels
- Pump head has average fixed occlusion for tubing; no need to adjust occlusion
- Two-stop tubing sets are easy to load
- Self-lubricating thermoplastic polyester (Ertalyle® TX) rollers are low friction and long wearing for smooth operation and long life

Specifications



Remote control input: start/stop via contact closure
Reversible motor: yes **IP rating:** IP22

| Flow range (mL/min) | Tubing sizes accepted (mm ID) | Speed range | Dimensions (L x W x H) | Power (50/60 Hz) | | Catalog number | Price |
|--|------------------------------------|-------------|---|------------------|---------------------------------|-----------------------------|-------|
| | | | | VAC | Amps | | |
| A. Catalyst FH10 single-channel pumps | | | | | | | |
| 0.002 to 1.65 | 0.19, 0.25, 0.89, 1.42, 2.06, 2.79 | 1.7 to 10 | 7" x 5¼" x 4½" (17.8 x 13.4 x 11.4 cm) | 90 to 260 | 0.4 at 115 VAC, 0.25 at 230 VAC | PG-77720-00 | |
| 0.017 to 11 | | 13 to 80 | | | | PG-77720-02 | |
| 0.07 to 50 | | 50 to 300 | | | | PG-77720-04 | |
| B. Catalyst FH15 single-channel pump | | | | | | | |
| 0.8 to 105 | 0.8, 1.6, 3.2, 4.8 | 20 to 100 | 7" x 5¼" x 4½" (17.8 x 13.4 x 11.4 cm) | 90 to 260 | 0.5 at 115 VAC, 0.3 at 230 VAC | PG-77720-20 | |
| B. Catalyst FH30 dual-channel pump | | | | | | | |
| 0.8 to 14 | 0.8, 1.6 | 20 to 100 | 7" x 5¼" x 4½" (17.8 x 13.4 x 11.4 cm) | 90 to 260 | 0.5 at 115 VAC, 0.3 at 230 VAC | PG-77720-30 | |

Tubing Coils for Catalyst FH10 Pumps

| Tubing ID | 0.19 mm ID | 0.25 mm ID | 0.89 mm ID | 1.42 mm ID | 2.06 mm ID | 2.79 mm ID |
|--|-----------------------------|-----------------------------|-----------------------------|-----------------------------|-----------------------------|-----------------------------|
| Flow (mL/min) at 1.7 to 10 rpm | 0.002 to 0.013 | 0.004 to 0.022 | 0.041 to 0.25 | 0.09 to 0.57 | 0.18 to 1.05 | 0.25 to 1.65 |
| Flow (mL/min) at 13 to 80 rpm | 0.017 to 0.10 | 0.03 to 0.18 | 0.33 to 2.0 | 0.75 to 4.5 | 1.4 to 8.5 | 1.8 to 11.0 |
| Flow (mL/min) at 50 to 300 rpm | 0.07 to 0.43 | 0.12 to 0.73 | 1.4 to 8.3 | 3.2 to 19 | 5.9 to 35.2 | 8.3 to 50 |
| Silicone, platinum-cured (15 m/49.2 ft) | — | — | PG-97200-14 | PG-97200-16 | PG-97200-17 | PG-97200-18 |
| PharMed® BPT (30 m/98.4 ft) | — | PG-97200-33 | PG-97200-34 | PG-97200-36 | PG-97200-37 | PG-97200-38 |
| Tygon® E-Food (30 m/98.4 ft) | PG-97200-72 | PG-97200-73 | PG-97200-74 | PG-97200-76 | PG-97200-77 | PG-97200-78 |

Two-Stop Tubing Sets for Catalyst FH15 and FH30 Pumps

| Tubing ID | 0.8 mm ID | 1.6 mm ID | 3.2 mm ID | 4.8 mm ID |
|--|-----------------------------|-----------------------------|-----------------------------|-----------------------------|
| Flow (mL/min) with FH15 | 0.8 to 4.0 | 2.8 to 14 | 11 to 54 | 21 to 105 |
| Flow (mL/min) with FH30 | 0.8 to 4.0 | 2.8 to 14 | Not recommended | |
| Silicone, platinum-cured (6/pk) | PG-97100-12 | PG-97100-13 | PG-97100-16 | PG-97100-17 |
| PharMed® BPT (12/pk) | PG-97100-22 | PG-97100-23 | PG-97100-26 | PG-97100-27 |
| Norprene® Food (12/pk) | PG-97100-42 | PG-97100-43 | PG-97100-46 | PG-97100-47 |
| Tygon® E-Food (12/pk) | PG-97100-62 | PG-97100-63 | PG-97100-66 | PG-97100-67 |

Catalyst™ FH100 and FH100D Peristaltic Pumps

You'll be up to speed and pumping in no time at all

NEW

- Integrated pump and drive systems are provided fully assembled, reducing setup time
- Pump head accepts multiple tubing sizes for a broad flow range
- Integral pump head allows tubing change in less than 30 seconds—tubing occlusion is automatic when pump head is closed
- Interlock switch powers unit down when pump head is opened for tubing change
- Contamination-free pumping—the fluid contacts only the tubing



A

CATALYST™
by Masterflex®



B

ISO9001:2008
CERTIFIED SUPPLIER

A. Catalyst FH100 Precision Peristaltic Pumps

- Intuitive keypad is easy to use—quickly increase or decrease flow
- Digital display of speed (rpm) for accurate control and repeatability
- Reversible motor permits purging of tubing before and after use
- Remote control capability is ideal for automated process applications

B. Catalyst FH100D Digital Peristaltic Dispensing Pumps

- Accurate dispensing from a simple, ready-to-use pump
- Clear multiline LCD displays all operational parameters
- Control capabilities include programmable dispensing in volume, time, or copy modes
- Programmed delay between cycles for convenient automated dispensing
- Programmable in seven languages—provides easy intuitive setup
- Optimize system accuracy by calibrating the pump system under application conditions—the calibration is stored in memory—one calibration value per tubing size

| Flow range (mL/min) | Tubing sizes accepted (mm ID) | Speed range | Speed control (repeatability) | Remote control input | Reversible motor | Power (50/60 Hz) VAC | Amps | Catalog number | Price |
|--|-------------------------------|--------------|-------------------------------|--|------------------|----------------------|--------------------------------|-----------------------------|-------|
| A. Catalyst FH100 pump accepts 1.6 mm (thin-wall) tubing | | | | | | | | | |
| 0.5 to 3000 | 0.8, 1.6, 3.2, 4.8, 6.4, 8.0 | 4 to 400 rpm | ±0.25% | 4 to 20 mA, 0 to 10 V | Yes | 90 to 260 | 1.6 at 115 VAC, 1.9 at 230 VAC | PG-77722-00 | |
| A. Catalyst FH100X pump accepts 2.4 mm (thick-wall) tubing | | | | | | | | | |
| 14 to 4000 | 4.8, 6.4, 8.0, 9.5 | 4 to 400 rpm | ±0.25% | 4 to 20 mA, 0 to 10 V | Yes | 90 to 260 | 1.6 at 115 VAC, 1.9 at 230 VAC | PG-77722-02 | |
| B. Catalyst FH100D pump accepts 1.6 mm (thin-wall) tubing | | | | | | | | | |
| 0.5 to 3000 | 0.8, 1.6, 3.2, 4.8, 6.4, 8.0 | 4 to 400 rpm | ±0.25% | 0 to 20 mA, 4 to 20 mA, 0 to 10 V scalable | Yes | 90 to 260 | 1.6 at 115 VAC, 1.9 at 230 VAC | PG-77722-10 | |
| B. Catalyst FH100DX pump accepts 2.4 mm (thick-wall) tubing | | | | | | | | | |
| 14 to 4000 | 4.8, 6.4, 8.0, 9.5 | 4 to 400 rpm | ±0.25% | 0 to 20 mA, 4 to 20 mA, 0 to 10 V scalable | Yes | 90 to 260 | 1.6 at 115 VAC, 1.9 at 230 VAC | PG-77722-12 | |

Accessories

[PG-07528-80](#) Handheld remote controller for models FH100 and FH100X.

DB9; for on/off control; route tubing through handle for filling applications

[PG-07523-97](#) Handheld remote controller for models FH100D and FH100DX.

DB25; for on/off control; route tubing through handle for dispensing applications

[PG-17050-01](#) NIST-traceable calibration with data for peristaltic pumps

Tubing Coils

| Description | 1.6 mm (thin-wall) tubing for FH100 and FH100D pumps | | | | | | 2.4 mm (thick-wall) tubing for FH100X and FH100DX pumps | | | |
|--------------------------|--|-----------------------------|-----------------------------|-----------------------------|-----------------------------|-----------------------------|---|-----------------------------|-----------------------------|-----------------------------|
| | 0.8 mm | 1.6 mm | 3.2 mm | 4.8 mm | 6.4 mm | 8.0 mm | 4.8 mm | 6.4 mm | 8 mm | 9.5 mm |
| Inner diameter | 0.8 mm | 1.6 mm | 3.2 mm | 4.8 mm | 6.4 mm | 8.0 mm | 4.8 mm | 6.4 mm | 8 mm | 9.5 mm |
| Hose barb size | 1/32" | 1/16" | 1/8" | 3/16" | 1/4" | 5/16" | 3/16" | 1/4" | 5/16" | 3/8" |
| Flow (mL/min) | 0.5 to 40 | 2.0 to 150 | 6.5 to 550 | 16 to 1200 | 24 to 2000 | 36 to 3000 | 14 to 1200 | 24 to 2000 | 36 to 3000 | 48 to 4000 |
| Length/pk | 15 m (49.2 ft) | 15 m (49.2 ft) | 15 m (49.2 ft) | 15 m (49.2 ft) | 15 m (49.2 ft) | 15 m (49.2 ft) | 15 m (49.2 ft) | 15 m (49.2 ft) | 15 m (49.2 ft) | 15 m (49.2 ft) |
| Silicone, platinum-cured | — | PG-97000-71 | PG-97000-72 | PG-97000-73 | PG-97000-74 | PG-97000-75 | PG-97000-76 | PG-97000-77 | PG-97000-78 | PG-97000-79 |
| PharMed® BPT | PG-97000-20 | PG-97000-21 | PG-97000-22 | PG-97000-23 | PG-97000-24 | PG-97000-25 | — | — | — | — |
| Norprene® Food | — | PG-97000-41 | PG-97000-42 | PG-97000-43 | PG-97000-44 | PG-97000-45 | — | — | — | — |
| Tygon® E-Food | — | PG-97000-61 | PG-97000-62 | PG-97000-63 | PG-97000-64 | PG-97000-65 | — | PG-97000-67 | PG-97000-68 | PG-97000-69 |



Cole-Parmer® Entry-Level Touch-Screen Syringe Pumps

Get more done simultaneously

- Accommodate two syringes for infusion and two syringes for withdrawal at the same time
- Control flow rates from 0.58 pL/min to 88.28 mL/min via full-color touch screen
- Daisy chain up to 99 pumps together with the built-in RS-485 connectivity
- Accept syringes from 0.5 µL to 60 mL

These pumps feature a continuous push and pull (infusion/withdrawal) pump. When used with check valves, the pump will draw fluid from a reservoir while opposite side is dispensing fluid. After dispensing the user-settable volume, the pump automatically switches direction and dispenses from the other side while the just-consumed side is being refilled.

Pump can be placed on its side to provide a smaller footprint with the display automatically rotating.

Specifications



Accuracy: ±0.5%
Reproducibility: ±0.05%
Linear force: 75 lb (34 kg)

Output: RS-232, RS-485, USB, 15 pin D-sub connector
Power: 100 to 240 VAC, 50/60 Hz



| Number of syringes | Syringe sizes accepted | Flow rate per syringe | Catalog number | Price |
|---|------------------------|-----------------------------|----------------|-------|
| Infusion only pumps | | | | |
| 1 | 0.5 µL to 60 mL | 1.28 pL/min to 88.28 mL/min | PG-74905-02 | |
| 2 | 0.5 µL to 10 mL | | PG-74905-06 | |
| Infusion/withdrawal programmable pumps | | | | |
| 1 | 0.5 µL to 60 mL | 1.28 pL/min to 88.28 mL/min | PG-74905-04 | |
| 2 | 0.5 µL to 10 mL | 1.28 pL/min to 88.28 mL/min | PG-74905-08 | |
| 2 | 0.5 µL to 10 mL | 0.58 pL/min to 11.70 mL/min | PG-74905-12 | |
| 1 | 0.5 µL to 1000 µL | 3.66 pL/min 363 µL/min | PG-74905-34 | |

Cole-Parmer® Syringe Pumps

Ideal for low-flow, low-pressure applications

- Backlit alphanumeric LCD guides you through setup and operating procedures
- Don't lose your settings—nonvolatile memory retains settings even after pump is turned off

A. Single-Syringe Infusion Pump automatically selects display units based on syringe used, obtaining precise flow rates down to 0.2 µL/hr. A wide dynamic range (6000:1) provides excellent flexibility.

B. Multi-Syringe Pumps achieve flow rates down to 0.001 µL/hr. Easy programming via keypad—infusion/withdrawal pumps sequence operations. Control from a computer with RS-232 interface.†

C. Multi-Step Multi-Syringe Pumps allow flow rates to vary from a slow trickle to a steady stream down to 0.001 µL/hr. Program up to 8 commands and repeat up to 10 times. Pumps allow you to program flow rate hold, pause, and change of direction; each program can be run up to 12 hours. Pumps can also sequence operations. Operate your pump from a computer—great for daisy-chaining pumps!

Pump continuously and automatically delivers exact quantities of liquid.

Specifications

Accuracy: ±<1%
Reproducibility: ±0.1%



| Description | Number of syringes accepted | Flow rate per syringe | Syringe size accepted | Linear force | Power (VAC, Hz) | Catalog number | Price |
|--|-----------------------------|---------------------------|-----------------------|-----------------|--------------------------|----------------------------|-------|
| A. Single-syringe pump | | | | | | | |
| Infusion | 1 | 0.2 µL/hr to 500 mL/hr | 10 µL to 60 mL | 20 lb (9.1 kg) | 115, 50/60 230, 50/60 | PG-74900-00 PG-74900-05 | |
| B. Multi-syringe pumps | | | | | | | |
| Infusion | 2 | 0.001 µL/hr to 147 mL/min | 10 µL to 140 mL | 40 lb (18.1 kg) | 115, 50/60 | PG-74900-10 | |
| | 10 | | | | 230, 50/60 | PG-74900-15 | |
| Infusion/withdrawal | 2 | 0.001 µL/hr to 147 mL/min | 10 µL to 140 mL | 40 lb (18.1 kg) | 115, 50/60 | PG-74900-30 | |
| | 10 | | | | 230, 50/60 | PG-74900-35 | |
| Infusion/withdrawal | 2 | 0.001 µL/hr to 147 mL/min | 10 µL to 140 mL | 40 lb (18.1 kg) | 115, 50/60 | PG-74900-20 | |
| | 10 | | | | 230, 50/60 | PG-74900-25 | |
| C. Multi-step multi-syringe pumps | | | | | | | |
| Infusion | 2 | 0.001 µL/hr to 147 mL/min | 10 µL to 140 mL | 40 lb (18.1 kg) | 115, 50/60 | PG-74900-60 | |
| | 10 | | | | 230, 50/60 | PG-74900-65 | |
| Infusion/withdrawal | 2 | 0.001 µL/hr to 147 mL/min | 10 µL to 140 mL | 40 lb (18.1 kg) | 115, 50/60 | PG-74900-80 | |
| | 10 | | | | 230, 50/60 | PG-74900-85 | |
| Infusion/withdrawal | 2 | 0.001 µL/hr to 147 mL/min | 10 µL to 140 mL | 40 lb (18.1 kg) | 115, 50/60 | PG-74901-00 | |
| | 10 | | | | 230, 50/60 | PG-74901-05 | |
| Infusion/withdrawal | 2 | 0.001 µL/hr to 147 mL/min | 10 µL to 140 mL | 40 lb (18.1 kg) | 115, 50/60 | PG-74901-10 | |
| | 10 | | | | 230, 50/60 | PG-74901-15 | |

†Order RS-232 cables separately online or call our Application Specialists.

Low-Flow Piston Pump Systems

Remote flow rate control via analog signal or RS-232

- Flow down to 0.002 mL/min; pressure up to 6000 psi (414 bar)
- Smooth fluid delivery from intra RPM stepper motor control
- Integrated piston wash to rinse away crystallized chemicals

Software control of refill rates and compressibility compensation add to the versatility of the pumps and enhance pump performance. Precise metering is attained by a positive-displacement reciprocating piston assembly. The high-resolution stepper motor is used to maximize flow output and minimize pulsation.

Choose pumps with an integrated pulse damper to further reduce pulsation. Pumps also feature the ability to monitor pressure and set high and low limits.



Specifications

Viscosity: 500 cp max **Duty cycle:** continuous **Power:** 110 to 220 VAC, 50/60 Hz
Repeatability: typically ±0.3% **Maximum fluid temperature:** 248°F (120°C)

| Flow rate (mL/min) | | Max pressure psi (bar) | Wetted parts | | Connection | | Standard | | Integrated pulse damper | |
|--------------------|-----|---------------------------|--------------|--------|--|--------------------------------------|----------------|-------|-------------------------|-------|
| Min | Max | | Body | Piston | Inlet | Outlet | Catalog number | Price | Catalog number | Price |
| 0.002 | 2.5 | 6000 (413) | 316 SS | PE | ¼" fitting for ⅜" tubing ⅜" Swagelok® | Ferrule for ⅜" tubing ⅜" Swagelok | PG-73150-00 | | PG-73150-02 | |
| 0.003 | 5 | 6000 (413) | | | | | PG-73150-10 | | PG-73150-12 | |
| 0.01 | 20 | 3000 (206) | | | | | PG-73150-20 | | — | — |
| 0.003 | 5 | 6000 (413) | 316 SS | PE | ¼" fitting for ⅜" tubing ⅜" Swagelok | Ferrule for ⅜" tubing ⅜" Swagelok | PG-73150-30 | | PG-73150-32 | |
| 0.01 | 10 | 6000 (413) | | | | | PG-73150-40 | | PG-73150-42 | |
| 0.02 | 40 | 1500 (103) | | | | | PG-73150-50 | | — | — |
| 0.01 | 10 | 3000 (206) | 316 SS | PE | ¼" fitting for ⅜" tubing ⅜" Swagelok | Ferrule for ⅜" tubing ⅜" Swagelok | PG-73150-60 | | — | — |
| 0.01 | 20 | 1500 (103) | | | | | PG-73150-70 | | — | — |
| 0.04 | 80 | 750 (52) | | | | | PG-73150-80 | | — | — |

Cole-Parmer® High-Pressure Piston Pumps

Precision pumping for your HPLC application



- Digital stepper motor ensures accuracy at low flow rates
- Self-flush feature washes piston with every stroke
- Interactive keypad controls make programming at the pump easy
- Pressure and leak sensors (except single-head pumps) alert you to malfunctions
- Remotely control pump with a PC via RS-232 and micro USB



Single-Head Pumps precisely meter and dispense chemicals, perfect for small-scale laboratory fluid transfers and HPLC applications. Small footprint saves bench and fume hood space. **High-Flow Dual-Head Pumps** are ideally suited to preparative and simulated moving bed chromatography applications and other high throughput processes. **High-Performance Isocratic Pumps** are best suited to semi-prep and other small-scale HPLC separations, and general metering and dispensing applications. **Low-Pulsation Dual-Head Pump** provides virtually pulse-free operation with a low dead-volume pulse dampener, automatic pressure compensation, and advanced linear cam technology.

Specifications

Wetted parts: synthetic ruby, sapphire, UHMWPE, PTFE **Duty cycle:** continuous
Self-priming: no
Maximum temperature (fluid): 212°F (100°C) **Power:** 100 to 240 VAC, 50/60 Hz

| Description | Single-head pumps | | High-flow dual-head pumps | | | | High-performance isocratic pumps | | Low-pulsation dual-head pump |
|-----------------------------|-------------------|-------------|---|-------------|-------------|-------------|---|-------------------|---|
| Catalog number | PG-74931-00 | PG-74931-01 | PG-74931-10 | PG-74931-11 | PG-74931-12 | PG-74931-20 | PG-74931-45 | PG-74931-25 | PG-74931-30 |
| Pump head | PEEK | 316 SS | PEEK | 316 SS | 316 SS | 316 SS | 316 SS | 316 SS | 316 SS |
| Flow | 0.01 to 10.00 | | 0.1 to 100.0 | | | | 0.01 to 10.00 | | 0.01 to 12.00 |
| Range (mL/min) | 0.01 to 10.00 | | 0.1 to 100.0 | | | | 0.01 to 10.00 | | 0.01 to 12.00 |
| Accuracy | ±2% at 10 mL/min | | ±2% of set point | | | | ±2% at midpoint of flow | ±2% at 0.2 mL/min | ±2% at 0.2 mL/min |
| Repeatability | ±1% | | ±0.5% | | | | ±0.5% | ±0.2% | ±0.2% |
| Pressure range (psi) | 0 to 2000 | | 0 to 4000 | | | | 0 to 5000 | 0 to 6000 | 0 to 6000 |
| Pulse dampener | No | | Yes | No | Yes | No | Yes | | Yes |
| Output | RS-232, micro USB | | RS-232, micro USB, voltage flow control, run/stop | | | | RS-232, micro USB, voltage flow control, run/stop | | RS-232, micro USB, voltage flow control, run/stop |
| Price | | | | | | | | | |

Cole-Parmer® Air Cadet® Vacuum/Pressure Pumps

Get better results with minimal dead space

- Minimizes dead space and air entrapment with unique cavity configuration
- No maintenance needed—AC motors are brushless with sealed ball bearings
- Worry-free pumping with reduced stress, wear, and heat buildup

AIR CADET®



UL US CE 115 VAC model only

Convenient on/off power switch

A-B. Single- and Dual-Head Pumps

- Handle tough applications easily
- Increase your capacity with dual-head models independently pumping or connected in series
- Easy shut-off with power switch on all models except 07532-65

What's included: PTFE thread tape and polyethylene 3/8" NPT(M) x 3/8" hose barb adapters.

C. Vacuum/Pressure Stations

- Increase productivity—evacuate or pressurize two systems simultaneously with auxiliary port
- Get control with built-in bronze and brass gauge and stainless steel regulator

What's included: PTFE thread tape, two polyethylene 3/8" NPT(M) x 3/8" hose barb adapters, and one polyethylene 1/4" NPT(M) x 3/8" hose barb adapter (for auxiliary port).

D. OEM Vacuum/Pressure Pumps

- Get long, reliable operation—continuous operation up to 18 psi for 4000 service hours
- Provides pumping with minimal stress and heat buildup

ISO 9001:2008 CERTIFIED SUPPLIER



| Free-air capacity cfm (LPM) | Max vacuum " Hg (Torr) | Max pressure psi (bar) | Wetted parts | Noise rating | Port size | Power | Catalog number | Price |
|-------------------------------------|------------------------|------------------------|--|--------------|----------------|----------------|------------------------------|-------|
| A. Single-head pumps | | | | | | | | |
| 0.54 (15.5) | 20 (508) | 18 (1.24) | Noryl® pump head, FKM diaphragm, PTFE valves, and polyethylene (PE) adapters | 72 dB(A) | 3/8" hose barb | 115 VAC, 60 Hz | PG-07532-40 | |
| 0.45 (13) | | | | | | 230 VAC, 50 Hz | PG-07532-45 | |
| B. Dual-head pumps | | | | | | | | |
| 1.1 (31)† | 20 (508) | 18 (1.24) | Noryl pump head, FKM diaphragm, PTFE valves, and PE adapters | 76 dB(A) | 3/8" hose barb | 115 VAC, 60 Hz | PG-07532-60 | |
| 0.91 (26)† | | | | | | 230 VAC, 50 Hz | PG-07532-65‡ | |
| C. Vacuum/pressure stations | | | | | | | | |
| 0.5 (14.1) | 20 (508) | 18 (1.24) | FKM diaphragm, SS regulator, bronze/brass gauge, and PE adapters | 73 dB(A) | 3/8" hose barb | 115 VAC, 60 Hz | PG-07532-80 | |
| 0.4 (11.3) | | | | | | 230 VAC, 50 Hz | PG-07532-85 | |
| D. OEM vacuum/pressure pumps | | | | | | | | |
| 0.6 (17) | 20 (508) | 18 (1.24) | Noryl pump head, FKM diaphragm, PTFE valves | 72 dB(A) | 3/8" NPT(F) | 115 VAC | PG-07530-85 | |
| | 18 (457.2) | 15 (1.03) | Noryl pump head, FKM diaphragm, PTFE valves, and PE adapters | | | 12 VDC | PG-07532-25 | |

† Total free-air capacity. Single-channel capacity is half this value. ‡ Power switch not available on this model. **Note:** Do not use metal fittings with any Air Cadet pump.

Accessories

[PG-07395-20 Vacuum/pressure gauge connector kit](#), brass. Contains two PE adapters and one each of bushing, pipe tee, and adapter for pipe mount

[PG-07530-06 Service kit](#). Contains long-life nitrile diaphragm, Noryl pump head, two PTFE valves, and two Noryl retainers

Replacement Parts

[PG-07530-77 Pump head assembly](#), Valox®. Includes valves and retainers. For continuous pressures greater than 14 psi

[PG-07530-71 Diaphragm clamp assembly](#); includes diaphragm clamp and shaft, and eccentric assembly

[PG-07530-79 Diaphragm shaft](#)

[PG-07530-75 Eccentric assembly](#)

[PG-08270-33 Thread sealer tape](#) of PTFE resin. Each roll measures 260"L x 1/2"W. Pack of 10 rolls

Standard-Duty Dry Vacuum Piston Pumps

Great for filtering, aspirating, degassing, and desiccating

- Oil free for life science applications
- Water trap prevents liquid from being drawn into the pump
- Muffler provides quiet operation

Use the convenient gauge and control knob to adjust vacuum level. Single-head models also provide pressure. Avoid using pump with organic, acidic, or basic vapors.

What's included: gauge, control knob, water trap, carrying handle, suction cup feet, on/off switch, two 1/4" barbed fittings, and a 6-ft (1.8-m) cord (115 VAC models come with a standard US plug; 230 VAC models come with a European (Schuko) plug).

Service kits include all components commonly required for refurbishment.



CE
230 VAC
models only RUNS DRY

| Free-air capacity cfm (L/min) | Ultimate [†] vacuum | Maximum pressure | Wetted parts | Motor hp | Noise rating | Port size (tube ID) | Power (VAC, Hz) | Catalog number | Price | Service kits | |
|----------------------------------|---------------------------------|------------------------|--|-------------|-----------------|------------------------|--------------------|-------------------|-------------|----------------|-------|
| | | | | | | | | | | Catalog number | Price |
| Single-head pumps | | | | | | | | | | | |
| 0.76 (22) | 26.0" Hg (100 Torr) | 100 psig (6.89 bar) | Aluminum (treated for corrosion resistance), SS, and PTFE | 1/8 | 62 dB(A) | 1/4" | 115, 60 | PG-79204-00 | | PG-79204-01 | |
| 0.67 (19) | | | | | | | 230, 50 | PG-79204-05 | | | |
| 1.20 (34) | 27.2" Hg (70 Torr) | 50 psig (3.45 bar) | | 1/8 | | 1/4" | 115, 60 | PG-79204-10 | PG-79204-11 | | |
| 0.99 (28) | | | | | | | 230, 50 | PG-79204-15 | PG-79204-21 | | |
| 1.60 (45) | 27.6" Hg (60 Torr) | 100 psig (6.89 bar) | | 1/4 | | 1/4" | 115, 60 | PG-79204-20 | PG-79204-21 | | |
| 1.34 (38) | | | | | | | 230, 50 | PG-79204-25 | PG-79204-21 | | |
| Dual-head pumps | | | | | | | | | | | |
| 2.1 (60) | 29.8" Hg (5 Torr) | — | Aluminum (treated for corrosion resistance), SS, and PTFE | 1/3 | 58 dB(A) | 3/8" | 115, 60 | PG-79204-30 | PG-79204-31 | | |
| 1.8 (50) | | | | | | | 230, 50 | PG-79204-35 | PG-79204-51 | | |
| 7.1 (201) | 27.6" Hg (60 Torr) | — | | 1/3 | | 3/8" | 115, 60 | PG-79204-70 | PG-79204-51 | | |
| 5.9 (168) | | | | | | | | 230, 50 | PG-79204-75 | PG-79204-51 | |

[†]Ultimate total vacuum

PG-06414-20 Tygon® non-DEHP vacuum tubing, 1/4" ID x 5/8" OD. Pack of 10 ft (3.0 m)

High-Capacity Vacuum/Pressure Pumps

Won't get overloaded

- Shaded-pole fan-cooled motor has thermal overload switch to protect your pump system
- Heads on pumps 07061-60 and -05 are connected in parallel for higher capacity; heads on 07061-11 and -13 are connected in series for greater vacuum
- Select pumps with or without gauges, regulators, and valves
- Free-air capacities up to 2.2 cfm (62.3 L/min)

What's included: 6-ft (1.8-m), three-wire cord (US standard plug on 115 VAC models). Models 07061-11 and -13 include a filter/muffler.



07061-40

ISO9001:2008
CERTIFIED SUPPLIER

UL
RUNS DRY

| Pump head configuration | Free-air capacity cfm (L/min) | Max vacuum | Max pressure | Wetted parts | Motor hp | Port size | Noise rating | Power (VAC, Hz) | Catalog number | Price |
|--|----------------------------------|---------------|----------------------|---|-------------|--|-----------------|--------------------|-------------------|-------|
| Pump without gauges or regulators (order regulators separately below; order gauges with 1/4" NPT(M) connections online) | | | | | | | | | | |
| Single | 1.1 (31.2) | 25.5" Hg | 60 psi (4.14 bar) | Aluminum, stainless steel, Nordel®, and Nomex® | 1/8 | 1/4" NPT(F), 3/8" hose barb on gauges | 68 dB(A) | 115, 60 | PG-07061-21 | |
| | 1.0 (28.3) | 24.0" Hg | | | | | | 220/240, 50 | PG-07061-22 | |
| Pumps with gauges, regulators, and adjustable relief valve | | | | | | | | | | |
| Single | 1.1 (31.2) | 25.5" Hg | 60 psi (4.14 bar) | Aluminum, stainless steel, Nordel, and Nomex | 1/8 | 1/4" NPT(F), 3/8" hose barb on gauges | 68 dB(A) | 115, 60 | PG-07061-40 | |
| | 1.0 (28.3) | 24.0" Hg | | | | | | 220/240, 50 | PG-07061-42 | |
| Dual/parallel | 2.2 (62.3) | 25.5" Hg | 60 psi (4.14 bar) | | 1/4 | | | 115, 60 | PG-07061-60 | |
| | 1.8 (51.0) | 24.0" Hg | | | | | | 220, 50 | PG-07061-05 | |
| Pump with vacuum gauge only | | | | | | | | | | |
| Dual/series | 1.15 (32.5) | 29.0" Hg | — | Aluminum, stainless steel, Nordel, and Nomex | 1/4 | 1/4" NPT(F), 3/8" hose barb on gauges | 68 dB(A) | 115, 60 | PG-07061-11 | |
| | 0.85 (24.0) | 28.0" Hg | | | | | | 220, 50 | PG-07061-13 | |

PG-07061-32 Pressure regulator assembly for pumps 07061-21 and -22

PG-07061-30 Vacuum regulator assembly for pumps 07061-21 and -22

PG-07061-01 Service kit for all pumps

PG-07061-03 Service kit for dual-head pumps. Pumps 07061-60, -05, -11, and -13 also require kit 07061-01 above

PG-07061-06 Diaphragm for all models, neoprene/nylon

PG-07061-04 Replacement diaphragm for all models, Nordel/Nomex



Cole-Parmer® Silicone Tubing

No need to worry about the heat—
use for applications up to 460°F

Peroxide Silicone



Applications: Pharmaceutical, biotechnology, food and beverage, aerospace, and general lab applications.

Characteristics: Peroxide-cured, excellent heat resistance, low compression set, odorless, nontoxic, translucent.

Certifications: Elastomer is FDA-compliant (21 CFR 177.2600) and meets USP Class VI requirements. Tubing is manufactured according to GMP.

Temperature range: -60 to 460°F (-51 to 238°C)

Sterilize: Autoclave or gamma irradiation.

Platinum Silicone



Applications: Pharmaceutical, biotechnology, aerospace, food and beverage, and general lab applications.

Characteristics: Platinum-cured, excellent heat resistance, low compression set, odorless, nontoxic, translucent.

Certifications: Elastomer is FDA-compliant (21 CFR 177.2600) and meets USP Class VI. Tubing is manufactured according to GMP.

Temperature range: -58 to 446°F (-50 to 230°C)

Sterilize: Autoclave or gamma irradiation.

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 20% off on 20+
 15% off on 10 to 19
 10% off on 4 to 9 packs



| Dimensions: in. (mm) | | | Max psi at 70°F (21°C) | Peroxide silicone | | Platinum silicone | |
|----------------------|---------------|------------|------------------------|-------------------|----------------|-------------------|----------------|
| ID | OD | Wall | | Catalog number | Price/25-ft pk | Catalog number | Price/25-ft pk |
| 1/50 (0.5) | 1/12 (2.1) | 1/32 (0.8) | 30 | PG-06411-59 | | PG-95802-00 | |
| 1/32 (0.8) | 3/32 (2.4) | 1/32 (0.8) | 30 | PG-06411-60 | | PG-95802-01 | |
| 1/16 (1.6) | 1/8 (3.2) | 1/32 (0.8) | 15 | PG-06411-62 | | PG-95802-02 | |
| 3/32 (2.4) | 5/32 (4.0) | 1/32 (0.8) | 15 | PG-06411-63 | | PG-95802-03 | |
| 1/8 (3.2) | 3/16 (4.8) | 1/32 (0.8) | 10 | PG-06411-64 | | PG-95802-04 | |
| 1/8 (3.2) | 1/4 (6.4) | 1/16 (1.6) | 20 | PG-06411-67 | | PG-95802-05 | |
| 1/8 (3.2) | 3/8 (9.6) | 1/8 (3.2) | 25 | PG-06411-68 | | PG-95802-06 | |
| 5/32 (4.0) | 5/32 (4.0) | 1/32 (0.8) | 10 | PG-06411-65 | | PG-95802-07 | |
| 3/16 (4.8) | 1/4 (6.4) | 1/32 (0.8) | 9 | PG-06411-66 | | PG-95802-08 | |
| 3/16 (4.8) | 5/16 (8.0) | 1/16 (1.6) | 13 | PG-06411-03 | | PG-95802-09 | |
| 3/16 (4.8) | 7/16 (11.2) | 1/8 (3.2) | 22 | PG-06411-69 | | PG-95802-10 | |
| 1/4 (6.4) | 5/16 (8.0) | 1/32 (0.8) | 9 | PG-06411-70 | | PG-95802-11 | |
| 1/4 (6.4) | 3/8 (9.6) | 1/16 (1.6) | 10 | PG-06411-71 | | PG-95802-12 | |
| 1/4 (6.4) | 7/16 (11.2) | 3/32 (2.4) | 17 | PG-06411-72 | | PG-95802-13 | |
| 1/4 (6.4) | 1/2 (12.8) | 1/8 (3.2) | 17 | PG-06411-74 | | PG-95802-14 | |
| 5/16 (8.0) | 7/16 (11.2) | 1/16 (1.6) | 10 | PG-06411-75 | | PG-95802-15 | |
| 5/16 (8.0) | 1/2 (12.8) | 3/32 (2.4) | 16 | PG-06411-76 | | PG-95802-16 | |
| 5/16 (8.0) | 9/16 (14.4) | 1/8 (3.2) | 20 | PG-06411-77 | | PG-95802-17 | |
| 3/8 (9.6) | 1/2 (12.8) | 1/16 (1.6) | 10 | PG-06411-12 | | PG-95802-18 | |
| 3/8 (9.6) | 9/16 (14.4) | 3/32 (2.4) | 12 | PG-06411-78 | | PG-95802-19 | |
| 3/8 (9.6) | 5/8 (16.0) | 1/8 (3.2) | 15 | PG-06411-79 | | PG-95802-20 | |
| 1/2 (12.8) | 5/8 (16.0) | 1/16 (1.6) | 9 | PG-06411-80 | | PG-95802-21 | |
| 1/2 (12.8) | 1 1/16 (17.6) | 3/32 (2.4) | 10 | PG-06411-19 | | PG-95802-22 | |
| 1/2 (12.8) | 3/4 (19.2) | 1/8 (3.2) | 12 | PG-06411-55 | | PG-95802-23 | |
| 5/8 (16.0) | 13/16 (20.8) | 3/32 (2.4) | 10 | PG-06411-82 | | PG-95802-24 | |
| 5/8 (16.0) | 7/8 (22.4) | 1/8 (3.2) | 12 | PG-06411-58 | | PG-95802-25 | |
| 3/4 (19.2) | 1 (25.4) | 1/8 (3.2) | 9 | PG-06411-83 | | PG-95802-26 | |

Benchtop Tubing Cutter

Steel blade makes right-angle cuts in plastic tubing 1/16" to 5/8" OD.

[PG-06438-10](#) Benchtop cutter

[PG-06438-11](#) Replacement blade



Tygon® BioPharm Silicone Tubing

Reduce particle entrapment with
ultra-smooth inner surface



Formulation: Tygon® 3350 silicone, platinum cured.

Applications: Pharmaceutical, cosmetic, industrial, and auto-analysis applications.

Characteristics: Ultra-smooth inner surface reduces particle entrapment and minimizes bacterial growth. Good for mild to medium concentration bases, salts, and alcohols; is odorless, tasteless, and nontoxic. Transparent.

Certifications: Elastomer is FDA-compliant (21 CFR 177.2600) and meets USP Class VI requirements, NSF criteria and EP 3.2.9 requirements. Tubing is manufactured according to GMP.

Temperature range: -112 to 392°F (-80 to 200°C)

Sterilize: Ethylene oxide, gamma irradiation, or autoclave for 30 min, 15 psi (1.0 bar).

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 20% off on 20+
 15% off on 10 to 19
 10% off on 4 to 9 packs

| Dimensions: in. (mm) | | | Max psi at 73°F (bar at 23°C) | Catalog number | Price/50-ft pk |
|----------------------|-------------|------------|-------------------------------|----------------|----------------|
| ID | OD | Wall | | | |
| 1/32 (0.8) | 3/32 (2.4) | 1/32 (0.8) | 16 (1.1) | PG-95702-00 | |
| 1/16 (1.6) | 1/8 (3.2) | 1/32 (0.8) | 10 (0.7) | PG-95702-01 | |
| 1/16 (1.6) | 3/16 (4.8) | 1/16 (1.6) | 15 (1.0) | PG-95702-02 | |
| 3/32 (2.4) | 5/32 (4.0) | 1/32 (0.8) | 7 (0.5) | PG-95702-03 | |
| 3/32 (2.4) | 7/32 (5.6) | 1/16 (1.6) | 12 (0.8) | PG-95702-04 | |
| 1/8 (3.2) | 3/16 (4.8) | 1/32 (0.8) | 7 (0.5) | PG-95702-05 | |
| 1/8 (3.2) | 1/4 (6.4) | 1/16 (1.6) | 9 (0.6) | PG-95702-06 | |
| 3/16 (4.8) | 1/4 (6.4) | 1/32 (0.8) | 5 (0.3) | PG-95702-08 | |
| 3/16 (4.8) | 5/16 (8.0) | 1/16 (1.6) | 7 (0.5) | PG-95702-09 | |
| 3/16 (4.8) | 3/8 (9.6) | 3/32 (2.4) | 9 (0.6) | PG-95702-10 | |
| 1/4 (6.4) | 3/8 (9.6) | 1/16 (1.6) | 5 (0.3) | PG-95702-13 | |
| 1/4 (6.4) | 7/16 (11.2) | 3/32 (2.4) | 7 (0.5) | PG-95702-14 | |
| 5/16 (8.0) | 7/16 (11.2) | 1/16 (1.6) | 5 (0.3) | PG-95702-16 | |
| 5/16 (8.0) | 1/2 (12.8) | 3/32 (2.4) | 6 (0.4) | PG-95702-17 | |
| 3/8 (9.6) | 1/2 (12.8) | 1/16 (1.6) | 4 (0.3) | PG-95702-18 | |
| 3/8 (9.6) | 9/16 (14.4) | 3/32 (2.4) | 5 (0.3) | PG-95702-19 | |
| 3/8 (9.6) | 5/8 (16.0) | 1/8 (3.2) | 7 (0.5) | PG-95702-20 | |

Free Certificate of Compliance

Cole-Parmer will provide a certificate of resin or elastomer compliance FREE at your request with each order of fittings or tubing. Certificates list your company's PO number, order reference number, catalog number, formulation, compound number, lot number (where applicable), and the regulations and agencies the tubing or fitting complies with, including FDA, USP, USDA, National Formulary, NSF International, GMP, and 3A. Look for the blue "check" icon throughout this catalog to identify when a certificate of compliance is available.



DON'T RISK IT!

Our chemical compatibility database provides important information on chemical resistance—check it out at ColeParmer.com/ChemChart



Cole-Parmer® Platinum-Cured Reinforced Silicone Tubing

Won't crack under pressure—
withstands pressures to 312 psi



Formulation: Tygon® 3370 I. B., silicone, platinum cured.

Applications: Demanding sanitary high-pressure pharmaceutical, biotechnology, food and beverage, and cosmetic applications.

Characteristics: Excellent heat resistance, low compression set, odorless, and nontoxic, translucent.

Certifications: Elastomer is FDA-compliant (21 CFR 177.2600) and USP Class V extractables; exceeds Class VI implant; exceeds 3A Sanitary Standards; produced to Bulk Pharmaceutical cGMPs (FDA 21 CFR 210, 211). Tubing is manufactured according to GMP.

Temperature range: -60 to 320°F (-51 to 160°C)

Sterilize: Autoclave, ethylene oxide, or gamma irradiation.

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20% off on 20+
15% off on 10 to 19
10% off on 4 to 9 packs



| Dimensions: in. (mm) | | | Max psi at 70°F (bar at 21°C) | Qty/pk | Catalog number | Price/pk |
|----------------------|--------------|------------|----------------------------------|--------|----------------|----------|
| ID | OD | Wall | | | | |
| 3/16 (4.8) | 7/16 (11.2) | 1/8 (3.2) | 312 (21.5) | 50 ft | PG-95703-00 | |
| 1/4 (6.4) | 1/2 (12.8) | 1/8 (3.2) | 248 (17.1) | 50 ft | PG-95703-01 | |
| 3/8 (9.6) | 5/8 (16.0) | 1/8 (3.2) | 180 (12.4) | 50 ft | PG-95703-02 | |
| 1/2 (12.8) | 13/16 (20.8) | 5/32 (4.0) | 168 (11.6) | 50 ft | PG-95703-03 | |
| 5/8 (16.0) | 15/16 (24.0) | 5/32 (4.0) | 144 (9.9) | 50 ft | PG-95703-04 | |
| 3/4 (19.1) | 1 1/8 (28.6) | 3/16 (4.8) | 144 (9.9) | 50 ft | PG-95703-05 | |
| 1 1/4 (31.8) | 1 5/8 (41.4) | 3/16 (4.8) | 96 (6.6) | 25 ft | PG-95703-07 | |

Dow Corning® Pharma-50 Tubing

No organic additives and low extractables



Applications: Pharmaceutical, biotechnology, and ultrapure fluid processing.

Characteristics: 50 durometer, translucent platinum-cured silicone tubing with a very low extractable profile. Pharma tubing remains flexible and resilient for long service life. Dow Corning maintains complete traceability from silica to silicone tubing.

Certifications: Elastomer exceeds test guidelines for USP Class VI Plastics and the tubing itself meets or exceeds FDA (21 CFR 177.2600), 3A Sanitary Standards and European Pharmacopoeia (EP) requirements. Produced under Bulk Pharmaceutical (BP) and current GMP principles.

Temperature range: -60 to 460°F (-51 to 232°C)

Sterilize: Autoclave, ethylene oxide, or gamma irradiation.

Buy More...Save More!

20% off on 20+
15% off on 10 to 19
10% off on 4 to 9 packs

| Dimensions: in. (mm) | | | Max psi at 70°F (bar at 21°C) | Catalog number | Price/ 50-ft pk |
|----------------------|-------------|------------|----------------------------------|----------------|--------------------|
| ID | OD | Wall | | | |
| 1/8 (3.2) | 1/4 (6.4) | 1/16 (1.6) | 21 (1.4) | PG-96105-00 | |
| 3/16 (4.8) | 3/8 (9.6) | 3/32 (2.4) | 16 (1.1) | PG-96105-02 | |
| 1/4 (6.4) | 3/8 (9.6) | 1/16 (1.6) | 12 (0.8) | PG-96105-03 | |
| 1/4 (6.4) | 7/16 (11.1) | 3/32 (2.4) | 17 (1.2) | PG-96105-04 | |
| 1/4 (6.4) | 1/2 (12.8) | 1/8 (3.2) | 17 (1.2) | PG-96105-05 | |
| 5/16 (8.0) | 1/2 (14.0) | 1/8 (3.0) | 16 (1.1) | PG-96105-06 | |
| 3/8 (9.6) | 9/16 (14.3) | 3/32 (2.4) | 13 (0.9) | PG-96105-08 | |
| 3/8 (9.6) | 5/8 (16.0) | 1/8 (3.2) | 14 (1.0) | PG-96105-09 | |
| 1/2 (12.8) | 3/4 (19.1) | 1/8 (3.2) | 10 (0.7) | PG-96105-11 | |
| 5/8 (16.0) | 7/8 (22.2) | 1/8 (3.2) | 9 (0.6) | PG-96105-12 | |

Silastic® Laboratory Tubing

Resists bacteria and fungus growth



Applications: Pharmaceutical, biotech, filtration, and environmental analysis.

Characteristics: Platinum-cured silicone, nonpyrogenic, bacteria and fungus-resistant, extremely low extractables, and does not impart a taste or odor.

Certifications: Exceeds USP Class VI Plastics Test requirements, elastomer and tubing are manufactured under Bulk Pharmaceutical cGMPs in an FDA-registered, ISO-9002-certified facility.

Temperature range: -65 to 480°F (-54 to 249°C)

Sterilize: Autoclave or radiation.

Buy More...Save More!

20% off on 20+
15% off on 10 to 19
10% off on 4 to 9 packs

| Dimensions: in. (mm) | | | Catalog number | Price/ 50-ft pk |
|----------------------|---------------|---------------|----------------|--------------------|
| ID | OD | Wall | | |
| 0.012 (0.3) | 0.025 (0.6) | 0.0065 (0.2) | PG-96115-00 | |
| 0.02 (0.5) | 0.037 (0.9) | 0.0085 (0.22) | PG-96115-02 | |
| 0.025 (0.6) | 0.047 (1.2) | 0.011 (0.3) | PG-96115-04 | |
| 0.03 (0.8) | 0.065 (1.7) | 0.0175 (0.4) | PG-96115-06 | |
| 0.04 (1) | 0.085 (2.2) | 0.0225 (0.6) | PG-96115-08 | |
| 0.058 (1.5) | 0.077 (2.0) | 0.0095 (0.2) | PG-96115-10 | |
| 0.062 (1.6) | 0.095 (2.4) | 0.0165 (0.4) | PG-96115-12 | |
| 0.062 (1.6) | 0.125 (3.2) | 0.0315 (0.8) | PG-96115-14 | |
| 0.078 (2) | 0.125 (3.2) | 0.0235 (0.6) | PG-96115-16 | |
| 0.104 (2.6) | 0.192 (4.9) | 0.044 (1.1) | PG-96115-18 | |
| 0.132 (3.4) | 0.183 (4.6) | 0.0255 (0.6) | PG-96115-20 | |
| 1/8 (3.2) | 1/4 (6.4) | 1/16 (1.6) | PG-96115-22 | |
| 3/16 (4.8) | 5/16 (8.0) | 1/16 (1.6) | PG-96115-24 | |
| 3/16 (4.8) | 3/8 (9.5) | 3/32 (2.4) | PG-96115-26 | |
| 1/4 (6.4) | 3/8 (9.5) | 1/16 (1.6) | PG-96115-28 | |
| 1/4 (6.4) | 7/16 (11.2) | 3/32 (2.4) | PG-96115-30 | |
| 1/4 (6.4) | 1/2 (12.8) | 1/8 (3.2) | PG-96115-32 | |
| 5/16 (8.0) | 1/2 (12.8) | 3/32 (2.4) | PG-96115-34 | |
| 3/8 (9.5) | 1/2 (12.8) | 1/16 (1.6) | PG-96115-36 | |
| 3/8 (9.5) | 9/16 (14.3) | 3/32 (2.4) | PG-96115-38 | |
| 3/8 (9.5) | 5/8 (15.9) | 1/8 (3.2) | PG-96115-40 | |
| 1/2 (12.8) | 1 1/16 (17.5) | 3/32 (2.4) | PG-96115-42 | |
| 1/2 (12.8) | 3/4 (19.1) | 1/8 (3.2) | PG-96115-44 | |
| 5/8 (15.9) | 7/8 (22.2) | 1/8 (3.2) | PG-96115-46 | |

Cole-Parmer® Vinyl Tubing

Ideal for general-purpose applications



Applications: General-purpose lab use.

Characteristics: Fair chemical and abrasion resistance, odorless, nontoxic and transparent.

Certifications: Tubing is manufactured according to GMP.

Temperature range: -45 to 180°F (-43 to 82°C)

Sterilize: Ethylene oxide.

Buy More...Save More!

20% off on 20+
15% off on 10 to 19
10% off on 4 to 9 packs

| Dimensions: in. (mm) | | | Max psi at 70°F (bar at 21°C) | Catalog number | Ft/pk | Price/pk |
|----------------------|---------------|------------|----------------------------------|----------------|-------|----------|
| ID | OD | Wall | | | | |
| 1/16 (1.6) | 1/8 (3.2) | 1/32 (0.8) | 40 (2.8) | PG-06405-01 | 50 | |
| 1/8 (3.2) | 1/4 (6.4) | 1/16 (1.6) | 59 (4.0) | PG-06405-02 | 50 | |
| 3/16 (4.8) | 5/16 (8.0) | 1/16 (1.6) | 51 (3.5) | PG-06405-03 | 50 | |
| 3/16 (4.8) | 7/16 (11.2) | 1/8 (3.2) | 46 (3.2) | PG-06405-04 | 100 | |
| 1/4 (6.4) | 3/8 (9.6) | 1/16 (1.6) | 51 (3.5) | PG-06405-06 | 50 | |
| 1/4 (6.4) | 7/16 (11.2) | 3/32 (2.4) | 55 (3.8) | PG-06405-07 | 100 | |
| 1/4 (6.4) | 1/2 (12.8) | 1/8 (3.2) | 64 (4.4) | PG-06405-08 | 50 | |
| 5/16 (8.0) | 7/16 (11.2) | 1/16 (1.6) | 46 (3.2) | PG-06405-09 | 50 | |
| 5/16 (8.0) | 1/2 (12.8) | 3/32 (2.4) | 55 (3.8) | PG-06405-10 | 100 | |
| 3/8 (9.6) | 1/2 (12.8) | 1/16 (1.6) | 41 (2.8) | PG-06405-12 | 50 | |
| 3/8 (9.6) | 9/16 (14.4) | 3/32 (2.4) | 46 (3.2) | PG-06405-15 | 100 | |
| 3/8 (9.6) | 5/8 (16.0) | 1/8 (3.2) | 55 (3.8) | PG-06405-16 | 100 | |
| 1/2 (12.8) | 5/8 (16.0) | 1/16 (1.6) | 28 (1.9) | PG-06405-18 | 50 | |
| 1/2 (12.8) | 1 1/16 (17.6) | 3/32 (2.4) | 36 (2.5) | PG-06405-19 | 100 | |
| 1/2 (12.8) | 3/4 (19.1) | 1/8 (3.2) | 41 (2.8) | PG-06405-20 | 50 | |
| 5/8 (16.0) | 13/16 (20.8) | 3/32 (2.4) | 32 (2.2) | PG-06405-25 | 100 | |
| 5/8 (16.0) | 7/8 (22.4) | 1/8 (3.2) | 36 (2.5) | PG-06405-27 | 50 | |
| 3/4 (19.1) | 1 (25.4) | 1/8 (3.2) | 32 (2.2) | PG-06405-31 | 50 | |
| 1 (25.4) | 1 1/4 (31.8) | 1/8 (3.2) | 23 (1.6) | PG-06405-36 | 50 | |
| 1 1/4 (31.8) | 1 3/4 (44.5) | 1/4 (6.4) | 41 (2.8) | PG-06405-46 | 50 | |



PharMed® BPT Tubing

Protect your light-sensitive samples



Applications: Cell and tissue culture work and pharmaceutical uses. Also good for light-sensitive samples.

Characteristics: Nontoxic; nonhemolytic; extremely low permeability; resists acids, alkalis, oxidizing agents, and animal and vegetable oils; heat-sealable, bondable, and formable. Opaque beige.

Certifications: Elastomer is FDA-compliant (21 CFR 177.2600) and meets USP Class VI and NSF (Standard 51) requirements. Meets EP requirements. Tubing is manufactured according to GMP.

Temperature range: -60 to 275°F (-51 to 135°C)

Sterilize: Autoclave, ethylene oxide, or gamma irradiation.

Buy More...Save More!

