

Monoblock Directional Control Valves

MB-2

Working condition	P.3
Ordering code	P.4~5
Dimensions	P.6
Performance data	P.7
Inlet relief options	P.8
Spool options	P.9~11
A side options	P.12~13
B side spool positioners	P.14~17
Inlet options	P.18

MB-3

Working condition	P.19
Ordering code	P.20~22
Dimensions	P.23
Performance data	P.24
Inlet relief options	P.25
Spool options	P.26~32
A side options	P.33~36
B side spool positioners	P.37~44
Other options	P.45~49
Outlet options	P.50

MB-4

Working condition	P.51
Ordering code	P.52~54
Dimensions	P.55
Performance data	P.56
Inlet relief options	P.57
Spool options	P.58~65
A side options	P.66~68
B side spool positioners	P.69~76
Other options	P.77~79
Outlet options	P.80

MB-5

Working condition	P.81
Ordering code	P.82~84
Dimensions	P.85
Performance data	P.86
Inlet relief options	P.87
Spool options	P.88~93
A side options	P.94~96
B side spool positioners	P.97~102
Other options	P.103~106
Outlet options	P.107

MSB-5

Working condition	P.108
Ordering code	P.109~111
Dimensions	P.112
Performance data	P.113
Inlet relief options	P.114
Spool options	P.115~118
A side options	P.119~122
B side spool positioners	P.123~129
Port relief	P.130
Other options	P.131~132
Outlet options	P.133

Sectional Directional Control Valves

SN-3

Working condition	P.134
Ordering code	P.135~140
Dimensions	P.141
Performance data	P.142
Inlet relief options	P.143
Spool options	P.144~148
A side options	P.149~152
B side spool positioners	P.153~161
Port relief	P.162
Other options	P.163~164
Outlet options	P.165

SN-4

Working condition	P.166
Ordering code	P.167~172
Dimensions	P.173
Performance data	P.174
Inlet relief options	P.175
Spool options	P.176~180
A side options	P.181~183
B side spool positioners	P.184~189
Port relief	P.190
Outlet options	P.191

SN-6

Working condition	P.192
Ordering code	P.193~198
Dimensions	P.199
Performance data	P.200
Inlet relief options	P.201
Spool options	P.202~205
A side options	P.206~208
B side spool positioners	P.209~214
Port relief	P.215
Other options	P.216~217
Outlet options	P.218

SN-8

Working condition	P.219
Ordering code	P.220~225
Dimensions	P.226
Performance data	P.227
Inlet relief options	P.228
Spool options	P.229~233
A side options	P.234~237
B side spool positioners	P.238~243
Port relief	P.244
Other options	P.245~247
Outlet options	P.248

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 (Page 3~18)

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 (Page 19~50)

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 (Page 51~80)

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 (Page 81~107)

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 (Page 108~133)

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 (Page 134~165)

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 (Page 166~191)

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 (Page 192~218)

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



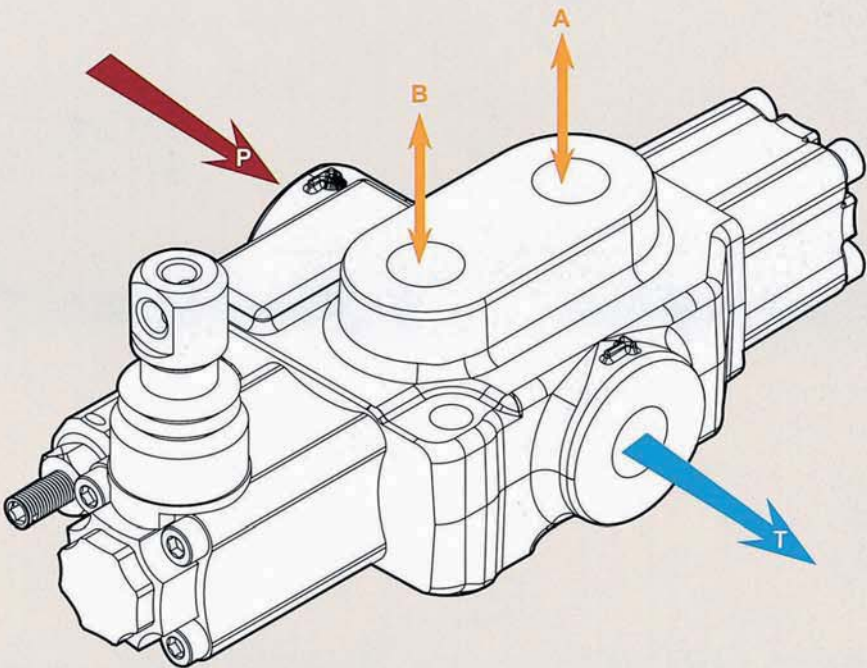
SN-8 (Page 219~248)

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

MB-2

Monoblock Directional Control Valves



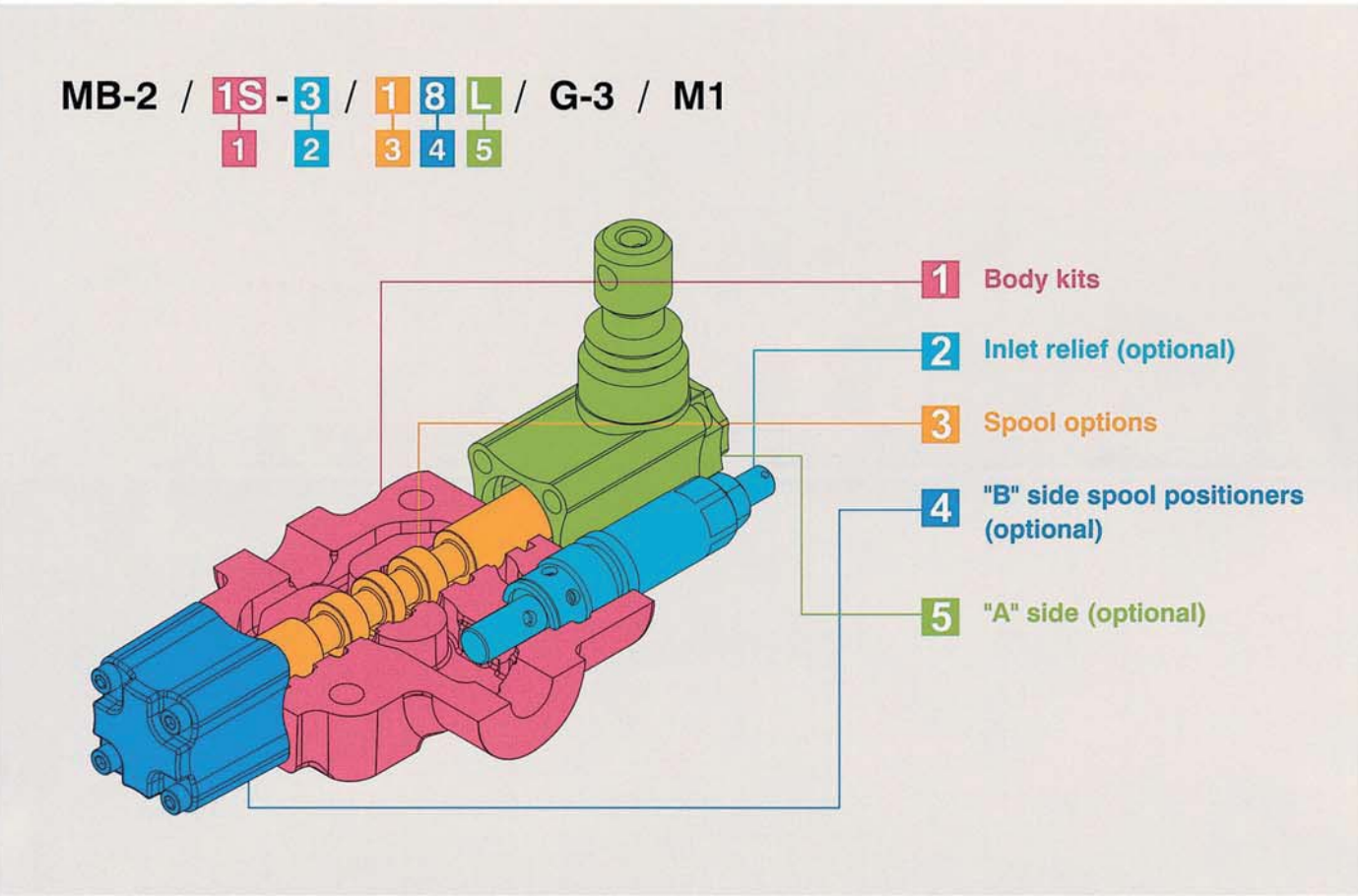
MB-2 Specifications

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
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 mm²/s	from 15 to 75 cst
	min	12 mm²/s	12 cst
	max.	400 mm²/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-2

Monoblock Directional Control Valves



1:	Body kits	WITHOUT SERVICE PORT VALVES PREARRANGEMENT (INCLUDE BODY, SEALS, RINGS AND LOAD CHECK VALVE.)
TYPE		DESCRIPTION
1 - S		1 section

2:	Inlet Relief (optional)		
TYPE	CODE	DESCRIPTION	PAGE
DG-2	YLMB32002	Range 40 to 80 bar / 580 to 1150 psi, standard setting 80 bar / 1150 psi	P. 8
DG-3	YLMB32003	Range 63 to 200 bar / 900 to 2900 psi, standard setting 120 bar / 1750 psi	P. 8
DG-4	YLMB32004	Range 160 to 315 bar / 2300 to 4600 psi, standard setting 220 bar / 3200 psi	P. 8
SV	YLMB32100	Relief valve blanking plug	P. 8

MB-2

Monoblock Directional Control Valves

MB-2

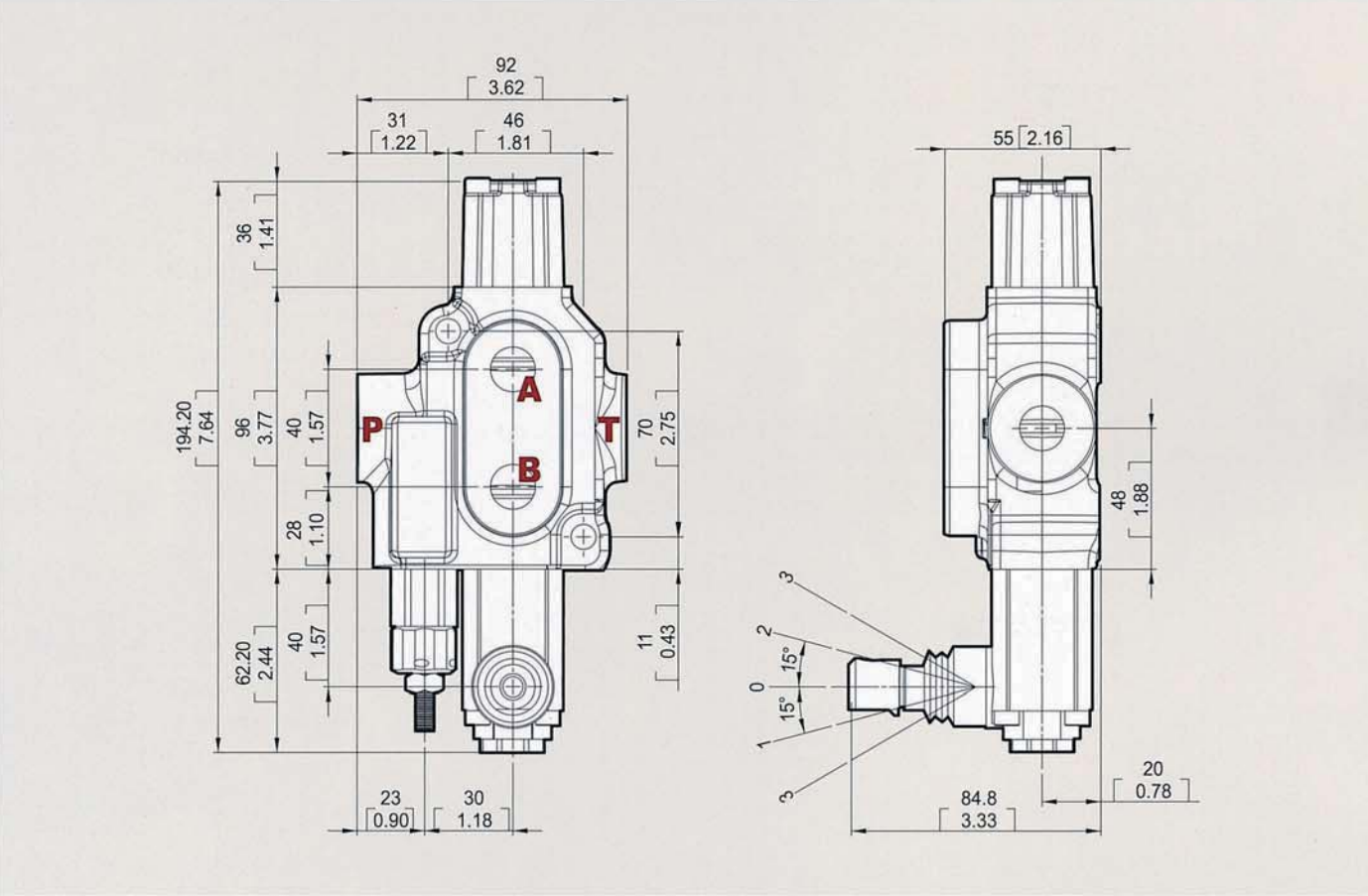
3: Spool Options			
TYPE	CODE	DESCRIPTION	PAGE
1	YLMB23001	Double acting, 3 positions, with A, B closed in neutral position	P. 9
2	YLMB23002	Double acting, 3 positions, with A, B open to Tank in neutral position	P. 9
3	YLMB23003	Single acting on A closed in neutral position, 3 positions, B plugged	P. 10
4	YLMB23003	Single acting on B closed in neutral position, 3 positions, A plugged	P. 10
9	YLMB23009	Double acting, 3 positions, with P, T, A, B closed in neutral position (Closed center)	P. 11
10	YLMB23010	Double acting, 3 positions, with A, B open to Tank and P, T closed in neutral position (Closed center)	P. 11

