



2022

Hygienic Shutter Valves & Pigging Systems

General Information

1

LIAG® Free Flow Shutter Valves (Arc Valves)

2

LIAG® Pig Diverter Shutter Valves

3

Customized LIAG® Shutter Valves

- 4.1 2-Way Control Arc Valve
- 4.2 Venturi Powder Control Valve
- 4.3 EASY-OPEN Shutter Valve for the meat industry
- 4.4 Leakage control of the moving o-ring seal of Shutter Valves

4

Spare Parts and Accessoires to chapter 2,3 and 4

5

LIAG® DMV Pigging System

6

High End Solutions

LAUFER VALVE TECHNOLOGY

Official Master Distributor of LIAG® in the US

Sanitary valves and pigging systems from LIAG® offer the maximum in quality and product safety for the low-germ processing of high grade media.



Know-how, on which you can rely!

Developed from field experience - for field use!

Many years of experience on process engineering and a consistent focus on customer demands are the basis of innovative technologies and customized system solutions.

Our primary focus is on maximum process safety and economic efficiency.



Modular and efficient!

The quality assurance system of our parent company LIAG®/Germany, ensures the very highest standard; at the same time, we place emphasis on modular systems and production flexibility.



Your requirement – our solution!

Your requirement - our solution!
Our worldwide sales and service network offers professional advice and support on all aspects of our delivery program.

Further information on
www.laufer-valve.com



LIAG® FREE FLOW SHUTTER VALVES (ARC VALVES)



Ideal for pasty media and low-germ pigging processes

Ideal for pasty media and hygienic pigging processes
LIAG® free flow shutter valves have been designed according to hygienic design guidelines to meet the high demands of process engineering applications. LIAG® valves are particularly suited for viscous/pasty products and fluids containing solid particles on account of a totally clear passage, as well as easy and thorough cleaning in place.

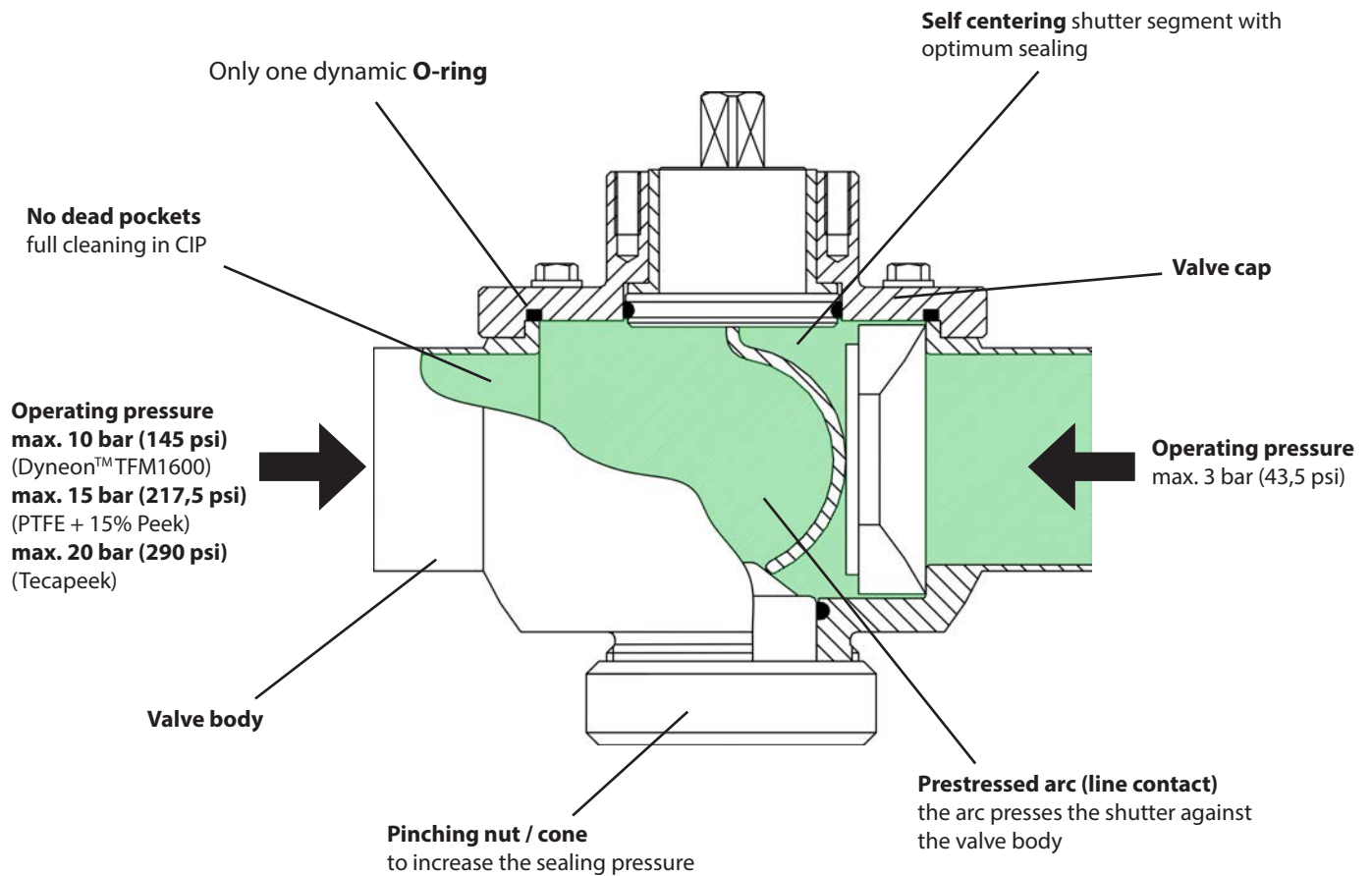
This valve series thus provides optimum conditions for a wide variety of pigging system applications. By virtue of their simplicity of design and minimum number of components and wearing parts, LIAG® valves are characterized by maximum hygiene, low maintenance and safe operation.

Features

- No dead pockets
- CIP/SIP capability (hygienic design)
- Totally clear passage – no pressure loss
- No product remainders or sticking of solid particles
- Designed to be passed with DMV lip pigs
- Minimum number of components and wearing parts
- Can be completely dismantled even when welded in place
- 3-A 51-01 and FDA compliance
- CRN

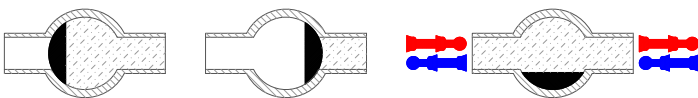


Principle of Design

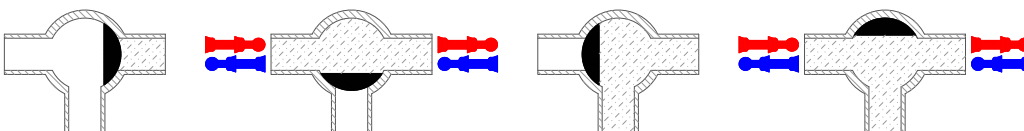


Operating positions

2-way shutter valve



3-way shutter valve



Product area



Shutter



Pig direction

Technical Data Overview

2

Nominal sizes

Inch: 1" / 1.5" / 2" / 2.5" / 3" / 4" / 6"
DIN: 25 / 40 / 50 / 65 / 80 / 100 / 150

Materials

Inox parts in contact with product: AISI 316L (1.4404 / 1.4435)
Other inox parts: AISI 304 (1.4301)
O-ring seals: EPDM, FPM (Viton®), FEP, other grades upon request
Shutter: Dyneon™ TFM1600

Surfaces

In contact with product: Ra ≤ 0,8 µm (Ra ≤ 32 µin)

Temperature

Operating temperature: 230°F (110°C)
Short-term: 284°F (140°C)
- optionally up to 392°F (200°C)

Operating pressure

Pressure behind arc: 145 psi (10 bar)
- optionally up to 290,1psi (20 bar)
Pressure against arc: 43,5 psi (3 bar)

Versions

2- way /3-way

Operation

Manual: with handle (4 locking positions)
Pneumatic: • Vertical pneumatic actuator (AISI 304)
• Horizontal pneumatic actuator (aluminium housing)

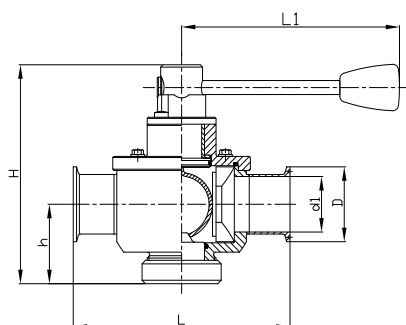
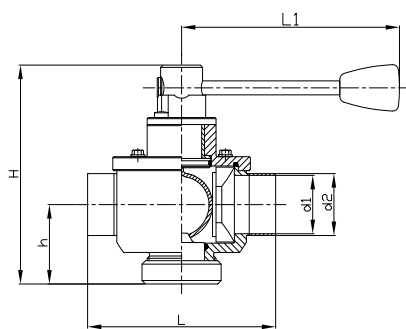
Valve connection

Clamp connection: Tri-Clamp
Welded ends: Inch, DIN
Male ends: DIN 11851

Further options / Certificates

- 4-way version
- Shutter material; alternatively: Tecapeek®, PTFE+15% Peek
- Heated version
- Leakage control of moving O-ring seal / steam barrier with ball-bearing supported selector shaft Combination of
- different types of connection Delivery and adaptation to
- actuators of different manufacture per Namur NE14 and DIN EN ISO5211 3-A 51-01 and FDA compliance
- CRN

SHUTTER VALVES (ARC VALVES)



Inch

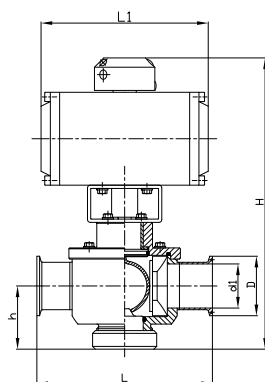
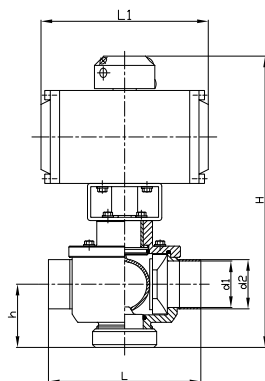
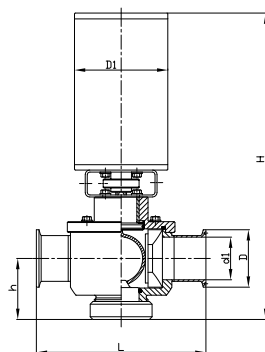
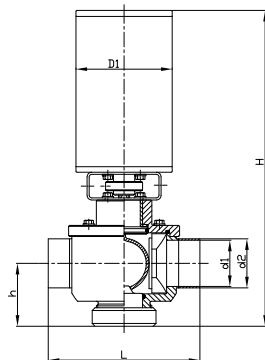
2-way shutter valve, manual, welded ends

VALVE SIZE inch (mm)	Type	Ød1	Ød2	H	h	L	L1
1.00 (25.4)	25C52M22	0.87 (22.1)	1.00 (25.4)	5.71 (145)	1.97 (50)	4.33 (110)	6.30 (160)
1.50 (38.1)	38C52M22	1.37 (34.8)	1.50 (38.1)	7.09 (180)	2.56 (65)	5.51 (140)	6.30 (160)
2.00 (50.8)	51C52M22	1.87 (47.5)	2.00 (50.8)	7.48 (190)	2.76 (70)	6.46 (164)	7.48 (190)
2.50 (63.5)	63C52M22	2.37 (60.2)	2.50 (63.5)	7.87 (200)	2.95 (75)	8.27 (210)	7.48 (190)
3.00 (76.2)	76C52M22	2.87 (72.9)	3.00 (76.2)	8.46 (215)	3.15 (80)	8.66 (220)	7.48 (190)
4.00 (101.6)	102C52M22	3.83 (97.4)	4.00 (101.6)	10.43 (265)	4.33 (110)	12.20 (310)	10.63 (270)
6.00 (152.4)	152C52M	5.78 (146.9)	6.00 (152.4)	13.58 (345)	5.51 (140)	19.69 (500)	10.63 (270)

2-way shutter valve, manual, TC-clamp

VALVE SIZE inch (mm)	Type	Ød1	ØD	H	h	L	L1
1.00 (25.4)	25C520M22	0.87 (22.1)	1.99 (50.5)	5.71 (145)	1.97 (50)	5.31 (135)	6.30 (160)
1.50 (38.1)	38C520M22	1.37 (34.8)	1.99 (50.5)	7.09 (180)	2.56 (65)	6.50 (165)	6.30 (160)
2.00 (50.8)	51C520M22	1.87 (47.5)	2.52 (64.0)	7.48 (190)	2.76 (70)	7.44 (189)	7.48 (190)
2.50 (63.5)	63C520M22	2.37 (60.2)	3.05 (77.5)	7.87 (200)	2.95 (75)	9.25 (235)	7.48 (190)
3.00 (76.2)	76C520M22	2.87 (72.9)	3.58 (91.0)	8.46 (215)	3.15 (80)	9.65 (245)	7.48 (190)
4.00 (101.6)	102C520M22	3.83 (97.4)	4.68 (119.0)	10.43 (265)	4.33 (110)	13.19 (335)	10.63 (270)
6.00 (152.4)	152C520M	5.78 (146.9)	6.57 (167.0)	13.58 (345)	5.51 (140)	19.69 (500)	10.63 (270)

SHUTTER VALVES (ARC VALVES)



Inch

2-way shutter valve, pneumatic (air/air - air/spring), welded ends

VALVE SIZE inch (mm)	Type	Ød1	Ød2	H	h	L	ØD1
1.00 (25.4)	25C52A22	0.87 (22.1)	1.00 (25.4)	11.81 (300)	1.97 (50)	4.33 (110)	3.50 (89)
1.50 (38.1)	38C52A22	1.37 (34.8)	1.50 (38.1)	13.19 (335)	2.56 (65)	5.51 (140)	3.50 (89)
2.00 (50.8)	51C52A22	1.87 (47.5)	2.00 (50.8)	13.39 (340)	2.76 (70)	6.46 (164)	4.09 (104)
2.50 (63.5)	63C52A22	2.37 (60.2)	2.50 (63.5)	13.98 (355)	2.95 (75)	8.27 (210)	4.09 (104)
3.00 (76.2)	76C52A22	2.87 (72.9)	3.00 (76.2)	16.61 (422)	3.15 (80)	8.66 (220)	5.08 (129)
4.00 (101.6)	102C52A22	3.83 (97.4)	4.00 (101.6)	18.66 (474)	4.33 (110)	12.20 (310)	5.08 (129)

2-way shutter valve, pneumatic (air/air - air/spring), TC-clamp

VALVE SIZE inch (mm)	Type	Ød1	ØD	H	h	L	ØD1
1.00 (25.4)	25C520A22	0.87 (22.1)	1.99 (50.5)	11.81 (300)	1.97 (50)	5.31 (135)	3.50 (89)
1.50 (38.1)	38C520A22	1.37 (34.8)	1.99 (50.5)	13.19 (335)	2.56 (65)	6.50 (165)	3.50 (89)
2.00 (50.8)	51C520A22	1.87 (47.5)	2.52 (64.0)	13.39 (340)	2.76 (70)	7.44 (189)	4.09 (104)
2.50 (63.5)	63C520A22	2.37 (60.2)	3.05 (77.5)	13.98 (355)	2.95 (75)	9.25 (235)	4.09 (104)
3.00 (76.2)	76C520A22	2.87 (72.9)	3.58 (91.0)	16.61 (422)	3.15 (80)	9.65 (245)	5.08 (129)
4.00 (101.6)	102C520A22	3.83 (97.4)	4.68 (119.0)	18.66 (474)	4.33 (110)	13.19 (335)	5.08 (129)