20% off on 20+ 15% off on 10 to 19 10% off on 4 to 9 packs

| Dimensions: in. (mm) | | | Max psi at 70°F (bar at 21°C) | Catalog number | Price/ 25-ft pk |
|----------------------|-------------|------------|-------------------------------|----------------|-----------------|
| ID | OD | Wall | | | |
| 1/50 (0.5) | 9/64 (3.7) | 1/16 (1.6) | 50 (3.4) | PG-96880-00 | |
| 1/32 (0.8) | 5/32 (4.0) | 1/16 (1.6) | 40 (2.8) | PG-96880-02 | |
| 1/16 (1.6) | 3/16 (4.8) | 1/16 (1.6) | 34 (2.3) | PG-96880-04 | |
| 1/8 (3.2) | 1/4 (6.4) | 1/16 (1.6) | 19 (1.3) | PG-96880-06 | |
| 3/16 (4.8) | 5/16 (8.0) | 1/16 (1.6) | 13 (0.9) | PG-96880-08 | |
| 1/4 (6.4) | 3/8 (9.6) | 1/16 (1.6) | 10 (0.7) | PG-96880-10 | |
| 1/4 (6.4) | 1/2 (12.8) | 1/8 (3.2) | 19 (1.3) | PG-96880-12 | |
| 5/16 (8.0) | 7/16 (11.2) | 1/16 (1.6) | 8 (0.6) | PG-96880-14 | |
| 3/8 (9.6) | 5/8 (16.0) | 1/8 (3.2) | 13 (0.9) | PG-96880-16 | |
| 1/2 (12.8) | 3/4 (19.1) | 1/8 (3.2) | 11 (0.8) | PG-96880-18 | |
| 5/8 (16.0) | 7/8 (22.4) | 1/8 (3.2) | 8 (0.6) | PG-96880-20 | |
| 3/4 (19.1) | 1 (25.4) | 1/8 (3.2) | 7 (0.5) | PG-96880-22 | |

Microbore PharMed BPT Tubing

| Dimensions: in. (mm) | | | Fits needle gauge | Catalog number | Price/ 100-ft pk |
|----------------------|--------------|--------------|-------------------|----------------|------------------|
| ID | OD | Wall | | | |
| 0.010 (0.25) | 0.082 (2.08) | 0.036 (0.91) | 30 | PG-95809-12 | |
| 0.020 (0.51) | 0.096 (2.44) | 0.038 (0.97) | 24 | PG-95809-18 | |
| 0.035 (0.89) | 0.111 (2.82) | 0.038 (0.97) | 20 | PG-95809-26 | |
| 0.045 (1.14) | 0.121 (3.07) | 0.038 (0.97) | 18 | PG-95809-30 | |
| 0.051 (1.30) | 0.127 (3.23) | 0.038 (0.97) | 18 | PG-95809-32 | |
| 0.056 (1.42) | 0.132 (3.35) | 0.038 (0.97) | 17 | PG-95809-34 | |
| 0.060 (1.52) | 0.136 (3.45) | 0.038 (0.97) | 16 | PG-95809-36 | |
| 0.073 (1.85) | 0.149 (3.78) | 0.038 (0.97) | 15 | PG-95809-40 | |

Dow Corning® Pharma-65 Tubing

Resilient for extended service life



Applications: High-pressure, pharmaceutical, biotechnology, and ultra-pure fluid processing.

Characteristics: 65 durometer, platinum-cured silicone tubing with a very low extractable profile; it contains no phthalates, plasticizers, latex, or other organic additives. Remains flexible and resilient for long service life. Dow Corning maintains complete traceability from silica to silicone tubing.

Certifications: Elastomer is FDA-compliant (21 CFR 177.2600) and meets USP Class VI requirements. Meets 3A Sanitary Standards and European Pharmacopoeia (EP) requirements. Tubing is manufactured according to Bulk Pharmaceutical (BP) and current GMP.

Temperature range: -60 to 460°F (-51 to 232°C)

Sterilize: Autoclave, ethylene oxide, or gamma irradiation.

Buy More...Save More!

20% off on 20+ 15% off on 10 to 19 10% off on 4 to 9 packs

| Dimensions: in. (mm) | | | Max psi at 70°F (bar at 21°C) | Catalog number | Price/ 50-ft pk |
|----------------------|--------------|------------|-------------------------------|----------------|-----------------|
| ID | OD | Wall | | | |
| 1/8 (3.2) | 1/4 (6.4) | 1/16 (1.6) | 19 (1.3) | PG-96107-00 | |
| 3/16 (4.8) | 5/16 (8.0) | 1/16 (1.6) | 13 (0.9) | PG-96107-01 | |
| 3/16 (4.8) | 3/8 (9.6) | 3/32 (2.4) | 15 (1.0) | PG-96107-02 | |
| 1/4 (6.4) | 7/16 (11.2) | 3/32 (2.4) | 20 (1.4) | PG-96107-04 | |
| 1/4 (6.4) | 1/2 (12.8) | 1/8 (3.2) | 19 (1.3) | PG-96107-05 | |
| 5/16 (8.0) | 1/2 (12.8) | 3/32 (2.4) | 12 (0.8) | PG-96107-06 | |
| 3/8 (9.6) | 1/2 (12.8) | 1/16 (1.6) | 11 (0.8) | PG-96107-07 | |
| 3/8 (9.6) | 9/16 (14.4) | 3/32 (2.4) | 13 (0.9) | PG-96107-08 | |
| 3/8 (9.6) | 5/8 (16.0) | 1/8 (3.2) | 13 (0.9) | PG-96107-09 | |
| 1/2 (12.8) | 11/16 (17.6) | 3/32 (2.4) | 12 (0.8) | PG-96107-10 | |
| 1/2 (12.8) | 3/4 (19.1) | 1/8 (3.2) | 11 (0.8) | PG-96107-11 | |
| 5/8 (16.0) | 7/8 (22.4) | 1/8 (3.2) | 8 (0.6) | PG-96107-12 | |
| 3/4 (19.1) | 1 (25.4) | 1/8 (3.2) | 7 (0.5) | PG-96107-13 | |

Find even more online! Go to ColeParmer.com to search more than 100,000 products.

C-Flex® Tubing

Meets the demands of various industries

– Available in three formulations—standard, clear, and animal-derived component-free (ADCF)

Applications: General-purpose lab uses requiring high performance and long life.

Characteristics: Exceptional tensile and tear strength, good biocompatibility, excellent chemical resistance, low gas permeability, and a smooth surface. Standard C-Flex is opaque white; C-Flex Clear and C-Flex ADCF are clear.



Certifications: Meets USP Class VI.

Tubing is manufactured according to GMP.

Temperature range:

-50 to 275°F (-45 to 135°C)

Sterilize: Autoclave, ethylene oxide, or gamma irradiation.

Buy More...Save More!

20% off on 20+ 15% off on 10 to 19 10% off on 4 to 9 packs

| Dimensions in. (mm) | | | C-Flex | | | C-Flex Clear | | | C-Flex ADCF | | |
|---------------------|--------------|------------|----------------|------------------------|-----------------|----------------|------------------------|-----------------|----------------|------------------------|-----------------|
| ID | OD | Wall | Catalog number | Max psi at 70°F (21°C) | Price/ 25-ft pk | Catalog number | Max psi at 70°F (21°C) | Price/ 25-ft pk | Catalog number | Max psi at 70°F (21°C) | Price/ 50-ft pk |
| 1/50 (0.5) | 1/12 (2.1) | 1/32 (0.8) | PG-06424-59 | 30 | | PG-06422-00 | 50 | | — | — | — |
| 1/32 (0.8) | 3/32 (2.4) | 1/32 (0.8) | PG-06424-60 | 31 | | PG-06422-01 | 51 | | — | — | — |
| 1/16 (1.6) | 1/8 (3.2) | 1/32 (0.8) | PG-06424-62 | 15 | | PG-06422-02 | 25 | | — | — | — |
| 3/32 (2.4) | 3/32 (4.0) | 1/32 (0.8) | PG-06424-63 | 14 | | PG-06422-03 | 23 | | — | — | — |
| 1/8 (3.2) | 3/16 (4.8) | 1/32 (0.8) | PG-06424-64 | 10 | | PG-06422-04 | 17 | | — | — | — |
| 1/8 (3.2) | 1/4 (6.4) | 1/16 (1.6) | PG-06424-67 | 21 | | PG-06422-05 | 35 | | PG-06432-50 | 35 | |
| 5/32 (4.0) | 7/32 (5.6) | 1/32 (0.8) | PG-06424-65 | 10 | | PG-06422-06 | 17 | | — | — | — |
| 3/16 (4.8) | 1/4 (6.4) | 1/32 (0.8) | PG-06424-66 | 9 | | PG-06422-07 | 15 | | — | — | — |
| 3/16 (4.8) | 5/16 (8.0) | 1/16 (1.6) | PG-06424-03 | 13 | | PG-06422-08 | 22 | | PG-06432-51 | 22 | |
| 3/16 (4.8) | 7/16 (11.2) | 1/8 (3.2) | PG-06424-69 | 22 | | PG-06422-09 | 36 | | — | — | — |
| 1/4 (6.4) | 3/8 (9.6) | 1/16 (1.6) | PG-06424-71 | 12 | | PG-06422-10 | 20 | | PG-06432-53 | 20 | |
| 1/4 (6.4) | 7/16 (11.2) | 3/32 (2.4) | PG-06424-72 | 17 | | PG-06422-11 | 28 | | PG-06432-54 | 28 | |
| 1/4 (6.4) | 1/2 (12.7) | 1/8 (3.2) | PG-06424-74 | 17 | | PG-06422-12 | 28 | | PG-06432-55 | 28 | |
| 5/16 (8.0) | 7/16 (11.2) | 1/16 (1.6) | PG-06424-75 | 10 | | PG-06422-13 | 17 | | — | — | — |
| 5/16 (8.0) | 1/2 (12.7) | 3/32 (2.4) | PG-06424-76 | 16 | | PG-06422-14 | 27 | | PG-06432-56 | 27 | |
| 3/8 (9.6) | 1/2 (12.7) | 1/16 (1.6) | PG-06424-12 | 10 | | PG-06422-15 | 17 | | PG-06432-57 | 17 | |
| 3/8 (9.6) | 5/8 (16.0) | 1/8 (3.2) | PG-06424-79 | 14 | | PG-06422-16 | 23 | | PG-06432-59 | 23 | |
| 1/2 (12.7) | 11/16 (17.6) | 3/32 (2.4) | PG-06424-19 | 10 | | PG-06422-17 | 17 | | PG-06432-60 | 17 | |
| 1/2 (12.7) | 3/4 (19.1) | 1/8 (3.2) | PG-06424-81 | 10 | | PG-06422-18 | 17 | | PG-06432-61 | 17 | |

Dow Corning® Pharma-80 Tubing

Economical alternative to reinforced tubing



Applications: High-pressure, pharmaceutical, biotech, and ultra-pure fluid processing.

Characteristics: 80 durometer, semi-transparent platinum-cured silicone tubing with a very low extractable profile; it contains no phthalates, plasticisers, latex or other organic additives. Pharma tubing is hydrophobic, and remains flexible and resilient for long service life. Dow Corning maintains complete traceability from silica to silicone tubing.

Certifications: Elastomer exceeds test guidelines for USP Class VI Plastics; tubing itself meets or exceeds FDA (21 CFR 177.2600), 3A Sanitary Standards, and European Pharmacopoeia (EP) requirements. Pharma tubing is produced under Bulk Pharmaceutical (BP) current GMP principals.

Temperature range: -60 to 460°F (-51 to 232°C)

Sterilize: Autoclave, ethylene oxide, or gamma irradiation.

Buy More...Save More!

20% off on 20+
15% off on 10 to 19
10% off on 4 to 9 packs

| Dimensions: in. (mm) | | | Max psi at 70°F (bar at 21°C) | Catalog number | Price/50-ft pk |
|----------------------|--------------|------------|-------------------------------|----------------|----------------|
| ID | OD | Wall | | | |
| 1/8 (3.2) | 1/4 (6.4) | 1/16 (1.6) | 249 (17.2) | PG-96109-00 | |
| 3/16 (4.8) | 5/16 (8.0) | 1/16 (1.6) | 249 (17.2) | PG-96109-01 | |
| 3/16 (4.8) | 3/8 (9.6) | 3/32 (2.4) | 260 (17.9) | PG-96109-02 | |
| 1/4 (6.4) | 3/8 (9.6) | 1/16 (1.6) | 249 (17.2) | PG-96109-03 | |
| 1/4 (6.4) | 7/16 (11.2) | 3/32 (2.4) | 249 (17.2) | PG-96109-04 | |
| 1/4 (6.4) | 1/2 (12.8) | 1/8 (3.2) | 260 (17.9) | PG-96109-05 | |
| 3/8 (9.6) | 1/2 (12.8) | 1/16 (1.6) | 241 (16.6) | PG-96109-07 | |
| 3/8 (9.6) | 9/16 (14.4) | 3/32 (2.4) | 249 (17.2) | PG-96109-08 | |
| 3/8 (9.6) | 5/8 (16.0) | 1/8 (3.2) | 231 (15.9) | PG-96109-09 | |
| 1/2 (12.8) | 11/16 (17.6) | 3/32 (2.4) | 210 (14.5) | PG-96109-10 | |
| 1/2 (12.8) | 3/4 (19.1) | 1/8 (3.2) | 200 (13.8) | PG-96109-11 | |

Cole-Parmer® Flexible PVC Tubing

Stop oxidation and bacteria problems



Applications: Food and beverage processing, pharmaceutical, biotech, and general lab applications.

Characteristics: Extremely flexible. Resistant to oxidation, chemicals and bacteria. Transparent.

Certifications: FDA-compliant (21 CFR 175.300) and meets USP Class VI and USDA requirements; meets 3A sanitary standards.

Temperature range: -41 to 165°F (-41 to 74°C)

Sterilize: Ethylene oxide or gamma irradiation.

Buy More...Save More!

20% off on 20+
15% off on 10 to 19
10% off on 4 to 9 packs



| Dimensions: in. (mm) | | | Max psi at 68°F (bar at 20°C) | Catalog number | Price/50-ft pk |
|----------------------|--------------|------------|-------------------------------|----------------|----------------|
| ID | OD | Wall | | | |
| 1/8 (3.2) | 1/4 (6.4) | 1/16 (1.6) | 68 (4.7) | PG-96605-01 | |
| 3/16 (4.8) | 5/16 (8.0) | 1/16 (1.6) | 55 (3.8) | PG-96605-02 | |
| 1/4 (6.4) | 3/8 (9.6) | 1/16 (1.6) | 55 (3.8) | PG-96605-03 | |
| 1/4 (6.4) | 1/2 (12.8) | 1/8 (3.2) | 70 (4.8) | PG-96605-05 | |
| 5/16 (8.0) | 7/16 (11.2) | 1/16 (1.6) | 50 (3.4) | PG-96605-06 | |
| 3/8 (9.6) | 1/2 (12.8) | 1/16 (1.6) | 40 (2.8) | PG-96605-08 | |
| 3/8 (9.6) | 5/8 (16.0) | 1/8 (3.2) | 65 (4.5) | PG-96605-10 | |
| 1/2 (12.8) | 5/8 (16.0) | 1/16 (1.6) | 30 (2.1) | PG-96605-11 | |
| 1/2 (12.8) | 3/4 (19.1) | 1/8 (3.2) | 45 (3.1) | PG-96605-13 | |
| 5/8 (16.0) | 7/8 (22.4) | 1/8 (3.2) | 40 (2.8) | PG-96605-15 | |
| 3/4 (19.1) | 1 (25.4) | 1/8 (3.2) | 35 (2.4) | PG-96605-16 | |
| 1 (25.4) | 1 1/4 (31.8) | 1/8 (3.2) | 28 (1.9) | PG-96605-19 | |
| 1 1/4 (31.8) | 1 3/4 (44.5) | 1/4 (6.4) | 45 (3.1) | PG-96605-25 | |

Tygon® Non-DEHP Lab Tubing

Pliable formulation for sharp radius bending



Formulation: Tygon E-3603

Applications: General lab, food & beverage, biopharm, analytical instruments.

Characteristics: Non-DEHP, phthalate free. Long-life, chemical resistant, nonoxidizing; able to bend to sharp radius curves and easily works with fittings. Transparent.

Certifications: FDA-compliant (21 CFR 175.300); meets USP Class VI and NSF 51 requirements.

Temperature range: -51 to 165°F (-46 to 74°C)

Sterilize: Autoclave or ethylene oxide.

Buy More...Save More!

20% off on 20+
15% off on 10 to 19
10% off on 4 to 9 packs

| Dimensions: in. (mm) | | | Max psi at 70°F (bar at 21°C) | Catalog number | Price/50-ft pk |
|----------------------|--------------|------------|-------------------------------|----------------|----------------|
| ID | OD | Wall | | | |
| 1/32 (0.8) | 3/32 (2.4) | 1/32 (0.8) | 69 (4.8) | PG-06407-70 | |
| 1/16 (1.6) | 1/8 (3.2) | 1/32 (0.8) | 36 (2.5) | PG-06407-71 | |
| 1/16 (1.6) | 3/16 (4.8) | 1/16 (1.6) | 69 (4.8) | PG-06407-72 | |
| 3/32 (2.4) | 5/32 (4.0) | 1/32 (0.8) | 25 (1.7) | PG-06407-73 | |
| 1/8 (3.2) | 3/16 (4.8) | 1/32 (0.8) | 20 (1.4) | PG-06407-75 | |
| 1/8 (3.2) | 1/4 (6.4) | 1/16 (1.6) | 36 (2.5) | PG-06407-76 | |
| 5/32 (4.0) | 7/32 (5.6) | 1/32 (0.8) | 17 (1.2) | PG-06407-77 | |
| 3/16 (4.8) | 5/16 (8.0) | 1/16 (1.6) | 25 (1.7) | PG-06407-78 | |
| 3/16 (4.8) | 3/8 (9.6) | 3/32 (2.4) | 36 (2.5) | PG-06407-79 | |
| 1/4 (6.4) | 3/8 (9.6) | 1/16 (1.6) | 20 (1.4) | PG-06407-80 | |
| 1/4 (6.4) | 7/16 (11.2) | 3/32 (2.4) | 28 (1.9) | PG-06407-81 | |
| 1/4 (6.4) | 1/2 (12.8) | 1/8 (3.2) | 35 (2.5) | PG-06407-82 | |
| 5/16 (8.0) | 7/16 (11.2) | 1/16 (1.6) | 17 (1.2) | PG-06407-83 | |
| 5/16 (8.0) | 1/2 (12.8) | 3/32 (2.4) | 23 (1.6) | PG-06407-84 | |
| 5/16 (8.0) | 9/16 (14.4) | 1/8 (3.2) | 30 (2.1) | PG-06407-85 | |
| 3/8 (9.6) | 1/2 (12.8) | 1/16 (1.6) | 14 (1.0) | PG-06407-86 | |
| 3/8 (9.6) | 5/8 (16.0) | 3/32 (2.4) | 20 (1.4) | PG-06407-87 | |
| 3/8 (9.6) | 5/8 (16.0) | 1/8 (3.2) | 25 (1.7) | PG-06407-88 | |
| 7/16 (11.2) | 9/16 (14.4) | 1/16 (1.6) | 13 (0.9) | PG-06407-89 | |
| 1/2 (12.8) | 5/8 (16.0) | 1/16 (1.6) | 12 (1.8) | PG-06407-90 | |
| 1/2 (12.8) | 11/16 (17.6) | 3/32 (2.4) | 15 (1.0) | PG-06407-91 | |
| 1/2 (12.8) | 3/4 (19.1) | 1/8 (3.2) | 20 (1.4) | PG-06407-92 | |
| 1/2 (12.8) | 13/16 (20.8) | 5/32 (4.0) | 24 (1.7) | PG-06407-93 | |
| 5/8 (16.0) | 13/16 (20.8) | 3/32 (2.4) | 13 (0.9) | PG-06407-94 | |
| 5/8 (16.0) | 7/16 (11.2) | 1/8 (3.2) | 17 (1.2) | PG-06407-95 | |
| 3/4 (19.1) | 1 (25.4) | 1/8 (3.2) | 14 (1.0) | PG-06407-96 | |
| 3/4 (19.1) | 1 1/8 (28.6) | 3/16 (4.8) | 20 (1.4) | PG-06407-97 | |
| 1 (25.4) | 1 1/4 (31.8) | 1/8 (3.2) | 12 (0.8) | PG-06407-98 | |
| 1 (25.4) | 1 1/2 (38.1) | 1/4 (6.4) | 20 (1.4) | PG-06407-99 | |

Microbore/Autoanalysis Tubing

| Dimensions: in. (mm) | | | Fits needle gauge | Catalog number | Price/100-ft pk |
|----------------------|--------------|--------------|-------------------|----------------|-----------------|
| ID | OD | Wall | | | |
| 0.008 (0.19) | 0.080 (2.03) | 0.036 (0.91) | 33 | PG-06460-10 | |
| 0.010 (0.25) | 0.082 (2.08) | 0.036 (0.91) | 30 | PG-06460-12 | |
| 0.017 (0.44) | 0.093 (2.36) | 0.036 (0.91) | 26 | PG-06460-16 | |
| 0.020 (0.51) | 0.096 (2.44) | 0.036 (0.91) | 24 | PG-06460-18 | |
| 0.025 (0.64) | 0.101 (2.57) | 0.036 (0.91) | 23 | PG-06460-22 | |
| 0.035 (0.89) | 0.111 (2.82) | 0.036 (0.91) | 20 | PG-06460-26 | |
| 0.040 (1.02) | 0.116 (2.95) | 0.036 (0.91) | 19 | PG-06460-28 | |
| 0.045 (1.14) | 0.121 (3.07) | 0.036 (0.91) | 18 | PG-06460-30 | |
| 0.056 (1.42) | 0.132 (3.35) | 0.036 (0.91) | 17 | PG-06460-34 | |
| 0.081 (2.06) | 0.157 (3.99) | 0.036 (0.91) | 14 | PG-06460-42 | |
| 0.110 (2.79) | 0.186 (4.72) | 0.036 (0.91) | 12 | PG-06460-48 | |

Ratchet Tubing Clamps

Durable Celcon® plastic tubing clamps are autoclavable; won't rust, corrode, or distort. Twelve-position ratchet control adjusts from full flow to complete closure. Mini-clamp is suitable for up to 1/8" (2.1 mm) OD tubing. Standard clamp accepts flexible tubing to 1/2" (12.7 mm) OD.



06833-00

PG-06833-01 Mini tubing clamp. Pack of 25

PG-06833-00 Tubing clamp. Pack of 25



Tygon® Microbore Autoanalysis Tubing

Clear to easily view sample

Formulation: ND-100-80

Applications: General laboratory and pharmaceutical use, especially with precision injection or dispensing applications. Also excellent with low-flow peristaltic pump applications.

Characteristics: Extremely flexible. Nontoxic; nonpyrogenic; biocompatible. Crystal clear.

Certifications: FDA-compliant. Resin meets USP Class VI requirements. Tubing is manufactured according to GMP.

Temperature range: -25 to 185°F (-31 to 85°C)

Sterilize: Autoclave, ethylene oxide, or gamma irradiation.



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20% off on 20+
15% off on 10 to 19
10% off on 4 to 9 packs

| Dimensions: in. (mm) | | | Fits needle gauge | Catalog number | Price/100-ft |
|----------------------|--------------|--------------|-------------------|----------------|--------------|
| ID | OD | Wall | | | |
| 0.010 (0.25) | 0.030 (0.76) | 0.010 (0.25) | 30 | PG-06419-00 | |
| 0.020 (0.51) | 0.060 (1.52) | 0.020 (0.51) | 25 | PG-06419-01 | |
| 0.030 (0.76) | 0.090 (2.29) | 0.030 (0.76) | 20 to 21 | PG-06419-03 | |
| 0.040 (1.02) | 0.070 (1.78) | 0.015 (0.38) | 18 to 19 | PG-06419-04 | |
| 0.050 (1.27) | 0.090 (2.29) | 0.020 (0.51) | 17 to 18 | PG-06419-05 | |

PG-06418-10 Tygon® microbore tubing assortment pack. One 100-ft (30.4-m) roll of 06418-01, -02, -03, -04, and -05 (500-ft [152.4-m] total)

Tygon® High-Purity Tubing

Resists build-up and bacterial growth



Formulation: 2475

Applications: Sensitive fluid transfer applications requiring high purity.

Characteristics: Plasticizer free, smooth inner surface (inhibits particulate buildup and bacterial growth), safely dispose through incineration. Nontoxic. Transparent.

Certifications: Resin is FDA-compliant (21 CFR 177.1520) and meets USP 23 Class VI requirements. Tubing is manufactured according to GMP.

Temperature range: -94 to 125°F (-70 to 52°C)

Sterilize: Ethylene oxide or gamma irradiation.

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20% off on 20+
15% off on 10 to 19
10% off on 4 to 9 packs

| Dimensions: in. (mm) | | | Max psi at 70°F (bar at 21°C) | Catalog number | Ft/pk | Price/pk |
|----------------------|--------------|------------|-------------------------------|----------------|-------|----------|
| ID | OD | Wall | | | | |
| 1/16 (1.6) | 3/16 (4.8) | 1/16 (1.6) | 49 (3.4) | PG-95635-50 | 50 | |
| 1/8 (3.2) | 1/4 (6.4) | 1/16 (1.6) | 27 (1.9) | PG-95635-51 | 50 | |
| 3/16 (4.8) | 5/16 (8.0) | 1/16 (1.6) | 19 (1.3) | PG-95635-52 | 50 | |
| 1/4 (6.4) | 3/8 (9.6) | 1/16 (1.6) | 16 (1.1) | PG-95635-53 | 50 | |
| 5/16 (8.0) | 7/16 (11.2) | 1/16 (1.6) | 13 (0.9) | PG-95635-54 | 50 | |
| 3/8 (9.6) | 1/2 (12.8) | 1/16 (1.6) | 11 (0.8) | PG-95635-55 | 50 | |
| 1/2 (12.8) | 3/4 (19.1) | 1/8 (3.2) | 15 (1.0) | PG-95635-56 | 50 | |
| 5/8 (16.0) | 7/8 (22.4) | 1/8 (3.2) | 13 (0.9) | PG-95635-57 | 50 | |
| 3/4 (19.1) | 1 (25.4) | 1/8 (3.2) | 11 (0.8) | PG-95635-58 | 50 | |
| 1 (25.4) | 1 1/8 (35.0) | 3/16 (4.8) | 11 (0.8) | PG-95635-59 | 25 | |

Platinum-Cured Silicone Tubing Spools

Cut tubing to your needs

Reduce unpacking time, save money on shipping, and ensure that you always have enough tubing on hand with bulk tubing.



| Dimensions in. (mm) | | Length per spool | Catalog number | Price |
|---------------------|------------|------------------|----------------|-------|
| ID | OD | | | |
| 1/32 (0.8) | 3/32 (2.4) | 500 ft (152 m) | PG-98906-00 | |
| 1/16 (1.6) | 1/8 (3.2) | | PG-98906-02 | |
| 1/8 (3.2) | 1/4 (6.4) | 300 ft (91 m) | PG-98906-04 | |
| 3/16 (4.8) | 5/16 (8.0) | | PG-98906-06 | |
| 1/4 (6.4) | 3/8 (9.6) | | PG-98906-08 | |
| 3/8 (9.6) | 5/8 (16.0) | | PG-98906-10 | |
| 5/8 (16.0) | 7/8 (22.4) | | PG-98906-12 | |

Viton® Tubing

Worry-free acid transfer



Applications: Acid and solvent transfer; high-temperature work.

Characteristics: Opaque black.

Certifications: Tubing is manufactured according to GMP.

Temperature range: 8 to 400°F (-13 to 204°C)

Sterilize: Not recommended.

Buy More...Save More!

20% off on 20+ 15% off on 10 to 19 10% off on 4 to 9 packs



| Dimensions: in. (mm) | | | Max psi at 70°F (bar at 21°C) | Catalog number | Price/25-ft pk |
|----------------------|-------------|------------|-------------------------------|----------------|----------------|
| ID | OD | Wall | | | |
| 1/16 (1.6) | 1/8 (3.2) | 1/32 (0.8) | 23 (1.6) | PG-06434-01 | |
| 1/8 (3.2) | 3/16 (4.8) | 1/32 (0.8) | 21 (1.4) | PG-06434-02 | |
| 3/16 (4.8) | 1/4 (6.4) | 1/32 (0.8) | 19 (1.3) | PG-06434-03 | |
| 1/4 (6.4) | 5/16 (8.0) | 1/32 (0.8) | 17 (1.2) | PG-06434-04 | |
| 5/16 (8.0) | 7/16 (11.2) | 1/16 (1.6) | 20 (1.4) | PG-06434-05 | |
| 3/8 (9.6) | 1/2 (12.8) | 1/16 (1.6) | 18 (1.2) | PG-06434-06 | |
| 1/2 (12.8) | 5/8 (16.0) | 1/16 (1.6) | 16 (1.1) | PG-06434-07 | |
| 5/8 (16.0) | 7/8 (22.4) | 1/8 (3.2) | 17 (1.8) | PG-06434-08 | |
| 3/4 (19.1) | 1 (25.4) | 1/8 (3.2) | 15 (1.0) | PG-06434-09 | |

Tygon® High-Purity Reinforced Tubing

Keeps visual track of samples



Formulation: 2475 I.B.

Applications: Pharmaceutical and cosmetic processing, deionized water systems, cell harvest and media process systems, chemical transfer, preservative and sterile fill lines.

Characteristics: Plasticizer free, smooth inner surface (inhibits particulate buildup and bacterial growth), and nontoxic. Transparent.

Certifications: Resin is FDA-compliant (21 CFR 177.1550) and meets NSF criteria and European Pharmacopoeia.

Temperature range: -103 to 130°F (-75 to 54°C)

Sterilize: Ethylene oxide, gamma irradiation.

Buy More...Save More!

20% off on 20+
15% off on 10 to 19
10% off on 4 to 9 packs

| Dimensions: in. (mm) | | | Max psi at 73°F (bar at 23°C) | Catalog number | Ft/pk | Price/pk |
|----------------------|--------------|------------|-------------------------------|----------------|-------|----------|
| ID | OD | Wall | | | | |
| 1/4 (6.4) | 1/2 (12.8) | 1/8 (3.2) | 150 (10.3) | PG-95360-50 | 50 | |
| 3/8 (9.6) | 5/8 (16.0) | 1/8 (3.2) | 135 (9.3) | PG-95360-51 | 50 | |
| 1/2 (12.8) | 3/4 (19.1) | 1/8 (3.2) | 125 (8.6) | PG-95360-52 | 50 | |
| 5/8 (16.0) | 7/8 (22.4) | 1/8 (3.2) | 120 (8.3) | PG-95360-53 | 50 | |
| 1 (25.4) | 1 1/8 (35.0) | 3/16 (4.8) | 112 (7.7) | PG-95360-55 | 25 | |

Tygon® Non-DEHP Vacuum Tubing

Won't crack or oxidize



Formulation: Tygon E-3603 vacuum

Applications: General lab, food and beverage, and biopharm. Vacuum service of 29.9" Hg (760 mm Hg) at 73°F (23°C).

Characteristics: Non-DEHP, phthalate-free plasticizer. Flexible, biodegradable, crack-resistant, nontoxic, and nonoxidizing. Clear.

Certifications: USP Class VI and NSF 51

Temperature range: Brittle temperature is -51°F (-46°C).

Sterilize: Ethylene oxide or autoclave for 30 min at 250°F (121°C), 15 psi (1 bar).

Buy More...Save More!

20% off on 20+
15% off on 10 to 19
10% off on 4 to 9 packs

| Dimensions: in. (mm) | | | Max psi at 73°F (bar at 23°C) | Catalog number | Price/10-ft pk |
|----------------------|--------------|------------|-------------------------------|----------------|----------------|
| ID | OD | Wall | | | |
| 3/16 (4.8) | 9/16 (14.3) | 3/16 (4.8) | 69 (4.8) | PG-06414-10 | |
| 1/4 (6.4) | 5/8 (16.0) | 3/16 (4.8) | 53 (3.7) | PG-06414-20 | |
| 3/8 (9.6) | 7/8 (22.2) | 1/4 (6.4) | 47 (3.2) | PG-06414-30 | |
| 1/2 (12.8) | 1 1/8 (28.6) | 5/16 (7.9) | 45 (3.1) | PG-06414-40 | |
| 5/8 (16.0) | 1 3/8 (35.0) | 3/8 (9.6) | 43 (3.0) | PG-06414-55 | |
| 3/4 (19.0) | 1 1/2 (38.1) | 3/8 (9.6) | 36 (2.5) | PG-06414-57 | |
| 1 (25.4) | 2 (50.8) | 1/2 (12.8) | 36 (2.5) | PG-06414-70 | |

Tygon® Non-DEHP Tubing

Drains completely

NEW

Formulation: Tygon ND-100-65

Applications: Pharmaceutical and biotech research applications.

Characteristics: Non-DEHP, phthalate free. Non-wetted surface permits complete drainage. Bondable, weldable. Clear.

Certification: USP Class VI, REACH, ISO 10993

Temperature range: -44 to 165°F (-42 to 74°C)

Sterilize: Autoclave, ethylene oxide, or irradiation.

Buy More...Save More!

20% off on 20+
15% off on 10 to 19
10% off on 4 to 9 packs

| Dimensions: in. (mm) | | | Max psi at 73°F (bar at 23°C) | Catalog number | Price/ 50-ft pk |
|----------------------|---------------|------------|----------------------------------|-------------------|--------------------|
| ID | OD | Wall | | | |
| 1/32 (0.8) | 3/32 (2.4) | 1/32 (0.8) | 100 (6.9) | PG-95666-00 | |
| 1/16 (1.6) | 1/8 (3.2) | 1/32 (0.8) | 55 (3.8) | PG-95666-01 | |
| 3/32 (2.4) | 5/32 (4.0) | 1/32 (0.8) | 40 (2.8) | PG-95666-03 | |
| 3/32 (2.4) | 7/32 (5.6) | 1/16 (1.6) | 70 (4.8) | PG-95666-04 | |
| 1/8 (3.2) | 3/16 (4.8) | 1/32 (0.8) | 30 (2.1) | PG-95666-05 | |
| 1/8 (3.2) | 1/4 (6.4) | 1/16 (1.6) | 55 (3.8) | PG-95666-06 | |
| 5/32 (4.0) | 7/32 (5.6) | 1/32 (0.8) | 25 (1.7) | PG-95666-07 | |
| 5/32 (4.0) | 9/32 (7.1) | 1/16 (1.6) | 45 (4.3) | PG-95666-08 | |
| 3/16 (4.8) | 1/4 (6.4) | 1/32 (0.8) | 20 (1.4) | PG-95666-09 | |
| 3/16 (4.8) | 5/16 (8.0) | 1/16 (1.6) | 40 (2.8) | PG-95666-10 | |
| 3/16 (4.8) | 3/8 (9.6) | 3/32 (2.4) | 55 (3.8) | PG-95666-11 | |
| 1/4 (6.4) | 3/8 (9.6) | 1/16 (1.6) | 30 (2.1) | PG-95666-14 | |
| 1/4 (6.4) | 7/16 (11.2) | 3/32 (2.4) | 45 (1.7) | PG-95666-15 | |
| 1/4 (6.4) | 1/2 (12.8) | 1/8 (3.2) | 55 (3.8) | PG-95666-16 | |
| 3/8 (9.6) | 9/16 (14.3) | 3/32 (2.4) | 30 (2.1) | PG-95666-21 | |
| 3/8 (9.6) | 5/8 (16.0) | 1/8 (3.2) | 40 (2.8) | PG-95666-22 | |
| 1/2 (12.8) | 1 1/16 (17.6) | 3/32 (2.4) | 25 (1.7) | PG-95666-27 | |
| 1/2 (12.8) | 3/4 (19.1) | 1/8 (3.2) | 30 (2.1) | PG-95666-28 | |

Cole-Parmer® PFA Tubing

Stands up to highly corrosive materials



Applications: Demanding lab, chemical, electrical, mechanical, pharmaceutical, and automotive applications. For the transfer of high-temperature or highly corrosive materials. Also good for high-purity work.

Characteristics: Chemically inert, nontoxic, and virtually nonporous. Excellent crack- and stress-resistance. Low coefficient of friction. Translucent.

Certifications: Resin is FDA-compliant (21 CFR 177.1550). Tubing is manufactured in ISO 9001-2008 approved facility.

Temperature range: -320 to 500°F (-195 to 260°C)

Sterilize: Autoclave, ethylene oxide, or dry heat.

Buy More...Save More!

20% off on 20+
15% off on 10 to 19
10% off on 4 to 9 packs



| Dimensions: in. (mm) | | | Max psi at 70°F (bar at 21°C) | Catalog number | Price/ 25-ft pk |
|----------------------|-------------|-------------|----------------------------------|-------------------|--------------------|
| ID | OD | Wall | | | |
| 1/32 (0.8) | 1/16 (1.6) | 1/64 (0.4) | 600 (41.4) | PG-06371-00 | |
| 1/16 (1.6) | 1/8 (3.2) | 1/32 (0.8) | 592 (40.8) | PG-06375-01 | |
| 3/32 (2.4) | 5/32 (4.0) | 1/32 (0.8) | 471 (32.5) | PG-06371-01 | |
| 1/8 (3.2) | 3/16 (4.8) | 1/32 (0.8) | 385 (26.5) | PG-06371-02 | |
| 1/8 (3.2) | 1/4 (6.4) | 1/16 (1.6) | 600 (41.4) | PG-06371-21 | |
| 5/32 (4.0) | 1/4 (6.4) | 3/64 (1.2) | 421 (29.0) | PG-06375-02 | |
| 3/16 (4.8) | 1/4 (6.4) | 1/32 (0.8) | 280 (19.3) | PG-06371-03 | |
| 3/16 (4.8) | 5/16 (8.0) | 1/16 (1.6) | 471 (32.5) | PG-06371-22 | |
| 1/4 (6.4) | 5/16 (8.0) | 1/32 (0.8) | 220 (15.2) | PG-06371-04 | |
| 1/4 (6.4) | 3/8 (9.6) | 1/16 (1.6) | 388 (26.8) | PG-06375-05 | |
| 1 9/64 (7.5) | 3/8 (9.6) | 5/128 (1.0) | 229 (15.8) | PG-06371-23 | |
| 3/16 (8.0) | 3/8 (9.6) | 1/32 (0.8) | 180 (12.4) | PG-06371-05 | |
| 3/16 (8.0) | 7/16 (11.2) | 1/16 (1.6) | 324 (22.3) | PG-06371-24 | |
| 3/8 (9.6) | 1/2 (12.8) | 1/16 (1.6) | 283 (19.5) | PG-06375-07 | |
| 3/8 (10.2) | 1/2 (12.8) | 1/20 (1.2) | 220 (9.5) | PG-06371-25 | |
| 7/16 (11.2) | 1/2 (12.8) | 1/32 (0.8) | 133 (9.2) | PG-06371-07 | |
| 1/2 (12.8) | 5/8 (16.0) | 1/16 (1.6) | 220 (15.2) | PG-06371-26 | |
| 5/8 (16.0) | 3/4 (19.0) | 1/16 (1.6) | 150 (10.3) | PG-06375-08 | |
| 1 1/16 (17.5) | 3/4 (19.0) | 1/32 (0.8) | 87 (6.0) | PG-06371-28 | |
| 3/4 (19.0) | 7/8 (22.2) | 1/16 (1.6) | 153 (10.5) | PG-06371-29 | |

Tygon® Ultra Chemical-Resistant Tubing

Won't allow particulate build-up



Formulation: Tygon 2375

Applications: For use with highly aggressive chemicals—acids, bases, ketones, salts, and alcohols.

Characteristics: Plasticizer free, smoother inner surface (inhibits particulate build-up), hydrophobic, minimal outgassing, safe disposal via incineration, and nontoxic. Transparent.

Certification: FDA-(21 CFR 177.1550) and REACH-compliant. Meets NSF 51 Standard.

Temperature range: -108 to 130°F (-78 to 54°C)

Sterilize: Ethylene oxide or gamma irradiation.

Buy More...Save More!

20% off on 20+
15% off on 10 to 19
10% off on 4 to 9 packs

| Dimensions: in. (mm) | | | Max psi at 70°F (bar at 21°C) | Catalog number | Price/ 50-ft pk |
|----------------------|--------------|------------|----------------------------------|-------------------|--------------------|
| ID | OD | Wall | | | |
| 1/16 (1.6) | 1/8 (3.2) | 1/32 (0.8) | 33 (2.8) | PG-95630-10 | |
| 1/16 (1.6) | 3/16 (4.8) | 1/16 (1.6) | 55 (3.8) | PG-95630-11 | |
| 3/32 (2.4) | 5/32 (4.0) | 1/32 (0.8) | 22 (1.5) | PG-95630-12 | |
| 1/8 (3.2) | 1/4 (6.4) | 1/16 (1.6) | 33 (2.8) | PG-95630-13 | |
| 3/32 (4.0) | 7/32 (5.5) | 1/32 (0.8) | 16 (1.1) | PG-95630-14 | |
| 3/16 (4.8) | 9/16 (8.0) | 1/16 (1.6) | 22 (1.5) | PG-95630-15 | |
| 1/4 (6.4) | 3/8 (9.6) | 1/16 (1.6) | 19 (1.3) | PG-95630-16 | |
| 3/16 (8.0) | 7/16 (11.2) | 1/16 (1.6) | 16 (1.1) | PG-95630-17 | |
| 3/8 (9.6) | 1/2 (12.8) | 1/16 (1.6) | 14 (1.0) | PG-95630-18 | |
| 3/8 (9.6) | 5/8 (16.0) | 1/8 (3.2) | 24 (1.6) | PG-95630-19 | |
| 1/2 (12.8) | 3/4 (19.1) | 1/8 (3.2) | 19 (1.3) | PG-95630-20 | |
| 5/8 (16.0) | 7/8 (22.4) | 1/8 (3.2) | 16 (1.1) | PG-95630-21 | |
| 3/4 (19.1) | 1 (25.4) | 1/8 (3.2) | 14 (1.1) | PG-95630-22 | |
| 1 (25.4) | 1 1/8 (35.0) | 3/16 (4.8) | 15 (1.0) | PG-95630-23 | |

Cole-Parmer® PTFE Tubing

Won't crack under heat or pressure



Applications: Demanding lab, chemical, electrical, mechanical, pharmaceutical, and automotive applications. Good for high-purity work. PTFE tubing withstands extreme temperatures.

Characteristics: Chemically inert, nontoxic, and virtually nonporous. Excellent crack- and stress-resistance. Low coefficient of friction. Translucent.

Certifications: Resin is FDA-compliant (21 CFR 177.1550).

Temperature range: -400 to 500°F (-240 to 260°C)

Sterilize: Autoclave, ethylene oxide, or dry heat.

Buy More...Save More!

20% off on 20+
15% off on 10 to 19
10% off on 4 to 9 packs



| Dimensions: in. (mm) | | | Max psi at 70°F (bar at 21°C) | Catalog number | Price/ 25-ft pk |
|----------------------|---------------|------------|----------------------------------|-------------------|--------------------|
| ID | OD | Wall | | | |
| 1/32 (0.8) | 1/16 (1.6) | 1/64 (0.4) | 370 (25.5) | PG-06407-41 | |
| 1/16 (1.6) | 1/8 (3.2) | 1/32 (0.8) | 370 (25.5) | PG-06605-27 | |
| 3/32 (2.4) | 5/32 (4.0) | 1/32 (0.8) | 294 (20.3) | PG-06605-28 | |
| 1/8 (3.2) | 3/16 (4.8) | 1/32 (0.8) | 240 (16.5) | PG-06605-29 | |
| 1/8 (3.2) | 1/4 (6.4) | 1/16 (1.6) | 375 (25.9) | PG-06605-30 | |
| 5/32 (4.0) | 1/4 (6.4) | 3/64 (1.2) | 274 (18.9) | PG-06605-31 | |
| 3/16 (4.8) | 1/4 (6.4) | 1/32 (0.8) | 175 (12.1) | PG-06605-32 | |
| 3/16 (4.8) | 5/16 (8.0) | 1/16 (1.6) | 294 (20.3) | PG-06605-33 | |
| 1/4 (6.4) | 5/16 (8.0) | 1/32 (0.8) | 137 (9.4) | PG-06605-34 | |
| 1/4 (6.4) | 3/8 (9.6) | 1/16 (1.6) | 240 (16.5) | PG-06605-35 | |
| 1 9/64 (7.5) | 3/8 (9.6) | 1/25 (1.0) | 143 (9.9) | PG-06605-36 | |
| 3/16 (8.0) | 3/8 (9.6) | 1/32 (0.8) | 113 (7.8) | PG-06605-37 | |
| 3/8 (9.6) | 7/16 (11.2) | 1/32 (0.8) | 96 (6.6) | PG-06605-39 | |
| 3/8 (9.6) | 1/2 (12.8) | 1/16 (1.6) | 175 (12.1) | PG-06605-40 | |
| 3/8 (10.2) | 1/2 (12.8) | 1/20 (1.4) | 137 (9.4) | PG-06605-41 | |
| 7/16 (11.2) | 1/2 (12.8) | 1/32 (0.8) | 83 (5.7) | PG-06605-42 | |
| 1/2 (12.8) | 9/16 (14.3) | 1/32 (0.8) | 73 (5.0) | PG-06605-44 | |
| 1/2 (12.8) | 5/8 (16.0) | 1/16 (1.6) | 137 (9.4) | PG-06605-45 | |
| 9/16 (14.3) | 5/8 (16.0) | 1/32 (0.8) | 66 (4.6) | PG-06605-46 | |
| 5/8 (16.0) | 1 1/16 (17.5) | 1/32 (0.8) | 59 (4.1) | PG-06605-48 | |
| 5/8 (16.0) | 3/4 (19.2) | 1/16 (1.6) | 113 (7.8) | PG-06605-49 | |
| 3/4 (19.2) | 7/8 (22.2) | 1/16 (1.6) | 96 (6.6) | PG-06605-51 | |



Cole-Parmer® FEP Tubing

Does not deteriorate with age



Applications: Demanding lab, chemical, electrical, mechanical, pharmaceutical, and automotive applications. Excellent for the transfer of extreme temperature or highly corrosive materials. Also good for high-purity work.

Characteristics: Chemically inert, nontoxic, heat resistant, with a low coefficient of friction. Doesn't deteriorate with age. Tough, but bends even at -454°F (-270°C). Translucent.

Certifications: Resin is FDA-compliant (21 CFR 177.1550). Tubing is manufactured in ISO 9001-2008 approved facility.

Temperature range: -454 to 400°F (-270 to 205°C)

Sterilize: With autoclave, ethylene oxide, or dry heat.

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20% off on 20+
15% off on 10 to 19
10% off on 4 to 9 packs

| Dimensions: in. (mm) | | | Max psi at 70°F (bar at 21°C) | Catalog number | Price/25-ft pk |
|----------------------|--------------|-------------|-------------------------------|----------------|----------------|
| ID | OD | Wall | | | |
| 1/32 (0.8) | 1/16 (1.6) | 1/64 (0.4) | 500 (34.5) | PG-06406-60 | |
| 1/16 (1.6) | 1/8 (3.2) | 1/32 (0.8) | 444 (30.6) | PG-06406-62 | |
| 3/32 (2.4) | 5/32 (4.0) | 1/32 (0.8) | 353 (24.3) | PG-06406-63 | |
| 1/8 (3.2) | 3/16 (4.8) | 1/32 (0.8) | 289 (19.9) | PG-06406-64 | |
| 1/8 (3.2) | 1/4 (6.4) | 1/16 (1.6) | 450 (31.0) | PG-06450-05 | |
| 5/32 (4.0) | 1/4 (6.4) | 3/64 (1.2) | 329 (22.7) | PG-06450-04 | |
| 3/16 (4.8) | 1/4 (6.4) | 1/32 (0.8) | 209 (14.4) | PG-06406-66 | |
| 3/16 (4.8) | 5/16 (8.0) | 1/16 (1.6) | 353 (24.3) | PG-06450-06 | |
| 1/4 (6.4) | 5/16 (8.0) | 1/32 (0.8) | 150 (10.3) | PG-06406-72 | |
| 1/4 (6.4) | 3/8 (9.6) | 1/16 (1.6) | 288 (19.9) | PG-06450-07 | |
| 19/64 (7.5) | 3/8 (9.6) | 5/128 (1.0) | 172 (11.9) | PG-06450-02 | |
| 5/16 (8.0) | 3/8 (9.6) | 1/32 (0.8) | 140 (9.7) | PG-06406-74 | |
| 5/16 (8.0) | 7/16 (11.2) | 1/16 (1.6) | 243 (16.8) | PG-06450-08 | |
| 3/8 (9.6) | 7/16 (11.2) | 1/32 (0.8) | 110 (7.6) | PG-06406-12 | |
| 3/8 (9.6) | 1/2 (12.8) | 1/16 (1.6) | 210 (14.5) | PG-06450-09 | |
| 7/16 (11.1) | 1/2 (12.8) | 1/32 (0.8) | 102 (7.0) | PG-06406-76 | |
| 7/16 (11.1) | 9/16 (14.3) | 1/16 (1.6) | 185 (12.8) | PG-06450-14 | |
| 1/2 (12.8) | 9/16 (14.3) | 1/32 (0.8) | 88 (6.1) | PG-06406-18 | |
| 1/2 (12.8) | 5/8 (16.0) | 1/16 (1.6) | 165 (11.4) | PG-06450-15 | |
| 5/8 (16.0) | 11/16 (17.5) | 1/32 (0.8) | 71 (4.9) | PG-06450-00 | |
| 5/8 (16.0) | 3/4 (19.2) | 1/16 (1.6) | 135 (9.3) | PG-06450-17 | |
| 11/16 (17.5) | 3/4 (19.2) | 1/32 (0.8) | 65 (4.5) | PG-06450-01 | |
| 3/4 (19.2) | 7/8 (22.2) | 1/16 (1.6) | 115 (7.9) | PG-06450-19 | |

Tygon® FEP-Lined Tubing

Keep samples free of odors and taste



Formulation: Tygon SE-200

Applications: Chemical and pharmaceutical processing, beverage dispensing, paint and solvent production, semiconductor processing.

Characteristics: Bio-based, phthalate-free. Flexible, chemically resistant, inert, non-contaminating. Odorless, nontoxic, and taste free. Clear.

Certifications: FDA-compliant (21 CFR 177.1550) for contact food products.

Temperature range: -49 to 165°F (-45 to 74°C)

Sterilize: Ethylene oxide.

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20% off on 20+
15% off on 10 to 19
10% off on 4 to 9 packs

| Dimensions: in. (mm) | | | Max psi at 73°F (bar at 23°C) | Catalog number | Price/50-ft pk |
|----------------------|-------------|------------|-------------------------------|----------------|----------------|
| ID | OD | Wall | | | |
| 1/16 (1.5) | 1/8 (3.2) | 1/32 (0.7) | 100 (6.9) | PG-95713-50 | |
| 1/8 (3.2) | 1/4 (6.4) | 1/16 (1.5) | 85 (5.9) | PG-95713-00 | |
| 3/16 (4.8) | 5/16 (8.0) | 1/16 (1.5) | 75 (5.2) | PG-95713-10 | |
| 1/4 (6.4) | 3/8 (9.6) | 1/16 (1.5) | 55 (3.8) | PG-95713-20 | |
| 3/8 (9.6) | 9/16 (14.4) | 3/32 (2.3) | 50 (3.4) | PG-95713-30 | |
| 1/2 (12.8) | 3/4 (19.1) | 1/8 (3.1) | 45 (3.1) | PG-95713-41 | |
| 3/4 (19.0) | 1 (25.4) | 1/8 (3.1) | 30 (2.1) | PG-95713-60 | |

Cole-Parmer® PTFE Microbore Tubing

Minimize friction, maximize chemical resistance

Use this translucent tubing in extreme temperatures and in harsh chemical environments. It's chemically inert, has low permeability, and has the lowest friction coefficient of any tubing. Temperature range is -400 to 500°F (-240 to 260°C); melts at 620°F (327°C). Tensile strength is 2500 to 4000 psi. PTFE tubing resin is UL-recognized and complies with FDA (21 CFR 177.1550) and USP Class VI requirements.



Buy More...Save More!

20% off on 20+
15% off on 10 to 19
10% off on 4 to 9 packs



| Dimensions | | | Fits needle gauge | Catalog number | Price/100 ft |
|---|--------|--------|-------------------|----------------|--------------|
| ID | OD | Wall | | | |
| Ultramicrobore PTFE tubing (finer than a human hair) | | | | | |
| 0.002" | 0.014" | 0.006" | 44 | PG-06417-70 | |
| 0.004" | 0.016" | 0.006" | 38 | PG-06417-72 | |
| 0.006" | 0.016" | 0.005" | 34 | PG-06417-74 | |
| 0.008" | 0.016" | 0.004" | 33 | PG-06417-76 | |
| Microbore PTFE tubing | | | | | |
| 0.012" | 0.030" | 0.009" | 30 | PG-06417-11 | |
| 0.022" | 0.042" | 0.010" | 24 | PG-06417-21 | |
| 0.032" | 0.056" | 0.012" | 21 | PG-06417-31 | |
| 0.042" | 0.066" | 0.012" | 18 | PG-06417-41 | |
| 0.052" | 0.076" | 0.012" | 16 | PG-06417-51 | |

PG-06417-60 Microbore tubing assortment pack. One 100-ft (30.4-m) roll each of 06417-11, -21, -31, -41, and -51 (500-ft [152.4-m] total)

Cole-Parmer® Corrugated FEP Tubing

No kinks or distortion



Order barbed or compression fittings separately at ColeParmer.com

High flexibility and excellent chemical resistance. Corrugations prevent kinking and help tubing retain its shape without limiting pressure or vacuum abilities. Simply cut this custom-extruded tubing to desired length. Sold in 5-ft lengths; each length has alternating sections of corrugated (10"L) and noncorrugated (2"L) tubing, with noncorrugated 1"L sections at both ends. Temperature range: -300 to 400°F (-184 to 205°C). Withstands 27" Hg vacuum.



| Cuff ID | Cuff OD | Wall | Max psi at 70°F (bar at 21°C) | Catalog number | Price/5-ft length* |
|--|---------|-------|-------------------------------|----------------|--------------------|
| Tubing compatible with barbed fittings | | | | | |
| 1/4" | 9/32" | 1/64" | 250 (17.2) | PG-06407-50 | |
| 3/8" | 13/32" | 1/32" | 200 (13.8) | PG-06407-52 | |
| Tubing compatible with compression fittings | | | | | |
| 7/32" | 1/4" | 1/64" | 250 (17.2) | PG-06407-60 | |
| 21/64" | 3/8" | 1/32" | 200 (13.8) | PG-06407-62 | |
| 29/64" | 1/2" | 1/32" | 170 (11.7) | PG-06407-64 | |
| 11/16" | 3/4" | 1/32" | 120 (8.3) | PG-06407-66 | |

*Discounts: Save 10% on 10 to 49, 15% on 50 to 99, and 20% on 100 5-ft lengths or more.