4: B Side Spool Positioners			
TYPE	CODE	DESCRIPTION	PAGE
6-1	YLMB24061	Detent in pos. 1-0-2, without spring centered	P. 14
6-2	YLMB24062	2 positions, detent in pos. 0-2, without spring centered	P. 14
6-3	YLMB24063	2 positions, detent in pos. 1-0, without spring centered	P. 14
8D2	YLMB24200	With spring return to neutral position and pin with M8 male thread for dual control	P. 14
8EP3	YLMB24300	ON/OFF Electro-Pneumatic actuator	P. 15
8P	YLMB24080	ON/OFF Pneumatic actuator	P. 15
8MG1 (NO)	YLMB24801	Microswitch kit operated in pos. 1 (Normally Open)	P. 16
8MG2 (NO)	YLMB24802	Microswitch kit operated in pos. 2 (Normally Open)	P. 16
8MG3 (NO)	YLMB24803	Microswitch kit operated in pos. 1&2 (Normally Open)	P. 16
MG (NO)	YLMB24804	Microswitch with NO terminal	P. 16
8MG1 (NC)	YLMB248011	Microswitch kit operated in pos. 1 (Normally Closed)	P. 16
8MG2(NC)	YLMB248021	Microswitch kit operated in pos. 2 (Normally Closed)	P. 16
8MG3 (NC)	YLMB248031	Microswitch kit operated in pos. 1&2 (Normally Closed)	P. 16
MG (NC)	YLMB248041	Microswitch with NC terminal	P. 16
8	YLMB24008	With spring return to neutral position	P. 17
8-1	YLMB24081	2 positions, with spring centered from pos. 1	P. 17
8-2	YLMB24082	2 positions, with spring centered from pos. 2	P. 17
9-1	YLMB24091	Detent in pos. 1, 2 with spring centered	P. 17
9-2	YLMB24092	Detent in pos. 2 with spring centered	P. 17
9-3	YLMB24093	Detent in pos. 1 with spring centered	P. 17

5: A Side (optional)			
TYPE	CODE	DESCRIPTION	PAGE
L	YLMB45000	Standard lever box	P. 12
SLP	YLMB45001	Without lever box, with dust-proof plate	P. 12
TQ	YLMB45003	Flexible cable connection	P. 13

MB-2 Dimensions

Monoblock Directional Control Valves



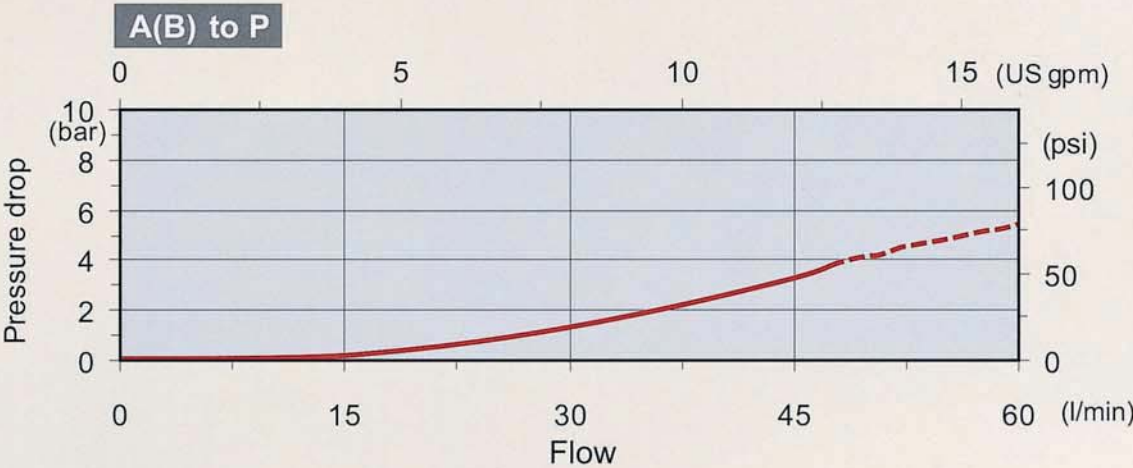
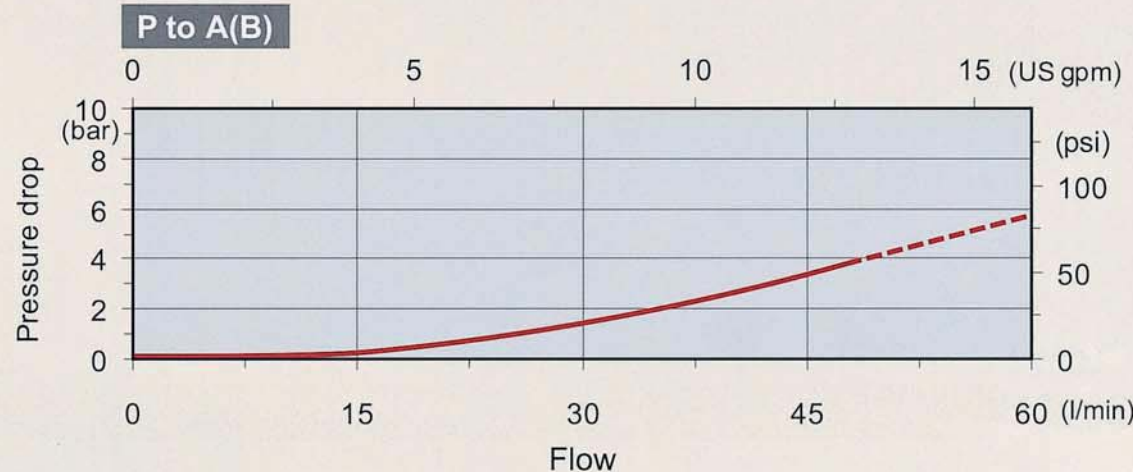
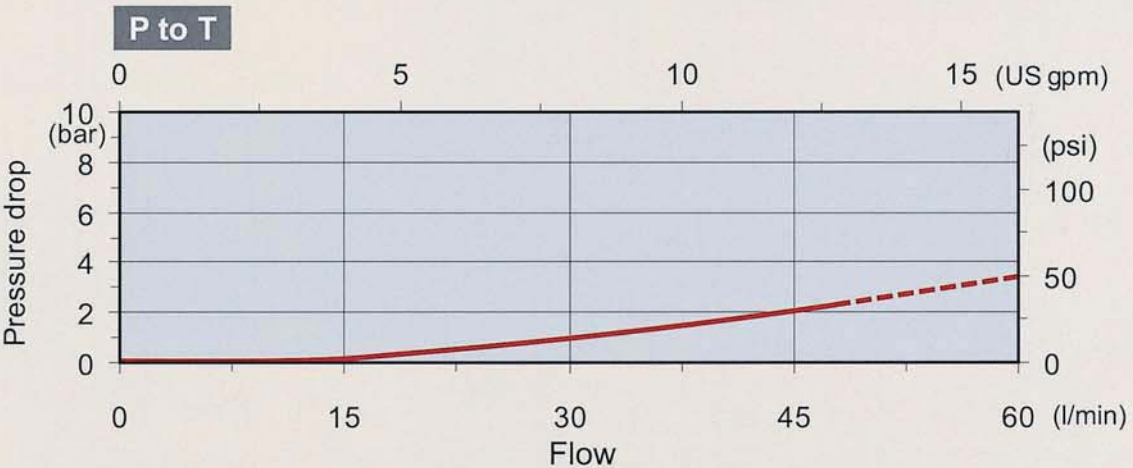
Standard threads

Ports	Inlet P	A and B	Outlet T
BSP	G3/8	G3/8	G3/8
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-1/2 : G4 G-3/8 : G3 G-3/4 : G6
• SAE 8: E8 SAE 10: E10 SAE 12: E12 SAE 16: E16

MB-2

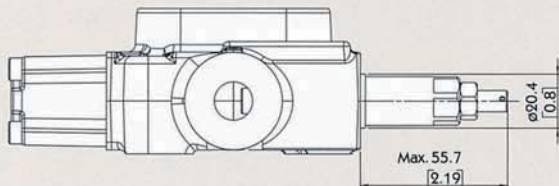
MB-2 Performance curve chart Monoblock Directional Control Valves



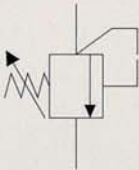
MB-2 Inlet Relief (Optional)

Monoblock Directional Control Valves

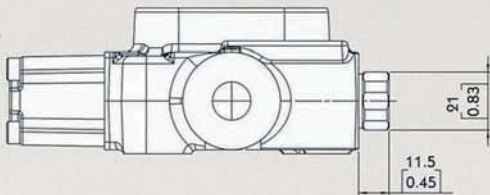
Type DG



Direct pressure relief valve:



Type SV



Relief valve blanking plug:



MB-2

MB-2 Spool Options

Monoblock Directional Control Valves

TYPE 1

	<p>P → A</p> <p>B → T</p> <p>C closed</p>	
	<p>P & T & A & B closed</p> <p>C open</p>	
	<p>P → B</p> <p>A → T</p> <p>C closed</p>	

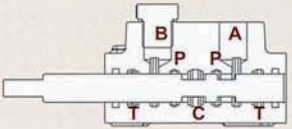
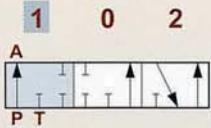
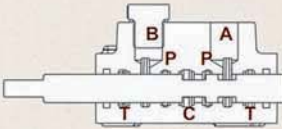
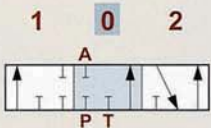
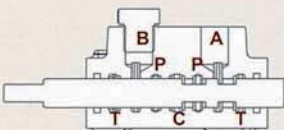
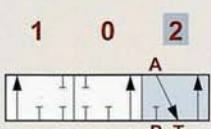
TYPE 2

	<p>P → A</p> <p>B → T</p> <p>C closed</p>	
	<p>A & B → T</p> <p>C open</p>	
	<p>P → B</p> <p>A → T</p> <p>C closed</p>	

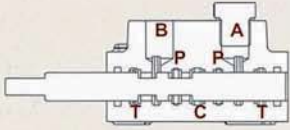
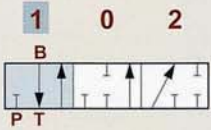
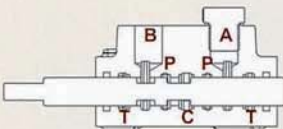
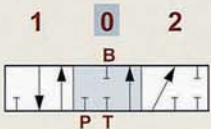
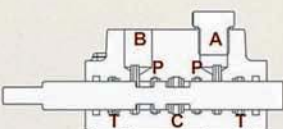
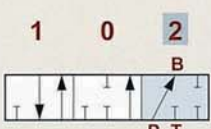
MB-2 Spool Options

Monoblock Directional Control Valves

TYPE 3

	<p>P → A</p> <p>C closed</p>	 <p>"B" port plugged</p>
	<p>P & A & T closed</p> <p>C open</p>	 <p>"B" port plugged</p>
	<p>A → T</p> <p>C open</p>	 <p>"B" port plugged</p>