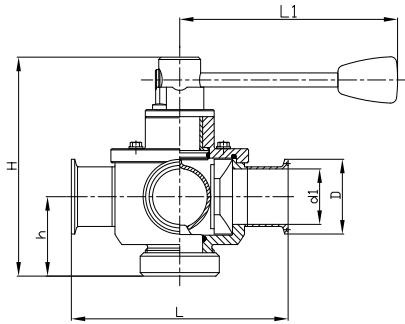
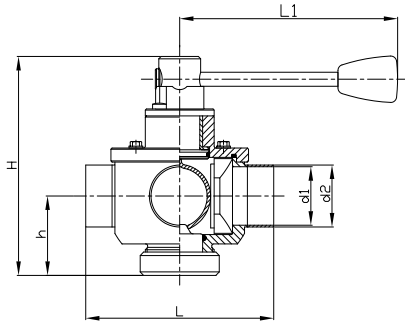
2-way shutter valve, pneumatic (air/air - air/spring), welded ends

VALVE SIZE inch (mm)	Type	Ød1	Ød2	H	h	L	L1
1.00 (25.4)	25C52Ab22	0.87 (22.1)	1.00 (25.4)	11.30 (287)	1.97 (50)	4.33 (110)	6.34 (161)
1.50 (38.1)	38C52Ab22	1.37 (34.8)	1.50 (38.1)	12.60 (320)	2.56 (65)	5.51 (140)	6.34 (161)
2.00 (50.8)	51C52Ab22	1.87 (47.5)	2.00 (50.8)	12.91 (328)	2.76 (70)	6.46 (164)	6.34 (161)
2.50 (63.5)	63C52Ab22	2.37 (60.2)	2.50 (63.5)	13.46 (342)	2.95 (75)	8.27 (210)	6.34 (161)
3.00 (76.2)	76C52Ab22	2.87 (72.9)	3.00 (76.2)	14.57 (370)	3.15 (80)	8.66 (220)	8.23 (209)
4.00 (101.6)	102C52Ab22	3.83 (97.4)	4.00 (101.6)	16.65 (423)	4.33 (110)	12.20 (310)	8.23 (209)
6.00 (152.4)	152C52Ab	5.78 (146.9)	6.00 (152.4)	21.26 (540)	5.51 (140)	19.69 (500)	13.11 (333)

2-way shutter valve, pneumatic (air/air - air/spring), TC-clamp

VALVE SIZE inch (mm)	Type	Ød1	ØD	H	h	L	L1
1.00 (25.4)	25C520Ab22	0.87 (22.1)	1.99 (50.5)	11.30 (287)	1.97 (50)	5.31 (135)	6.34 (161)
1.50 (38.1)	38C520Ab22	1.37 (34.8)	1.99 (50.5)	12.60 (320)	2.56 (65)	6.50 (165)	6.34 (161)
2.00 (50.8)	51C520Ab22	1.87 (47.5)	2.52 (64.0)	12.91 (328)	2.76 (70)	7.44 (189)	6.34 (161)
2.50 (63.5)	63C520Ab22	2.37 (60.2)	3.05 (77.5)	13.46 (342)	2.95 (75)	9.25 (235)	6.34 (161)
3.00 (76.2)	76C520Ab22	2.87 (72.9)	3.58 (91.0)	14.57 (370)	3.15 (80)	9.65 (245)	8.23 (209)
4.00 (101.6)	102C520Ab22	3.83 (97.4)	4.68 (119.0)	16.65 (423)	4.33 (110)	13.19 (335)	8.23 (209)
6.00 (152.4)	152C520Ab	5.78 (146.9)	6.57 (167.0)	21.26 (540)	5.51 (140)	19.69 (500)	13.11 (333)

SHUTTER VALVES (ARC VALVES)



Inch

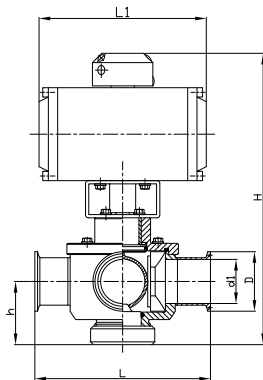
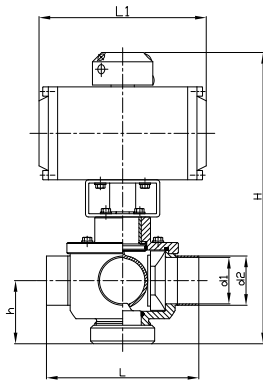
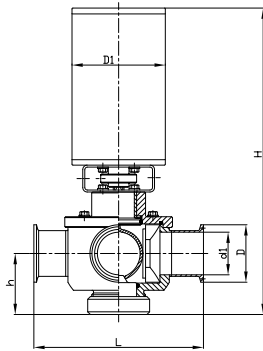
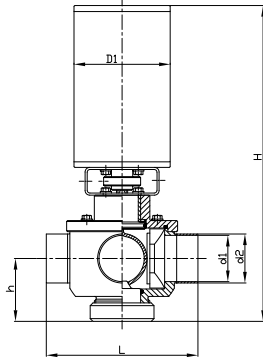
3-way shutter valve, manual, welded ends

VALVE SIZE inch (mm)	Type	Ød1	Ød2	H	h	L	L1
1.00 (25.4)	25C53M22	0.87 (22.1)	1.00 (25.4)	5.71 (145)	1.97 (50)	4.33 (110)	6.30 (160)
1.50 (38.1)	38C53M22	1.37 (34.8)	1.50 (38.1)	7.09 (180)	2.56 (65)	5.51 (140)	6.30 (160)
2.00 (50.8)	51C53M22	1.87 (47.5)	2.00 (50.8)	7.48 (190)	2.76 (70)	6.46 (164)	7.48 (190)
2.50 (63.5)	63C53M22	2.37 (60.2)	2.50 (63.5)	7.87 (200)	2.95 (75)	8.27 (210)	7.48 (190)
3.00 (76.2)	76C53M22	2.87 (72.9)	3.00 (76.2)	8.46 (215)	3.15 (80)	8.66 (220)	7.48 (190)
4.00 (101.6)	102C53M22	3.83 (97.4)	4.00 (101.6)	10.43 (265)	4.33 (110)	12.20 (310)	10.63 (270)
6.00 (152.4)	152C53M	5.78 (146.9)	6.00 (152.4)	13.58 (345)	5.51 (140)	19.69 (500)	10.63 (270)

3-way shutter valve, manual, TC-clamp

VALVE SIZE inch (mm)	Type	Ød1	ØD	H	h	L	L1
1.00 (25.4)	25C530M22	0.87 (22.1)	1.99 (50.5)	5.71 (145)	1.97 (50)	5.31 (135)	6.30 (160)
1.50 (38.1)	38C530M22	1.37 (34.8)	1.99 (50.5)	7.09 (180)	2.56 (65)	6.50 (165)	6.30 (160)
2.00 (50.8)	51C530M22	1.87 (47.5)	2.52 (64.0)	7.48 (190)	2.76 (70)	7.44 (189)	7.48 (190)
2.50 (63.5)	63C530M22	2.37 (60.2)	3.05 (77.5)	7.87 (200)	2.95 (75)	9.25 (235)	7.48 (190)
3.00 (76.2)	76C530M22	2.87 (72.9)	3.58 (91.0)	8.46 (215)	3.15 (80)	9.65 (245)	7.48 (190)
4.00 (101.6)	102C530M22	3.83 (97.4)	4.68 (119.0)	10.43 (265)	4.33 (110)	13.19 (335)	10.63 (270)
6.00 (152.4)	152C530M	5.78 (146.9)	6.57 (167.0)	13.58 (345)	5.51 (140)	19.69 (500)	10.63 (270)

SHUTTER VALVES (ARC VALVES)



Inch

3-way shutter valve, pneumatic (air/air - air/spring), welded ends

VALVE SIZE inch (mm)	Type	Ød1	Ød2	H	h	L	ØD1
1.00 (25.4)	25C53A22	0.87 (22.1)	1.00 (25.4)	11.81 (300)	1.97 (50)	4.33 (110)	3.50 (89)
1.50 (38.1)	38C53A22	1.37 (34.8)	1.50 (38.1)	13.19 (335)	2.56 (65)	5.51 (140)	3.50 (89)
2.00 (50.8)	51C53A22	1.87 (47.5)	2.00 (50.8)	13.39 (340)	2.76 (70)	6.46 (164)	4.09 (104)
2.50 (63.5)	63C53A22	2.37 (60.2)	2.50 (63.5)	13.98 (355)	2.95 (75)	8.27 (210)	4.09 (104)
3.00 (76.2)	76C53A22	2.87 (72.9)	3.00 (76.2)	16.61 (422)	3.15 (80)	8.66 (220)	5.08 (129)
4.00 (101.6)	102C53A22	3.83 (97.4)	4.00 (101.6)	18.66 (474)	4.33 (110)	12.20 (310)	5.08 (129)

3-way shutter valve, pneumatic (air/air - air/spring), TC-clamp

VALVE SIZE inch (mm)	Type	Ød1	ØD	H	h	L	ØD1
1.00 (25.4)	25C530A22	0.87 (22.1)	1.99 (50.5)	11.81 (300)	1.97 (50)	5.31 (135)	3.50 (89)
1.50 (38.1)	38C530A22	1.37 (34.8)	1.99 (50.5)	13.19 (335)	2.56 (65)	6.50 (165)	3.50 (89)
2.00 (50.8)	51C530A22	1.87 (47.5)	2.52 (64.0)	13.39 (340)	2.76 (70)	7.44 (189)	4.09 (104)
2.50 (63.5)	63C530A22	2.37 (60.2)	3.05 (77.5)	13.98 (355)	2.95 (75)	9.25 (235)	4.09 (104)
3.00 (76.2)	76C530A22	2.87 (72.9)	3.58 (91.0)	16.61 (422)	3.15 (80)	9.65 (245)	5.08 (129)
4.00 (101.6)	102C530A22	3.83 (97.4)	4.68 (119.0)	18.66 (474)	4.33 (110)	13.19 (335)	5.08 (129)

3-way shutter valve, pneumatic (air/air - air/spring), welded ends

VALVE SIZE inch (mm)	Type	Ød1	Ød2	H	h	L	L1
1.00 (25.4)	25C53Ab22	0.87 (22.1)	1.00 (25.4)	11.30 (287)	1.97 (50)	4.33 (110)	6.34 (161)
1.50 (38.1)	38C53Ab22	1.37 (34.8)	1.50 (38.1)	12.60 (320)	2.56 (65)	5.51 (140)	6.34 (161)
2.00 (50.8)	51C53Ab22	1.87 (47.5)	2.00 (50.8)	12.91 (328)	2.76 (70)	6.46 (164)	6.34 (161)
2.50 (63.5)	63C53Ab22	2.37 (60.2)	2.50 (63.5)	13.46 (342)	2.95 (75)	8.27 (210)	6.34 (161)
3.00 (76.2)	76C53Ab22	2.87 (72.9)	3.00 (76.2)	14.57 (370)	3.15 (80)	8.66 (220)	8.23 (209)
4.00 (101.6)	102C53Ab22	3.83 (97.4)	4.00 (101.6)	16.65 (423)	4.33 (110)	12.20 (310)	8.23 (209)
6.00 (152.4)	152C53Ab	5.78 (146.9)	6.00 (152.4)	21.26 (540)	5.51 (140)	19.69 (500)	13.11 (333)

3-way shutter valve, pneumatic (air/air - air/spring), TC-clamp

VALVE SIZE inch (mm)	Type	Ød1	ØD	H	h	L	L1
1.00 (25.4)	25C530Ab22	0.87 (22.1)	1.99 (50.5)	11.30 (287)	1.97 (50)	5.31 (135)	6.34 (161)
1.50 (38.1)	38C530Ab22	1.37 (34.8)	1.99 (50.5)	12.60 (320)	2.56 (65)	6.50 (165)	6.34 (161)
2.00 (50.8)	51C530Ab22	1.87 (47.5)	2.52 (64.0)	12.91 (328)	2.76 (70)	7.44 (189)	6.34 (161)
2.50 (63.5)	63C530Ab22	2.37 (60.2)	3.05 (77.5)	13.46 (342)	2.95 (75)	9.25 (235)	6.34 (161)
3.00 (76.2)	76C530Ab22	2.87 (72.9)	3.58 (91.0)	14.57 (370)	3.15 (80)	9.65 (245)	8.23 (209)
4.00 (101.6)	102C530Ab22	3.83 (97.4)	4.68 (119.0)	16.65 (423)	4.33 (110)	13.19 (335)	8.23 (209)
6.00 (152.4)	152C530Ab	5.78 (146.9)	6.57 (167.0)	21.26 (540)	5.51 (140)	19.69 (500)	13.11 (333)

LIAG® PIG DIVERTER SHUTTER VALVES

Ideal for low-germ pigging processes

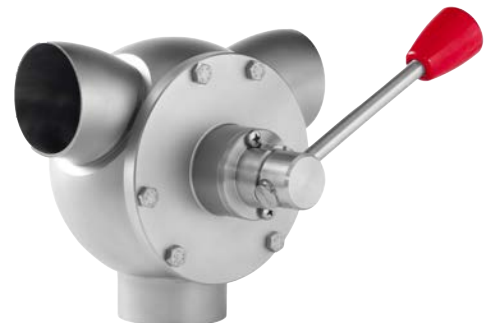
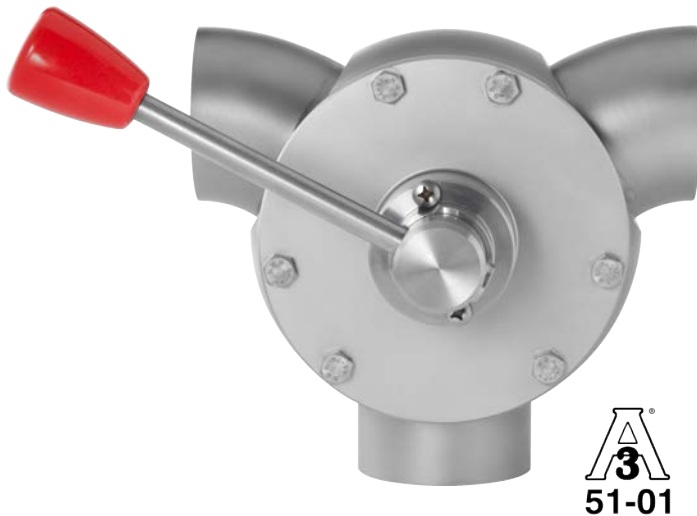
LIAG® pig diverter shutter valves have been designed according to hygienic design guidelines to meet the high demands of process engineering applications. They build upon the same design principle as free flow shutter valves.

By virtue of this principle no products remain in the valves during operation.