Tubing Accessories

Handheld Tubing Cutter

Steel blade coated with PTFE resin produces clean, straight cuts through tubing up to 1 1/4" OD (cuts polyethylene tubing up to 1 1/2" OD). Order carrying pouch and replacement blade separately below.



- [PG-06438-90](#) Handheld tubing cutter
- [PG-06438-81](#) Tubing cutter pouch
- [PG-06438-92](#) Replacement blade for handheld tubing cutter 06438-90

Benchtop Tubing Cutter

Steel blade makes right-angle cuts in plastic tubing 1/16" to 5/8" OD.



- [PG-06438-10](#) Benchtop cutter
- [PG-06438-11](#) Replacement blade

Plastic Clamp Ties



Perfect for flexible fuel line, water line, and vacuum line applications. Special curved clamp tie head ensures a tight seal. Ties measure 8"L x 0.18"W; maximum diameter of 1 3/4". Black resin resists UV degradation.

- [PG-95615-00](#) Clamp ties, white. 100/pk
- [PG-95615-10](#) Clamp ties, black. 100/pk

Stainless Steel Hose Clamps

SS strap and screw housing with a steel screw. Band-type worm drive.



| Clamp diameter | | Catalog number | Price/pk of 10* |
|----------------|--------|-----------------------------|-----------------|
| Min | Max | | |
| 7/32" | 5/8" | PG-06403-11 | |
| 11/16" | 1 1/4" | PG-06403-12 | |
| 13/16" | 1 3/4" | PG-06403-13 | |
| 1 1/16" | 2" | PG-06403-14 | |
| 1 5/16" | 2 1/4" | PG-06403-15 | |
| 2" | 2 3/4" | PG-06403-16 | |
| 2 3/4" | 3 1/2" | PG-06403-21 | |
| 3 1/2" | 4 3/8" | PG-06403-22 | |
| 4 3/8" | 5 1/8" | PG-06403-23 | |
| 5 1/8" | 5 7/8" | PG-06403-24 | |
| 5 1/2" | 6 1/4" | PG-06403-25 | |

*Discounts: Save 10% on 5-24 pks, 15% on 25-99 pks, and 20% on 100+ pks.

Cole-Parmer® Plastic Hose Clamps and Kits

Reusable white acetal copolymer or white or black nylon clamps will not rust or corrode. Recommended for continuous use from ambient temperature for the acetal copolymer to 200°F (93°C); ambient temperature for nylon clamps is 180°F (82°C). Clamps are nonconducting and stable in a wide variety of chemicals; black clamps resist UV degradation.

Once set, clamps stay put. To use, just position clamp on hose or tubing bundle and press the jaws together with a pair of pliers. Order clamps individually or in kits. Kits include 170 assorted clamps from 0.228" to 1.405" ID.

- [PG-06832-99](#) White acetal copolymer hose-clamp kit
- [PG-06420-99](#) White nylon hose-clamp kit
- [PG-06430-49](#) Black nylon hose-clamp kit



White Acetal Hose Clamps

| Inside diameter | | | | Catalog number | Qty/pk | Price/pk** |
|-----------------|-------|-------------|------|-----------------------------|--------|------------|
| Decimal inches | | Millimeters | | | | |
| Min | Max | Min | Max | | | |
| 0.228 | 0.256 | 5.8 | 6.5 | PG-06832-01 | 100 | |
| 0.269 | 0.291 | 6.8 | 7.4 | PG-95614-00 | 100 | |
| 0.307 | 0.342 | 7.8 | 8.7 | PG-06832-02 | 100 | |
| 0.351 | 0.394 | 8.9 | 10.0 | PG-06832-03 | 100 | |
| 0.387 | 0.440 | 9.8 | 11.2 | PG-95614-01 | 100 | |
| 0.404 | 0.452 | 10.3 | 11.5 | PG-06832-04 | 100 | |
| 0.449 | 0.511 | 11.4 | 13.0 | PG-06832-06 | 100 | |
| 0.513 | 0.586 | 13.0 | 14.9 | PG-06832-08 | 100 | |
| 0.569 | 0.650 | 14.5 | 16.5 | PG-06832-10 | 100 | |
| 0.616 | 0.707 | 15.7 | 18.0 | PG-06832-12 | 100 | |
| 0.702 | 0.801 | 17.8 | 20.4 | PG-06832-14 | 100 | |
| 0.759 | 0.848 | 19.3 | 21.5 | PG-06832-16 | 100 | |
| 0.779 | 0.899 | 19.8 | 22.8 | PG-06832-18 | 100 | |
| 0.859 | 0.989 | 21.8 | 25.1 | PG-06832-20 | 100 | |
| 0.928 | 1.072 | 23.6 | 27.2 | PG-06832-22 | 100 | |
| 0.985 | 1.135 | 25.0 | 28.8 | PG-06832-24 | 100 | |
| 1.123 | 1.296 | 28.5 | 32.9 | PG-06832-28 | 50 | |
| 1.218 | 1.405 | 30.9 | 35.7 | PG-06832-32 | 50 | |
| 1.338 | 1.566 | 34.0 | 39.8 | PG-06832-34 | 50 | |
| 1.472 | 1.724 | 37.4 | 43.8 | PG-06832-36 | 50 | |

**Discounts: Save 10% on 4-19 pks, 15% on 20-79 pks, and 20% on 80+ pks.

Nylon Hose Clamps

| Inside diameter | | | | Qty/pk | White | | Black | |
|-----------------|-------|-------------|------|--------|-----------------------------|------------|-----------------------------|------------|
| Decimal inches | | Millimeters | | | Catalog number | Price/pk** | Catalog number | Price/pk** |
| Min | Max | Min | Max | | | | | |
| 0.246 | 0.290 | 5.95 | 7.5 | 100 | PG-06420-50 | | PG-06430-07 | |
| 0.283 | 0.312 | 7.1 | 7.9 | 100 | PG-06420-52 | | PG-06430-02 | |
| 0.350 | 0.395 | 9.1 | 9.9 | 100 | PG-06420-56 | | PG-06430-06 | |
| 0.360 | 0.410 | 9.3 | 10.5 | 100 | PG-06420-58 | | PG-06430-08 | |
| 0.430 | 0.480 | 11.11 | 12.3 | 100 | PG-06420-60 | | PG-06430-10 | |
| 0.500 | 0.545 | 12.7 | 13.8 | 100 | PG-06420-62 | | PG-06430-12 | |
| 0.525 | 0.605 | 13.3 | 15.4 | 100 | PG-06420-64 | | PG-06430-14 | |
| 0.580 | 0.660 | 15.0 | 16.9 | 100 | PG-06420-66 | | PG-06430-46 | |
| 0.650 | 0.750 | 16.6 | 19.0 | 100 | PG-06420-68 | | PG-06430-18 | |
| 0.750 | 0.875 | 19.05 | 22.2 | 100 | PG-06420-70 | | PG-06430-20 | |
| 0.779 | 0.899 | 19.7 | 22.6 | 100 | PG-06420-72 | | PG-06430-22 | |
| 0.859 | 0.989 | 21.8 | 25.0 | 100 | PG-06420-74 | | PG-06430-44 | |
| 0.900 | 0.989 | 23.0 | 25.0 | 100 | PG-06420-76 | | PG-06430-26 | |
| 0.990 | 1.135 | 25.0 | 28.5 | 100 | PG-06420-78 | | PG-06430-28 | |
| 1.123 | 1.296 | 28.5 | 32.9 | 50 | PG-06420-80 | | PG-06430-30 | |
| 1.250 | 1.425 | 31.7 | 35.9 | 50 | PG-06420-82 | | PG-06430-32 | |
| 1.406 | 1.610 | 35.7 | 40.8 | 50 | PG-06420-84 | | PG-06430-34 | |
| 1.593 | 1.812 | 40.4 | 46.0 | 50 | PG-06420-86 | | PG-06430-36 | |
| 1.790 | 2.110 | 45.6 | 53.5 | 50 | PG-06420-88 | | PG-06430-38 | |
| 1.870 | 2.125 | 47.0 | 52.0 | 50 | PG-06420-90 | | PG-06430-40 | |
| 2.119 | 2.390 | 53.5 | 60.7 | 25 | PG-06420-92 | | PG-06430-42 | |

**Discounts: Save 10% on 4-19 pks, 15% on 20-79 pks, and 20% on 80+ pks.



Cole-Parmer® Premium Luer Fittings

Premium luer fittings for critical applications

- Manufactured from 100% virgin raw materials in a Class 100,000 environment
- Full material traceability on all items

These luer fittings are ideal for a variety of applications, including syringes or small tubing. Manufactured in compliance with ISO 594-1 standards, these fittings are inspected to be free from contaminants, and are fully traceable. All parts meet tight dimensional tolerances for increased reliability and process purity. Choose from a range of sizes, 1/16" to 1/4", with a variety of connection options. **Pack of 25.**

Search

For our complete line of luer fittings, go to...

ColeParmer.com/Luer

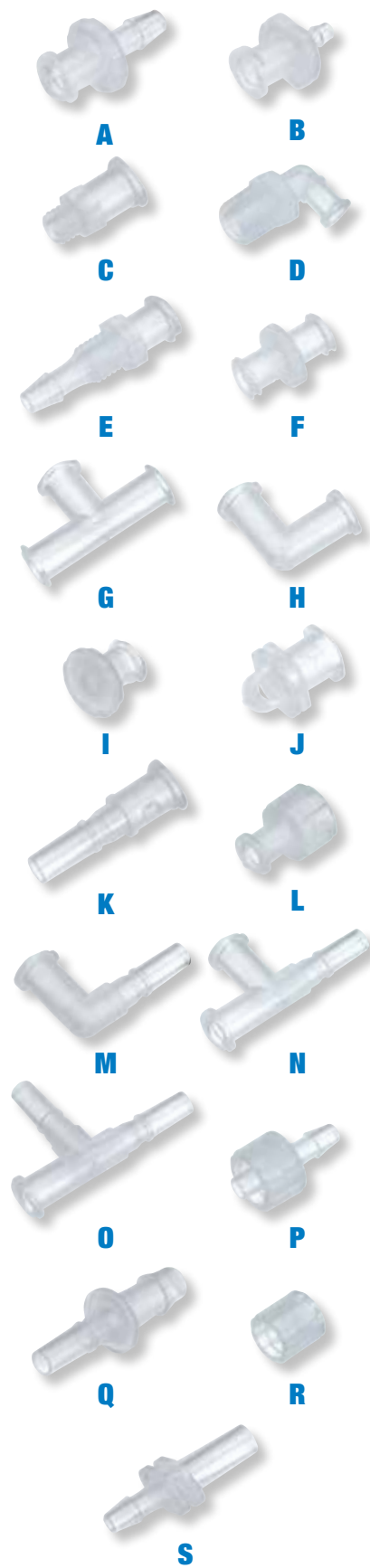


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15% off on 50 to 99
10% off on 10 to 49 packs



| Key | Description | Polypropylene | | Polycarbonate | | Nylon | |
|--|--|---------------|----------|---------------|----------|-------------|----------|
| | | Cat. no. | Price/pk | Cat. no. | Price/pk | Cat. no. | Price/pk |
| Female luer x hose barb adapters | | | | | | | |
| A | Female luer x 1/16" hose barb | PG-45508-00 | | PG-45501-00 | | PG-45502-00 | |
| | Female luer x 3/32" hose barb | PG-45508-02 | | PG-45501-02 | | PG-45502-02 | |
| | Female luer x 1/8" hose barb | PG-30800-08 | | PG-45501-04 | | PG-45502-04 | |
| | Female luer x 5/32" hose barb | PG-45508-06 | | PG-45501-06 | | PG-45502-06 | |
| | Female luer x 3/16" hose barb | PG-45508-08 | | PG-45501-08 | | PG-45502-08 | |
| | Female luer x 1/4" hose barb | PG-30800-06 | | PG-45501-20 | | PG-45502-20 | |
| Female luer x hose barb adapters (smooth bore) | | | | | | | |
| B | Female luer x 1/16" hose barb (smooth bore) | PG-45508-50 | | PG-45501-50 | | PG-45502-50 | |
| | Female luer x 3/32" hose barb (smooth bore) | PG-45508-52 | | PG-45501-52 | | PG-45502-52 | |
| | Female luer x 1/8" hose barb (smooth bore) | PG-45508-54 | | PG-45501-54 | | PG-45502-54 | |
| Female luer x thread adapters | | | | | | | |
| C | Female luer x 10-32 special tapered thread | PG-45508-70 | | PG-45501-70 | | PG-45502-70 | |
| | Female luer x 10-32 UNF thread | PG-45508-60 | | PG-45501-60 | | PG-45502-60 | |
| | Female luer x 1/4-28 UNF thread | PG-45508-66 | | PG-45501-66 | | PG-45502-66 | |
| | Female luer x 1/4-28 UNF bottom sealing thread | PG-45508-76 | | — | — | PG-45505-76 | |
| | Female luer x 1/8-27 NPT thread | PG-30800-07 | | — | — | PG-45505-78 | |
| D | Female luer x 1/8-27 NPT thread elbow | PG-45518-80 | | — | — | PG-45505-80 | |
| Female luer bulkhead x hose barb adapters | | | | | | | |
| E | Female luer x 1/4-28 UNF thread to 1/16" hose barb | PG-45508-30 | | PG-45501-30 | | PG-45502-30 | |
| | Female luer x 1/4-28 UNF thread to 3/32" hose barb | PG-45508-32 | | PG-45501-32 | | PG-45502-32 | |
| | Female luer x 1/4-28 UNF thread to 1/8" hose barb | PG-45508-34 | | PG-45501-34 | | PG-45502-34 | |
| Female adapters | | | | | | | |
| F | Female luer x female luer | PG-45508-22 | | PG-45501-22 | | PG-45502-22 | |
| G | Female tee | PG-45508-56 | | PG-45501-56 | | PG-45502-56 | |
| H | Female elbow | PG-45508-26 | | PG-45501-26 | | PG-45502-26 | |
| I | Female luer x cap | PG-30800-12 | | PG-45501-28 | | PG-45502-28 | |
| J | Female luer x cap with tether loop | PG-45508-64 | | PG-45501-64 | | PG-45502-64 | |
| Male x female adapters | | | | | | | |
| K | Male luer x female luer coupler | PG-45508-82 | | PG-45501-82 | | PG-45502-82 | |
| L | Male luer x female luer coupler with lock ring | PG-45508-80 | | PG-45501-80 | | PG-45502-80 | |
| M | Male luer x female luer elbow | PG-45508-84 | | PG-45501-84 | | PG-45502-84 | |
| N | Male x female x female tee | PG-45508-85 | | PG-45501-85 | | PG-45502-85 | |
| O | Male x male x female tee | PG-45508-75 | | PG-45501-75 | | PG-45502-75 | |
| Male luer lock x hose barb adapters | | | | | | | |
| P | Male luer lock x 1/16" hose barb | PG-45518-00 | | PG-45504-00 | | PG-45505-00 | |
| | Male luer lock x 3/32" hose barb | PG-45518-02 | | PG-45504-02 | | PG-45505-02 | |
| | Male luer lock x 1/8" hose barb | PG-30800-24 | | PG-45504-04 | | PG-45505-04 | |
| | Male luer lock x 5/32" hose barb | PG-45518-06 | | PG-45504-06 | | PG-45505-06 | |
| | Male luer lock x 3/16" hose barb | PG-45518-08 | | PG-45504-08 | | PG-45505-08 | |
| | Male luer lock x 1/4" hose barb | PG-30800-22 | | PG-45504-19 | | PG-45505-19 | |
| Male luer x hose barb adapters (for use with separate rotating lock ring "R") | | | | | | | |
| Q | Male luer x 1/16" hose barb | PG-45518-40 | | PG-45504-40 | | PG-45505-40 | |
| | Male luer x 3/32" hose barb | PG-45518-42 | | PG-45504-42 | | PG-45505-42 | |
| | Male luer x 1/8" hose barb | PG-45518-44 | | PG-45504-44 | | PG-45505-44 | |
| | Male luer x 5/32" hose barb | PG-45518-46 | | PG-45504-46 | | PG-45505-46 | |
| | Male luer x 3/16" hose barb | PG-45518-48 | | PG-45504-48 | | PG-45505-48 | |
| | Male luer x 1/4" hose barb | PG-45518-50 | | PG-45504-50 | | PG-45505-50 | |
| R | Snap luer lock ring | PG-45518-74 | | PG-45504-74 | | PG-45505-74 | |
| Male slip luer x hose barb adapters (no lock ring) | | | | | | | |
| S | Male luer x 1/16" hose barb | PG-45518-22 | | PG-45504-22 | | PG-45505-22 | |
| | Male luer x 3/32" hose barb | PG-45518-24 | | PG-45504-24 | | PG-45505-24 | |
| | Male luer x 1/8" hose barb | PG-45518-26 | | PG-45504-26 | | PG-45505-26 | |
| | Male luer x 5/32" hose barb | PG-45518-28 | | PG-45504-28 | | PG-45505-28 | |
| | Male luer x 3/16" hose barb | PG-45518-52 | | PG-45504-52 | | PG-45505-52 | |
| | Male luer x 1/4" hose barb | PG-45518-54 | | PG-45504-54 | | PG-45505-54 | |



Fluid Handling

Fittings

Cole-Parmer® Barbed Fittings

No tools needed for assembly

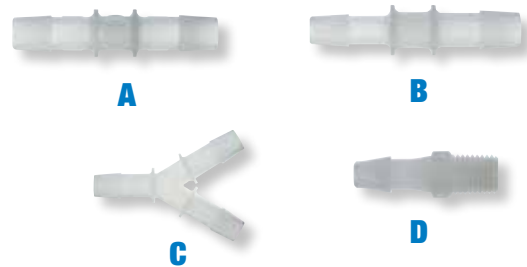
Combine these fittings with our flexible tubing for use in your low-pressure applications (less than 30 psi).

High-Density Polyethylene (HDPE). Very good chemical resistance. Temp range: -65 to 150°F (-53 to 65°C). Sterilize by ethylene oxide.

Nylon. Good chemical resistance. Temp range: -50 to 250°F (-46 to 121°C). Sterilize by ethylene oxide.

Polypropylene (PP). Very good chemical resistance. Temp range: 9 to 180°F (-13 to 66°C). Sterilize by ethylene oxide or gamma irradiation.

PVDF. Excellent chemical resistance. Temp range: -80 to 265°F (-62 to 129°C). Sterilize by ethylene oxide or autoclave.



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20% off on 100+
15% off on 50 to 99
10% off on 10 to 49 packs

FREE
certificate
of compliance
for these fittings



| Tubing ID | HDPE | | | Nylon | | | Polypropylene | | | PVDF | | |
|--|-----------------------------|--------|----------|-----------------------------|--------|----------|-----------------------------|--------|----------|-----------------------------|--------|----------|
| | Catalog number | Qty/pk | Price/pk | Catalog number | Qty/pk | Price/pk | Catalog number | Qty/pk | Price/pk | Catalog number | Qty/pk | Price/pk |
| A. Straight connectors | | | | | | | | | | | | |
| 1/16" | PG-30622-47 | 10 | | PG-30622-48 | 10 | | PG-40622-49 | 10 | | PG-30703-00 | 10 | |
| 3/32" | PG-30622-44 | 10 | | PG-30622-45 | 10 | | PG-40622-46 | 10 | | PG-30703-01 | 10 | |
| 1/8" | PG-30622-53 | 10 | | PG-30622-54 | 10 | | PG-41518-05 | 10 | | PG-30703-02 | 10 | |
| 3/16" | PG-30622-55 | 10 | | PG-30622-56 | 10 | | PG-40622-57 | 10 | | PG-30703-04 | 10 | |
| 1/4" | PG-30621-85 | 10 | | PG-30621-86 | 10 | | PG-40610-00 | 10 | | PG-30703-05 | 10 | |
| 3/8" | PG-30621-89 | 10 | | PG-30621-90 | 10 | | PG-40610-02 | 10 | | PG-30703-07 | 10 | |
| 1/2" | PG-30621-92 | 10 | | PG-30621-93 | 10 | | PG-40610-03 | 10 | | PG-30703-08 | 10 | |
| 5/8" | PG-30621-79 | 10 | | PG-30621-80 | 10 | | PG-40610-04 | 10 | | PG-30703-09 | 10 | |
| 3/4" | PG-30621-81 | 10 | | PG-30621-82 | 10 | | PG-40610-05 | 5 | | PG-30703-10 | 5 | |
| 1" | PG-30621-83 | 10 | | PG-30621-84 | 10 | | PG-40610-06 | 5 | | PG-30703-11 | 5 | |
| B. Reducing connectors | | | | | | | | | | | | |
| 1/8" x 1/16" | PG-31518-29 | 10 | | PG-30622-22 | 25 | | PG-40622-23 | 25 | | PG-30703-41 | 10 | |
| 1/4" x 1/8" | PG-30622-27 | 10 | | PG-30622-28 | 10 | | PG-41518-36 | 10 | | PG-30703-50 | 10 | |
| 1/4" x 3/16" | PG-30622-29 | 10 | | PG-30622-30 | 10 | | PG-40622-32 | 10 | | PG-30703-52 | 10 | |
| 3/8" x 1/4" | PG-30622-35 | 10 | | PG-30703-99 | 10 | | PG-40610-08 | 10 | | PG-30703-54 | 10 | |
| 1/2" x 1/4" | PG-30622-38 | 10 | | PG-30622-39 | 10 | | PG-40610-10 | 10 | | PG-30703-56 | 10 | |
| 1/2" x 3/8" | PG-30622-42 | 10 | | PG-30622-43 | 10 | | PG-40610-12 | 10 | | PG-30703-58 | 10 | |
| 5/8" x 1/4" | PG-30621-96 | 10 | | PG-30621-97 | 10 | | PG-40610-13 | 10 | | PG-30703-59 | 10 | |
| 5/8" x 1/2" | PG-30622-03 | 10 | | PG-30622-04 | 10 | | PG-40610-16 | 10 | | PG-30703-62 | 10 | |
| 3/4" x 1/2" | PG-30622-09 | 5 | | PG-30622-10 | 5 | | PG-40610-18 | 5 | | PG-30703-64 | 5 | |
| 1" x 1/2" | PG-30622-15 | 5 | | PG-30622-16 | 5 | | PG-40610-20 | 5 | | PG-30703-66 | 5 | |
| 1" x 3/4" | PG-30622-13 | 5 | | PG-30622-14 | 5 | | PG-40610-22 | 5 | | PG-30703-68 | 5 | |
| C. Y connectors | | | | | | | | | | | | |
| 1/16" | PG-30726-01 | 10 | | PG-30726-21 | 10 | | PG-40726-41 | 10 | | PG-30703-90 | 10 | |
| 3/32" | PG-30726-02 | 10 | | PG-30726-22 | 10 | | PG-40726-42 | 10 | | PG-30703-91 | 10 | |
| 1/8" | PG-30726-03 | 10 | | PG-30726-23 | 10 | | PG-40726-43 | 10 | | PG-30703-92 | 10 | |
| 3/16" | PG-30726-04 | 10 | | PG-30726-24 | 10 | | PG-40726-44 | 10 | | PG-30726-64 | 10 | |
| 1/4" | PG-30726-05 | 10 | | PG-30726-25 | 10 | | PG-40726-45 | 10 | | PG-30726-65 | 10 | |
| 3/8" | PG-30726-06 | 10 | | PG-30726-26 | 10 | | PG-40726-46 | 10 | | PG-30703-93 | 10 | |
| 1/2" | PG-30726-07 | 10 | | PG-30726-27 | 10 | | PG-40726-47 | 10 | | PG-30703-94 | 10 | |
| 5/8" | PG-30726-08 | 10 | | PG-30726-28 | 10 | | PG-40726-48 | 10 | | PG-30726-68 | 10 | |
| D. NPT male threaded adapters, NPT(M) x tubing ID | | | | | | | | | | | | |
| 1/8" x 1/8" | PG-30621-26 | 10 | | PG-30621-27 | 10 | | PG-40621-28 | 25 | | PG-30704-07 | 10 | |
| 1/8" x 1/4" | PG-30621-31 | 10 | | PG-30621-32 | 10 | | PG-40610-36 | 10 | | PG-30704-09 | 10 | |
| 1/4" x 1/8" | PG-30621-42 | 10 | | PG-30621-44 | 10 | | PG-40621-45 | 10 | | PG-30621-43 | 10 | |
| 1/4" x 1/4" | PG-30621-46 | 10 | | PG-30621-47 | 10 | | PG-40610-38 | 10 | | PG-30704-11 | 10 | |
| 3/8" x 1/4" | PG-30621-56 | 10 | | PG-30621-57 | 10 | | PG-40610-41 | 10 | | PG-30704-14 | 10 | |
| 3/8" x 3/8" | PG-30621-62 | 10 | | PG-30621-63 | 10 | | PG-40610-42 | 10 | | PG-30704-15 | 10 | |
| 1/2" x 1/4" | PG-30621-73 | 10 | | PG-30621-74 | 10 | | PG-40610-44 | 10 | | PG-30704-17 | 10 | |
| 1/2" x 3/8" | PG-30621-75 | 10 | | PG-30621-76 | 10 | | PG-40610-45 | 10 | | PG-30704-18 | 10 | |
| 1/2" x 1/2" | PG-30621-77 | 10 | | PG-30621-78 | 10 | | PG-40610-46 | 10 | | PG-30704-19 | 10 | |
| 3/4" x 1/2" | PG-30621-20 | 10 | | PG-30621-21 | 10 | | PG-40610-50 | 5 | | PG-30704-23 | 5 | |
| 3/4" x 3/4" | PG-30621-12 | 10 | | PG-30621-13 | 10 | | PG-40610-51 | 5 | | PG-30704-24 | 5 | |
| 1" x 1" | PG-31517-18 | 10 | | PG-30401-34 | 10 | | PG-40610-53 | 5 | | PG-30704-26 | 5 | |



Free Certificate of Compliance

Cole-Parmer will provide a certificate of resin or elastomer compliance FREE at your request with each order of fittings, gaskets, or tubing. Certificates list your company's PO number, order reference number, catalog number, formulation, compound number, lot number (where applicable), and the regulations and agencies the fitting, tubing, or gasket complies with, including FDA, USP, USDA, National Formulary, NSF International, GMP, and 3A. Look for the blue "check" icon throughout this catalog to identify when a certificate of compliance is available.



CPC™ Plastic Quick-Disconnect Fittings

Fittings connect in a snap

- Acetal fittings are ideal for use with corrosive fluids
- Polycarbonate and polysulfone materials meet USP Class VI requirements

Simply press the thumb latch to disconnect coupling halves. Polycarbonate and polysulfone materials meet USP Class VI requirements and pass all physicochemical, cytotoxicity, leachables, and extractables tests. Order complete couplings or separate bodies and inserts from the tables below.

Note: Standard bodies and inserts fit together; won't work with large bodies and inserts and vice versa.



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- 20% off on 100+
- 15% off on 50 to 99
- 10% off on 10 to 49 packs

Specifications

| Body material | Acetal | Polycarbonate (PC) | Polysulfone (PSF) |
|-------------------|----------------------------|--------------------------------------|--------------------------------------|
| Temperature range | -40 to 180°F (-40 to 82°C) | -40 to 250°F (-40 to 121°C) | -40 to 300°F (-40 to 148°C) |
| Max pressure | 120 psi | 125 psi† | 120 psi |
| Max vacuum | 28" Hg | 25" Hg | 25" Hg |
| Sterilization | Autoclave or EtO | Autoclave, EtO, or gamma irradiation | Autoclave, EtO, or gamma irradiation |

†Max pressure for 1/2" polycarbonate fittings is 60 psi.



Complete Couplings

| Key | Catalog number | Size | Material | Length | Qty/pk | Price/pk |
|-----|----------------|----------------|----------|--------|--------|----------|
| A | PG-06360-90 | 1/4" tubing ID | Acetal | — | 10 | |
| | PG-31305-00 | | PC | — | 10 | |
| | PG-06360-91 | | Acetal | — | 10 | |
| | PG-31305-05 | 3/8" tubing ID | PC | — | 10 | |
| | PG-31306-05 | | PSF | — | 10 | |

Standard Bodies and Caps

| Key | Catalog number | Size | Material | Length | Qty/pk | Price/pk |
|--|----------------|----------------|----------|-----------------|--------|----------|
| Barbed bodies | | | | | | |
| B | PG-06360-94 | 1/4" tubing ID | Acetal | 1.31" (33.3 mm) | 10 | |
| | PG-31311-11 | | PC | | 5 | |
| | PG-31311-21 | | PSF | | 5 | |
| | PG-06360-95 | 3/8" tubing ID | Acetal | 1.31" (33.3 mm) | 10 | |
| | PG-31311-12 | | PC | | 5 | |
| | PG-31311-22 | | PSF | | 5 | |
| Hose barb coupling bodies with lock | | | | | | |
| C | PG-31311-16 | 1/4" tubing ID | PC | 1.31" (33.3 mm) | 5 | |
| | PG-31311-26 | | PSF | | 5 | |
| | PG-31311-17 | 3/8" tubing ID | PC | 1.31" (33.3 mm) | 5 | |
| | PG-31311-27 | | PSF | | 5 | |
| BSP straight-through bodies | | | | | | |
| D | PG-06360-01 | 1/4" BSP | Acetal | 1.31" (33.3 mm) | 10 | |
| | PG-06360-02 | 3/8" BSP | | | 10 | |
| NPT(M) bodies | | | | | | |
| E | PG-06360-00 | 1/4" NPT | Acetal | 1.31" (33.3 mm) | 10 | |
| | PG-06360-96 | 3/8" NPT | | | 10 | |
| Compression coupling bodies | | | | | | |
| F | PG-06360-06 | 1/4" OD | Acetal | 1.31" (33.3 mm) | 10 | |
| | PG-06360-08 | 3/8" OD | | | 10 | |
| Sealing caps | | | | | | |
| G | PG-31311-64 | 1/4" | PC | 1.31" (33.3 mm) | 5 | |
| | PG-31311-74 | 1/4" | PSF | | 5 | |
| Sealing caps with lock | | | | | | |
| H | PG-31311-67 | 1/4" | PC | 1.31" (33.3 mm) | 5 | |
| | PG-31311-77 | 1/4" | PSF | | 5 | |

Standard Inserts and Plugs

| Key | Catalog number | Size | Material | Length | Qty/pk | Price/pk |
|-------------------------------------|----------------|----------------|----------|-----------------|--------|----------|
| Barbed inserts | | | | | | |
| I | PG-06360-92 | 1/4" tubing ID | Acetal | 1.28" (32.5 mm) | 10 | |
| | PG-31311-61 | | PC | | 5 | |
| | PG-31311-71 | | PSF | | 5 | |
| | PG-06360-93 | 3/8" tubing ID | Acetal | 1.28" (32.5 mm) | 10 | |
| | PG-31311-62 | | PC | | 5 | |
| | PG-31311-72 | | PSF | | 5 | |
| BSP straight-through inserts | | | | | | |
| J | PG-06360-27 | 1/4" BSP | Acetal | 1.28" (32.5 mm) | 10 | |
| | PG-06360-97 | 3/8" BSP | | | 10 | |
| NPT(M) inserts | | | | | | |
| K | PG-06360-16 | 1/4" NPT | Acetal | 1.28" (32.5 mm) | 10 | |
| | PG-06360-18 | 3/8" NPT | | | 10 | |
| Compression coupling inserts | | | | | | |
| L | PG-06360-21 | 1/4" OD | Acetal | 1.28" (32.5 mm) | 10 | |
| | PG-06360-24 | 3/8" OD | | | 10 | |
| Sealing caps | | | | | | |
| M | PG-06360-31 | 1/4" OD | Acetal | 1.28" (32.5 mm) | 10 | |
| | PG-06360-34 | 3/8" OD | | | 10 | |
| Plugs with lock | | | | | | |
| N | PG-31311-68 | 1/4" | PC | 1.20" (30.5 mm) | 5 | |
| | PG-31311-78 | 1/4" | PSF | | 5 | |

Large Bodies and Inserts (use these bodies and inserts together)

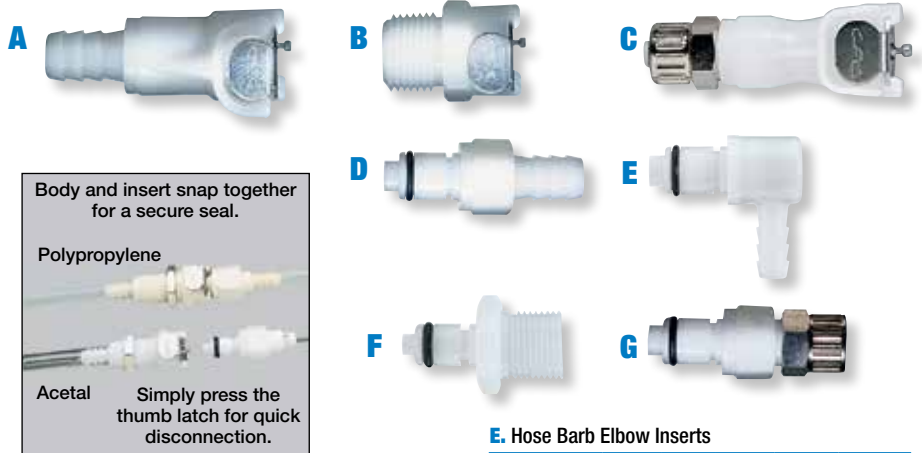
| Key | Catalog number | Size | Material | Length | Qty/pk | Price/pk |
|--|----------------|----------------|----------|-----------------|-----------------|----------|
| Barbed bodies | | | | | | |
| O | PG-31311-13 | 1/2" tubing ID | PC | 1.96" (49.8 mm) | 5 | |
| | PG-31311-23 | | PSF | | 5 | |
| Hose barb coupling bodies with lock | | | | | | |
| P | PG-31311-18 | 3/8" tubing ID | PC | 1.96" (49.8 mm) | 5 | |
| | PG-31311-28 | | PSF | | 5 | |
| Barbed inserts | | | | | | |
| Q | PG-31311-63 | 1/2" tubing ID | PC | 1.90" (48.3 mm) | 5 | |
| | PG-31311-73 | | PSF | | 1.40" (35.6 mm) | 5 |

CPC™ Quick-Disconnect Couplings

No more struggling—just press thumb latch to disconnect

- Valved fittings shut off flow when disconnected
- Available in three styles—hose barb, compression, and pipe adapter—with standard in-line configurations

For each complete quick-disconnect fitting, order one body and one insert with the same flow size. Plug insert into body to connect fitting—fitting halves lock in place immediately. To disconnect, simply press the lever on the coupling body. All fitting bodies have 316 stainless steel springs and latches.



Body and insert snap together for a secure seal.
Polypropylene
Acetal
Simply press the thumb latch for quick disconnection.

Specifications

| | | |
|---------------|------------------|-------------------|
| Body material | Acetal | Polysulfone (PSF) |
| Seal material | Buna N | EPR |
| Max temp | 180°F (-82°C) | 160°F (71°C) |
| Max pressure | 120 psi | 100 psi |
| Max vacuum | 28" Hg | 28" Hg |
| Sterilization | Autoclave or ETO | Gamma or ETO |

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- 15% off on 50 to 99
- 10% off on 10 to 49 packs

Quick-Disconnect Bodies

(Female Coupling Halves)

A. Hose Barb Bodies

| Catalog number | Tubing ID | Flow size | Length | Resin | Price/pk of 1 |
|----------------------------------|-----------|-----------|--------|--------|---------------|
| Valved fittings | | | | | |
| PG-06360-19 | 1/16" | 1/8" | 1.41" | Acetal | |
| PG-06360-20 | 1/8" | 1/8" | 1.65" | Acetal | |
| PG-06360-22 | 3/16" | 1/8" | 1.85" | Acetal | |
| PG-06360-25 | 1/4" | 1/8" | 1.85" | Acetal | |
| PG-06360-65 | 1/4" | 1/4" | 1.95" | Acetal | |
| PG-06360-67 | 3/16" | 1/4" | 1.95" | Acetal | |
| PG-06360-70 | 3/8" | 1/4" | 1.95" | Acetal | |
| PG-06364-19 | 1/16" | 1/8" | 1.41" | PP | |
| PG-06364-20 | 1/8" | 1/8" | 1.67" | PP | |
| PG-06364-25 | 1/4" | 1/8" | 1.87" | PP | |
| PG-06364-65 | 1/4" | 1/4" | 1.97" | PP | |
| PG-06364-70 | 3/8" | 1/4" | 1.97" | PP | |
| Straight-through fittings | | | | | |
| PG-06361-09 | 1/16" | 1/8" | 1.41" | Acetal | |
| PG-06361-11 | 1/8" | 1/8" | 1.65" | Acetal | |
| PG-06361-12 | 3/16" | 1/8" | 1.85" | Acetal | |
| PG-06361-13 | 1/4" | 1/8" | 1.85" | Acetal | |
| PG-06361-51 | 1/4" | 1/4" | 1.95" | Acetal | |
| PG-06361-52 | 3/16" | 1/4" | 1.95" | Acetal | |
| PG-06361-53 | 3/8" | 1/4" | 1.95" | Acetal | |

B. NPT(M) Pipe Adapter Bodies

| Catalog number | NPT(M) | Flow size | Resin | Price/pk of 1 |
|----------------------------------|--------|-----------|--------|---------------|
| Valved fittings | | | | |
| PG-06359-70 | 1/8" | 1/8" | Acetal | |
| PG-06359-71 | 1/4" | 1/8" | Acetal | |
| PG-06359-72 | 1/4" | 1/4" | Acetal | |
| PG-06359-73 | 3/8" | 1/4" | Acetal | |
| PG-06359-80 | 1/8" | 1/8" | PP | |
| PG-06359-81 | 1/4" | 1/8" | PP | |
| PG-06359-82 | 1/4" | 1/4" | PP | |
| PG-06359-83 | 3/8" | 1/4" | PP | |
| Straight-through fittings | | | | |
| PG-06361-00 | 1/8" | 1/8" | Acetal | |
| PG-06361-01 | 1/4" | 1/8" | Acetal | |
| PG-06361-42 | 1/4" | 1/4" | Acetal | |
| PG-06361-43 | 3/8" | 1/4" | Acetal | |

C. Compression Bodies

| Catalog number | Tubing OD | Flow size | Length | Resin | Price/pk of 1 |
|----------------------------------|-----------|-----------|--------|--------|---------------|
| Valved fittings | | | | | |
| PG-06360-98 | 1/4" | 1/8" | 1.73" | Acetal | |
| PG-06359-90 | 1/4" | 1/4" | 1.82" | Acetal | |
| PG-06359-91 | 3/8" | 1/4" | 1.95" | Acetal | |
| PG-06364-90 | 1/4" | 1/8" | 1.74" | PP | |
| PG-06364-91 | 3/8" | 1/4" | 1.97" | PP | |
| Straight-through fittings | | | | | |
| PG-06361-08 | 1/4" | 1/8" | 1.73" | Acetal | |
| PG-06361-49 | 3/8" | 1/4" | 1.95" | Acetal | |

Quick-Disconnect Inserts

(Male Coupling Halves)

D. Hose Barb Inserts

| Catalog number | Tubing ID | Flow size | Length | Resin | Price/pk of 1 |
|----------------------------------|-----------|-----------|--------|--------|---------------|
| Valved fittings | | | | | |
| PG-06360-36 | 1/16" | 1/8" | 1.35" | Acetal | |
| PG-06360-40 | 1/8" | 1/8" | 1.55" | Acetal | |
| PG-06360-43 | 3/16" | 1/8" | 1.75" | Acetal | |
| PG-06360-45 | 1/4" | 1/8" | 1.58" | Acetal | |
| PG-06360-80 | 1/4" | 1/4" | 1.86" | Acetal | |
| PG-06360-83 | 5/16" | 1/4" | 1.86" | Acetal | |
| PG-06360-85 | 3/8" | 1/4" | 1.86" | Acetal | |
| PG-06364-38 | 1/16" | 1/8" | 1.35" | PP | |
| PG-06364-40 | 1/8" | 1/8" | 1.55" | PP | |
| PG-06364-45 | 1/4" | 1/8" | 1.58" | PP | |
| PG-06364-80 | 1/4" | 1/4" | 1.86" | PP | |
| PG-06364-85 | 3/8" | 1/4" | 1.67" | PP | |
| Straight-through fittings | | | | | |
| PG-06360-38 | 1/16" | 1/8" | 0.80" | Acetal | |
| PG-06360-42 | 1/8" | 1/8" | 1.05" | Acetal | |
| PG-06360-44 | 3/16" | 1/8" | 1.25" | Acetal | |
| PG-06360-47 | 1/4" | 1/8" | 1.25" | Acetal | |
| PG-06360-82 | 1/4" | 1/4" | 1.35" | Acetal | |
| PG-06360-84 | 5/16" | 1/4" | 1.35" | Acetal | |
| PG-06360-87 | 3/8" | 1/4" | 1.35" | Acetal | |
| PG-06364-39 | 1/16" | 1/8" | 0.80" | PP | |
| PG-06364-42 | 1/8" | 1/8" | 1.05" | PP | |
| PG-06364-47 | 1/4" | 1/8" | 1.25" | PP | |
| PG-06364-82 | 1/4" | 1/4" | 1.35" | PP | |
| PG-06364-87 | 3/8" | 1/4" | 1.35" | PP | |

E. Hose Barb Elbow Inserts

| Catalog number | Tubing ID | Flow size | Length | Resin | Price/pk of 1 |
|----------------------------------|-----------|-----------|--------|--------|---------------|
| Valved fittings | | | | | |
| PG-06361-39 | 1/8" | 1/8" | 1.09" | Acetal | |
| PG-06361-41 | 1/4" | 1/8" | 1.09" | Acetal | |
| PG-06361-75 | 1/4" | 1/4" | 1.22" | Acetal | |
| PG-06361-76 | 3/8" | 1/4" | 1.22" | Acetal | |
| PG-06361-98 | 1/8" | 1/8" | 1.09" | PP | |
| PG-06361-99 | 1/4" | 1/8" | 1.09" | PP | |
| PG-06362-00 | 1/4" | 1/4" | 1.21" | PP | |
| PG-06362-01 | 3/8" | 1/4" | 1.21" | PP | |
| Straight-through fittings | | | | | |
| PG-06361-27 | 1/8" | 1/8" | 0.85" | Acetal | |
| PG-06361-28 | 1/4" | 1/8" | 1.00" | Acetal | |
| PG-06361-63 | 1/4" | 1/4" | 1.10" | Acetal | |
| PG-06361-64 | 3/8" | 1/4" | 1.20" | Acetal | |
| PG-06361-85 | 1/8" | 1/8" | 1.09" | PP | |
| PG-06361-86 | 1/4" | 1/8" | 1.09" | PP | |
| PG-06361-87 | 1/4" | 1/4" | 1.21" | PP | |
| PG-06361-88 | 3/8" | 1/4" | 1.21" | PP | |

F. NPT(M) Pipe Adapter Inserts

| Catalog number | NPT(M) | Flow size | Resin | Price/pk of 1 |
|----------------------------------|--------|-----------|--------|---------------|
| Valved fittings | | | | |
| PG-06361-29 | 1/8" | 1/8" | Acetal | |
| PG-06361-31 | 1/4" | 1/8" | Acetal | |
| PG-06361-65 | 1/4" | 1/4" | Acetal | |
| PG-06361-66 | 3/8" | 1/4" | Acetal | |
| PG-06361-89 | 1/8" | 1/8" | PP | |
| PG-06361-91 | 1/4" | 1/4" | PP | |
| Straight-through fittings | | | | |
| PG-06361-17 | 1/8" | 1/8" | Acetal | |
| PG-06361-18 | 1/4" | 1/8" | Acetal | |
| PG-06361-54 | 1/4" | 1/4" | Acetal | |
| PG-06361-55 | 3/8" | 1/4" | Acetal | |
| PG-06361-79 | 1/8" | 1/8" | PP | |
| PG-06361-81 | 1/4" | 1/4" | PP | |

G. Compression Inserts

| Catalog number | Tubing OD | Flow size | Length | Resin | Price/pk of 1 |
|----------------------------------|-----------|-----------|--------|--------|---------------|
| Valved fittings | | | | | |
| PG-06360-30 | 1/4" | 1/8" | 1.45" | Acetal | |
| PG-06360-35 | 3/8" | 1/8" | 1.40" | Acetal | |
| PG-06360-74 | 1/4" | 1/4" | 1.75" | Acetal | |
| PG-06360-75 | 3/8" | 1/4" | 1.68" | Acetal | |
| PG-06364-30 | 1/4" | 1/8" | 1.45" | PP | |
| PG-06364-75 | 3/8" | 1/4" | 1.68" | PP | |
| Straight-through fittings | | | | | |
| PG-06360-32 | 1/4" | 1/8" | 1.15" | Acetal | |
| PG-06360-37 | 3/8" | 1/8" | 1.30" | Acetal | |
| PG-06360-76 | 1/4" | 1/4" | 1.25" | Acetal | |
| PG-06360-77 | 3/8" | 1/4" | 1.38" | Acetal | |
| PG-06364-32 | 1/4" | 1/8" | 1.15" | PP | |
| PG-06364-77 | 3/8" | 1/4" | 1.38" | PP | |



Cole-Parmer® Polypropylene (PP) and PVDF Sanitary Clamp Fittings

Maintain sanitary conditions in your processes

- Meet USP Class VI for pharmaceutical use and FDA, USDA, and 3A standards for food contact
- All fittings are compatible with Tri-Clamp® fittings
- Excellent chemical resistance; low leachable characteristics

Note: Though both materials may be autoclaved, PVDF tolerates high temperatures better than PP does and will perform more consistently after repeated autoclaving.



Specifications

| Clamp size | Inner dimension (based on SS tube ID) |
|------------|---------------------------------------|
| 3/4" mini | 9/16" |
| 1" maxi | 7/8" |
| 1" ladish† | 7/8" |
| 1 1/2" | 1 3/8" |
| 2" | 1 7/8" |
| 2 1/2" | 2 3/8" |
| 3" | 2 7/8" |

†Choose 1" ladish fittings for a direct match with 1" stainless steel sanitary connections.

Chemical resistance

PP: very good PVDF: excellent

Temperature range

PP: 15 to 180°F (–9 to 82°C)

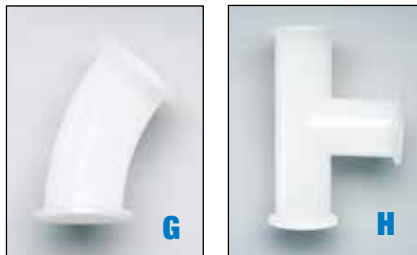
PVDF: –40 to 280°F (–40 to 138°C)

Max pressure

In ambient conditions, using plastic true union style clamp

PP: 125 psi PVDF: 150 psi

Sterilization: EtO or autoclave



| Clamp size | PP | | PVDF | |
|--|-----------------------------|-------|-----------------------------|-------|
| | Cat. no. | Price | Cat. no. | Price |
| A. Eccentric reducers | | | | |
| 1 1/2" x 3/4" mini | PG-31805-01 | | PG-31808-01 | |
| B. Concentric reducers | | | | |
| 1" ladish x 3/4" mini | PG-31805-05 | | PG-31808-05 | |
| 1 1/2" x 3/4" mini | PG-31805-06 | | PG-31808-06 | |
| 1 1/2" x 1" ladish | PG-31805-10 | | PG-31808-10 | |
| 2" x 1" ladish | PG-31805-11 | | PG-31808-11 | |
| 2" x 1 1/2" | PG-31805-14 | | PG-31808-14 | |
| C. Barbed adapters, clamp x tubing ID | | | | |
| 3/4" mini x 1/8" | PG-31805-24 | | PG-31808-24 | |
| 3/4" mini x 1/4" | PG-31805-25 | | PG-31808-25 | |
| 3/4" mini x 3/8" | PG-31805-26 | | PG-31808-26 | |
| 3/4" mini x 1/2" | PG-31805-27 | | PG-31808-27 | |
| 3/4" mini x 5/8" | PG-31805-28 | | PG-31808-28 | |
| 3/4" mini x 3/4" | PG-31805-29 | | PG-31808-29 | |
| 1" ladish x 1/8" | PG-31805-30 | | PG-31808-30 | |
| 1" ladish x 1/4" | PG-31805-31 | | PG-31808-31 | |
| 1" ladish x 3/8" | PG-31805-32 | | PG-31808-32 | |
| 1" ladish x 1/2" | PG-31805-33 | | PG-31808-33 | |
| 1" ladish x 3/4" | PG-31805-34 | | PG-31808-34 | |
| 1" ladish x 1" | PG-31805-35 | | PG-31808-35 | |
| 1 1/2" x 1" | PG-31805-41 | | PG-31808-41 | |
| 2" x 1" | PG-31805-47 | | PG-31808-47 | |
| D. Pipe thread adapters, clamp x NPT(M) | | | | |
| 1" ladish x 1/8" | PG-31805-56 | | PG-31808-56 | |
| 1" ladish x 1/4" | PG-31805-57 | | PG-31808-57 | |
| 1" ladish x 3/8" | PG-31805-58 | | PG-31808-58 | |
| 1" ladish x 1/2" | PG-31805-59 | | PG-31808-59 | |
| 1" ladish x 3/4" | PG-31805-60 | | PG-31808-60 | |
| 1" ladish x 1" | PG-31805-61 | | PG-31808-61 | |
| 1" ladish x 1 1/4" | PG-31805-62 | | PG-31808-62 | |
| 1" ladish x 1 1/2" | PG-31805-63 | | PG-31808-63 | |
| 1 1/2" x 3/4" | PG-31805-68 | | PG-31808-68 | |
| 1 1/2" x 1" | PG-31805-69 | | PG-31808-69 | |
| 1 1/2" x 1 1/4" | PG-31805-70 | | PG-31808-70 | |
| 1 1/2" x 1 1/2" | PG-31805-71 | | PG-31808-71 | |
| 2" x 1" | PG-31805-77 | | PG-31808-77 | |
| 2" x 1 1/4" | PG-31805-78 | | PG-31808-78 | |
| 2" x 1 1/2" | PG-31805-79 | | PG-31808-79 | |
| 2" x 2" | PG-31805-80 | | PG-31808-80 | |
| E. Pipe thread adapters, clamp x NPT(F) | | | | |
| 1" ladish x 3/4" | PG-31806-04 | | PG-31809-04 | |
| 1" ladish x 1" | PG-31806-05 | | PG-31809-05 | |
| 1 1/2" x 1 1/2" | PG-31806-15 | | PG-31809-15 | |
| F. 90° elbows | | | | |
| 3/4" mini | PG-31806-41 | | PG-31809-41 | |
| 1" ladish | PG-31806-42 | | PG-31809-42 | |
| 1 1/2" | PG-31806-43 | | PG-31809-43 | |
| 2" | PG-31806-44 | | PG-31809-44 | |
| G. 45° elbows | | | | |
| 3/4" mini | PG-31806-51 | | PG-31809-51 | |
| 1" ladish | PG-31806-52 | | PG-31809-52 | |
| 1 1/2" | PG-31806-53 | | PG-31809-53 | |
| 2" | PG-31806-54 | | PG-31809-54 | |
| H. Standard tees | | | | |
| 3/4" mini | PG-31806-61 | | PG-31809-61 | |
| 1" ladish | PG-31806-62 | | PG-31809-62 | |
| 1 1/2" | PG-31806-63 | | PG-31809-63 | |
| 2" | PG-31806-64 | | PG-31809-64 | |
| I. Clamps | | | | |
| 3/4" mini | — | — | PG-31811-00 | |
| 1" and 1 1/2" | — | — | PG-31811-01 | |
| 2" | — | — | PG-31811-02 | |
| 2 1/2" | — | — | PG-31811-03 | |

J. Nylon Clamps

| Clamp size | Catalog number | Price |
|--------------|-----------------------------|-------|
| 1/2" to 3/4" | PG-30508-21 | |
| 1" to 1 1/2" | PG-30508-23 | |
| 2" | PG-30508-25 | |
| 3" | PG-30508-27 | |
| 4" | PG-30508-29 | |

Gaskets (not shown)

| Gasket size | Catalog number | Price |
|--------------------------------|-----------------------------|-------|
| Platinum-cured silicone | | |
| 3/4" mini | PG-30548-00 | |
| 1" ladish | PG-30548-02 | |
| 1 1/2" | PG-30548-04 | |
| 2" | PG-30548-06 | |
| 2 1/2" | PG-30548-08 | |
| Viton® | | |
| 3/4" mini | PG-30548-20 | |
| 1" ladish | PG-30548-22 | |
| 1 1/2" | PG-30548-24 | |
| 2" | PG-30548-26 | |
| 2 1/2" | PG-30548-28 | |
| Buna N | | |
| 3/4" mini | PG-30548-40 | |
| 1" ladish | PG-30548-42 | |
| 1 1/2" | PG-30548-44 | |
| 2" | PG-30548-46 | |
| 2 1/2" | PG-30548-48 | |
| EPDM | | |
| 3/4" mini | PG-30548-60 | |
| 1" ladish | PG-30548-62 | |
| 1 1/2" | PG-30548-64 | |
| 2" | PG-30548-66 | |
| 2 1/2" | PG-30548-68 | |
| PTFE | | |
| 3/4" mini | PG-30548-80 | |
| 1" ladish | PG-30548-82 | |
| 1 1/2" | PG-30548-84 | |
| 2" | PG-30548-86 | |
| 2 1/2" | PG-30548-88 | |

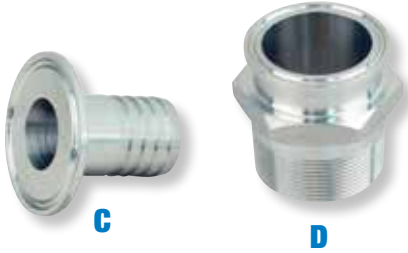
Wait! There's More...

