



MB-4 SERIES

Monoblock Directional Control Valves

FOR MOBILE AND INDUSTRIAL
HYDRAULIC APPLICATIONS



Innovative Designs
Professional Quality
Customer Satisfaction !



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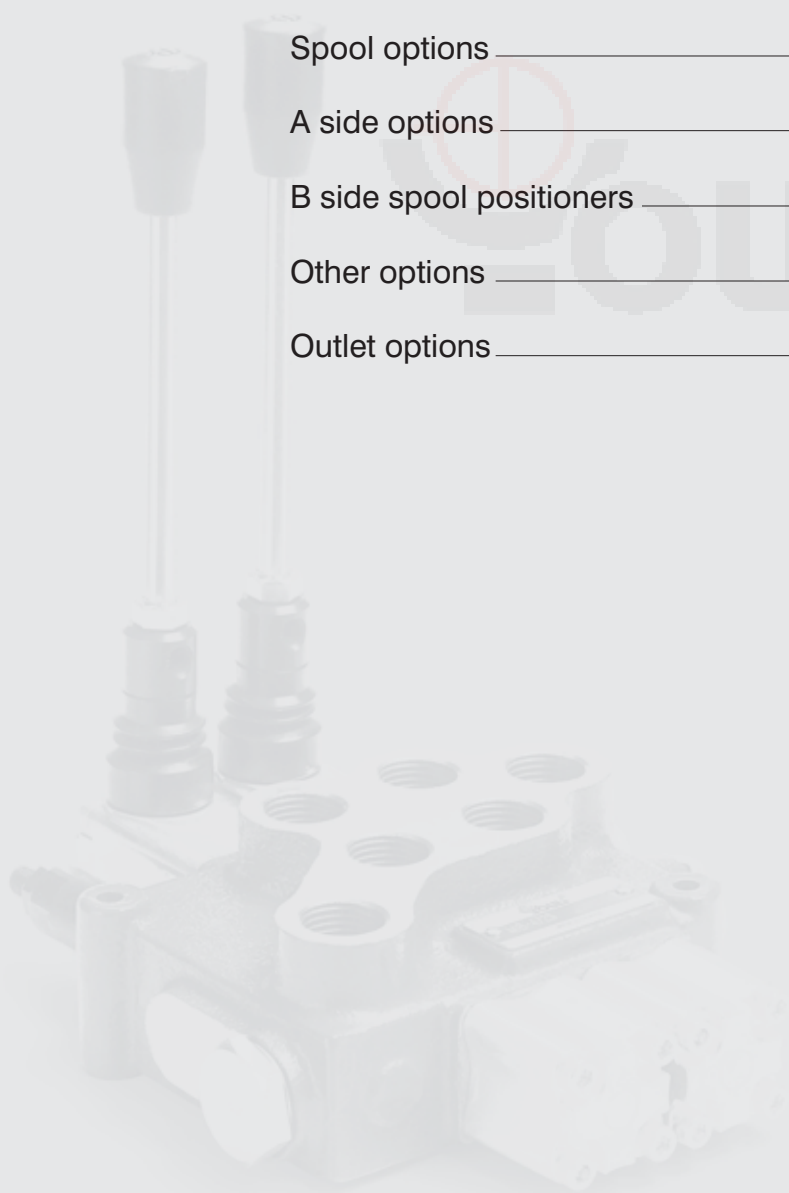


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MB-4 Chapters

Monoblock Directional Control Valves

| | |
|--------------------------|------|
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For Mobile And Industrial Hydraulic Applications.

MONOBLOCK DIRECTIONAL CONTROL VALVES

MB-2 / MB-3 / MB-4 / MB-5 / MSB-5

SECTIONAL DIRECTIONAL CONTROL VALVES

SN-3 / SN-4 / SN-6 / SN-8



MB-2

ONLY ONE SECTION AVAILABLE

| | | |
|------------------------------------------|----------|-----------|
| Nominal flow rate | 45 l/min | 12 US gpm |
| Operating pressure (maximum) | 250 bar | 3600 psi |
| Back pressure (maximum) on outlet port T | 25 bar | 360 psi |



MB-3

AVAILABLE SECTIONS FROM 1 TO 7

| | | |
|------------------------------------------|----------|-----------|
| Nominal flow rate | 45 l/min | 12 US gpm |
| Operating pressure (maximum) | 315 bar | 4600 psi |
| Back pressure (maximum) on outlet port T | 25 bar | 360 psi |



MB-4

AVAILABLE SECTIONS FROM 1 TO 6

| | | |
|------------------------------------------|----------|-----------|
| Nominal flow rate | 60 l/min | 16 US gpm |
| Operating pressure (maximum) | 315 bar | 4600 psi |
| Back pressure (maximum) on outlet port T | 25 bar | 360 psi |



MB-5

AVAILABLE SECTIONS FROM 1 TO 6

| | | |
|------------------------------------------|----------|-----------|
| Nominal flow rate | 80 l/min | 21 US gpm |
| Operating pressure (maximum) | 315 bar | 4600 psi |
| Back pressure (maximum) on outlet port T | 25 bar | 360 psi |



MSB-5

AVAILABLE SECTIONS FROM 1 TO 6

With Independent load check valve in each section, and optional port relief.

| | | |
|------------------------------------------|----------|-----------|
| Nominal flow rate | 80 l/min | 21 US gpm |
| Operating pressure (maximum) | 315 bar | 4600 psi |
| Back pressure (maximum) on outlet port T | 25 bar | 360 psi |



SN-3

AVAILABLE SECTIONS FROM 1 TO 12

| | | |
|------------------------------------------|----------|-----------|
| Nominal flow rate | 50 l/min | 13 US gpm |
| Operating pressure (maximum) | 315 bar | 4600 psi |
| Back pressure (maximum) on outlet port T | 25 bar | 360 psi |



SN-4

AVAILABLE SECTIONS FROM 1 TO 12

| | | |
|------------------------------------------|----------|-----------|
| Nominal flow rate | 80 l/min | 21 US gpm |
| Operating pressure (maximum) | 315 bar | 4600 psi |
| Back pressure (maximum) on outlet port T | 25 bar | 360 psi |



SN-6

AVAILABLE SECTIONS FROM 1 TO 12

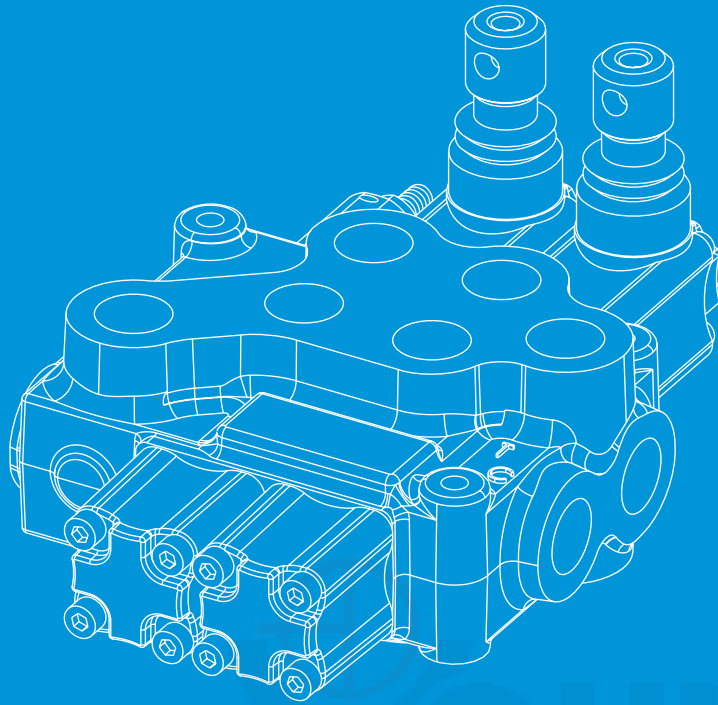
| | | |
|------------------------------------------|-----------|-----------|
| Nominal flow rate | 140 l/min | 37 US gpm |
| Operating pressure (maximum) | 315 bar | 4600 psi |
| Back pressure (maximum) on outlet port T | 25 bar | 360 psi |



SN-8

AVAILABLE SECTIONS FROM 1 TO 12

| | | |
|------------------------------------------|-----------|-----------|
| Nominal flow rate | 240 l/min | 63 US gpm |
| Operating pressure (maximum) | 315 bar | 4600 psi |
| Back pressure (maximum) on outlet port T | 25 bar | 360 psi |



Innovative Designs
Professional Quality
Customer Satisfaction !

AVAILABLE SECTIONS FROM

1 TO 6

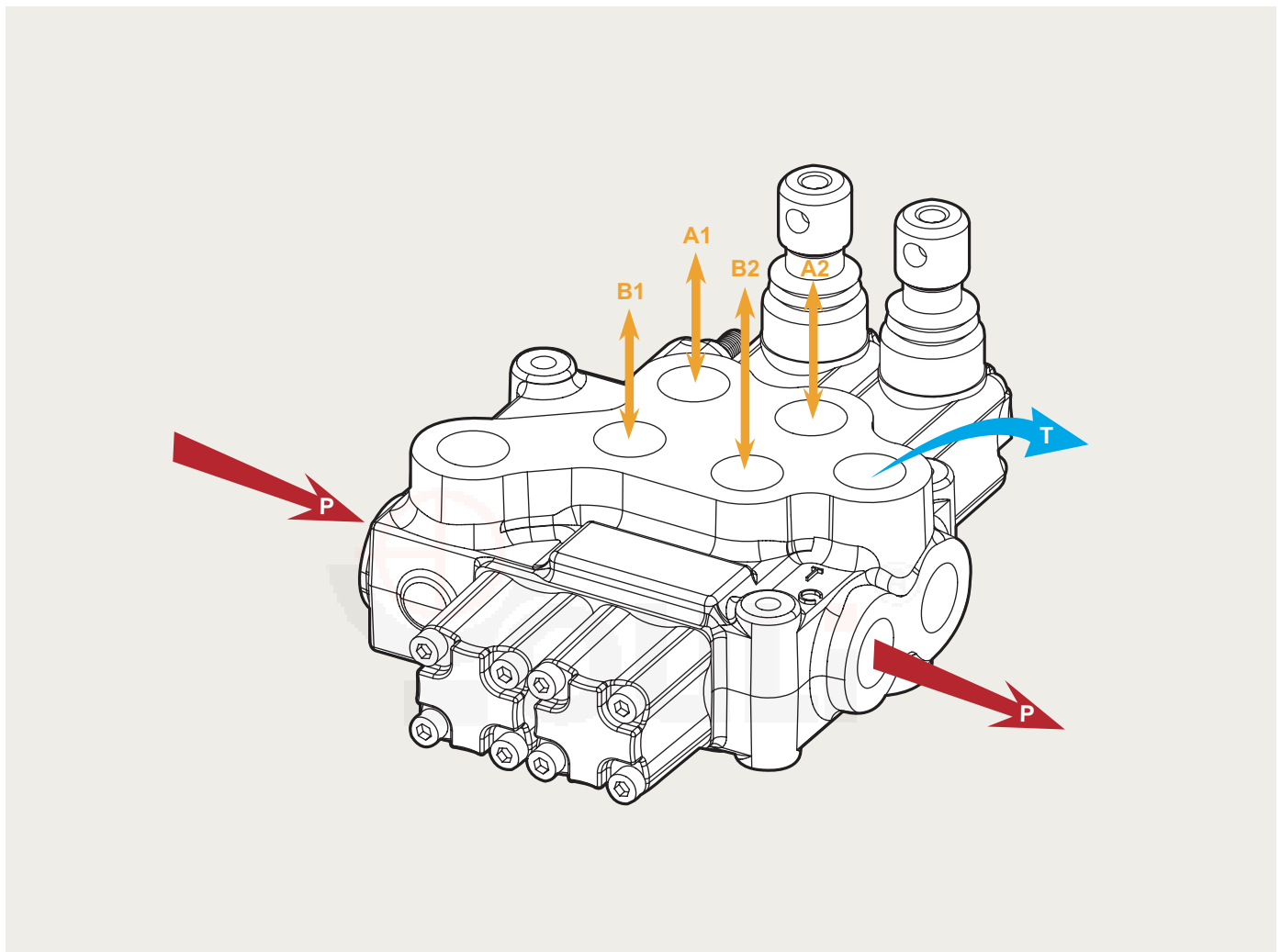
MB-4

Monoblock Directional Control Valves



MB-4

Monoblock Directional Control Valves



MB-4 Specifications

| Nominal flow rate | | 60 l/min | 16 US gpm |
|------------------------------|------------------------|----------------------------------|----------------------|
| Operating pressure (maximum) | | 315 bar | 4600 psi |
| Back pressure (maximum) | on outlet port T | 25 bar | 360 psi |
| Fluid temperature range | with NBR(BUNA-N) seals | from - 20° to 80°C | from - 4° to 176° F |
| | with FPM(VITON) seal | from - 20° to 100°C | from - 4° to 212° F |
| Viscosity | operating range | from 15 to 75 mm ² /s | from 15 to 75 cst |
| | min. | 12 mm ² /s | 12 cst |
| | max. | 400 mm ² /s | 400 cst |
| Ambient temperature range | | from - 40° to 60°C | from - 40° to 140° F |