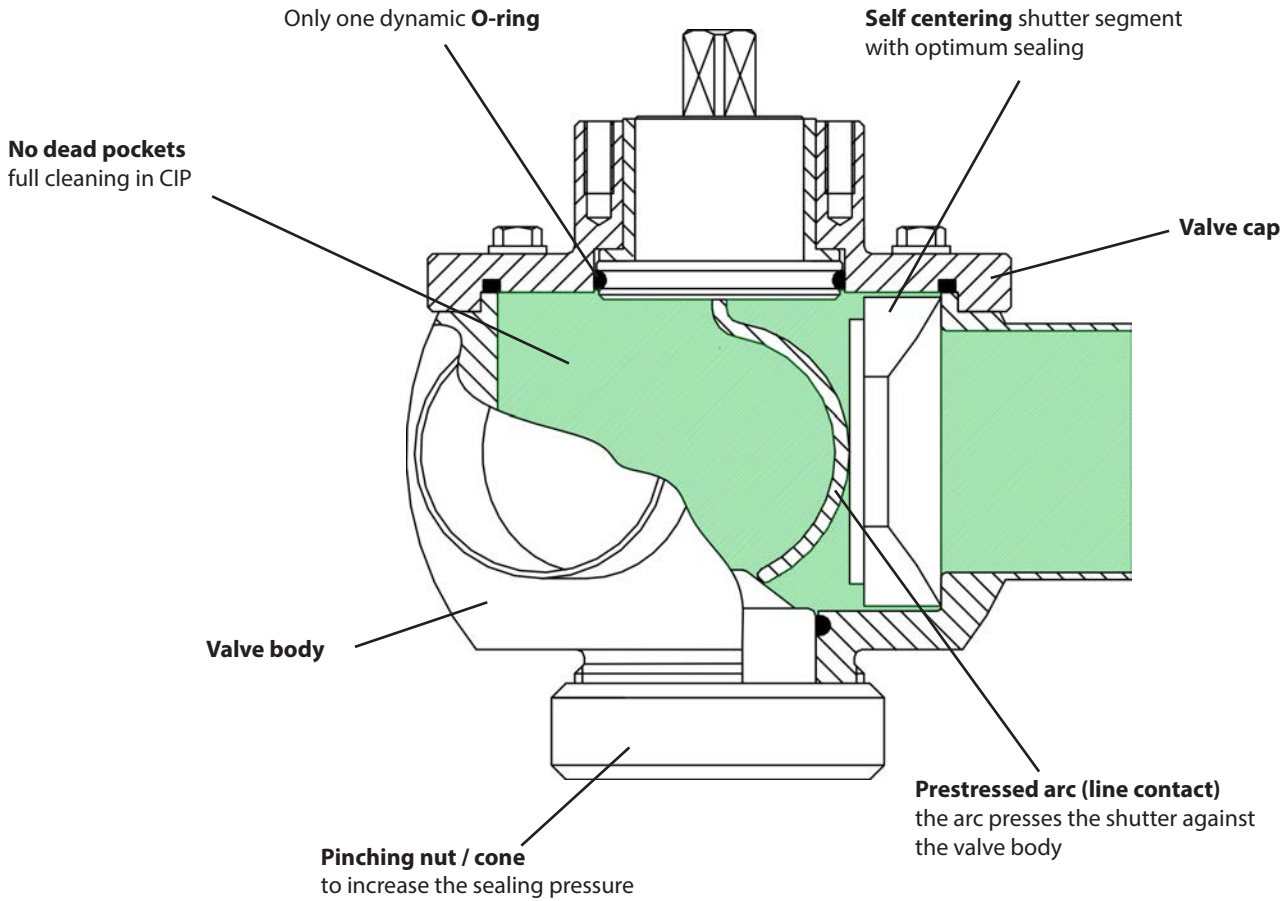
The prime use of LIAG® pig diverter shutter valves is with sterile pigging systems as they can be disassembled easily and quickly even when welded in place, and additionally, offer high CIP capability.

Features

- No dead pockets
- CIP/SIP capability (hygienic design)
- Totally clear passage – no pressure loss
- No product remainders or sticking of solid particles
- Designed to be passed with DMV lip pigs
- Compact design for 90° installation
- Minimum number of components and wearing parts
- Can be completely dismantled even when welded in place
- 3-A 51-01 and FDA compliance
- CRN

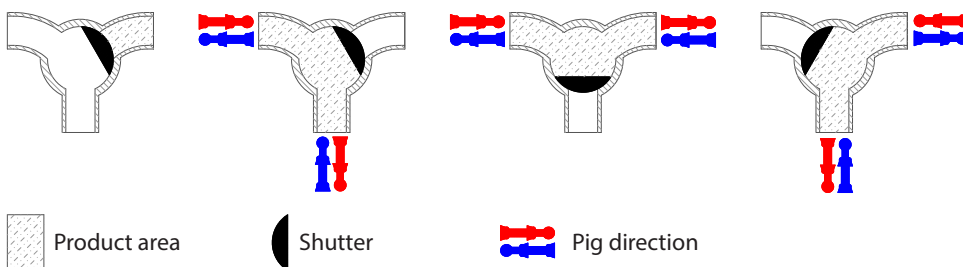


Principle of Design



Operating positions

Pig diverter shutter valve 90°/120°



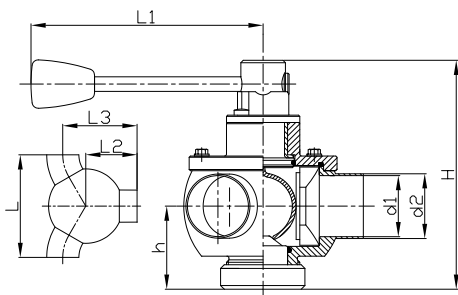
Technical Data Overview

Nominal sizes	
Inch:	1" / 1.5" / 2" / 2.5" / 3" / 4"
DIN:	25 / 40 / 50 / 65 / 80 / 100
Materials	
Inox parts in contact with product:	AISI 316L (1.4404 / 1.4435)
Other inox parts:	AISI 304 (1.4301)
O-ring seals:	EPDM, FPM (Viton®), FEP, other grades upon request
Shutter:	Dyneon™TFM1600
Surfaces	
In contact with product:	Ra ≤ 0,8 µm (Ra ≤ 32 µin)
Temperature	
Operating temperature:	230°F (110°C)
Short-term:	284°F (140°C) - optionally up to 392°F (200°C)
Operating pressure	
Pressure behind arc:	145 psi (10 bar) - optionally up to 290,1psi (20 bar)
Pressure against arc:	43,5 psi (3 bar)
Versions	
3-way (3 x 120°)	
Operation	
Manual:	with handle (4 locking positions)
Pneumatic:	Horizontal pneumatic actuator (aluminium housing)
Valve connection	
Clamp connection:	Tri-Clamp
Welded ends:	Inch, DIN
Male ends:	DIN 11851
Further options / Certificates	
<ul style="list-style-type: none">• Shutter material; alternatively: Tecapeek®, PTFE+15% Peek• Heated version• Combination of different types of connection• Delivery and adaptation to actuators of different manufacture per Namur NE14 and DIN EN ISO5211• 3-A 51-01 and FDA compliance• CRN	

PIG DIVERTER SHUTTER VALVES

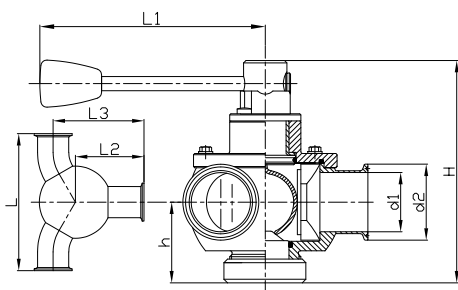
Inch

90°/120° pig diverter shutter valve, manual, welded ends



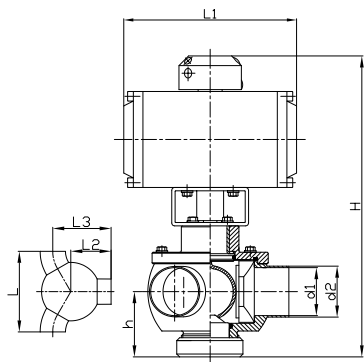
VALVE SIZE inch (mm)	Type	Ød1	Ød2	H	h	L	L1	L2	L3
1.50 (38.1)	38CV53M22	1.37 (34.8)	1.50 (38.1)	7.09 (180)	2.56 (65)	5.16 (131)	6.30 (160)	2.58 (65.5)	3.78 (96)
2.00 (50.8)	51CV53M22	1.87 (47.5)	2.00 (50.8)	7.48 (190)	2.76 (70)	6.06 (154)	7.48 (190)	3.03 (77)	4.49 (114)
2.50 (63.5)	63CV53M22	2.37 (60.2)	2.50 (63.5)	7.87 (200)	2.95 (75)	7.80 (198)	7.48 (190)	3.90 (99)	5.43 (138)
3.00 (76.2)	76CV53M22	2.87 (72.9)	3.00 (76.2)	8.46 (215)	3.15 (80)	8.58 (218)	7.48 (190)	4.29 (109)	6.22 (158)
4.00 (101.6)	102CV53M22	3.83 (97.4)	4.00 (101.6)	10.43 (265)	4.33 (110)	11.73 (298)	10.63 (270)	5.87 (149)	8.54 (217)

90°/120° pig diverter shutter valve, manual, TC-clamp



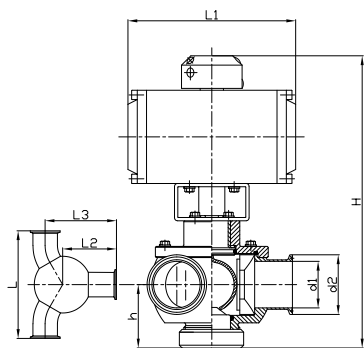
VALVE SIZE inch (mm)	Type	Ød1	Ød2	H	h	L	L1	L2	L3
1.50 (38.1)	38CV530M22	1.37 (34.8)	1.99 (50.5)	7.09 (180)	2.56 (65)	6.14 (156)	6.30 (160)	3.07 (78)	4.29 (109)
2.00 (50.8)	51CV530M22	1.87 (47.5)	2.52 (64)	7.48 (190)	2.76 (70)	7.05 (179)	7.48 (190)	3.52 (89.5)	5.00 (127)
2.50 (63.5)	63CV530M22	2.37 (60.2)	3.05 (77.5)	7.87 (200)	2.95 (75)	8.78 (223)	7.48 (190)	4.39 (111.5)	5.94 (151)
3.00 (76.2)	76CV530M22	2.87 (72.9)	3.58 (91)	8.46 (215)	3.15 (80)	9.57 (243)	7.48 (190)	4.78 (121.5)	6.73 (171)
4.00 (101.6)	102CV530M22	3.83 (97.4)	4.69 (119)	10.43 (265)	4.33 (110)	12.72 (323)	10.63 (270)	6.36 (161.5)	9.06 (230)

90°/120° pig diverter shutter valve, pneumatic (air/air), welded ends



VALVE SIZE inch (mm)	Type	Ød1	Ød2	H	h	L	L1	L2	L3
1.50 (38.1)	38CV53Ab22	1.37 (34.8)	1.50 (38.1)	12.87 (327)	2.56 (65)	5.16 (131)	7.17 (182)	2.58 (65.5)	3.78 (96)
2.00 (50.8)	51CV53Ab22	1.87 (47.5)	2.00 (50.8)	13.11 (333)	2.76 (70)	6.06 (154)	7.17 (182)	3.03 (77)	4.49 (114)
2.50 (63.5)	63CV53Ab22	2.37 (60.2)	2.50 (63.5)	13.66 (347)	2.95 (75)	7.80 (198)	7.17 (182)	3.90 (99)	5.43 (138)
3.00 (76.2)	76CV53Ab22	2.87 (72.9)	3.00 (76.2)	14.80 (376)	3.15 (80)	8.58 (218)	9.29 (236)	4.29 (109)	6.22 (158)
4.00 (101.6)	102CV53Ab22	3.83 (97.4)	4.00 (101.6)	16.85 (428)	4.33 (110)	11.73 (298)	9.29 (236)	5.87 (149)	8.54 (217)

90°/120° pig diverter shutter valve, pneumatic (air/air), TC-clamp



VALVE SIZE inch (mm)	Type	Ød1	Ød2	H	h	L	L1	L2	L3
1.50 (38.1)	38CV530Ab22	1.37 (34.8)	1.99 (50.5)	12.87 (327)	2.56 (65)	6.14 (156)	7.17 (182)	3.07 (78)	4.29 (109)
2.00 (50.8)	51CV530Ab22	1.87 (47.5)	2.52 (64)	13.11 (333)	2.76 (70)	7.05 (179)	7.17 (182)	3.52 (89.5)	5.00 (127)
2.50 (63.5)	63CV530Ab22	2.37 (60.2)	3.05 (77.5)	13.66 (347)	2.95 (75)	8.78 (223)	7.17 (182)	4.39 (111.5)	5.94 (151)
3.00 (76.2)	76CV530Ab22	2.87 (72.9)	3.58 (91)	14.80 (376)	3.15 (80)	9.57 (243)	9.29 (236)	4.78 (121.5)	6.73 (171)
4.00 (101.6)	102CV530Ab22	3.83 (97.4)	4.69 (119)	16.85 (428)	4.33 (110)	12.72 (323)	9.29 (236)	6.36 (161.5)	9.06 (230)

CUSTOMIZED LAUFER SHUTTER VALVES

4.1 2-Way Control Shutter Valve

4.2 Venturi Powder Control Valve

4.3 EASY-OPEN Shutter Valve for the meat industry

4.4 Leakage control of the moving O-ring seal

4.1 2-way Control Arc Valve

Ideal for controlling sensitive media containing solid particles



A
3
51-01

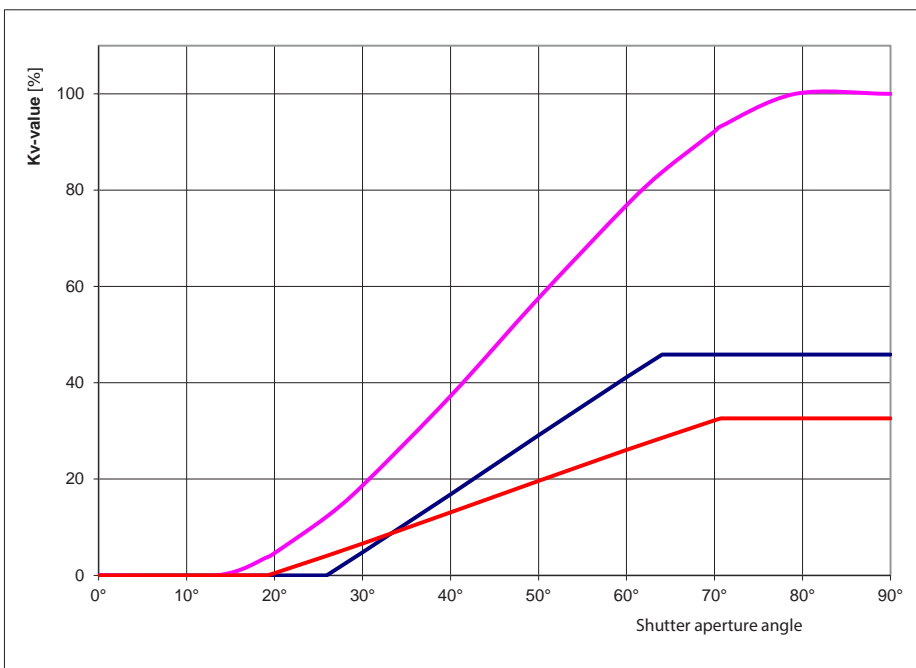
On account of their favorable flow characteristic LIAG® free flow shutter valves are particularly suited for pro-portioning viscous and pasty products. Depending on the product to be propor-tioned LIAG® control shutter valves can be delivered with various shutter quali-ties and linearization inserts. Control is per-formed via a standard 4-20mA (0-10V) electro-pneumatic actuator.

The control characteristic / rate of flow or the control range can be adapted to customer requirements.