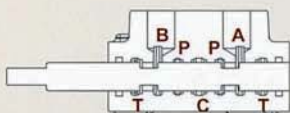
TYPE 4

	<p>B → T</p> <p>closed</p>	 <p>"A" port plugged</p>
	<p>P & B & T closed</p> <p>C open</p>	 <p>"A" port plugged</p>
	<p>P → B</p> <p>C closed</p>	 <p>"A" port plugged</p>

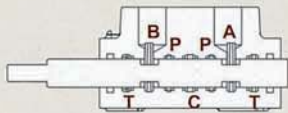
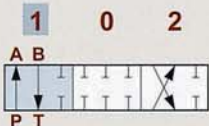
MB-2 Spool Options

Monoblock Directional Control Valves

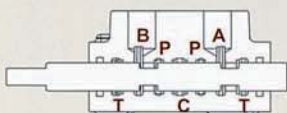
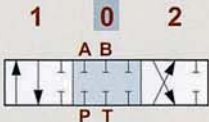
TYPE 9



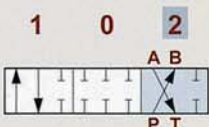
P → A
B → T
C closed



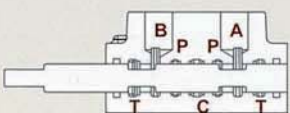
P & A & B & T closed
C closed



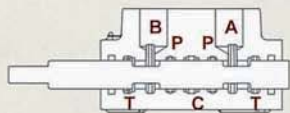
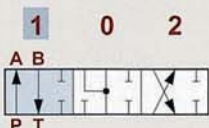
P → B
A → T
C closed



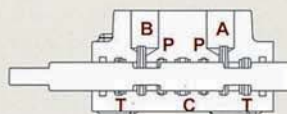
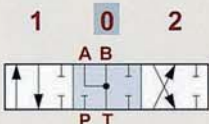
TYPE 10



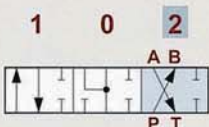
P → A
B → T
C closed



A & B → T
P & C closed



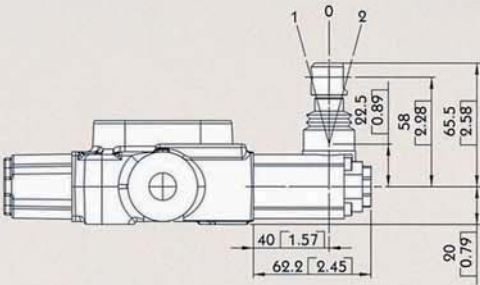
P → B
A → T
C closed



MB-2 A Side

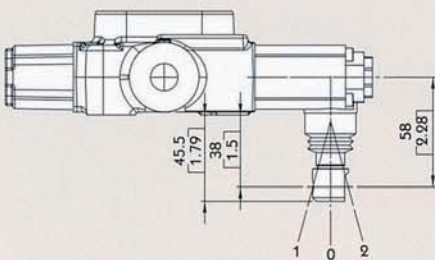
Monoblock Directional Control Valves

Type L



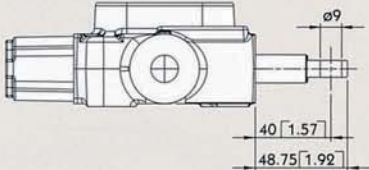
Type L:
STANDART LEVER KIT

Type R



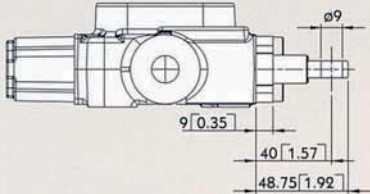
Type R:
STANDART LEVER KIT
(ROTATED 180 DEGREE)

Type SL



Type SL:
WITHOUT ANY COVER

Type SLP

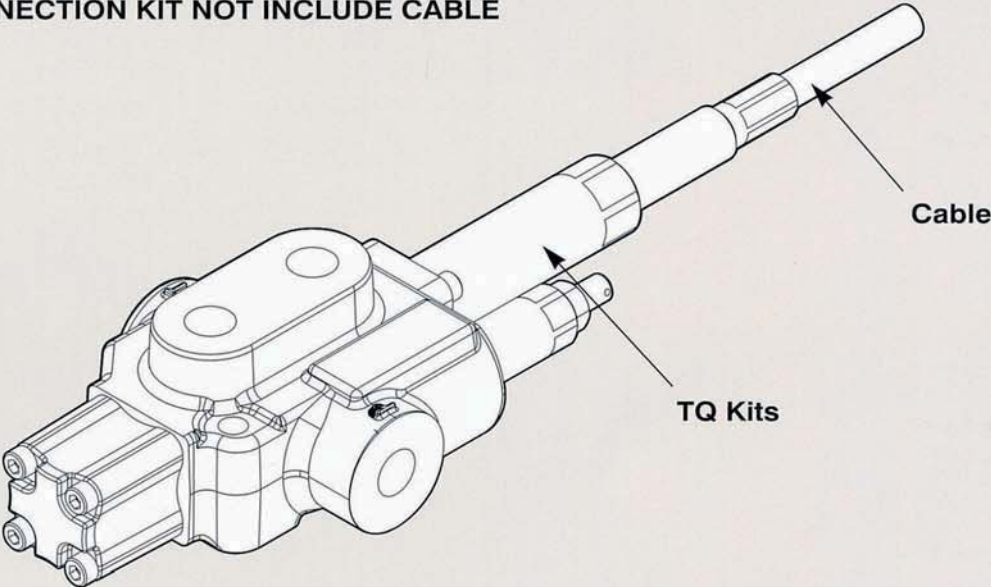


Type SLP:
WITH DUST-PROOF PLATE

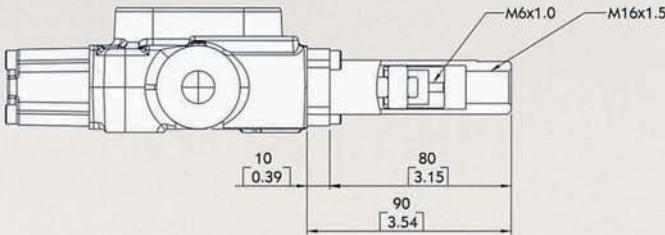
MB-2

MB-2 A Side Monoblock Directional Control Valves

Note : CONNECTION KIT NOT INCLUDE CABLE



Type TQ

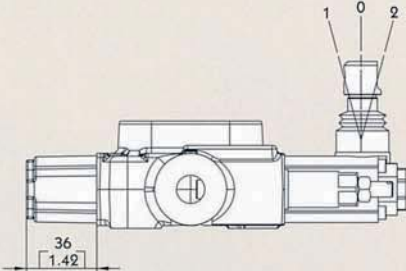
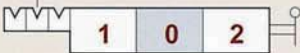

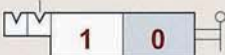


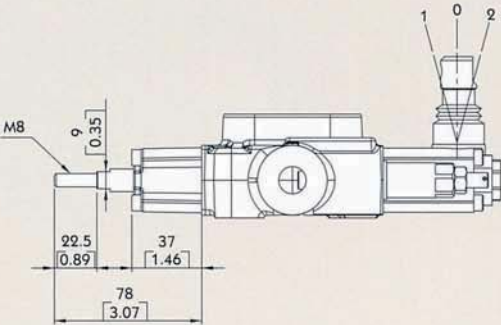

TQ Kit:



MB-2 B Side

Monoblock Directional Control Valves

Type 6		
		6-1 Kit: DETENT IN POS. 1-0-2, WITHOUT SPRING CENTERED
		6-2 Kit: 2 POSITIONS, DETENT IN POS. 0-2, WITHOUT SPRING CENTERED
		6-3 Kit: 2 POSITIONS, DETENT IN POS. 1-0, WITHOUT SPRING CENTERED

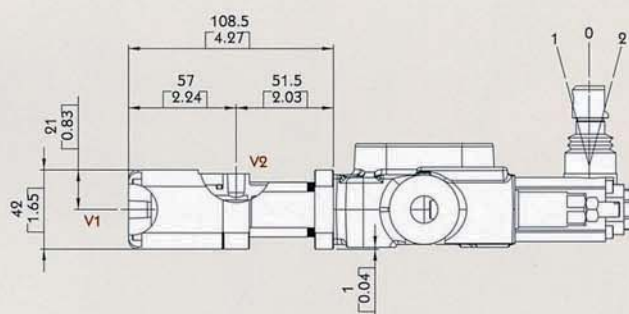
Type 8D2		
		8D2 Kit: WITH SPRING RETURN TO NEUTRAL POSITION AND PIN WITH M8 MALE THREAD FOR DUAL CONTROL

MB-2 B Side

Monoblock Directional Control Valves

Type 8P

V1 & V2: NPT 1/8 - 27



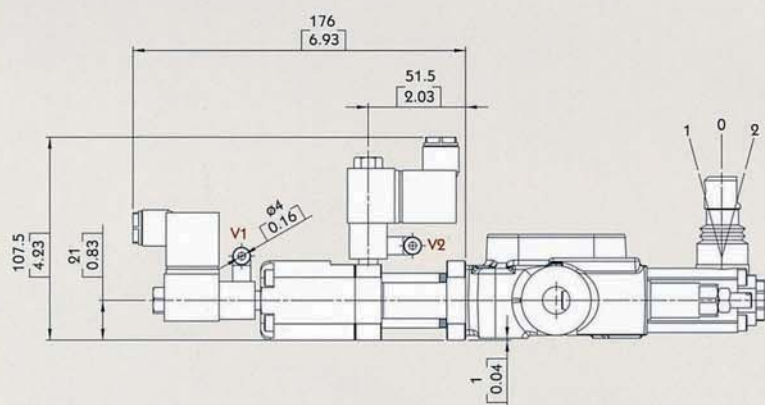
Operating feature :

PILOT PRESSURE (MIN.): 5.5 BAR / 80 PSI

PILOT PRESSURE (MAX.): 10 BAR / 145 PSI



Type 8EP3

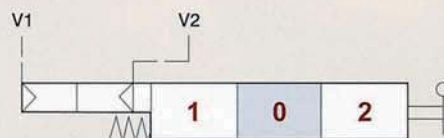


Solenoid operating features :

NOMINAL VOLTAGE: 24VDC

NOMINAL VOLTAGE TOLERANCE: $\pm 10\%$

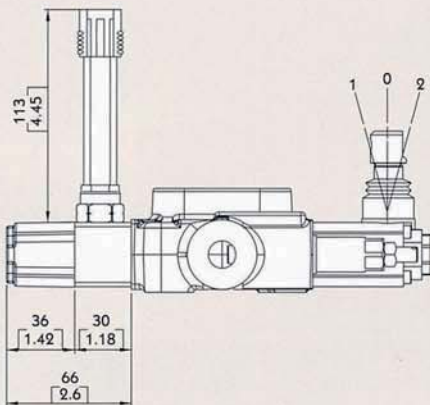
POWER RATING: 5W



MB-2 B Side

Monoblock Directional Control Valves

Type 8MG



MICROSWITCH

Operating features :

MECHANICAL LIFE: • 5X10⁵ OPERATIONS

ELECTRICAL LIFE (RESISTIVE LOAD):

- 10⁵ 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:

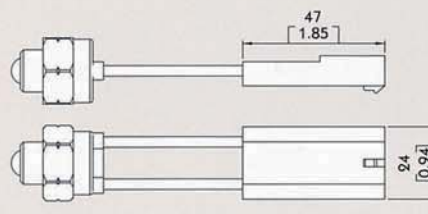
MICROSWITCH WITH MALE/FEMALE CONNECTOR, OPERATED IN POS. 2



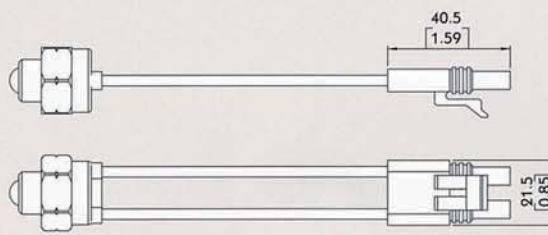
8MG3 Kit:

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

With NO contact (female connector with male end)



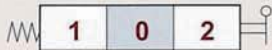
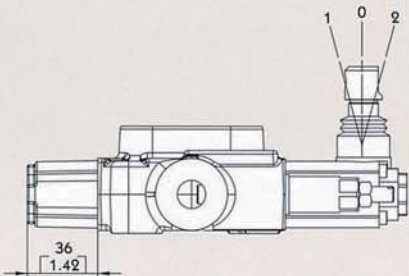
With NC contact (male connector with female end)