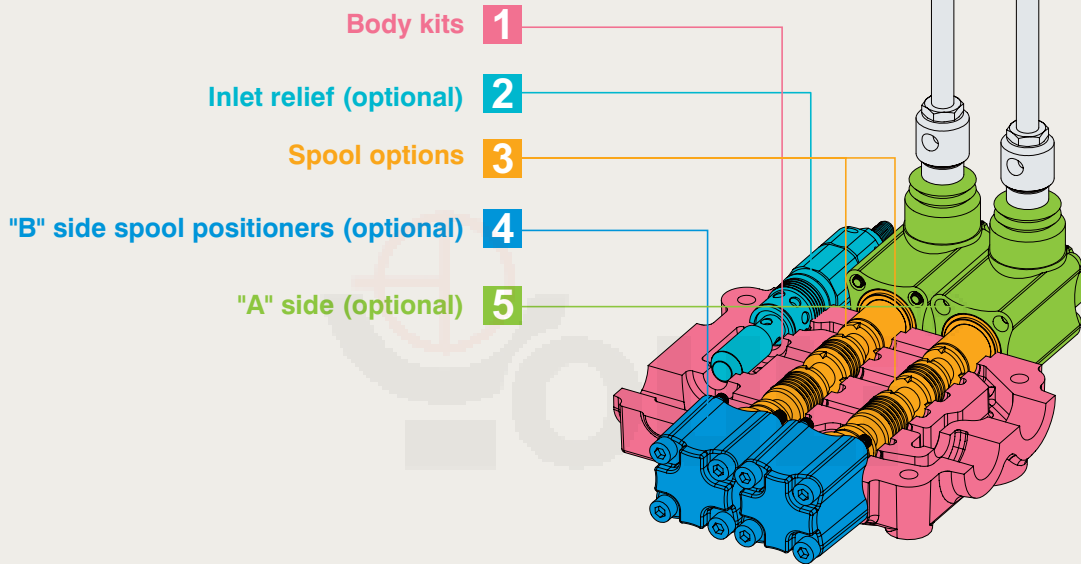
• All specifications, dimensions and design characteristics shown in this catalogue are subject to change without notice.

MB-4

Monoblock Directional Control Valves

MB-4 / **2 - S - 3** / **1 8 L** / G - 4 / M3

1 **2** **3** **4** **5**



| 1: Body kits | | WITHOUT SERVICE PORT VALVES PREARRANGEMENT |
|--------------|-------------|--------------------------------------------|
| TYPE | DESCRIPTION | |
| 1 - S | 1 section | |
| 2 - S | 2 sections | |
| 3 - S | 3 sections | |
| 4 - S | 4 sections | |
| 5 - S | 5 sections | |
| 6 - S | 6 sections | |

| 2: Inlet Relief (optional) | | | |
|----------------------------|-----------|------------------------------------------------------------------------------|-------|
| TYPE | CODE | DESCRIPTION | PAGE |
| MG-2 | YLMB42002 | Range 40 to 80 bar / 580 to 1150 psi, standard setting 80 bar / 1150 psi | P. 11 |
| MG-3 | YLMB42003 | Range 63 to 200 bar / 900 to 2900 psi, standard setting 120 bar / 1750 psi | P. 11 |
| MG-4 | YLMB42004 | Range 160 to 315 bar / 2300 to 4600 psi, standard setting 220 bar / 3200 psi | P. 11 |
| SV | YLMB42100 | Relief valve blanking plug | P. 11 |

MB-4

Monoblock Directional Control Valves

| 3: Spool options | | | |
|------------------|------------|-----------------------------------------------------------------------------------------------------------------------------|-------|
| TYPE | CODE | DESCRIPTION | PAGE |
| 1 | YLMB43001 | Double acting, 3 positions, with A, B closed in neutral position | P. 12 |
| 2 | YLMB43002 | Double acting, 3 positions, with A, B open to Tank in neutral position | P. 12 |
| 3 | YLMB43003 | Single acting on A closed in neutral position, 3 positions, B plugged | P. 13 |
| 4 | YLMB43004 | Single acting on B closed in neutral position, 3 positions, A plugged | P. 13 |
| 5 | YLMB43005 | Double acting, 3 positions, with B open to Tank in neutral position | P. 14 |
| 6 | YLMB43006 | Double acting, 3 positions, with A open to Tank in neutral position | P. 14 |
| 7 | YLMB43007 | Single acting on A open to Tank in neutral position, 3 positions, B plugged | P. 15 |
| 8 | YLMB43008 | Single acting on B open to Tank in neutral position, 3 positions, A plugged | P. 15 |
| 9 | YLMB43009 | Double acting, 3 positions, with P, T, A, B closed in neutral position (Closed center) | P. 16 |
| 1 0 | YLMB43010 | Double acting, 3 positions, with A, B open to Tank and P, T closed in neutral position (Closed center) | P. 16 |
| 5DY | YLMB43052 | Double acting, 4 position, floating circuit in 4th position with A, B open to Tank by pulling the lever | P. 17 |
| 5PYX | YLMB430511 | Double acting, 4 positions, floating circuit in 4th position with A, B open to Tank by pushing the lever (with check valve) | P. 17 |
| 5PY | YLMB43051 | Double acting, 4 positions, floating circuit in 4th position with A, B open to Tank by pushing the lever | P. 18 |
| Z41 | YLMB43041 | Double acting, 4 positions, regenerative circuit in 4th position with P open to A, B by pulling the lever (Rest in pos. 1) | P. 18 |
| Z42 | YLMB43042 | Double acting, 4 positions, regenerative circuit in 4th position with P open to A, B by pulling the lever (Rest in pos. 0) | P. 19 |

| 4: B Side Spool Positioners | | | |
|-----------------------------|------------|-------------------------------------------------------------------------------------|-------|
| TYPE | CODE | DESCRIPTION | PAGE |
| 6-1 | YLMB44061 | Detent in pos. 1-0-2, without spring centered | P. 23 |
| 6-2 | YLMB44062 | 2 positions, detent in pos. 0-2, without spring centered | P. 23 |
| 6-3 | YLMB44063 | 2 positions, detent in pos. 1-0, without spring centered | P. 23 |
| 8D2 | YLMB44200 | With spring return to neutral position and pin with M8 male thread for dual control | P. 23 |
| 8EP3 | YLMB44300 | ON/OFF Electro-Pneumatic actuator | P. 24 |
| 8P | YLMB44080 | ON/OFF Pneumatic actuator | P. 24 |
| 8MG1 (NO) | YLMB44801 | Microswitch kit operated in pos. 1 (Normally Open) | P. 27 |
| 8MG2 (NO) | YLMB44802 | Microswitch kit operated in pos. 2 (Normally Open) | P. 27 |
| 8MG3 (NO) | YLMB44803 | Microswitch kit operated in pos. 1&2 (Normally Open) | P. 27 |
| MG (NO) | YLMB44804 | Microswitch with NO terminal | P. 27 |
| 8MG1 (NC) | YLMB448011 | Microswitch kit operated in pos. 1 (Normally Closed) | P. 27 |
| 8MG2 (NC) | YLMB448021 | Microswitch kit operated in pos. 2 (Normally Closed) | P. 27 |
| 8MG3 (NC) | YLMB448031 | Microswitch kit operated in pos. 1&2 (Normally Closed) | P. 27 |
| MG (NC) | YLMB448041 | Microswitch with NC terminal | P. 27 |
| 8 | YLMB44008 | With spring return to neutral position | P. 28 |
| 8-1 | YLMB44081 | 2 positions, with spring centered from pos. 1 | P. 28 |
| 8-2 | YLMB44082 | 2 positions, with spring centered from pos. 2 | P. 28 |
| 9-1 | YLMB44091 | Detent in pos. 1, 2 with spring centered | P. 28 |
| 9-2 | YLMB44092 | Detent in pos. 2 with spring centered | P. 28 |
| 9-3 | YLMB44093 | Detent in pos. 1 with spring centered | P. 28 |