Sanitary gaskets, see page 66.



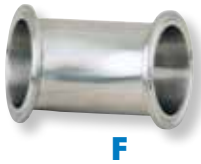
A

B



C

D



F



E



G



H



I

Cole-Parmer® 316L and 304 Stainless Steel Sanitary Clamp Couplings

Meet FDA requirements and 3A Sanitary Standards



All couplings are compatible with standard 304L fittings clamps.

316L Stainless Steel Couplings are ideal for the pharmaceutical industry; they offer great chemical compatibility for use with corrosive acids and bases.

304 Stainless Steel Couplings are ideal for the food, beverage, and dairy industries; they offer good chemical compatibility and are cost effective.



| Key | Clamp size | 316L stainless steel | | 304 stainless steel | | |
|----------------------------|--|-----------------------------|-----------------------------|-----------------------------|-------|---|
| | | Catalog number | Price | Catalog number | Price | |
| Concentric reducers | | | | | | |
| A | 1" x ¾" | PG-30700-50 | — | — | — | |
| | 1½" x 1" | PG-30700-51 | — | PG-30700-95 | — | |
| | 2" x 1" | PG-30700-52 | — | PG-30700-96 | — | |
| | 2" x 1½" | PG-30700-53 | — | PG-30700-97 | — | |
| Eccentric reducers | | | | | | |
| B | 1" x ¾" | PG-30700-54 | — | — | — | |
| | 1½" x 1" | PG-30700-55 | — | PG-30700-98 | — | |
| | 2" x 1" | PG-30700-56 | — | PG-30700-99 | — | |
| | 2" x 1½" | PG-30700-57 | — | PG-30701-00 | — | |
| Barbed adapters | | | | | | |
| C | ¾" x ⅛" | PG-30700-58 | — | — | — | |
| | ¾" x ¼" | PG-30700-59 | — | — | — | |
| | ¾" x ⅜" | PG-30700-60 | — | — | — | |
| | ¾" x ½" | PG-30700-61 | — | — | — | |
| | ¾" x ¾" | PG-30700-62 | — | — | — | |
| | 1" x 1" | PG-30700-63 | — | PG-30800-50 | — | |
| | 1½" x 1½" | PG-30700-64 | — | PG-30800-51 | — | |
| | 2" x 2" | PG-30700-65 | — | PG-30800-52 | — | |
| | Threaded adapters, clamp x NPT(M) | | | | | |
| | D | ¾" x ⅛" | PG-30700-66 | — | — | — |
| ¾" x ¼" | | PG-30700-67 | — | — | — | |
| ¾" x ⅜" | | PG-30700-68 | — | — | — | |
| ¾" x ½" | | PG-30700-69 | — | — | — | |
| ¾" x ¾" | | PG-30700-70 | — | — | — | |
| 1" x ¾" | | PG-30700-71 | — | PG-30800-53 | — | |
| 1" x 1" | | PG-30700-72 | — | PG-30800-54 | — | |
| 1" x 1½" | | PG-30700-74 | — | PG-30800-55 | — | |
| 1" x 2" | | PG-30700-75 | — | PG-30800-56 | — | |
| 1½" x ¾" | | PG-30700-76 | — | PG-30800-57 | — | |
| 1½" x 1" | | PG-30700-77 | — | PG-30800-58 | — | |
| 1½" x 1¼" | | PG-30700-78 | — | PG-30800-59 | — | |
| 1½" x 1½" | | PG-30700-79 | — | PG-30800-60 | — | |
| 1½" x 2" | | — | — | PG-30800-61 | — | |
| 90° elbows | | | | | | |
| E | | ¾" | PG-30700-80 | — | — | — |
| | 1" | PG-30700-81 | — | PG-30800-62 | — | |
| | 1½" | PG-30700-82 | — | PG-30800-63 | — | |
| | 2" | PG-30700-83 | — | PG-30800-64 | — | |
| 45° elbows | | | | | | |
| F | ¾" | PG-30700-84 | — | — | — | |
| | 1" | PG-30700-85 | — | PG-30800-65 | — | |
| | 1½" | PG-30700-86 | — | PG-30800-66 | — | |
| | 2" | PG-30700-87 | — | PG-30800-67 | — | |
| Tees | | | | | | |
| G | ¾" | PG-30700-88 | — | — | — | |
| | 1" | PG-30700-89 | — | PG-30800-68 | — | |
| | 1½" | PG-30700-90 | — | PG-30800-69 | — | |
| | 2" | PG-30700-91 | — | PG-30800-70 | — | |
| Crosses | | | | | | |
| H | 1" | PG-30700-92 | — | PG-30800-71 | — | |
| | 1½" | PG-30700-93 | — | PG-30800-72 | — | |
| | 2" | PG-30700-94 | — | PG-30800-73 | — | |
| Clamps | | | | | | |
| I | ½" to ¾" | — | — | PG-30800-74 | — | |
| | 1" to 1½" | — | — | PG-30800-75 | — | |
| | 2" | — | — | PG-30800-76 | — | |
| | 2½" | — | — | PG-30800-77 | — | |
| | 3" | — | — | PG-30800-78 | — | |
| | 4" | — | — | PG-30800-80 | — | |



Cole-Parmer® Syringe Filters

Get easy, reliable filtration—just slip on and twist

- Easy identification—membrane type and pore size printed on each filter
- Filter more confidently—filters are 100% integrity tested and manufactured in accordance with ISO 9002 standards
- Get a secure fit—bidirectional membrane support and luer lock inlet/outlet
- Sterile filters are sterilized by gamma irradiation and certified nonpyrogenic, noncytotoxic, and blister packed

Glass Prefilters with Final Filter

- Save time—borosilicate glass fiber prefilter and cellulose filter in one
- Prefilter extends life of final filter by removing particulates from sample
- Reduces retention volume and sample loss



| Membrane Type | Dia | Pore size | Housing | Retention volume | Qty/ bx | Catalog number | Price/ bx |
|---------------------------|-------|-----------|---------|------------------|---------|----------------|-----------|
| Nonsterile filters | | | | | | | |
| Cellulose acetate | 26 mm | 0.20 µm | Acrylic | 0.23 mL | 100 | PG-02915-90 | |
| | | 0.45 µm | | | | | |
| | | 0.80 µm | | | | | |
| Sterile filter | | | | | | | |
| Cellulose acetate | 26 mm | 0.20 µm | Acrylic | 0.23 mL | 50 | PG-02915-40 | |

Cellulose Acetate Filters

- Low protein binding—ideal for biological solutions
- Use for sterilization and clarification of aqueous solutions



| Pore size | Membrane dia | Housing | Color | Qty/bx | Catalog number | Price/bx |
|---------------------------|--------------|---------|-------|--------|----------------|----------|
| Nonsterile filters | | | | | | |
| 0.22 µm | 26 mm | Acrylic | Blue | 100 | PG-02915-60 | |
| 0.45 µm | | | Clear | | | |
| 0.80 µm | | | Green | | | |
| Sterile filters | | | | | | |
| 0.22 µm | 26 mm | Acrylic | Blue | 50 | PG-02915-12 | |
| 0.45 µm | | | Clear | | | |
| 0.80 µm | | | Green | | | |

Nylon Filters

- Low levels of extractables with no wetting agents
- Hydrophilic nylon for good chemical resistance—ideal for aqueous and most organics



| Pore size | Membrane dia | Housing | Color | Qty/bx | Catalog number | Price/bx |
|---------------------------|--------------|---------|---------|--------|----------------|----------|
| Nonsterile filters | | | | | | |
| 0.22 µm | 25 mm | PP | Natural | 100 | PG-02915-16 | |
| 0.45 µm | | | | | PG-02915-14 | |
| Sterile filters | | | | | | |
| 0.20 µm | 25 mm | PP | Red | 50 | PG-02915-04 | |
| 0.45 µm | | | Natural | | PG-02915-02 | |



Teky's Tips



Choose the Right Filter!

| Membrane type | Applications |
|-------------------|--|
| Glass prefilter | One-step prefiltration and filtration. Choose the final membrane to meet your application needs. High particle loading capacity. |
| Cellulose acetate | Sterilization and clarification of aqueous solutions. Low protein binding. |
| Nylon | Filtration of organic and aqueous solutions. Low extractables. |
| PTFE | Sterilization of gases and alcohols; cleaning acids, alkalies, and organic solvents; venting purposes. For aggressive chemicals. |
| Nitrocellulose | High protein retention; microbiological analysis, waste water treatment; sterilization of aqueous solutions. |

Specifications

| Membrane dia | Housing type | Sample volume | Retention volume† | Pressure limit at 25°C | Max temp | Effective filtration area |
|--------------|--------------|---------------|-------------------|------------------------|----------|---------------------------|
| 15 mm | PP | ≤5 mL | 10 µL | 87 psi | 127°C | 1.7 cm² |
| 25 mm | PP | ≤100 mL | 0.1 mL | 87 psi | 127°C | 4.8 cm² |
| 26 mm | Acrylic | ≤100 mL | 0.1 mL | 87 psi | 50°C | 5.3 cm² |
| 50 mm | PP | ≤2 L | 0.5 mL | 60 psi | 134°C | 20 cm² |

†Varies for glass prefilters; see glass prefilter table below.

PTFE Filters

- Ideal for aggressive chemicals—organic solvents, concentrated acids and bases, propellants and more
- Use for gas/air filtration
- 50-mm membranes have stepped hose barb connectors for ¼" to ½" ID tubing



| Pore size | Membrane dia | Housing | Color | Qty/bx | Cat. no. | Price/bx |
|---------------------------|--------------|---------|---------|--------|-------------|----------|
| Nonsterile filters | | | | | | |
| 0.20 µm | 15 mm | PP | Natural | 100 | PG-29550-08 | |
| 0.45 µm | | | | | PG-29550-10 | |
| 0.20 µm | 25 mm | PP | Natural | 100 | PG-02915-20 | |
| 0.45 µm | | | | | PG-02915-22 | |
| 0.20 µm | 50 mm | PP | Natural | 20 | PG-02915-28 | |
| 0.45 µm | | | | | PG-02915-30 | |
| Sterile filters | | | | | | |
| 0.20 µm | 25 mm | PP | Natural | 50 | PG-02915-08 | |
| 0.50 µm | | | | | PG-02915-06 | |

Nitrocellulose Filters

- Good for macromolecules—highest protein retention
- Get fast flow rates with aqueous solutions
- Ideal for microbiological analysis, waste water treatment, and sterilization of aqueous solutions



| Pore size | Membrane dia | Housing | Color | Qty/bx | Cat. no. | Price/bx |
|--------------------------|--------------|---------|-------|--------|-------------|----------|
| Nonsterile filter | | | | | | |
| 0.20 µm | 26 mm | Acrylic | Blue | 100 | PG-02915-56 | |
| Sterile filters | | | | | | |
| 0.20 µm | 26 mm | Acrylic | Blue | 50 | PG-02915-52 | |
| 0.45 µm | | | | | PG-02915-53 | |

Advantec® Mixed Cellulose Ester Membranes

High quality at low prices

– Made from over 90% cellulose nitrate for strength and thermostability

These MCE membranes can be exposed to temperatures up to 266°F (130°C). Can be used for many laboratory applications including filter sterilizing biological fluids, microbiology, contamination analysis, and air monitoring.



| Pore size (µm) | Bubble point (psi) | Flow (L/min/cm²) | | 13 mm (100/pk) | | 25 mm (100/pk) | | 47 mm (100/pk) | | 90 mm (25/pk) | | 142 mm (25/pk) | | 293 mm (25/pk) | |
|----------------|--------------------|-------------------|------|-----------------------------|-------|-----------------------------|-------|-----------------------------|-------|-----------------------------|-------|-----------------------------|-------|-----------------------------|-------|
| | | H ₂ O† | Air | Cat. no. | Price | Cat. no. | Price | Cat. no. | Price | Cat. no. | Price | Cat. no. | Price | Cat. no. | Price |
| 0.10 | 35.3 | 0.027 | 0.67 | PG-06639-25 | | PG-06639-28 | | PG-06639-31 | | PG-06639-34 | | PG-06639-41 | | PG-36230-81 | |
| 0.20 | 54.5 | 0.018 | 2.4 | PG-06639-01 | | PG-06639-05 | | PG-06639-13 | | PG-06639-35 | | PG-06639-17 | | PG-36230-82 | |
| 0.45 | 35.0 | 0.045 | 3.7 | PG-06639-02 | | PG-06639-06 | | PG-06639-14 | | PG-06639-36 | | PG-06639-18 | | PG-36230-83 | |
| 0.80 | 16.4 | 0.165 | 15.0 | PG-06645-30 | | PG-06645-32 | | PG-06645-34 | | PG-06645-36 | | PG-06645-38 | | PG-36230-84 | |
| 1.00 | 13.9 | 0.220 | 20.4 | PG-06639-47 | | PG-06639-49 | | PG-06639-51 | | PG-06639-55 | | PG-06639-53 | | PG-36230-85 | |
| 3.00 | 10.2 | 0.300 | 28.3 | PG-06639-26 | | PG-06639-29 | | PG-06639-32 | | PG-06639-39 | | PG-06639-42 | | PG-36230-86 | |
| 5.00 | 8.5 | 0.400 | 40.9 | PG-06639-27 | | PG-06639-30 | | PG-06639-33 | | PG-06639-40 | | PG-06639-43 | | PG-36230-87 | |

†Using water prefiltered to 0.1 µm at 10 psi.

Environmental Express® ProWeigh® and ProWeigh® Double Filters

No more washing, drying, preweighing filters—it's already done for you!

- Get individual weights immediately—filter ID and weight is printed on each individual pan
- Eliminate loose fibers and inaccurate weights with precise, laser-cut edges

Save time and get faster results with these prepared filters. Each filter is washed, dried, and weighed robotically to the nearest 0.1 mg, then transferred to an aluminum dish that is printed with a barcode and the filter weight. Simply record the weight, filter your sample, dry the filter, and weigh the final product. ProWeigh filters are prepared and approved for use in *Standard Methods*.

ProWeigh Filters for Volatiles are specifically treated for use to determine fixed or volatile solids. After rinsing and drying, the filters are then heated to 550°C in a muffle furnace to drive off any volatile materials. They are then desiccated, weighed to 0.1 mg and quality inspected for accuracy.

ProWeigh Double Filters are weighed twice to ensure accuracy. After the initial weighing and labeling, the filters are reweighed to ensure a stable weight!



Each filter is supplied in an aluminum dish.



Standard Methods Approved for (Since 1997):

| Parameter | EPA Method | Standard Method |
|---------------------------|------------|-----------------|
| Total Dissolved Solids | 160.1 | 2540C |
| Total Suspended Solids | 160.2 | 2540D |
| Volatile Suspended Solids | 160.4 | 2540E |

| Pore size (µm) | Filter size | Qty/pk | ProWeigh filters for total suspended solids (TSS) | | ProWeigh filters for volatiles | |
|----------------|-------------|--------|---|----------|--------------------------------|----------|
| | | | Catalog number | Price/pk | Catalog number | Price/pk |
| 1.5 | 32 mm | 100 | PG-53200-51 | | — | |
| 1.5 | 42 mm | 100 | PG-53200-52 | | PG-53200-62 | |
| 1.5 | 47 mm | 100 | PG-53200-53 | | PG-53200-63 | |
| 1.5 | 55 mm | 100 | PG-53200-54 | | PG-53200-64 | |
| 1.5 | 70 mm | 100 | PG-53200-55 | | PG-53200-65 | |
| 1.5 | 76 mm | 100 | PG-53200-56 | | PG-53200-66 | |
| 1.5 | 90 mm | 100 | PG-53200-57 | | PG-53200-67 | |
| 1.5 | 110 mm | 100 | PG-53200-58 | | PG-53200-68 | |

| Pore size (µm) | Filter size | Qty/pk | ProWeigh Double filters for total suspended solids (TSS) | | ProWeigh Double filters for volatiles | |
|----------------|-------------|--------|--|----------|---------------------------------------|----------|
| | | | Catalog number | Price/pk | Catalog number | Price/pk |
| 1.5 | 47 mm | 100 | PG-53200-73 | | PG-53200-83 | |
| 1.5 | 76 mm | 100 | PG-53200-76 | | — | |
| 1.5 | 90 mm | 100 | PG-53200-77 | | — | |

Advantec® Filter Holders

Easy assembly

Polypropylene (PP) holders are ideal for ultracleaning and sterilizing liquids under pressure, or for aseptic sampling of liquids and gases. Maximum operating temperature (liquids) is 176°F (80°C); maximum operating pressure is 42 psi (2.9 bar) for the 25-mm holder and 71 psi (4.8 bar) for the 47-mm holder.



06623-22



06623-32

Holders feature PP dual support screens and silicone O-rings. Dual support screens allow for flow in both directions. Assemble holders quickly and efficiently without membrane tears with the specially designed inlet cap and exterior lock.

The 25-mm holder features a female luer-lock on the inlet and a male luer-slip on the outlet. The 47-mm holder features a ¼" NPT(M) thread on the inlet and a ¼" NPT(M)-female luer-slip on the outlet. Both are autoclavable.

| Type of holder | Diameter | Catalog number | Qty/pk | Price/pk |
|----------------|----------|-----------------------------|--------|----------|
| Syringe | 25 mm | PG-06623-32 | 6 | |
| In-line | 47 mm | PG-06623-22 | 1 | |

[PG-02930-95](#) Support screen, 25 mm
Pack of 8

[PG-06645-90](#) Support screen, 47 mm
Pack of 4

Find even more online!
Go to [ColeParmer.com](#) to see full product details.



Double-Open-End Liquid Filter Cartridges

A. Bonded Gradient-Density Cartridges. Ideal for removing a broad range of deformable and nondeformable particles. Rigid designs ideal for filtering high-solids, higher-viscosity fluids that require higher differential pressures. Polypropylene fiber medium is thermally bonded to a rigid core for added durability. Cartridges impart no taste, odor or color; suitable to 175°F (79°C).

| µm rating, nominal | Flow rate† | Length | Catalog number | Price |
|--------------------|------------------|---------------|----------------|-------|
| 1 | 2 GPM at <2 psid | 10" (25.4 cm) | PG-01512-00 | |
| 5 | | | PG-01512-08 | |
| 10 | | | PG-01512-18 | |
| 25 | | | PG-01512-28 | |
| 50 | | | PG-01512-38 | |
| 1 | 5 GPM at <2 psid | 20" (50.8 cm) | PG-01512-02 | |
| 5 | | | PG-01512-12 | |
| 10 | | | PG-01512-22 | |
| 25 | | | PG-01512-32 | |
| 50 | | | PG-01512-42 | |

B. String-Wound Gradient-Density Cartridges. Ideal for removing a broad range of deformable and non-deformable particles such as sand, silt, sludge, rust, and scale. String-wind pattern has lower pressure drop for higher flow. Polypropylene string is resistant to chemical and bacterial attack; suitable to 150°F (66°C).

| µm rating, nominal | Flow rate† | Length | Catalog number | Price |
|--------------------|-------------------|---------------|----------------|-------|
| 5 | 10 GPM at <1 psid | 10" (25.4 cm) | PG-01513-00 | |
| 30 | | | PG-01513-02 | |
| 50 | | | PG-01513-04 | |

C. Spun Gradient-Density Cartridges. Ideal for removing a broad range of deformable and non-deformable particles such as sand, silt, sludge, rust, and scale. Polypropylene construction is resistant to chemical and bacterial attack. One-micron and five-micron cartridges are certified to NSF Standard 42 for materials and impart no taste, odor, or color. Suitable to 145°F (63°C).

| µm rating, nominal | Flow rate† | Length | Cat. no. | Price |
|--------------------|--------------------|---------------|-------------|---------|
| 1 | 5 GPM at 0.6 psid | 10" (25.4 cm) | PG-01509-14 | pk of 2 |
| 5 | 5 GPM at 0.2 psid | | PG-01509-15 | |
| 1 | 10 GPM at 0.6 psid | 20" (50.8 cm) | PG-01509-37 | |
| 5 | 10 GPM at 0.6 psid | | PG-01509-40 | |
| 25 | 10 GPM at 0.2 psid | | PG-01509-41 | |

D. High-Efficiency Pleated Filter Cartridges. The pleated polypropylene (PP) design offers flow rates and dirt-loading capacities higher than spun or wound depth cartridges. Biologically safe and designed to meet FDA requirements for regulated industries. All-PP construction provides broad chemical compatibility. The gradient density microfiber media provides removal of a broader range of particle sizes than typical pleated filters. Suitable to 122°F (50°C).

| µm rating, nominal | Flow rate† | Length | Catalog number | Price |
|--------------------|------------------|---------------|----------------|-------|
| 0.2 | 2 GPM at 1 psid | 10" (25.4 cm) | PG-29830-00 | |
| | 2 GPM at <1 psid | 20" (50.8 cm) | PG-29830-01 | |

†psid refers to pounds per square inch pressure drop through the filter system.

For optimal performance, change cartridges at 25 psid.

‡To use with aqueous solutions, prewet with methanol, then rinse with water before use.

††Pore sizes for polypropylene cartridges are nominal.

†††Filtration efficiency and chlorine reduction efficiency are reduced at higher flow rates; chlorine capacity based on 75% reduction using 2 ppm free chlorine feed concentration at 68°F (20°C).

E. Extra-Strength Pleated Cellulose Cartridges. This cellulose cartridge is blended with polyester for better wet strength. The polyester material allows more pleats to improve flow and dirt loading. Suitable to 165°F (74°C).

| µm rating, nominal | Flow rate† | Length | Catalog number | Price |
|--------------------|-------------------|---------------|----------------|-------|
| 1 | 15 GPM at <1 psid | 10" (25.4 cm) | PG-01509-11 | |
| 5 | | | PG-01509-09 | |

F. Filter Cartridges for Ultrapure Applications. These cartridges are autoclavable to 250°F (121°C) and in-line sterilizable to 257°F (125°C) for up to 30-minute cycles. They are tolerant to an accumulated exposure of 10 hours. The filters may also be sanitized with compatible chemical agents. All cartridges are suitable to 180°F (82°C) at 10 psid.

The cartridges comply with U.S. CFR Title 21 guidelines for repeated food contact, comply with USP Class VI, 121°C Plastics guidelines, and pass the MEM Elution Cytotoxicity Test. Aqueous extracts contain less than 0.25 EU/mL.

Multi-Layer Nylon Cartridges. These consist of two pleated nylon membranes with the top acting as a prefilter to increase cartridge life and efficiency.

Glass Microfiber Cartridges. Made of resin-bonded borosilicate glass microfibers that do not leach flavor-altering substances. Meet NSF Standard 53 for the reduction of cysts. Ideal as prefilters to protect membrane filter/RO systems.

Polypropylene (PP) Cartridges. Thermally bonded high-purity PP fiber. Economical for a chemically inert media with high dirt-loading capacity. Suitable for air/gas filtration; FDA-acceptable. Hydrophobic; prewet before liquid filtration.‡

Pleated PTFE Cartridges. Clean room-constructed using thermal welding instead of adhesives or additives. Ideal for the more aggressive liquid or air/gas filtration applications. Hydrophobic; prewet before liquid filtration.‡

Semiconductor Cartridges. Single-layer PES membrane over PP core. Each is flushed with high-purity water to leach less than 5 ppb TOC and less than 5 ppb trace metals. Ideal for any high-purity chemical or DI water application.

| Cartridge type | µm rating†† | Length | Catalog number | Price |
|----------------|-------------|---------------|----------------|-------|
| Serial nylon | 0.2 | 10" (25.4 cm) | PG-06479-16 | |
| | 0.45 | | PG-06479-20 | |
| Glass fiber | 3.0 | 10" (25.4 cm) | PG-06479-24 | |
| | 3.0 | | PG-06479-24 | |
| Polypropylene | 1.0 | 10" (25.4 cm) | PG-06479-32 | |
| | 3.0 | | PG-06479-36 | |
| Polypropylene | 5 | 10" (25.4 cm) | PG-06479-40 | |
| | 10 | | PG-06479-44 | |
| PTFE | 0.1 | 10" (25.4 cm) | PG-06479-48 | |
| | 0.2 | | PG-06479-52 | |
| Semiconductor | 0.2 | 10" (25.4 cm) | PG-06479-60 | |

G. Economical Carbon-Impregnated Cartridges. These cellulose cartridges remove organic tastes/odors and chlorine, plus reduce sediment. Best suited for chemically neutral waters with lower chlorine concentrations. The 10" cartridge can treat approximately 2500 gallons at 1 GPM for chlorine†††. The 10" cartridge meets NSF Standard 42 for materials. Suitable to 125°F (52°C).

| µm rating, nominal | Flow rate†† | Length | Catalog number | Price |
|--------------------|-------------------|---------------|----------------|-------|
| 5 | 5 GPM at 4.0 psid | 10" (25.4 cm) | PG-01509-25 | |
| | 5 GPM at 1.0 psid | 20" (50.8 cm) | PG-01509-27 | |



In-line strainer
29590-02

Side-inlet strainer
29590-54



Perforated core
29590-22



Mesh overscreen
29590-31

Sanitary Strainers

Protect products and equipment from particulates

- 316 stainless steel wetted surfaces are polished to a smooth, blemish-free finish
- Mesh overscreens are hemmed smooth with no stray wire ends
- Standard clamp sizes allow easy installation or retrofit

Sanitary strainers are ideal for particulate removal or prefiltration. Available in in-line and side-inlet configurations. Side-inlet design lets you clean housing and change screens without disconnecting the strainer from process line.

What's included: strainer assemblies include housing, perforated core, internal cap and spring, assembly clamp, and gasket. Order wire mesh overscreens and replacement perforated cores separately.

| Connection size (Tri-Clamp®) | Core perforations | Length | Catalog number | Price | Replacement cores | |
|---------------------------------------|-------------------|-------------------|-----------------------------|-------|-----------------------------|-------|
| | | | | | Catalog number | Price |
| In-line strainer assemblies | | | | | | |
| 1" | 1/8" | 15 3/4" (40.0 cm) | PG-29590-00 | | PG-29590-20 | |
| 1.5" | | | PG-29590-02 | | | |
| 2" | | | PG-29590-04 | | | |
| 1" | 1/4" | 15 3/4" (40.0 cm) | PG-29590-10 | | PG-29590-22 | |
| 1.5" | | | PG-29590-12 | | | |
| 2" | | | PG-29590-14 | | | |
| Side-inlet strainer assemblies | | | | | | |
| 1" | 1/8" | 15 3/4" (40.0 cm) | PG-29590-50 | | PG-29590-70 | |
| 1.5" | | | PG-29590-52 | | | |
| 2" | | | PG-29590-54 | | | |
| 1" | 1/4" | 15 3/4" (40.0 cm) | PG-29590-60 | | PG-29590-72 | |
| 1.5" | | | PG-29590-62 | | | |
| 2" | | | PG-29590-64 | | | |

Mesh Overscreens, 10 7/8" (27.6 cm) L x 3" (7.6 cm) dia

| Mesh size | Wire diameter (inches) | Opening size inches (microns) | Open area | Catalog number | Price |
|-----------|------------------------|-------------------------------|-----------|-----------------------------|-------|
| 20 x 20 | 0.016 | 0.0340 (864) | 46.20% | PG-29590-31 | |
| 30 x 30 | 0.013 | 0.0203 (516) | 37.10% | PG-29590-32 | |
| 40 x 40 | 0.010 | 0.0150 (381) | 36.00% | PG-29590-33 | |
| 60 x 60 | 0.0075 | 0.0092 (234) | 30.50% | PG-29590-35 | |
| 80 x 80 | 0.0055 | 0.0070 (178) | 31.40% | PG-29590-36 | |
| 100 x 100 | 0.0045 | 0.0055 (140) | 30.30% | PG-29590-37 | |
| 150 x 150 | 0.0026 | 0.0041 (104) | 37.40% | PG-29590-39 | |

Gaskets for Sanitary Fittings

Ensure a tight seal

- Meet FDA CFR Title 21 CFR 177.2600, USDA, 3A, and cGMP criteria
- Free of animal-derived ingredients and meet USP Class IV, EP 3.1.9, and cytotoxicity criteria

Platinum-Cured Silicone is ideal for most pharmaceutical, food, and beverage processing applications. Odorless and tasteless to ensure media purity. Usable from -58 to 446°F (-50 to 230°C). May undergo SIP.

PTFE offers excellent chemical compatibility. Highly resistant to stress cracking and corrosion. Usable from -450 to 550°F (-268 to 288°C).

Tuf-Flex® gasket grafts a PTFE envelope to an elastomer core; will not creep or cold flow over time and therefore maintains the integrity of its seal in your process line. Designed to meet the stringent requirements of biopharmaceutical, ultra-pure water, WFI (water for injection), food and beverage processing, and CIP/SIP applications. Usable from -20 to 400°F (-29 to 204°C).



ANIMAL DERIVED
INGREDIENT FREE



| Size | Platinum-cured silicone | | | PTFE | | | Tuf-Flex® | | |
|--------|-----------------------------|--------|----------|-----------------------------|--------|----------|-----------------------------|--------|----------|
| | Cat. no. | Qty/pk | Price/pk | Cat. no. | Qty/pk | Price/pk | Cat. no. | Qty/pk | Price/pk |
| 1" | PG-30548-02 | 10 | | PG-30548-82 | 10 | | PG-30547-54 | 1 | |
| 1 1/2" | PG-30548-04 | | | PG-30548-84 | | | PG-30547-56 | | |
| 2" | PG-30548-06 | | | PG-30548-86 | | | PG-30547-58 | | |



Cole-Parmer® Acrylic Variable-Area Flowmeters for Bench or Panel Mount

Don't sacrifice durability for precision

- Easily and precisely control flow of your application via manual valve
- Durable acrylic bodies with integral metering tubes for accurate readings
- Stand up to even aggressive plant environments
- Versatile—easy panel installation or move from bench to bench with optional tripod base 32462-50 (order separately at ColeParmer.com)



Specifications

Accuracy:
 2" and 50-mm models: ±5% FS
 4" and 100-mm models: ±3% FS
 5" and 127-mm models: ±2% FS

Max operating temp: 150°F (65°C)

Connections:
 2", 4", 50-mm, and 100-mm models: 1/8" NPT(F)[†]
 5" and 127-mm models: 1" NPT(F)

Media type: liquids or gases

Max pressure: 100 psi (6.9 bar)

Materials of construction

| Part | 2" and 50 mm | 4" and 100 mm | 5" and 127 mm |
|----------|---------------------------------|--------------------------|---------------|
| Body | Acrylic | | |
| Fittings | Brass | | PVC |
| O-rings | Buna N | | |
| Float | Black glass (BG), Aluminum (AL) | 316 Stainless steel (SS) | |

Flowmeters with Valves; English-Unit Scale

| Float [‡] | For liquid applications | | | For air applications | | |
|---------------------------------|-------------------------|---|-------|----------------------|---|-------|
| | Flow range | Cat. no. | Price | Flow range | Cat. no. | Price |
| Flowmeters with 2" scale | | | | | | |
| BG | 0.2–2 GPH | PG-32460-00 | | 0.1–1 scfh | PG-32460-10 | |
| SS | 0.4–5 GPH | PG-32460-02 | | 0.2–2 scfh | PG-32460-12 | |
| BG | 1–10 GPH | PG-32460-04 | | 0.4–5 scfh | PG-32460-14 | |
| SS | 2–20 GPH | PG-32460-06 | | 0.5–10 scfh | PG-32460-16 | |
| SS | 4–40 GPH | PG-32460-08 | | 2–20 scfh | PG-32460-18 | |
| SS | — | — | — | 3–30 scfh | PG-32460-20 | |
| BG | — | — | — | 4–50 scfh | PG-32460-22 | |
| SS | — | — | — | 10–100 scfh | PG-32460-24 | |
| SS | — | — | — | 20–200 scfh | PG-32460-26 | |
| Flowmeters with 4" scale | | | | | | |
| SS | 1–10 GPH | PG-32461-00 | | 0.4–5 scfh | PG-32461-10 | |
| SS | 2–25 GPH | PG-32461-02 | | 1–10 scfh | PG-32461-12 | |
| SS | 4–50 GPH | PG-32461-04 | | 2–20 scfh | PG-32461-14 | |
| SS | 6–60 GPH | PG-32461-06 | | 4–40 scfh | PG-32461-16 | |
| SS | 0.2–2.5 GPM | PG-32461-07[‡] | | 10–100 scfh | PG-32461-18 | |
| SS | 0.4–5 GPM | PG-32461-08[‡] | | 14–150 scfh | PG-32461-20 | |
| SS | — | — | — | 20–200 scfh | PG-32461-22 | |
| AL | — | — | — | 0.5–5 scfm | PG-32461-24[‡] | |
| SS | — | — | — | 1–10 scfm | PG-32461-26[‡] | |
| Flowmeters with 5" scale | | | | | | |
| SS | 1–10 GPM | PG-32466-50 | | 3–25 scfm | PG-32466-60 | |
| SS | 2–20 GPM | PG-32466-52 | | 4–50 scfm | PG-32466-62 | |

[†]These models have dual scale: GPM/GPH, scfm/scfh, LPM/LPH; they also have 1/4" NPT(F) connections and use optional tripod base 32462-60 sold separately online.
[‡]Float material key: BG = black glass, SS = stainless steel, AL = aluminum.

Flowmeters without Valves; English-Unit Scales

| Float [‡] | For liquid applications | | | For air applications | | |
|---------------------------------|-------------------------|-----------------------------|-------|----------------------|---|-------|
| | Flow range | Cat. no. | Price | Flow range | Cat. no. | Price |
| Flowmeters with 4" scale | | | | | | |
| SS | 1–10 GPH | PG-32458-00 | | 0.4–5 scfh | PG-32458-10 | |
| SS | — | — | — | 0.5–5 scfm | PG-32458-24[‡] | |
| SS | — | — | — | 1–10 scfm | PG-32458-26[‡] | |
| Flowmeters with 5" scale | | | | | | |
| SS | 0.4–5 GPM | PG-32462-00 | | 3–25 scfm | PG-32458-10 | |
| SS | 2–20 GPM | PG-32462-04 | | 10–100 scfm | PG-32458-14 | |

Flowmeters with Valves; Metric-Unit Scales

| Float [‡] | For liquid applications | | | For air applications | | |
|-------------------------------------|-------------------------|---|-------|----------------------|---|-------|
| | Flow range (mL/min) | Catalog number | Price | Flow range (LPM) | Catalog number | Price |
| Flowmeters with 50-mm scale | | | | | | |
| BG | 5 to 50 | PG-32460-30 | | 0.04 to 0.5 | PG-32460-40 | |
| SS | 10 to 100 | PG-32460-32 | | 0.1 to 1 | PG-32460-42 | |
| SS | 20 to 240 | PG-32460-34 | | 0.4 to 5 | PG-32460-44 | |
| SS | — | — | — | 1 to 10 | PG-32460-46 | |
| AL | — | — | — | 2 to 25 | PG-32460-48 | |
| SS | — | — | — | 4 to 50 | PG-32460-50 | |
| SS | — | — | — | 10 to 100 | PG-32460-52 | |
| Flowmeters with 100-mm scale | | | | | | |
| SS | 4 to 50 | PG-32461-30 | | 0.4 to 5 | PG-32461-50 | |
| SS | 10 to 120 | PG-32461-32 | | 1 to 10 | PG-32461-52 | |
| BG | 25 to 225 | PG-32461-34 | | 2 to 20 | PG-32461-54 | |
| SS | 40 to 400 | PG-32461-36 | | 3 to 30 | PG-32461-56 | |
| SS | 40 to 660 | PG-32461-38 | | 4 to 50 | PG-32461-58 | |
| SS | 100 to 1500 | PG-32461-40 | | 10 to 100 | PG-32461-60 | |
| SS | 200 to 3000 | PG-32461-42 | | 14 to 140 | PG-32461-62[‡] | |
| SS | 0.8 to 9 LPM | PG-32461-44[‡] | | 30 to 280 | PG-32461-64[‡] | |
| SS | 1.5 to 20 LPM | PG-32461-46[‡] | | — | — | |
| Flowmeters with 127-mm scale | | | | | | |
| SS | 4 to 36 LPM | PG-32466-54 | | 100 to 700 | PG-32466-66 | |
| SS | — | — | — | 400 to 3400 | PG-32466-70 | |

Flowmeters without Valves; Metric-Unit Scales

| Float [‡] | For liquid applications | | | For air applications | | |
|-------------------------------------|-------------------------|---|-------|----------------------|---|-------|
| | Flow range (mL/min) | Catalog number | Price | Flow range (LPM) | Catalog number | Price |
| Flowmeters with 50-mm scale | | | | | | |
| BG | 5 to 50 | PG-32457-30 | | 0.04 to 0.5 | PG-32457-40 | |
| BG | 10 to 100 | PG-32457-32 | | 0.1 to 1 | PG-32457-42 | |
| SS | 20 to 240 | PG-32457-34 | | 0.4 to 5 | PG-32457-44 | |
| SS | — | — | — | 1 to 10 | PG-32457-46 | |
| Flowmeters with 100-mm scale | | | | | | |
| BG | 4 to 50 | PG-32458-30 | | 0.4 to 5 | PG-32458-50 | |
| SS | 10 to 120 | PG-32458-32 | | 1 to 10 | PG-32458-52 | |
| BG | 25 to 225 | PG-32458-34 | | 2 to 20 | PG-32458-54 | |
| SS | 40 to 400 | PG-32458-36 | | 3 to 30 | PG-32458-56 | |
| SS | 40 to 660 | PG-32458-38 | | 4 to 50 | PG-32458-58 | |
| SS | 100 to 1500 | PG-32458-40 | | 10 to 100 | PG-32458-60 | |
| SS | 200 to 3000 | PG-32458-42 | | 14 to 140 | PG-32458-62[‡] | |
| SS | 0.8 to 9 LPM | PG-32458-44[‡] | | 30 to 280 | PG-32458-64[‡] | |
| SS | 1.5 to 20 LPM | PG-32458-46[‡] | | 80 to 560 | PG-32458-65[‡] | |
| Flowmeters with 127-mm scale | | | | | | |
| SS | 1 to 15 LPM | PG-32462-20 | | 100 to 700 | PG-32462-30 | |
| SS | 4 to 36 LPM | PG-32462-22 | | 100 to 1400 | PG-32462-32 | |
| SS | 5 to 75 LPM | PG-32462-24 | | 400 to 3000 | PG-32462-34 | |

Easy-View Acrylic In-Line Flowmeters

Read measurements in an unobstructed 360° view

- Flow ranges up to 50 GPM (200 LPM) with dual scales for easy reading
- Extremely durable—machined from high-quality acrylic rod stock
- One-piece, in-line body occupies less space for a clean installation

These meters are designed for use in more aggressive process environments. In addition to the machined acrylic bodies, the design utilizes SS float guides. The combination is a meter suitable for high-vibration, high-fluctuation process applications. Some versions include polypropylene end fittings reinforced with aluminum stress rings for added strength to the meters' design.



Specifications

- Accuracy:** ±5% of reading
- Max pressure:** 150 psi (10.3 bar); 130 psig (8.8 bar) for large-body models
- Max operating temperature:** 150°F (65°C); 130°F (54°C) for large-body models

| Materials of Construction | | |
|---------------------------|-----------------|------------|
| Part | General-purpose | Large-body |
| Body | Acrylic | |
| Fittings | PP† | PVC |
| O-rings | Viton® | |
| Guide | 316 SS | |

†Reinforced with aluminum stress rings.

| Flow range | Float | Connections | Cat. no. | Price |
|---|-----------------|-------------|---|-------|
| General-purpose flowmeters for liquids | | | | |
| 0.025 to 0.25 GPM | 0.1 to 1 LPM | PVC | 1/4" NPT(F) PG-32477-00 | |
| | | | 3/8" NPT(F) PG-32477-02 | |
| 0.1 to 1 GPM | 0.4 to 4 LPM | PVC | 3/8" NPT(F) PG-32477-04 | |
| 0.2 to 2 GPM | 1 to 7.5 LPM | 316 SS | 1/2" NPT(F) PG-32477-10 | |
| 0.3 to 3 GPM | 1.5 to 11.1 LPM | 316 SS | 3/8" NPT(F) PG-32477-12 | |
| | | | 1/2" NPT(F) PG-32477-14 | |
| 0.5 to 5 GPM | 2.0 to 20 LPM | 316 SS | 1/2" NPT(F) PG-32477-18 | |
| 1 to 10 GPM | 4 to 38 LPM | 316 SS | 3/4" NPT(F) PG-32477-20 | |
| | | | 1" NPT(F) PG-32477-22 | |
| 1 to 17 GPM | 4 to 64 LPM | 316 SS | 1" NPT(F) PG-32477-26 | |
| 2 to 20 GPM | 8 to 80 LPM | 316 SS | 3/4" NPT(F) PG-32477-28 | |
| | | | 1" NPT(F) PG-32477-30 | |
| Large-body flowmeters for liquids | | | | |
| 5 to 25 GPM | 20 to 100 LPM | | PG-32477-78 | |
| 8 to 40 GPM | 30 to 150 LPM | 316 SS | 1 1/2" NPT(M) PG-32477-80 | |
| 10 to 50 GPM | 40 to 200 LPM | | PG-32477-82 | |



Polysulfone In-Line Flowmeters

Get better results than acrylic

- Better than acrylic for aggressive fluids or high temperature and pressure applications
- Flow ranges from less than 0.1 GPM to over 130 GPM and less than 1 scfm to over 230 scfm

All meters include union connections—installing the meter and cleaning the internals is much easier. The unions also allow simple rotation of the sight-tube for easier reading all while keeping a tight thread seal on the fittings to contain aggressive fluids.

Dual scales (English and metric) reduce the need for stocking separate units for shipping to the US or elsewhere. The back side of the meter body is molded with an opaque surface to make reading easier.

Note: Polysulfone is not suited for direct exposure to sunlight.



Specifications

- Accuracy:**
 - Standard in-line: ±5% full-scale
 - High-capacity: ±3% full-scale
- Max pressure drop:** 2 psi (0.1 bar)
- Max pressure:**
 - 1/2", 3/4", and 1" NPT models: 150 psig (10.3 bar)
 - 2" NPT models: 130 psig (8.8 bar)
- Max operating temperature:**
 - 1/2", 3/4", and 1" NPT models: 212°F (100°C)
 - 2" NPT models: 150°F (65°C)

| Flow range | Float | Connections | Cat. no. | Price |
|---|-----------------|-------------|---|-------|
| Standard in-line flowmeters for water | | | | |
| 0.025 to 0.25 GPM | 0.1 to 1.0 LPM | PVC | 1/2" NPT(M) PG-32470-00 | |
| 0.1 to 1.0 GPM | 0.4 to 4.0 LPM | | PG-32470-01 | |
| 0.2 to 2.0 GPM | 0.75 to 7.5 LPM | 316 SS | 1/2" NPT(M) PG-32470-02 | |
| 0.5 to 5.0 GPM | 1.8 to 18 LPM | | PG-32470-03 | |
| 1.0 to 10.0 GPM | 5.0 to 37.5 LPM | 316 SS | 3/4" NPT(M) PG-32470-04 | |
| High-capacity in-line flowmeters for water | | | | |
| 2.0 to 20 GPM | 7.5 to 75 LPM | | PG-32472-01 | |
| 3.0 to 30 GPM | 12 to 115 LPM | 316 SS | 1" NPT(F) PG-32472-02 | |
| 4.0 to 40 GPM | 15 to 155 LPM | | PG-32472-03 | |
| 6.0 to 60 GPM | 30 to 230 LPM | | PG-32473-01 | |
| 10 to 80 GPM | 40 to 300 LPM | 316 SS | 2" NPT(F) PG-32473-02 | |
| 15 to 130 GPM | 60 to 500 LPM | | PG-32473-04 | |



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[PG-17080-00](#) NIST-traceable calibration with data for air/gas flowmeter
[PG-17080-12](#) NIST-traceable calibration with data for liquid flowmeter



Cole-Parmer® 150-mm Flowmeters

Be more accurate with longer 150-mm scale

- Ceramic millimeter scale is fused directly to flowtube
- A vertical tangential locator line ensures hairline accuracy in reading float position
- More accurately set your desired flow point with 16-turn high-precision valve features a "nonrising stem"

Each flowmeter consists of a heavy-walled glass flowtube mounted in a frame with white acrylic back plate (1/8" thick). Aluminum flowmeters are economical and good for general use with noncorrosive gases and liquids. Brass flowmeters are economical and good for use with water. The 316 stainless steel flowmeters feature excellent chemical compatibility. Select a flowmeter with a high-precision valve for superior flow rate control—ideal for low-flow applications, for metering samples, and calibration gases for gas analyzers.

All flowmeters come with correlation data sheets for water and air at standard temperature and pressure (STP). We can also supply calibration data for oxygen, nitrogen, hydrogen, helium, CO₂, argon, other liquids and gases, and for conditions other than STP—call our Application Specialists for more information.



Specifications

Accuracy: ±5% full-scale for meters with rate of 0.19 and 0.94 mL/min H₂O
±2% full-scale for remaining

Repeatability: ±0.25% full-scale

Max pressure: 200 psi (13.7 bar)

Operating temperature: -15 to 250°F (-26 to 121°C)

Connections: 1/8" NPT(F)

| Materials of Construction | | | |
|---------------------------|----------------------------|---------------------|--------|
| Part | Aluminum | Brass | SS |
| Flowtube | Borosilicate glass | | |
| Fittings, valves | Aluminum | Chrome-plated brass | 316 SS |
| O-rings | Buna N | | Viton® |
| Float | Glass, 316 SS, or carboloy | | |
| Shield | Polycarbonate | | |
| Frame | Aluminum/acrylic | | |

03229-01



Fluid Handling

Flowmeters

| Maximum flow rate (mL/min) [‡] | | | | | | | | Float ^{††} | Correlated meters with valves | | | Correlated meters with high-resolution valves | | | |
|---|------------------|----------------|----------------|----------------|----------|-----------------|----------|---------------------|-------------------------------|-----------------------------|-----------------------------|---|-----------------------------|-----------------------------|--|
| H ₂ O [†] | Air [†] | O ₂ | N ₂ | H ₂ | He | CO ₂ | Ar | | Aluminum | Brass | 316 SS | Aluminum | Brass | 316 SS | |
| Cat. no. | Cat. no. | Cat. no. | Cat. no. | Cat. no. | Cat. no. | Cat. no. | Cat. no. | | Cat. no. | Cat. no. | Cat. no. | Cat. no. | Cat. no. | Cat. no. | |
| 0.19 | 18.7 | 17 | 20 | 37 | 16 | 23.6 | 15.4 | G | PG-03217-00 | PG-03294-00 | PG-03219-01 | PG-03227-00 | PG-03295-00 | PG-03229-01 | |
| 0.49 | 49.1 | 42 | 48 | 94 | 46.2 | 56.4 | 43.5 | G | PG-03217-04 | PG-03294-04 | PG-03219-05 | PG-03227-04 | PG-03295-04 | PG-03229-05 | |
| 0.85 | 92 | 81 | 92 | 208 | 90.1 | 103.1 | 75.6 | G | PG-03217-08 | PG-03294-08 | PG-03219-09 | PG-03227-08 | PG-03295-08 | PG-03229-09 | |
| 0.94 | 60.5 | 54 | 62 | 123 | 53 | 72 | 49 | SS | PG-03217-02 | PG-03294-02 | PG-03219-03 | PG-03227-02 | PG-03295-02 | PG-03229-03 | |
| 2.45 | 137 | 131 | 143 | 301 | 133 | 150 | 113 | SS | PG-03217-06 | PG-03294-06 | PG-03219-07 | PG-03227-06 | PG-03295-06 | PG-03229-07 | |
| 4.74 | 264 | 233 | 271 | 627 | 283 | 281 | 218 | SS | PG-03217-10 | PG-03294-10 | PG-03219-11 | PG-03227-10 | PG-03295-10 | PG-03229-11 | |
| 5.5 | 374 | 340 | 382 | 1021 | 450 | 355 | 305 | G | PG-03217-12 | PG-03294-12 | PG-03219-13 | PG-03227-12 | PG-03295-12 | PG-03229-13 | |
| 16.5 | 844 | 772 | 827 | 2620 | 1490 | 725 | 687 | G | PG-03217-16 | PG-03294-16 | PG-03219-17 | PG-03227-16 | PG-03295-16 | PG-03229-17 | |
| 20.4 | 814 | 753 | 824 | 2496 | 1290 | 728 | 676 | SS | PG-03217-14 | PG-03294-14 | PG-03219-15 | PG-03227-14 | PG-03295-14 | PG-03229-15 | |
| 46 | 1682 | 1545 | 1662 | 5547 | 3397 | 1420 | 1380 | SS | PG-03217-18 | PG-03294-18 | PG-03219-19 | PG-03227-18 | PG-03295-18 | PG-03229-19 | |
| 53.5 | 2313 | 2169 | 2395 | 7817 | 4880 | 2048 | 1949 | G | PG-03217-20 | PG-03294-20 | PG-03219-21 | PG-03227-20 | PG-03295-20 | PG-03229-21 | |
| 84 | 3807 | 3485 | 3868 | 13,105 | 7803 | 3374 | 3151 | G | PG-03217-24 | PG-03294-24 | PG-03219-25 | PG-03227-24 | PG-03295-24 | PG-03229-25 | |
| 134 | 4562 | 4341 | 4685 | 15,855 | 9770 | 3990 | 3903 | SS | PG-03217-22 | PG-03294-22 | PG-03219-23 | PG-03227-22 | PG-03295-22 | PG-03229-23 | |
| 210 | 8678 | 8269 | 8916 | 29,840 | 19,426 | 7485 | 7366 | G | PG-03217-28 | PG-03294-28 | PG-03219-29 | PG-03227-28 | PG-03295-28 | PG-03229-29 | |
| 217 | 7825 | 6992 | 7722 | 27,804 | 15,960 | 6308 | 6384 | SS | PG-03217-26 | PG-03294-26 | PG-03219-27 | PG-03227-26 | PG-03295-26 | PG-03229-27 | |
| 506 | 16,737 | 15,710 | 17,021 | 59,996 | 38,576 | 14,051 | 14,131 | SS | PG-03217-30 | PG-03294-30 | PG-03219-31 | PG-03227-30 | PG-03295-30 | PG-03229-31 | |
| | | | | | | | | Price | | | | | | | |
| High-flow flowmeters | | | | | | | | | | | | | | | |
| 541 | 23,742 | 21,350 | 23,512 | 85,812 | 53,100 | 18,989 | 19,761 | G | PG-03217-32 | PG-03294-32 | PG-03219-33 | PG-03227-32 | PG-03295-32 | PG-03229-33 | |
| 1288 | 45,227 | 39,567 | 43,000 | 159,699 | 103,647 | 34,287 | 45,227 | SS | PG-03217-34 | PG-03294-34 | PG-03219-35 | PG-03227-34 | PG-03295-34 | PG-03229-35 | |
| 1881 | 66,346 | 54,902 | 59,580 | 221,872 | 146,500 | 46,311 | 47,890 | C | PG-03217-36 | PG-03294-36 | PG-03219-37 | PG-03227-36 | PG-03295-36 | PG-03229-37 | |
| | | | | | | | | Price | | | | | | | |

[†]Correlation data sheets for water and air are included with flowmeters.

[‡]Flow rates are at standard temperature and pressure (70°F and 14.7 psi). Minimum flow rate is approx 10% of the maximum flow rate.

^{††}Float material key: G = glass, SS = 316 stainless steel, C = carboloy

Accessories

[PG-03226-10 Tripod base](#) holds one flowmeter, clear acrylic

[PG-03226-30 Tripod base](#) holds up to three flowmeters, clear acrylic

[PG-30904-01 Fitting](#); NPT(M) to barbed adapter, brass, 1/8" x 1/4"

[PG-31412-34 Fitting](#); NPT(M) to compression adapter, brass, 1/8" x 1/8"

[PG-31406-34 Fitting](#); NPT(M) to compression adapter, SS, 1/8" x 1/8"

[PG-30621-30 Fitting](#); NPT(M) to barbed adapter, SS, 1/8" x 1/8"

[PG-17080-00 NIST-traceable calibration](#) with data for air/gas flowmeter

[PG-17080-12 NIST-traceable calibration](#) with data for liquid flowmeter

Cole-Parmer® Flowmeters and Proportional Controllers for Gases

Measure 130 standard gases—user selectable from display

- Accuracy of $\pm 0.8\%$ of reading $+0.2\%$ full-scale; repeatability of $\pm 0.2\%$
- 100 to 1 turndown with ranges of 1 SCCM full-scale up to 1000 SLPM
- Models with 4 to 20 mA output or totalizer are available

These meters measure flow via pressure drop across a laminar flow element (LFE). Because the flow element makes the flow stream laminar, placement in the process does not require straight pipe runs upstream or downstream of the meter, greatly simplifying installation. As compared to thermal mass technologies, the LFE design provides an ultrafast response within 10 milliseconds and offers "instant on" with no warm-up time.