MB-2 B Side

Monoblock Directional Control Valves

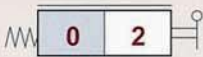
Type 8



8 Kit:
SPRING RETURN TO NEUTRAL POSITION.

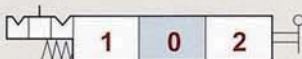
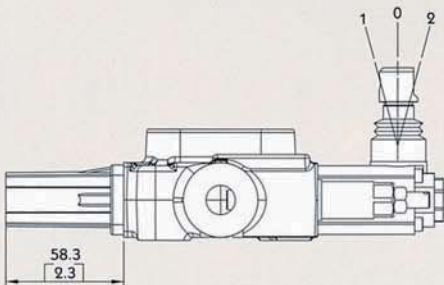


8-1 Kit:
SPRING RETURN TO NEUTRAL POSITION.
(2 POSITIONS)



8-2 Kit:
SPRING RETURN TO NEUTRAL POSITION.
(2 POSITIONS)

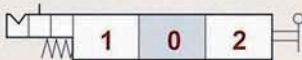
Type 9



9-1 Kit:
DETENT IN POS. 1, 2 WITH SPRING CENTERED



9-2 Kit:
DETENT IN POS. 2 WITH SPRING CENTERED



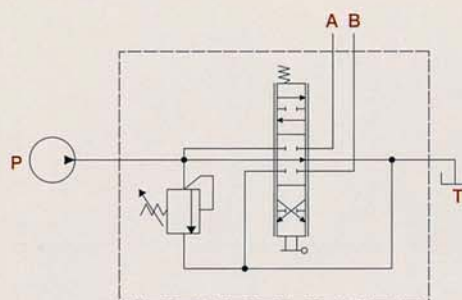
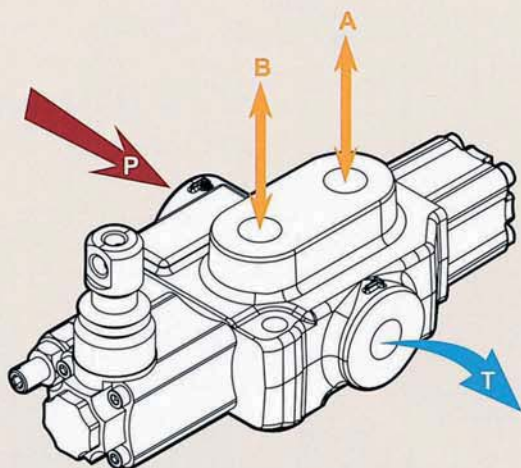
9-3 Kit:
DETENT IN POS. 1 WITH SPRING CENTERED

MB-2 Inlet

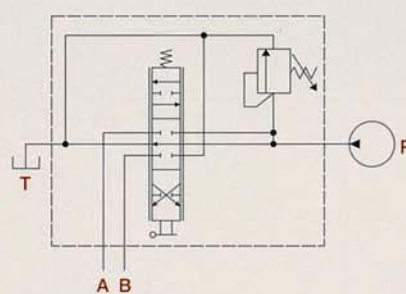
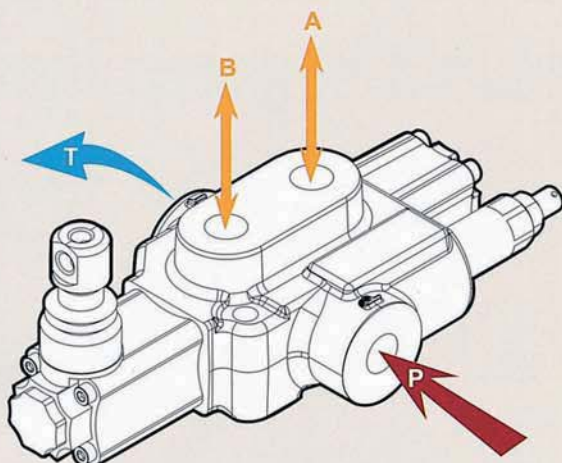
Monoblock Directional Control Valves

A symmetrical body allows the reverse assembly of spool and relative control kit and lever

(Left inlet)



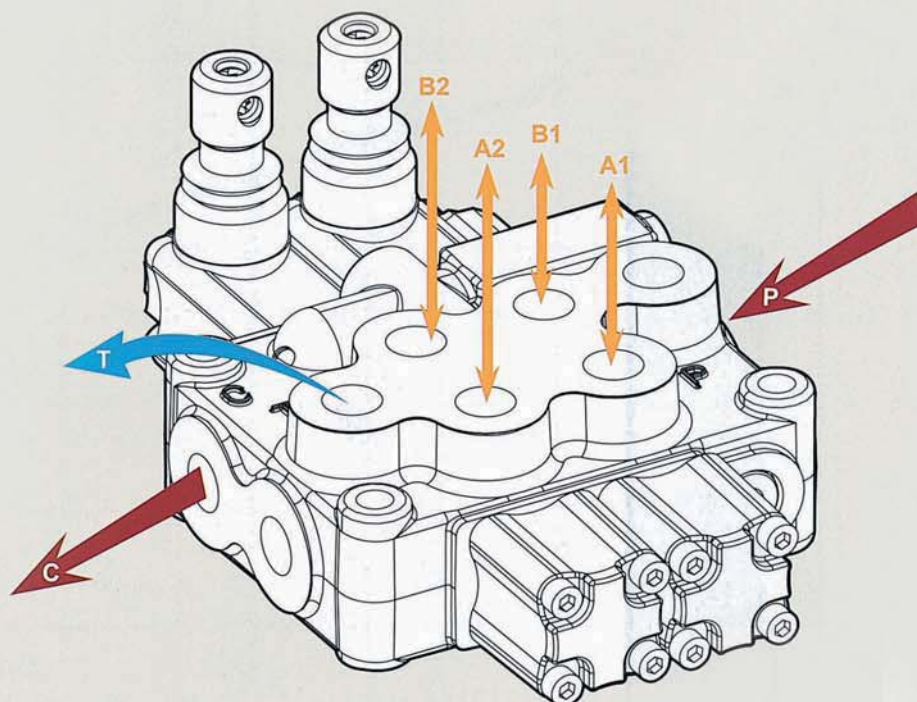
(Right inlet)



MB-2

MB-3

Monoblock Directional Control Valves



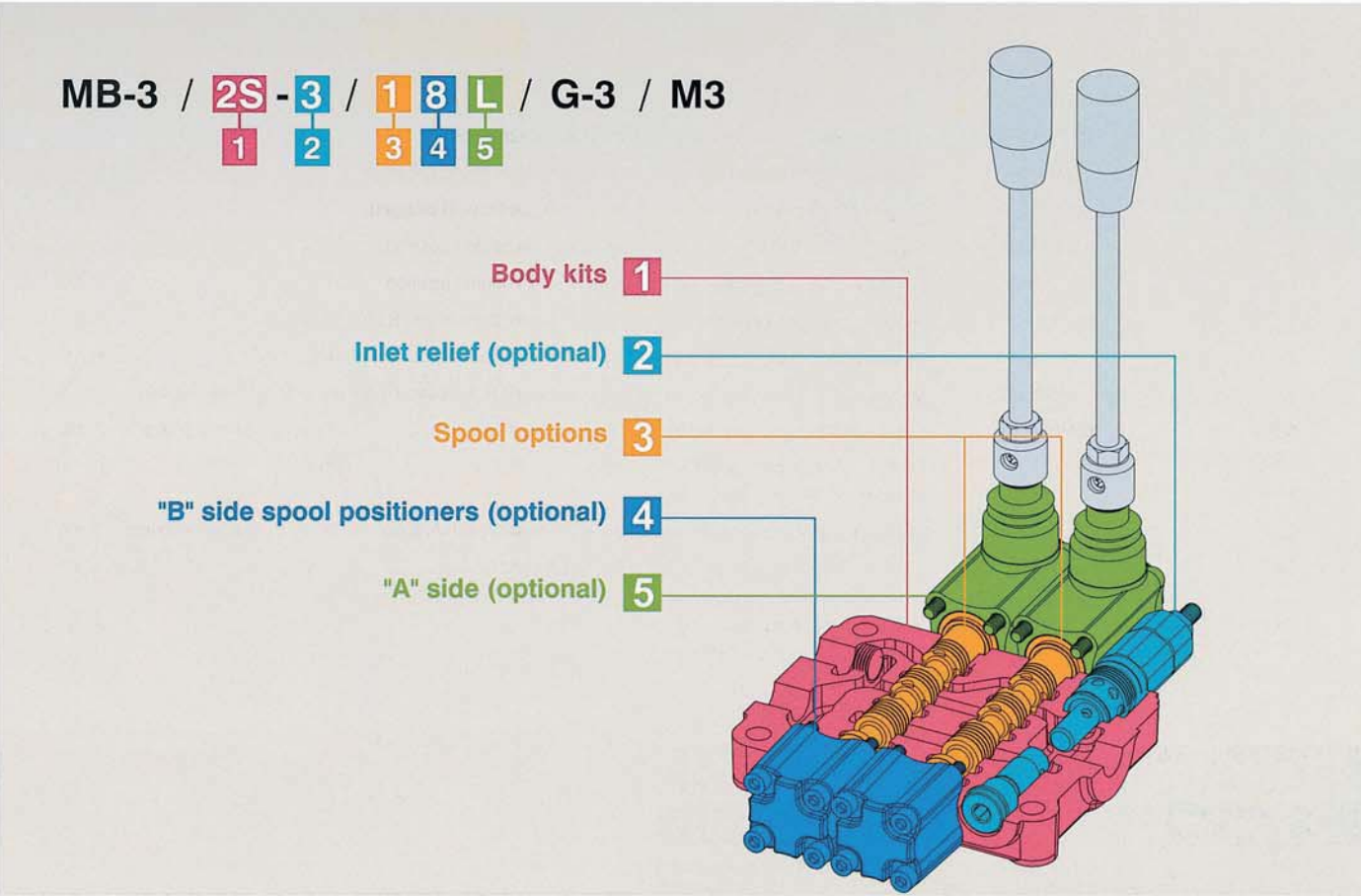
MB-3 Specifications

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
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 mm²/s	from 15 to 75 cst
	min	12 mm²/s	12 cst
	max.	400 mm²/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-3

Monoblock Directional Control Valves



1:	Body kits	WITHOUT SERVICE PORT VALVES PREARRANGEMENT (INCLUDE BODY, SEALS, RINGS AND LOAD CHECK VALVE.)	
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	PAGE
DG-2	YLMB32002	Range 40 to 80 bar / 580 to 1150 psi, standard setting 80 bar / 1150 psi	P. 25
DG-3	YLMB32003	Range 63 to 200 bar / 900 to 2900 psi, standard setting 120 bar / 1750 psi	P. 25
DG-4	YLMB32004	Range 160 to 315 bar / 2300 to 4600 psi, standard setting 220 bar / 3200 psi	P. 25
SV	YLMB32100	Relief valve blanking plug	P. 25

MB-3

Monoblock Directional Control Valves

MB-3

3: Spool Options			
TYPE	CODE	DESCRIPTION	PAGE
1	YLMB33001	Double acting, 3 positions, with A, B closed in neutral position	P. 26
2	YLMB33002	Double acting, 3 positions, with A, B open to Tank in neutral position	P. 26
3	YLMB33003	Single acting on A closed in neutral position, 3 positions, B plugged	P. 27
5	YLMB33005	Double acting, 3 positions, with B open to Tank in neutral position	P. 27
6	YLMB33006	Double acting, 3 positions, with A open to Tank in neutral position	P. 28
7	YLMB33007	Single acting on A open to Tank in neutral position, 3 positions, B plugged	P. 28
9	YLMB33009	Double acting, 3 positions, with P, T, A, B closed in neutral position (Closed center)	P. 29
1 0	YLMB33010	Double acting, 3 positions, with A, B open to Tank and P, T closed in neutral position (Closed center)	P. 29
5DY	YLMB33052	Double acting, 4 position, floating circuit in 4th position with A, B open to Tank by pulling the lever	P. 30
5PYX	YLMB330511	Double acting, 4 positions, floating circuit in 4th position with A, B open to Tank by pushing the lever (with check valve)	P. 30
5PY	YLMB33051	Double acting, 4 positions, floating circuit in 4th position with A, B open to Tank by pushing the lever	P. 31
Z41	YLMB33041	Double acting, 4 positions, regenerative circuit in 4th position with P open to A, B by pulling the lever (Rest in pos. 1)	P. 31
Z42	YLMB33042	Double acting, 4 positions, regenerative circuit in 4th position with P open to A, B by pulling the lever (Rest in pos. 0)	P. 32