MB-4

Monoblock Directional Control Valves

MB-4 / **2-S-3** / **18L** / G-4 / M3

1 **2** **3** **4** **5**

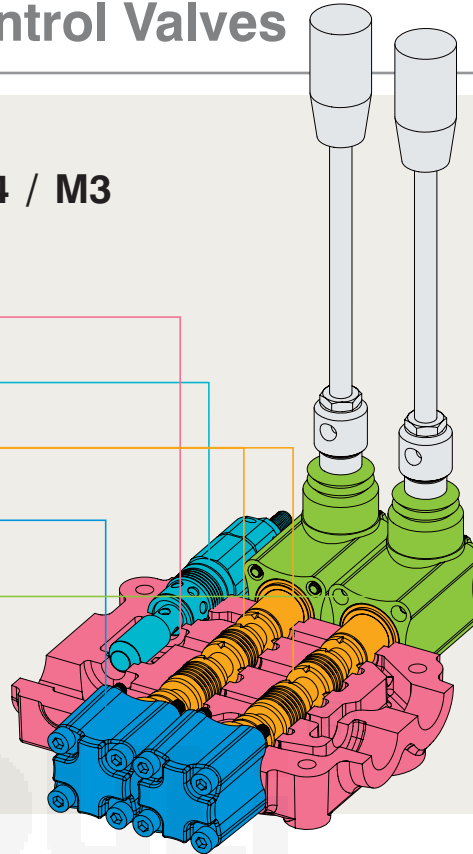
Body kits **1**

Inlet relief (optional) **2**

Spool options **3**

"B" side spool positioners (optional) **4**

"A" side (optional) **5**



4: B Side Spool Positioners

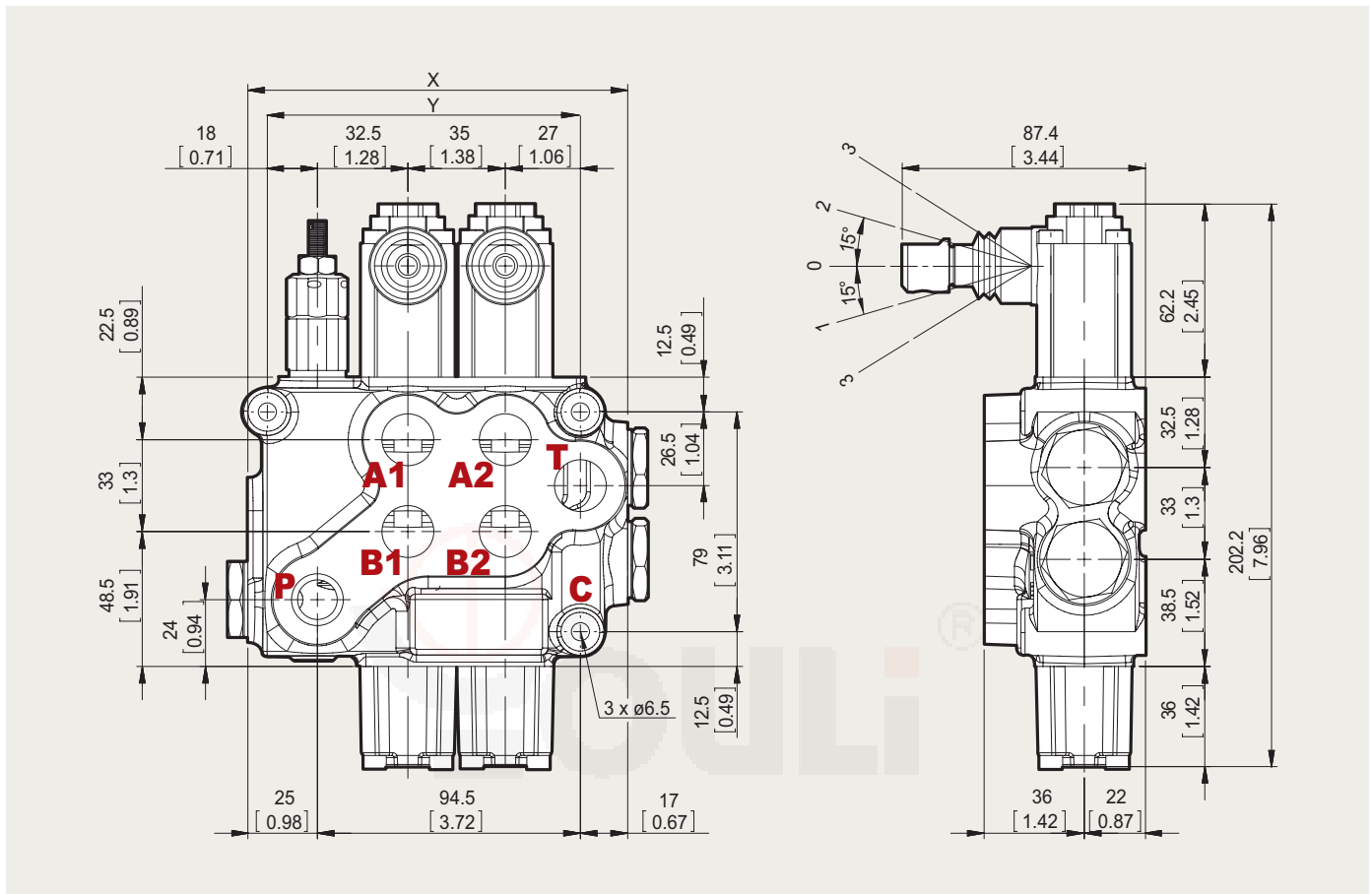
| TYPE | CODE | DESCRIPTION | PAGE |
|---------------|-----------|---------------------------------------------------------------------------------------------------|-------|
| 8ED3+RV-KE1R3 | YLMB44201 | 1S: ON/OFF Electro-Hydraulic control kit with pilot and drain line+backpressure valve (12/24 VDC) | P. 25 |
| 8ED3+RV-KE2R3 | YLMB44202 | 2S: ON/OFF Electro-Hydraulic control kit with pilot and drain line+backpressure valve (12/24 VDC) | P. 25 |
| 8ED3+RV-KE3R3 | YLMB44203 | 3S: ON/OFF Electro-Hydraulic control kit with pilot and drain line+backpressure valve (12/24 VDC) | P. 25 |
| 8ED3+RV-KE4R3 | YLMB44204 | 4S: ON/OFF Electro-Hydraulic control kit with pilot and drain line+backpressure valve (12/24 VDC) | P. 25 |
| 8ED3+RV-KE5R3 | YLMB44205 | 5S: ON/OFF Electro-Hydraulic control kit with pilot and drain line+backpressure valve (12/24 VDC) | P. 25 |
| 8ED3+RV-KE6R3 | YLMB44206 | 6S: ON/OFF Electro-Hydraulic control kit with pilot and drain line+backpressure valve (12/24 VDC) | P. 25 |
| 8ER3+KE1S0 | YLMB44401 | 1S: ON/OFF Electro-hydraulic control kit with collector kit for external pilot and drain | P. 26 |
| 8ER3+KE2S0 | YLMB44402 | 2S: ON/OFF Electro-hydraulic control kit with collector kit for external pilot and drain | P. 26 |
| 8ER3+KE3S0 | YLMB44403 | 3S: ON/OFF Electro-hydraulic control kit with collector kit for external pilot and drain | P. 26 |
| 8ER3+KE4S0 | YLMB44404 | 4S: ON/OFF Electro-hydraulic control kit with collector kit for external pilot and drain | P. 26 |
| 8ER3+KE5S0 | YLMB44405 | 5S:ON/OFF Electro-hydraulic control kit with collector kit for external pilot and drain | P. 26 |
| 8ER3+KE6S0 | YLMB44406 | 6S: ON/OFF Electro-hydraulic control kit with collector kit for external pilot and drain | P. 26 |

5: A Side (optional)

| TYPE | CODE | DESCRIPTION | PAGE |
|------|-----------|------------------------------------------|-------|
| L | YLMB45000 | Standard lever box | P. 20 |
| SLP | YLMB45001 | Without lever box, with dust-proof plate | P. 20 |
| LCB | YLMB45002 | Joystick lever for 2 section operation | P. 21 |
| TQ | YLMB45003 | Flexible cable connection | P. 22 |

MB-4 Dimensions

Monoblock Directional Control Valves



Standard threads

| Ports | Inlet P | A and B | Outlet T and C |
|--------|-----------------------|-----------------------|-----------------------|
| BSP | G1/2 | G1/2 | G1/2 |
| UN-UNF | 3/4-16 UNF-2B (SAE 8) | 3/4-16 UNF-2B (SAE 8) | 3/4-16 UNF-2B (SAE 8) |
| METRIC | M18x1.5 | M18x1.5 | M18x1.5 |

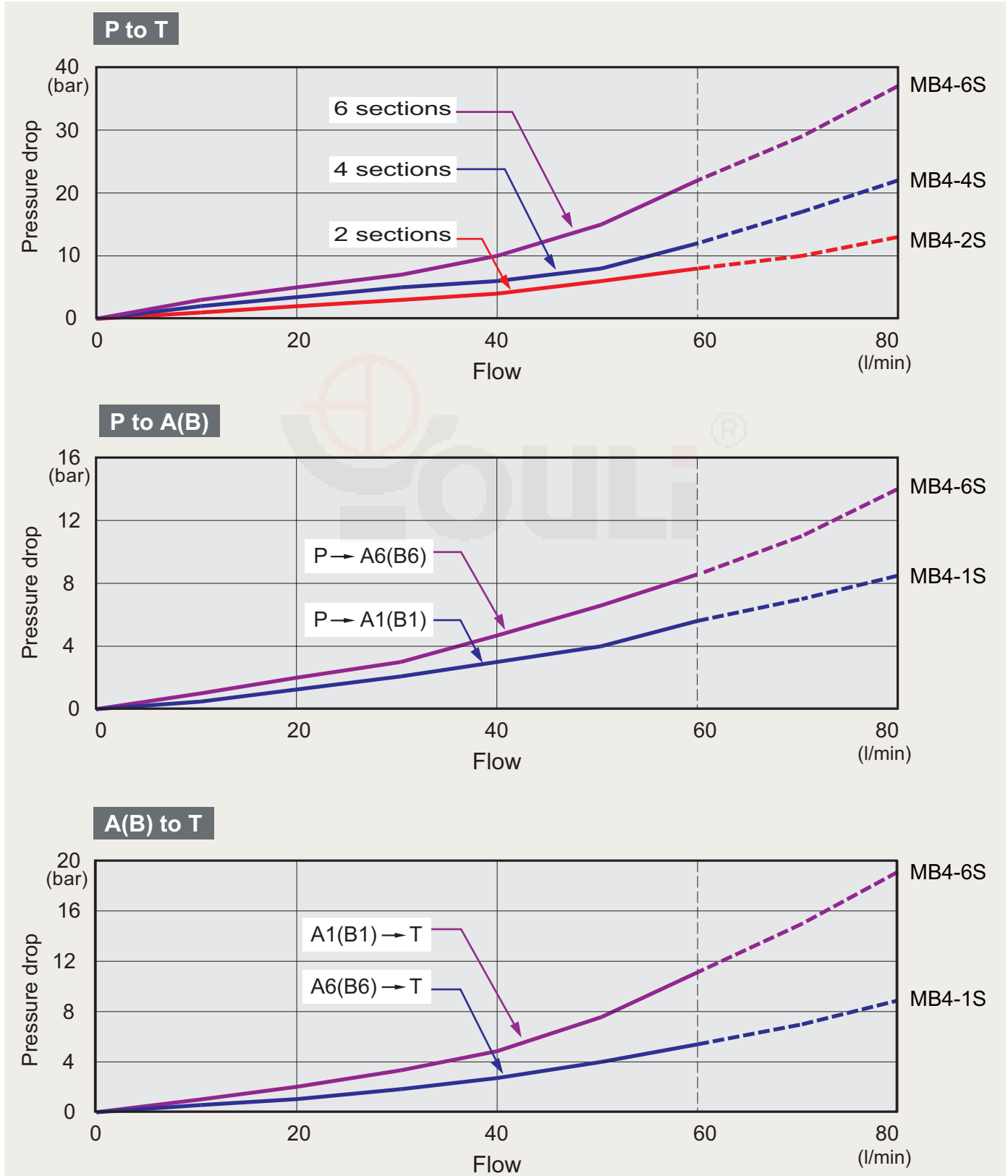
• G-3/8 : G3 G-1/2 : G4 G-3/4 : G6 G-1 : G8 G-1 1/4 : G10
 • SAE 8: E8 SAE 10: E10 SAE 12: E12 SAE 16: E16 SAE 20: E20

Standard dimensions

| TYPE | X | | Y | |
|---------|-------|-------|-------|------|
| | mm | in | mm | in |
| MB4 /1S | 101.5 | 4 | 77.5 | 3.05 |
| MB4 /2S | 136.5 | 5.37 | 112.5 | 4.33 |
| MB4 /3S | 171.5 | 6.75 | 147.5 | 5.81 |
| MB4 /4S | 206.5 | 8.13 | 182.5 | 7.19 |
| MB4 /5S | 241.5 | 9.51 | 217.5 | 8.56 |
| MB4 /6S | 276.5 | 10.89 | 252.5 | 9.94 |

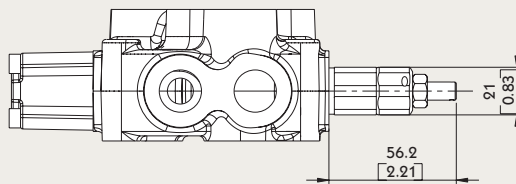
MB-4 Performance curve chart

Monoblock Directional Control Valves

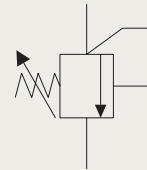


MB-4 Inlet Relief (Optional) Monoblock Directional Control Valves

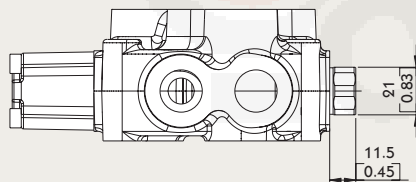
Type MG



Direct pressure relief valve:



Type SV



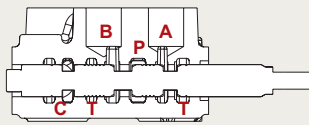
Relief valve blanking plug:



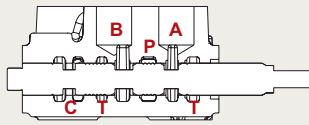
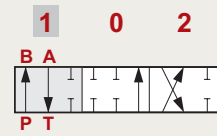
MB-4 Spool Options

Monoblock Directional Control Valves

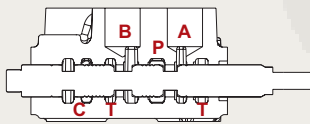
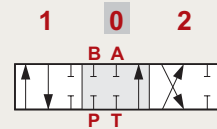
TYPE 1



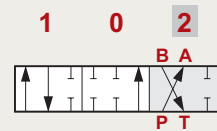
P → B
 A → T
 C closed



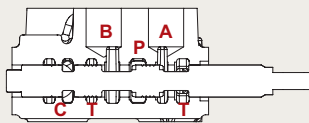
P & A & B & T close
 C open



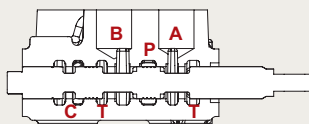
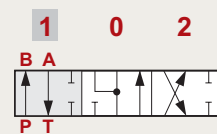
P → A
 B → T
 C closed



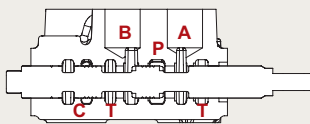
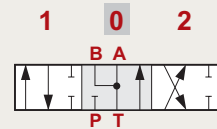
TYPE 2



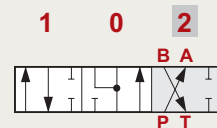
P → B
 A → T
 C closed



A & B → T
 P closed
 C open

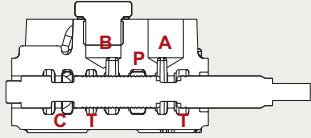
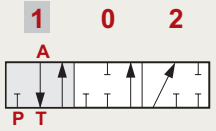
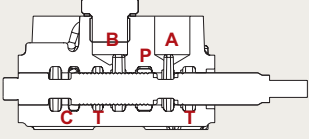
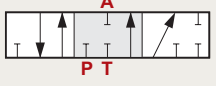
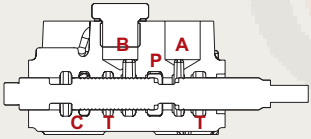
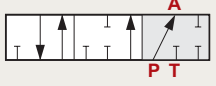
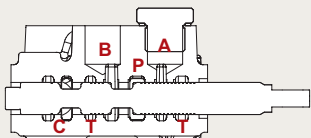
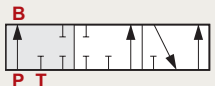
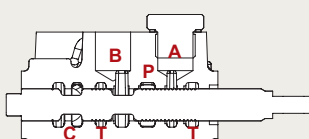

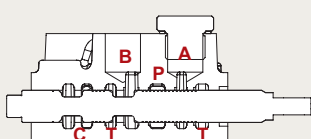
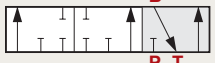


P → A
 B → T
 C closed



MB-4 Spool Options

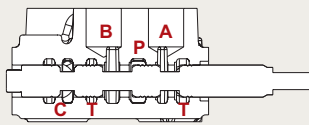
Monoblock Directional Control Valves

| TYPE 3 | | |
|-------------------------------------------------------------------------------------|-------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------|
|  | <p>A → T P closed C open</p> | <p>1 0 2 A P T "B" port plugged</p>  |
|  | <p>P & A & T close C open</p> | <p>1 0 2 A P T "B" port plugged</p>  |
|  | <p>P → A T & C closed</p> | <p>1 0 2 A P T "B" port plugged</p>  |
| TYPE 4 | | |
|  | <p>P → B T & C closed</p> | <p>1 0 2 B P T "A" port plugged</p>  |
|  | <p>P & B & T close C open</p> | <p>1 0 2 B P T "A" port plugged</p>  |
|  | <p>B → T P closed C open</p> | <p>1 0 2 B P T "A" port plugged</p>  |

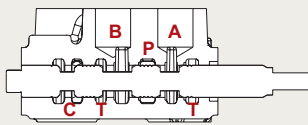
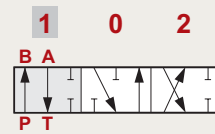
MB-4 Spool Options

Monoblock Directional Control Valves

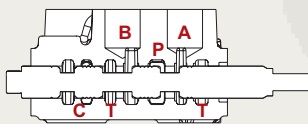
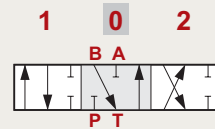
TYPE 5



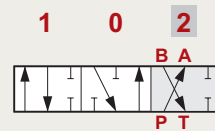
P → B
A → T
C closed



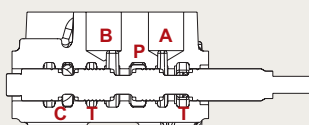
B → T
P & A close
C open



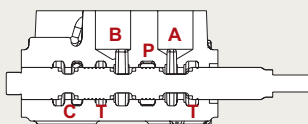
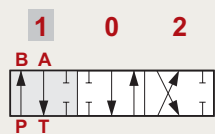
P → A
B → T
C closed



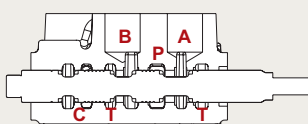
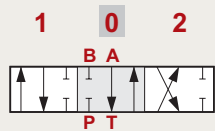
TYPE 6



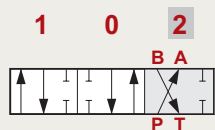
P → B
A → T
C closed



A → T
P & B closed
C open

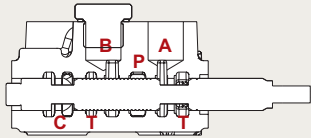
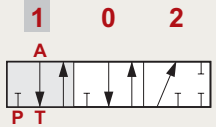
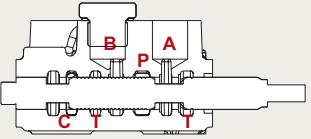
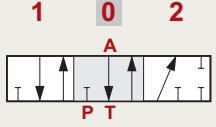
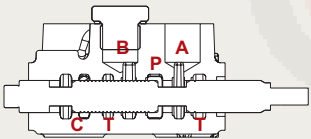
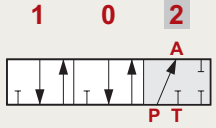
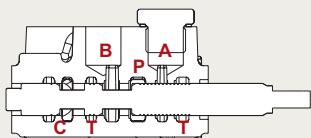
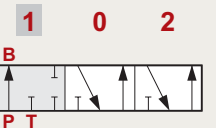
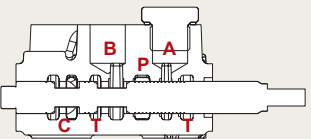
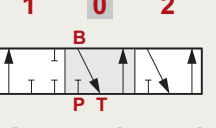
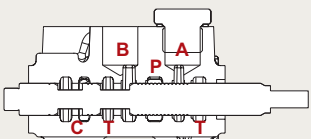
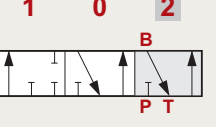


P → A
B → T
C closed



MB-4 Spool Options

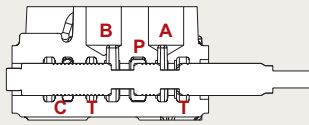
Monoblock Directional Control Valves

| TYPE 7 | | |
|-------------------------------------------------------------------------------------|--------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------|
|  | <p>A → T P closed C open</p> | <p>1 0 2 A P T "B" port plugged</p>  |
|  | <p>A → T P closed C open</p> | <p>1 0 2 A P T "B" port plugged</p>  |
|  | <p>P → A C & P closed</p> | <p>1 0 2 A P T "B" port plugged</p>  |
| TYPE 8 | | |
|  | <p>P → B C & P closed</p> | <p>1 0 2 B P T "A" port plugged</p>  |
|  | <p>B → T P closed C open</p> | <p>1 0 2 B P T "A" port plugged</p>  |
|  | <p>B → T P closed C open</p> | <p>1 0 2 B P T "A" port plugged</p>  |

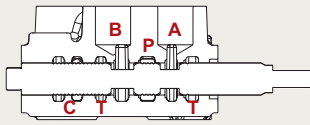
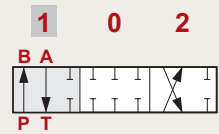
MB-4 Spool Options

Monoblock Directional Control Valves

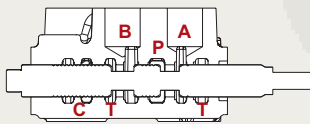
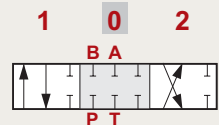
TYPE 9



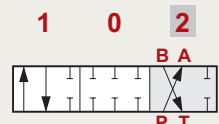
P → B
A → T
C closed



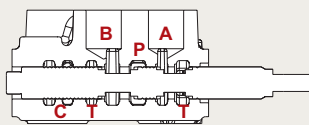
P & A & B & T closed
C closed



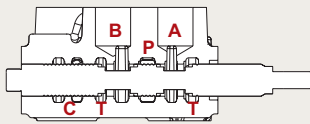
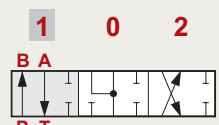
P → A
B → T
C closed



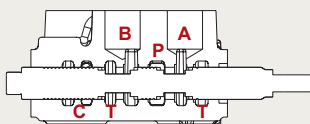
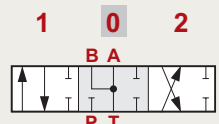
TYPE 10



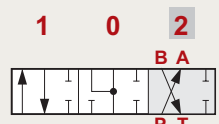
P → B
A → T
C closed



A & B → T
P & C close

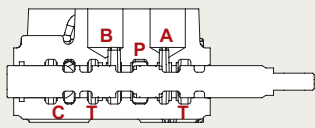
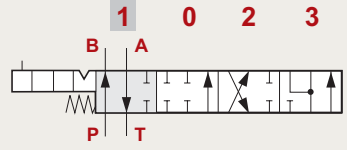
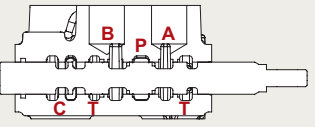
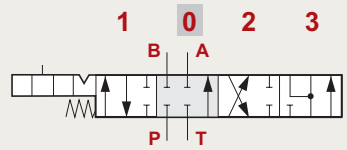
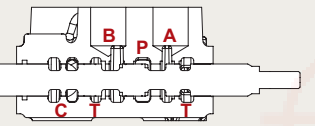
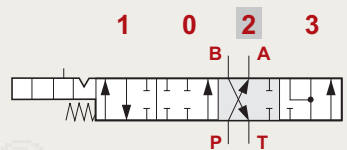
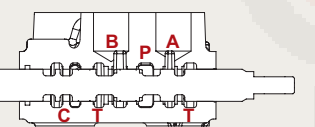
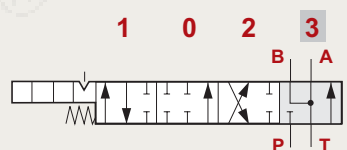