An integrated keypad around the display is all that is required to program the unit for service. The 0 to 5 VDC output allows transmission of the flow value to a remote display, recorder, or controller regulating a valve or pump.

Flow controllers feature an integrated PID to direct the unit's response to process changes. Flow set point is established with keypad, the optional set point control module, a 0 to 5 V signal, or an RS-232 input signal. Order set point control modules separately from the table. For portable flow metering applications, order the battery pack listed below table.

What's included: 120/230 VAC power adapter with communications cable 32929-89 and NIST-traceable calibration report supplied by the manufacturer.



Flow controller
32907-51



Mass flowmeter 32908-59
shown with optional
battery pack 32929-50



Meters and controllers feature a dynamic display that simultaneously shows flow rate, line pressure, fluid temperature, and (for controllers) the set point. For the units shown, both power and input/output signals are transmitted through a single multi-pin connector.



Specifications

Max particulate size:

- Up to 1 LPM: 20 μm
- >1 LPM to 1000 LPM: 50 μm

Accuracy: $\pm 0.8\%$ of reading, $+0.2\%$ full-scale

Repeatability: $\pm 0.2\%$

Response time:

- Flowmeters: 10 msec
- Flow controllers: 50 msec

Operating temperature:

- 14 to 122°F (–10 to 50°C)

Max pressure: 145 psig (9.9 bar)

Pressure drop: 0.8 to 3.2 psig (flowmeter)

Output signal: 0 to 5 VDC, RS-232

Input signal: 0 to 5 VDC and RS-232

Wetted materials:

- Flowmeters: 302 and 303 SS, Viton®, silicone RTV, and glass-reinforced nylon, aluminum
- Flow controllers: 302, 303; Viton, silicone RTV, glass-reinforced nylon, aluminum, brass, 410 SS, silicon, glass

Power:

- Flowmeters: 7 to 30 VDC at 30 mA
- Flow controllers
- Models ≤ 10 LPM: 12 to 30 VDC at 250 mA
- Models ≤ 50 LPM: 24 to 30 VDC at 750 mA

Display type: four-digit, seven-line LCD; 1/4"H flow display

Connections:

- ≤ 10 mL/min: 10-32 UNF
- 50 mL/min to 10 LPM: 1/8" NPT(F)
- 50 to 100 LPM: 1/4" NPT(F)
- 100 and 250 LPM: 1/2" NPT(F)
- 500 and 1000 LPM: 3/4" NPT(F)

| Flow range | Mass flowmeters | | Mass flow controllers | | Set point modules [†] | |
|------------------|-----------------------------|-------|-----------------------------|-------|--------------------------------|-------|
| | Catalog number | Price | Catalog number | Price | Catalog number | Price |
| 0.01 to 1 mL/min | PG-32908-51 | | PG-32907-51 | | PG-32907-83 | |
| 0.05 to 5 mL/min | PG-32908-53 | | PG-32907-53 | | PG-32907-85 | |
| 0.1 to 10 mL/min | PG-32908-55 | | PG-32907-55 | | PG-32907-87 | |
| 0.5 to 50 mL/min | PG-32908-57 | | PG-32907-57 | | PG-32907-89 | |
| 1 to 100 mL/min | PG-32908-59 | | PG-32907-59 | | PG-32907-91 | |
| 2 to 200 mL/min | PG-32908-61 | | PG-32907-61 | | PG-32907-93 | |
| 5 to 500 mL/min | PG-32908-63 | | PG-32907-63 | | PG-32907-97 | |
| 0.01 to 1 LPM | PG-32908-67 | | PG-32907-67 | | PG-32907-83 | |
| 0.05 to 5 LPM | PG-32908-69 | | PG-32907-69 | | PG-32907-85 | |
| 0.1 to 10 LPM | PG-32908-71 | | PG-32907-71 | | PG-32907-87 | |
| 0.5 to 50 LPM | PG-32908-73 | | PG-32907-73 | | PG-32907-89 | |
| 1 to 100 LPM | PG-32908-75 | | PG-32907-75 | | PG-32907-91 | |
| 2.5 to 250 LPM | PG-32908-77 | | PG-32907-77 | | PG-32907-95 | |
| 5 to 500 LPM | PG-32908-79 | | PG-32907-79 | | PG-32907-97 | |
| 10 to 1000 LPM | PG-32908-81 | | PG-32907-81 | | PG-32907-99 | |

[†]May be ordered as an option.

[PG-17080-10](#) NIST-traceable recalibration

[PG-32929-50](#) Battery pack, for portable operation of mass or volumetric flowmeter only

[PG-32929-89](#) Replacement communication cable, 8-DIN to stripped ends



Cole-Parmer® Heavy-Duty Flowmeters/Totalizers

Eliminate the need for expensive wiring with battery power

– Two totalizers allow for process or period-specific volume monitoring

These heavy-duty in-line flowmeters/totalizers display flow rate and accumulated flow in gallons or liters. The compact, yet robust design makes them ideal for use in manufacturing, pilot-plant, or quality control areas.

All flowmeters measure linearly across a range and record a cumulative volume plus a resettable volume. Meters are factory-calibrated using water but can store two application-specific K-factors determined in process. To conserve power, the six-digit display automatically turns on with flow and then turns off four minutes after flow ceases. The internal parts are simple to replace for easy maintenance—contact our Application Specialists for details.

Meters operate on two lithium batteries (included). Remote installation of the flowmeter body is possible using the optional remote installation kit 05609-93 (order separately below). Calibration container and replacement battery kits can be ordered below.



Flowmeter 05609-17 with sanitary connection



Flowmeter 05609-21 with NPT(F) connection

Specifications

Repeatability: ±0.1% of reading

Maximum pressure:

Aluminum: 300 psig (21 bar);

NPT SS: 1500 psig (105 bar);

Sanitary SS: 450 psig (31 bar);

ANSI SS: 285 psig (19 bar)

Operating temp: 14 to 140°F (–10 to 60°C)

Wetted materials: 316 SS or aluminum housing, PVDF rotor and supports, tungsten carbide shaft, 316 SS retainers, and ceramic bearings

Maximum particulate size:

Models with ≤50 GPM (190 LPM)

max flow rate: 125 µm

Models with >50 GPM (190 LPM)

max flow rate: 500 µm

Display: 6-digit LCD, ½"H

(with floating decimal)

Input power: two 3 V lithium batteries (included)

Battery life: 9000 hours nominal

Approvals: EEx II 3 G IIC T4



| Flow range | Connections | Body material | Accuracy | Catalog number | Price |
|----------------------------------|---------------|---------------|--------------|-----------------------------|-------|
| 1 to 10 GPM (3.8 to 37.9 LPM) | ½" NPT(F) | Aluminum | ±2% of rdg | PG-05609-01 | |
| | ½" NPT(F) | 316 SS | | PG-05609-03 | |
| | ¾" Sanitary† | 316 SS | | PG-05609-05 | |
| 2 to 20 GPM (7.6 to 75.7 LPM) | ¾" NPT(F) | Aluminum | ±2.0% of rdg | PG-05609-07 | |
| | ¾" NPT(F) | 316 SS | | PG-05609-09 | |
| | 1" Sanitary† | 316 SS | | PG-05609-11 | |
| 5 to 50 GPM (18.9 to 190 LPM) | 1" NPT(F) | Aluminum | ±1.5% of rdg | PG-05609-13 | |
| | 1" NPT(F) | 316 SS | | PG-05609-15 | |
| | 1½" Sanitary† | 316 SS | | PG-05609-17 | |
| 10 to 100 GPM (38 to 380 LPM) | 1" ANSI‡ | 316 SS | ±1% of rdg | PG-05609-19 | |
| | 1½" NPT(F) | Aluminum | | PG-05609-21 | |
| | 1½" NPT(F) | 316 SS | | PG-05609-23 | |
| 20 to 200 GPM (6 to 760 LPM) | 2" Sanitary† | 316 SS | ±1% of rdg | PG-05609-25 | |
| | 1½" ANSI‡ | 316 SS | | PG-05609-27 | |
| | 2" NPT(F) | Aluminum | | PG-05609-29 | |
| | 2" NPT(F) | 316 SS | ±1% of rdg | PG-05609-31 | |
| | 2½" Sanitary† | 316 SS | | PG-05609-33 | |
| | 2" ANSI‡ | 316 SS | | PG-05609-35 | |

†Sanitary flange

‡150# ANSI flange

Accessories

[PG-05610-70](#) Calibration container; HDPE, 5-gal. (19 L) capacity

[PG-05610-96](#) Replacement battery kit

[PG-05609-93](#) Remote installation kit. Mount display up to 100 feet (30 m) from sensor—ideal for measuring flow in hot pipes (up to 250°F/121°C) or in inaccessible areas. Kit includes a sensor cover with 10-ft (3-m) cable, remote display housing, and installation hardware

[PG-05609-91](#) Output module, pulse output. Module provides a digital open collector output for interfacing with compatible instrumentation

[PG-05609-92](#) Output module, 4 to 20 mA or 5 to 20 volts. Module provides an output for interfacing with compatible instrumentation

[PG-17080-12](#) NIST-traceable calibration



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Cole-Parmer® Two- and Three-Way Direct Lift Solenoid Valves

Ideal with high-purity or corrosive fluids—made of inert PTFE

- Minimize trapped liquids with minimal dead volume
- Mount almost anywhere—lightweight and compact

Models with a 1/16" orifice have mounting holes at the bottom only and models with a 3/32" or 5/32" orifice have mounting holes at the top and bottom. Optional mounting clip 01540-50 can be used to mount valves with a 1/16" orifice in any position.



Mounting clip
01540-50



Mounting flange
01540-55



Specifications

Vacuum rating: 26" Hg Maximum fluid temperature: 158°F (70°C) Lead wire length: 15" (38 cm)

| Ports NPT(F) | Orifice | Max psi | Response time | Watts | 12 VDC | | 24 VDC | |
|---|---------|---------|---------------|-------|----------------|-------|----------------|-------|
| | | | | | Catalog number | Price | Catalog number | Price |
| Two-way solenoid valves; normally closed | | | | | | | | |
| 1/4-28 | 1/16" | 30 | 20 ms | 4.0 | PG-01540-01 | | PG-01540-02 | |
| 1/4-28 | 1/16" | 60 | 25 ms | 8.0 | PG-01540-03 | | PG-01540-04 | |
| 1/4-28 | 3/32" | 20 | 20 ms | 5.1 | PG-01540-05 | | PG-01540-06 | |
| 1/8 | 5/32" | 18 | 30 ms | 8.0 | PG-01540-07 | | PG-01540-08 | |
| Two-way solenoid valves; normally open | | | | | | | | |
| 1/4-28 | 1/16" | 30 | 20 ms | 4.0 | PG-01540-09 | | PG-01540-10 | |
| Three-way solenoid valves | | | | | | | | |
| 1/4-28 | 1/16" | 30 | 20 ms | 4.0 | PG-01540-11 | | PG-01540-12 | |
| 1/4-28 | 1/16" | 60 | 25 ms | 8.0 | PG-01540-13 | | PG-01540-14 | |
| 1/8 | 5/32" | 18 | 30 ms | 8.0 | PG-01540-17 | | PG-01540-18 | |

PG-01540-50 Mounting clip for two- and three-way valves

PG-01540-55 Mounting flange for two- and three-way valves



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Miniature Check Valves

Install in any position—use with liquids and gases



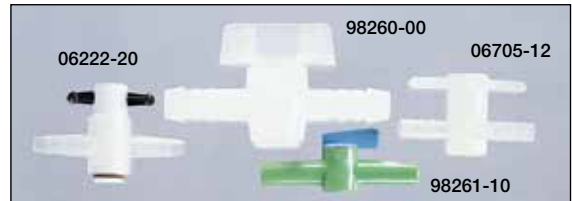
Breaking pressure is 0.18 psi, closing pressure is 0.014 psi. Maximum temperature (at maximum psi) is 250°F (121°C) for "A" and "C"; 200°F (93°C) for "B."

Note: Valves require 1 psi back pressure for a tight seal.

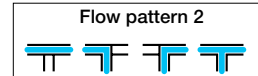
| Tubing ID | C _v | Working pressure | Catalog number | Price |
|---|----------------|--------------------------------|----------------|-------|
| A. Nylon body and fluorosilicone diaphragm | | | | |
| 1/8" | 0.12 | 3 to 5 psi (0.2 to 0.3 bar) | PG-98553-00 | |
| 3/16" | 0.13 | | PG-98553-01 | |
| 1/4" | 0.13 | | PG-98553-02 | |
| B. PP body and Viton® diaphragm | | | | |
| 1/8" | 0.11 | 3 to 5 psi (0.2 to 0.3 bar) | PG-98553-10 | |
| 3/16" | 0.12 | | PG-98553-11 | |
| 1/4" | 0.12 | | PG-98553-12 | |
| 5/16" | 0.13 | | PG-98553-13 | |
| C. PVDF body and Viton diaphragm | | | | |
| 3/16" | 0.12 | 3 to 5 psi (0.2 to 0.3 bar) | PG-98553-21 | |
| 1/4" | 0.12 | | PG-98553-22 | |
| 3/8" | 0.12 | | PG-98553-34 | |

Two- and Three-Way Stopcocks with Hose Barb Connections

Easily adjust flow



PP stopcocks have plugs made of PTFE and are autoclavable. Maximum temperature is 275°F (135°C); maximum pressure is 2 psi. **LDPE stopcocks** are rated for 167°F (75°C); maximum pressure is 7 psi. **HDPE stopcocks** are rated for 203°F (95°C); maximum pressure is 7 psi. **PVDF stopcocks** are rated for 464°F (240°C); maximum pressure is 5 psi.



| Tube ID | Orifice | Material | Catalog number | Price |
|---|---------|----------|----------------|-------|
| Two-way stopcocks | | | | |
| 1/4" to 5/16" | 2 mm | PP | PG-06222-20 | |
| 1/4" to 5/16" | 4 mm | | PG-06222-40 | |
| 3/8" | 1/4" | LDPE | PG-98260-00 | |
| 1/2" | 3/8" | | PG-98260-10 | |
| 10 mm | 6.8 mm | HDPE | PG-98261-10 | |
| 14 mm | 10.7 mm | | PG-98261-20 | |
| 16 mm | 12.7 mm | | PG-98261-30 | |
| Three-way stopcocks; follow flow pattern 2 | | | | |
| 1/4" to 5/16" | 2 mm | PP | PG-06225-20 | |
| 1/4" to 5/16" | 4 mm | | PG-06225-40 | |
| 6 mm | 4 mm | PVDF | PG-06705-10 | |
| 8 mm | 6 mm | | PG-06705-12 | |
| 10 mm | 8 mm | | PG-06705-14 | |

Testers—
simply dip and read

Conductivity 74
pH 78



Handheld Meters—
take it where you need it

Conductivity 75-76
pH 79
Dissolved Oxygen . . . Online
Multiparameter Online



Benchtop Meters—
higher precision for more accurate results

Conductivity Online
pH/Ion 80
Dissolved Oxygen . . . Online
Multiparameter Online



Test with Confidence

From pocket-sized testers to research-grade bench meters, find the water quality instrument you need.

Value.

Features you want at an affordable price

Quality.

Accurate, reliable results in a durable, easy-to-use design

Selection.

Choose from meters that take you from the lab to the field, including handheld and benchtop models

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Product Selection | Troubleshooting | And More...

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— or Ch@t Live —

Not sure what to choose?
Our expert Application Specialists can help you find the right product for your application.



Oakton® Waterproof EcoTestr™ TDS and EC Pocket Meters

Stop replacing sensors

- Price allows you to just replace meter
- Rugged, chemical-resistant stainless steel sensors
- Easy push-button electronic single-point calibration
- Read measurements easily—ergonomic display for easy viewing at a glance
- Waterproof, floating meter—ideal for damp or dirty conditions
- Save money—ideal for education or field use



Choose from four models depending on your parameter. TDS models include a self-adjusting TDS factor from 0.40 to 1.0.



| Description | EcoTestr TDS Low | EcoTestr TDS High | EcoTestr EC Low | EcoTestr EC High |
|--------------------------|--|-------------------------------------|---------------------------|----------------------------|
| Catalog number | PG-35462-10 | PG-35462-15 | PG-35462-30 | PG-35462-35 |
| Range | Conductivity — TDS 0 to 1990 ppm | Conductivity — TDS 0 to 10.0 ppt | Conductivity 0 to 1990 µS | Conductivity 0 to 19.90 mS |
| Resolution | Conductivity — TDS 10 ppm | Conductivity — TDS 0.1 ppt | Conductivity 10 µS | Conductivity 0.1 mS |
| Accuracy | Conductivity — TDS ±1% FS | Conductivity — TDS ±2% FS | Conductivity ±1% FS | Conductivity ±2% FS |
| Temperature compensation | Automatic, 0 to 50°C, 2% per °C | | | |
| Calibration | One-point digital calibration | | | |
| Power | Four 1.5 V batteries (included), >200 hours life | | | |
| Price | | | | |

PG-09377-16 Replacement batteries, 1.5 V button cell.
Pack of 6

Oakton® Dual-Range Waterproof TDSTestr® 11 and ECTestr® 11 Meters

Get longer life with replaceable sensor

- Don't worry about losing your meter—floats if dropped in water and included lanyard keeps it close
- Get more out of your meter—dual range measurements for a wider application range
- Easy calibration—up to one point per range
- Stands up to whatever you throw at it—Valox® housing and stainless steel electrodes for good chemical compatibility



Replaceable sensor



| Description | TDSTestr 11 Dual Range | ECTestr 11 Dual Range |
|--------------------------|--|---|
| Catalog number | PG-35662-10 | PG-35662-30 |
| Range | Conductivity 0 to 2000 ppm; 0 to 10.0 ppt Temperature 32 to 122°F (0 to 50°C) | Conductivity 0 to 2000 µS; 0 to 20.00 mS Temperature 32 to 122°F (0 to 50°C) |
| Resolution | Conductivity 10 ppm; 0.10 ppt Temperature 0.1°F (0.1°C) | Conductivity 10 µS; 0.10 mS Temperature 0.1°F (0.1°C) |
| Accuracy | Conductivity ±1% full scale Temperature ±0.9°F (±0.5°C) | Conductivity ±1% full scale Temperature ±0.9°F (±0.5°C) |
| Temperature compensation | Automatic, 0 to 50°C; 2% per °C | Automatic, 0 to 50°C; 2% per °C |
| Calibration | One or two points | One or two points |
| Power | Four 1.5 V batteries (included), approx. 150 hours use | |
| Price | | |

PG-35661-17 Replacement sensor for above pin-style testers

Oakton® Multirange Waterproof Cup-Style TDSTestr® 11+ and ECTestr® 11+ Meters

Be more versatile in sampling

- Operates as either a cup-style or dip-style tester for greater flexibility
- Selectable measuring range
- Won't sink—waterproof, dustproof housings float
- Easy operation—push-button calibration, Hold function, and error messages
- Save money—replaceable sensor reduces costs

| Description | TDSTestr 11+ Multirange | ECTestr 11+ Multirange |
|--------------------------|---|---|
| Catalog number | PG-35662-15 | PG-35662-35 |
| Range | Conductivity 0 to 200.0, 0 to 2000 ppm; 0 to 10.00 ppt Temperature 32 to 122°F (0 to 50°C) | Conductivity 0 to 200.0, 0 to 2000 µS/cm; 0 to 20.00 mS/cm Temperature 32 to 122°F (0 to 50°C) |
| Resolution | Conductivity 0.1, 1 ppm; 0.01 ppt Temperature 0.1°F (0.1°C) | Conductivity 0.1, 1 µS/cm; 0.01 mS/cm Temperature 0.1°F (0.1°C) |
| Accuracy | Conductivity ±1% full scale Temperature ±0.9°F (±0.5°C) | Conductivity ±1% full scale Temperature ±0.9°F (±0.5°C) |
| Temperature compensation | Automatic, 0 to 50°C; 2% per °C | |
| Calibration | Push-button calibration, one to three points | |
| Power | Four 1.5 V batteries (included), approximately 150 hours continuous use | |
| Price | | |

PG-35661-08 Replacement sensor for cup-style testers





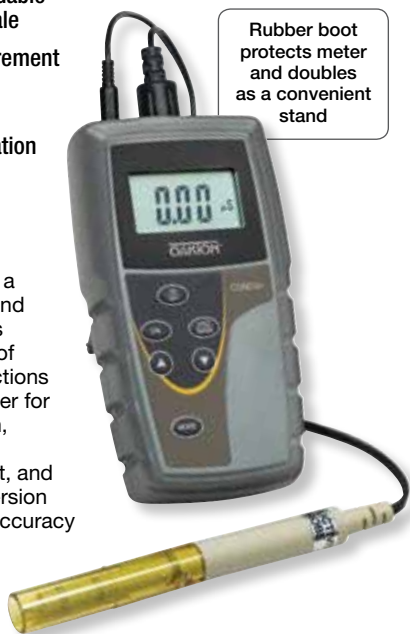
Oakton® CON 6+ and TDS 6+ Meter Kits

Easy, push-button calibration

- High accuracy at an affordable price, ±1% across full scale
- Five auto-ranging measurement modes—up to 200.0 mS (200.0 ppt)
- Get more accurate calibration for all five ranges
- Get temperature readings at the touch of a button

Additional features include a convenient Hold function and auto-off function that shuts meter off after 20 minutes of nonuse. Programming functions allow customization of meter for temperature compensation, temperature coefficient, normalization, cell constant, and conductivity-to-TDS conversion factor (TDS 6+) for better accuracy in varying applications.

What's included: protective rubber boot with stand, conductivity/TDS/temperature probe (K = 1.0), calibration solutions, sample bottles, rinse bottle, hard plastic carrying case, and four AAA batteries.



Rubber boot protects meter and doubles as a convenient stand

Save time, save money!

Choose Precalibrated
Includes a data-rich, ISO 17025 certificate—no additional charge!

Precalibrated by **INNOCAL**
INNOVATIVE CALIBRATION SOLUTIONS



ISO9001:2008
CERTIFIED SUPPLIER



| Description | CON 6+ kit | Precalibrated CON 6+ kit | TDS 6+ kit | Precalibrated TDS 6+ kit |
|---------------------------------------|--|---|--|--------------------------|
| Catalog number | PG-35604-04 | PG-35604-05 | PG-35604-24 | PG-35604-25 |
| Range | Conductivity | 0 to 20.00, 0 to 200.0, 0 to 2000 µS; 0 to 20.00, 0 to 200.0 mS | — | — |
| | TDS | — | 0 to 10.00, 10 to 100.0, 100 to 1000 ppm; 1.00 to 10.00, 10.0 to 100.0, up to 200.0 ppt [†] | — |
| | Temperature | –10.0 to 110.0°C | –10.0 to 110.0°C | — |
| Accuracy | Conductivity | ±1% full-scale | — | — |
| | Temperature | ±0.5°C | ±0.5°C | — |
| Temp. compensation | Automatic or manual from 0.0 to 50.0°C | | | |
| Cell constant (K) | Selectable, 0.1, 1, and 10 | | | |
| Conductivity-to-TDS conversion factor | — 0.4 to 1.00 adjustable | | | |
| Calibration points | 5 maximum, one per range | | | |
| Power | Four AAA batteries (included) | | | |
| Price | | | | |

[†]With K = 10 probe

Accessories

- PG-35606-53** Conductivity probe, K = 0.1
- PG-35606-55** Replacement conductivity probe, K = 1.0
- PG-35606-57** Conductivity probe, K = 10
- PG-09376-00** Replacement batteries, AAA. Pk of 12
- PG-17090-30** NIST-traceable calibration with data for conductivity meters

Oakton® Waterproof CON 150 Meter

NEW

Get more for your money

- Best value for an IP67-rated waterproof meter—ideal for any environment
- Know the status of your probe—intuitive, user-friendly icon displays cell constant
- Get quick and easy electrode attachment to a beaker or container with Grip-Clip™ holder
- Recall more data with expanded data logging for up to 150 data sets
- Use as a benchtop meter as well—built-in stand and wall-mount option
- Versatile power supply—battery or AC



View more data simultaneously with large, three-line LCD providing conductivity or TDS measurement with temperature. Get faster calibration with auto-ranging and auto-cal functions for one calibration point per measurement range. Select a probe with a 0.1, 1.0, or 10 cell constant and automatic temperature compensation (ATC). Get more accuracy even in fluctuating temperatures with ATC.

Meter features include adjustable conductivity-to-TDS factor, selectable temperature coefficient, ready (stability) indicator, smart averaging, hold function, calibration alarm (visible), battery life indicator, and probe status.

Meter includes: conductivity cell (K = 1.0), Grip-Clip holder, and two AA batteries. **Kit adds:** two calibration standards and hard carrying case.



ISO9001:2008
CERTIFIED SUPPLIER



| Description | CON 150 meter with probe | CON 150 meter kit |
|-------------------------------------|---|-------------------------------------|
| Catalog number | PG-35607-32 | PG-35607-90 |
| Precalibrated catalog number | PG-35607-34 | PG-35607-91 |
| Range | Conductivity | 0 to 200 mS |
| | TDS | 0 to 200 ppt |
| | Temperature | –17.0 to 230.0°F (–10.0 to 110.0°C) |
| Resolution | Conductivity | 0.01 µS to 0.1 mS |
| | TDS | 0.01 ppm to 0.1 ppt |
| Accuracy | Conductivity | ±1% full-scale |
| | TDS | ±1% full-scale |
| | Temperature | ±0.9°F (±0.5°C) |
| Calibration | Conductivity | Auto/manual; 1 point/range |
| | TDS | Auto/manual; 1 point/range |
| | Temperature | Offset 0.1 increments |
| Temperature compensation | Automatic or manual from –10 to 110°C | |
| Conductivity-to-TDS factor | 0.4 to 1.0 | |
| Data logging | Stores up to 150 data sets | |
| Power | Two AA batteries (included); universal power adapter (optional) | |
| Price | | |
| Precalibrated price | | |

PG-35608-55 Conductivity cell, K = 0.1

PG-35608-50 Replacement conductivity cell, K = 1.0

PG-35608-51 Conductivity cell, K = 10

PG-35614-50 Replacement Grip-Clip holder easily attaches probe to side of container for hands-free measurement

PG-35614-51 Hard carrying case

PG-35420-72 Optional power adapter, 110/220 VAC

PG-09376-01 Replacement batteries, AA. Pack of 4

PG-17090-30 NIST-traceable calibration with data for conductivity meter

Oakton® Waterproof CON 450 Meter

Easy to read in any environment

NEW

- Use it in any environment with backlit display and rugged design
- Know the status of your probe—intuitive, user-friendly icon displays cell constant
- Get quick and easy electrode attachment to a beaker or container with Grip-Clip™ holder
- Download and analyze up to 500 data sets with USB or RS-232 output
- Use as a benchtop meter as well—built-in stand and wall-mount option
- Versatile power supply—battery or AC

Waterproof, IP67-rated meter is ideal for even the harshest environments. View the main measurement simultaneously with temperature on backlit display. Get faster calibration with auto-cal function, which permits one calibration point per measurement range. Select a probe with a 0.1, 1.0, or 10 cell constant and automatic temperature compensation (ATC). Get more accuracy even in fluctuating temperatures with ATC.

Meter features include adjustable conductivity-to-TDS factor, selectable temperature coefficient, ready (stability) indicator, smart averaging, user-selectable °F/°C units, hold function, calibration alarm, battery life-indicator, and electrode status.

Meter includes: conductivity cell (model 35608-50, K = 1.0), Grip-Clip holder, and batteries.

Kit adds: calibration standards and hard carrying case.



Easy one-button data logging

OAKTON®

ISO 9001:2008
CERTIFIED SUPPLIER



| Description | | CON 450 meter with probe | CON 450 meter kit |
|------------------------------|--------------|---|-----------------------------|
| Catalog number | | PG-35608-32 | PG-35608-80 |
| Precalibrated catalog number | | PG-35608-34 | PG-35608-81 |
| Range | Conductivity | 0 to 200 mS | |
| | TDS | 0 to 200 ppt | |
| | Salinity | 0 to 50 ppt | |
| | Temperature | -17.0 to 230.0°F (-10.0 to 110.0°C) | |
| Resolution | Conductivity | 0.01 µS to 0.1 mS | |
| | TDS | 0.01 ppm to 0.1 ppt | |
| | Salinity | 0.01 | |
| | Temperature | 0.1°F/°C | |
| Accuracy | Conductivity | ±1% full-scale | |
| | TDS | ±1% full-scale | |
| | Salinity | ±1% full-scale | |
| | Temperature | ±0.9°F (±0.5°C) | |
| Calibration | Conductivity | Auto/manual; 1 point/range | |
| | TDS | Auto/manual; 1 point/range | |
| | Salinity | Auto/manual; 1 point/range | |
| | Temperature | ±5.0° offset | |
| Temperature compensation | | Automatic or manual from -10 to 110°C | |
| Data logging | | Stores up to 500 data sets | |
| Output | | USB or RS-232 | |
| Power | | Two AA batteries (included); 500 hours (without backlight); AC adapter (optional) | |
| Price | | | |
| Precalibrated price | | | |

Save time, save money!

Choose Precalibrated

Includes a data-rich, ISO 17025 certificate—no additional charge!

Precalibrated by **INNOCAL®**
INNOVATIVE CALIBRATION SOLUTIONS



Convenient kit saves you money!

Accessories

[PG-35608-55](#) Conductivity cell, K = 0.1

[PG-35608-50](#) Replacement conductivity cell, K = 1.0

[PG-35608-51](#) Conductivity cell, K = 10

[PG-35614-50](#) Replacement Grip-Clip electrode holder

[PG-35614-51](#) Hard carrying case

[PG-35630-53](#) Data cable for USB connectivity

[PG-35420-01](#) Data cable for RS-232 connectivity

[PG-35420-72](#) Optional AC adapter, 110/220 VAC

[PG-09376-01](#) Replacement batteries, AA. Pack of 4



Cole-Parmer® Conductivity Solutions, NIST-Traceable Reference Materials

Trust your standards—high accuracy

- Up to ±0.25% accuracy verified by an ISO Guide 34 and ISO 17025 accredited lab

A. Batch-Tested Bottles, 16-oz

- Easy calibration with included instructions and temperature compensation chart
- Includes NIST-traceable certificate and batch testing information



B. Individually Tested Bottles, 16-oz

- Each bottle individually calibrated—NIST-traceable certificate included with serial number and testing information
- Easy calibration with step-by-step instructions and included temperature compensation chart

C. One-Shot® Vials, pack of six 3.4-oz vials

- Fresh solution each time you calibrate—single-use vials eliminate contamination
- Grab it and go—convenient for field use; calibrate right in vial
- Includes NIST-traceable calibration report and temperature compensation chart



| Conductivity (µS) | Resistivity (MΩ) | TDS (ppm) | Catalog number | Price |
|--|------------------|-----------|----------------|-------|
| A. Batch tested, one 16-oz (473-mL) glass bottle | | | | |
| 1 | 1 | 0.66 | PG-00652-20 | |
| 5 | 0.2 | 3.3 | PG-00652-22 | |
| 10 | 0.1 | 6.6 | PG-00652-24 | |
| 100 | 0.01 | 66 | PG-00652-26 | |
| 1000 | 0.001 | 666 | PG-00652-28 | |
| 1413 | 0.00071 | 933 | PG-00652-30 | |
| 10,000 | 0.0001 | 6666 | PG-00652-32 | |
| 100,000 | 0.00001 | 66,666 | PG-00652-34 | |
| 150,000 | 0.0000066 | 100,000 | PG-00652-53 | |
| 200,000 | 0.000005 | 133,333 | PG-00652-55 | |
| B. Individually tested, one 16-oz (473-mL) glass bottle | | | | |
| 1 | 1 | 0.66 | PG-00652-40 | |
| 5 | 0.2 | 3.3 | PG-00652-42 | |
| 10 | 0.1 | 6.6 | PG-00652-44 | |
| 100 | 0.01 | 66 | PG-00652-46 | |
| 1000 | 0.001 | 666 | PG-00652-48 | |
| 1413 | 0.00071 | 933 | PG-00652-50 | |
| 10,000 | 0.0001 | 6666 | PG-00652-52 | |
| 100,000 | 0.00001 | 66,666 | PG-00652-54 | |
| 150,000 | 0.0000066 | 100,000 | PG-00652-56 | |
| 200,000 | 0.000005 | 133,333 | PG-00652-58 | |
| C. One-Shot®, pack of six 3.4-oz (100-mL) vials | | | | |
| 5 | 0.2 | 3.3 | PG-00652-60 | |
| 10 | 0.1 | 6.6 | PG-00652-62 | |
| 100 | 0.01 | 66 | PG-00652-64 | |
| 1000 | 0.001 | 666 | PG-00652-66 | |
| 1413 | 0.00071 | 933 | PG-00652-68 | |
| 10,000 | 0.0001 | 6666 | PG-00652-70 | |
| 100,000 | 0.00001 | 66,666 | PG-00652-72 | |
| 150,000 | 0.0000066 | 100,000 | PG-00652-76 | |
| 200,000 | 0.000005 | 133,333 | PG-00652-78 | |
| Assortment† | — | — | PG-00652-74 | |

†Assortment has one 100-mL vial each of 10, 100, 1000, 1413, 10,000, and 100,000 µS.

Oakton® Calibration Solutions Save money while calibrating

- KCl, NaCl, and 442 conversions printed right on the bottle
- Temperature corrections at hand—printed right on the 17-oz (500-mL) bottle



| Conductivity (µS) | Conductivity-to-TDS calibration values | | | Catalog number | Price |
|-------------------|--|----------|---------|----------------|-------|
| | ppm KCl | ppm NaCl | ppm 442 | | |
| 23 | 11.6 | 10.7 | 14.74 | PG-00653-23 | |
| 84 | 40.38 | 38.04 | 50.5 | PG-00653-16 | |
| 447 | 226 | 215 | 300 | PG-00653-47 | |
| 1413 | 745 | 702 | 1000 | PG-00653-18 | |
| 1500 | 757 | 737 | 1050 | PG-00653-15 | |
| 2070 | 1045 | 1041 | 1500 | PG-00653-27 | |
| 2764 | 1382 | 1414 | 2062 | PG-00653-20 | |
| 8974 | 5101 | 4487 | 7608 | PG-00653-89 | |
| 12,880 | 7447 | 7230 | 11,367 | PG-00606-10 | |
| 15,000 | 8759 | 8532 | 13,455 | PG-00653-50 | |
| 80,000 | 52,168 | 48,384 | 79,688 | PG-00653-32 | |

Conductivity Calibration Pouches Calibrate on the go!

- Single-use pouches for easy calibrations
- Quick-reference conversion table printed on each pack



| Conductivity (µS) | Conductivity-to-TDS calibration values | | | Catalog number | Price/pk of 20 |
|-------------------|--|----------|---------|----------------|----------------|
| | ppm KCl | ppm NaCl | ppm 442 | | |
| 10 | 4.8 | 4.7 | 7.0 | PG-35653-09 | |
| 447 | 226 | 216 | 300 | PG-35653-10 | |
| 1413 | 745 | 702 | 1000 | PG-35653-11 | |
| 2764 | 1382 | 1414 | 2062 | PG-35653-12 | |
| 15,000 | 8759 | 8532 | 13,445 | PG-35653-13 | |
| Rinse solution | — | — | — | PG-35653-00 | |

Cole-Parmer® Extended-Life Conductivity Standards



Extend shelf life to 5 years!

- Sealed, metal-lined storage envelope eliminates transpiration—store up to 5 years before opening
- Open sealed envelope to begin the 1-year shelf life—bottle and Certificate of Analysis have a convenient marking area to write the new expiration date
- NIST-traceable calibration report from an ISO Guide 34 and ISO 17025 accredited laboratory included with each 17-oz (500-mL) bottle



| Conductivity (µS) | Resistivity (MΩ) | Conductivity-to-TDS calibration values (ppm KCl) | Catalog number | Price |
|-------------------|------------------|--|----------------|-------|
| 2 | 0.5 | 0.3 | PG-00651-41 | |
| 10 | 0.1 | 4.4 | PG-00651-42 | |
| 100 | 0.01 | 51 | PG-00651-43 | |
| 147 | 0.007 | 73 | PG-00651-44 | |
| 1000 | 0.001 | 524 | PG-00651-45 | |
| 1413 | 0.00071 | 745 | PG-00651-46 | |
| 10,000 | 0.0001 | 5695 | PG-00651-47 | |
| 100,000 | 0.00001 | 65,611 | PG-00651-48 | |



Oakton® Waterproof EcoTestr™ pH 2 Pocket Meter

No more replacing electrodes

- Easy to use—simply dip and read results on the easy-to-read display
- Waterproof housing is ideal for dirty or damp conditions—even floats if dropped in water
- Transparent protective cap also holds calibration solutions

Single-junction electrode is recessed to protect against breakage. Meter offers up to three-point calibration with autobuffer recognition for quick calibrations. Automatic temperature compensation ensures accurate readings, even under changing conditions. Hold function allows you to lock a measured value.



| Model | EcoTestr pH 2 |
|--------------------------|---|
| Catalog number | PG-35423-10 |
| Range | 0 to 14.0 pH |
| Resolution | 0.1 pH |
| Accuracy | ±0.1 pH |
| Temperature compensation | Automatic |
| Calibration | Up to 3 points |
| Buffer recognition | 4.0, 7.0, or 10.0 |
| Power | Four 1.5 V button cell batteries (included) |
| Price | |

[PG-09377-16](#) Replacement batteries, 1.5 V. Pack of 6
[PG-17101-45](#) NIST-traceable calibration for pH pocket meters (non-BNC)

Oakton® High-Accuracy pH Buffers

Trust your buffers—high accuracy

- For meters with 0.001 resolution
- Standardized against NIST-certified pH references



| pH | One 500-mL bottle | | Case of 12 bottles | |
|--------|-----------------------------|----------|-----------------------------|----------|
| | Catalog number | Price/ea | Catalog number | Price/cs |
| 4.000 | PG-05942-29 | | PG-05942-35 | |
| 7.000 | PG-05942-49 | | PG-05942-55 | |
| 10.000 | PG-05942-69 | | PG-05942-75 | |

Oakton® Waterproof pHTestr® 10, 20, and 30 Pocket Meters

Save money—replace electrode instead of meter

- IP67-rated housing floats in water and won't roll off table
- Resistant to most chemicals with Valox® sensor housing
- Automatic buffer recognition for calibration up to three points
- Don't let temperature interfere—automatic temperature compensation minimizes impact

Double-junction electrode sensors handle wastewater and solutions containing sulfides, heavy metals, and Tris. Electrode sensors offer a clog-resistant Kynar® PVDF junction and a recessed, glass pH bulb to protect against breakage.

pHTestr 10 offers the most economical option.

pHTestr 20 features ±0.01 pH accuracy—suitable for most ASTM and EPA test procedures.

pHTestr 30 includes all of the features of the pHTestr 20 along with dual pH and 0.1-resolution temperature display. Temperature display units in selectable °F or °C.

What's included: protective plastic storage case, lanyard, and batteries.

pHTestr 10



pHTestr 20



pHTestr 30



| Description | pHTestr 10 | pHTestr 20 | pHTestr 30 with temperature readout |
|--------------------------|---|--|-------------------------------------|
| Catalog number | PG-35634-10 | PG-35634-20 | PG-35634-30 |
| Range | -1.0 to 15.0 pH | -1.00 to 15.00 pH | -1.00 to 15.00 pH |
| Resolution | 0.1 pH | 0.01 pH | 0.01 pH |
| Accuracy | ±0.1 pH | ±0.01 pH | ±0.01 pH |
| Temperature compensation | Automatic, 32 to 122°F (0 to 50°C) | | |
| Calibration | Up to three pH points | | |
| Buffer recognition | 4.0, 7.0, 10.0 USA 4.0, 6.9, 9.2 NIST | 4.01, 7.00, 10.01 USA 4.01, 6.86, 9.18 NIST | |
| Power | Four 1.5 V button cell batteries (included) | | |
| Price | | | |

Accessories

[PG-35624-38](#) Replacement pH sensor
[PG-09377-16](#) Replacement batteries, 1.5 V button cell. Pack of 6
[PG-17101-45](#) NIST-traceable calibration for pH pocket meters (non-BNC)



Oakton® pH 5+ and pH 6+ Meters

Get high accuracy at low prices

- Autobuffer recognition for up to five-point calibration provides ±0.01 pH accuracy
- Take this compact unit anywhere
- Get pH and temperature readings at the push of a button
- Improve your accuracy with automatic temperature compensation (ATC) from 0 to 100°C
- Protect your unit with protective rubber boot that doubles as a stand
- Choose the pH 6+ meter to also read mV

Meter includes: ATC probe, protective rubber boot, and batteries.

Meter with probe adds: pH electrode 59001-65

Meter kit adds: "All-in-one" pH electrode, pH buffer solutions, sample bottles, rinse bottle, and carrying case.



Save time, save money!

Choose Precalibrated

Includes a data-rich, ISO 17025 certificate—no additional charge!

Precalibrated by **INNOCAL**
INNOVATIVE CALIBRATION SOLUTIONS



Specifications

| Mode | pH | mV (pH 6+ only) | Temperature |
|-------------|---|--------------------|-------------------------|
| Range | 0.00 to 14.00 pH | ±1000 mV or rel mV | 0 to 100.0°C |
| Resolution | 0.01 pH | 1 mV | 0.1°C |
| Accuracy | ±0.01 pH | ±2 mV | ±0.5°C |
| Calibration | Up to five points: pH 1.68, 4.01, 7.00, 10.00, 12.45 (USA); pH 1.68, 4.01, 6.86, 9.18, 12.45 (NIST) pH 4.10, 6.97 (Pb) | ±20 mV | Offset 0.1°C increments |

Temp compensation: automatic with ATC probe, 0 to 100°C

Power: four AAA batteries (included)

| Model | Description | Meter | | Precalibrated | |
|-------|------------------|-----------------------------|-------|-----------------------------|-------|
| | | Cat. no. | Price | Cat. no. | Price |
| pH 5+ | Meter only | PG-35613-50 | | PG-35613-51 | |
| pH 6+ | | PG-35613-20 | | PG-35613-41 | |
| pH 5+ | Meter with probe | PG-35613-52 | | PG-35613-53 | |
| pH 6+ | | PG-35613-22 | | PG-35613-42 | |
| pH 5+ | Meter kit | PG-35613-54 | | PG-35613-55 | |
| pH 6+ | | PG-35613-24 | | PG-35613-44 | |

Accessories

[PG-59001-65](#) Replacement pH electrode; single-junction, gel-filled. Epoxy body, BNC connector

[PG-35811-71](#) "All-in-one" combination pH probe with built-in ATC; single-junction sealed, epoxy body, BNC connector

[PG-35811-72](#) "All-in-one" combination pH probe with built-in ATC; double-junction sealed, epoxy body, BNC connector

[PG-35613-05](#) Replacement ATC probe, stainless steel

[PG-09376-00](#) Replacement batteries, AAA. Pack of 12

Oakton® Waterproof pH 150 Meter

Get more for your money!

NEW

- Intuitive, user-friendly icons show electrode status as pH slope
- Get quick and easy electrode attachment to a beaker or container with Grip-Clip™ holder
- Recall more data with expanded data logging for up to 150 data sets
- mV offset for calibration of ORP standards, zeroing mV value, and pH diagnostics
- Use as a benchtop meter as well—built-in stand or wall-mount option



View more simultaneously with large, three-line LCD providing pH or mV measurement with temperature and calibration % slope. Get faster calibration with auto buffer recognition which identifies the correct pH buffer. Be more accurate with up to six calibration points from USA, NIST, and DIN pH buffer sets and automatic temperature compensation (ATC).

Additional features include ready (stability) indicator, smart averaging, hold function, calibration alarm (visible), battery-life indicator, and electrode status.

Meter only includes: Grip-Clip holder and two AA batteries.

Meter with probe adds: "All-in-One" pH electrode (35808-71).

Meter kit further adds: pH buffers, storage solution, rinse solution, and hard carrying case.



| Description | Meter only | Meter with probe | Meter kit |
|-------------------------------|---|--|-----------------------------|
| Model | pH 150 | | |
| Catalog number | PG-35614-32 | PG-35614-30 | PG-35614-90 |
| Precalibrated cat. no. | PG-35614-34 | PG-35614-33 | PG-35614-91 |
| Range | pH | -2.00 to 16.00 | |
| | mV | ±2000 mV | |
| Resolution | Temperature | -17.0° to 230.0° F (-10.0° to 110.0°C) | |
| | pH | 0.01 | |
| Accuracy | mV | 0.1 mV ±999.9 mV; 1 mV beyond | |
| | Temperature | 0.1°F/°C | |
| Calibration | pH | ±0.01 | |
| | mV | ±0.2 mV ±2 LSD or ±0.5% of reading; whichever is greater | |
| Temperature compensation | Temperature | ±0.9°F (±0.5°C) | |
| | pH | Up to 6 points: USA, NIST, DIN | |
| Data logging | mV | ±200 mV | |
| | Temperature | Offset 0.1 increments | |
| Power | Automatic or manual from -10 to 110°C | | |
| Price | Stores up to 150 data sets | | |
| Precalibrated price | Two AA batteries (included); universal power adapter (optional) | | |

[PG-35808-71](#) Replacement "All-in-One" combination pH electrode with built-in ATC; single-junction, epoxy body, BNC connector

[PG-35618-05](#) ATC probe. Use with any standard pH electrode for temperature compensation

[PG-35614-50](#) Replacement Grip-Clip, holder attaches probe to side of container for hands-free measurement

[PG-35614-51](#) Hard carrying case, for 150/450 meters

[PG-35420-72](#) Optional power adapter, 110/220 VAC

[PG-09376-01](#) Replacement batteries, AA. Pack of 4

[PG-17106-20](#) NIST-traceable calibration with data for pH meter

Oakton® Benchtop pH 700 and Ion 700 Meters

No more lost data—store and recall up to 100 data sets

- Takes up less bench space—40% smaller than comparable models
- Super-large dual-line display is easy to read
- Simple calibrations with 5-point automatic pH buffer recognition for USA and NIST buffers
- More accurate measurements with up to 5-point calibration for ion concentration on Ion 700 model
- Versatile—use with any pH, ORP, or ISE electrodes with BNC connector

pH 700 meter measures pH, mV, relative mV, and temperature. Ion 700 meter adds ion concentration measurement and reads directly in ppm for easy use. Automatic temperature compensation (ATC) maintains reading accuracy even with fluctuating temperatures.

Meters feature Auto-Hold, selectable °F or °C measurement, and easy recall of electrode slope or offset.

Save time, save money!

Choose Precalibrated

Includes a data-rich, ISO 17025 certificate—no additional charge!

Precalibrated by **INNOCAL**
INNOVATIVE CALIBRATION SOLUTIONS



Keep procedures handy with quick-reference pull out

Search

For our complete selection of pH/ion meters, go to...
ColeParmer.com/pHMeters

Electrochemistry

pH/ion

OAKTON

ISO 9001:2008
CERTIFIED SUPPLIER

CE Meter only



Specifications

| Model | | pH 700 | Ion 700 |
|--------------------|--------------------------|---|--|
| Range | pH | -2.00 to 16.00 | -2.00 to 16.00 |
| | mV/rel mV | ±2000 | ±2000 |
| | ISE | — | 0.01 to 2000 ppm |
| | Temperature | 32 to 100°F (0.0 to 100.0°C) | 32 to 100°F (0.0 to 100.0°C) |
| Resolution | pH | 0.01 pH | 0.01 pH |
| | mV/rel mV | 0.1 within ±199.9 mV, ±2 beyond ±199.9 mV | 0.1 within ±199.9 mV, ±2 beyond ±199.9 mV |
| | ISE | — | 0.01 to 2000 ppm |
| | Temperature | 0.1°F or °C | 0.1°F or °C |
| Accuracy | pH | ±0.01 pH | ±0.01 pH |
| | mV/rel mV | ±0.2 within ±199.9 mV, ±2 beyond 199.9 mV | ±0.2 within ±199.9 mV, ±2 beyond 199.9 mV |
| | ISE | — | ±0.5% of reading (monovalent); ±1% of reading (divalent) |
| | Temperature | ±0.9°F (±0.5°C) | ±0.9°F (±0.5°C) |
| Calibration | pH | Up to 5 points with autobuffer recognition | Up to 5 points with autobuffer recognition |
| | mV | Up to ±150 mV offset adjustment | Up to ±150 mV offset adjustment |
| | ISE | — | From 2 to 5 consecutive points (0.1, 1.0, 10.0, 100.0, 1000 ppm) |
| | Temperature compensation | Automatic or manual from 32 to 100°F (0 to 100°C) | Automatic or manual from 32 to 100°F (0 to 100°C) |
| Buffer recognition | USA or NIST buffer sets | USA or NIST buffer sets | |
| Data logging | 100 data sets | 100 data sets | |
| Power | 100/240 VAC, 50/60 Hz | 100/240 VAC, 50/60 Hz | |

| Model | Description | Meter | | Precalibrated meter | |
|---------|--|-----------------------------|-------|-----------------------------|-------|
| | | Catalog number | Price | Catalog number | Price |
| pH 700 | Meter only | PG-35419-00 | | PG-35419-01 | |
| pH 700 | Meter with "all-in-one" pH/ATC electrode | PG-35419-03 | | PG-35419-05 | |
| Ion 700 | Meter with double-junction pH electrode, ATC probe, and removable electrode holder | PG-35419-23 | | PG-35419-27 | |
| pH 700 | Meter with removable electrode holder | PG-35419-10 | | PG-35419-11 | |
| Ion 700 | Meter with removable electrode holder | PG-35419-20 | | PG-35419-24 | |
| pH 700 | | PG-35419-12 | | PG-35419-15 | |
| Ion 700 | | PG-35419-22 | | PG-35419-26 | |

[PG-59001-65](#) Combination pH electrode; single junction, gel-filled, epoxy body

[PG-59001-70](#) Combination pH electrode; double junction, gel-filled, epoxy body

[PG-35811-71](#) "All-in-one" combination pH electrode; single junction, gel-filled, epoxy body

[PG-35805-04](#) Replacement combination pH electrode; double junction, refillable, glass body

[PG-35613-13](#) Replacement ATC probe, SS

[PG-35420-54](#) Replacement electrode arm

[PG-17106-20](#) NIST-traceable calibration with data for pH/ion meter

Cole-Parmer® Epoxy-Body Combination pH and ORP Electrodes

Get fast, stable readings

- Impact resistant—epoxy-body housing for added strength
- Ideal for your general-purpose applications in the lab or field
- Compatible with most brands of pH meter

These electrodes are ideal for prolonged pH or ORP readings. Electrodes with sealed, gel-filled design require virtually no maintenance. Electrodes with PTFE reference-junction offer extended electrode life. All listed electrodes have Ag/AgCl reference cells.

What's included: 3.3-ft (1-m) cable with BNC connector.

See How to...



Maintain it!

ColeParmer.com/pHmaintain



| Key | Description | Reference junction | Type | Maximum temperature | Length x dia (mm) | Catalog number | Price |
|---|---|--------------------|--------------|---------------------|-------------------|----------------|-------|
| General-purpose pH electrodes | | | | | | | |
| A | General purpose | Single | Sealed | 176°F (80°C) | 127 x 12 | PG-59001-65 | |
| | For dirty samples | Double | | | | | |
| B | General purpose, refillable | Single | Refillable† | 176°F (80°C) | 148 x 12 | PG-05992-30 | |
| | For dirty samples, refillable | Double | | | | | |
| C | Extra-long neck for test tube sampling | Single | Sealed | 176°F (80°C) | 220 x 6 | PG-05990-45 | |
| D | Flat tip for surface or low-volume sampling | Single | Sealed | 176°F (80°C) | 127 x 12 | PG-05990-65 | |
| PTFE reference-junction pH electrodes (clog resistant) | | | | | | | |
| E | General purpose | Single | Sealed | 212°F (100°C) | 110 x 12 | PG-05992-00 | |
| | For dirty samples | Double | | | | | |
| Special-purpose pH electrodes | | | | | | | |
| F | Coiled-cable for dirty samples | Double | Sealed | 176°F (80°C) | 140 x 12 | PG-05993-28 | |
| G | Spear-tip for dirty samples | | | | 110 x 10 | PG-59002-24 | |
| ORP electrodes | | | | | | | |
| A | General purpose | Single | Sealed | 176°F (80°C) | 127 x 12 | PG-59001-75 | |
| | For dirty samples | Double | | | | | |
| H | General purpose, refillable | Single | Refillable†† | 176°F (80°C) | 155 x 12 | PG-05990-55 | |

†Use fill solution 05992-48

††Use fill solution 05992-47

Accessories

[PG-05992-48](#) Reference fill solution, 4 M KCl. Two 125-mL bottles

[PG-05992-47](#) Reference fill solution, 3.8 M KCl with AgCl. Two 125-mL bottles

[PG-05983-25](#) Adapter, BNC to US standard plug meter

Oakton® pH Buffer Solutions

Keep your readings accurate with these quality buffers

– Standardized against NIST-traceable pH references for meters with 0.01 resolution



Save by ordering larger sizes or by the case!



| pH | 500-mL bottles | | 1-L bottles | | 4-L bottles | |
|-------|-----------------------------|----------|-----------------------------|----------------|-----------------------------|----------|
| | Catalog number | Price/ea | Catalog number | Price/cs of 12 | Catalog number | Price/ea |
| 1.68 | PG-00654-01 | — | — | — | — | — |
| 4.01 | PG-00654-00 | — | PG-05942-21 | — | PG-05942-22 | — |
| 6.86 | PG-00654-03 | — | — | — | PG-05942-24 | — |
| 7.00 | PG-00654-04 | — | PG-05942-41 | — | PG-05942-42 | — |
| 9.18 | PG-00654-07 | — | — | — | PG-05942-44 | — |
| 10.00 | PG-00654-08 | — | PG-05942-61 | — | PG-05942-62 | — |
| 12.45 | PG-00654-12 | — | — | — | PG-05942-64 | — |

Oakton® pH Buffer and pH Solution Packs

Maintain accuracy and your budget

– Save money by purchasing buffer pack—includes 500 mL bottle of pH 4, 7, and 10 NIST-traceable buffers

– Keep electrodes clean and stored correctly—purchase solution pack which adds 500-mL bottles of cleaning and storage solutions



| Description | Qty/pk | Catalog number | Price/pk |
|------------------|-----------|-----------------------------|----------|
| pH buffer pack | 3 bottles | PG-05942-10 | — |
| pH solution pack | 5 bottles | PG-05942-15 | — |

Oakton® pH Buffer Pouches

Keep your accuracy even on the go!