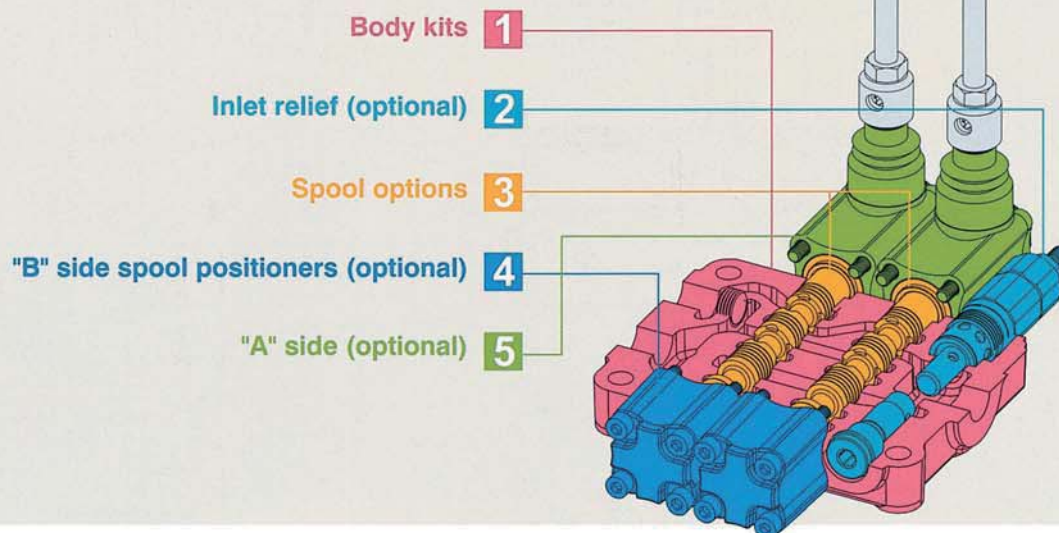
4: B Side Spool Positioners			
TYPE	CODE	DESCRIPTION	PAGE
6-1	YLMB44061	Detent in pos. 1-0-2, without spring centered	P. 36
6-2	YLMB44062	2 positions, detent in pos. 0-2, without spring centered	P. 36
6-3	YLMB44063	2 positions, detent in pos. 1-0, without spring centered	P. 36
8D2	YLMB44200	With spring return to neutral position and pin with M8 male thread for dual control	P. 36
8EP3	YLMB44300	ON/OFF Electro-Pneumatic actuator	P. 37
8P	YLMB44080	ON/OFF Pneumatic actuator	P. 37
8MG1 (NO)	YLMB44801	Microswitch kit operated in pos. 1 (Normally Open)	P. 40
8MG2 (NO)	YLMB44802	Microswitch kit operated in pos. 2 (Normally Open)	P. 40
8MG3 (NO)	YLMB44803	Microswitch kit operated in pos. 1&2 (Normally Open)	P. 40
MG (NO)	YLMB44804	Microswitch with NO terminal	P. 40
8MG1 (NC)	YLMB448011	Microswitch kit operated in pos. 1 (Normally Closed)	P. 40
8MG2 (NC)	YLMB448021	Microswitch kit operated in pos. 2 (Normally Closed)	P. 40
8MG3 (NC)	YLMB448031	Microswitch kit operated in pos. 1&2 (Normally Closed)	P. 40
MG (NC)	YLMB448041	Microswitch with NC terminal	P. 40
8	YLMB44008	With spring return to neutral position	P. 41
8-1	YLMB44081	2 positions, with spring centered from pos. 1	P. 41
8-2	YLMB44082	2 positions, with spring centered from pos. 2	P. 41
9-1	YLMB44091	Detent in pos. 1, 2 with spring centered	P. 41
9-2	YLMB44092	Detent in pos. 2 with spring centered	P. 41
9-3	YLMB44093	Detent in pos. 1 with spring centered	P. 41

MB-3

Monoblock Directional Control Valves

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

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

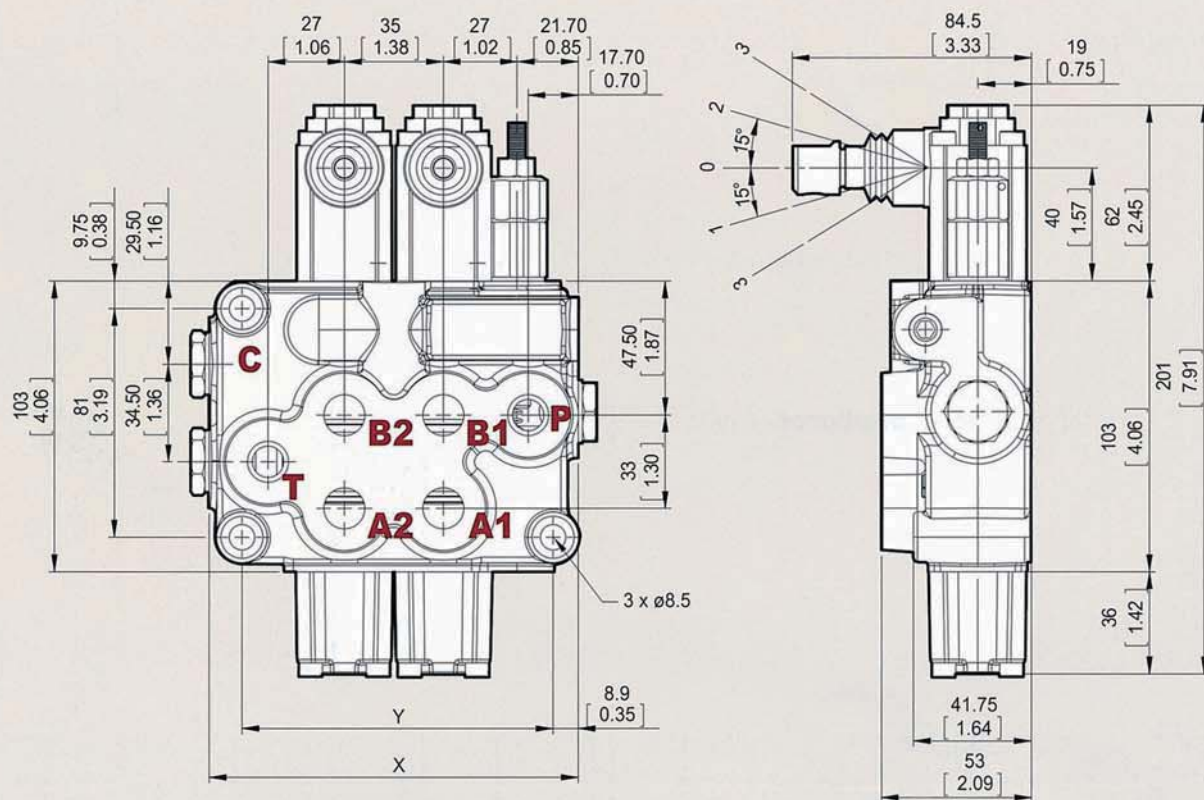


4: B Side Spool Positioners			
TYPE	CODE	DESCRIPTION	PAGE
8ED3+RV-KE1R3	YLMB44201	1S: ON/OFF Electro-Hydraulic control kit with pilot and drain line+backpressure valve (12/24 VDC)	P. 38
8ED3+RV-KE2R3	YLMB44202	2S: ON/OFF Electro-Hydraulic control kit with pilot and drain line+backpressure valve (12/24 VDC)	P. 38
8ED3+RV-KE3R3	YLMB44203	3S: ON/OFF Electro-Hydraulic control kit with pilot and drain line+backpressure valve (12/24 VDC)	P. 38
8ED3+RV-KE4R3	YLMB44204	4S: ON/OFF Electro-Hydraulic control kit with pilot and drain line+backpressure valve (12/24 VDC)	P. 38
8ED3+RV-KE5R3	YLMB44205	5S: ON/OFF Electro-Hydraulic control kit with pilot and drain line+backpressure valve (12/24 VDC)	P. 38
8ED3+RV-KE6R3	YLMB44206	6S: ON/OFF Electro-Hydraulic control kit with pilot and drain line+backpressure valve (12/24 VDC)	P. 38
8ER3+KE1S0	YLMB44401	1S: ON/OFF Electro-hydraulic control kit with collector kit for external pilot and drain	P. 39
8ER3+KE2S0	YLMB44402	2S: ON/OFF Electro-hydraulic control kit with collector kit for external pilot and drain	P. 39
8ER3+KE3S0	YLMB44403	3S: ON/OFF Electro-hydraulic control kit with collector kit for external pilot and drain	P. 39
8ER3+KE4S0	YLMB44404	4S: ON/OFF Electro-hydraulic control kit with collector kit for external pilot and drain	P. 39
8ER3+KE5S0	YLMB44405	5S:ON/OFF Electro-hydraulic control kit with collector kit for external pilot and drain	P. 39
8ER3+KE6S0	YLMB44406	6S: ON/OFF Electro-hydraulic control kit with collector kit for external pilot and drain	P. 39

5: A Side (optional)			
TYPE	CODE	DESCRIPTION	PAGE
L	YLMB45000	Standard lever box	P. 33
SLP	YLMB45001	Without lever box, with dust-proof plate	P. 33
LCB	YLMB45002	Joystick lever for 2 section operation	P. 34
TQ	YLMB45003	Flexible cable connection	P. 35

MB-3 Dimensions

Monoblock Directional Control Valves



Standard threads

Ports	Inlet P	A and B	Outlet T and C
BSP	G3/8	G3/8	G3/8
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-1/2 : G4 G-3/8 : G3 G-3/4 : G6
 • SAE 8: E8 SAE 10: E10 SAE 12: E12 SAE 16: E16

Standard dimensions

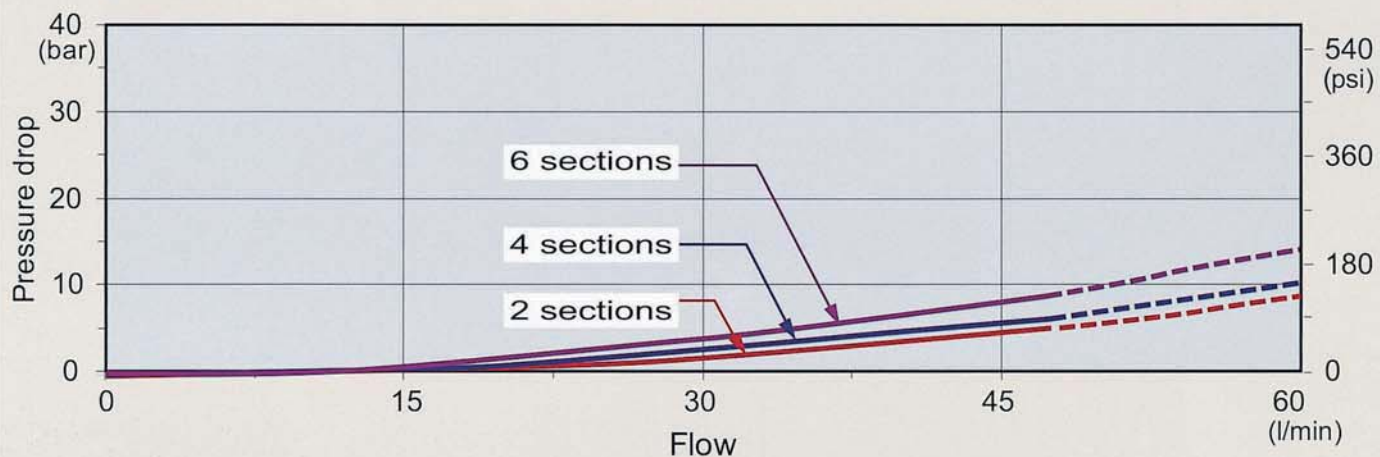
TYPE	X		Y	
	mm	in	mm	in
MB3 /1S	93.5	3.68	73	2.87
MB3 /2S	130.5	5.14	110	4.33
MB3 /3S	165.5	6.52	147	5.79
MB3 /4S	202.5	7.97	184	7.24
MB3 /5S	239.5	9.43	221	8.7
MB3 /6S	276.5	10.89	258	10.16
MB3 /7S	313.5	12.34	295	11.61