Features

- No dead pockets
- CIP/SIP capability
- Product-saving proportioning
- No product remainders or sticking of solid particles
- Full linearization option of control characteristic
- Minimum number of components and wearing parts
- Can be completely dismantled even when welded in place
- 3-A 51-01 and FDA compliance
- Identical wearing and spare parts as shutter valves
- CRN

Flow characteristic LIAG® control shutter valve



Outlet: Standard "full bore" ○

Outlet: Linearization insert "square" □

Outlet: Linearization insert "rectangle" ▭

Technical Data Overview

Nominal sizes

Inch: 1" / 1.5" / 2" / 2.5" / 3" / 4"
DIN: 25 / 40 / 50 / 65 / 80 / 100

Materials

Inox parts in contact with product: AISI 316L (1.4404 / 1.4435)
Other inox parts: AISI 304 (1.4301)
O-ring seals: EPDM, FPM (Viton®), FEP, other grades upon request
Shutter: Dyneon™ TFM1600

Surfaces

In contact with product: Ra ≤ 0,8 µm (Ra ≤ 32 µin)

Temperature

Operating temperature: 230°F (110°C)
Short-term: 284°F (140°C)
- optionally up to 392°F (200°C)

Operating pressure

Pressure behind arc: 145 psi (10 bar)
- optionally up to 290,1psi (20 bar)
Pressure against arc: 43,5 psi (3 bar)

Versions

2-way

Actuator

Electro-pneumatic control unit consisting of:

- Pneumatic actuator 0°-90°
- Positioner Positurn 4-20mA (0-10V), 24V DC, IP65

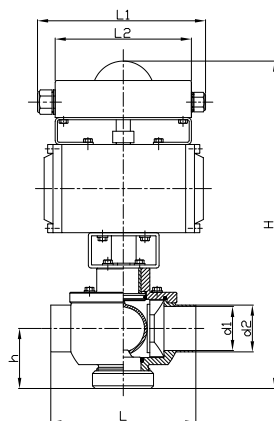
Valve connection

Clamp connection: Tri-Clamp
Welded ends: Inch, DIN
Male ends: DIN 11851

Further options / Certificates

- Linerization insert - mechanical adaptation of control characteristic
- Electric actuator with MOD positioner 4-20mA (0-10V), 220-240V, 50/60Hz / IP65 / 0°-90° (110V AC-version upon request)
- Shutter material; alternatively: Tecapeek®, PTFE+15% Peek
- Heated version
- Leakage control of moving O-ring seal / steam barrier with ball-bearing supported selector shaft
- 3-A 51-01 and FDA compliance
- CRN

CONTROL SHUTTER VALVES



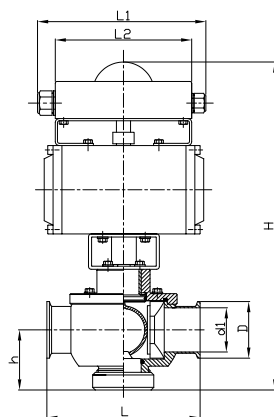
Inch

2-way control shutter valve, pneumatic (air/air - air/spring), welded ends

VALVE SIZE inch (mm)	Type	Ød1	Ød2	H	h	L	L1	L2
1.00 (25.4)	25C52Aep22	0.87 (22.1)	1.00 (25.4)	13.03 (331)	1.97 (50)	4.33 (110)	7.80 (198)	6.06 (154)
1.50 (38.1)	38C52Aep22	1.37 (34.8)	1.50 (38.1)	14.33 (364)	2.56 (65)	5.51 (140)	7.80 (198)	6.06 (154)
2.00 (50.8)	51C52Aep22	1.87 (47.5)	2.00 (50.8)	14.57 (370)	2.76 (70)	6.46 (164)	7.80 (198)	6.06 (154)
2.50 (63.5)	63C52Aep22	2.37 (60.2)	2.50 (63.5)	16.26 (413)	2.95 (75)	8.27 (210)	7.80 (198)	6.06 (154)
3.00 (76.2)	76C52Aep22	2.87 (72.9)	3.00 (76.2)	16.89 (429)	3.15 (80)	8.66 (220)	7.80 (198)	6.06 (154)
4.00 (101.6)	102C52Aep22	3.83 (97.4)	4.00 (101.6)	18.31 (465)	4.33 (110)	12.20 (310)	7.80 (198)	6.06 (154)

Electro-pneumatic control unit consisting of:

- Pneumatic actuator 0°-90°
- Positioner Positurn 4-20mA (0-10V), 24V DC, IP65



2-way control shutter valve, pneumatic (air/air - air/spring), TC-clamp

VALVE SIZE inch (mm)	Type	Ød1	ØD	H	h	L	L1	L2
1.00 (25.4)	25C520Aep22	0.87 (22.1)	1.99 (50.5)	13.03 (331)	1.97 (50)	5.31 (135)	7.80 (198)	6.06 (154)
1.50 (38.1)	38C520Aep22	1.37 (34.8)	1.99 (50.5)	14.33 (364)	2.56 (65)	6.50 (165)	7.80 (198)	6.06 (154)
2.00 (50.8)	51C520Aep22	1.87 (47.5)	2.52 (64.0)	14.57 (370)	2.76 (70)	7.44 (189)	7.80 (198)	6.06 (154)
2.50 (63.5)	63C520Aep22	2.37 (60.2)	3.05 (77.5)	16.26 (413)	2.95 (75)	9.25 (235)	7.80 (198)	6.06 (154)
3.00 (76.2)	76C520Aep22	2.87 (72.9)	3.58 (91.0)	16.89 (429)	3.15 (80)	9.65 (245)	7.80 (198)	6.06 (154)
4.00 (101.6)	102C520Aep22	3.83 (97.4)	4.68 (119.0)	18.31 (465)	4.33 (110)	13.19 (335)	7.80 (198)	6.06 (154)

Electro-pneumatic control unit consisting of:

- Pneumatic actuator 0°-90°
- Positioner Positurn 4-20mA (0-10V), 24V DC, IP65

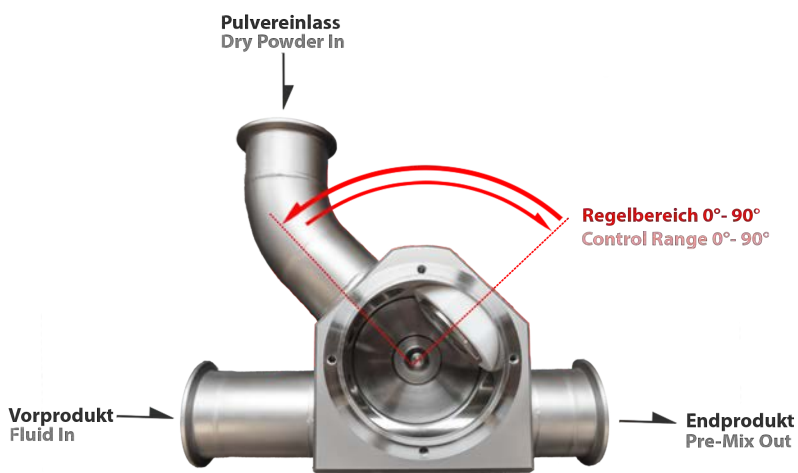
4.2 Venturi Powder Control Valve



LIAG® Venturi powder control valves are designed to enable smooth flow of powder through the valve, the middle port is orientated at a 135°/45° angle to the straight through passage. The Y-arrangement of the inlet creates the ideal flow and vacuum exhaust characteristics for proportioning and dosing. This allows for a complete full bore without reducing the nominal diameter as often experienced with the use of a butterfly valve. Furthermore the Venturi powder control valve can substitute up to two butterfly valves, which improves the operating control of the unit.

Features

- Totally clear passage - no pressure loss
- No dead pockets
- No product retention or sticking of solid particles
- Can be completely dismantled for easy service even when welded in place
- Identical wearing and spare parts as shutter valves

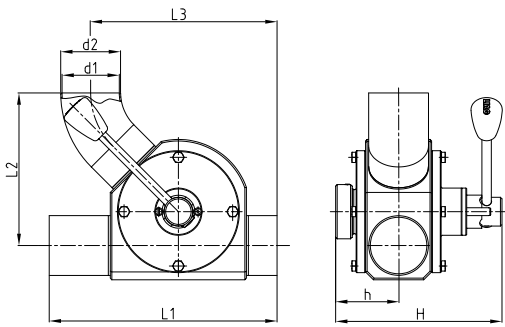


Technical Data Overview

Nominal sizes	
Inch:	1" / 1.5" / 2" / 2.5" / 3"
Materials	
Inox parts in contact with product:	AISI 316L (1.4404 / 1.4435)
Other inox parts:	AISI 304 (1.4301)
O-ring seals:	EPDM, FPM (Viton®), FEP, other grades upon request
Shutter:	Dyneon™ TFM1600
Surfaces	
In contact with product:	Ra ≤ 0,8 µm (Ra ≤ 32 µin)
Temperature	
Operating temperature:	230°F (110°C)
Short-term:	284°F (140°C) - optionally up to 392°F (200°C)
Operating pressure	
Pressure behind arc:	145 psi (10 bar) - optionally up to 290,1 psi (20 bar)
Pressure against arc:	43,5 psi (3 bar)
Versions	
3-way	
Operation	
Manual:	with handle (4 locking positions)
Pneumatic:	• Vertical pneumatic actuator (AISI 304) • Horizontal pneumatic actuator (aluminium housing)
Valve connection	
Clamp connection:	Tri-Clamp
Welded ends:	Inch, DIN
Male ends:	DIN 11851
Further options	
<ul style="list-style-type: none"> • Shutter material; alternatively: Tecapeek®, PTFE+15% Peek • Combination of different types of connection • Delivery and adaptation to actuators of different manufacture per Namur NE14 and DIN EN ISO 5211 	

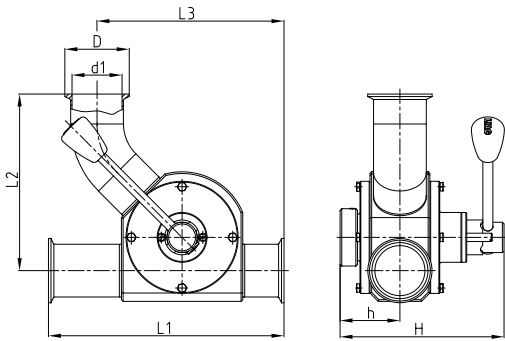
VENTURI VALVE

Inch



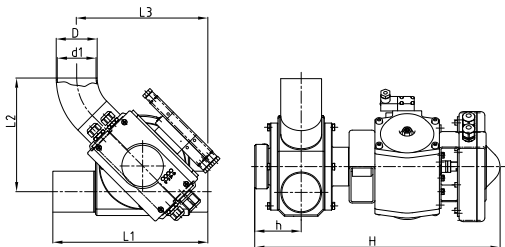
Venturi arc valve, manual, welded ends

VALVE SIZE inch (mm)	Type	Ød1	Ød2	H	h	L1	L2	L3
1.50 (38.1)	38CY53M19	1.37 (34.8)	1.50 (38.1)	7.09 (180)	2.56 (65)	6.14 (156)	2.58 (65.5)	5.71 (145)
2.00 (50.8)	51CY53M19	1.87 (47.5)	2.00 (50.8)	7.48 (190)	2.76 (70)	7.52 (191)	3.03 (77)	6.73 (171)
2.50 (63.5)	63CY53M19	2.37 (60.2)	2.50 (63.5)	7.87 (200)	2.95 (75)	8.98 (228)	3.90 (99)	8.50 (216)
3.00 (76.2)	76CY53M19	2.87 (72.9)	3.00 (76.2)	8.45 (215)	3.15 (80)	9.76 (248)	4.29 (109)	9.29 (236)



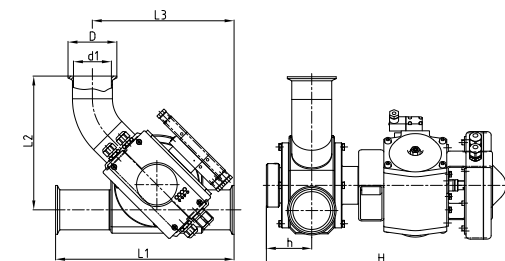
Venturi arc valve, manual, TC-clamp

VALVE SIZE inch (mm)	Type	Ød1	ØD	H	h	L1	L2	L3
1.50 (38.1)	38CY530M19	1.37 (34.8)	1.99 (50.5)	7.09 (180)	2.56 (65)	6.22 (158)	5.51 (140)	5.75 (146)
2.00 (50.8)	51CY530M19	1.87 (47.5)	2.52 (64)	7.48 (190)	2.76 (70)	8.86 (225)	6.34 (161)	7.40 (188)
2.50 (63.5)	63CY530M19	2.37 (60.2)	3.05 (77.5)	7.87 (200)	2.95 (75)	11.14 (283)	8.39 (213)	8.86 (225)
3.00 (76.2)	76CY530M19	2.87 (72.9)	3.58 (91)	8.46 (215)	3.15 (80)	12.01 (305)	8.46 (215)	9.65 (245)



Venturi control arc valve, (air/air - air/spring), welded ends

VALVE SIZE inch (mm)	Type	Ød1	ØD	H	h	L1	L2	L3
1.50 (38.1)	38CY53AbC19	1.37 (34.8)	1.50 (38.1)	14.37 (365)	2.56 (65)	6.14 (156)	4.69 (119)	5.71 (145)
2.00 (50.8)	51CY53AbC19	1.87 (47.5)	2.00 (50.8)	14.76 (375)	2.76 (70)	7.52 (191)	5.47 (139)	6.73 (171)
2.50 (63.5)	63CY53AbC19	2.37 (60.2)	2.50 (63.5)	15.16 (385)	2.95 (75)	8.98 (228)	6.93 (176)	8.50 (216)
3.00 (76.2)	76CY53AbC19	2.87 (72.9)	3.00 (76.2)	16.34 (415)	3.15 (80)	9.76 (248)	7.64 (194)	9.29 (236)



Venturi control arc valve, (air/air - air/spring), TC-clamp

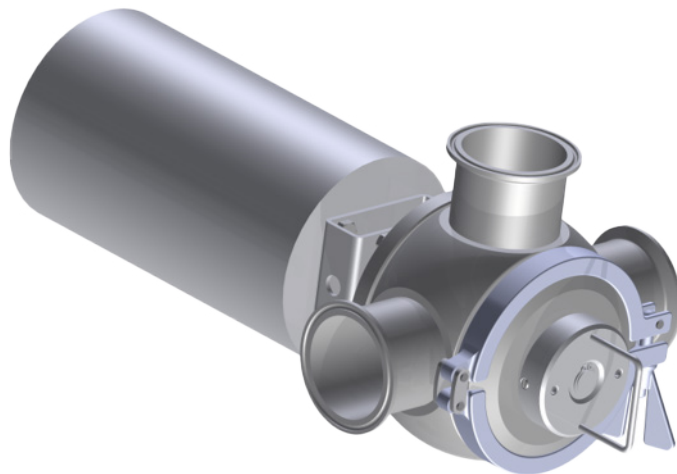
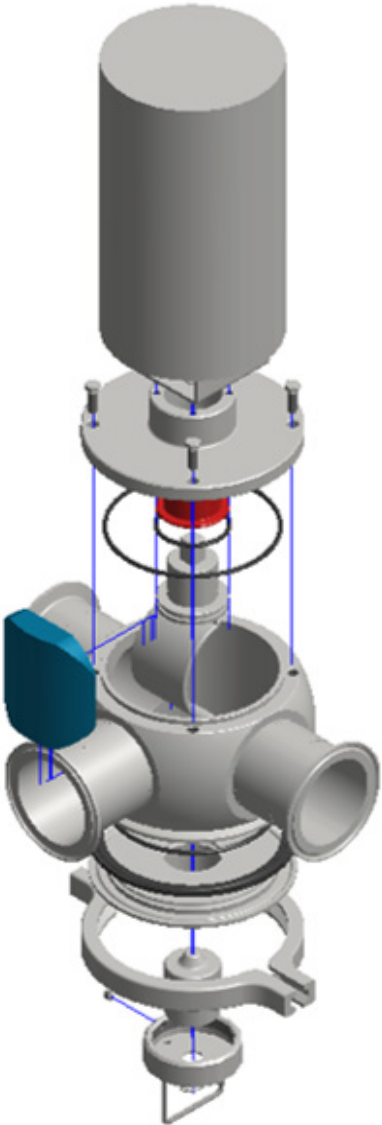
VALVE SIZE inch (mm)	Type	Ød1	ØD	H	h	L1	L2	L3
1.50 (38.1)	38CY530AbC19	1.37 (34.8)	1.99 (50.5)	14.37 (365)	2.56 (65)	6.22 (158)	5.51 (140)	5.75 (146)
2.00 (50.8)	51CY530AbC19	1.87 (47.5)	2.52 (64)	14.76 (375)	2.76 (70)	8.86 (225)	6.34 (161)	7.40 (188)
2.50 (63.5)	63CY530AbC19	2.37 (60.2)	3.05 (77.5)	15.16 (385)	2.95 (75)	11.14 (283)	8.39 (213)	8.86 (225)
3.00 (76.2)	76CY530AbC19	2.87 (72.9)	3.58 (91)	16.34 (415)	3.15 (80)	12.01 (305)	8.46 (215)	9.65 (245)

4.3 EASY-OPEN Arc Valve for the meat industry

LIAG® EASY-OPEN shutter valves are specially designed as reliable component of inline metal detectors and process lines in the meat industry without CIP cleaning. This valve performs easy and quick opening for manual cleaning (COP).