- Single-use pouch—just tear, dip, calibrate
- Standardized to NIST-traceable pH references
- Sold in pack of 20 pouches



| pH | Catalog number | Price/pk |
|----------------|-----------------------------|----------|
| 4.01 | PG-35653-01 | — |
| 7.00 | PG-35653-02 | — |
| 10.00 | PG-35653-03 | — |
| Rinse solution | PG-35653-00 | — |

[PG-35653-04](#) Buffer pouch assortment pack; contains five pouches each of pH 4, 7, and 10 buffers and rinse solution

Cole-Parmer® Extended-Life pH Standard Solution Buffers

Don't waste your buffer solutions—up to 5-year shelf life

- Achieve a shelf life of up to 5 years unopened in special envelope, or 1 year after opening
- Make note of open date so you know the expiration date
- NIST-traceable calibration report from an ISO Guide 34 and ISO 17025 accredited laboratory included with each 17-oz (500-mL) bottle
- Store at room temperature



What's included: Certificate of Analysis, step-by-step calibration instructions, temperature compensation chart, and SDS.



| pH | Catalog number | Price |
|-------|-----------------------------|-------|
| 4.01 | PG-00651-20 | — |
| 7.00 | PG-00651-22 | — |
| 10.00 | PG-00651-24 | — |

Cole-Parmer® pH Buffers, NIST-Traceable Reference Materials

Feel more confident about accuracies



- Calibrated by ISO Guide 34 and ISO 17025 accredited laboratory—includes NIST-traceable certificate supplied by manufacturer
- Easy calibrations—include instructions and temperature compensation chart



| pH | 500-mL bottles | | 1-L bottles | | 4-L bottles | |
|----------------------------|-----------------------------|-------|-----------------------------|-------|-----------------------------|-------|
| | Cat. no. | Price | Cat. no. | Price | Cat. no. | Price |
| Colorless buffers | | | | | | |
| 4.01 | PG-00651-00 | — | PG-00651-30 | — | PG-00651-70 | — |
| 7.00 | PG-00651-02 | — | PG-00651-32 | — | PG-00651-72 | — |
| 10.00 | PG-00651-04 | — | PG-00651-34 | — | PG-00651-74 | — |
| Color-coded buffers | | | | | | |
| 4.01 (red) | PG-00651-06 | — | PG-00651-36 | — | PG-00651-76 | — |
| 7.00 (yellow) | PG-00651-08 | — | PG-00651-38 | — | PG-00651-78 | — |
| 10.00 (blue) | PG-00651-10 | — | PG-00651-40 | — | PG-00651-80 | — |

Put the **SURE** back in your mea**SURE**ments

Specialists in NIST-Traceable Calibration for Certified Accuracy and Reliability



Precalibration—We will calibrate your new instrument before it ships so you can be sure it's ready when you get it.

Recalibration—Ship us your product and we'll clean, calibrate, and quickly return it with documentation.

On-Site Services—We come to you! Contact us today for pricing.

Maintenance & Repair—Keep your valuable equipment up and running with scheduled preventive maintenance and repair.

“Keep up the great service as long as you can”

Victor, Texas

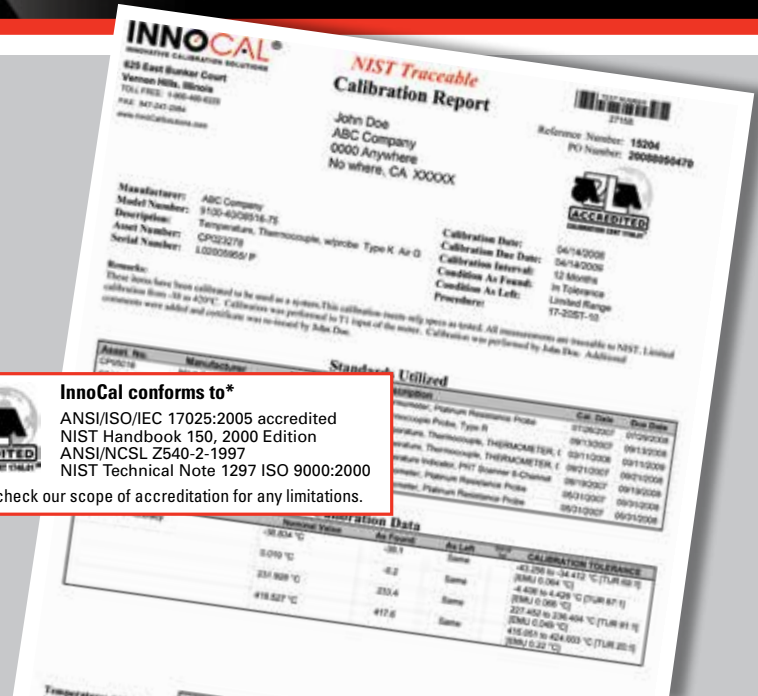
Data-Rich Certificate Includes

- Description and identification of the item
- Condition of the item as received
- Identification of calibration procedure
- Calibration date
- As found/as left test data
- Electronic signature of technician
- Statement of measurement uncertainty
- Test uncertainties (TURs)
- List of standards used to perform calibration (including their calibration dates)

Stay audit ready! Get calibration documentation 24/7

Go online anytime and view or print your calibration documents.

InnoCalSolutions.com/INNOTRAK



InnoCal conforms to*
ANSI/ISO/IEC 17025:2005 accredited
NIST Handbook 150, 2000 Edition
ANSI/NCSL Z540-2-1997
NIST Technical Note 1297 ISO 9000:2000

*Please check our scope of accreditation for any limitations.

Cole-Parmer® Symmetry® PT Toploading Balances

Large weighing surface allows placement of a variety of samples

NEW



Symmetry®

- Weighing modes include parts counting, percent weighing, checkweighing, animal/dynamic weighing and density determination
- USB and RS-232 interfaces offer connection to a computer or printer for GLP/GMP-compliant outputs
- Sealed keypad, splashproof design, and removable stainless steel weighing pan
- An oversized backlit LCD provides clear visibility of weighing results
- Digital filters compensate for vibration, drafts or temperature changes
- Fast stabilization and response time

What's included: AC power adapter. The 210-g and 410-g models also include a draft shield.



Specifications

Calibration: Internal or external with calibration mass
Weighing units: g, ct, oz, dwt, mg, grains, oz, ozt, dwt, custom
Power: 115/220 VAC power adapter and built-in rechargeable battery pack (battery function not available on models 10001-06, -07, -13)

| Capacity | Readability | Repeatability | Linearity | Pan size | Cat. no. | Price |
|-----------------------------|-------------|---------------|-----------|----------------------------|-----------------------------|-------|
| Internal calibration | | | | | | |
| 210 g | 0.001 g | ±0.002 g | ±0.002 g | 5½" x 5½" (13.0 x 13.0 cm) | PG-10001-10 | |
| 410 g | 0.001 g | ±0.002 g | ±0.002 g | 5½" x 5½" (13.0 x 13.0 cm) | PG-10001-11 | |
| 2200 g | 0.01 g | ±0.02 g | ±0.02 g | 7½" x 6¼" (19.0 x 16.0 cm) | PG-10001-12 | |
| 4200 g | 0.01 g | ±0.02 g | ±0.02 g | 7½" x 6¼" (19.0 x 16.0 cm) | PG-10001-13 | |
| External calibration | | | | | | |
| 210 g | 0.001 g | ±0.002 g | ±0.002 g | 5½" x 5½" (13.0 x 13.0 cm) | PG-10001-02 | |
| 410 g | 0.001 g | ±0.002 g | ±0.002 g | 5½" x 5½" (13.0 x 13.0 cm) | PG-10001-03 | |
| 2200 g | 0.01 g | ±0.02 g | ±0.02 g | 7½" x 6¼" (19.0 x 16.0 cm) | PG-10001-04 | |
| 4200 g | 0.01 g | ±0.02 g | ±0.02 g | 7½" x 6¼" (19.0 x 16.0 cm) | PG-10001-05 | |
| 5000 g | 0.1 g | ±0.2 g | ±0.4 g | 7½" x 6¼" (19.0 x 16.0 cm) | PG-10001-06 | |
| 15000 g | 0.1 g | ±0.2 g | ±0.4 g | 7½" x 6¼" (19.0 x 16.0 cm) | PG-10001-07 | |

Accessories

- [PG-11120-78](#) Compact thermal printer
- [PG-10000-47](#) Kensington™ type security lock and cable
- [PG-17101-52](#) NIST-traceable calibration with data for balances

Cole-Parmer® Symmetry® PA Analytical Balances

Discover Symmetry—affordable, advanced, accurate

NEW



Symmetry®

- Three-door glass draft shield provides easy access inside the weighing chamber
- Oversized backlit LCD provides clear visibility of weighing results
- Sealed keypad, splashproof design, and removable stainless steel weighing pan offer safeguards in a messy lab environment
- Weighing modes include parts counting, percent weighing and checkweighing
- USB and RS-232 interfaces offer connection to a computer or printer for GLP/GMP-compliant output
- Digital filters compensate for vibration, drafts or temperature changes
- Selectable multi-language display and output
- Fast stabilization and response time

What's included: AC power adapter and draft shield.



Specifications

Calibration: Internal or external with calibration mass
Weighing units: g, ct, oz, dwt, mg, grains, oz, ozt, dwt, custom
Power: 115/220 VAC power adapter

| Capacity | Readability | Repeatability | Linearity | Pan size | Catalog number | Price |
|-----------------------------|-------------|---------------|-----------|------------------|-----------------------------|-------|
| Internal calibration | | | | | | |
| 120 g | 0.0001 g | ±0.0002 g | ±0.0002 g | 3½" dia (9.0 cm) | PG-10001-08 | |
| 220 g | 0.0001 g | ±0.0002 g | ±0.0002 g | 3½" dia (9.0 cm) | PG-10001-09 | |
| External calibration | | | | | | |
| 120 g | 0.0001 g | ±0.0002 g | ±0.0002 g | 3½" dia (9.0 cm) | PG-10001-00 | |
| 220 g | 0.0001 g | ±0.0002 g | ±0.0002 g | 3½" dia (9.0 cm) | PG-10001-01 | |

Accessories

- [PG-11120-78](#) Compact thermal printer
- [PG-10000-47](#) Kensington™ type security lock and cable
- [PG-17101-52](#) NIST-traceable calibration with data for balances



Bath Fluids

Get more out of your bath!

Use these bath fluids to maintain desired bath temperatures. Refer to the table below to select the appropriate bath fluid for your application.

For operator safety, set the overtemperature cutoff of your bath/circulator below the flash point of the bath fluid you use.



| Fluid type | Silicone 210 | Dynalene® HK-50 | Silicone 200 20 (hot) | Silicone 710 (hot) |
|-------------------|-----------------------------|-----------------------------|-----------------------------|-----------------------------|
| Catalog number | PG-01294-60 | PG-01297-00 | PG-01294-40 | PG-01294-00 |
| Specific gravity | 0.98 | 0.85 | 0.95 | 1.11 |
| Temperature range | -65 to 280°C | -50 to 58°C | 10 to 149°C | 150 to 250°C |
| Freezing point | — | -60°C | -84°C | -22°C |
| Flash point | 288°C | 65°C | 246°C | 302°C |
| Viscosity | 98 cp at 26°C | 2.35 cp at 25°C | 18.98 cp at 25°C | 33 cp at 99°C |
| Quantity | 1 gal. (3.8 L) | 1 gal. (3.8 L) | 1 gal. (3.8 L) | 1 gal. (3.8 L) |
| Price | | | | |

Note: Do not use automotive antifreeze with circulating baths—additives can be harmful to the circulating pump. Silicone fluids are not compatible with silicone tubing.

Cole-Parmer® StableTemp® Digital Utility Water Baths

Get digital accuracy at an analog price

NEW

- Recall settings at the touch of a button
- Know when process is complete with built-in timer

Dual thermostat baths provide ±0.1°C precision and overtemperature safety feature prevents overheating. Seamless tank eliminates rusting and is easy to clean.



StableTemp



Specifications

Temperature range: 5°C above ambient to 100°C

Temperature stability: ±0.1°C

Wetted materials: 304 SS

Temperature uniformity: ±0.2°C

High-temperature cutoff: yes

| Bath capacity | Opening (L x W) | Working depth | 120 VAC, 60 Hz | | 240 VAC, 50 Hz | |
|---------------|---|---------------------------------|-----------------------------|-------|-----------------------------|-------|
| | | | Cat. no. | Price | Cat. no. | Price |
| 2 L | 3 ⁷ / ₈ " x 4 ⁵ / ₁₆ " | 5 ¹ / ₂ " | PG-14576-00 | | PG-14576-02 | |
| 5 L | 5" x 10 ¹³ / ₁₆ " | 5 ¹ / ₂ " | PG-14576-04 | | PG-14576-06 | |
| 10 L | 10 ⁵ / ₈ " x 11 ⁵ / ₈ " | 5 ¹ / ₂ " | PG-14576-08 | | PG-14576-10 | |
| 20 L | 9 ¹ / ₂ " x 17 ¹ / ₂ " | 5" | PG-14576-12 | | PG-14576-14 | |
| 28 L | 9 ¹ / ₂ " x 17 ¹ / ₂ " | 7" | PG-14576-16 | | PG-14576-18 | |

Cole-Parmer® Polystat® Cooling/Heating Circulating Baths

Get excellent cooling across range of temperatures

- Two-speed pump with up to 21 L/min flow
- Maximize bench space with compact size
- Protect samples and bath with high-temperature and low-level cut offs

Standard Digital Controller Baths feature five programmable set points, adjustable high-temperature cutoff, user-settable Min/Max temperature limits, and an adjustable pump nozzle. **Advanced Digital Controller Baths** offer all the features of the Standard Digital models (except adjustable pump nozzle) plus five programmable set points, a two-stage (force/suction) pump for greater circulation capacity, and a USB port.

What's included: lid, 6-ft (1.8-m) power cord with plug, M16 x 1 pump connection and 8- and 12-mm hose barb fittings with clamps for external circulation.

Specifications

Wetted materials: stainless steel, polymers

Low-level cutoff: yes

polystat®



| Bath capacity | Temperature range | Stability | Cooling capacity at 20°C | Pump type | Max pump pressure psi (mbar) | Max pump flow (L/min) | Working area (W x L x D) | Power (VAC, Hz) | Catalog number | Price |
|--|-------------------|-----------|--------------------------|---------------|------------------------------|-----------------------|--|----------------------|--|-------|
| Standard digital controller baths | | | | | | | | | | |
| 6.5 L | -20 to 100°C | ±0.05°C | 250 W | Force | 4.4 (310) | 17 | 5 ⁵ / ₁₆ " x 4 ¹ / ₁₆ " x 5 ⁷ / ₈ " (13.5 x 12.2 x 15 cm) | 115, 60 230, 50 | PG-12122-02 PG-12122-04 | |
| 8.6 L | -28 to 100°C | ±0.05°C | 500 W | Force | 4.4 (310) | 17 | 6 ¹³ / ₁₆ " x 7 ³ / ₁₆ " x 5 ⁷ / ₈ " (17.3 x 18.3 x 15 cm) | 115, 60 230, 50 | PG-12122-32 PG-12122-34 | |
| 8.6 L | -28 to 150°C | ±0.05°C | 500 W | Force | 4.4 (310) | 17 | 6 ¹³ / ₁₆ " x 7 ³ / ₁₆ " x 5 ⁷ / ₈ " (17.3 x 18.3 x 15 cm) | 115, 60 230, 50 | PG-12122-36 PG-12122-38 | |
| Advanced digital controller baths | | | | | | | | | | |
| 6.5 L | -20 to 100°C | ±0.025°C | 250 W | Force/suction | 11.7 (750) | 21 | 5 ⁵ / ₁₆ " x 4 ¹ / ₁₆ " x 5 ⁷ / ₈ " (13.5 x 12.2 x 15 cm) | 115, 60 230, 50 | PG-12122-12 PG-12122-14 | |
| 6.5 L | -20 to 100°C | ±0.025°C | 250 W | Force/suction | 11.7 (750) | 21 | 5 ⁵ / ₁₆ " x 4 ¹ / ₁₆ " x 5 ⁷ / ₈ " (13.5 x 12.2 x 15 cm) | 115, 60 230, 50 | PG-12122-26 PG-12122-28 | |
| 8.6 L | -28 to 200°C | ±0.025°C | 500 W | Force/suction | 11.7 (750) | 21 | 6 ¹³ / ₁₆ " x 7 ³ / ₁₆ " x 5 ⁷ / ₈ " (17.3 x 18.3 x 15 cm) | 115, 60 230, 50 | PG-12122-42 PG-12122-44 | |
| 8.6 L | -35 to 200°C | ±0.025°C | 800 W | Force/suction | 11.7 (750) | 21 | 6 ¹³ / ₁₆ " x 7 ³ / ₁₆ " x 5 ⁷ / ₈ " (17.3 x 18.3 x 15 cm) | 115, 60† 230, 50† | PG-12122-56 PG-12122-58 | |

†Requires 20 amp current.

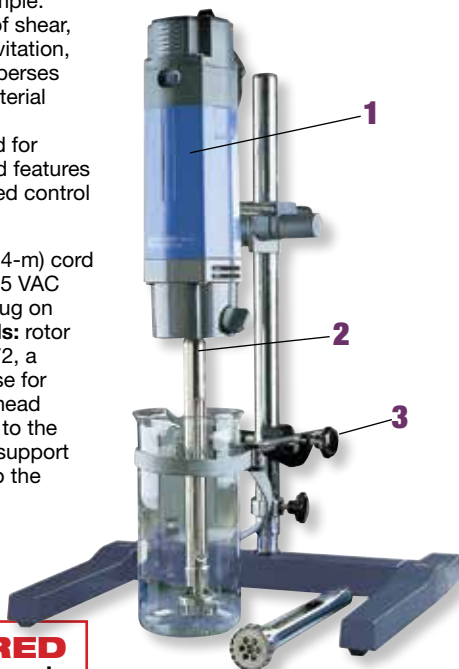
IKA® T50 ULTRA-TURRAX® Heavy-Duty Homogenizer

Quickly homogenize tissues and solids in batches from 0.25 to 30 L

- Integrated control ensures constant speed even with changes in viscosity
- Output of 700 watts delivers superior dispersing power

The rotor-stator generator (order separately) uses a pump-like action to constantly draw in sample. Through a combination of shear, impact, collision, and cavitation, the generator rapidly disperses and disintegrates the material suspended in the media. Homogenizer is designed for continuous operation and features an infinitely variable-speed control from 500 to 10,000 rpm.

What's included: 8-ft (2.4-m) cord with standard plug on 115 VAC model (European-type plug on 230 VAC model). **Kit adds:** rotor stator generator 04738-72, a stand with H-shaped base for optimal stability, a boss head clamp (secures the drive to the stand), and strap clamp support (secures batch vessels to the stand).



REQUIRED System Components

- 1) Homogenizer
- 2) Rotor-stator generator
- 3) Stands and clamps

1. Homogenizer

| Description | Homogenizer only | | Homogenizer kit | |
|--------------------|------------------------|-------------|-----------------|-------------|
| | PG-04738-30 | PG-04738-35 | PG-04738-31 | PG-04738-36 |
| Speed range | 500 to 10,000 rpm | | | |
| Batch volume range | 0.25 to 30 L | | | |
| Noise rating | 72 dB | | | |
| Speed adjustment | Stepless | | | |
| Wattage | 1000 input, 700 output | | | |
| Power (VAC, Hz) | 115, 50/60 | 220, 50/60 | 115, 50/60 | 220, 50/60 |
| Price | | | | |

2. Rotor-Stator Generators

| Style | Sample volume | Ultimate fineness | Catalog number | Price |
|----------|---------------|-------------------|----------------|-------|
| Standard | 0.25 to 10 L | 10 µm | PG-04738-60 | |
| | 0.5 to 20 L | 40 µm | PG-04738-72 | |
| | 0.5 to 15 L | 50 µm | PG-04738-76 | |
| Sawtooth | 0.5 to 20 L | 40 µm | PG-04738-82 | |

3. Stand and Clamps

- PG-50703-93 H-Stand
PG-50703-98 Boss head clamp
PG-50703-71 Strap clamp

IKA® T25 Digital ULTRA-TURRAX® High-Speed Homogenizer

Handle sample volumes from 1 to 2000 mL

- Systems can be used with tough solids or large-volume samples
- Generators are made of 316 stainless steel and PTFE, providing excellent chemical compatibility

This system is ideal for batch homogenizing of cell tissues, emulsifying suspended solids, and air pollution filter extraction. The key component is the rotor-stator generator. (Order rotor-stator generators separately below.) Shielded in a 316 stainless steel shaft, the rotor acts as a centrifugal pump to recirculate the liquid and suspended solids through the generator, where shear, impact, collision, and cavitation provide rapid homogenization.

What's included: 10-ft (3-m) power cord (the 115 VAC model has a standard US plug; the 230 VAC model has a European plug). **Kit adds:** pack of 10 disposable generators, stand (50703-91), boss head clamp, and strap clamp.



REQUIRED System Components

- 1) Homogenizer
- 2) Rotor-stator generator
- 3) Stand and clamps

1. Homogenizer

| Description | Homogenizer only | | Homogenizer kit | |
|--------------------|-----------------------|-------------|-----------------|-------------|
| | PG-04739-21 | PG-04739-22 | PG-04739-31 | PG-04739-32 |
| Speed range | 500 to 25,000 rpm | | | |
| Batch volume range | 1 to 2000 mL | | | |
| Noise rating | 73 dB | | | |
| Speed adjustment | Stepless | | | |
| Wattage | 800 input, 500 output | | | |
| Power (VAC, Hz) | 115, 50/60 | 220, 50/60 | 115, 50/60 | 220, 50/60 |
| Price | | | | |

2. Rotor-Stator Generators

| Style | Sample volume range | Ultimate fineness | Dimensions (L x OD) | Catalog number | Price |
|----------|---------------------|-------------------|---------------------|----------------|-------|
| Standard | 1 to 50 mL | 10 µm | 108 x 8 mm | PG-04720-11 | |
| | 1 to 100 mL | 10 µm | 105 x 10 mm | PG-04720-10 | |
| | 10 to 1500 mL | 10 µm | 194 x 18 mm | PG-04720-12 | |
| | 50 to 2000 mL | 10 µm | 194 x 25 mm | PG-04719-52 | |
| | 100 to 2000 mL | 5 µm | 194 x 25 mm | PG-04719-53 | |
| Sawtooth | 1 to 50 mL | 10 µm | 108 x 8 mm | PG-04737-90 | |
| | 1 to 100 mL | 10 µm | 105 x 10 mm | PG-04737-92 | |
| | 10 to 1500 mL | 10 µm | 194 x 18 mm | PG-04737-94 | |
| | 50 to 2000 mL | 15 µm | 194 x 25 mm | PG-04737-96 | |

3. Stands and Clamps

- PG-50703-90 Plate stand, 22" high
PG-50703-91 Plate stand, 31½" high
PG-50703-92 Plate stand, 39½" high
PG-50703-96 Boss head clamp
PG-50703-70 Strap clamp

Stir-Pak® Heavy-Duty Mixer Systems

Easily customize to your needs

1. Speed Controller

- Simple controls—speed adjustment knob and separate “forward/off/reverse” switch
- Reduce gear failure with torque limiting protection

2. Mixer Heads

- Don't limit your mixing angle—adjustable tilt from 0 to 30° for proper propeller placement
- Maintenance-free, rugged motor
- For more viscous or larger samples, choose a high-torque, low-speed mixer head with keyless chuck
- For lower viscosity samples, use a high-speed low-torque mixer head with through shaft for easy shaft positioning



REQUIRED System Components

- 1) Speed controller
 - 2) Mixer head
- or choose complete system

Stir-Pak high-speed, low-torque mixer system 50007-32



Complete systems include: speed controller, mixer head, shaft, propeller, clamp and stand.

| 1. Speed controller | | | 2. Mixer heads | | | | | Complete systems | | | | |
|---------------------|-----------------------------|-------|--|--|-----------------------------|--------------------|-----------------------------|-----------------------------|-----------------------------|-----------------------------|-----------------------------|--|
| Power (VAC, Hz) | Catalog number | Price | Description | Speed (rpm) | hp | Max torque (in-oz) | Power (VAC, Hz) | Catalog number | Price | Catalog number | Price | |
| 115, 50/60 | PG-50007-00 | | High torque, low speed; with keyless chuck | 2 to 180 | 1/5 | 340 | 115, 50/60 | PG-50007-10 | | PG-50007-12 | | |
| 230, 50/60 | PG-50007-05 | | | 9 to 900 | 1/5 | 70 | 230, 50/60 | PG-50007-15 | | PG-50007-17 | | |
| 115, 50/60 | PG-50007-00 | | | High speed, low torque; with adjustable through-shaft collet | 23 to 2300 | 1/10 | 45 | 115, 50/60 | PG-50007-20 | | PG-50007-22 | |
| 230, 50/60 | PG-50007-05 | | | | 60 to 6000 | 1/10 | 17 | 230, 50/60 | PG-50007-25 | | PG-50007-27 | |
| 115, 50/60 | PG-50007-00 | | 115, 50/60 | | PG-50007-30 | | PG-50007-32 | | | | | |
| 230, 50/60 | PG-50007-05 | | 230, 50/60 | | PG-50007-35 | | PG-50007-37 | | | | | |
| 115, 50/60 | PG-50007-00 | | | | | 115, 50/60 | PG-50007-40 | | PG-50007-42 | | | |
| 230, 50/60 | PG-50007-05 | | | | | 230, 50/60 | PG-50007-45 | | PG-50007-47 | | | |

ServoDyne™ Electronic Mixers

Get more precise mixing

- Monitor and control speed, torque, and batch time through digital controller or a computer interface

1. Controller

Provide precise control of mixing speed within ±0.2% despite changes in viscosity, temperature, or line voltage. Monitor torque, set torque limits, or measure and control differential torque with mixer head in use and sets the appropriate rpm and torque limits for that motor. Operates on 115 VAC, 50/60 Hz.

High-Torque, Low-Speed Models have a keyless chuck that accepts mixing shafts up to 3/8" (10 mm) in diameter.

High-Speed, Low-Torque Models have an adjustable, through-shaft precision hand-tightened collet that accepts 3/8" (10 mm) dia mixing shafts. Through-shaft design allows positioning the mixing propeller at any depth without moving the mixer head.

Complete systems include: speed controller, mixer head, shaft, propeller, clamp and stand.

2. Mixer Heads

- Maintenance-free—permanent-magnet DC motor with permanently lubricated ball-bearing construction
- Rotate mixer head from 0° to 30° for proper positioning of shaft and propeller
- Optical shaft encoder relays the exact motor rotation speed data to the electronic mixer controller



| 1. Controller | | 2. Mixer heads | | | | | Complete systems | | | |
|-----------------------------|-------|--|-------------|------|--------------------|--------------|-----------------------------|-------|-----------------------------|-------|
| Catalog number | Price | Description | Speed (rpm) | hp | Max torque (in-oz) | | Catalog number | Price | Catalog number | Price |
| | | | | | Continuous | Intermittent | | | | |
| PG-50008-00 | | High torque, low speed; with keyless chuck | 3 to 180 | 1/5 | 340 | 510 | PG-50008-10 | | PG-50008-12 | |
| | | | 20 to 900 | 1/5 | 70 | 105 | PG-50008-20 | | PG-50008-22 | |
| | | High speed, low torque; with adjustable through-shaft collet | 60 to 2300 | 1/10 | 45 | 65 | PG-50008-30 | | PG-50008-32 | |
| | | | 150 to 6000 | 1/10 | 17 | 25 | PG-50008-40 | | PG-50008-42 | |

Cole-Parmer® Digital Reversing Mixer

Time your cycles for more efficient mixing

- Won't lose speed—brushless, 142 in-oz torque motor maintains speed
- Minimize aeration and vortexing—reversing feature alters mixing pattern for better mixing
- No more moving mixer head to change impeller depth—through-shaft housing for easier positioning
- No more motor burn out—overload protection if torque exceeds ratings
- See what you're mixing—integrated sample light illuminates sample area

Mix samples up to 20,000 cps or up to 6.6 gallons (25 liters) easily and effectively. Repeat mixing conditions accurately with LED display, with control to ± 1 rpm or 3% of reading. Set timer from 1 to 2000 minutes, with audible alert when complete.

Mixer includes: mixer head, adjustable chuck (accepts rod up to $\frac{3}{8}$ " [9.5 mm] dia), chuck key, mounting support rod, external power supply, and grounded power cord with plug assembly.

Complete system adds: propeller/shaft, support stand, and clamp.



| Description | Speed (rpm) | hp | Max torque (in-oz) | Power (VAC, Hz) | Catalog number | Price |
|-----------------|-------------|----------------|--------------------|-------------------|----------------|-------|
| Mixer only | 40 to 2010 | $\frac{1}{10}$ | 142 | 100 to 230, 50/60 | PG-50004-00 | |
| Complete system | | | | | PG-50004-10 | |

PG-17050-03 NIST-traceable calibration for mixers



Complete system 50004-10 includes mixer, support stand, clamp, and mixer propeller.

IKA® RW 20 Digital Dual-Range Mixer

No separate components to purchase—complete system is ready to go!

- No downtime—maintenance-free motor for continuous duty
- Fulfill all your lab mixing needs—two speed ranges for a variety of applications
- No need to move mixer head to reposition propeller—through-shaft design for easy movement
- No difficult controls—easy-to-use knob and LED display for accurate setting

Use this versatile, affordable mixer for liquid volumes up to 5 gallons (18.9 liters) and viscosities up to 10,000 cps (approximately the viscosity of honey). Select speed from 60 to 2000 rpm in two ranges for a variety of applications.

What's included: chuck (accepts up to $\frac{3}{8}$ " [10 mm] dia shafts), $6\frac{1}{4}$ " L x $\frac{1}{2}$ " dia (159 mm L x 10 mm dia) mounting rod, four-blade propeller mixer stand, and clamp.



| Speed (rpm) | hp | Max torque (in-oz) | Power (VAC, Hz) | Catalog number | Price |
|---------------------------|----------------|--------------------|-----------------|----------------|-------|
| 60 to 500/ 240 to 2000 | $\frac{1}{25}$ | 259 | 115, 50/60 | PG-50705-00 | |
| | | | 230, 50/60 | PG-50705-10 | |

Find even more online! Go to ColeParmer.com to search more than 100,000 products.



Complete system includes propeller, clamp, and stand



Real-Torque Digital™ Brushless Mixers

Get precise speeds with user-friendly keypad

- Won't let speed change even as viscosity changes
- Maintenance-free, nonventilated motor for continuous use
- Set torque reading at zero via torque tare function
- Easily alter shaft length with through-shaft design

These mixers feature overload protection that automatically shuts off the mixer if maximum torque is exceeded—an LED light signals overload conditions.

What's included: calibration certificate, stainless steel chuck and key (accepts up to 3/8" [9.5 mm] dia shafts), chuck guard, 5" L x 1/2" dia (127 mm L x 13 mm dia) mounting rod, and 6-ft (1.8-m) cord with three-prong plug.



| Speed range (torque) | | Motor | Power (50/60 Hz) | Catalog number | Price |
|----------------------------|-----------------------------|--------|------------------|-----------------------------|-------|
| Low speed | High speed | | | | |
| 12 to 360 rpm (800 in-oz) | 360 to 1800 rpm (160 in-oz) | 1/8 hp | 115 VAC | PG-50800-00 | |
| | | | 230 VAC | PG-50800-05 | |
| 20 to 600 rpm (480 in-oz) | 600 to 3000 rpm (96 in-oz) | 1/8 hp | 115 VAC | PG-50800-10 | |
| | | | 230 VAC | PG-50800-15 | |
| 40 to 1200 rpm (240 in-oz) | 1200 to 6000 rpm (48 in-oz) | 1/8 hp | 115 VAC | PG-50800-20 | |
| | | | 230 VAC | PG-50800-25 | |



IKA® EUROSTAR Digital Mixers

Mix viscous samples up to 30,000 cps

- Speed won't change even as viscosity changes
- Won't overheat—thermal overload shut-off for safety
- Maintenance-free design for continuous duty

EUROSTAR 20 Digital Mixer handles volumes up to 4 gallons (15 liters) and viscosities up to 10,000 cps.

EUROSTAR 40 Digital Mixer will mix volumes up to 6.6 gallons (25 liters) and viscosities up to 30,000 cps.

What's included: chuck (accepts up to 3/8" [10 mm] dia shaft) and 6 1/4" L x 1/2" dia (159 mm x 13 mm) mounting rod.



| Speed (rpm) | hp | Max torque (in-oz) | Power (VAC, Hz) | Catalog number | Price |
|----------------------------------|------|--------------------|-----------------|-----------------------------|-------|
| Eurostar 20 digital mixer | | | | | |
| 30 to 2000 | 1/16 | 28.3 | 115, 50/60 | PG-50702-30 | |
| | | | 230, 50/60 | PG-50702-35 | |
| Eurostar 40 digital mixer | | | | | |
| 30 to 2000 | 1/8 | 56.6 | 115, 50/60 | PG-50702-40 | |
| | | | 230, 50/60 | PG-50702-45 | |

IKA® EUROSTAR Digital Constant-Speed Mixers

Speed won't change even as viscosity does

- Automatic adjustment to desired speed with unique continuous speed comparison
- No need to move mixer head to remove samples—through-shaft design for impeller adjustments
- Worry-free operation—maintenance-free motor with overload protection
- Handle even large samples—up to 26.4 gallons (100 liters)

EUROSTAR 60 Digital Mixer (50704-20 and -25) handles volumes up to 10.6 gallons (40 liters) and viscosities up to 50,000 cps.

EUROSTAR 100 Digital Mixer (50704-30 and -35) will mix volumes up to 26.4 gallons (100 liters) and viscosities up to 70,000 cps.

What's included: chuck (accepts up to 3/8" [10 mm] dia shaft) and 6 1/4" L x 1/2" dia (159 mm x 13 mm) mounting rod.



| Speed (rpm) | hp | Max torque (in-oz) | Power (VAC, Hz) | Catalog number | Price |
|-----------------------------------|------|--------------------|-----------------|-----------------------------|-------|
| Eurostar 60 digital mixer | | | | | |
| 30 to 2000 | 3/16 | 85 | 115, 50/60 | PG-50704-20 | |
| | | | 230, 50/60 | PG-50704-25 | |
| Eurostar 100 digital mixer | | | | | |
| 30 to 1300 | 1/8 | 142 | 115, 50/60 | PG-50704-30 | |
| | | | 230, 50/60 | PG-50704-35 | |



FEATURES

- ✓ Ultra-clear, high-contrast TFT LCD controller screen displays all process parameters
- ✓ RS-232 and USB interfaces for easy documentation of processes and firmware updates

Detachable wireless controller—lets you monitor and control all functions remotely



IKA® EUROSTAR Control Mixers with Wireless Remote

Control and monitor mixer wirelessly

- Measure viscosity changes with torque trend function
- Monitor fluid temperature with integrated temperature sensor
- Automatic adjustment to desired speed for maintaining consistent mixing

EUROSTAR 60 Control Mixer (50705-30 and -35) handles volumes up to 10.6 gallons (40 liters) and viscosities up to 50,000 cps.

EUROSTAR 100 Control Mixer (50705-40 and -45) will mix volumes up to 26.4 gallons (100 liters) and viscosities up to 70,000 cps.

EUROSTAR 200 Control Dual-Range Mixer (50705-50 and -55) will mix up to 26.4 gallons (100 liters) and viscosities up to 100,000 cps. Two selectable speed ranges give you the option of high viscosity or high-speed mixing.

EUROSTAR 200 Control P4 Dual-Range/High-Torque Mixer (50705-60 and -65) will mix up to 26.4 gallons (100 liters) and viscosities up to 150,000 cps. A high-torque rating and two selectable speed ranges give you the option of high viscosity or high-speed mixing.

What's included: stainless steel Pt RTD temperature probe; chuck (accepts up to 5/8" [10 mm] dia shaft); 6 1/4" L x 1/2" dia (159 mm x 13 mm) mounting rod; and a 6 1/2-ft (2-m) three-wire power cord with plug.



| Speed (rpm) | hp | Max torque (in-oz) | Power (VAC, Hz) | Catalog number | Price |
|---|------|--------------------|-----------------|-----------------------------|-------|
| Eurostar 60 control mixer | | | | | |
| 30 to 2000 | 3/16 | 85 | 115, 50/60 | PG-50705-30 | |
| | | | 230, 50/60 | PG-50705-35 | |
| Eurostar 100 control mixer | | | | | |
| 30 to 1300 | 1/8 | 142 | 115, 50/60 | PG-50705-40 | |
| | | | 230, 50/60 | PG-50705-45 | |
| Eurostar 200 control dual-range mixer | | | | | |
| 6 to 400/30 to 2000 | 1/8 | 283 | 115, 50/60 | PG-50705-50 | |
| | | | 230, 50/60 | PG-50705-55 | |
| Eurostar 200 control P4 dual-range/high-torque mixer | | | | | |
| 4 to 108/16 to 530 | 1/8 | 935 | 115, 50/60 | PG-50705-60 | |
| | | | 230, 50/60 | PG-50705-65 | |

[PG-50705-80](#) Replacement temperature probe, stainless steel

[PG-50705-82](#) Temperature probe, glass-coated stainless steel for acid and alkaline fluids

IKA® RW 47 Digital Pilot-Process Mixer

Mix large, viscous batches with ease

- Two speed ranges for intensive mixing up to 100,000 cps
- Stir volumes up to 52 gallons (200 liters)
- Precisely set parameters with clear LED display
- Eliminate the chance of overheating and maintain safe operation with thermal overload protection

What's included: chuck (accepts up to 5/8" [16 mm] dia shaft). Note: cable and plug are not included; unit to be wired on-site according to local ordinances.

Complete system adds: four-blade propeller 50702-90 and telescopic mixer stand 50702-95.



| Description | Speed (rpm) | hp | Max torque (in-oz) | Power (VAC, Hz, phase) | Catalog number | Price |
|-----------------|-----------------------|-----|--------------------|------------------------|-----------------------------|-------|
| Mixer only | 57 to 275/275 to 1300 | 5/8 | 4248 | 230, 60, 3 | PG-50702-80 | |
| Complete system | | | | | PG-50702-85 | |

Accessories

(included in complete system)

Four-Blade Propeller Assembly. Standard stirring element for drawing the material to be mixed from the top to the bottom. Local shearing forces. Generates axial flow in the vessel. Use at medium to high speeds.



Telescopic Mixer Stand features a pneumatic spring for effortless raising and lowering of the mixer.



| Description | Cat. no. | Price |
|------------------------|-----------------------------|-------|
| Four-blade propeller | PG-50702-90 | |
| Telescopic mixer stand | PG-50702-95 | |

InterCyclone Cyclonic Action Mixing System

Blade-free impeller safely mixes high-viscosity fluids

- Effectively mixes high-viscosity fluids and fluids with large differences in specific gravity
- Durable stainless steel construction resists corrosion
- Use with traditional mixer motors and handheld drills
- Open bottom design is more gentle, while the small-diameter bottom creates a fastest turnover

Anaerobic Impeller has a solid top plate, so fluid suction is only from the bottom. The result is a quiet, gentle swirl at the liquid-air interface, preventing gas dispersion. In addition to anaerobic microbiological applications, this mixer is suitable where low-foam and low-bubble conditions are preferred.

Aerobic Impeller is ideal for general mixing and aerobic microbiology applications. The radial flow pattern created by suction ports in the top and bottom plates result in high turnover and will disperse air into the mixture. With a hollow shaft (order separately), you can increase the oxygenation of the fluid.

Shafts are compatible with adjustable chucks found on mixer motors and handheld drills. For motors with fixed-diameter chucks and collets, a connector is required (50706-87 or -88). Or use the mixer motor (50706-86); requires the metric connector (50706-87) for operation.

NEW



50706-05



50706-00

50706-04

50706-06

Mixer Impellers

| Type | Bottom description | Dimensions (L x dia) | Sample volume (L) | Catalog number | Price |
|-----------|--------------------|-------------------------|------------------------|-----------------------------|-----------------------------|
| Anaerobic | Open | 2½" x ¾" (64 x 15 mm) | <0.5 | PG-50706-00 | |
| | | 2⅞" x 1" (62 x 25 mm) | 0.5 to 10 | PG-50706-01 | |
| | | 3½" x 2" (88 x 50 mm) | 10 to 30 | PG-50706-03 | |
| | | 4¾" x 4" (120 x 101 mm) | 30 to 60 | PG-50706-07 | |
| | Small diameter | 4½" x 2" (113 x 50 mm) | 10 to 30 | PG-50706-04 | |
| | | 5¾" x 4" (145 x 101 mm) | 30 to 60 | PG-50706-08 | |
| Aerobic | Open | 2⅞" x 1" (62 x 25 mm) | 0.5 to 10 | PG-50706-02 | |
| | | 3½" x 2" (88 x 50 mm) | 10 to 30 | PG-50706-05 | |
| | | 4¾" x 4" (120 x 101 mm) | 30 to 60 | PG-50706-09 | |
| | | Small diameter | 4½" x 2" (113 x 50 mm) | 10 to 30 | PG-50706-06 |
| | | 5¾" x 4" (145 x 101 mm) | 30 to 60 | PG-50706-10 | |

Mixer Shafts

| Core | Thread type | Dimensions (L x dia) | Catalog number | Price |
|--------|-------------|------------------------|-----------------------------|-------|
| Solid | Male | 12" x ¾" (300 x 10 mm) | PG-50706-80 | |
| | | 24" x ¾" (600 x 10 mm) | PG-50706-82 | |
| Hollow | Male | 12" x ¾" (300 x 10 mm) | PG-50706-81 | |
| | | 24" x ¾" (600 x 10 mm) | PG-50706-83 | |
| | Female | 7⅞" x ¾" (200 x 10 mm) | PG-50706-84 | |

[PG-50706-85](#) Adjustable height mixer motor stand, 16¾" to 23½" (42.5 to 60 cm)

[PG-50706-86](#) Mixer motor with controller, 1200 rpm, 110 VAC (connector 50706-87 required)

[PG-50706-87](#) Connector, 6 mm dia motor shaft x 10 mm mixer shaft

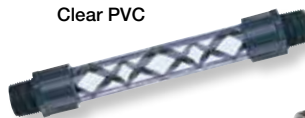
[PG-50706-88](#) Connector, ¾" dia motor shaft x 10 mm mixer shaft

Koflo® In-Line Static Mixers

Mix fluids as you pump them through a pipe line

- These economical, long-lasting, in-line mixers are more convenient than most motorized mixers
- In-line mixers prevent overmixing and undermixing, and resist fouling in your pipes or tubes
- Virtually maintenance free and need no spare parts

Clear PVC



316 stainless steel (cut-away view)

Install these pipe mixers directly into your process line to achieve a 100% mixed output—mixing elements are welded inside the pipe. All mixers have threaded ends. Clear PVC mixers are ideal for a visual check of your mixing processes.

| NPT(M) | Pipe ID, in. (mm) | No. of elements | Mixer length, in. (mm) | Catalog number | Price |
|--|-------------------|-----------------|------------------------|-----------------------------|-------|
| Clear PVC schedule 40 pipe mixers | | | | | |
| ¾" | 0.473 (12) | 6 | 6½ (165) | PG-04669-85 | |
| | | 12 | 11 (279) | PG-04669-87 | |
| ½" | 0.602 (15.3) | 6 | 7 (178) | PG-04669-89 | |
| | | 12 | 12 (305) | PG-04669-91 | |
| ¾" | 0.804 (20.4) | 6 | 9 (229) | PG-04669-92 | |
| | | 12 | 15 (381) | PG-04669-93 | |
| 1" | 1.029 (26.1) | 6 | 11 (279) | PG-04669-94 | |
| | | 12 | 18 (457) | PG-04669-95 | |
| 1½" | 1.590 (40.4) | 6 | 15 (381) | PG-04669-96 | |
| | | 12 | 28 (711) | PG-04669-97 | |
| 2" | 2.047 (52) | 6 | 19 (483) | PG-04669-98 | |
| | | 12 | 35 (889) | PG-04669-99 | |
| 316 stainless steel schedule 40 pipe mixers | | | | | |
| ¼" | 0.364 (9.2) | 6 | 3 (76.2) | PG-04669-05 | |
| | | 12 | 6 (152) | PG-04669-07 | |
| ¾" | 0.493 (12.5) | 6 | 4 (101) | PG-04669-09 | |
| | | 12 | 8 (203) | PG-04669-11 | |
| ½" | 0.62 (15.7) | 6 | 5 (127) | PG-04669-12 | |
| | | 12 | 10 (254) | PG-04669-18 | |
| ¾" | 0.82 (20.8) | 6 | 7 (178) | PG-04669-14 | |
| | | 12 | 13 (330) | PG-04669-20 | |
| 1" | 1.05 (26.7) | 6 | 9 (229) | PG-04669-16 | |
| | | 12 | 17 (439) | PG-04669-22 | |
| 1½" | 1.61 (40.9) | 6 | 13 (330) | PG-04669-23 | |
| | | 12 | 26 (660) | PG-04669-24 | |
| 2" | 2.067 (52.5) | 6 | 17 (432) | PG-04669-25 | |
| | | 12 | 33 (838) | PG-04669-26 | |



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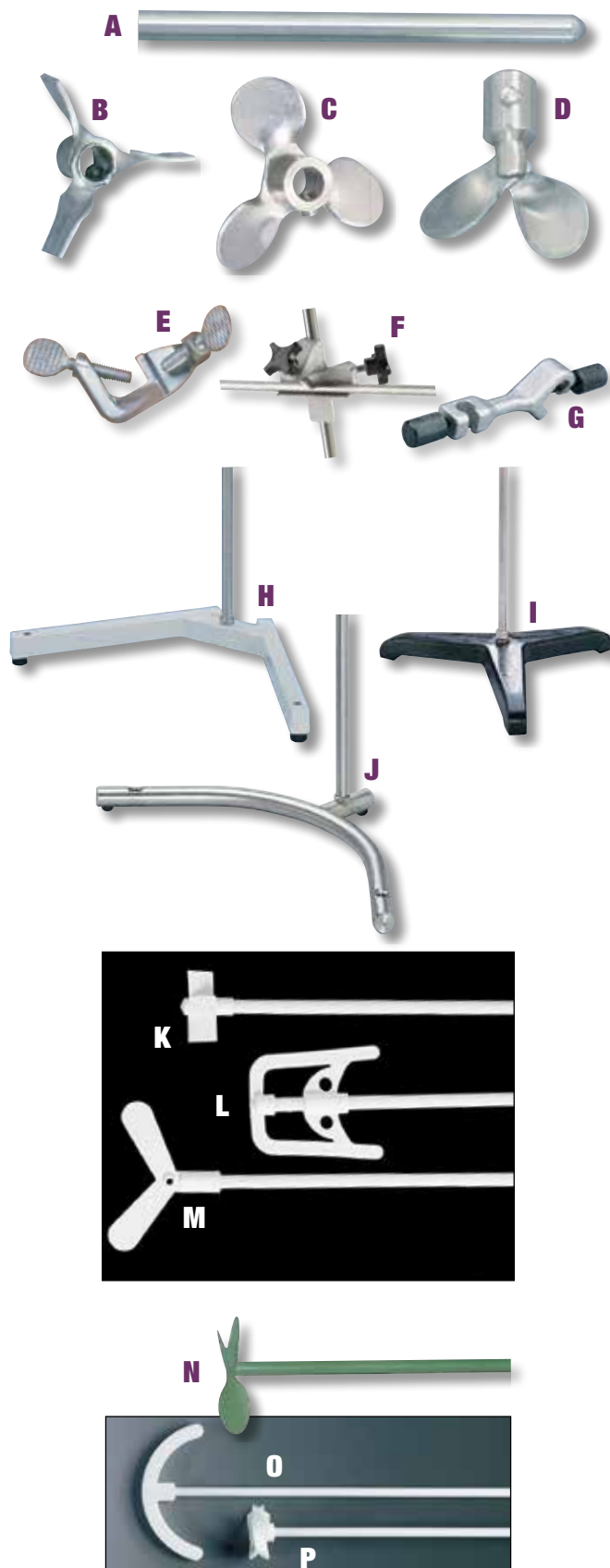
800-323-4340

E-mail:

sales@coleparmer.com

Chat live:

ColeParmer.com



Accessories for Laboratory Mixers

A. Shafts. All $\frac{3}{16}$ " (10 mm) dia shafts are machined on one end to accept a $\frac{5}{16}$ " (8 mm) bore dia propeller.

| Key | Shaft dimensions, dia x L, in. (mm) | Catalog number | Price |
|-----|-------------------------------------|-----------------------------|-------|
| A | $\frac{5}{16}$ x 12 (8 x 305) | PG-04552-20 | |
| | $\frac{5}{16}$ x 18 (8 x 457) | PG-04552-30 | |
| | $\frac{3}{8}$ x 12 (10 x 305) | PG-04552-25 | |
| | $\frac{3}{8}$ x 18 (10 x 457) | PG-04552-35 | |
| | $\frac{3}{8}$ x 24 (10 x 610) | PG-04552-00 | |
| | $\frac{3}{8}$ x 30 (10 x 762) | PG-04552-05 | |

B. Turbine Propellers are for airless mixing in deep containers.

C. Marine-Style Propellers are for general-purpose mixing. Use alone or mount several on a single shaft for thorough agitation.

D. Folding Propeller is for use in narrow-mouth vessels. Folded diameter is $1\frac{1}{4}$ " (18 mm).

| Key | Description | Bore dia in. (mm) | Overall dia in. (mm) | Catalog number | Price |
|-----|---------------|---------------------|----------------------|-----------------------------|-------|
| B | Turbine style | $\frac{3}{8}$ (9.5) | 2 (51) | PG-04552-15 | |
| | | $\frac{5}{16}$ (8) | 2 (51) | PG-04552-10 | |
| C | Marine style | $\frac{3}{16}$ (8) | 1 (25) | PG-04552-40 | |
| | | $\frac{5}{16}$ (8) | 1½ (38) | PG-04552-45 | |
| | | $\frac{3}{8}$ (9.5) | 2 (51) | PG-04552-50 | |
| | | $\frac{3}{8}$ (9.5) | 2 (51) | PG-04552-55 | |
| | | $\frac{5}{16}$ (8) | 3 (76) | PG-04552-60 | |
| D | Folding style | $\frac{5}{16}$ (8) | 2 (51) open | PG-04543-00 | |

E-G. Clamps ensure a sturdy connection between mixer and stands.

| Key | Catalog number | Price |
|-----|-----------------------------|-------|
| E | PG-08041-22 | |
| F | PG-04340-50 | |
| G | PG-04560-24 | |

H. Stand. Corrosion resistant, electropolished cast steel base; 303 SS support rod. Both legs accept an extra support rod.

I. Mixer Stand has a cast-iron base and a stainless steel rod.

J. 316 SS Mixer Stand accepts extra screw-in support rods in both legs.

| Key | Dimensions H x dia, in. (mm) | Stand | | Extra support rod | |
|-----|-------------------------------|-----------------------------|-------|-----------------------------|-------|
| | | Cat. no. | Price | Cat. no. | Price |
| H | 29 x $\frac{5}{8}$ (737 x 16) | PG-04552-80 | | PG-04552-85 | |
| I | 24 x $\frac{5}{8}$ (610 x 16) | PG-04546-00 | | — | — |
| J | 29 x $\frac{5}{8}$ (737 x 16) | PG-04344-00 | | PG-04344-10 | |

K-P. Plastic Mixing Paddle Assemblies

Use these plastic paddle assemblies for mixing most acids and corrosive solutions. Plastic-coated steel assemblies provide better chemical resistance than stainless steel alone.

| Material | Shaft, dia x L, in. (mm) | Max paddle dia, in. (mm) | Catalog number | Price |
|--|--|--------------------------|-----------------------------|-------|
| K. Fixed, dual-blade paddle assembly —for mixing medium-viscosity liquids | | | | |
| Polypropylene | $\frac{5}{16}$ x $13\frac{13}{16}$ (8 x 350) | 1½ (41) | PG-06367-10 | |
| L. A-shaped, blade paddle assembly —for mixing highly viscous liquids | | | | |
| Polypropylene | $\frac{5}{16}$ x $13\frac{13}{16}$ (8 x 350) | 2½ (67) | PG-06367-20 | |
| M. Swing-out, dual-blade paddle assembly —for use in narrow-necked vessels | | | | |
| Polypropylene | $\frac{5}{16}$ x $13\frac{13}{16}$ (8 x 350) | 2½ (60) | PG-06367-40 | |
| | | 4 (102) | PG-06367-60 | |
| N. Three-blade paddle assembly —for general-purpose mixing | | | | |
| PTFE | $\frac{5}{16}$ x 12 (8 x 305) | 2 (51) | PG-04449-06 | |
| PTFE | $\frac{5}{16}$ x 18 (8 x 457) | 2 (51) | PG-04449-10 | |
| O. Anchor-style paddle assembly —for mixing medium- to high-viscosity liquids | | | | |
| PTFE | $\frac{3}{8}$ x 22 (10 x 559) | 4 (102) | PG-06367-70 | |
| P. Four-blade paddle assembly —for mixing low- to medium-viscosity liquids | | | | |
| PTFE | $\frac{3}{8}$ x 22½ (10 x 562) | 2½ (60) | PG-06367-80 | |

IKA® Mixer Accessories

Get the most out of your IKA mixer!