MB-3 Performance curve chart

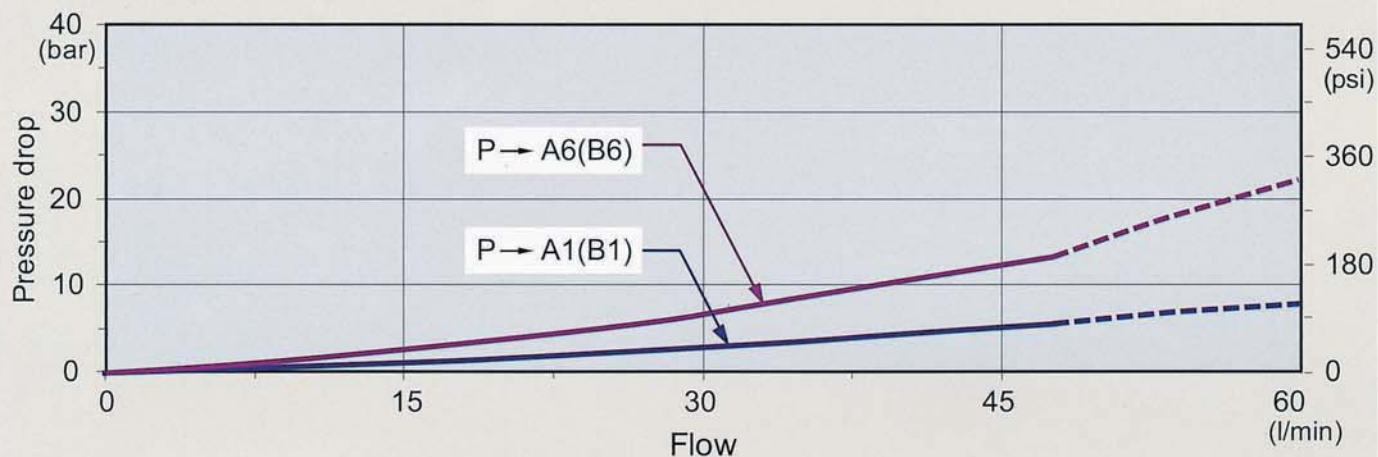
Monoblock Directional Control Valves

MB-3

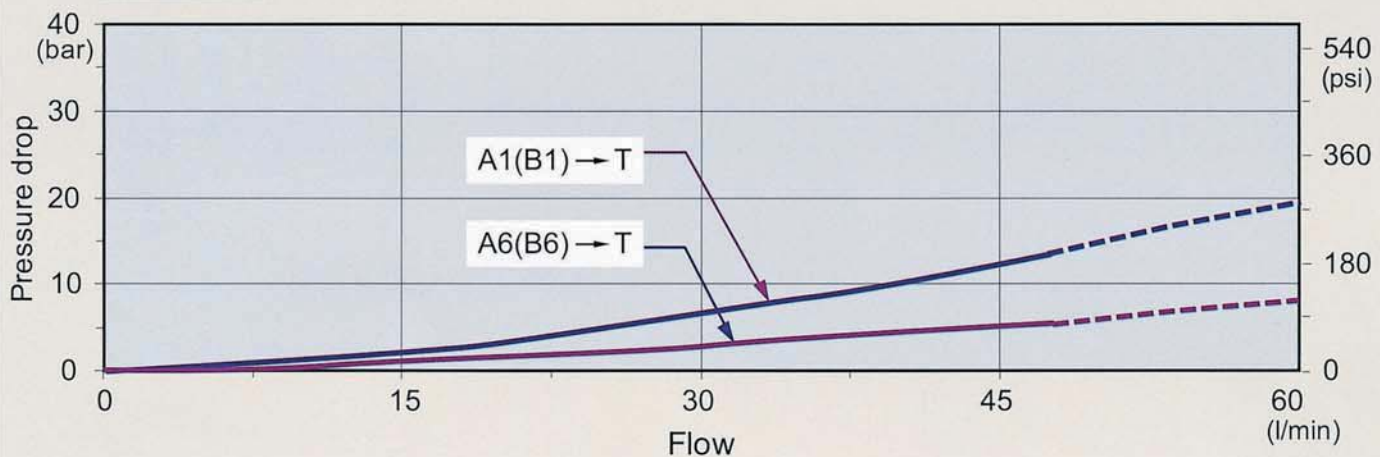
P to T



P to A(B)



A(B) to T

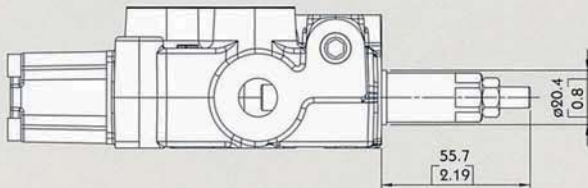


MB-3 Inlet Relief (Optional)

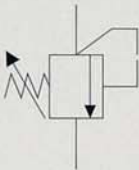
Monoblock Directional Control Valves

MB-3

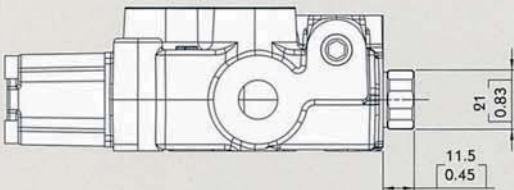
Type DG



Direct pressure relief valve:



Type SV



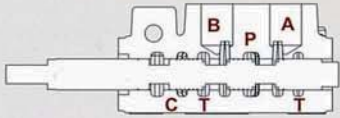
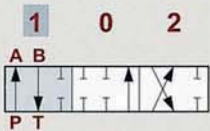
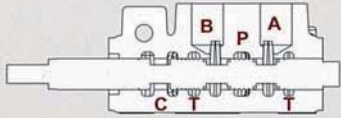
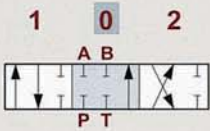
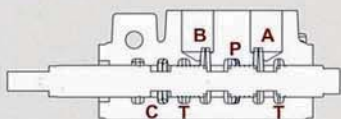
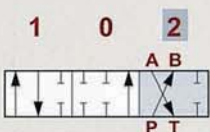
Relief valve blanking plug:



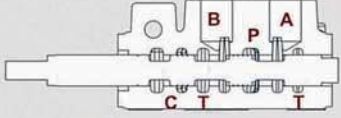
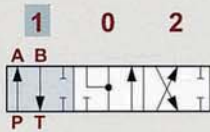
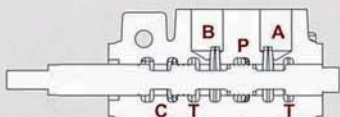
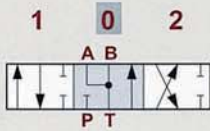
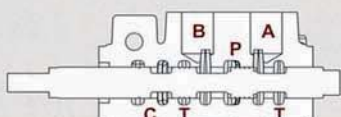
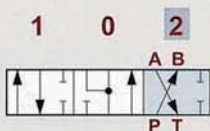
MB-3 Spool Options

Monoblock Directional Control Valves

TYPE 1

	<p>P → A</p> <p>B → T</p> <p>C closed</p>	
	<p>A & B & P & T closed</p> <p>C open</p>	
	<p>P → B</p> <p>A → T</p> <p>C closed</p>	

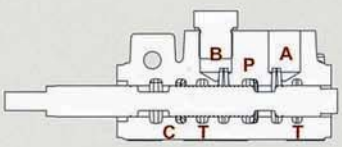
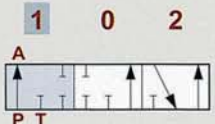
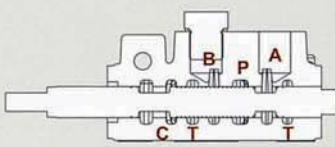
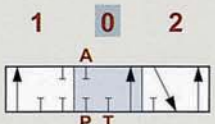
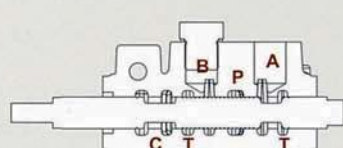
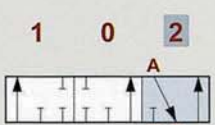
TYPE 2

	<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>	
	<p>P → B</p> <p>A → T</p> <p>C closed</p>	

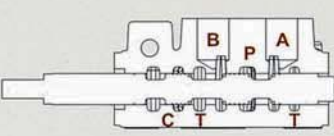
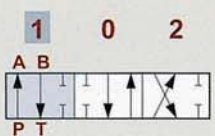
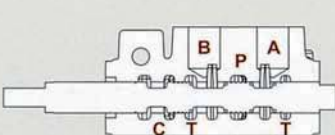
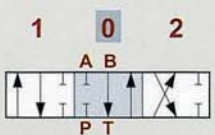
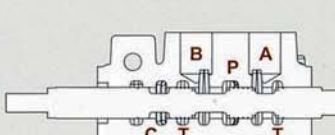
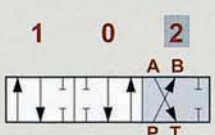
MB-3 Spool Options

Monoblock Directional Control Valves

TYPE 3

	<p>P → A C & T closed</p>	 <p>"B" port plugged</p>
	<p>P & A & T closed C open</p>	 <p>"B" port plugged</p>
	<p>A → T P closed C open</p>	 <p>"B" port plugged</p>

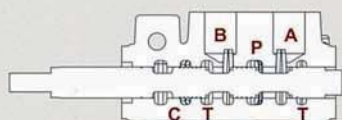
TYPE 5

	<p>P → A B → T C closed</p>	
	<p>B → T A & P closed C open</p>	
	<p>P → B A → T C closed</p>	

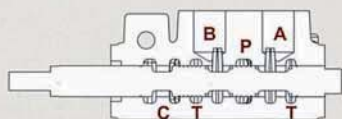
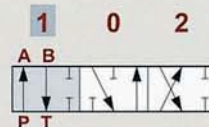
MB-3 Spool Options

Monoblock Directional Control Valves

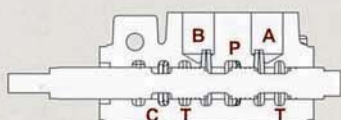
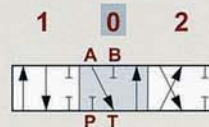
TYPE 6



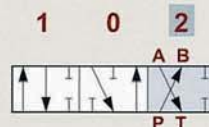
P → A
B → T
C closed



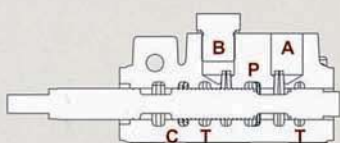
A → T
P & B closed
C open



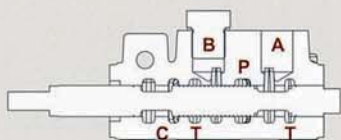
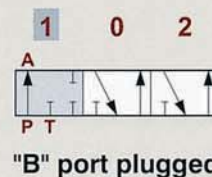
P → B
A → T
C closed



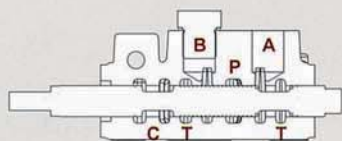
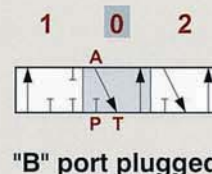
TYPE 7



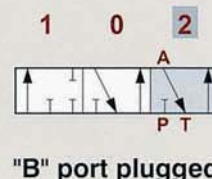
P → A
C & T closed



A → T
P closed
C open



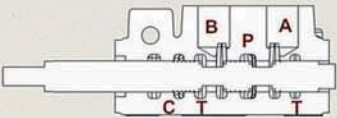
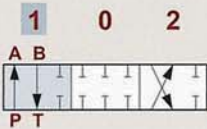
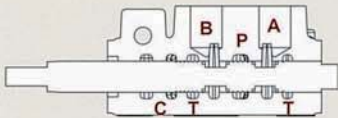
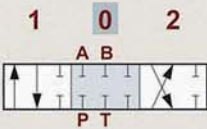
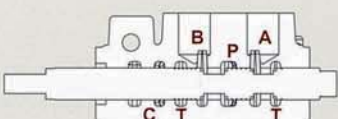
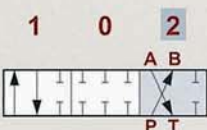
A → T
P closed
C open



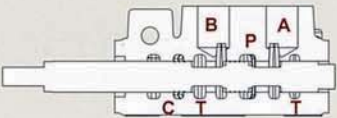
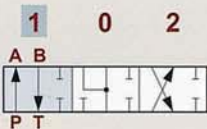
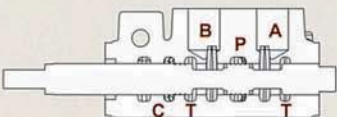
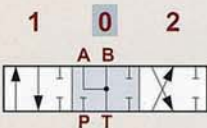
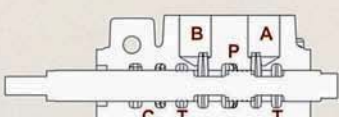
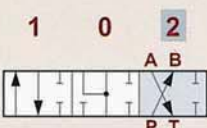
MB-3 Spool Options