Features

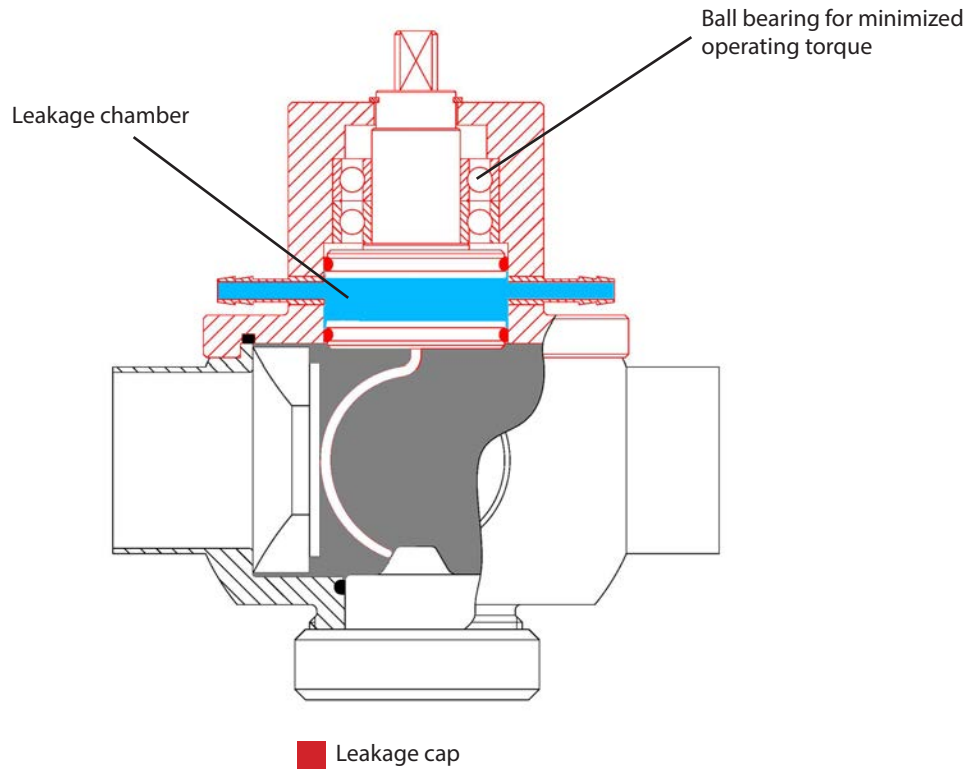
- Hygienic design - no dead pockets
- Totally clear passage - no pressure loss
- Minimum number of components and wearing parts
- EASY OPEN design for fast opening even when built in



Technical Data Overview

Nominal sizes	
Inch:	2" / 2.5" / 3"
DIN:	50 / 65 / 80
Materials	
Inox parts in contact with product:	AISI 316L (1.4404 / 1.4435)
Other inox parts:	AISI 304 (1.4301)
O-ring seals:	EPDM, FPM (Viton®), FEP, other grades upon request
Shutter:	Dyneon™TFM1600
Surfaces	
In contact with product:	Ra ≤ 0,8 µm (Ra ≤ 32 µin)
Temperature	
Operating temperature:	230°F (110°C)
Short-term:	284°F (140°C) - optionally up to 392°F (200°C)
Operating pressure	
Pressure behind arc:	145 psi (10 bar) - optionally up to 290,1 psi (20 bar)
Pressure against arc:	43,5 psi (3 bar)
Versions	
	2-way / 3-way
Operation	
Pneumatic:	<ul style="list-style-type: none">• Vertical pneumatic actuator (AISI 304)• Horizontal pneumatic actuator (aluminium housing)
Valve connection	
Clamp connection:	Tri-Clamp
Welded ends:	Inch, DIN
Male ends:	DIN 11851
Further options	
	<ul style="list-style-type: none">• Shutter material; alternatively: Tecapeek®, PTFE+15% Peek• Combination of different types of connection• Delivery and adaptation to actuators of different manufacture per Namur NE14 and DIN EN ISO 5211

4.4 Leakage control of the moving O-ring seal of Shutter Valves



For maximum product safety, LIAG® free flow shutter valves are available with a leakage monitoring system of the only dynamic O-ring. The specific design identifies possible wearing defects of the seal and prevents any contamination from the outside environment.

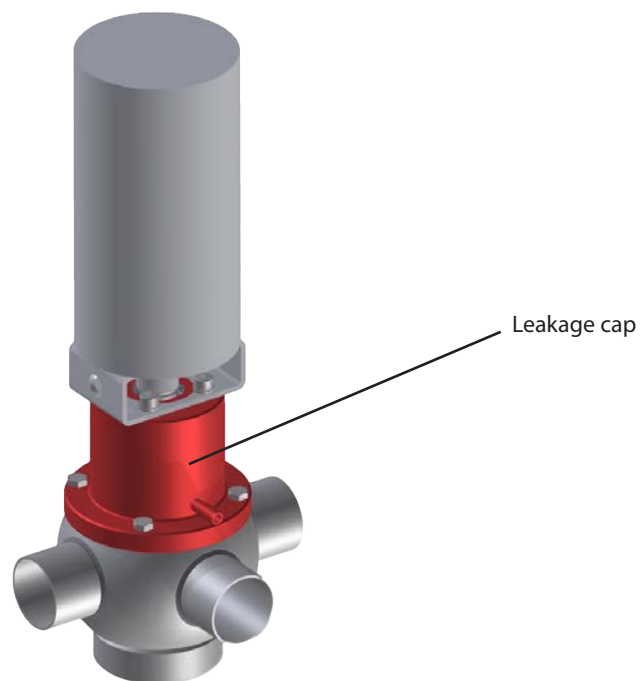
The special designed leakage chamber can act as a steam barrier or offer monitoring via means of a level conductor control (dilution of glycerine). The pivoting axle is supported with a ball-bearing shaft for increased radial stability and 80% less required operating torque compared with the standard shutter valve.

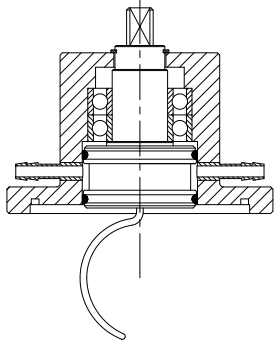
Features

- Maximum product safety for aseptic processes
- No contamination from the outside environment by as a result of excessive wearing or a defective stem o-ring seal
- Quick acting valve due to low operating torque requirements (ball bearing supported main shaft)
- Able to be retrofit to shutter valves

Technical Data Overview

Leakage cap	
Nominal sizes	
Inch:	2" / 2.5" / 3"
DIN:	50 / 65 / 80
Materials	
Inox parts in contact with product:	AISI 316L (1.4404 / 1.4435)
Other inox parts:	AISI 304 (1.4301)
O-ring seals:	EPDM, FPM (Viton®), FEP, other grades upon request
Shutter:	Dyneon™ TFM1600
Surfaces	
In contact with product:	Ra ≤ 0,8 µm (Ra ≤ 32 µin)
Temperature	
Operating temperature:	230°F (110°C)
Short-term:	284°F (140°C) - optionally up to 392°F (200°C)





Leakage cap with ball bearing supported selector shaft and leakage control of the moving O-ring seal

VALVE SIZE inch (mm)	Type
1.50 (38.1)	38-40SD510
2.00 (50.8)	50-51SD510
2.50 (63.5)	63S510
3.00 (76.2)	65-76SD510

without picture

Grooved ball bearing for leakage cap

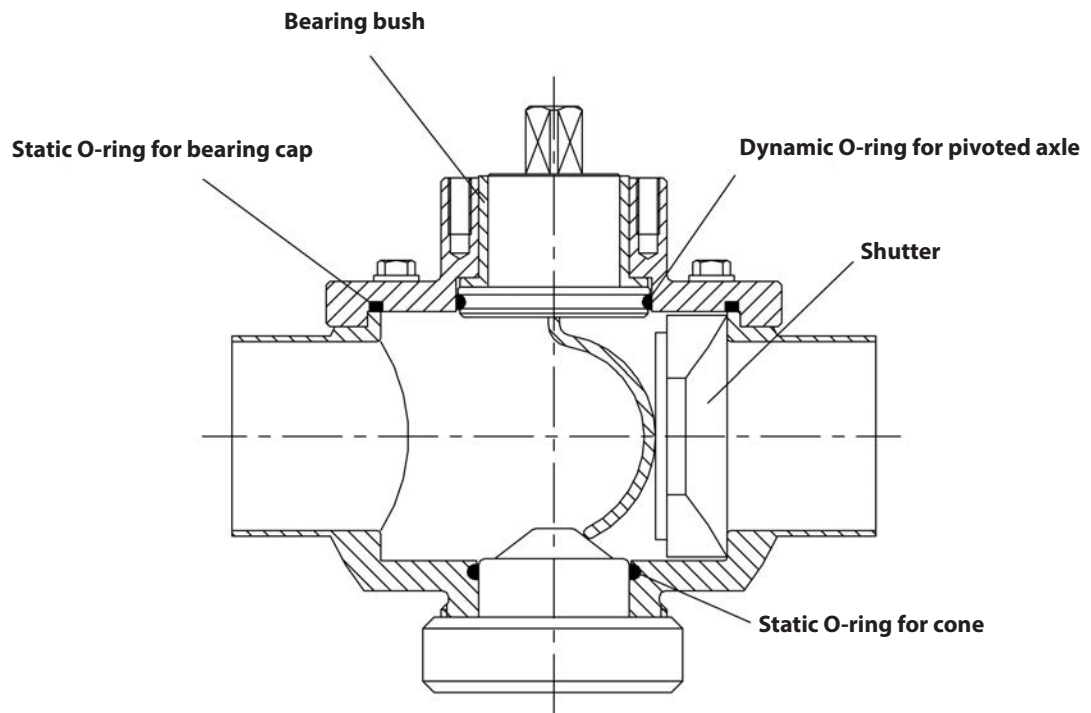
VALVE SIZE inch (mm)	Type
1.50 (38.1)	38-80SD509
2.00 (50.8)	38-80SD509
2.50 (63.5)	38-80SD509
3.00 (76.2)	38-80SD509

SPARE PARTS & ACCESSORIES

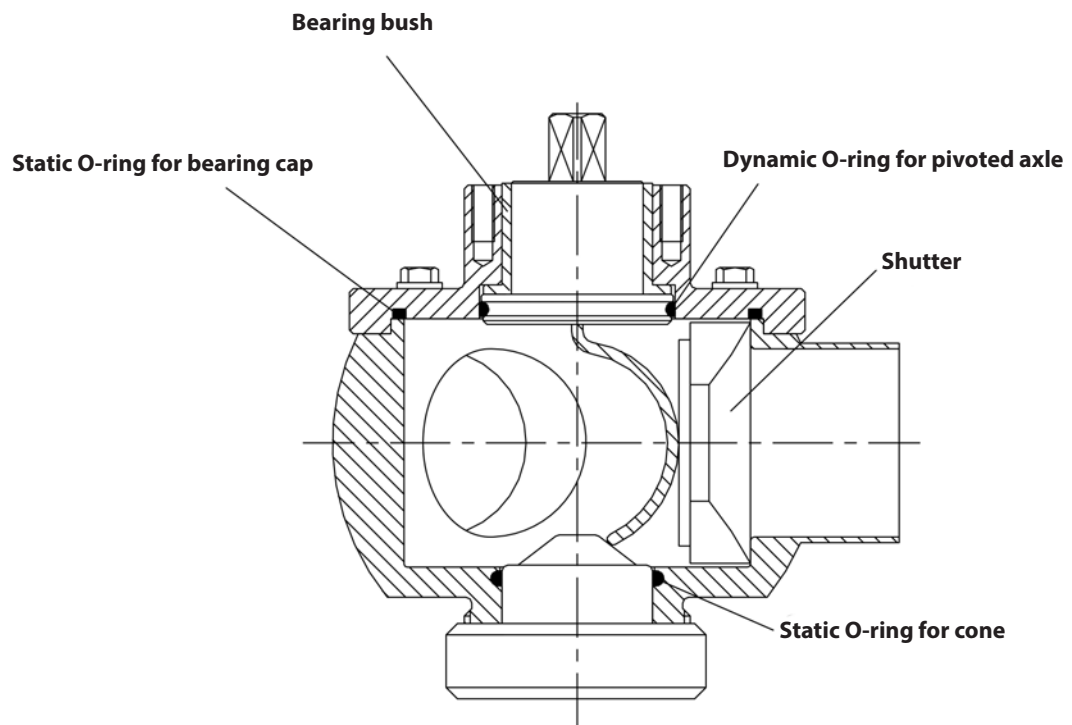
Spare Parts and Accessories to chapter 2, 3 and 4

Spare parts & Accessories

LIAG® Free Flow Shutter Valve (Arc Valve) - chapter 2



LIAG® Pig Diverter Shutter Valve - chapter 3



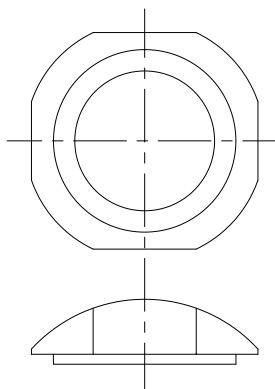
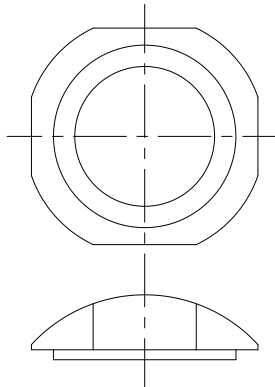
SPARE PARTS AND ACCESSORIES

O-ring set EPDM / FKM (Viton®)

Consists of:
1x O-ring for pivoted axle*
1x O-ring for bearing cap
1x O-ring for cone

O-ring set FEP

Consists of:
1x O-ring for pivoted axle*
1x O-ring for bearing cap
1x O-ring for cone



For shutter valves - chapter 2 and 3

EPDM O-ring set

VALVE SIZE inch (mm)	Type
1.00 (25.4)	25SD502S21E
1.50 (38.1)	38-40SD502S21E
2.00 (50.8)	50-51SD502S21E
2.50 (63.5)	63S502S21E
3.00 (76.2)	65-76SD502S21E
4.00 (101.6)	100-102SD502S21E
6.00 (152.4)	150D502E

FKM (Viton®) O-ring set

VALVE SIZE inch (mm)	Type
1.00 (25.4)	25SD502S21V
1.50 (38.1)	38-40SD502S21V
2.00 (50.8)	50-51SD502S21V
2.50 (63.5)	63S502S21V
3.00 (76.2)	65-76SD502S21V
4.00 (101.6)	100-102SD502S21V
6.00 (152.4)	150D502V

FEP O-ring set

VALVE SIZE inch (mm)	Type
1.00 (25.4)	25SD502S21FEP
1.50 (38.1)	38-40SD502S21FEP
2.00 (50.8)	50-51SD502S21FEP
2.50 (63.5)	63S502S21FEP
3.00 (76.2)	65-76SD502S21FEP
4.00 (101.6)	100-102SD502S21FEP
6.00 (152.4)	150D502FEP

Dyneon™ TFM1600 shutter

VALVE SIZE inch (mm)	Type
1.00 (25.4)	25SD501T
1.50 (38.1)	38-40SD501T
2.00 (50.8)	50-51SD501T
2.50 (63.5)	63S501T
3.00 (76.2)	65-76SD501T
4.00 (101.6)	100-102SD501T
6.00 (152.4)	150D501T

PTFE+15% Peek shutter

VALVE SIZE inch (mm)	Type
1.00 (25.4)	25SD501TP
1.50 (38.1)	38-40SD501TP
2.00 (50.8)	50-51SD501TP
2.50 (63.5)	63S501TP
3.00 (76.2)	65-76SD501TP
4.00 (101.6)	100-102SD501TP
6.00 (152.4)	upon request

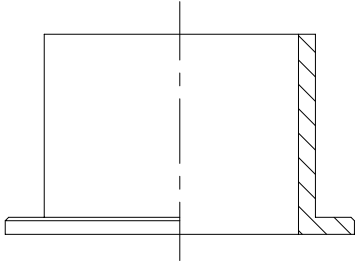
Tecapeek® shutter

VALVE SIZE inch (mm)	Type
1.00 (25.4)	25SD501P
1.50 (38.1)	38-40SD501P
2.00 (50.8)	50-51SD501P
2.50 (63.5)	63S501P
3.00 (76.2)	65-76SD501P
4.00 (101.6)	100-102SD501P

*Please note:

For shutter valves with "leakage control of the moving O-ring seal" (chapter 4.4), the O-ring set contains two O-rings for the pivoted axle.