A-H. Propellers and Stirrers

A. Four-Blade Propellers draw the material to be mixed from the top to the bottom. Create local shearing forces and axial flow in the vessel. Use at medium to high speeds.

B-C. Three-Blade Propellers draw material to be mixed from the top and the bottom while creating minimum shearing forces. Use at medium to high speed.

D. Turbine Propellers are used for drawing the material to be mixed from above while generating axial flow within the vessel. Minimum danger of injury when contact is made with the vessel. Create minimal shearing forces. Use at medium to high speeds.

E. Dissolver Propellers are for drawing the material to be mixed from the top and the bottom while creating high turbulence and high shearing forces for particle reduction. Use at medium to high speeds.

F. Folding Propellers are two-bladed, and the blades open with increasing speed, perfect for stirring in round vessels with narrow necks. Medium to high speeds are required.

G. Paddle Stirrers create tangential flow, minimum turbulence, good heat exchange, and gentle treatment of product. Use at low to medium speeds.

H. Anchor Stirrers create tangential flow, high shearing rate at edges, minimum deposits on the vessel wall, making them great for polymer reactions and even distribution of high mineral contents in liquids. Ideal for medium to highly viscous fluids. Use at low speeds.



I-K. Stands

I. Mixer Plate Stand comes with slip-resistant foil and a support rod with diameter of 5/8" (16 mm).

| Key | Height, in. (mm) | Catalog number | Price |
|-----|------------------|-----------------------------|-------|
| I | 22 (560) | PG-50703-90 | |
| | 31½ (800) | PG-50703-91 | |
| | 39½ (1000) | PG-50703-92 | |

J-K. Mixer H-Stands. Particularly stable stand with "H"-shaped base prevents the stand from tipping backwards. Model K is spring loaded to allow for height adjustment from 24½" to 39¾" (620 mm to 1010 mm).

| Key | Height, in. (mm) | Catalog number | Price |
|-----|--------------------------|-----------------------------|-------|
| J | 39¾ (1010) | PG-50703-93 | |
| K | 24½ to 39¾ (620 to 1010) | PG-50703-94 | |

PG-50703-70 Mixer strap clamp, fits vessels from 1½" to 11¾" (40 to 300 mm)

PG-50703-71 Mixer strap clamp with Boss head clamps, fits vessels from 1½" to 11¾" (40 to 300 mm)

PG-50703-96 Boss head clamp, clamping range ¼" to 5/8" (6 to 16 mm)

PG-50703-97 Boss head clamp, fits stands 1" to 1½" (25 to 36 mm) dia and accommodates mounting rods 3/16" to 3/4" (5 to 21 mm) dia

PG-50703-98 Boss head clamp, fits stands 1¼" (34 mm) dia and accessory rods 2½" (16 mm) dia

L. Mixer Flexible Coupling

Required for stirring tasks utilizing glass stirring rods, compensating for any structural variances. Clamping range is ¼" to 3/8" (6 to 10 mm).

| Key | Description | Catalog number | Price |
|-----|-------------------------|-----------------------------|-------|
| L | Mixer flexible coupling | PG-50703-75 | |

| Key | Material | Shaft, dia x L, in. (mm) | Paddle dia, in. (mm) | Catalog number | Price |
|-----|----------------|--------------------------|----------------------|-----------------------------|-------|
| A | 316 SS | 1½ x 13¾ (8 x 350) | 2 (50) | PG-50703-25 | |
| | 316 SS | 1½ x 21¼ (8 x 540) | 4 (102) | PG-50703-26 | |
| B | 316 SS | 1½ x 13¾ (8 x 350) | 1¾ (45) | PG-50703-30 | |
| | 316 SS | 1½ x 13¾ (8 x 350) | 2½ (56) | PG-50703-31 | |
| | 316 SS | 1¾ x 21½ (10 x 550) | 5½ (140) | PG-50703-32 | |
| | 316 SS | 1¾ x 31½ (10 x 800) | 5½ (140) | PG-50703-33 | |
| C | PTFE-coated SS | 1½ x 13¾ (8 x 350) | 3 (75) | PG-50703-34 | |
| D | 316 SS | 1½ x 13¾ (8 x 350) | 1½ (31) | PG-50703-35 | |
| | 316 SS | 1½ x 13¾ (8 x 350) | 2 (50) | PG-50703-36 | |
| | 316 SS | 1¾ x 15¾ (10 x 400) | 2¾ (70) | PG-50703-37 | |
| E | 316 SS | 1½ x 13¾ (8 x 350) | 3¾ (83) | PG-50703-40 | |
| | 316 SS | 1¾ x 13¾ (10 x 350) | 4 (102) | PG-50703-41 | |
| | 316 SS | 1½ x 13¾ (8 x 350) | 2½ (68) | PG-50703-42 | |
| F | 316 SS | 1½ x 13¾ (8 x 350) | 1½ to 2½ (15 to 61) | PG-50703-45 | |
| | 316 SS | 1½ x 21½ (8 x 550) | 1 to 4 (24 to 100) | PG-50703-46 | |
| G | 316 SS | 1½ x 21½ (8 x 550) | 2¾ (70) | PG-50703-51 | |
| | 316 SS | 1¾ x 21½ (10 x 550) | 5/8 (150) | PG-50703-52 | |
| H | 316 SS | 1½ x 13¾ (8 x 350) | 1¾ (45) | PG-50703-55 | |
| | 316 SS | 1½ x 13¾ (8 x 350) | 3½ (90) | PG-50703-56 | |
| | 316 SS | 1¾ x 21½ (10 x 550) | 5/8 (150) | PG-50703-58 | |

Search

For our complete line of IKA products and accessories, go to...

ColeParmer.com/IKA

Cole-Parmer® Sealed SS Pressure Transducers

No epoxies to cause signal instability or drift

- Stainless steel (SS) diaphragm and polysilicon strain gauge are bonded by vapor deposition



Specifications

Temp range (compensated): –4 to 176°F (–20 to 80°C)
Process connection: ¼" NPT(M)
Power: 9 to 30 VDC
Output: 4 to 20 mA (call for models with 1 to 5 V output)
Wetted materials: PH 17-4 SS
Dimensions (L x dia): 2¾" x 1½" (7 x 3.8 cm)



| Range | Catalog number | Price |
|---|-----------------------------|-------|
| Vacuum and compound transducers; ±0.4% accuracy (BFSL) | | |
| 30" Hg to 0 psi | PG-07356-10 | |
| 30" Hg to 30 psi | PG-07356-11 | |
| Pressure transducers; ±0.4% accuracy (BFSL) | | |
| 0 to 30 psi | PG-07356-51 | |
| 0 to 60 psi | PG-07356-52 | |
| 0 to 100 psi | PG-07356-53 | |
| 0 to 300 psi | PG-07356-54 | |
| 0 to 750 psi | PG-07356-55 | |
| 0 to 1000 psi | PG-07356-56 | |
| Pressure transducers; ±0.25% accuracy (BFSL); with NIST-traceable calibration report | | |
| 0 to 100 psi | PG-68001-04 | |
| 0 to 200 psi | PG-68001-05 | |

Cole-Parmer® High-Accuracy Pressure Transducers

Be more accurate, affordably

- SS sensor attached to SS electrode forms a variable capacitor



Specifications

Accuracy: ±0.25% full-scale
Temp range (compensated): –4 to 176°F (–20 to 80°C)
Process connection: ¼" NPT(M)
Power: 9 to 30 VDC
Wetted materials: PH 17-4 SS
Dimensions (L x dia): 2¾" x 1½" (7 x 3.8 cm)



| Range | 4 to 20 mA output | | 0.5 to 5.5 V output | |
|------------------------------------|-----------------------------|-------|-----------------------------|-------|
| | Catalog number | Price | Catalog number | Price |
| Compound transmitters | | | | |
| –14.7 to 0 psi | PG-68075-00 | | PG-68075-30 | |
| –14.7 to 15 psi | PG-68075-02 | | PG-68075-32 | |
| Gauge pressure transmitters | | | | |
| 0 to 5 psi | PG-68075-10 | | PG-68075-40 | |
| 0 to 10 psi | PG-68075-12 | | PG-68075-42 | |
| 0 to 25 psi | PG-68075-14 | | PG-68075-44 | |
| 0 to 50 psi | PG-68075-16 | | PG-68075-46 | |
| 0 to 100 psi | PG-68075-18 | | PG-68075-48 | |
| 0 to 250 psi | PG-68075-20 | | PG-68075-50 | |

Handheld Differential Pressure Meters

Intrinsically safe models for hazardous use

- Select one of nine units
- Feature zero, hold, maximum, minimum, and out-of-range, functions
- Smooth fluctuating pressure readings with filter function
- Displays average of last sixteen pressure readings



Specifications

Accuracy: ±0.2% full scale
Operating temperature: 32 to 122°F (0 to 50°C)
Temperature range (compensated): 68 to 86°F (20 to 30°C)
Media compatibility: clean, noncorrosive, inert gases
Process connections: ⅛" BSP
Units of measure: psi, " H₂O, cm H₂O, " Hg, mm Hg, mbar, torr, kPa, and kg/cm²
Power: one 9 V battery (included)
Approval (intrinsically safe models): EEx Ia IIC T4

| Range | Resolution | Catalog number | Price |
|--|------------|-----------------------------|-------|
| Intrinsically safe differential pressure gauges | | | |
| –5 to 5 psid | 0.001 psi | PG-68600-06 | |
| –30 to 30 psid | 0.01 psi | PG-68600-02 | |
| –100 to 100 psid | 0.1 psi | PG-68600-04 | |
| Non-intrinsically safe differential pressure gauges | | | |
| –5 to 5 psid | 0.001 psi | PG-68600-10 | |
| –30 to 30 psid | 0.01 psi | PG-68600-12 | |
| –100 to 100 psid | 0.1 psi | PG-68600-14 | |

[PG-95616-00](#) PVC tubing, 4 mm ID x 6 mm OD. Pack of 25 ft
[PG-17090-31](#) NIST-traceable calibration with data

Cole-Parmer® Economical Pressure Transducers

Accuracy in a compact, durable package

- High-performance ASIC married to a very stable polysilicon thin-film pressure sensor
- Sensor is electron-beam welded to a SS pressure fitting for high overpressure capability and outstanding durability against shock and vibration
- Circuitry is held securely within an internal cage and housed in a reinforced nylon enclosure



Specifications

Accuracy: ±1% span
Temp range (compensated): –40 to 257°F (–40 to 125°C)
Process connection: ¼" NPT (M)
Power: 9 to 36 VDC
Wetted materials: PH 17-4 SS
Dimensions (dia x L): 1" x 2½" (2.5 x 6.4 cm)

| Range | 4 to 20 mA output | | 1 to 5 VDC output | |
|------------------|-----------------------------|-------|-----------------------------|-------|
| | Catalog number | Price | Catalog number | Price |
| 30" Hg to 30 psi | PG-68900-48 | | PG-68900-62 | |
| 0 to 30 psi | PG-68900-50 | | PG-68900-64 | |
| 0 to 100 psi | PG-68900-52 | | PG-68900-66 | |
| 0 to 200 psi | PG-68900-54 | | PG-68900-68 | |
| 0 to 500 psi | PG-68900-56 | | PG-68900-70 | |
| 0 to 1000 psi | PG-68900-58 | | PG-68900-72 | |
| 0 to 3000 psi | PG-68900-60 | | PG-68900-74 | |



Cole-Parmer® Low-Pressure Mechanical Gauges

Perfect for accurately measuring pressures below 10 psi

- Manufactured with a chrome-plated case, use these gauges to measure low pressure in filter systems, cleanrooms, or fluidic systems



Specifications

Accuracy: ±1½% full scale
Dial size: 2½" (64 mm)
Operating temp: 0 to 150°F (0 to 66°C)
Wetted materials: brass
Lens: polycarbonate
Process connection: ¼" NPT(M)
Casing: black steel

| Range | Catalog number | Price |
|----------------------------|-----------------------------|-------|
| 0 to 10" H ₂ O | PG-68357-00 | |
| 0 to 15" H ₂ O | PG-68357-02 | |
| 0 to 30" H ₂ O | PG-68357-04 | |
| 0 to 60" H ₂ O | PG-68357-06 | |
| 0 to 100" H ₂ O | PG-68357-08 | |
| 0 to 3 psi | PG-68357-14 | |
| 0 to 5 psi | PG-68357-16 | |
| 0 to 10 psi | PG-68357-18 | |

[PG-17040-10](#) NIST-traceable calibration with data

WIKA® 3A Sanitary Gauges

Get better readings

- Glycerin fill reduces fluctuations
- Manufactured for clean-in-place (CIP) applications
- All-welded gauge assembly contains an external flush diaphragm
- Assembly meets the criteria set forth by 3A standards



Specifications

Accuracy: ±3-2-3% of span
Operating temp: 50 to 257°F (10 to 125°C)
Wetted materials: 316L SS
Lens: polycarbonate
Process connection: ¾" Tri-Clamp®
Casing: 304 SS
Dial size: 2½" (64 mm)

| Range | Resolution | Catalog number | Price |
|---------|------------|-----------------------------|-------|
| 30 psi | 0.5 psi | PG-68056-72 | |
| 60 psi | 1 psi | PG-68056-74 | |
| 100 psi | 2 psi | PG-68056-76 | |
| 160 psi | 2 psi | PG-68056-78 | |

[PG-17040-10](#) NIST-traceable calibration with data

Find even more online!
 Go to ColeParmer.com to see full product details.

Ashcroft® Digital Pressure Gauges

Simple to program

- Easy-to-read, 5-digit display with backlight and 20-segment bar graph
- Stainless steel sensor; IP67-rated case
- Features tare, min/max memory, and nine engineering plus one custom engineering units



Specifications

Accuracy: ±0.5% full-scale
Dial size: 2½" (64 mm)
Operating temp: –4 to 140°F (–20 to 60°C)
Units of measure: psi, Hg, cm Hg, mm Hg, kPa, mPa, bar, kg/cm², ft H₂O, and user-defined unit
Wetted materials: 17-4 ph and 316L stainless steel
Lens: polycarbonate
Process connection: ¼" NPT(M)
Power: two AA batteries (included)

| Range | Resolution | Catalog number | Price |
|-------------------|------------|-----------------------------|-------|
| 0 to 30" Hg | 0.01" Hg | PG-68334-01 | |
| 30" Hg to 30 psi | 0.01" Hg | PG-68334-03 | |
| 30" Hg to 100 psi | 0.01" Hg | PG-68334-07 | |
| 0 to 15 psi | 0.001 psi | PG-68334-09 | |
| 0 to 30 psi | 0.001 psi | PG-68334-11 | |
| 0 to 60 psi | 0.001 psi | PG-68334-13 | |
| 0 to 100 psi | 0.01 psi | PG-68334-15 | |
| 0 to 200 psi | 0.01 psi | PG-68334-17 | |
| 0 to 300 psi | 0.01 psi | PG-68334-19 | |
| 0 to 500 psi | 0.01 psi | PG-68334-21 | |
| 0 to 1000 psi | 0.1 psi | PG-68334-25 | |
| 0 to 5000 psi | 0.1 psi | PG-68334-27 | |
| 0 to 10,000 psi | 1 psi | PG-68334-31 | |

[PG-09376-01](#) Batteries, AA. Pk of 4

[PG-17040-12](#) NIST-traceable calibration with data

Ashcroft® Digital Sanitary Pressure Gauges

Get more flexibility

- Offer 3A rating with the functionality of a digital gauge
- Get readings how you need them—ten engineering units
- Unlimited deadband throughout its range



Specifications

Accuracy: ±0.25% full-scale
Dial size: 3½" (89 mm)
Operating temp: 14 to 140°F (10 to 60°C)
Units of measure: psi, " H₂O, ft H₂O, mPa, mbar, kPa, kg/cm², bar, " Hg, mm Hg
Display: 5-digit LCD, 0.88"H
Process connection: 1½" sanitary Tri-Clamp®
Wetted materials: 316 stainless steel
Casing: 300 stainless steel
Lens: polyester
Power: two C batteries

| Range | Resolution | Catalog number | Price |
|--------------|------------|-----------------------------|-------|
| 30 to 0" Hg | 0.0001" Hg | PG-68901-50 | |
| 0 to 30 psi | 0.0001 psi | PG-68901-51 | |
| 0 to 60 psi | 0.005 psi | PG-68901-52 | |
| 0 to 100 psi | 0.005 psi | PG-68901-53 | |
| 0 to 200 psi | 0.01 psi | PG-68901-54 | |

[PG-17040-12](#) NIST-traceable calibration with data

Cole-Parmer® Stirrers and Stirring Hot Plates

Get to work faster—reach max temperature in two minutes

- Stir bar doesn't dance—unique U-shaped magnet holds stir bar tightly
- Front-panel controls are positioned to prevent you from touching the hot plate
- Choose corrosion-resistant ceramic or more uniform aluminum top
- Stepless speed control provides smooth stirring action to 1500 rpm

A large, permanent drive magnet, ensures positive coupling of drive to stir bar. Permanently lubricated, brushless drive motor provides long, trouble-free operation.



230 VAC models

| Volume per position | Top plate | | Heating | | Speed range | 115 VAC, 60 Hz | | 230 VAC, 50 Hz | |
|----------------------------|----------------------------|----------|----------------------------|-----------------|-----------------|----------------|-------|----------------|-------|
| | Dimensions | Material | Temp range | Max load | | Cat. no. | Price | Cat. no. | Price |
| Stirrers | | | | | | | | | |
| 2.5 L | 6" x 6" (15.2 x 15.2 cm) | Aluminum | — | 15 lb (6.8 kg) | 100 to 1500 rpm | PG-04802-01 | | PG-04802-03 | |
| 10 L | 12" x 12" (30.5 x 30.5 cm) | Aluminum | — | 25 lb (11.4 kg) | 100 to 1500 rpm | PG-04802-11 | | PG-04802-13 | |
| Stirring hot plates | | | | | | | | | |
| 2.5 L | 6" x 6" (15.2 x 15.2 cm) | Aluminum | 120 to 700°F (49 to 371°C) | 15 lb (6.8 kg) | 100 to 1500 rpm | PG-04803-01 | | PG-04803-03 | |
| 2.5 L | 6" x 6" (15.2 x 15.2 cm) | Ceramic | 120 to 842°F (49 to 450°C) | 15 lb (6.8 kg) | 100 to 1500 rpm | PG-04803-05 | | PG-04803-07 | |
| 10 L | 12" x 12" (30.5 x 30.5 cm) | Aluminum | 120 to 700°F (49 to 371°C) | 25 lb (11.4 kg) | 100 to 1500 rpm | PG-04803-11 | | PG-04803-13 | |
| 10 L | 12" x 12" (30.5 x 30.5 cm) | Ceramic | 120 to 752°F (49 to 400°C) | 25 lb (11.4 kg) | 100 to 1500 rpm | PG-04803-15 | | PG-04803-17 | |

Equipment & Instrumentation

Cole-Parmer® StableTemp™ Stirrers and Stirring Hot Plates

Precision control ensures accurate, repeatable results

- Stay safe—hot surface warning until plate cools below 50°C
- Don't worry about spills—raised display diverts liquids away from critical components

Advanced Stirrer and Stirring Hot Plate

- Greater accuracy and repeatability for advanced applications
- Set ramp/dwell programs and save settings for quick repeat
- Always know your status—view actual and set values simultaneously
- Protect you and your sample with overtemperature protection



StableTemp



| Top plate | | Heating | | Stirring | | Power | | Catalog number | Price |
|--|----------|-------------------------------|--------------------|----------------|--------------|------------|-------|----------------|-------|
| Dimensions | Material | Temperature range | Max load | Speed range | Max capacity | VAC | Hz | | |
| Stirrers | | | | | | | | | |
| 4 1/4" x 4 1/4" (10.8 x 10.8 cm) | Ceramic | — | 25 lb (11.4 kg) | 50 to 1500 rpm | 1 L | 100 to 120 | 50/60 | PG-03406-01 | |
| | | | | | | 230 | 50/60 | PG-03406-06 | |
| 7 1/4" x 7 1/4" (18.4 x 18.4 cm) | Ceramic | — | 25 lb (11.4 kg) | 50 to 1500 rpm | 4 L | 100 to 120 | 50/60 | PG-03406-11 | |
| | | | | | | 230 | 50/60 | PG-03406-16 | |
| 10 1/4" x 10 1/4" (26 x 26 cm) | Ceramic | — | 25 lb (11.4 kg) | 50 to 1500 rpm | 6 L | 100 to 120 | 50/60 | PG-03406-31 | |
| | | | | | | 230 | 50/60 | PG-03406-36 | |
| Stirring hot plates | | | | | | | | | |
| 4 1/4" x 4 1/4" (10.8 x 10.8 cm) | Ceramic | 86 to 1004°F (30 to 540°C) | 25 lb (11.4 kg) | 50 to 1500 rpm | 1 L | 100 to 120 | 50/60 | PG-03407-01 | |
| | | | | | | 230 | 50/60 | PG-03407-06 | |
| 7 1/4" x 7 1/4" (18.4 x 18.4 cm) | Ceramic | 86 to 1004°F (30 to 540°C) | 25 lb (11.4 kg) | 50 to 1500 rpm | 4 L | 100 to 120 | 50/60 | PG-03407-11 | |
| | | | | | | 230 | 50/60 | PG-03407-16 | |
| 10 1/4" x 10 1/4" (26 x 26 cm) | Ceramic | 86 to 752°F (30 to 400°C) | 25 lb (11.4 kg) | 50 to 1500 rpm | 6 L | 100 to 120 | 50/60 | PG-03407-31 | |
| | | | | | | 230 | 50/60 | PG-03407-36 | |
| Advanced stirrer and stirring hot plate | | | | | | | | | |
| 7 1/4" x 7 1/4" (18.4 x 18.4 cm) | Ceramic | — | 25 lb (11.4 kg) | 50 to 1500 rpm | 4 L | 100 to 120 | 50/60 | PG-03406-41 | |
| | | | | | | 230 | 50/60 | PG-03406-46 | |
| 7 1/4" x 7 1/4" (18.4 x 18.4 cm) | Ceramic | 86 to 842°F (30 to 450°C) | 25 lb (11.4 kg) | 50 to 1500 rpm | 4 L | 100 to 120 | 50/60 | PG-03407-41 | |
| | | | | | | 230 | 50/60 | PG-03407-46 | |

[†]Based on water contained in a 20-L glass flat-bottom flask.

Stirrers & Hot Plates



IKA® Multiposition Stirrers and Stirring Hot Plates

Maintain consistent and silent operation with wear-free and maintenance-free motor

- Stir consistently in all positions
- Adjust speed in 10-rpm increments—speed remains constant
- Easy cleanup
- Stirring hot plates feature synchronous heating and stirring, and homogeneous temperature distribution

What's included: RO models include a removable transparent antislip cover, 5½-ft (1.7-m) cord and adapters to work with US, EU, Canada, Australia and UK outlets. RT models include a 5½-ft (1.7-m) cord and plug.



| Stirring positions | Volume per position | Top plate | | Temperature range | Speed range | Power | | Catalog number | Price |
|---|---------------------|----------------------------|-----------------|-----------------------------------|---------------|---------|-------|----------------|-------|
| | | Dimensions (W x D) | Material | | | VAC | Hz | | |
| RO multiposition stirrers | | | | | | | | | |
| 5 | 400 mL | 4¾" x 18½" (12 x 47 cm) | Stainless steel | — | 0 to 1200 rpm | 100–240 | 50/60 | PG-04671-91 | |
| 10 | | 7½" x 18½" (19 x 47 cm) | | | | | | | |
| 15 | | 11" x 18½" (28 x 47 cm) | | | | | | | |
| RT multiposition stirring hot plates | | | | | | | | | |
| 5 | 400 mL | 4⅝" x 19½" (11 x 49.5 cm) | Stainless steel | Room temperature to 248°F (120°C) | 0 to 1100 rpm | 115 | 50/60 | PG-04671-94 | |
| 10 | | 7⅝" x 19½" (18 x 49.5 cm) | | | | | | | |
| 15 | | 10⅝" x 19½" (27 x 49.5 cm) | | | | | | | |

[PG-17050-04](#) NIST-traceable calibration with data for stirrers

[PG-17002-27](#) NIST-traceable calibration with data for stirrer, heat

IKA® Large-Capacity Digital Stirrers

Digital control for your large, heavy-duty mixing

- Effectively stir up to 40 gallons (150 liters)

Powerful magnetic stirrers feature a flat, sturdy stainless steel casing—ideal for your heavy-duty mixing needs. Digital LED display allows for exact control. Unit features a timer for up to 56 minutes or set for continuous run.



| Dimensions | Material | Speed range | Max stirring capacity | Power | | Catalog number | Price |
|-------------------------------|-----------------|---------------|-----------------------|-------|-------|----------------|-------|
| | | | | VAC | Hz | | |
| 13" x 13" (33.0 x 33.0 cm) | Stainless steel | 0 to 1000 rpm | 50 L | 120 | 50/60 | PG-04671-80 | |
| | | | | 230 | | PG-04671-81 | |
| 19" x 19" (48.3 x 48.3 cm) | Stainless steel | 0 to 600 rpm | 150 L | 120 | 50/60 | PG-04671-82 | |
| | | | | 230 | | PG-04671-83 | |

[PG-04627-00](#) Large-volume stir bar, measures 4¼"L x 1⅛" dia (10.8 x 2.7 cm)

Cole-Parmer® Mono-Mold® Stir Bars

Resist spin out at high speeds

- Super-strong alnico V magnets remain coupled to drive magnets even at high speeds
- Chemically inert, low-friction, leakproof PTFE coating provides smooth spinning and maximum energy transfer



| Size | | With spinning ring | | Without spinning ring | |
|-----------------|----------------|--------------------|-------|-----------------------|-------|
| Length | Diameter† | Cat. no. | Price | Cat. no. | Price |
| 7/16" (11.1 mm) | 3/16" (4.8 mm) | — | — | PG-04775-10 | |
| 1/2" (12.7 mm) | 5/16" (7.9 mm) | PG-08548-00 | | PG-04770-20 | |
| 5/8" (15.9 mm) | 5/16" (7.9 mm) | PG-08549-00 | | PG-04770-30 | |
| 1" (25.4 mm) | 3/8" (9.5 mm) | PG-08550-00 | | PG-04770-40 | |
| 1½" (38.1 mm) | 3/8" (9.5 mm) | PG-08551-00 | | PG-04770-50 | |
| 2" (50.8 mm) | 3/8" (9.5 mm) | PG-08552-00 | | PG-04770-60 | |
| 2½" (63.5 mm) | 3/8" (9.5 mm) | PG-04775-75 | | — | — |
| 2½" (63.5 mm) | 1/2" (12.7 mm) | — | — | PG-04770-70 | |
| 3" (76.2 mm) | 1/2" (12.7 mm) | PG-04612-30 | | PG-04612-40 | |

†Diameter given does not include the diameter of the spinning ring.

Digi-Sense® General-Purpose Digital Pocket Thermometers

Don't risk accuracy—precalibrated



- 304 stainless steel penetration stem
- All include a protective case with pocket clip and battery



A. Pen-Style Pocket Thermometer offers fast response and laboratory accuracy. Features include probe guard, Min/Max/Hold, °F/°C switchable ranges and auto power-off to conserve battery life. Includes a NIST-traceable calibration report with data supplied by InnoCal.

B. Large Head Pocket Thermometer offers fast response and laboratory accuracy. The head of the thermometer is square allowing the unit not to roll when placed on a flat surface. Features include probe guard, °F/°C switchable ranges and auto power-off to conserve battery life. Includes a NIST-traceable calibration report with data supplied by InnoCal.

C. Waterproof Thermometer features a dishwasher-safe sealed case. Features °F/°C switchable ranges, a Min/Max button, and display updates every second. Use ON/OFF button to conserve battery life.

D. Key-Chain “Mini” Thermometer is pocket sized and perfect for carrying around anywhere. Clip onto a lab coat, jacket zipper, belt loop, backpack, or key ring. Features °F/°C switchable ranges and display updates every second. Use ON/OFF button to conserve battery life.

E. Long-Stem Thermometer has an 8" or 11½" long stem, °F/°C switchable ranges, and display updates every second. Use ON/OFF button to conserve battery life.

F. Rotating-Display Thermometer can be angled up to 180° for easy reading. Extra-long 8" stem is ideal for measuring reagents, water baths, air, liquids, and any semisolid. Features °F/°C selection. Use ON/OFF button to conserve battery life.

G. T-Handle Thermometer is designed for penetrating semisolids and features °F/°C switchable ranges. Display updates every second. Use ON/OFF button to conserve battery life or auto shutoff at one hour.

H. Pen-Style Thermometer has °F/°C switchable ranges and display updates every second. Data Hold button to freeze readings. Use ON/OFF button to conserve battery life.

I. NIST-Traceable Pen-Style Thermometer has a unique, flat-profile design. Probe guard snaps into handle to extend the overall length to 10¾" making it ideal for hard-to-reach locations. Features °F/°C switchable ranges, Hold button, display that updates every second, and an ON/OFF button to conserve battery life.



| Key letter | Range | Resolution | Accuracy† | Probe size | Catalog number | Price |
|------------|-----------------------------|--|----------------------|---------------------|------------------------------|-------|
| A | –40 to 482°F (–40 to 250°C) | 0.1°F (0.1°C) | 1.5% ± 2° full scale | 4.6" L x 0.16" dia | PG-20250-33 | |
| B | –40 to 482°F (–40 to 250°C) | 0.1°F (0.1°C) | 1.5% ± 2° full scale | 5" L x 0.16" dia | PG-20250-32 | |
| C | 14 to 392°F (–10 to 200°C) | 0.1° up to 199.9°; 1° above 200° | ±1.8°F (±1.0°C) | 5" L x 0.14" dia | PG-90003-00‡ | |
| D | –58 to 302°F (–50 to 150°C) | 0.1°F (0.1°C) | ±1.8°F (1.0°C) | 10" L x 0.14" dia | PG-90205-05 | |
| E | –58 to 302°F (–50 to 150°C) | 0.1° from –19 to 199.9°; 1° outside this range | ±1.8°F (±1°C) | 1" L x 0.14" dia | PG-90205-10 | |
| | –58 to 302°F (–50 to 150°C) | 0.1° from –19 to 199.9°; 1° outside this range | ±0.5°F (±0.2°C) | 8" L x 0.14" dia | PG-90225-15 | |
| | –58 to 572°F (–50 to 300°C) | 0.1° from –19 to 199.9°; 1° outside this range | ±1.8°F (±1°C) | 8" L x 0.14" dia | PG-90205-01 | |
| | –58 to 302°F (–50 to 150°C) | 0.1° from –19 to 199.9°; 1° outside this range | ±0.5°F (±0.2°C) | 11.5" L x 0.14" dia | PG-94460-40 | |
| F | –58 to 536°F (–50 to 280°C) | 0.1° from –20 to 200°F; 1° outside this range | ±1.8°F (1.0°C) | 11.5" L x 0.14" dia | PG-90205-02 | |
| G | –58 to 302°F (–50 to 150°C) | 0.1° from –19 to 199.9°; 1° outside this range | ±1.8°F (1.0°C) | 8" L x 0.14" dia | PG-90205-25 | |
| H | –58 to 302°F (–50 to 150°C) | 0.1° from –19 to 199.9°; 1° outside this range | ±1.8°F (±1.0°C) | 5.3" L x 0.14" dia | PG-90051-00 | |
| I | –58 to 572°F (–50 to 300°C) | 0.1° from –19 to 199.9°; 1° outside this range | ±2°F (±1.5°C) | 2.5" L x 0.16" dia | PG-90001-02 | |
| I | –58 to 572°F (–50 to 300°C) | 0.1° from –20 to 200°F; 1° outside this range | ±3°F (1.5°C) | 3.5" L x 0.14" dia | PG-90205-15 | |

†Basic accuracy shown, full accuracy available online. ‡Model 90003-00 does not come precalibrated.

[PG-17003-00](#) NIST-traceable recalibration with data for pocket thermometers

Don't Get Burned—Gain More Confidence in Your Readings

Digi-Sense® Precalibrated Thermocouple Thermometers

NEW

- Compact, affordable units provide accurate and dependable readings
- No need to worry about reading measurements—large, backlit LCD makes readings easy

General-Purpose Thermocouple Thermometers accept both type K or J thermocouple probes with miniconnector. The two- and four-channel models provide data logging of up to 18,000 readings; USB interface lets you easily download data to a PC for analysis with included software.

Professional Thermocouple Thermometers with IR Input deliver accurate readings in an ergonomic design. Models accept type K probes and an optional infrared (IR) wand for noncontact measurements from a distance. Two- and four-channel models continually scan each channel for real-time measurements. Data logging models allow you to download and analyze data fully.



20250-01

20250-17



| Description | General-purpose thermometers | | | Professional thermocouple thermometers with IR input | | | | |
|---------------------------|--|-----------------|-----------------|--|---------------|-------------|---------------|-------------|
| | Catalog number | PG-20250-01 | PG-20250-02 | PG-20250-03 | PG-20250-18 | PG-20250-17 | PG-20250-19 | PG-20250-20 |
| Thermocouple (T/C) inputs | 1 (type K or J) | 2 (type K or J) | 4 (type K or J) | 1 (type K) | 2 (type K) | 2 (type K) | 4 (type K) | |
| T/C range | K: -328 to 2501°F (-200 to 1372°C) J: -346 to 2012°F (-210 to 1100°C) | | | K: -328 to 2501°F (-200 to 1372°C) | | | | |
| IR range | — | | | -31 to 1022°F (-35 to 550°C), with optional IR wand 20250-24 | | | | |
| Resolution | 0.1°F/C below 1000°, 1°F/C above 1000° | | | 0.1°F/C below 1000°, 1°F/C above 1000° | | | | |
| T/C accuracy | Above -148°F (-100°C): ±[0.5% rdg + 1.8°F (1°C)] Below -148°F (-100°C): ±[0.5% rdg + 3.6°F (2°C)] Differentials: ±[0.5% rdg + 3.6°F (2°C)] | | | Above -148°F (-100°C): ±[0.15% rdg + 1.8°F (1°C)] Below -148°F (-100°C): ±[0.5% rdg + 3.6°F (2°C)] Differentials: ±[0.5% rdg + 1.8°F (1°C)] | | | | |
| IR accuracy | — | | | Above 14°F (-10°C): ±[2.0% rdg + 3.6°F (2°C)]; Below 14°F (-10°C): ±9°F (5°C); T/C-IR differentials: ±[2.0% rdg + 5.4°F (3°C)] above 14°F (-10°C); ±11°F (6°C) below 14°F (-10°C) | | | | |
| Data logging | No | 18,000 points | | No | 18,000 points | | 10,000 points | |
| USB interface | No | Yes | | No | Yes | | Yes | |
| Temp differential | No | Yes | | Yes | | | | |
| Scan function | No | | | No | Yes | | | |
| Price | | | | | | | | |

PG-20250-24 Optional infrared wand for professional thermocouple thermometers only. Features 8:1 distance-to-spot ratio. Measures 6½" x 2" x 1½" (16.4 x 5 x 4 cm). Includes one 9 V battery

✓ **Save time and money**—precalibrated to NIST-traceable standards before you receive it

✓ **Don't let probe errors** interfere with readings—electronic offset compensates for errors

✓ **Choose your readout**—measures in °F, °C, or Kelvin (K) with 0.1 resolution

✓ **Features for your convenience:**

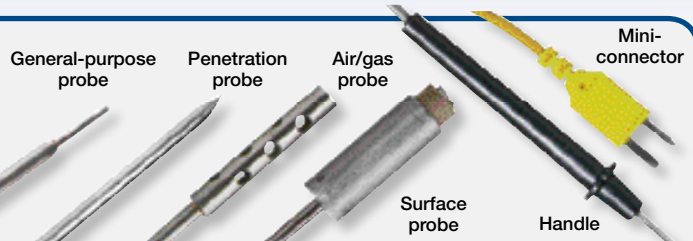
- Min/Max/Avg
- Hold
- Relative time stamp
- Auto-off to save battery life

✓ **Take measurements from a distance with optional infrared wand on Professional series**

Precalibration provided by
INNOCAL®
Precalibration | Recalibration | Onsite
866-InnoCal (866-466-6225)
InnoCalSolutions.com

Some of Our Most Popular Thermocouple Probes

All probes include a 5-ft coiled cord with strain relief spring that protects from repeated flexing and tugging. Ergonomic, easy-to-grip glass-filled nylon handle provides maximum insulation and impact resistance; fingerstops prevent fingers from sliding and prevent probe from rolling. Rugged thermoset plastic miniconnector also included.



| Type | General-purpose probes (5" L) | | | Penetration probes (4" L) | | | Air/gas probes (8.5" L) | | | Surface probes (9.9" L) | | |
|------|-------------------------------|-------------|-------|---------------------------|-------------|-------|-------------------------|-------------|-------|-------------------------|-------------|-------|
| | Max temp | Cat. no. | Price | Max temp | Cat. no. | Price | Max temp | Cat. no. | Price | Max temp | Cat. no. | Price |
| J | 1400°F (760°C) | PG-08517-55 | | 1400°F (760°C) | PG-08517-65 | | 1000°F (537°C) | PG-08517-75 | | 1200°F (649°C) | PG-08517-60 | |
| K | 1652°F (900°C) | PG-08516-55 | | 1652°F (900°C) | PG-08516-65 | | 1000°F (537°C) | PG-08516-75 | | 1200°F (649°C) | PG-08516-60 | |
| T | 752°F (400°C) | PG-08500-55 | | 752°F (400°C) | PG-08500-65 | | 1000°F (537°C) | PG-08500-75 | | 650°F (343°C) | PG-08500-60 | |

Digi-Sense® Precalibrated Thermometers

Perfect for the lab to production floor

NEW

- Reliable measurements, guaranteed! Precalibrated to NIST-traceable standards
- Electronic offset function allows compensation of probe errors
- Robust, reliable handheld temperature meters work in tough environments

Single-Input Thermometers feature an easy-to-use control panel, Min/Max and Hold functions, offset adjustment, °F/°C selection, backlit display, low-battery indicator, and auto shutoff.

Dual-Input Data Logging Thermometers store up to 16,000 sets of readings in real time, and data can be downloaded to your PC via a USB port. Logging interval is selectable from 1 second to 60 minutes. Meters also feature Min/Max, Hold, and average functions; differential temperature; offset adjustment; °F/°C selection; time stamp/clock; out-of-range alarm with audible/visible indicator; backlit display; low-battery indicator; and auto shutoff.

What's included: protective rubber armor boot with built-in stand, one 9 V battery, and NIST-traceable calibration report with data supplied by InnoCal. Data logging models 20250-92, -94, and -96 also include a USB cable and software.



Specifications

Power: one 9 V battery (included)

Models 20250-92, -94, -96:

Data logging: 16,000 sets of readings



| Description | Range | Resolution | Accuracy | Catalog number | Price |
|------------------------------|--|--|--|-----------------------------|-------|
| Thermocouple meters | | | | | |
| Single input | Type J: -328 to 1832°F (-200 to 1000°C) Type K: -418 to 2501°F (-250 to 1372°C) | 0.1°F (0.1°C) from -148 to 1832°F (-99.9 to 999.9°C); 1°F (1°C) outside range | ±1% of reading + 1.8°F (1°C) below -148°F (-99.9°C); ±1% of reading + 0.9°F (0.5°C) above -148°F (-99.9°C) | PG-20250-91 | |
| Dual input with data logging | Type T: -418 to 752°F (-250 to 400°C) | | | PG-20250-92 | |
| Thermistor meters | | | | | |
| Single input | -40 to 257°F (-40 to 125°C) | 0.1°F (0.1°C) | ±0.9°F (±0.5°C) from 32 to 158°F (0 to 70°C); ±2°F (1°C) outside range | PG-20250-93 | |
| Dual input with data logging | | | | PG-20250-94 | |
| RTD meters | | | | | |
| Single input | -320 to 1562°F (-200 to 850°C) | 0.1°F (0.1°C) from -148 to 1562°F (-99.9 to 850°C); 1°F (1°C) outside range | ±1.5°F (0.8°C) from -148 to 392°F (-99.9 to 199.9°C); ±2°F (1°C) ±0.5% of reading outside range | PG-20250-95 | |
| Dual input with data logging | | | | PG-20250-96 | |

Equipment & Instrumentation

Temperature

Digi-Sense® Precalibrated Infrared Thermometers

Save money and prevent breakdowns—easily locate hot and cold spots

- Reliable measurements—guaranteed! Precalibrated to NIST-traceable standards
- Get easy readings from a distance—just aim, pull trigger and read!
- Continuous scanning via trigger lock



General-Purpose Infrared Thermometers feature Min/Max and Hold functions, °F/°C selectable units, single targeting laser, and large backlit LCD for easy reading. Models 20250-05 and -06 also offer adjustable emissivity and temperature alarm with indicator.

Professional Infrared Thermometers provide high distance-to-sight ratio and enhanced temperature range in a heavy-duty housing. Get a more precise measurement area with dual targeting lasers and external type K thermocouple (one included). Min/Max/Avg and Hold, temperature differential, high/low alarms, adjustable emissivity, data logging, and more!



Protective lens cover with magnetic lock



20250-05

20250-08

| Description | General-purpose infrared thermometers | | | Professional infrared thermometers | |
|-------------------------|---------------------------------------|------------------------------|------------------------------|--|-------------------------------|
| Catalog number | PG-20250-04 | PG-20250-05 | PG-20250-06 | PG-20250-07 | PG-20250-08 |
| Range (IR) | -4 to 630°F (-20 to 332°C) | -31 to 1000°F (-35 to 537°C) | -31 to 1472°F (-35 to 800°C) | -58 to 3002°F (-50 to 1650°C) | -58 to 3362°F (-50 to 1850°C) |
| Resolution | 0.1°F/°C | 0.1°F/°C below 1000°, 1°F/°C | | 0.1°F/°C below 1000°, 1°F/°C above 1000° | |
| Response time | Less than 1 sec | Less than 300 ms | | Less than 150 ms | |
| Distance-to-sight ratio | 10:1 | 12:1 | 20:1 | 30:1 | 50:1 |
| Emissivity | 0.95 fixed | 0.10 to 1.0 adjustable | | 0.10 to 1.0 adjustable | |
| Laser sighting | Single Class II laser | | | Dual Class II laser | |
| Temperature alarm | No | Yes | | Yes | |
| USB interface | No | | | Yes (cable and software included) | |
| Data logging | No | | | Yes, 100 internal readings | |
| Power | One 9 V battery | | | One 9 V battery | |
| Price | | | | | |





Digi-Sense™ Temperature and Temp/RH USB Data Loggers

Use just about anywhere—portable or mountable design

- Store, download, and analyze up to 32,000 data points with included software for analysis, graphing, printing
- Select your sample rate and level alarms with user-definable settings
- Choose your start-up mode: immediate, manual, or real-time

NEW



20250-41



20250-43

Temperature Data Logger (20250-41) records up to 32,000 temperature data points from its internal temperature sensor. **Temperature/RH Data Loggers (20250-42, -43)** record 16,000 temperature and 16,000 RH data points from its internal sensors. The 20250-43 features a hiPG-contrast LCD that shows measured temperature in °F or °C as set by the user. **Temperature Type K Data Logger (20250-44)** records remote high temperatures as measured by a 38" (97 cm) thermocouple probe.

What's included: software, mounting clip and hardware, protective plastic cover, and battery. Model 20250-44 also includes a type K thermocouple.



| Description | Temperature | Temperature/RH | Temperature/RH with LCD | Temperature, type K |
|-----------------------|--|--|--|---------------------------------|
| Catalog number | PG-20250-41 | PG-20250-42 | PG-20250-43 | PG-20250-44 |
| Range | -40 to 158°F (-40 to 70°C) | -40 to 158°F (-40 to 70°C), 0 to 100% RH (noncondensing) | -40 to 158°F (-40 to 70°C), 0 to 100% RH (noncondensing) | -328 to 2498°F (-200 to 1370°C) |
| Resolution | 0.1°F (0.1°C) | 0.1°F (0.1°C) | 0.1°F (0.1°C) | 0.1°F (0.1°C) |
| Accuracy | ±2°F (±1°C) | ±2°F (±1°C); ±3% RH | ±2°F (±1°C); ±3% RH | ±2°F (±1°C) |
| Memory | 32,000 data points | 32,000 data points (16,000 per channel) | 32,000 data points (16,000 per channel) | 32,000 data points |
| Reading rate | 1 reading every 2 seconds to 1 reading every 24 hours; user selectable | | | |
| Power | 3.6 V lithium battery, user replaceable; 1-year battery life typical | | | |
| Price | | | | |

[PG-17002-20](#) NIST-traceable calibration with data for temperature data logger

[PG-17030-20](#) NIST-traceable calibration with data for temperature/RH data logger

Digi-Sense™ Temperature Data Loggers

No need to download data first—display shows measurements and alarm duration

- Be alerted to out-of-limit conditions of sensitive items
- Download and analyze data with time-and-date stamp via required software
- Program and edit programs via software, even on multiple units

Temperature Data Logger is reusable and reprogrammable, ideal for the monitoring of perishable items during transport. **Temperature/Relative Humidity Data Logger** is ideal for transportation temperature monitoring, and for use with products that are sensitive to humidity levels. **Cryogenic Temperature Data Logger** has an external, 4.35" (110.5 mm) long stainless steel temperature probe—perfect for monitoring cryo-materials, reagents, samples, pharmaceuticals, and frozen food items.

What's included: battery and individually serialized NIST-traceable calibration certificate. Kit 18005-01 comes with five temperature data loggers, one copy of data download and analysis software, and one cradle with USB cable.



18005-00

NEW



Cradle
18005-03



Sleeves
18005-02



| Description | Temperature data logger | Temperature data logger kit | Temperature/RH data logger | Cryogenic temperature data logger |
|---|--|--|--|--|
| Catalog number | PG-18005-00[†] | PG-18005-01 | PG-18005-05[†] | PG-18005-06[†] |
| Temp range | -31 to 122°F (-35 to 50°C) | -31 to 122°F (-35 to 50°C) | -20.2 to 161.6°F (-29 to 72°C) | -328 to 161.6°F (-200 to 72°C) |
| Temp resolution | 0.1°F/C | 0.1°F/C | 0.1°F/C | 0.1°F/C |
| Temp accuracy | ±0.4°F (±0.2°C) from 32 to 50°F (0 to 10°C); ±2°F (±1°C) otherwise | ±0.4°F (±0.2°C) from 32 to 50°F (0 to 10°C); ±2°F (±1°C) otherwise | ±0.4°F (±0.2°C) from 32 to 50°F (0 to 10°C); ±1°F (±0.5°C) otherwise | ±0.4°F (±0.2°C) from 32 to 86°F (0 to 30°C); ±2°F (±1°C) otherwise |
| RH range | — | — | 0 to 100% | — |
| Memory capacity | 7680 readings | 7680 readings | 30,720 readings | 64,000 readings |
| Sampling rate | Adjustable from every 2 seconds to every 24 hours | | | |
| Required for data transfer [†] | Cradle 18005-03; Software 18005-04 | Cradle and software included | Cable 18005-07; Software 18005-04 | Cable 18005-07; Software 18005-04 |
| Power | CR2450 3V lithium coin cell battery (included) | | | |
| Price | | | | |

[†]Order required items separately at right.



[PG-18005-03](#) Cradle and USB cable for temperature data logger

[PG-18005-07](#) USB cable for temp/RH and cryogenic data loggers

[PG-18005-04](#) Software for data analysis and setting parameters

[PG-18005-02](#) Data logger sleeves. Pack of 100

[PG-17102-20](#) NIST-traceable recalibration for temperature data logger

Intrinsically Safe Temperature and Temperature/Humidity Data Loggers

Use in hostile environments such as EtO sterilization

- Intrinsically safe design for Class 1, Division 1, groups A, B, C, and D applications and non-incendive for Class I, Division 2, groups ABCD hazardous (classified) locations
- Download data in seconds via docking station or multiplexer
- Stands up to your demands—rugged 316 stainless steel design
- Know when to change your batteries—life indicator alerts when low

These data loggers feature ultra-fast communication speed, allowing you to program and download data in seconds using the required single-port docking station or multiplexer (both sold separately). Communications are established automatically through metal contacts in the docking station or multiplexer. Up to six loggers can be programmed simultaneously using the multiplexer and up to 18 by daisy-chaining three multiplexers through one USB port.

Temp1000IS Data Logger features a highly accurate precision 100 Ω RTD sensing element. The external 1" (2.5 cm) RTD probe provides a faster response time in comparison to most standard internal sensors.

RHTemp1000IS Data Logger features a cutting-edge thermoset-polymer capacitive humidity sensor that provides the longest operating life in an ethylene oxide-based (EtO) sterilization process. With the ability to maintain resistance against various chemical liquids and vapors like isopropyl, benzene, toluene, formaldehydes, oils, and common cleaning agents, this sensor is ideal for EtO processes, as well as continual, long-term use.

What's included: software and 3.6 V lithium battery.



REQUIRED System Components

- 1) Data logger
- 2) Docking station (single or 6 port)

NEW



18003-21

18003-43



Docking station
23000-98



Multiplexer docking station
23001-90
(data loggers sold separately)



Rated **INTRINSICALLY SAFE**

| Model | Temp1000IS | RHTemp1000IS |
|-----------------------|---|--|
| Catalog number | PG-18003-21 | PG-18003-43 |
| Range | -40 to 176°F (-40 to 80°C) | -40 to 176°F (-40 to 80°C), 0 to 100% RH (noncondensing) |
| Resolution | 0.02°F (0.01°C) | 0.02°F (0.01°C), 0.1% RH |
| Accuracy | ±1°F (±0.5°C) from 0 to 50°C | ±1°F (±0.5°C) from 0 to 55°C, ±3.0% RH |
| Memory | 32,767 data points | 16,350 data points per channel |
| Reading rate | 1 reading every 2 seconds to 1 reading every 12 hours | 1 reading every 2 seconds to 1 reading every 24 hours |
| Operating environment | -40 to 176°F (-40 to 80°C), 0 to 95% RH | -4 to 176°F (-20 to 80°C), 0 to 95% RH |
| Dimensions (L x dia) | 2 5/8" x 1" (6.7 x 2.5 cm) | 1 3/4" x 1" (4.2 x 2.5 cm) |
| Power | 3.6 V lithium battery, user replaceable | 3.6 V lithium battery, user replaceable |
| Price | | |

Accessories

[PG-23000-98](#) USB docking station, 1 port

[PG-23001-90](#) Multiplexer docking station, 6 ports

[PG-17002-20](#) NIST-traceable calibration with data for temperature data logger

[PG-17030-20](#) NIST-traceable calibration with data for temperature/humidity data logger



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Sample Prep and Storage Made Easy



Cole-Parmer® Nitrile Gloves page 111

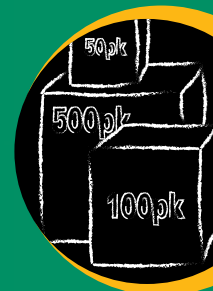
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WHIRL-PAK® Sterile Sampling Bags, LDPE

Keep samples safe—easy-seal bags hold solids and liquids

- Quick and easy sealing—flip bag around wire/tape and bend to seal
- No more poking—puncture-proof tabs keep wire intact even after extensive use

Sampling Bags are available with or without a white labeling area.

“Speci-Sponge” Bags are designed to sample surfaces and equipment for *Listeria*, *Salmonella*, and other food-borne pathogens; contain a 1½" x 3" (3.8 x 7.6 cm) sponge that is free of bactericides and noninhibitory; with white labeling area.

Sodium Thiosulfate Bags are EPA-compliant for potable water collection; contain a nontoxic, nonnutritive 10-mg active ingredient tablet of sodium thiosulfate to neutralize the chlorine at the point of collection; with white labeling area.

High-Temperature Bag is for hot fill samples with a temperature up to 215°F (102°C). The FDA-compliant film is a blend of low-density polyethylene and nylon that will hold liquids, solids, sauces, gravies, and other samples having a high temperature. Bag is self standing and does not need a rack or special holder to keep it upright, making sample collection safe and easy. With white labeling area. **Caution:** Do not put bag in boiling water.