Monoblock Directional Control Valves

TYPE 9

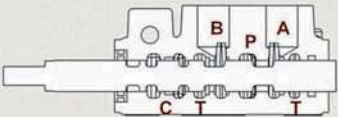
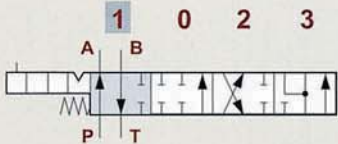
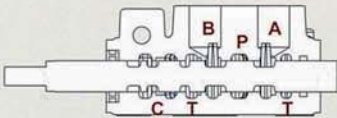
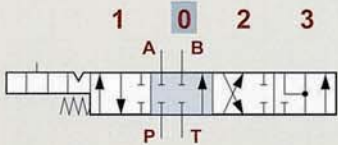
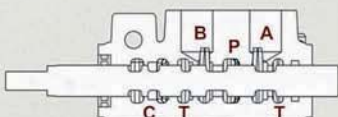
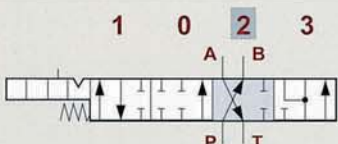
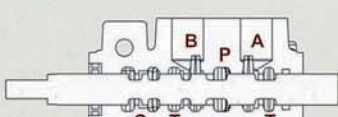
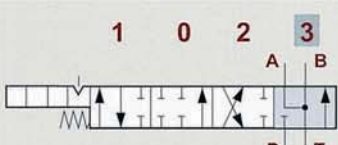
	<p>P → A B → T C closed</p>	
	<p>A & B & P & T closed C closed</p>	
	<p>P → B A → T C closed</p>	

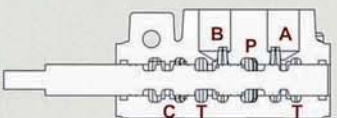
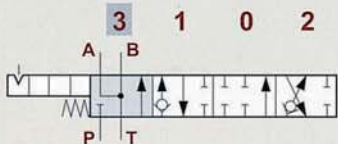
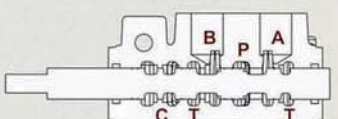
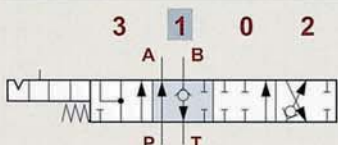
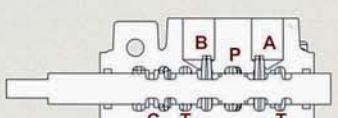
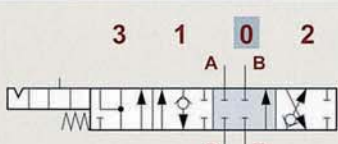
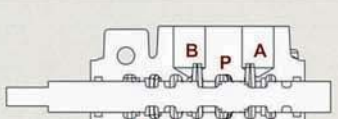
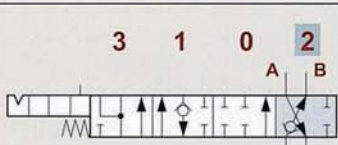
TYPE 10

	<p>P → A B → T C closed</p>	
	<p>A & B → T P & C closed</p>	
	<p>P → B A → T C closed</p>	

MB-3 Spool Options

Monoblock Directional Control Valves

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

MB-3 Spool Options

Monoblock Directional Control Valves

MB-3

TYPE 5PY

NOTE: WITH SPECIAL BODY AND SPECIAL POSITIONER

	<p>A & B → T P closed C open</p>	
	<p>P → A B → T C closed</p>	
	<p>P & A & B & T closed C open</p>	
	<p>P → B A → T C closed</p>	

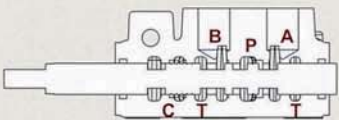
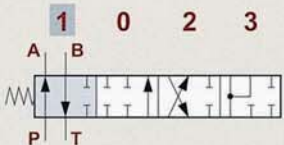
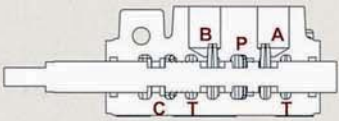
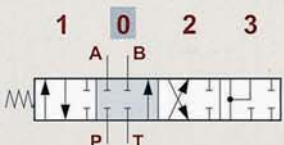
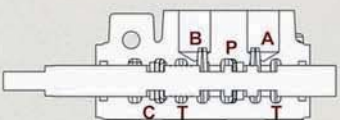
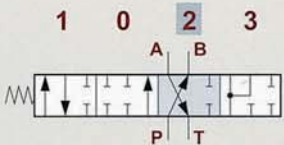
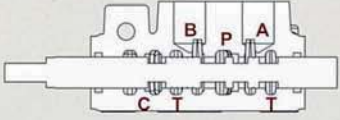
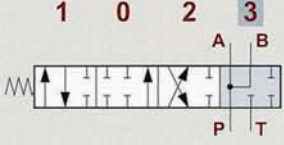
TYPE Z41

NOTE: WITH SPECIAL BODY AND SPECIAL POSITIONER

	<p>P → A B → T C closed</p>	
	<p>P & A & B & T closed C open</p>	
	<p>P → B A → T C closed</p>	
	<p>P → A & B T & C closed</p>	

MB-3 Spool Options

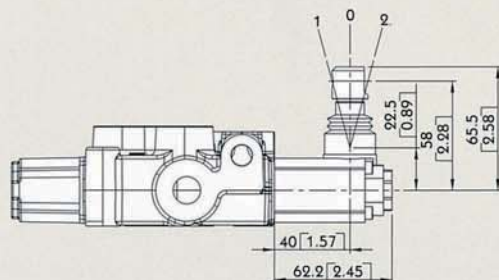
Monoblock Directional Control Valves

TYPE Z42		NOTE: WITH SPECIAL BODY AND SPECIAL POSITIONER	
	<p>P → A</p> <p>B → T</p> <p>C closed</p>		
	<p>P & A & B & T closed</p> <p>C open</p>		
	<p>P → B</p> <p>A → T</p> <p>C closed</p>		
	<p>P → A & B</p> <p>T & C closed</p>		

MB-3 A Side

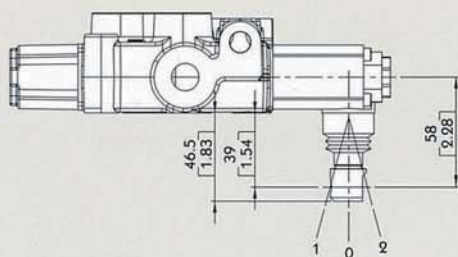
Monoblock Directional Control Valves

Type L



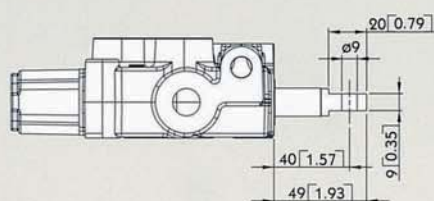
Type L :
STANDART LEVER KIT

Type R



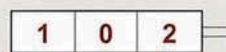
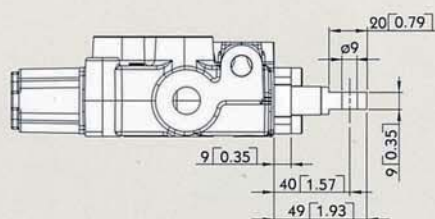
Type R :
STANDART LEVER KIT
(ROTATED 180 DEGREE)