SPARE PARTS AND ACCESSORIES



For shutter valves - chapter 2 and 3

Bearing bush POM (Polyacetal)

VALVE SIZE inch (mm)	Type
1.00 (25.4)	25SD503
1.50 (38.1)	38-80SD503
2.00 (50.8)	38-80SD503
2.50 (63.5)	38-80SD503
3.00 (76.2)	38-80SD503
4.00 (101.6)	100-102SD503
6.00 (152.4)	150D503

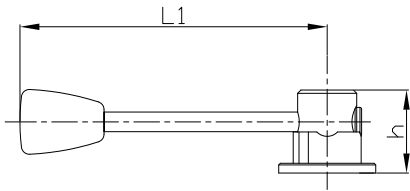
Bearing bush Dyneon™ TFM1600

VALVE SIZE inch (mm)	Type
1.00 (25.4)	25SD503T
1.50 (38.1)	38-80SD503T
2.00 (50.8)	38-80SD503T
2.50 (63.5)	38-80SD503T
3.00 (76.2)	38-80SD503T
4.00 (101.6)	100-102SD503T
6.00 (152.4)	150D503T

Assembling tool for the pinch nut

VALVE SIZE inch (mm)	Type
1.00 (25.4)	25-150SL
1.50 (38.1)	25-150SL
2.00 (50.8)	25-150SL
2.50 (63.5)	25-150SL
3.00 (76.2)	25-150SL
4.00 (101.6)	25-150SL
6.00 (152.4)	25-150SL

SPARE PARTS AND ACCESSORIES



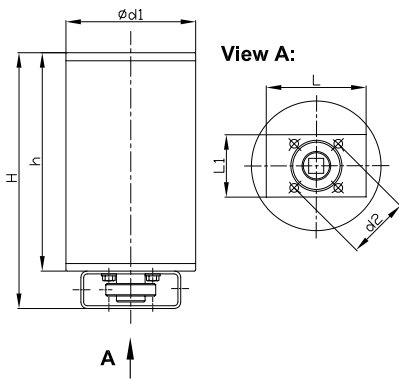
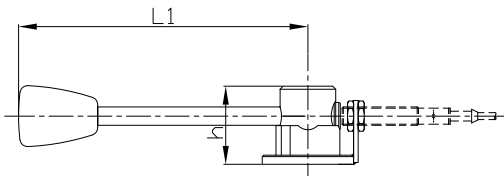
For shutter valves - chapter 2 only

Standard handle, 4 x 90°

VALVE SIZE inch (mm)	Type	L1	h
1.00 (25.4)	25-40SD506-90	6.30 (160)	2.01 (51)
1.50 (38.1)	25-40SD506-90	6.30 (160)	2.01 (51)
2.00 (50.8)	50-63SD506-90	7.48 (190)	2.01 (51)
2.50 (63.5)	50-63SD506-90	7.48 (190)	2.01 (51)
3.00 (76.2)	65-80SD506-90	7.48 (190)	2.01 (51)
4.00 (101.6)	100-102SD506-90	10.63 (270)	2.01 (51)
6.00 (152.4)	150D506-90	10.63 (270)	2.01 (51)

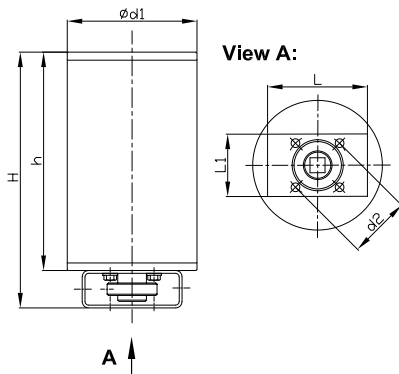
Standard handle with feedback bracket M12, 0° - 90°

VALVE SIZE inch (mm)	Type	L1	h
1.00 (25.4)	25-40SD506-90R	6.30 (160)	2.01 (51)
1.50 (38.1)	25-40SD506-90R	6.30 (160)	2.01 (51)
2.00 (50.8)	50-63SD506-90R	7.48 (190)	2.01 (51)
2.50 (63.5)	50-63SD506-90R	7.48 (190)	2.01 (51)
3.00 (76.2)	65-80SD506-90R	7.48 (190)	2.01 (51)
4.00 (101.6)	100-102SD506-90R	10.63 (270)	2.01 (51)
6.00 (152.4)	150D506-90R	10.63 (270)	2.01 (51)



Vertical pneumatic actuator (AISI304), double acting 0° - 90° (air/air)

VALVE SIZE inch (mm)	Type	Ød1	Ød2	H	h	L	L1
1.00 (25.4)	25-40KH002D	3.50 (89)	1.97 (50)	8.07 (205)	6.89 (175)	3.15 (80)	1.97 (50)
1.50 (38.1)	25-40KH002D	3.50 (89)	1.97 (50)	8.07 (205)	6.89 (175)	3.15 (80)	1.97 (50)
2.00 (50.8)	50-63KH004D	4.09 (104)	1.97 (50)	8.07 (205)	6.89 (175)	3.15 (80)	1.97 (50)
2.50 (63.5)	50-63KH004D	4.09 (104)	1.97 (50)	8.07 (205)	6.89 (175)	3.15 (80)	1.97 (50)
3.00 (76.2)	65-80KH006D	5.08 (129)	1.97 (50)	10.24 (260)	9.06 (230)	3.15 (80)	2.76 (70)
4.00 (101.6)	100-102KH006D	5.08 (129)	2.76 (70)	10.24 (260)	9.06 (230)	3.15 (80)	2.76 (70)



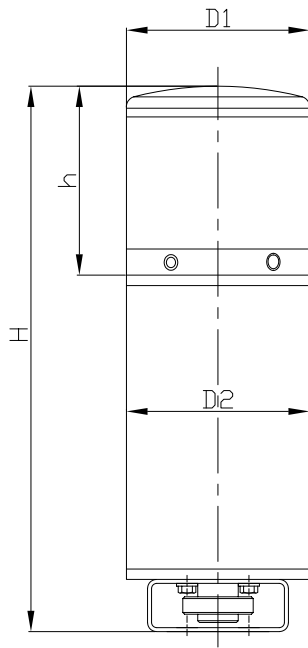
Vertical pneumatic actuator (AISI304), single acting 0°-90° (air/spring return)

VALVE SIZE inch (mm)	Type	Ød1	Ød2	H	h	L	L1
1.00 (25.4)	25-40KH002S	3.50 (89)	1.97 (50)	8.07 (205)	6.89 (175)	3.15 (80)	1.97 (50)
1.50 (38.1)	25-40KH002S	3.50 (89)	1.97 (50)	8.07 (205)	6.89 (175)	3.15 (80)	1.97 (50)
2.00 (50.8)	50-63KH004S	4.09 (104)	1.97 (50)	8.07 (205)	6.89 (175)	3.15 (80)	1.97 (50)
2.50 (63.5)	50-63KH004S	4.09 (104)	1.97 (50)	8.07 (205)	6.89 (175)	3.15 (80)	1.97 (50)
3.00 (76.2)	65-80KH006S	5.08 (129)	1.97 (50)	10.24 (260)	9.06 (230)	3.15 (80)	2.76 (70)
4.00 (101.6)	100-102LKLA L/F NO	5.24 (133)	2.76 (70)	12.13 (308)	9.76 (248)	3.94 (100)	3.94 (100)

5

SPARE PARTS AND ACCESSORIES

For shutter valves - chapter 2 only



ASi or DeviceNet upon request

pneumatic actuator (AISI304), double acting 0° - 90° (air/air) with control unit TOP

VALVE SIZE inch (mm)	Type	ØD1	ØD2	H	h
1.00 (25.4)	25-40KH002D TOP	4.02 (102)	3.50 (89)	12.44 (316)	4.37 (111)
1.50 (38.1)	25-40KH002D TOP	4.02 (102)	3.50 (89)	12.44 (316)	4.37 (111)
2.00 (50.8)	50-63KH004D TOP	4.02 (102)	4.09 (104)	12.44 (316)	4.37 (111)
2.50 (63.5)	50-63KH004D TOP	4.02 (102)	4.09 (104)	12.44 (316)	4.37 (111)
3.00 (76.2)	65-80KH006D TOP	4.02 (102)	5.08 (129)	14.61 (371)	4.37 (111)
4.00 (101.6)	100-102KH006D TOP	4.02 (102)	5.08 (129)	14.61 (371)	4.37 (111)

Vertical pneumatic actuator (AISI304), single acting 0° - 90° (air/spring return) with control unit TOP

VALVE SIZE inch (mm)	Type	ØD1	ØD2	H	h
1.00 (25.4)	25-40KH002S TOP	4.02 (102)	3.50 (89)	12.44 (316)	4.37 (111)
1.50 (38.1)	25-40KH002S TOP	4.02 (102)	3.50 (89)	12.44 (316)	4.37 (111)
2.00 (50.8)	50-63KH004S TOP	4.02 (102)	4.09 (104)	12.44 (316)	4.37 (111)
2.50 (63.5)	50-63KH004S TOP	4.02 (102)	4.09 (104)	12.44 (316)	4.37 (111)
3.00 (76.2)	65-80KH006S TOP	4.02 (102)	5.08 (129)	14.61 (371)	4.37 (111)
4.00 (101.6)	100-102LKLA TOP	5.51 (140)	5.24 (133)	18.90 (480)	6.73 (171)

Set of gaskets for vertical pneumatic actuator 0° - 90°

VALVE SIZE inch (mm)	Type	Used for actuator
1.00 (25.4)	25-40KH002DS	double acting / single acting
1.50 (38.1)	25-40KH002DS	double acting / single acting
2.00 (50.8)	50-63KH004DS	double acting / single acting
2.50 (63.5)	50-63KH004DS	double acting / single acting
3.00 (76.2)	65-102KH006DS	double acting / single acting
4.00 (101.6)	65-102KH006DS	double acting
4.00 (101.6)	65-102LKLASK	single acting

SPARE PARTS AND ACCESSORIES



CE



CE Ex

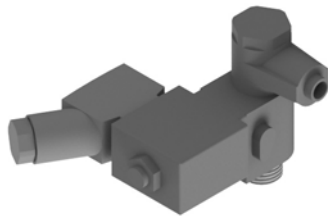
For shutter valves - chapter 2 only

Inductive proximity switch M12, metal, 24V DC for vertical pneumatic actuator

VALVE SIZE inch (mm)	Type
1.00 (25.4)	25-102M55BSt
1.50 (38.1)	25-102M55BSt
2.00 (50.8)	25-102M55BSt
2.50 (63.5)	25-102M55BSt
3.00 (76.2)	25-102M55BSt
4.00 (101.6)	25-102M55BSt

Inductive proximity switch M12, metal, 8.2V DC for vertical pneumatic actuator, Ex

VALVE SIZE inch (mm)	Type
1.00 (25.4)	25-102M55ExSt
1.50 (38.1)	25-102M55ExSt
2.00 (50.8)	25-102M55ExSt
2.50 (63.5)	25-102M55ExSt
3.00 (76.2)	25-102M55ExSt
4.00 (101.6)	25-102M55ExSt

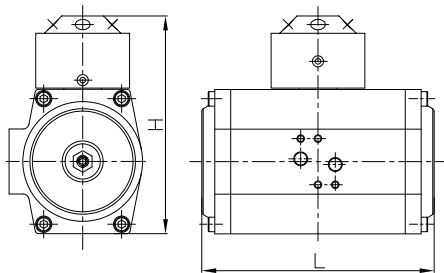
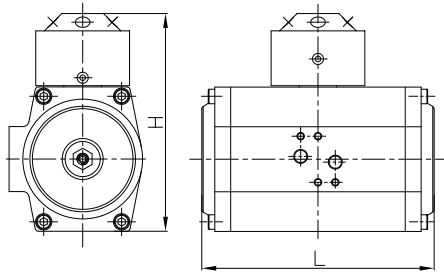
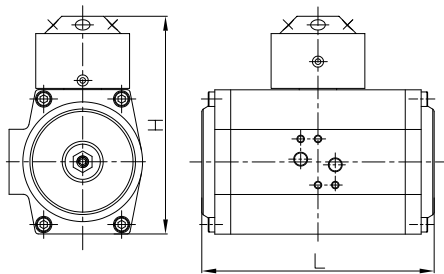
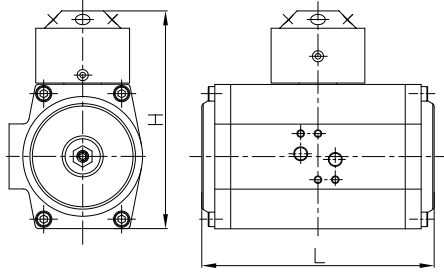


3/2 Solenoid valve with cable plug, for vertical pneumatic actuator

VALVE SIZE inch (mm)	Type		
1.00 (25.4)	25-63MVB24D	24V DC	G 1/8
	25-63MVB110A	110V AC	
	25-63MVB230A	230V AC	
1.50 (38.1)	25-63MVB24D	24V DC	G 1/8
	25-63MVB110A	110V AC	
	25-63MVB230A	230V AC	
2.00 (50.8)	25-63MVB24D	24V DC	G 1/8
	25-63MVB110A	110V AC	
	25-63MVB230A	230V AC	
2.50 (63.5)	25-63MVB24D	24V DC	G 1/8
	25-63MVB110A	110V AC	
	25-63MVB230A	230V AC	
3.00 (76.2)	65-102MVB24D	24V DC	G 1/4
	65-102MVB110A	110V AC	
	65-102MVB230A	230V AC	
4.00 (101.6)	65-102MVB24D	24V DC	G 1/4
	65-102MVB110A	110V AC	
	65-102MVB230A	230V AC	

5

SPARE PARTS AND ACCESSORIES



For shutter valves - chapter 2 only

Horizontal pneumatic actuator (aluminium housing), double acting 0° - 90° (air/air)

VALVE SIZE inch (mm)	Type	L	H
1.00 (25.4)	25-63KB50	6.34 (161)	5.94 (151)
1.50 (38.1)	25-63KB50	6.34 (161)	5.94 (151)
2.00 (50.8)	25-63KB50	6.34 (161)	5.94 (151)
2.50 (63.5)	25-63KB50	6.34 (161)	5.94 (151)
3.00 (76.2)	65-80KB50	8.23 (209)	6.61 (168)
4.00 (101.6)	100-102KB50	8.23 (209)	6.61 (168)
6.00 (152.4)	150KA50	13.11 (333)	7.36 (187)

PTFE coated housing upon request

Horizontal pneumatic actuator (aluminium housing), single acting 0° - 90° (air/spring return)

VALVE SIZE inch (mm)	Type	L	H
1.00 (25.4)	25KB51	6.34 (161)	5.94 (151)
1.50 (38.1)	38-51KB51	6.34 (161)	5.94 (151)
2.00 (50.8)	38-51KB51	6.34 (161)	5.94 (151)
2.50 (63.5)	63-76KB51	6.34 (161)	5.94 (151)
3.00 (76.2)	63-76KB51	8.23 (209)	6.61 (168)
4.00 (101.6)	100-102KB51	8.23 (209)	6.61 (168)

PTFE coated housing upon request

Horizontal pneumatic actuator (aluminium housing), double acting 0° - 180° (air/air)