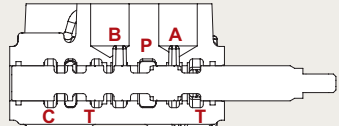
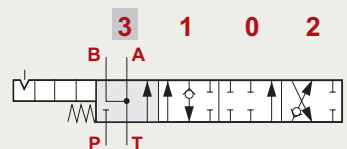
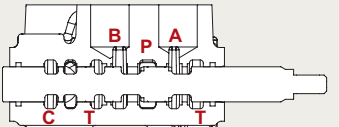
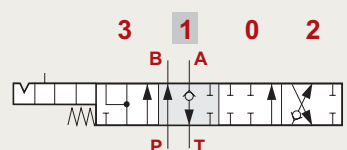
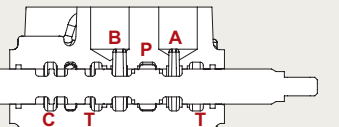
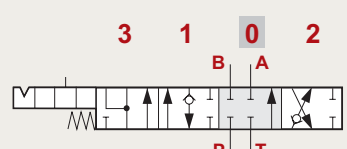
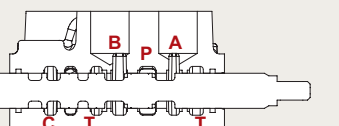
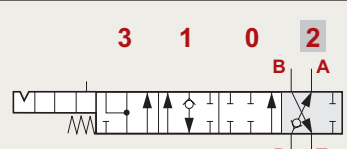
P → A
B → T
C closed



MB-4 Spool Options

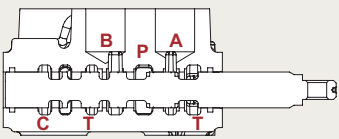
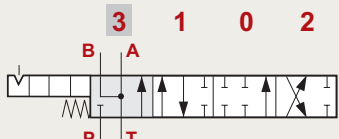
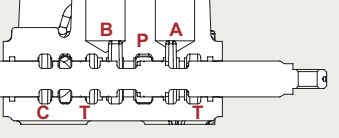
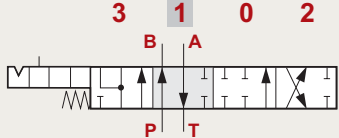
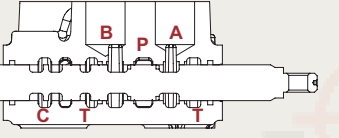
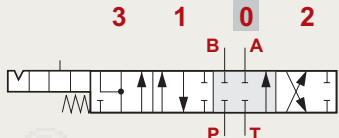
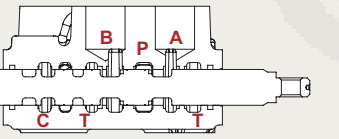
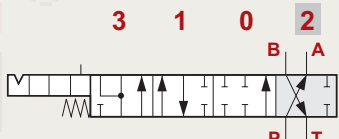
Monoblock Directional Control Valves

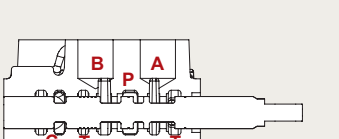
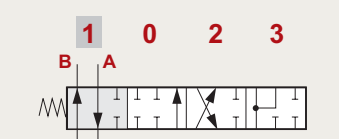
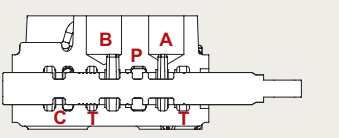
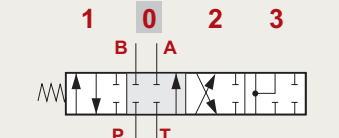
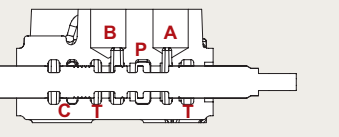
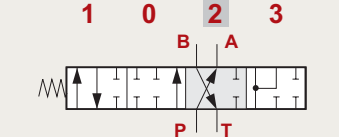
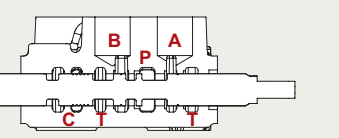
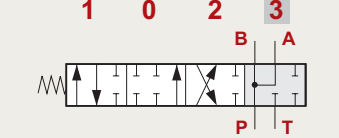
| TYPE 5DY | | NOTE: WITH SPECIAL BODY AND SPECIAL POSITIONER |
|-------------------------------------------------------------------------------------|-------------------------------------------------------|---------------------------------------------------------------------------------------|
|  | <p>P → B</p> <p>A → T</p> <p>C closed</p> |  |
|  | <p>P & T & A & B closed</p> <p>C open</p> |  |
|  | <p>P → A</p> <p>B → T</p> <p>C closed</p> |  |
|  | <p>A & B → T</p> <p>P closed</p> <p>C open</p> |  |

| TYPE 5PYX | | NOTE: WITH SPECIAL BODY AND SPECIAL POSITIONER |
|-------------------------------------------------------------------------------------|-------------------------------------------------------|---------------------------------------------------------------------------------------|
|  | <p>A & B → T</p> <p>P closed</p> <p>C open</p> |  |
|  | <p>P → B</p> <p>A → T</p> <p>C closed</p> |  |
|  | <p>P & T & A & B closed</p> <p>C open</p> |  |
|  | <p>P → A</p> <p>B → T</p> <p>C closed</p> |  |

MB-4 Spool Options

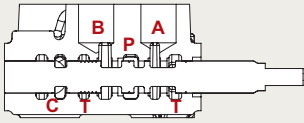
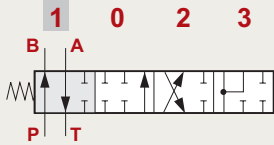
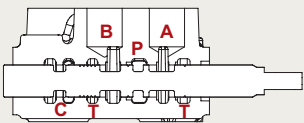
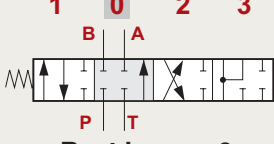
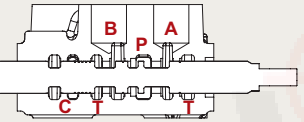
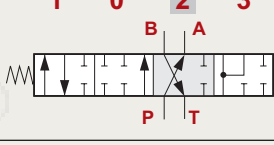
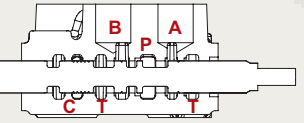
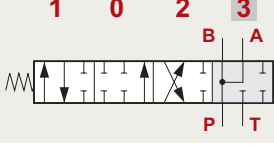
Monoblock Directional Control Valves

| TYPE 5PY | NOTE: WITH SPECIAL BODY AND SPECIAL POSITIONER | |
|-------------------------------------------------------------------------------------|----------------------------------------------------|---------------------------------------------------------------------------------------|
|  | <p>A & B → T P closed C open</p> |  |
|  | <p>P → B A → T C closed</p> |  |
|  | <p>P & T & A & B closed C open</p> |  |
|  | <p>P → A B → T C closed</p> |  |

| TYPE Z41 | NOTE: WITH SPECIAL BODY AND SPECIAL POSITIONER | |
|-------------------------------------------------------------------------------------|----------------------------------------------------|-------------------------------------------------------------------------------------------------------------|
|  | <p>P → B A → T C closed</p> |  <p>Rest in pos. 1</p> |
|  | <p>P & A & B & T closed C open</p> |  |
|  | <p>P → A B → T C closed</p> |  |
|  | <p>P → A & B T & C closed</p> |  |

MB-4 Spool Options

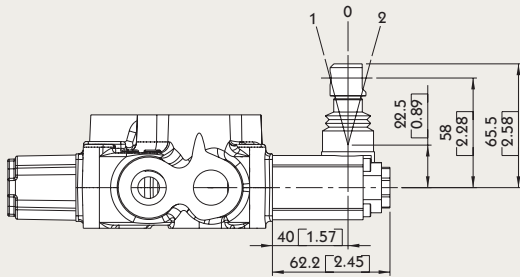
Monoblock Directional Control Valves

| TYPE Z42 | NOTE: WITH SPECIAL BODY AND SPECIAL POSITIONER | |
|-------------------------------------------------------------------------------------|----------------------------------------------------|-----------------------------------------------------------------------------------------------------------|
|  | <p>P → B A → T C closed</p> |  |
|  | <p>P & A & B & T closed C open</p> |  <p>Rest in pos. 0</p> |
|  | <p>P → A B → T C closed</p> |  |
|  | <p>P → A & B T & C closed</p> |  |

MB-4 A Side

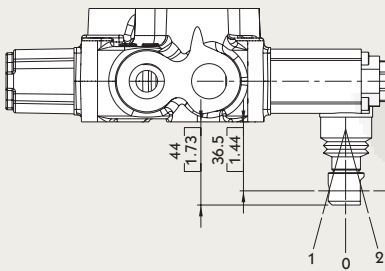
Monoblock Directional Control Valves

Type L



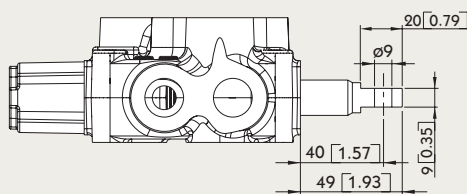
Type L:
STANDART LEVER KIT

Type R



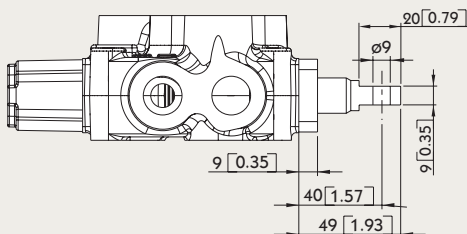
Type R:
STANDART LEVER KIT
(ROTATED 180 DEGREE)