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STERILE

| Capacity oz (mL) | Size (W x L) | Thickness (mil) | Catalog number | Qty/pk | Price/pk |
|---|-----------------------------|-----------------|----------------|--------|----------|
| Sampling bags without white labeling area | | | | | |
| 4 (118) | 3" x 7¼" (7.6 x 18.4 cm) | 2.25 | PG-06499-10 | 500 | |
| 18 (532) | 4½" x 9" (11.4 x 22.9 cm) | 2.5 | PG-06499-20 | 500 | |
| 24 (710) | 6" x 9" (15.2 x 22.9 cm) | 3.0 | PG-06499-30 | 500 | |
| 36 (1065) | 5" x 15" (12.7 x 38.1 cm) | 3.0 | PG-06499-40 | 500 | |
| 42 (1242) | 6" x 15" (15.2 x 38.1 cm) | 3.0 | PG-06499-50 | 500 | |
| 69 (2041) | 7½" x 15" (19.1 x 38.1 cm) | 3.0 | PG-06499-54 | 500 | |
| Standup sampling bags with white labeling area | | | | | |
| 4 (118) | 3" x 7¼" (7.6 x 18.4 cm) | 2.5 | PG-06499-16 | 500 | |
| 18 (532) | 4½" x 9" (11.4 x 22.9 cm) | 3.0 | PG-06499-21 | 500 | |
| 24 (710) | 6" x 9" (15.2 x 22.9 cm) | 3.0 | PG-06499-31 | 500 | |
| 27 (798) | 5" x 12" (12.7 x 30.5 cm) | 3.0 | PG-06499-32 | 250 | |
| 36 (1065) | 5" x 15" (12.7 x 38.1 cm) | 4.0 | PG-06499-33 | 250 | |
| 42 (1242) | 6" x 15" (15.2 x 38.1 cm) | 4.0 | PG-06499-34 | 250 | |
| 69 (2041) | 7½" x 15" (19.1 x 38.1 cm) | 4.0 | PG-06499-35 | 250 | |
| Sampling bags with white labeling area | | | | | |
| 2 (58) | 3" x 5" (7.6 x 12.7 cm) | 2.5 | PG-06499-60 | 500 | |
| 4 (118) | 3" x 7¼" (7.6 x 18.4 cm) | 2.25 | PG-06499-70 | 500 | |
| 7 (207) | 3¾" x 7" (9.5 x 17.8 cm) | 2.5 | PG-06499-72 | 500 | |
| 13 (384) | 5¼" x 7½" (13.3 x 19.1 cm) | 2.5 | PG-06499-74 | 500 | |
| 18 (532) | 4½" x 9" (11.4 x 22.9 cm) | 2.5 | PG-06499-80 | 500 | |
| 24 (710) | 6" x 9" (15.2 x 22.9 cm) | 3.0 | PG-06499-85 | 500 | |
| 27 (798) | 5" x 12" (12.7 x 30.5 cm) | 3.0 | PG-06499-87 | 500 | |
| 69 (2041) | 7½" x 15" (19.1 x 38.1 cm) | 3.0 | PG-06499-89 | 500 | |
| 92 (2721) | 10" x 15" (25.4 x 38.1 cm) | 4.0 | PG-06499-94 | 250 | |
| 123 (3637) | 10" x 20" (25.4 x 50.8 cm) | 4.0 | PG-06499-98 | 250 | |
| 184 (5441) | 15" x 20" (38.1 x 50.8 cm) | 4.0 | PG-06499-99 | 100 | |
| "Speci-Sponge" bags for surface sampling with sponge | | | | | |
| 18 (532) | 4½" x 9" (11.4 x 22.9 cm) | 2.5 | PG-06499-13 | 100 | |
| 55 (1627) | 7½" x 11¾" (19.1 x 29.8 cm) | 4.0 | PG-06499-14 | 100 | |
| 18 (532) | 4" x 9" (10.2 x 22.9 cm) | 2.5 | PG-06499-52† | 100 | |
| Sodium thiosulfate bags for water sampling with tablet | | | | | |
| 3¾ (100) | 3" x 7¼" (7.6 x 18.4 cm) | 2.5 | PG-06499-90 | 100 | |
| 10½ (300) | 4½" x 9" (11.4 x 22.9 cm) | 2.5 | PG-06499-95 | 100 | |
| High-temperature bag | | | | | |
| 18 (532) | 4½" x 9" (11.4 x 22.9 cm) | 3.0 | PG-06498-16 | 500 | |

†Model 06499-52 has a sterile glove.

Accessories

PG-66203-10 Carrying rack for 2- and 4-oz bags. Double-grid design keeps bags upright and has 15 compartments. Vinyl coated, autoclavable

PG-66203-00 Carrying rack for 18-oz bags. Double-grid design keeps bags upright. Rack has 20 compartments. Vinyl coated, autoclavable

PG-06498-12 Water scoop, 18" (45.7 cm) L coated handle. Two alligator clips hold a variety of bag sizes



Standup bags stay upright



Water scoop holds bag open for easy filling



Rack



Disposable Griffin Low-Form Beakers, PP

Molded-in graduations won't wear off

- No need to convert volumes—graduated in mL and oz
- Won't stick together—stacking rib for easier separation
- Autoclavable



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20% off on 120+ 15% off on 30 to 119 10% off on 6 to 29 packs or cases

| Capacity mL (oz) | Graduations (mL) | Catalog number | Qty/pk | Price/pk |
|------------------|------------------|-----------------------------|--------|----------|
| 15 (0.5) | 5 | PG-06006-12 | 100 | |
| 15 (0.5) | 5 | PG-06006-15 | 1000 | |
| 30 (1) | 5 | PG-06006-22 | 100 | |
| 30 (1) | 5 | PG-06006-25 | 1000 | |
| 50 (1.7) | 5 | PG-06006-32 | 100 | |
| 50 (1.7) | 5 | PG-06006-35 | 1000 | |
| 100 (3.5) | 5 | PG-06006-42 | 100 | |
| 100 (3.5) | 5 | PG-06006-45 | 1000 | |
| 150 (5) | 5 | PG-06006-52 | 100 | |
| 150 (5) | 5 | PG-06006-55 | 1000 | |
| 250 (8) | 10 | PG-06006-63 | 50 | |
| 250 (8) | 10 | PG-06006-65 | 500 | |
| 400 (13) | 25 | PG-06006-72 | 50 | |
| 400 (13) | 25 | PG-06006-75 | 500 | |
| 600 (20) | 25 | PG-06006-83 | 25 | |
| 600 (20) | 25 | PG-06006-85 | 500 | |

DON'T RISK IT!

Our chemical compatibility database provides important information on chemical resistance—check it out at ColeParmer.com/ChemChart



PYREX® Brand 1003 Heavy-Duty Griffin Beakers

Get the best strength even under harsh conditions

- Measure initial quantity and how much is used—double metric scale on 250- to 4000-mL sizes
- Know your solution—extra-large marking spot for easier identification
- Reference: ASTM E-960



Buy More...Save More!
15% off on 10+ packs or cases 10% off on 5 to 9 packs or cases

| Capacity mL (oz) | Graduation range (mL) | Graduation interval (mL) | Catalog number | Qty | Price |
|------------------|-----------------------|--------------------------|-----------------------------|-------|-------|
| 150 (5) | 20 to 140 | 20 | PG-34512-06 | 12/pk | |
| 150 (5) | 20 to 140 | 20 | PG-34512-26 | 48/cs | |
| 250 (8) | 25 to 200 | 25 | PG-34512-07 | 12/pk | |
| 250 (8) | 25 to 200 | 25 | PG-34512-27 | 48/cs | |
| 400 (13) | 25 to 325 | 25 | PG-34512-08 | 12/pk | |
| 400 (13) | 25 to 325 | 25 | PG-34512-28 | 48/cs | |
| 600 (20) | 50 to 500 | 50 | PG-34512-09 | 6/pk | |
| 600 (20) | 50 to 500 | 50 | PG-34512-29 | 36/cs | |
| 1000 (32) | 50 to 1000 | 50 | PG-34512-11 | 6/pk | |
| 1000 (32) | 50 to 1000 | 50 | PG-34512-31 | 24/cs | |
| 2000 (64) | 200 to 1800 | 200 | PG-34512-13 | 4/pk | |
| 2000 (64) | 200 to 1800 | 200 | PG-34512-33 | 8/pk | |
| 4000 (128) | 500 to 3500 | 250 | PG-34512-15 | 1/pk | |
| 4000 (128) | 500 to 3500 | 250 | PG-34512-35 | 4/pk | |

Cole-Parmer® Tri-Corner Beakers, PP

Easy pouring from three sides



- Easily mix on stirrer—flat bottom keeps stir bars centered
- Accurate to ±5%; molded graduations
- Withstand temperatures to 250°F (121°C)
- Autoclavable



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20% off on 120+ 15% off on 30 to 119 10% off on 6 to 29 packs or cases

| Capacity mL (oz) | Graduations (mL) | Cat. no. | Qty/pk | Price/pk |
|--------------------|------------------|-----------------------------|--------|----------|
| 50 (1.5) | 10 | PG-06020-01 | | |
| 100 (3.5) | 10 | PG-06020-03 | 100 | |
| 250 (8) | 20 | PG-06020-05 | | |
| 400 (13) | 40 | PG-06020-07 | 100 | |
| 800 (26) | 50 | PG-06020-09 | | |
| 1000 (32) | 50 | PG-06020-11 | | |
| Five of each above | — | PG-06010-07 | 30 | |

PYREX® Brand 1000 Griffin Low-Form Beakers

Stand up to thermal shock

- Uniform wall thickness offers optimal balance of thermal shock resistance and mechanical strength
- Know how much is left and how much is gone—double graduation scale indicates approximate content (on 250- to 400-mL sizes only)
- No mystery liquids—extra-large marking spot for easy identification
- Reference: ASTM E-960



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15% off on 10+ packs or cases 10% off on 5 to 9 packs or cases

| Capacity mL (oz) | Graduation range (mL) | Graduation interval (mL) | Catalog number | Qty/pk | Price/pk |
|---|-----------------------|--------------------------|-----------------------------|-----------------------------|----------|
| 10 (1/2) | — | — | PG-34502-01 | | |
| 20 (2/3) | 5 to 15 | 5 | PG-34502-02 | 12 | |
| 30 (1) | 5 to 25 | 10 | PG-34502-03 | | |
| 50 (1 1/4) | 10 to 40 | 10 | PG-34502-04 | | |
| 100 (3) | 20 to 80 | 10 | PG-34502-05 | 12 | |
| 150 (5) | 20 to 140 | 10 | PG-34502-06 | | |
| 250 (8) | 25 to 200 | 25 | PG-34502-07 | | |
| 400 (13) | 25 to 325 | 25 | PG-34502-08 | | |
| 600 (20) | 50 to 500 | 50 | PG-34502-09 | 6 | |
| 800 (27) | 50 to 750 | 50 | PG-34502-10 | 6 | |
| 1000 (32) | 50 to 1000 | 50 | PG-34502-11 | 6 | |
| 1500 (51) | 200 to 1400 | 100 | PG-34502-12 | 4 | |
| 2000 (64) | 200 to 2000 | 100 | PG-34502-13 | 4 | |
| 3000 (96) | 250 to 2500 | 125 | PG-34502-14 | 1 | |
| 4000 (128) | 500 to 3500 | 250 | PG-34502-15 | 1 | |
| 10 (1/2) | — | — | PG-34502-21 | | |
| 20 (2/3) | 5 to 15 | 5 | PG-34502-22 | 48 | |
| 30 (1) | 5 to 25 | 10 | PG-34502-23 | | |
| 50 (1 1/4) | 10 to 40 | 10 | PG-34502-24 | | |
| 100 (3) | 20 to 80 | 10 | PG-34502-25 | 48 | |
| 150 (5) | 20 to 140 | 10 | PG-34502-26 | | |
| 250 (8) | 25 to 200 | 25 | PG-34502-27 | | |
| 400 (13) | 25 to 325 | 25 | PG-34502-28 | | |
| 600 (20) | 50 to 500 | 50 | PG-34502-29 | 36 | |
| 800 (27) | 50 to 750 | 50 | PG-34502-30 | 24 | |
| 1000 (32) | 50 to 1000 | 50 | PG-34502-31 | 24 | |
| 1500 (51) | 200 to 1400 | 100 | PG-34502-32 | 16 | |
| 2000 (64) | 200 to 2000 | 100 | PG-34502-33 | 8 | |
| 3000 (96) | 250 to 2500 | 125 | PG-34502-34 | 6 | |
| 4000 (128) | 500 to 3500 | 250 | PG-34502-35 | 6 | |
| Starter set contains one each of 50 mL, 100 mL, 250 mL, 600 mL, 1000 mL | | | | PG-34502-90 | 5 |

Cole-Parmer® Wide-Mouth Bottles, LDPE, HDPE, PP

Wide-mouth opening provides easier filling and sampling

- Offered in pack quantities or bulk pack quantities to meet your specific requirements
- Reliable and sturdy
- Choose from three materials; all include a leakproof PP closure

HDPE Bottles are manufactured with FDA-compliant resin for noncontaminating storage of chemicals and food-grade products.

LDPE Bottles are translucent and ideal for food and general-use laboratory applications.

PP Bottles are rigid and offer superior chemical resistance; perfect for storage and sampling of liquids and solids.

Autoclavable.



Buy More...Save More!

20% off on 120+
15% off on 30 to 119
10% off on 6 to 29 packs or cases



| Capacity mL (oz) | Cap size | Catalog number | Qty/ pk | Price/ pk | Catalog number | Qty/ cs | Price/ cs |
|------------------|----------|-----------------------------|---------|-----------|-----------------------------|---------|-----------|
| HDPE | | | | | | | |
| 60 (2) | 22 mm | PG-06045-18 | 12 | | PG-06045-23 | 72 | |
| 125 (4) | 28 mm | PG-06045-24 | 12 | | PG-06045-25 | 72 | |
| 250 (8) | 28 mm | PG-06045-26 | 12 | | PG-06045-27 | 72 | |
| 500 (16) | 28 mm | PG-06045-28 | 12 | | PG-06045-29 | 48 | |
| 1000 (32) | 28 mm | PG-06045-44 | 6 | | PG-06045-31 | 24 | |
| 2000 (64) | 45 mm | PG-06045-46 | 1 | | PG-06045-33 | 6 | |
| LDPE | | | | | | | |
| 60 (2) | 22 mm | PG-06045-02 | 12 | | PG-06045-03 | 72 | |
| 125 (4) | 28 mm | PG-06045-04 | 12 | | PG-06045-05 | 72 | |
| 250 (8) | 28 mm | PG-06045-06 | 12 | | PG-06045-07 | 72 | |
| 500 (16) | 28 mm | PG-06045-08 | 12 | | PG-06045-09 | 48 | |
| 1000 (32) | 28 mm | PG-06045-14 | 6 | | PG-06045-11 | 6 | |
| PP | | | | | | | |
| 30 (1) | 22 mm | PG-06045-48 | 12 | | PG-06045-41 | 72 | |
| 60 (2) | 22 mm | PG-06045-56 | 12 | | PG-06045-43 | 72 | |
| 125 (4) | 28 mm | PG-06045-58 | 12 | | PG-06045-45 | 72 | |
| 250 (8) | 28 mm | PG-06045-62 | 12 | | PG-06045-47 | 72 | |
| 500 (16) | 28 mm | PG-06045-66 | 12 | | PG-06045-49 | 48 | |
| 1000 (32) | 28 mm | PG-06045-68 | 6 | | PG-06045-51 | 24 | |
| 2000 (64) | 45 mm | PG-06045-74 | 1 | | PG-06045-53 | 6 | |

Thermo Scientific™ Nalgene™ Economy Wide-Mouth Bottles, HDPE

Rugged design fits all your needs

- Leakproof, PP enclosure

Buy More...Save More!

20% off on 120+
15% off on 30 to 119
10% off on 6 to 29 packs or cases



| Capacity mL (oz) | Cap size | Catalog number | Qty/ pk | Price/ pk | Catalog number | Qty/ cs | Price/ cs |
|------------------|----------|-----------------------------|---------|-----------|-----------------------------|---------|-----------|
| 30 (1) | 28 mm | PG-06035-31 | | | PG-06035-33 | | |
| 60 (2) | 28 mm | PG-06035-35 | 12 | | PG-06035-37 | 72 | |
| 125 (4) | 38 mm | PG-06035-39 | | | PG-06035-41 | | |
| 250 (8) | 43 mm | PG-06035-43 | 12 | | PG-06035-45 | 72 | |
| 500 (16) | 53 mm | PG-06035-47 | 6 | | PG-06035-49 | 48 | |
| 1000 (32) | 63 mm | PG-06035-51 | 6 | | PG-06035-53 | 24 | |

Sample Bottles, HDPE

Store samples without breaking your budget

- Provide good chemical resistance for a wide range of uses
- Bottles are made of HDPE; included cap is made of polypropylene and lined with polyethylene foam
- Easy mailing with optional mailing tube (sold separately)



Buy More...Save More!

20% off on 120+
15% off on 30 to 119
10% off on 6 to 29 packs or cases

| Capacity mL (oz) | Qty/ pk | Catalog number | Price/pk |
|------------------|---------|-----------------------------|----------|
| 180 (6) | 300 | PG-06043-01 | |
| 250 (8) | 329 | PG-06049-01 | |
| 500 (16) | 198 | PG-06050-05 | |

[PG-06049-30](#) Mailing tubes for bottle 06049-01. Carton of 240

Teky's Tips



Caring for Your Plasticware

Washing Plastics with a Mild Detergent is sufficient for most general applications. Be sure to rinse with tap water, then rinse again with distilled water. Most plastics, particularly the polyolefins (PPCO, PP, PMP, LDPE, and HDPE), have nonwetting surfaces that resist attack and are easy to clean. Do not use abrasive cleaners or scouring pads on plastic labware. Do not use strong alkaline cleaning agents with polycarbonate (PC).

Questions?



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Bob, 7 years of experience

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Thermo Scientific™ Nalgene™ Wide-Mouth Bottles, LDPE

Get better sample visibility

- Translucent material provides flexibility and impact resistance
- Ideal for shipping liquids—include leakproof polypropylene (PP) screw caps



Buy More...Save More!

20% off on 120+
15% off on 30 to 119
10% off on 6 to 29 packs or cases

| Capacity mL (oz) | Cap size | Catalog number | Qty/pk | Price/pk |
|------------------|----------|-----------------------------|--------|----------|
| 30 (1) | 28 mm | PG-06043-10 | | |
| 60 (2) | 28 mm | PG-06043-20 | 12 | |
| 125 (4) | 38 mm | PG-06043-30 | | |
| 250 (8) | 43 mm | PG-06043-40 | 12 | |
| 500 (16) | 53 mm | PG-06043-50 | | |
| 1000 (32) | 63 mm | PG-06043-60 | 6 | |

Collapsible Containers, LDPE

Won't take up extra space—easily expand when filled

- Stack neatly when empty, just unscrew cap and fill to expand
- Include polypropylene caps



Buy More...Save More!

20% off on 120+
15% off on 30 to 119
10% off on 6 to 29 packs or cases

| Capacity, L (gallon) | Cap size | Qty/pk | Catalog number | Price/pk |
|----------------------|----------|--------|-----------------------------|----------|
| 1 (1/4) | 38 mm | 12 | PG-06100-10 | |
| 4 (1) | 38 mm | | PG-06100-20 | |
| 10 (2 1/2) | 38 mm | 10 | PG-06100-30 | |
| 19 (5) | 38 mm | | PG-06100-40 | |

Graduated Sample Containers, PP

Graduated for easier sampling

- Durable design—translucent, unbreakable, and chemical resistant
- Sterile containers are individually wrapped



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15% off on 30 to 119
10% off on 6 to 29 packs or cases

| Capacity mL (oz) | Description | Catalog number | Qty/pk | Price/pk |
|------------------|---------------------------|-----------------------------|--------|----------|
| 118 (4) | Sterile, no tab | PG-06049-40 | 100 | |
| 118 (4) | Nonsterile with white tab | PG-06049-50 | 500 | |



Cole-Parmer® Precleaned EPA Sample Containers

No contaminants—precleaned and ready to use

NEW

- Include certificate of conformance to EPA specifications
- Identify samples easier with included labels (unattached)



A-D. Glass Bottles, Jars, and Jugs are processed and certified to meet the requirements of the current US EPA “Specifications and Guidance for Contaminant-Free Sample Containers” document for semi-volatile organics, pesticides, PCBs, metals, cyanide, fluoride, nitrate and nitrite analyses. Include PTFE-lined caps.

E. Glass Septa Jars are processed and certified to meet the requirements of the current US EPA “Specifications and Guidance for Contaminant-Free Sample Containers” document for purgeable volatile organic analysis. Include PTFE-lined silicone septa bonded to open-top caps.



| Capacity mL (oz) | Neck size | Qty/cs | Catalog number | Price/cs |
|---|-----------|--------|-----------------------------|----------|
| A. Clear wide-mouth glass jars | | | | |
| 60 (2) | 53 mm | 24 | PG-99540-40 | |
| 125 (4) | 58 mm | 24 | PG-99540-41 | |
| 250 (8) | 70 mm | 12 | PG-99540-42 | |
| 500 (16) | 89 mm | 12 | PG-99540-43 | |
| 950 (32) | 89 mm | 12 | PG-99540-44 | |
| B. Amber narrow-mouth glass bottles | | | | |
| 125 (4) | 22 mm | 24 | PG-99540-30 | |
| 250 (8) | 24-414 | 12 | PG-99540-31 | |
| 500 (16) | 28 mm | 12 | PG-99540-32 | |
| 1000 (34) | 33-430 | 12 | PG-99540-33 | |
| C. Amber wide-mouth glass bottles | | | | |
| 125 (4) | 38 mm | 12 | PG-99540-51 | |
| 250 (8) | 45 mm | 12 | PG-99540-53 | |
| 500 (16) | 53 mm | 12 | PG-99540-55 | |
| 950 (32) | 53 mm | 12 | PG-99540-57 | |
| D. Amber narrow-mouth glass jugs | | | | |
| 2500 (80) | 38-430 | 6 | PG-99540-34 | |
| 4000 (135) | 38-430 | 4 | PG-99540-35 | |
| E. Clear wide-mouth glass septa jars | | | | |
| 60 (2) | 53 mm | 24 | PG-99540-20 | |
| 125 (4) | 58 mm | 24 | PG-99540-21 | |

Bottles & Containers

Lab Supplies

DON'T RISK IT!

Our chemical compatibility database provides important information on chemical resistance—check it out at ColeParmer.com/ChemChart



Cole-Parmer® Economical Heavy-Duty Carboys with Shoulder Handle, PP

Sturdy, octagonal design for added rigidity

- Easier filling and pouring with offset neck
- Leakproof spigot models have tube fitting for easier filling of containers
- Polypropylene closure reduces evaporation
- Autoclavable



Buy More...Save More!
20% off on 120+ 15% off on 30 to 119 10% off on 6 to 29 packs or cases

| Liters (gallons) | Cap size | Catalog number | Qty/pk | Price/pk |
|---|----------|-----------------------------|--------|----------|
| Heavy-duty carboys with shoulder handle | | | | |
| 5 (1¼) | 45 mm | PG-62507-00 | 1 | |
| 10 (2½) | 90 mm | PG-62507-10 | 1 | |
| 20 (5¼) | 90 mm | PG-62507-20 | 1 | |
| Heavy-duty carboys with shoulder handle and spigot | | | | |
| 5 (1¼) | 45 mm | PG-62507-05 | 1 | |
| 10 (2½) | 90 mm | PG-62507-15 | 1 | |
| 20 (5¼) | 90 mm | PG-62507-25 | 1 | |

Thermo Scientific™ Nalgene™ FDA-Compliant Carboys, PP

Get a better grip with two-handle construction

- Dispense solutions more quickly with optional spigot models—accept ¼", ½", or 5/8" ID tubing
- Leakproof polypropylene (PP) cap
- Autoclavable



Buy More...Save More!
20% off on 120+ 15% off on 30 to 119 10% off on 6 to 29 packs or cases

| Liters (gallons) | Cap size | Catalog number | Qty/pk | Price/pk |
|--|----------|-----------------------------|--------|----------|
| FDA-compliant carboys, USP Class VI | | | | |
| 10 (2½) | 83B | PG-06063-12 | 1 | |
| 20 (5) | 83B | PG-06063-22 | | |
| 50 (13) | 83B | PG-06063-32 | | |
| FDA-compliant carboys with spigot, USP Class VI | | | | |
| 10 (2½) | 83B | PG-06064-50 | 1 | |
| 20 (5) | 83B | PG-06064-60 | | |
| 50 (13) | 83B | PG-06064-70 | | |

Thermo Scientific™ Nalgene™ Round Carboys, LDPE

No more leaks

- Leakproof, polypropylene cap for no worry transport
- Make transport easy with easy-grip handles
- Withstand corrosive materials
- Maintain adequate levels of solution—larger than 10-L carboys indicate 1-gallon and 5-liter increments
- Dispense easily with spigot models



Buy More...Save More!
20% off on 120+ 15% off on 30 to 119 10% off on 6 to 29 packs or cases

| Liters (gallons) | Cap size | Catalog number | Qty/pk | Price/pk |
|---|----------|-----------------------------|--------|----------|
| Carboys with shoulder handles | | | | |
| 10 (2½) | 83B | PG-06031-32 | 1 | |
| 15 (4) | 83B | PG-06031-42 | | |
| 20 (5) | 83B | PG-06031-52 | | |
| 25 (6½) | 83B | PG-06031-62 | | |
| 50 (13) | 83B | PG-06031-72 | | |
| Wide-mouth carboys with shoulder handles | | | | |
| 10 (2½) | 100 mm | PG-06056-22 | 1 | |
| 15 (4) | 100 mm | PG-06056-32 | | |
| 20 (5) | 100 mm | PG-06056-52 | | |
| Carboy with spigot and shoulder handles | | | | |
| 4 (1) | 38-430 | PG-06065-10 | 1 | |
| 10 (2½) | 83B | PG-06065-22 | | |
| 20 (5) | 83B | PG-06065-32 | | |
| 25 (6½) | 83B | PG-06065-52 | | |
| 50 (13) | 83B | PG-06065-62 | | |
| Carboys with ½" OD tubulation and shoulder handles | | | | |
| 10 (2½) | 83B | PG-06080-42 | 1 | |
| 20 (5¼) | 83B | PG-06080-52 | | |

Accessories

- [PG-06258-30](#) Replacement cap, PP, 83B. Pack of 2
- [PG-63000-16](#) Replacement cap, PP, 100 mm. Pack of 12
- [PG-63000-18](#) Replacement cap, PP, 38-430. Pack of 12
- [PG-06070-22](#) Replacement spigot, PP

Cole-Parmer® Jiffy-Jack® Lab Jacks

Safely position sample or equipment



- Easily position equipment or sample with a twist of the knob
- Rugged construction stands up to heavy loads
- Add optional support rod for probes, clamps, or other items



Model 08057-20 supports up to 132 lb (60 kg).

| Top plate dimensions | Open height | Closed height | Max support static load | Catalog number | Price |
|---|----------------|---------------|-------------------------|-----------------------------|-------|
| Plastic lab jack | | | | | |
| 8" x 8" (20.3 x 20.3 cm) | 12" (30.5 cm) | 3" (7.6 cm) | 15 lb (6 kg) | PG-08055-50 | |
| Aluminum lab jacks | | | | | |
| 4" x 4" (10.2 x 10.2 cm) | 5" (12.7 cm) | 2½" (6.4 cm) | 66 lb (30 kg) | PG-08057-10 | |
| 6" x 6" (15.2 x 15.2 cm) | 9¾" (24.8 cm) | 3" (7.6 cm) | 132 lb (60 kg) | PG-08057-20 | |
| 8" x 8" (20.3 x 20.3 cm) | 13" (33.0 cm) | 3½" (8.9 cm) | 176 lb (80 kg) | PG-08057-30 | |
| 10" x 10" (25.4 x 25.4 cm) | 13" (33.0 cm) | 3½" (8.9 cm) | 198 lb (90 kg) | PG-08057-40 | |
| Stainless steel heavy-duty lab jacks | | | | | |
| 3" x 3" (7.6 x 7.6 cm) | 5" (12.7 cm) | 2½" (6.4 cm) | 20 lb (9.0 kg) | PG-08057-12 | |
| 4" x 4" (10.2 x 10.2 cm) | 5" (12.7 cm) | 2½" (6.4 cm) | 30 lb (13.6 kg) | PG-08057-14 | |
| 6" x 6" (15.2 x 15.2 cm) | 9¾" (24.8 cm) | 3" (7.6 cm) | 35 lb (15.8 kg) | PG-08057-16 | |
| 8" x 8" (20.3 x 20.3 cm) | 13" (33.0 cm) | 3½" (8.9 cm) | 55 lb (25.0 kg) | PG-08057-18 | |
| 10" x 10" (25.4 x 25.4 cm) | 13" (33.0 cm) | 3½" (8.9 cm) | 80 lb (36.3 kg) | PG-08057-22 | |
| 12" x 12" (30.5 x 30.5 cm) | 19½" (49.5 cm) | 4" (10.2 cm) | 150 lb (68.0 kg) | PG-08057-24 | |
| 16" x 16" (40.6 x 40.6 cm) | 19½" (49.5 cm) | 4" (10.2 cm) | 180 lb (81.6 kg) | PG-08057-26 | |

[PG-08057-50](#) Ratchet tool adds extra leverage to models 08057-24 and -26

[PG-08057-52](#) Support rod kit allows you to mount a 17" (43.2 cm) L vertical support rod to models 08057-16, -18, -22, -24, and -26

Keck® Connectors, Clamps, and Clips

Keep connections together

A. Keck Original Standard Taper Clips

Economical standard taper clips securely hold conical joints under pressure without damaging glass. The polyoxymethylene (POM) acetal resin clips are safe to 302°F (150°C). Resistant to concentrated alkalis and dilute acids (not resistant to halogen gases and concentrated acids).



Plastic taper clips are easy to attach and remove.

| Joint size no. | Color | Qty/pk | Catalog number | Price/pk |
|----------------|--------|--------|-----------------------------|----------|
| 10 | Green | 12 | PG-06839-90 | |
| 12 | Violet | | PG-06839-95 | |
| 14 | Yellow | | PG-06840-05 | |
| 19 | Blue | 12 | PG-06840-10 | |
| 24 | Green | | PG-06840-15 | |
| 29 | Red | | PG-06840-20 | |
| 34 | Orange | 12 | PG-06840-25 | |
| 40 | Yellow | | PG-06840-30 | |
| 45 | Brown | | PG-06840-35 | |

[PG-06840-00](#) Standard taper clip assortment pack.

Six each of sizes 14, 19, 24, and 29 (24 total)

[PG-06840-50](#) Standard taper clip assortment pack.

Three each of all nine sizes in table above (27 total)

B. Keck Metal Standard Taper Clips

Durable nickel-plated steel taper clips securely hold conical joints under pressure. Clips offer superior chemical and temperature resistance—withstanding temperatures to 932°F (500°C).



| Joint size no. | Qty/pk | Cat. no. | Price/pk |
|----------------|--------|-----------------------------|----------|
| 14 | 6 | PG-06836-05 | |
| 19 | | PG-06836-10 | |
| 24 | | PG-06836-15 | |
| 29 | | PG-06836-20 | |

C. Keck Ball-Joint Clips

Secure ball and socket joints—no locking screw required. Polyoxymethylene (POM) acetal resin clips are safe to 302°F (150°C). Resistant to concentrated alkalis and dilute acids (not resistant to halogen gases or concentrated acids).



| Joint size no. | Color | Qty/pk | Catalog number | Price/pk |
|----------------|--------|--------|-----------------------------|----------|
| 13 | Violet | 12 | PG-06838-10 | |
| 19 | Blue | | PG-06838-15 | |
| 29 | Red | | PG-06838-20 | |
| 35 | Orange | | PG-06838-25 | |

Cole-Parmer® Cleaning Products

Easily clean glass, metal, plastic, rubber, and other hard materials



- Safe and effective cleaning products
- Highly concentrated, aqueous solutions are free-rinsing
- Meet USDA guidelines for incidental contact with food processing systems
- Do not contain CFCs, phosphates, silicates, halogens, or phenols



| Cleaner | Type | Cleaning applications | Dilution | pH | Packaging | Cat. no. | Price/ea | Cat. no. | Qty/cs | Price/cs |
|----------------------|---|---|----------------|-----|----------------------|-------------|----------|-------------|--------|----------|
| Micro-90® | Ionic, nonionic, USDA authorized | Manual or ultrasonic; removes most biological materials; cleans glass, most metals, plastic, and rubber† | 1:100 to 2:100 | 9.5 | 0.26 gal. (1 L) | PG-18100-05 | — | PG-18100-04 | 12 | — |
| | | | | | 1 gal. (4 L) | — | — | PG-18100-11 | 4 | — |
| | | | | | 5 gal. (18.9 L) | — | — | PG-18100-20 | 1 | — |
| | | | | | 55-gal. drum (208 L) | PG-18100-30 | — | — | — | — |
| Zymit® | Enzymatic, USDA authorized | Machine, manual, or ultrasonic; dissolves protein and starch-based soils; may use for delicate materials | 1:100 | 7.5 | 0.26 gal. (1 L) | PG-18101-30 | — | PG-18101-20 | 12 | — |
| LF2100™ | Low-sudsing, anionic, nonionic, amphoteric, USDA authorized | Automatic washers, high-pressure and high agitation applications† | 1:100 | 9.7 | 0.26 gal. (1 L) | PG-18102-00 | — | PG-18102-10 | 12 | — |
| | | | | | 5.3 gal. (20 L) | PG-18102-30 | — | — | — | — |
| Surface-Cleanse/930® | Nonionic, USDA authorized | Cleans grease, petroleum, oils from glass, aluminum, lead, zinc, and plastic without surface damage | 1:200 | 7.0 | 0.26 gal. (1 L) | PG-18103-00 | — | PG-18103-10 | 12 | — |
| | | | | | 5.3 gal. (20 L) | PG-18103-30 | — | — | — | — |
| Micro-A07® | Citric acid, nonionic, USDA authorized | Removes millstone, hard water scale, rust, mineral deposits, and other inorganic soils from filter membranes, labware, and industrial equipment | 1:100 to 2:100 | 2.5 | 0.26 gal. (1 L) | PG-18104-00 | — | PG-18104-01 | 12 | — |
| | | | | | 5.3 gal. (20 L) | PG-18104-30 | — | — | — | — |

†Do not use on zinc, magnesium, or aluminum.

Kimberly-Clark® Critical Task Wipes

Low-lint, absorbent, soft, and nonabrasive

- Won't scratch delicate surfaces
- Single- and two-ply delicate task wipes are made of a finely textured tissue
- Solvent-resistant KimTech CL4 wipes are made of a single-ply, nonwoven fabric specially bonded to eliminate surface fibers and trap particles

| Description | Compliance | Wipe size | Qty/bx | Box/cs | Cat. no. | Price/cs* |
|----------------------------|-------------|-----------------|--------|--------|-------------|-----------|
| Delicate task wipes | | | | | | |
| Kimwipes® EX-L, 1 ply | — | 4 1/2" x 8 1/2" | 280 | 60 | PG-33670-04 | — |
| | | 15" x 16 3/4" | 140 | 15 | PG-33670-06 | — |
| Kaydry® EX-L, 2 ply | — | 15" x 16 3/4" | 90 | 15 | PG-33670-10 | — |
| Cleanroom wipes | | | | | | |
| Kimtech CL4 cleanroom | ISO Class 4 | 12" x 12" | 100 | 5 | PG-33670-20 | — |

*Discounts: Save 10% on 10 to 49 cases and 15% on 50 or more cases.



Bacdown® Hand Soap

Won't dry your skin

- Formulated specifically for those washing frequently to minimize dry, chapped skin
- Protects against gram-negative and gram-positive bacteria as well as yeast and fungi



| Packaging | Catalog number | Price/ea | Catalog number | Qty/cs | Price/cs |
|-----------------|----------------|----------|----------------|--------|----------|
| 16 oz (500 mL) | PG-86115-02 | — | PG-86115-00 | 12 | — |
| 0.26 gal. (1 L) | PG-86115-06 | — | PG-86115-04 | 12 | — |
| 1.32 gal. (5 L) | PG-86115-10 | — | — | — | — |

CONFLIKT® Detergent Disinfectant

No need to dilute—ready to use

- Don't worry about contaminants—easily and effectively decontaminates surfaces
- Ammonium-based detergent disinfects and cleans hard surfaces



This pre-diluted detergent is effective against a wide range of viruses, bacteria, pathogenic fungi, mold, and mildew. USDA approved and EPA registered. Comes in a 32-oz spray bottle and a 1-gal. refill.

| Packaging | Catalog number | Price/ea | Catalog number | Qty/cs | Price/cs |
|----------------|----------------|----------|----------------|--------|----------|
| 32 oz (946 mL) | PG-86115-40 | — | PG-86115-38 | 6 | — |
| 1 gal. (3.7 L) | PG-86115-44 | — | PG-86115-42 | 4 | — |



Ansell TNT™ Blue Disposable Nitrile Gloves

Durable and comfortable

- Static dissipative to eliminate static electricity
- Textured fingertips for better gripping
- Powder-free
- Ambidextrous

Compliance: FDA regulations for food contact.

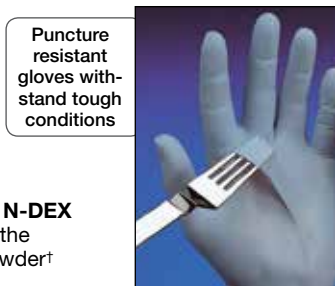


| Size | Length | Thickness | Qty/ bx | Catalog number | Price per box | |
|---------|-------------|-----------|---------|----------------|---------------|-------|
| | | | | | 1 bx | 10 bx |
| Small | 9½" (24 cm) | 5 mil | 100 | PG-81601-04 | | |
| Medium | | | | PG-81601-05 | | |
| Large | | | | PG-81601-06 | | |
| X-large | | | | PG-81601-07 | | |

Showa® Best® N-DEX® Nitrile Gloves

Keep your cool—special formulation for comfort, less fatigue

- Nonlatex—made of soft 100% lightweight nitrile
- Fewer punctures—three times the resistance of rubber or vinyl
- Ambidextrous



General and Laboratory Grade N-DEX Gloves protect your hands from the environment. Available in low-powder† or powder-free versions.

Industrial Grade N-DEX Plus Gloves are thicker for greater puncture and tear resistance. Gloves provide good resistance to chemicals and abrasion. Ideal for tough lab conditions, assembly, or manufacturing. Available only in low-powder† version.



Compliance: FDA 21 CFR, parts 170-199, acceptable for food and pharmaceutical use.



| Size | Length | Thickness | Qty/pk | Catalog number | Price per pack | |
|--|-------------|-----------|--------|----------------|----------------|-------|
| | | | | | 1 pk | 10 pk |
| General and laboratory grade low-powder† N-DEX gloves | | | | | | |
| Small | 9½" (24 cm) | 4 mil | 100 | PG-86287-70 | | |
| Medium | | | | PG-86287-71 | | |
| Large | | | | PG-86287-72 | | |
| X-large | | | | PG-86287-73 | | |
| General and laboratory grade powder-free N-DEX gloves | | | | | | |
| Small | 9½" (24 cm) | 4 mil | 100 | PG-86287-80 | | |
| Medium | | | | PG-86287-81 | | |
| Large | | | | PG-86287-82 | | |
| X-large | | | | PG-86287-83 | | |
| Industrial grade N-DEX Plus low-powder† gloves | | | | | | |
| Small | 9½" (24 cm) | 8 mil | 50 | PG-86287-60 | | |
| Medium | | | | PG-86287-61 | | |
| Large | | | | PG-86287-62 | | |
| X-large | | | | PG-86287-63 | | |

†USP grade cornstarch

Cole-Parmer® Nitrile Gloves

Don't lose your grip

- Soft feel with textured fingertips for better grip
- Powder-free
- Ambidextrous



| Size | Length | Thickness | Qty | Catalog number | Price |
|---------|-------------|-----------|------------------------------|----------------|-------|
| Small | 9½" (24 cm) | 4.0 mil | 1 box of 100 | PG-15954-42 | |
| Medium | | | | PG-15954-43 | |
| Large | | | | PG-15954-44 | |
| X-large | | | | PG-15954-45 | |
| Small | 9½" (24 cm) | 4.0 mil | 10 boxes of 100 (1000 total) | PG-15954-24 | |
| Medium | | | | PG-15954-25 | |
| Large | | | | PG-15954-26 | |
| X-large | | | | PG-15954-46 | |

Ansell Touch N Tuff™ Nitrile Gloves

Keep dexterity without sacrificing safety

- Thin formulation, yet resists punctures and tears
- No fillers—gloves are 100% nitrile
- Ambidextrous



| Size | Length | Thickness | Qty/ bx | Catalog number | Price per box | |
|---------------------------|-------------|-----------|---------|----------------|---------------|-------|
| | | | | | 1 bx | 10 bx |
| Powdered gloves | | | | | | |
| Small | 9½" (24 cm) | 4 mil | 100 | PG-81602-40 | | |
| Medium | | | | PG-81602-50 | | |
| Large | | | | PG-81602-60 | | |
| X-large | | | | PG-81602-70 | | |
| Powder-free gloves | | | | | | |
| Small | 9½" (24 cm) | 4 mil | 100 | PG-81602-45 | | |
| Medium | | | | PG-81602-55 | | |
| Large | | | | PG-81602-65 | | |
| X-large | | | | PG-81602-75 | | |

Microflex® MidKnight™ Black Nitrile Gloves

Won't show stains

- Fully textured for consistently reliable gripping
- Power free
- Ambidextrous



| Size | Length | Thickness | Qty/case | Catalog number | Price per case |
|---------|-------------|-----------|----------|----------------|----------------|
| Small | 9½" (24 cm) | 5.5 mil | 1000 | PG-86445-15 | |
| Medium | | | | PG-86445-16 | |
| Large | | | | PG-86445-17 | |
| X-large | | | | PG-86445-18 | |

Disposable Transfer Pipettes

Easily draw and deliver solutions

- Deliver repeatable, uniform drops
- Eliminate cross-contamination with these low-cost, disposable LDPE pipettes



| Key | Description | Graduations | | Bulb draw | Total capacity | Drops per mL | Length in. (mm) | Qty/ pk | Catalog number | Price/ pk |
|-----|---------------------------------|-------------|---------|-----------|----------------|--------------|-------------------------------------|---------|-----------------------------|-----------|
| | | Increments | Maximum | | | | | | | |
| A | Small bulb, graduated | 0.1 mL | 0.3 mL | 0.8 mL | 1.5 mL | 21 | 4 ⁵ / ₈ (117) | 500 | PG-06226-37 | |
| B | Small bulb, graduated | 0.25 mL | 1 mL | 2.2 mL | 3.9 mL | 25 | 5 ¹ / ₂ (140) | 500 | PG-06226-41 | |
| C | Large capacity, thin stem | — | — | 3.3 mL | 4.6 mL | 25 | 6 ¹ / ₈ (156) | 500 | PG-06226-65 | |
| D | Large capacity, fine tip | — | — | 3.5 mL | 5.8 mL | 50 | 6 ¹ / ₄ (159) | 500 | PG-06226-67 | |
| E | Large capacity, graduated | 0.25 mL | 1 mL | 3.4 mL | 5.8 mL | 25 | 6 ¹ / ₈ (156) | 500 | PG-06226-61 | |
| F | Large capacity, extra-long stem | — | — | 2.3 mL | 6.0 mL | 25 | 9 (229) | 400 | PG-06226-69 | |
| G | Large capacity, graduated | 0.5 mL | 3.0 mL | 3.2 mL | 7.5 mL | 20 | 6 ¹ / ₈ (156) | 500 | PG-06226-63 | |
| H | Jumbo bulb, long stem | — | — | 8.0 mL | 15.0 mL | 19 | 6 ¹ / ₈ (156) | 250 | PG-06226-51 | |

Cole-Parmer® Single-Channel Electronic Pipettors

Save time on routine tasks

- Program up to six presets with function, volume, speed, and number of dispenses
- Nine pipetting functions cover common and specialized pipetting applications
- Adjust brightness and background on large color display to suit any lighting condition

NEW



What's included: rechargeable battery, USB power cord, and two AC adapters (US and Euro).



Specifications

- Tip ejector:** yes, soft touch
- Autoclavable:** tip cone

| Volume (µL) | Increments | Accuracy† | Reproducibility† | Catalog number | Price |
|----------------|------------|-----------|------------------|-----------------------------|-------|
| 0.2 to 10 | 0.01 µL | ±1.0% | ≤0.4% | PG-24500-01 | |
| 5 to 100 | 0.1 µL | ±0.6% | ≤0.2% | PG-24500-02 | |
| 20 to 300 | 0.5 µL | ±0.5% | ≤0.2% | PG-24500-03 | |
| 50 to 1200 | 1 µL | ±0.4% | ≤0.2% | PG-24500-04 | |
| 500 to 5000 | 5 µL | ±0.5% | ≤0.2% | PG-24500-05 | |
| 1000 to 10,000 | 10 µL | ±0.4% | ≤0.2% | PG-24500-06 | |

†Accuracy and reproducibility at full-scale volume.

Tips, Polypropylene

| Volume (µL) | Pack description | Catalog number | Price |
|----------------|-----------------------------------|-----------------------------|-------|
| 0.1 to 10 | Bag of 1000 | PG-25711-49 | |
| | 10 racks of 96 | PG-25711-51 | |
| | 10 racks of 96, sterile | PG-25711-53 | |
| | 10 racks of 96, sterile, filtered | PG-25711-55 | |
| 1 to 200 | Bag of 1000 | PG-25711-57 | |
| | 10 racks of 96 | PG-25711-59 | |
| | 10 racks of 96, sterile | PG-25711-61 | |
| | 10 racks of 96, sterile, filtered | PG-25711-65 | |
| 1000 to 5000 | Bag of 500 | PG-25711-71 | |
| | Bag of 500 | PG-25711-73 | |
| | Bag of 1000 | PG-25711-66 | |
| 1000 to 10,000 | 10 racks of 96 | PG-25711-67 | |
| | 10 racks of 96, sterile | PG-25711-68 | |
| | 10 racks of 96, sterile, filtered | PG-25711-69 | |

iTrack® Pipette Tracking System

No more pipetting errors

- Automatically detects, guides, and records your pipetting dispense steps
- Optical sensors detect actual pipetting locations and flag them with lights and sound
- Versatile—compatible with standard 96-/384-well microplates and tube strips
- Ensure quality control with detailed log file

NEW



This tablet-driven system eliminates the need for you to input any pipetting protocol or to press an advance button after every dispense. Unique system uses scanning infrared LED lights to detect pipetting steps and displays them on the tablet's preloaded application as a dot, which changes color with each new dispense. The dots appear in both the sample detection and the control windows, and show the number of times each well received a dispensed amount.



Each pipetting step is recorded in a log file with time and location, providing a detailed record for analysis and quality control. Built-in flash memory (8 GB) stores data for later download, or use an external storage device—MicroSD port supports up to 64 GB.

What's included: optical detector base, Android™ tablet, adapters for 96-well microplates and ELISA or storage microplates, USB adapter, and power cord with AC adapter.

| Description | Pipette tracking system |
|-----------------------|-----------------------------|
| Catalog number | PG-26000-00 |
| Compatible pipettes | Single-, 8-, and 12-channel |
| Compatible tip sizes | 0.1 to 1000 µL |
| Price | |

Accessories

[PG-26000-01](#) Adapter for 8- and 12-tube PCR strips



BD™ Disposable Syringes

Luer-Lok™ tips allow for easy connection of syringe filters

Use these latex-free, disposable polycarbonate syringes for your general-purpose applications. Available in either Luer-Lok or slip-tip versions. Autoclavable.



| Capacity | Graduations | Type | Qty | Catalog number | Price |
|--|------------------------|----------|--------|-----------------------------|-------|
| Sterilized syringes, individually wrapped | | | | | |
| 1 mL | 1/100 mL | Luer-Lok | 100/bx | PG-07940-00 | |
| 3 mL | 1/10 mL | Luer-Lok | 200/bx | PG-07940-02 | |
| | | Slip tip | | PG-07940-04 | |
| 5 mL | 1/5 mL | Luer-Lok | 100/bx | PG-07940-06 | |
| | | Slip tip | | PG-07940-08 | |
| 10 mL | 1/5 mL | Luer-Lok | 100/bx | PG-07940-12 | |
| | | Slip tip | | PG-07940-14 | |
| 60 mL | 1 mL, 2 oz in 1/4 oz | Luer-Lok | 40/bx | PG-07940-30 | |
| | | Slip tip | | PG-07940-28 | |
| Nonsterilized syringes | | | | | |
| 1 mL | 1/100 mL | Slip tip | 100/pk | PG-07944-00 | |
| 3mL | 1/10 mL | Luer-Lok | 100/pk | PG-07944-02 | |
| | | Slip tip | | PG-07944-04 | |
| 5 mL | 1/5 mL | Luer-Lok | 100/pk | PG-07944-06 | |
| | | Slip tip | | PG-07944-08 | |
| 10 mL | 1/5 mL | Luer-Lok | 50/pk | PG-07944-12 | |
| | | Slip tip | | PG-07944-14 | |
| 20mL | 1 mL, 3/4 oz in 1/2 oz | Luer-Lok | 25/pk | PG-07944-16 | |
| | | Slip tip | | PG-07944-18 | |

| Capacity | Graduations | Type | Qty | Catalog number | Price |
|---|------------------------|----------|---------|-----------------------------|-------|
| Nonsterilized syringes (continued) | | | | | |
| 30 mL | 1 mL, 1 oz in 1/8 oz | Luer-Lok | 25/pk | PG-07944-24 | |
| | | Slip tip | | PG-07944-22 | |
| 60 mL | 1 mL, 2 oz in 1/4 oz | Luer-Lok | 25/pk | PG-07944-28 | |
| | | Slip tip | | PG-07944-30 | |
| Nonsterilized syringes, bulk pack | | | | | |
| 1 mL | 1/100 mL | Slip tip | 3000/cs | PG-07945-00 | |
| 3 mL | 1/10 mL | Luer-Lok | 1600/cs | PG-07945-02 | |
| | | Slip tip | | PG-07945-04 | |
| 5 mL | 1/5 mL | Luer-Lok | 1400/cs | PG-07945-06 | |
| | | Slip tip | | PG-07945-08 | |
| 10 mL | 1/5 mL | Luer-Lok | 850/cs | PG-07945-12 | |
| | | Slip tip | | PG-07945-14 | |
| 20 mL | 1 mL, 3/4 oz in 1/2 oz | Luer-Lok | 325/cs | PG-07945-16 | |
| | | Slip tip | | PG-07945-18 | |
| 30 mL | 1 mL, 1 oz in 1/8 oz | Luer-Lok | 225/cs | PG-07945-24 | |
| | | Slip tip | | PG-07945-22 | |
| 60 mL | 1 mL, 2 oz in 1/4 oz | Luer-Lok | 125/cs | PG-07945-28 | |
| | | Slip tip | | PG-07945-30 | |

Warning—These products are not approved or intended for, and should not be used for, medical, clinical, surgical or other patient oriented applications.

Hamilton Standard Microliter® Syringes

Provide precise liquid delivery—from 10 to 500 µL

Syringes with Cemented and Removable needles include a 304 stainless steel needle with a noncoring beveled tip—ideal for septum penetration in all chromatographic techniques. If you use large numbers of syringes, choose one of our convenient “economy packs” containing six 10-µL syringes with cemented or removable needles. Each pack is in a protective storage container and includes a set of adhesive-backed numbers for syringe identification.

Syringes with Luer Tip Connections do not include a needle; order needles separately at ColeParmer.com.



| Syringes | | Needles | | Catalog number | Price/ea | Economy packs | |
|----------|-----------------------|--------------------|-------------------|-----------------------------|----------|-----------------------------|---------------|
| Capacity | Type | Gauge [‡] | Tip type | | | Catalog number | Price/pk of 6 |
| 10 µL | Cemented needle | 26s | Noncoring beveled | PG-07938-00 | | PG-07938-30 | |
| | Removable needle | | | PG-07938-10 | | PG-07938-40 | |
| 25 µL | Cemented needle | 22s | Noncoring beveled | PG-07938-01 | | — | — |
| | Removable needle | | | PG-07938-11 | | — | — |
| | Luer tip [†] | | | PG-07938-21 | | — | — |
| 50 µL | Cemented needle | 22s | Noncoring beveled | PG-07938-02 | | — | — |
| | Removable needle | | | PG-07938-12 | | — | — |
| | Luer tip [†] | | | PG-07938-22 | | — | — |
| 100 µL | Cemented needle | 22s | Noncoring beveled | PG-07938-03 | | — | — |
| | Removable needle | | | PG-07938-13 | | — | — |
| | Luer tip [†] | | | PG-07938-23 | | — | — |
| 250 µL | Cemented needle | 22s | Noncoring beveled | PG-07938-04 | | — | — |
| | Removable needle | | | PG-07938-14 | | — | — |
| | Luer tip [†] | | | PG-07938-24 | | — | — |
| 500 µL | Cemented needle | 22s | Noncoring beveled | PG-07938-05 | | — | — |
| | Removable needle | | | PG-07938-15 | | — | — |
| | Luer tip [†] | | | PG-07938-25 | | — | — |

[†]Luer tip syringes do not include a needle; order separately. [‡]An “s” denotes “small bore”—reduces dead volume and provides impedance to improve transfer accuracy.

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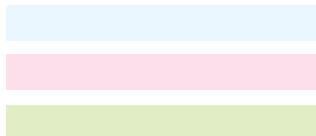
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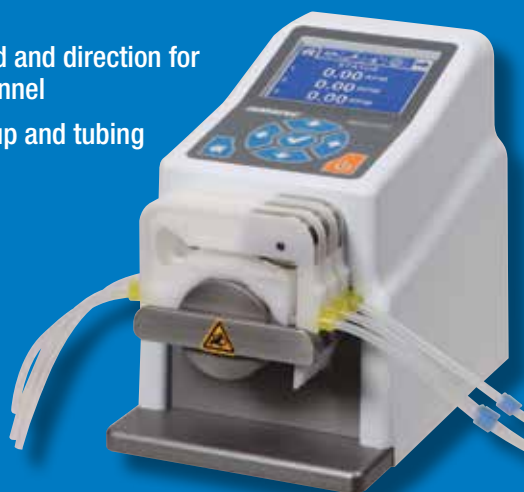


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