VALVE SIZE inch (mm)	Type	L	H
1.00 (25.4)	25-63KB180	9.25 (235)	5.94 (151)
1.50 (38.1)	25-63KB180	9.25 (235)	5.94 (151)
2.00 (50.8)	25-63KB180	9.25 (235)	5.94 (151)
2.50 (63.5)	25-63KB180	9.25 (235)	5.94 (151)
3.00 (76.2)	65-80KB180	12.24 (311)	6.61 (168)
4.00 (101.6)	100-102KB180	12.24 (311)	6.61 (168)
6.00 (152.4)	150KB180	17.64 (448)	8.31 (211)

PTFE coated housing upon request

Horizontal 3-position pneumatic actuator (aluminium housing), double acting 0° - 90° - 180° (air/air)

VALVE SIZE inch (mm)	Type	L	H
1.00 (25.4)	25-63KB52	13.54 (344)	5.94 (151)
1.50 (38.1)	25-63KB52	13.54 (344)	5.94 (151)
2.00 (50.8)	25-63KB52	13.54 (344)	5.94 (151)
2.50 (63.5)	25-63KB52	13.54 (344)	5.94 (151)
3.00 (76.2)	65-80KB52	17.09 (434)	6.61 (168)
4.00 (101.6)	100-102KB52	17.09 (434)	6.61 (168)
6.00 (152.4)	150KB52	24.84 (631)	8.31 (211)

PTFE coated housing upon request

SPARE PARTS AND ACCESSORIES



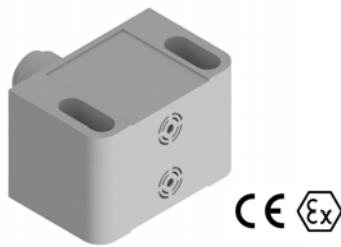
For shutter valves - chapter 2 only

Inductive proximity switch (double sensor), 24V DC for hori- zontal pneumatic actuator

VALVE SIZE inch (mm)	Type
1.00 (25.4)	25-102M55
1.50 (38.1)	25-102M55
2.00 (50.8)	25-102M55
2.50 (63.5)	25-102M55
3.00 (76.2)	25-102M55
4.00 (101.6)	25-102M55
6.00 (152.4)	25-102M55

Inductive proximity switch (double sensor), 20-250V AC for horizontal pneumatic actuator

VALVE SIZE inch (mm)	Type
1.00 (25.4)	25-102M55A
1.50 (38.1)	25-102M55A
2.00 (50.8)	25-102M55A
2.50 (63.5)	25-102M55A
3.00 (76.2)	25-102M55A
4.00 (101.6)	25-102M55A
6.00 (152.4)	25-102M55A



Inductive proximity switch (double sensor), 8.2V DC for horizontal pneumatic actuator, Ex

VALVE SIZE inch (mm)	Type
1.00 (25.4)	25-102M55AT
1.50 (38.1)	25-102M55AT
2.00 (50.8)	25-102M55AT
2.50 (63.5)	25-102M55AT
3.00 (76.2)	25-102M55AT
4.00 (101.6)	25-102M55AT
6.00 (152.4)	25-102M55AT



Target puck for horizontal pneumatic actuator, 0° - 90° (180°)

VALVE SIZE inch (mm)	Type
1.00 (25.4)	25-102M55ExSt
1.50 (38.1)	25-102M55ExSt
2.00 (50.8)	25-102M55ExSt
2.50 (63.5)	25-102M55ExSt
3.00 (76.2)	25-102M55ExSt
4.00 (101.6)	25-102M55ExSt
6.00 (152.4)	25-102M55ExSt

SPARE PARTS AND ACCESSORIES



Consists of:
2 x 5/2 solenoid valve
1 x mounting plate
incl. complete tubing

For shutter valves - chapter 2 only

5/2 Solenoid valve with cable plug for horizontal pneumatic actuator

VALVE SIZE inch (mm)	Type		
1.00 (25.4)	25-102MVA24D	24V DC	G 1/4
	25-102MVA110A	110V AC	
	25-102MVA230A	230V AC	
1.50 (38.1)	25-102MVA24D	24V DC	G 1/4
	25-102MVA110A	110V AC	
	25-102MVA230A	230V AC	
2.00 (50.8)	25-102MVA24D	24V DC	G 1/4
	25-102MVA110A	110V AC	
	25-102MVA230A	230V AC	
2.50 (63.5)	25-102MVA24D	24V DC	G 1/4
	25-102MVA110A	110V AC	
	25-102MVA230A	230V AC	
3.00 (76.2)	25-102MVA24D	24V DC	G 1/4
	25-102MVA110A	110V AC	
	25-102MVA230A	230V AC	
4.00 (101.6)	25-102MVA24D	24V DC	G 1/4
	25-102MVA110A	110V AC	
	25-102MVA230A	230V AC	

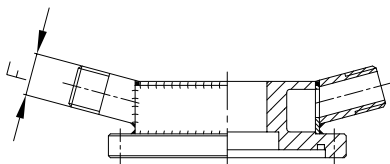
Control unit for horizontal 3-position pneumatic actuator

VALVE SIZE inch (mm)	Type		
1.00 (25.4)	25-102STV24D	24V DC	G 1/4
	25-102STV110A	110V AC	
	25-102STV230A	230V AC	
1.50 (38.1)	25-102STV24D	24V DC	G 1/4
	25-102STV110A	110V AC	
	25-102STV230A	230V AC	
2.00 (50.8)	25-102STV24D	24V DC	G 1/4
	25-102STV110A	110V AC	
	25-102STV230A	230V AC	
2.50 (63.5)	25-102STV24D	24V DC	G 1/4
	25-102STV110A	110V AC	
	25-102STV230A	230V AC	
3.00 (76.2)	25-102STV24D	24V DC	G 1/4
	25-102STV110A	110V AC	
	25-102STV230A	230V AC	
4.00 (101.6)	25-102STV24D	24V DC	G 1/4
	25-102STV110A	110V AC	
	25-102STV230A	230V AC	

SPARE PARTS AND ACCESSORIES

Consists of:
2 x piston guiding ring
2 x guiding segment 1
x slip ring "top"
1 x slip ring "bottom"

Consists of:
2 x gasket for cap
2 x O-ring "piston"
2 x O-ring "drive pinion"
2 x O-ring "adjusting screw"
1 x O-ring "inside end
position adjustment"



For shutter valves - chapter 2 only

Set of wearing parts for horizontal pneumatic actuator

VALVE SIZE (mm)	inch	Type
1.00 (25.4)		25-63W
1.50 (38.1)		25-63W
2.00 (50.8)		25-63W
2.50 (63.5)		25-63W
3.00 (76.2)		25-63W
4.00 (101.6)		25-63W

O-ring set for horizontal pneumatic actuator

VALVE SIZE (mm)	inch	Type
1.00 (25.4)		25-630R
1.50 (38.1)		25-630R
2.00 (50.8)		25-630R
2.50 (63.5)		25-630R
3.00 (76.2)		65-1020R
4.00 (101.6)		65-1020R

Electro-pneumatic positioner for horizontal pneumatic actuator, 4-20mA / 24V DC

VALVE SIZE (mm)	inch	Type
1.00 (25.4)		25-102SBE
1.50 (38.1)		25-102SBE
2.00 (50.8)		25-102SBE
2.50 (63.5)		25-102SBE
3.00 (76.2)		25-102SBE
4.00 (101.6)		150SBE

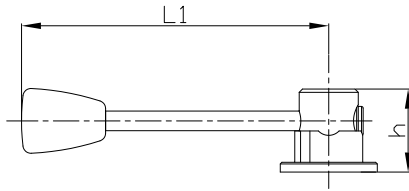
Heated bearing cap (water/steam)

VALVE SIZE inch (mm)	Type	F*
1.00 (25.4)	25SD505H	G 1/8
1.50 (38.1)	38-40SD505H	R 1/2
2.00 (50.8)	50-51SD505H	R 1/2
2.50 (63.5)	65-76SD505H	R 1/2
3.00 (76.2)	100-102SD505H	R 1/2
4.00 (101.6)	150SD505H upon request	R 1/2

* according DIN EN 10226-1

SPARE PARTS AND ACCESSORIES

For pig diverter shutter valves - chapter 3 only

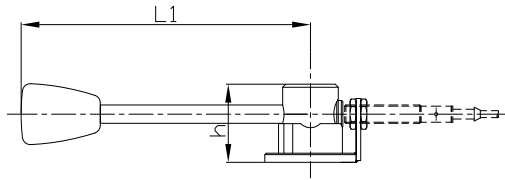


Standard handle, 3 x 120°

VALVE SIZE inch (mm)	Type	L1	h
1.00 (25.4)	38-40SD506-120	6.30 (160)	2.01 (51)
1.50 (38.1)	50-63SD506-120	7.48 (190)	2.01 (51)
2.00 (50.8)	50-63SD506-120	7.48 (190)	2.01 (51)
2.50 (63.5)	65-80SD506-120	7.48 (190)	2.01 (51)
3.00 (76.2)	100-102SD506-120	10.63 (270)	2.01 (51)

Standard handle with feedback bracket M12, 0° - 120°

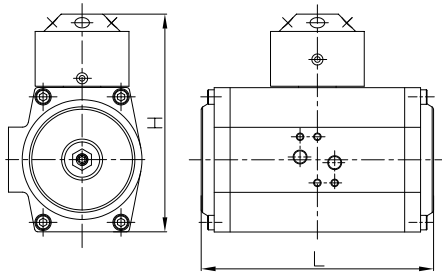
VALVE SIZE inch (mm)	Type	L1	h
1.50 (38.1)	25-40SD506-120R	6.30 (160)	2.01 (51)
2.00 (50.8)	50-63SD506-120R	7.48 (190)	2.01 (51)
2.50 (63.5)	50-63SD506-120R	7.48 (190)	2.01 (51)
3.00 (76.2)	65-80SD506-120R	7.48 (190)	2.01 (51)
4.00 (101.6)	100-102SD506-120R	10.63 (270)	2.01 (51)



Horizontal pneumatic actuator (aluminium housing), double acting 0° - 120° (air/air)

VALVE SIZE inch (mm)	Type	L1	h
1.50 (38.1)	38-63KB50V	7.17 (182)	6.18 (157)
2.00 (50.8)	38-63KB50V	7.17 (182)	6.18 (157)
2.50 (63.5)	38-63KB50V	7.17 (182)	6.18 (157)
3.00 (76.2)	65-80KB50V	9.29 (236)	6.85 (174)
4.00 (101.6)	100-102KB50V	9.29 (236)	6.85 (174)

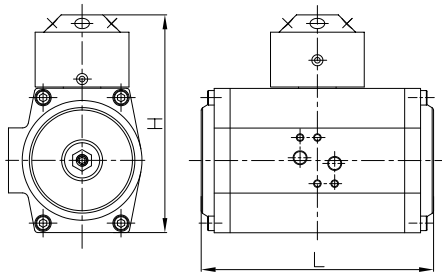
PTFE coated housing upon request



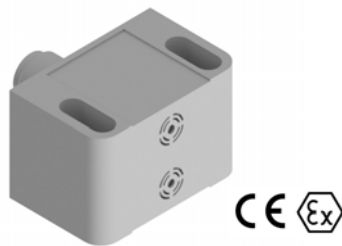
Horizontal pneumatic actuator (aluminium housing), double acting 0° - 120° (air/air)

VALVE SIZE inch (mm)	Type	L1	h
1.50 (38.1)	38-63KB52V	16.14 (410)	6.18 (157)
2.00 (50.8)	38-63KB52V	16.14 (410)	6.18 (157)
2.50 (63.5)	38-63KB52V	16.14 (410)	6.18 (157)
3.00 (76.2)	65-80KB52V	20.39 (518)	6.85 (174)
4.00 (101.6)	100-102KB52V	20.39 (518)	6.85 (174)

PTFE coated housing upon request



SPARE PARTS AND ACCESSORIES



For pig diverter shutter valves - chapter 3 only

Inductive proximity switch (double sensor), 24V DC for horizontal pneumatic actuator

VALVE SIZE inch (mm)	Type
1.50 (38.1)	25-102M55
2.00 (50.8)	25-102M55
2.50 (63.5)	25-102M55
3.00 (76.2)	25-102M55
4.00 (101.6)	25-102M55

Inductive proximity switch (double sensor), 20-250V AC for horizontal pneumatic actuator

VALVE SIZE inch (mm)	Type
1.50 (38.1)	25-102M55A
2.00 (50.8)	25-102M55A
2.50 (63.5)	25-102M55A
3.00 (76.2)	25-102M55A
4.00 (101.6)	25-102M55A

Inductive proximity switch (double sensor), 8.2V DC for horizontal pneumatic actuator, Ex

VALVE SIZE inch (mm)	Type
1.50 (38.1)	25-102M55AT
2.00 (50.8)	25-102M55AT
2.50 (63.5)	25-102M55AT
3.00 (76.2)	25-102M55AT
4.00 (101.6)	25-102M55AT

Target puck for horizontal pneumatic actuator, 0° - 120° (240°)

VALVE SIZE inch (mm)	Type
1.50 (38.1)	38-102SN53
2.00 (50.8)	38-102SN53
2.50 (63.5)	38-102SN53
3.00 (76.2)	38-102SN53
4.00 (101.6)	38-102SN53

SPARE PARTS AND ACCESSORIES



Consists of:
2 x 5/2 solenoid valve
1 x mounting plate
incl. complete tubing

For pig diverter shutter valves - chapter 3 only

5/2 Solenoid valve with cable plug for horizontal pneumatic actuator

VALVE SIZE inch (mm)	Type		
1.50 (38.1)	25-102MVA24D	24V DC	G 1/4
	25-102MVA110A	110V AC	
	25-102MVA230A	230V AC	
2.00 (50.8)	25-102MVA24D	24V DC	G 1/4
	25-102MVA110A	110V AC	
	25-102MVA230A	230V AC	
2.50 (63.5)	25-102MVA24D	24V DC	G 1/4
	25-102MVA110A	110V AC	
	25-102MVA230A	230V AC	
3.00 (76.2)	25-102MVA24D	24V DC	G 1/4
	25-102MVA110A	110V AC	
	25-102MVA230A	230V AC	
4.00 (101.6)	25-102MVA24D	24V DC	G 1/4
	25-102MVA110A	110V AC	
	25-102MVA230A	230V AC	

Control unit for horizontal 3-position pneumatic actuator

VALVE SIZE inch (mm)	Type		
1.50 (38.1)	25-102STV24D	24V DC	G 1/4
	25-102STV110A	110V AC	
	25-102STV230A	230V AC	
2.00 (50.8)	25-102STV24D	24V DC	G 1/4
	25-102STV110A	110V AC	
	25-102STV230A	230V AC	
2.50 (63.5)	25-102STV24D	24V DC	G 1/4
	25-102STV110A	110V AC	
	25-102STV230A	230V AC	
3.00 (76.2)	25-102STV24D	24V DC	G 1/4
	25-102STV110A	110V AC	
	25-102STV230A	230V AC	
4.00 (101.6)	25-102STV24D	24V DC	G 1/4
	25-102STV110A	110V AC	
	25-102STV230A	230V AC	

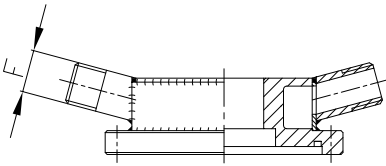
SPARE PARTS AND ACCESSORIES

Consists of:

- 2 x piston guiding ring
- 2 x guiding segment
- 1 x slip ring "top"
- 1 x slip ring "bottom"

Consists of:

- 2 x gasket for cap
- 2 x O-ring "piston"
- 2 x O-ring "drive pinion"
- 2 x O-ring "adjusting screw"
- 1 x O-ring "inside end position adjustment"



For pig diverter shutter valves - chapter 3 only

Set of wearing parts for horizontal pneumatic actuator

VALVE SIZE inch (mm)	Type
1.50 (38.1)	25-63W
2.00 (50.8)	25-63W
2.50 (63.5)	25-63W
3.00 (76.2)	25-63W
4.00 (101.6)	25-63W

O-ring set for horizontal pneumatic actuator

VALVE SIZE inch (mm)	Type
1.50 (38.1)	25-630R
2.00 (50.8)	25-630R
2.50 (63.5)	25-630R
3.00 (76.2)	65-1020R
4.00 (101.6)	65-1020R

Heated bearing cap (water/steam)

VALVE SIZE inch (mm)	Type	F*
1.50 (38.1)	38-40SD505H	R 1/2
2.00 (50.8)	50-51SD505H	R 1/2
2.50 (63.5)	65-76SD505H	R 1/2
3.00 (76.2)	100-102SD505H	R 1/2
4.00 (101.6)	150D505H upon request	R 1/2

* according DIN EN 10226-1

LIAG® PIGGING SYSTEM

Process systems cleaned with pigs are becoming increasingly important for hygienic processes. Increased environmental consciousness, costly waste water treatment and product losses, superior hygienic standards and production streamlining are some of the reasons.