Type SL



Type SL:
WITHOUT ANY COVER

Type SLP

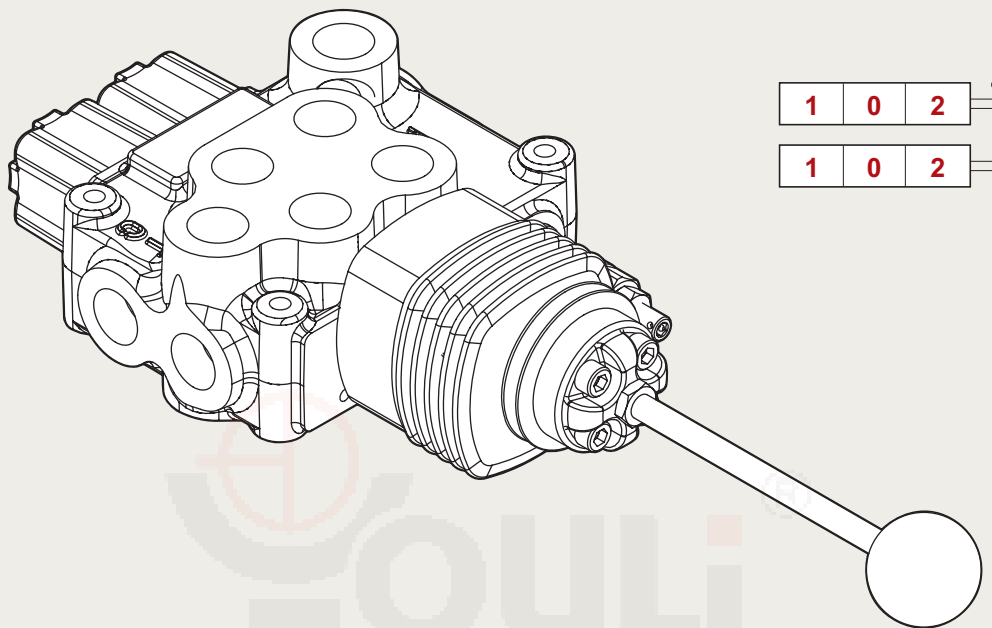


Type SLP:
WITH DUST-PROOF PLATE

MB-4 A Side

Monoblock Directional Control Valves

LCB: Joystick control

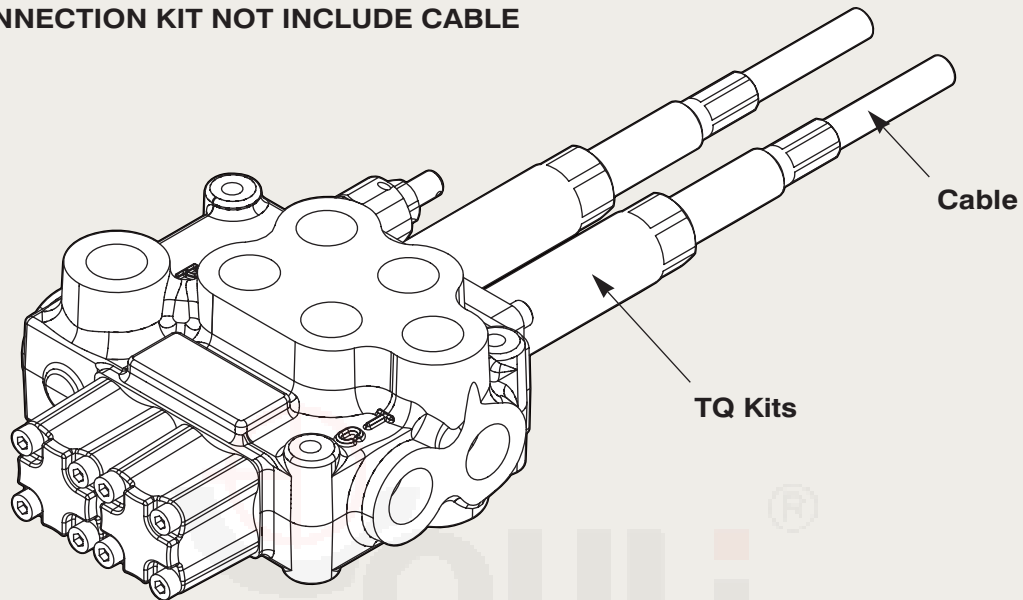


| Type LCB | LCB1 | LCB2 |
|----------|------|------|
| | | |
| Type LCB | LCB3 | LCB4 |
| | | |

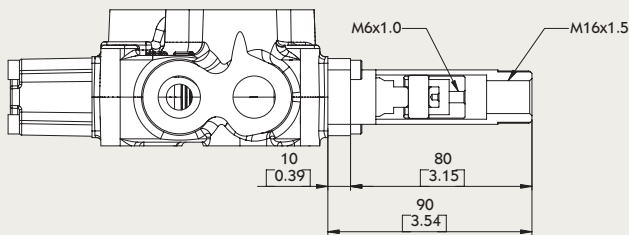
MB-4 A Side

Monoblock Directional Control Valves

Note : CONNECTION KIT NOT INCLUDE CABLE



Type TQ

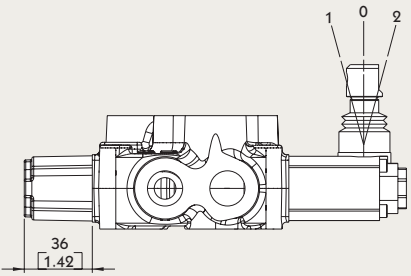



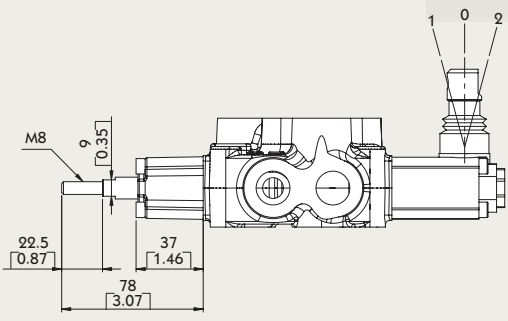



TQ Kit:



MB-4 B Side

Monoblock Directional Control Valves

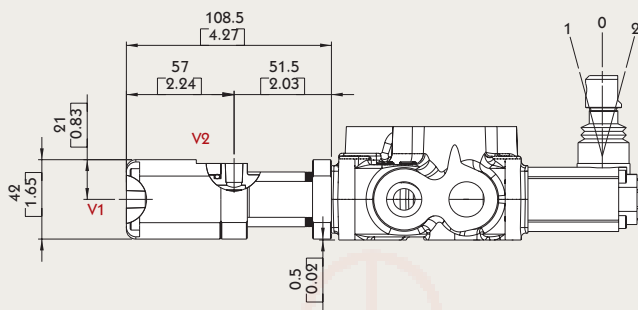
| Type 6 | | |
|-------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------|
|  |  | <p>6-1 Kit: DETENT IN POS. 1-0-2, WITHOUT SPRING CENTERED</p> |
| |  | <p>6-2 Kit: 2 POSITIONS, DETENT IN POS. 0-2, WITHOUT SPRING CENTERED</p> |
| |  | <p>6-3 Kit: 2 POSITIONS, DETENT IN POS. 1-0, WITHOUT SPRING CENTERED</p> |
| Type 8D2 | | |
|  |  | <p>8D2 Kit: WITH SPRING RETURN TO NEUTRAL POSITION AND PIN WITH M8 MALE THREAD FOR DUAL CONTROL</p> |

MB-4 B Side

Monoblock Directional Control Valves

Type 8P

V1 & V2 : NPT 1/8 - 27

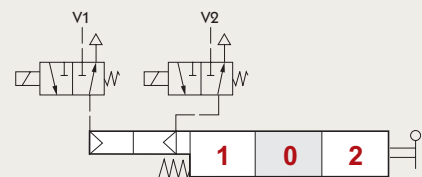
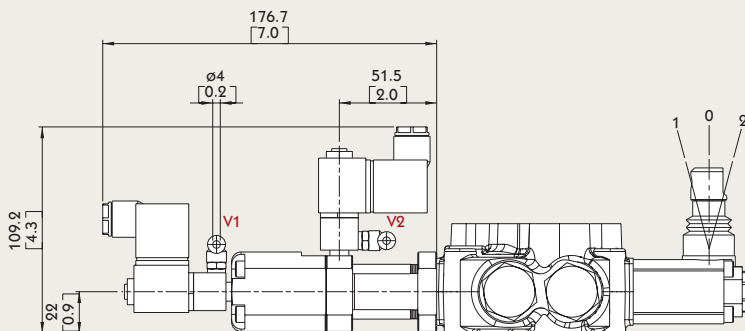


Operating feature :

PILOT PRESSURE (MIN.) 5.5 BAR / 80 PSI

PILOT PRESSURE (MAX.) 10 BAR / 145 PSI

Type 8EP3



Solenoid operating features :

NOMINAL VOLTAGE: 24VDC

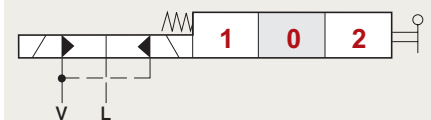
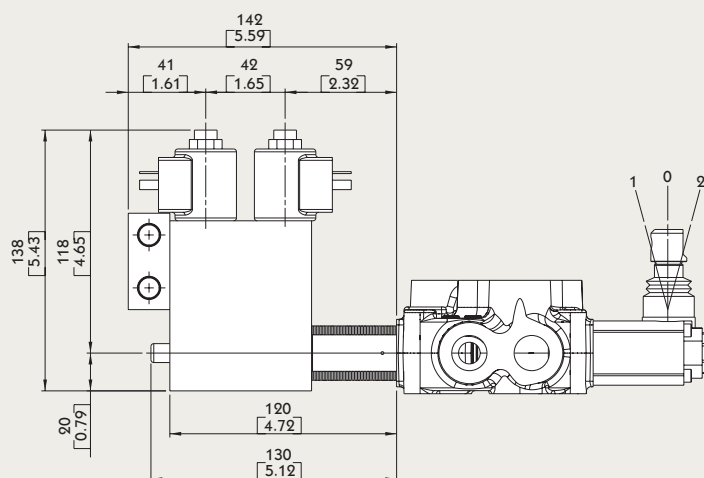
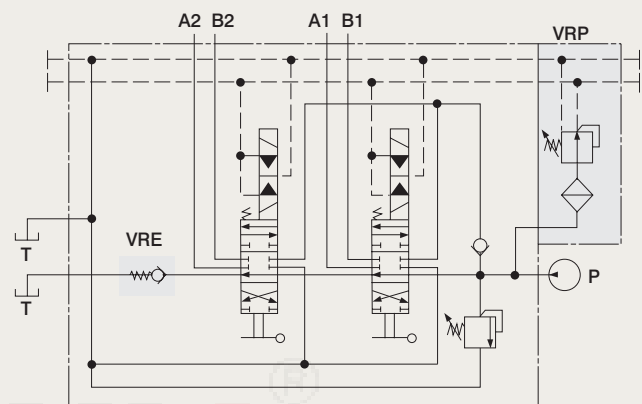
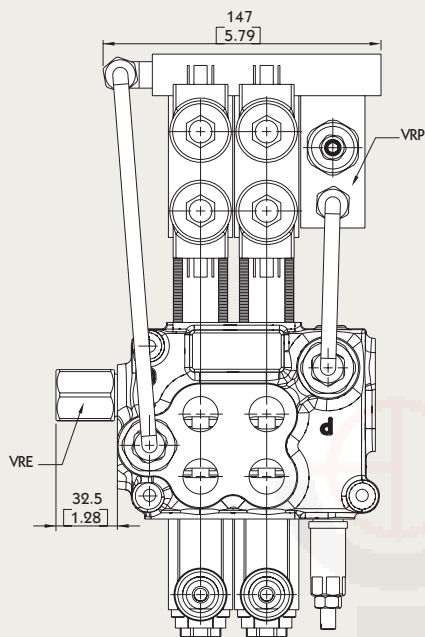
NOMINAL VOLTAGE TOLERANCE: $\pm 10\%$

POWER RATING: 5W

MB-4 B Side

Monoblock Directional Control Valves

Type 8ED3



Operating features :

- PILOT PRESSURE: • MIN. 10 BAR / 145 PSI
 • MAX. 50 BAR / 725 PSI
- MAX. BACKPRESSURE ON DRAIN L: 25 BAR / 360 PSI

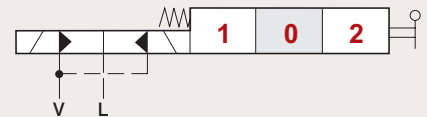
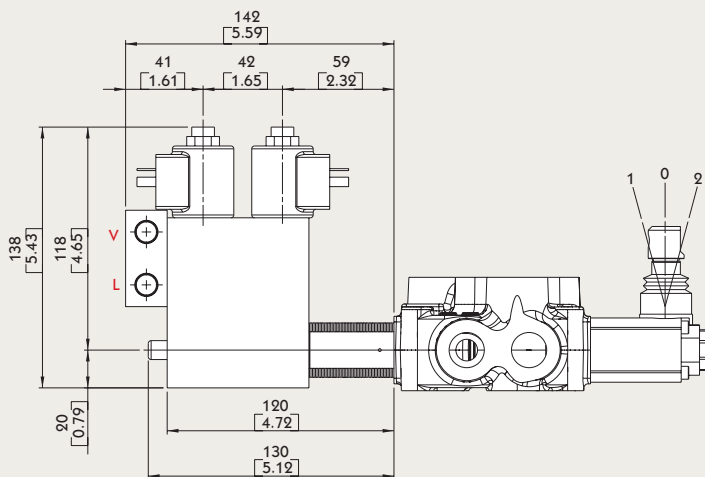
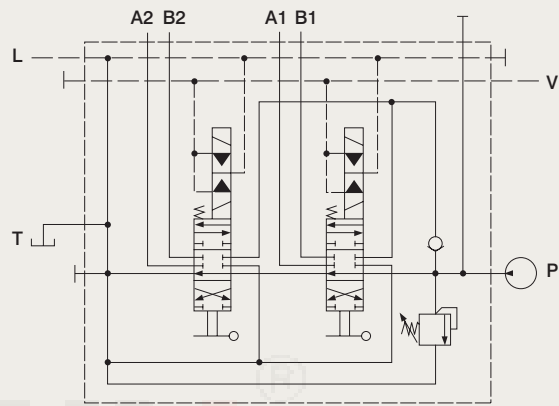
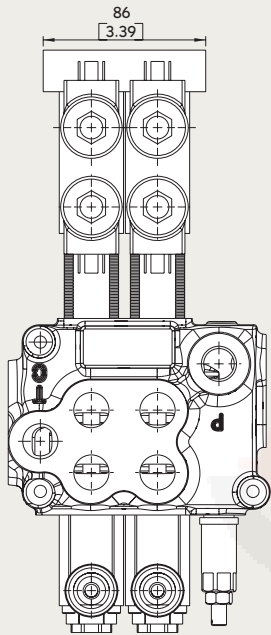
Coil features :

- NOMINAL VOLTAGE TOLERANCE: $\pm 10\%$
- ELECTRIC POWER: 21 W
- STANDARD VOLTAGE: 12 VDC / 24 VDC

MB-4 B Side

Monoblock Directional Control Valves

Type 8ER3



Operating features :

PILOT PRESSURE: • MIN. 10 BAR / 145 PSI
 • MAX. 50 BAR / 725 PSI

MAX. BACKPRESSURE ON DRAIN L: 25 BAR / 360 PSI

Coil features :

NOMINAL VOLTAGE TOLERANCE: $\pm 10\%$

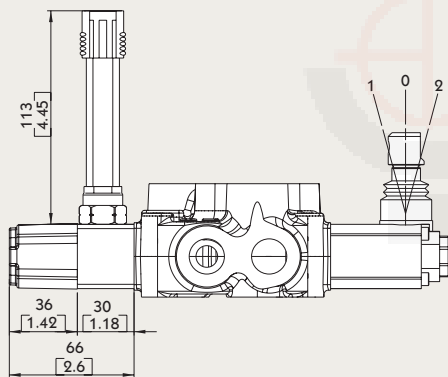
ELECTRIC POWER: 21 W

STANDARD VOLTAGE: 12 VDC / 24 VDC

MB-4 B Side

Monoblock Directional Control Valves

Type 8MG



MICROSWITCH

Operating features :

MECHANICAL LIFE: • 5X10⁶ OPERATIONS

ELECTRICAL LIFE (RESISTIVE LOAD):

- 10⁶ OPERATIONS - 7A / 13.5 VDC
- 5x10⁴ OPERATIONS - 10A / 12 VDC
- 5x10⁴ OPERATIONS - 3A / 28 VDC



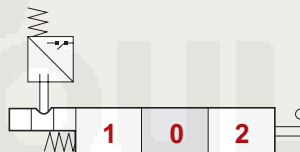
8MG1 Kit:

MICROSWITCH WITH MALE/FEMALE CONNECTOR, OPERATED IN POS. 1



8MG2 Kit:

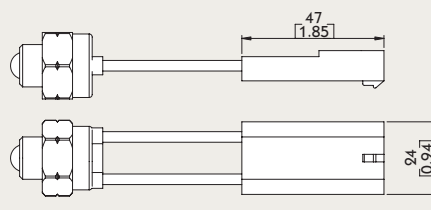
MICROSWITCH WITH MALE/FEMALE CONNECTOR, OPERATED IN POS. 2



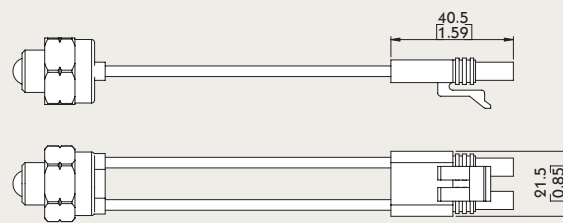
8MG3 Kit:

MICROSWITCH WITH MALE/FEMALE CONNECTOR, OPERATED IN POS. 1 AND POS. 2

With NO contact (female connector with male end)



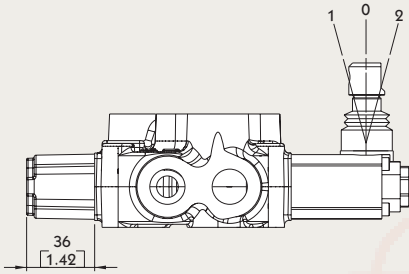
With NC contact (male connector with female end)



MB-4 B Side

Monoblock Directional Control Valves

Type 8



8 Kit:

SPRING RETURN TO NEUTRAL POSITION



8-1 Kit:

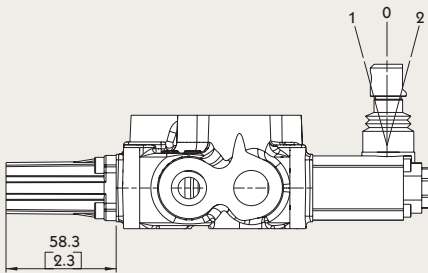
SPRING RETURN TO NEUTRAL POSITION.
(2 POSITIONS)



8-2 Kit:

SPRING RETURN TO NEUTRAL POSITION.
(2 POSITIONS)

Type 9



9-1 Kit:

DETENT IN POS. 1, 2 WITH SPRING CENTERED



9-2 Kit:

DETENT IN POS. 2 WITH SPRING CENTERED



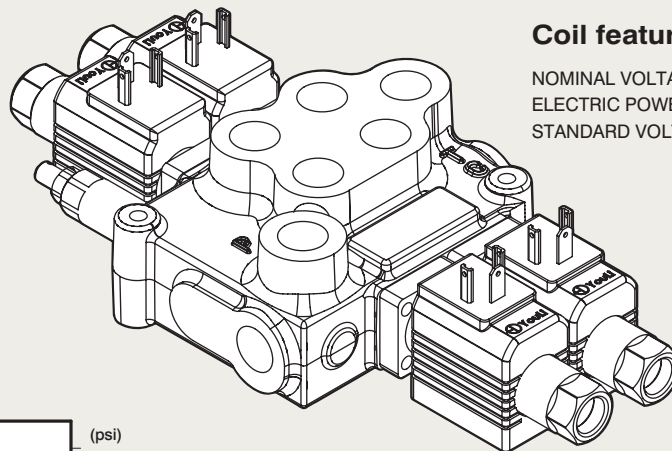
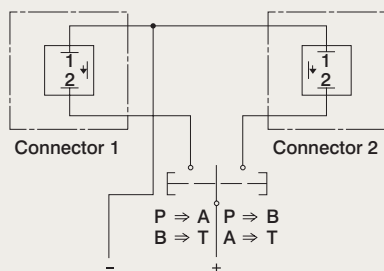
9-3 Kit:

DETENT IN POS. 1 WITH SPRING CENTERED

MB-4 B Side (Optional controls)

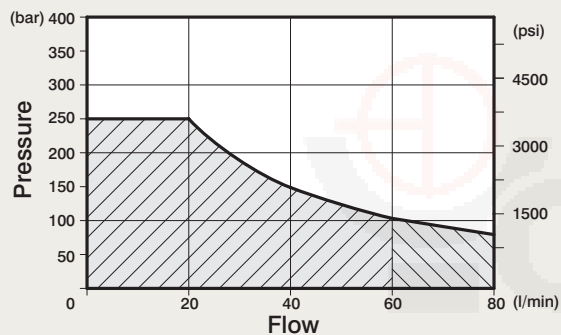
Monoblock Directional Control Valves

Electric wiring example



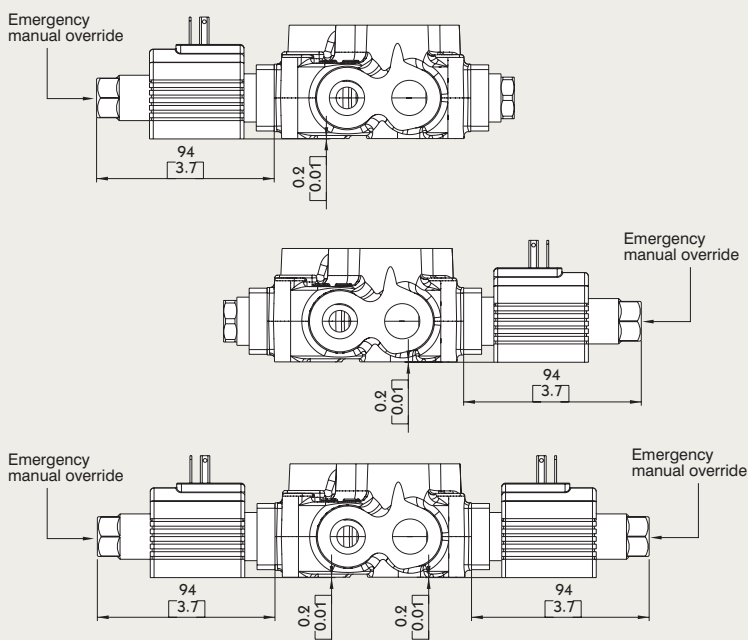
Coil features :

NOMINAL VOLTAGE TOLERANCE: ±10%
ELECTRIC POWER: 36 W
STANDARD VOLTAGE: 12 VDC / 24 VDC



| | | | |
|---------------------------|---------------------|---------------------------------------------|---------------------------|
| Nominal flow rating | | 60 L/min | 16 US gpm |
| Operating pressure (Max.) | | 250 bar | 3650 psi |
| Back pressure (Max.) | on outlet port T | 5 bar | 70 psi |
| Fluid temperature | with NBR seals | -20°C ~ 80°C | -4°F ~ 176°F |
| | with FPM seals | -20°C ~ 100°C | -4°F ~ 212°F |
| Viscosity | Operating range | 15mm ² /s ~ 75mm ² /s | 15 ~ 75 cst |
| | Max. | 400mm ² /s | 400 cst |
| | Min. | 12mm ² /s | 12 cst |
| Ambient temperature | | -40°C ~ 60°C | -40°F ~ 140°F |
| Internal Leakage A(B)→T | ΔP = 100bar at 40°C | 10 cm ³ /min | 0.61 in ³ /min |