Features

- Minimum product loss
- Safe separation of product - no mixed phases
- Faster changeovers
- Maximum product quality
- Reduction of time consuming cleaning and waste water generation
- Environmentally sound systems

A large advertisement for DMV Product Recovery. It features a pair of hands holding a globe, with green leaves surrounding it. The words 'Hygienic', 'Modular', and 'Efficient' are written on the leaves. The background is a soft-focus green.

DMV Product Recovery
Pigging Systems for hygienic processes

Hygienic Modular
Efficient

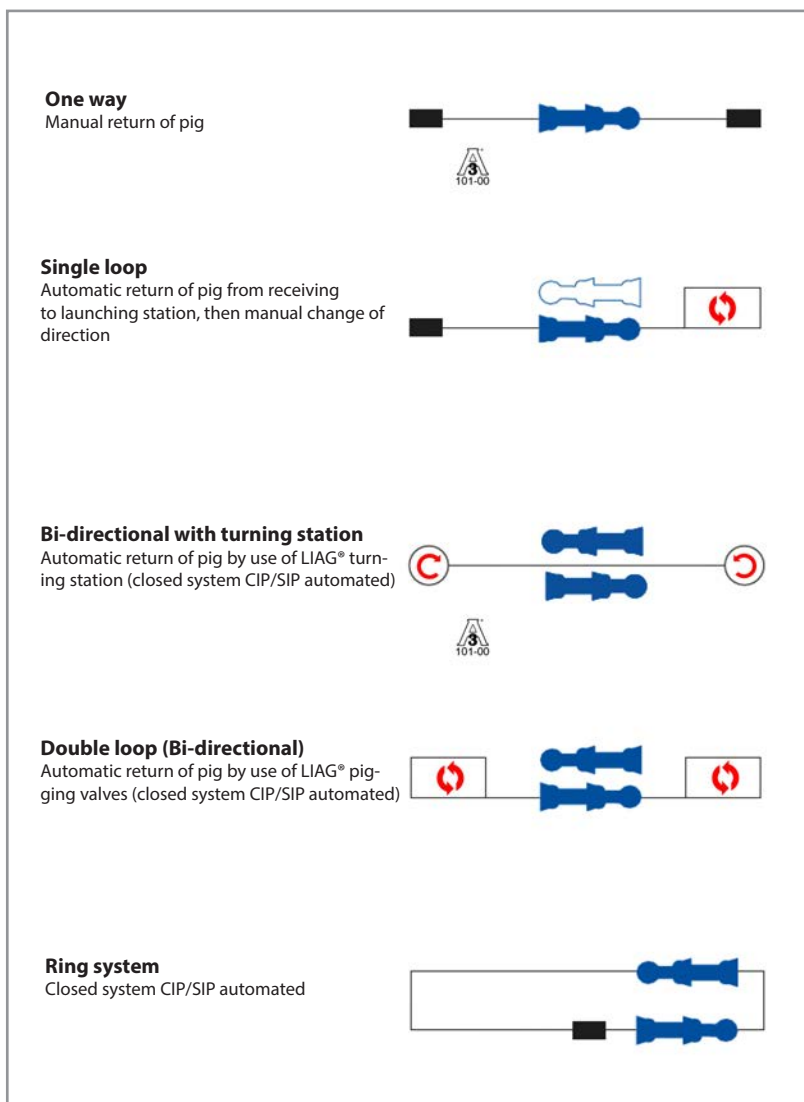
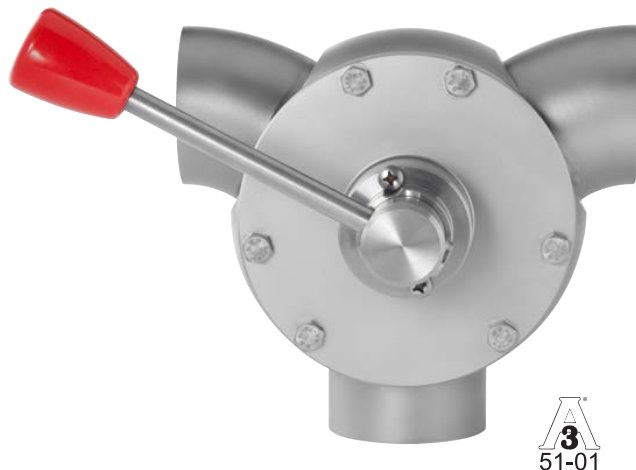
LIAG®
LAUFER Valve Technology Inc.

LIAG® DMV Pigging System

for hygienic processes and viscous, fast hardening media

Sterile processes pose stringent demands on system components

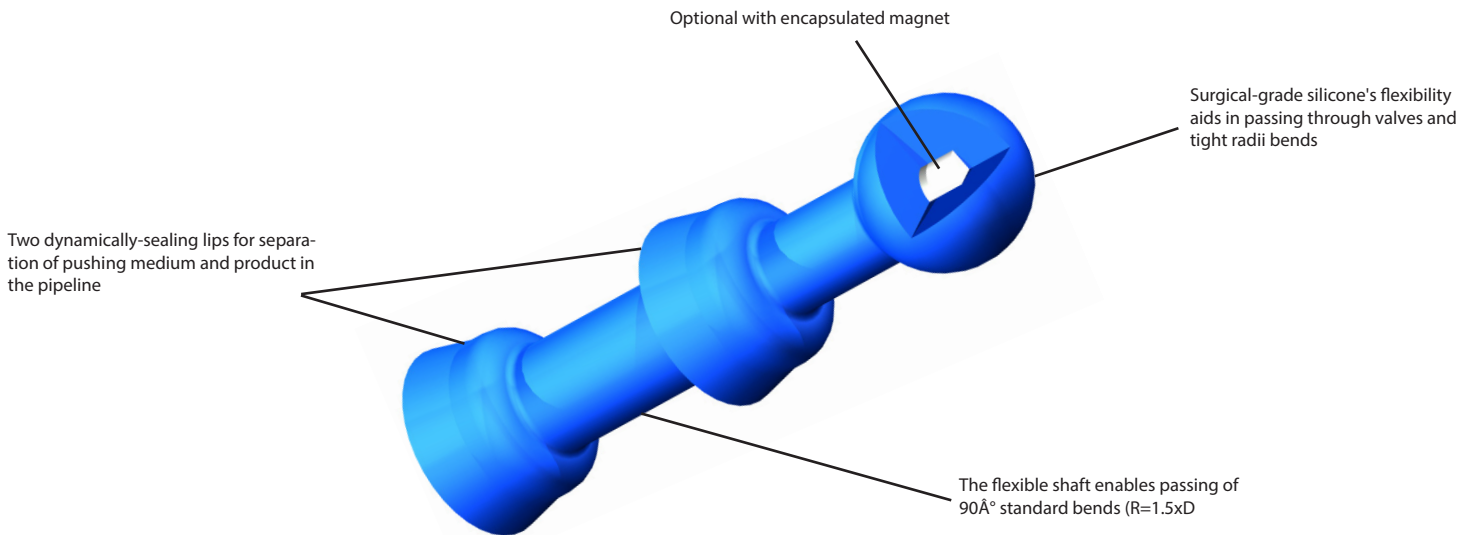
For this processes we offer LIAG® DMV pigging systems featuring 3-A rated CIP/SIP LIAG® free flow shutter valves and specifically designed pig launching and receiving stations without dead pockets. Simplifying the modular component design, thread and clamp unions are virtually no longer needed, minimizing typical hygienic risk areas by design. All LIAG® shutter valves, even when welded in place, can be easily disassembled for maintenance.



DMV lip pig - reliable tight

The DMV pigging system works with a 2-seal lip pig and are of homogeneous hygienic design. They offer excellent cleaning effect and are virtually free of wear. Two dynamic lips form a reliable seal with the pipe wall, the action of pressure and counter pressure forms the seals to the pipe wall, compensating for minor deviations in the pipe geometry.

The pigs are highly flexible and can pass tight radii ($R= 1.5 \times D$). Dynamic lip pigs are optionally equipped with a magnet for location and control.



DMV pig launching and receiving station

To satisfy the diverse requirements of the wide range of processes, the optimum pigging procedure is always designed to the specific project.



Features LIAG® DMV Pigging System

- Sterile and closed pipe systems
- No dead pockets with LIAG® CIP/SIP free flow shutter valves
- Optimized cleaning result with dynamic DMV lip pigs
- Capable of passing 90° standard bends ($R= 1.5 \times D$)
- Available with in system cleaning of the pig
- Optimally suited for hygienic processes and highly viscous, fast hardening media, e.g. yogurt, dressings, soft cheese, chocolate, tooth paste, etc.
- optionally 3-A 101-00 and FDA compliance



Technical Data Overview

Basic facts

Norminal sizes:	Inch: 1.5" / 2" / 2.5" / 3" / 4" DIN: 40 / 50 / 65 / 80 / 100
Radius of the bends:	Capable of passing 90° standard bends R= 1.5 x D
Multi-mode:	Manual, semi or fully automated
DMV pig pushing media:	e.g. product, water, air etc.

Materials

Inox parts in contact with product:	AISI 316L (1.4404 / 1.4435)
Other inox parts:	AISI 304 (1.4301)
O-ring seals:	EPDM, FPM (Viton®), FEP, other grades upon request
Shutter material:	Dyneon™TFM1600, alternatively: Tecapeek®, PTFE+15% Peek
DMV lip pig:	Silicone with FDA compliance

Surfaces

In contact with product:	Ra ≤ 0,8 µm (Ra ≤ 32 µin)
--------------------------	---------------------------

Range of Temperature

Standard:	-13°F (-25°C) up to +230°F (+110°C)
Optional:	-13°F (-25°C) up to +302°F (+150°C)

Pushing pressure DMV lip pig

Depending on product (viscosity) and length of the pipe work:
min. 14.5 psi - max. 145 psi (min. 1 bar - max. 10 bar)

Further option

3-A 101-00 and FDA compliance

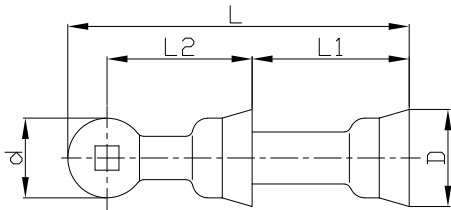
Rentability

For ROI calculations please visit our website www.laufer-valve.com

Important note

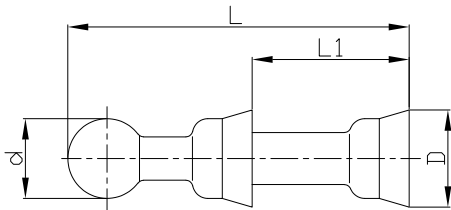
DMV pigs should only be used in pigging systems, which are designed for this type of pig. The supplier will not assume any kind of function warranty or product liability and no responsibility for any kind of damage to persons or property due to improper use.

LIAG® DMV PIGGING SYSTEM



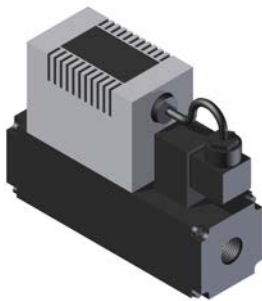
DMV silicone lip pig with magnet

VALVE SIZE inch (mm)	Type	suitable for ID	Ø d	Ø D	L	L1	L2
1.50 (38.1)	38-40DMV	1.38-1.57 (35-40)	1.34 (34)	1.69 (43)	6.46 (164)	2.91 (74)	2.87 (73)
2.00 (50.8)	50-51DMV	1.85-2.20 (47-56)	1.81 (46)	2.20 (56)	7.87 (200)	3.62 (92)	3.35 (85)
2.50 (63.5)	63-65DMV	2.32-2.76 (59-70)	2.28 (58)	2.83 (72)	10.39 (264)	5.12 (130)	4.13 (105)
3.00 (76.2)	76DMV	2.83-3.11 (72-79)	2.74 (69.5)	3.15 (80)	11.34 (288)	5.04 (128)	4.92 (125)
4.00 (101.6)	100-102DMV	3.78-4.17 (96-106)	3.74 (95)	4.21 (107)	14.76 (375)	6.38 (162)	6.52 (165.5)



DMV silicone lip pig without magnet

VALVE SIZE inch (mm)	Type	suitable for ID	Ø d	Ø D	L	L1	L2
1.50 (38.1)	38-40DV	1.38-1.57 (35-40)	1.34 (34)	1.69 (43)	6.46 (164)	2.91 (74)	2.87 (73)
2.00 (50.8)	50-51DV	1.85-2.20 (47-56)	1.81 (46)	2.20 (56)	7.87 (200)	3.62 (92)	3.35 (85)
2.50 (63.5)	63-65DV	2.32-2.76 (59-70)	2.28 (58)	2.83 (72)	10.39 (264)	5.12 (130)	4.13 (105)
3.00 (76.2)	76DV	2.83-3.11 (72-79)	2.74 (69.5)	3.15 (80)	11.34 (288)	5.04 (128)	4.92 (125)

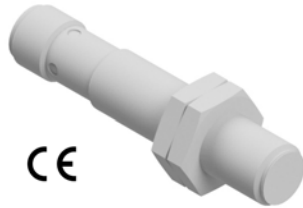


Mass flow controller to adjust the pigging speed in long pipe lines

SIZE inch (mm)	Type	
1.50 (38.1)	38-102MDR8626	G 1/2
2.00 (50.8)	38-102MDR8626	G 1/2
2.50 (63.5)	38-102MDR8626	G 1/2
3.00 (76.2)	38-102MDR8626	G 1/2
4.00 (101.6)	38-102MDR8626	G 1/2

Technical Data:
4-20mA (0-10V), 24V DC, 145psi max. (10bar max.)

LIAG® DMV PIGGING SYSTEM



Magnet sensor for pig detection M12, 24V DC pluggable

VALVE SIZE inch (mm)	Type
1.50 (38.1)	38-102MSB12
2.00 (50.8)	38-102MSB12
2.50 (63.5)	38-102MSB12
3.00 (76.2)	38-102MSB12
4.00 (101.6)	38-102MSB12

Magnet sensor for pig detection M12, 8.2V DC pluggable, Ex

VALVE SIZE inch (mm)	Type
1.50 (38.1)	38-102MSB12T
2.00 (50.8)	38-102MSB12T
2.50 (63.5)	38-102MSB12T
3.00 (76.2)	38-102MSB12T
4.00 (101.6)	38-102MSB12T

Inductive proximity switch M8 of metal, 24V DC pluggable for blind nut detection

VALVE SIZE inch (mm)	Type
1.50 (38.1)	38-102M55DSt
2.00 (50.8)	38-102M55DSt
2.50 (63.5)	38-102M55DSt
3.00 (76.2)	38-102M55DSt
4.00 (101.6)	38-102M55DSt

Magnet field detector for pig detection

VALVE SIZE inch (mm)	Type
1.50 (38.1)	38-102MD90
2.00 (50.8)	38-102MD90
2.50 (63.5)	38-102MD90
3.00 (76.2)	38-102MD90
4.00 (101.6)	38-102MD90

Subject to technical alterations, errors and misprints excepted.

LAUFER Valve Technology Inc., 2300 Walnut Ave, Suite Q-R, Signal Hill, CA 90755
T: +1.562.232.4777 - sales@laufer-valve.com - www.laufer-valve.com