Type 8ES



8ES1 Kit:
ACTING IN 1

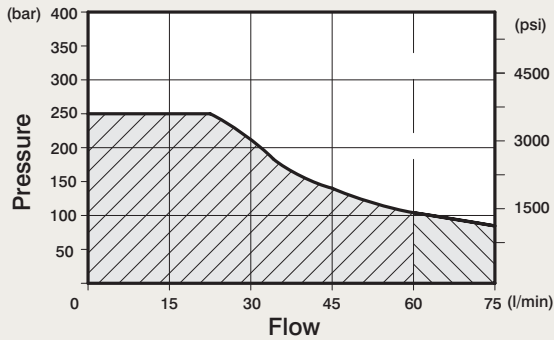


8ES2 Kit:
ACTING IN 2

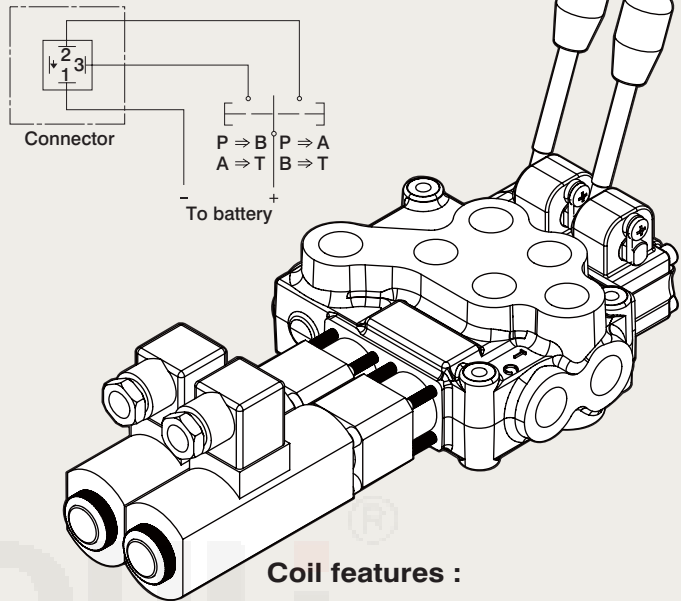


8ES3 Kit:
ACTING IN 1 & 2

MB-4 B Side (Optional controls) Monoblock Directional Control Valves



Electric wiring example



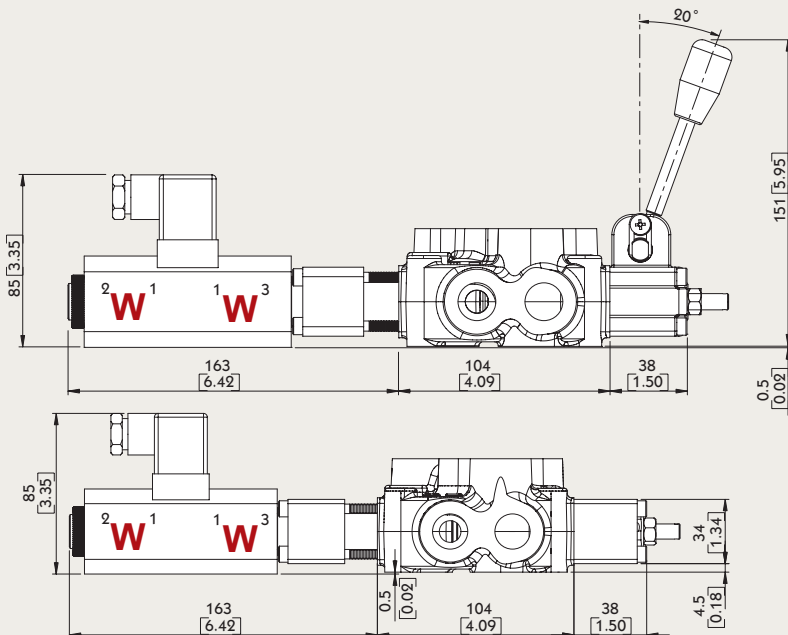
| | | | |
|---------------------------|---------------------|-------------------------------------------|---------------------------|
| Nominal flow rating | | 60 L/min | 16 US gpm |
| Operating pressure (Max.) | | 250 bar | 3650 psi |
| Back pressure (Max.) | on outlet port T | 5 bar | 70 psi |
| Fluid temperature | with NBR seals | -20°C~80°C | -4°F~176°F |
| | with FPM seals | -20°C~100°C | -4°F~212°F |
| Viscosity | Operating range | 15mm ² /s~75mm ² /s | 15~75 cst |
| | Max. | 400mm ² /s | 400 cst |
| | Min. | 12mm ² /s | 12 cst |
| Ambient temperature | | -40°C~60°C | -40°F~140°F |
| Internal Leakage A(B)->T | ΔP = 100bar at 40°C | 10 cm ³ /min | 0.61 in ³ /min |

Available sections from 1 to 3 section

Coil features :

NOMINAL EL. POWER: 60 WATT
LIMITS OF AMBIENT TEMPERATURE : -20°C +70°C
STANDARD VOLTAGE: 12 - 24 VDC (±10%)

Type 8ESN



8ESNLES Kit:

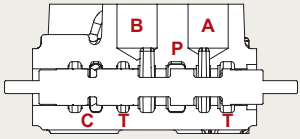
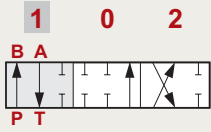
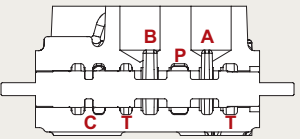
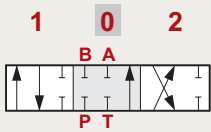
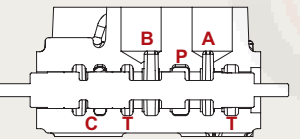
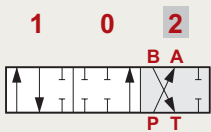
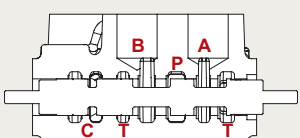
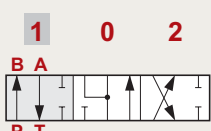
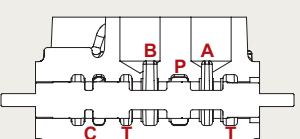
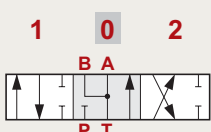
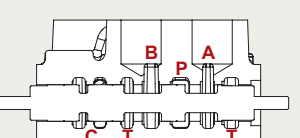
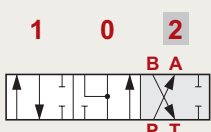


8ESNCAE Kit:



MB-4 Special spool (Options for 8ES Kit)

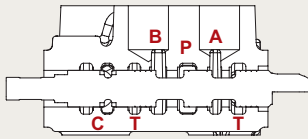
Monoblock Directional Control Valves

| Type 8ES3#1 | | |
|-------------------------------------------------------------------------------------|----------------------------------------------------|---------------------------------------------------------------------------------------|
|  | <p>P → B A → T C closed</p> |  |
|  | <p>P & T & A & B closed C open</p> |  |
|  | <p>P → A B → T C closed</p> |  |
| Type 8ES3#2 | | |
|  | <p>P → B A → T C closed</p> |  |
|  | <p>A & B → T P closed C open</p> |  |
|  | <p>P → A B → T C closed</p> |  |

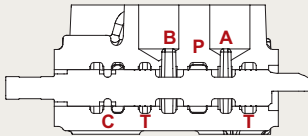
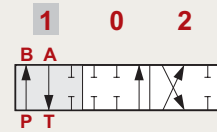
MB-4 Special spool (Options for 8ESN Kit)

Monoblock Directional Control Valves

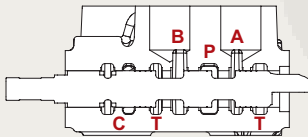
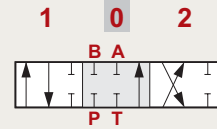
Type 8ESN#1



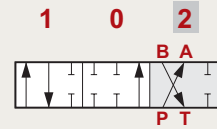
P → B
A → T
C closed



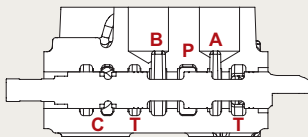
P & T & A & B closed
C open



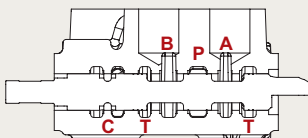
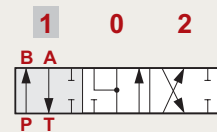
P → A
B → T
C closed



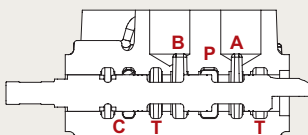
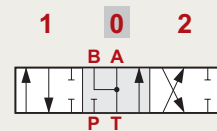
Type 8ESN#2



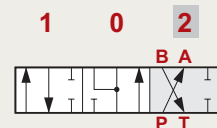
P → B
A → T
C closed



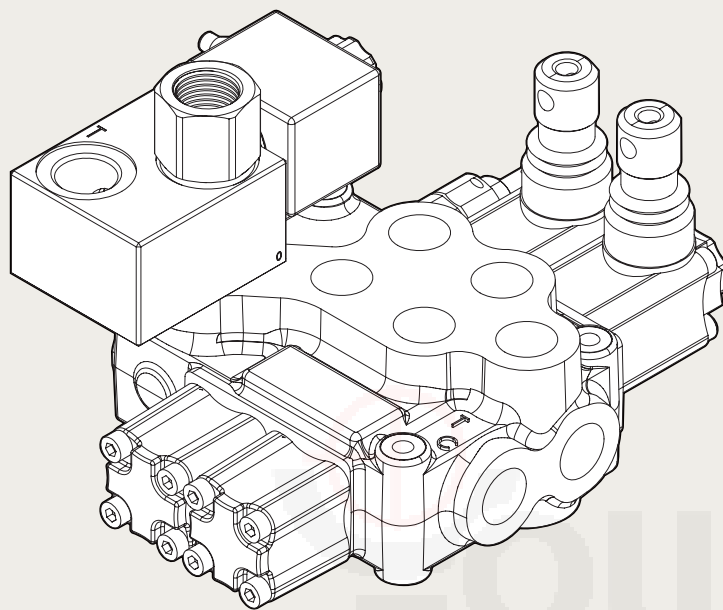
A & B → T
P closed
C open



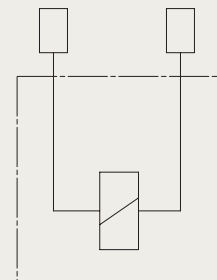
P → A
B → T
C closed



MB-4 (Option - Dump valve (Emergency stop valve)) Monoblock Directional Control Valves

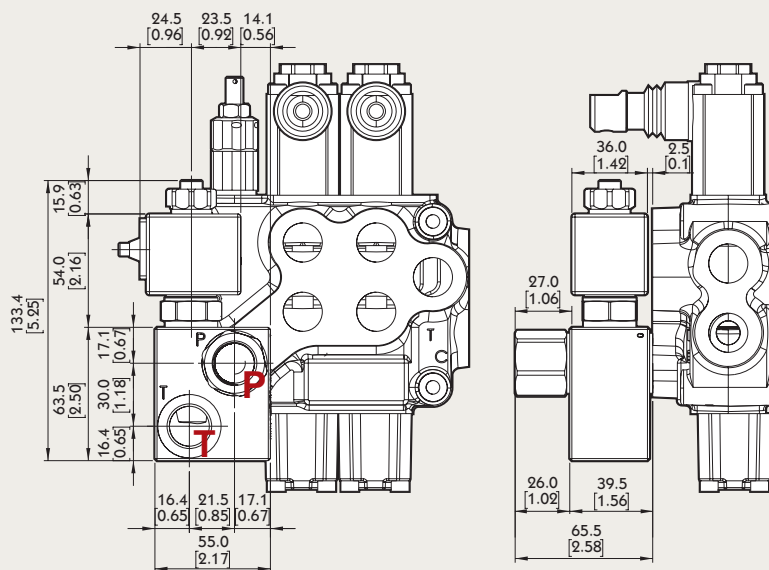


Electric wiring example

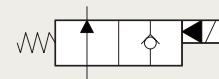


Coil features :

NOMINAL VOLTAGE TOLERANCE : $\pm 10\%$
ELECTRIC POWER : 20W
STANDARD VOLTAGE : 12VDC / 24VDC



P & T : G1/2

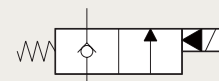


TYPE :

DUMP-G04-24VDC(NO)
DUMP-G04-12VDC(NO)

CODE :

YLMB45424
YLMB45412



TYPE :

DUMP-G04-24VDC(NC)
DUMP-G04-12VDC(NC)

CODE :

YLMB454241
YLMB454121

MB-4 Outlet

Monoblock Directional Control Valves

Power Beyond Conversion plug
(Closed center plug)