Type SL



Type SL :
WITHOUT ANY COVER

Type SLP

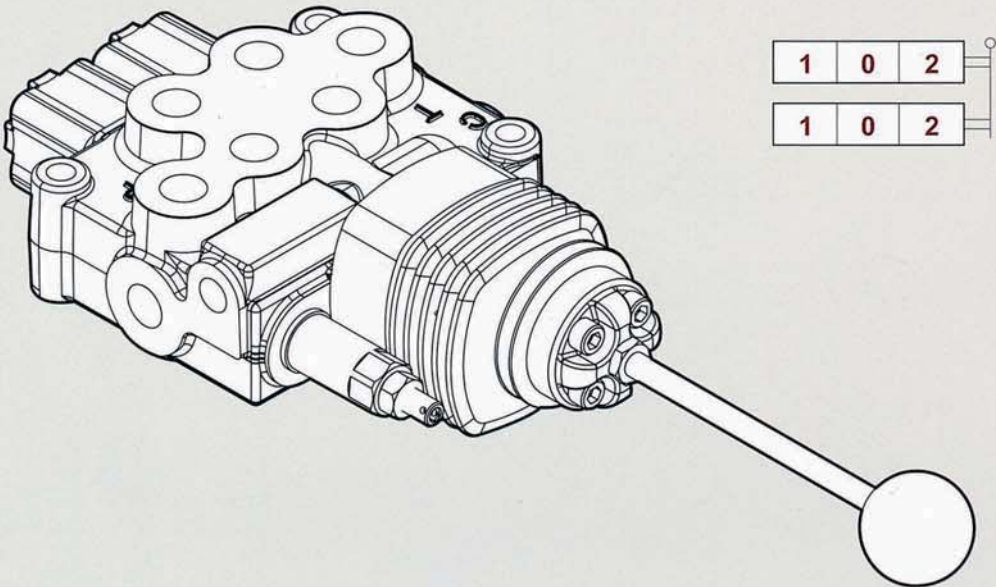


Type SLP :
WITH DUST-PROOF PLATE

MB-3 A Side

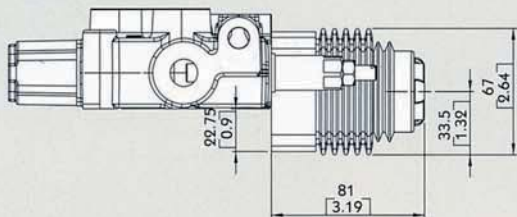
Monoblock Directional Control Valves

LCB: Joystick control

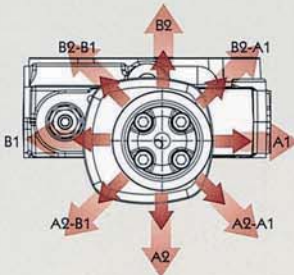


MB-3

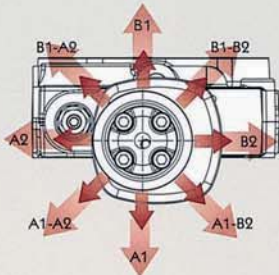
Type LCB



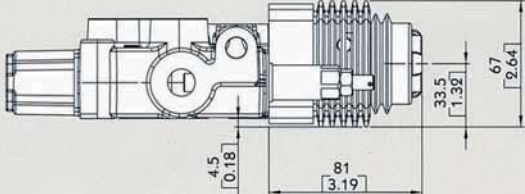
LCB1



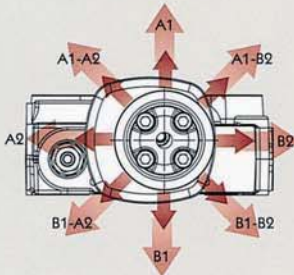
LCB2



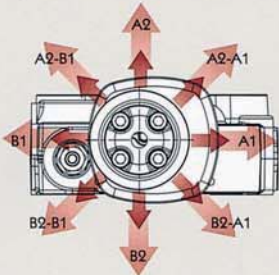
Type LCB



LCB3

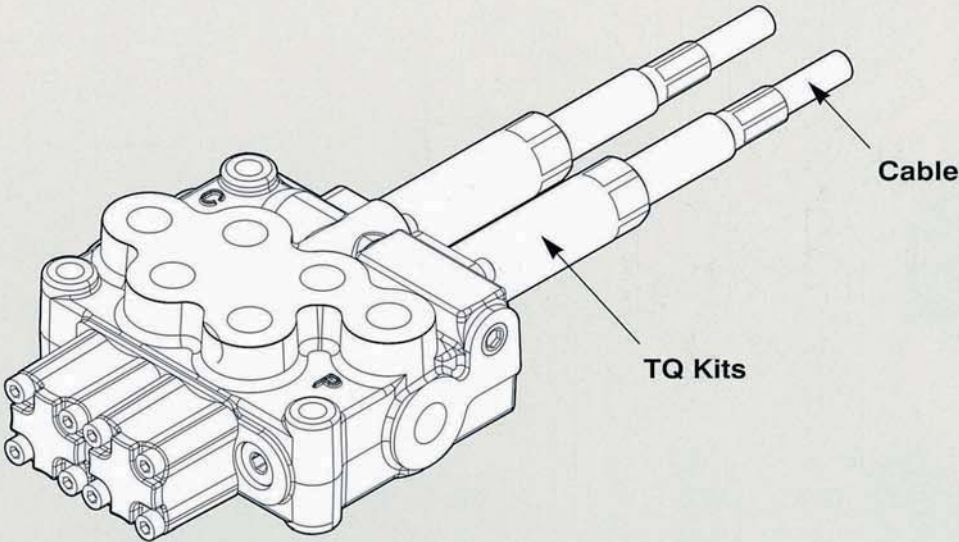


LCB4

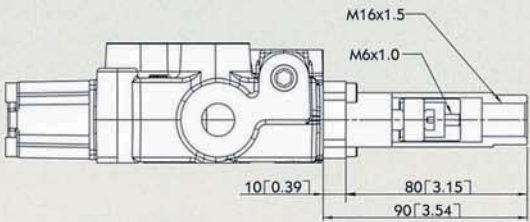


MB-3 A Side Monoblock Directional Control Valves

Note : CONNECTION KIT NOT INCLUDE CABLE



Type TQ



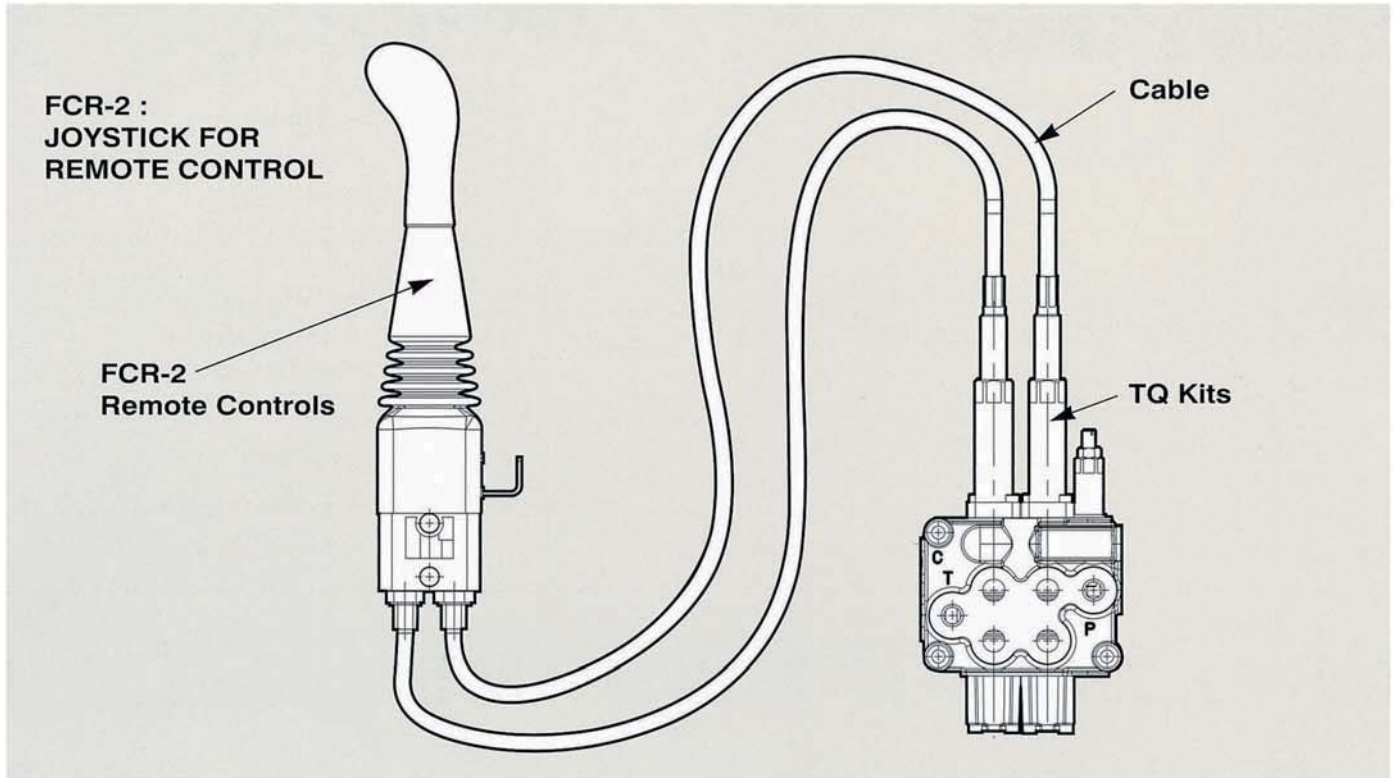
TQ Kit:



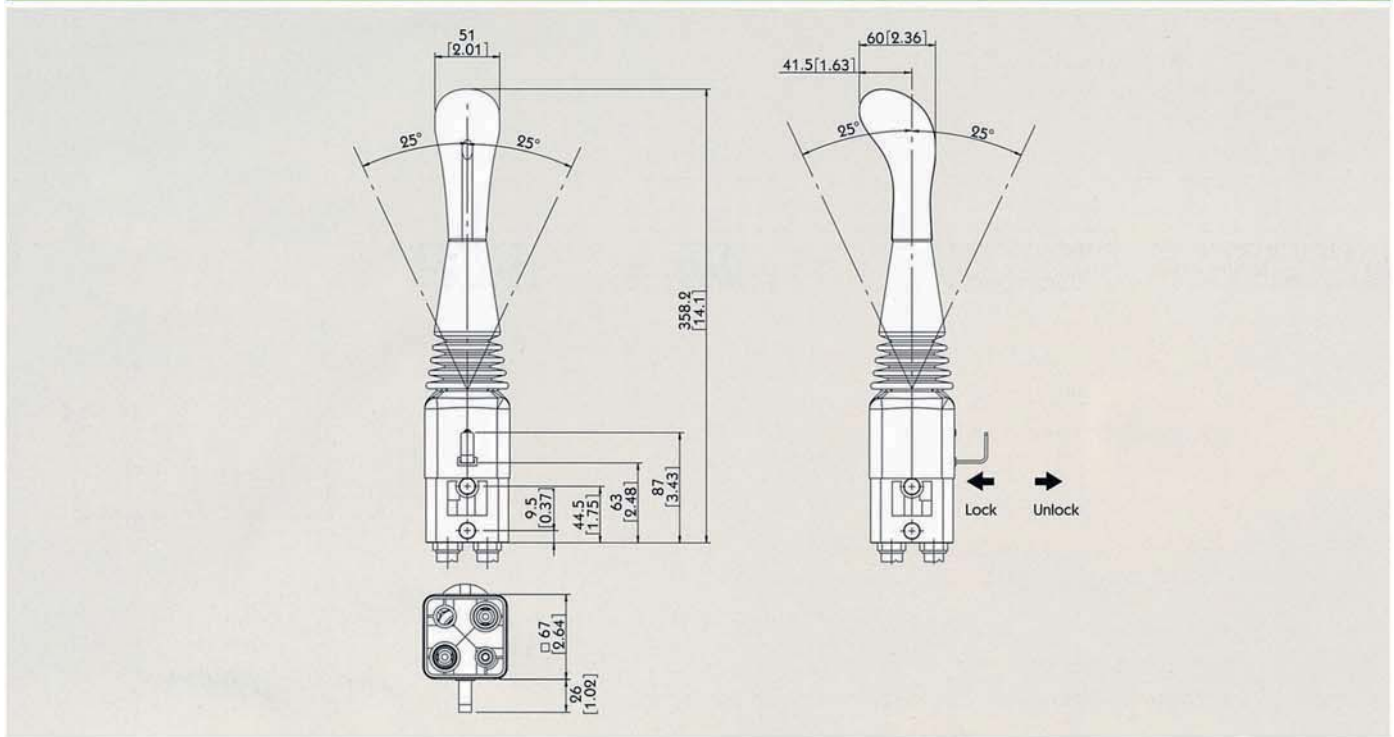
MB-3 A Side

Monoblock Directional Control Valves

MB-3



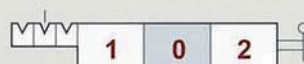
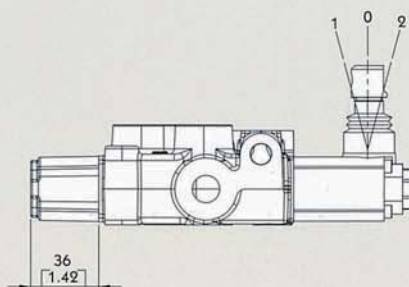
Type FCR-2



MB-3 B Side

Monoblock Directional Control Valves

Type 6



6-1 Kit:

DETENT IN POS. 1-0-2, WITHOUT SPRING CENTERED



6-2 Kit:

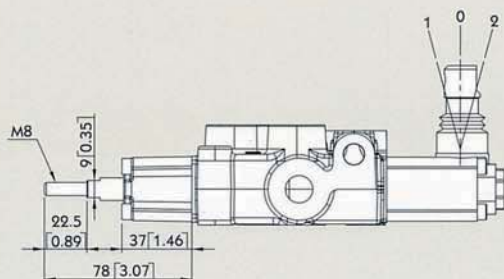
2 POSITIONS, DETENT IN POS. 0-2, WITHOUT SPRING CENTERED



6-3 Kit:

2 POSITIONS, DETENT IN POS. 1-0, WITHOUT SPRING CENTERED

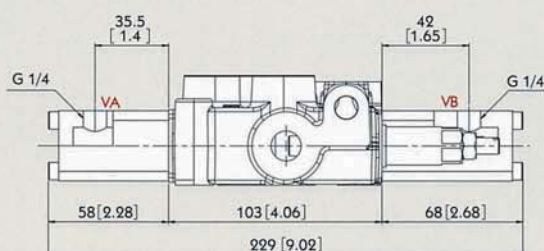
Type 8D2



8D2 Kit:

WITH SPRING RETURN TO NEUTRAL POSITION AND PIN WITH M8 MALE THREAD FOR DUAL CONTROL

Type 8IM



Operating features :

PILOT PRESSURE : MAX. 50 BAR

INTERNAL LEAKAGE A(B) -> T : MAX. 6 CM³/MIN (100 BAR / 40°C)

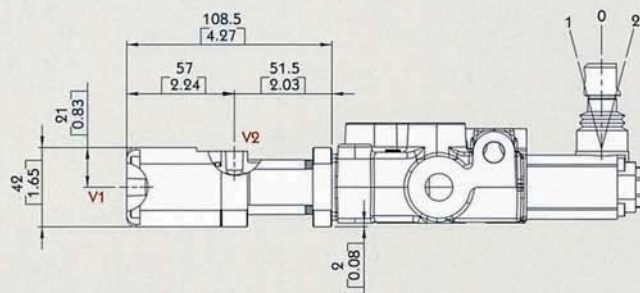


MB-3 B Side

Monoblock Directional Control Valves

Type 8P

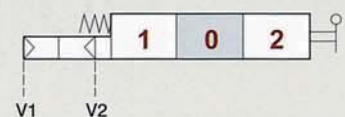
V1 & V2: NPT 1/8 - 27



Operating feature :

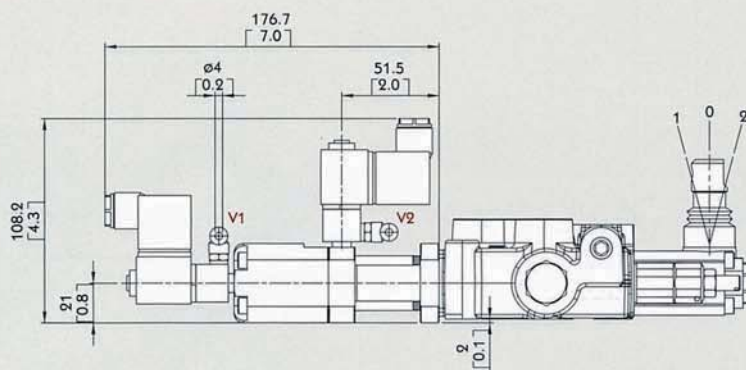
PILOT PRESSURE (MIN.): 5.5 BAR / 80 PSI

PILOT PRESSURE (MAX.): 10 BAR / 145 PSI



MB-3

Type 8EP3

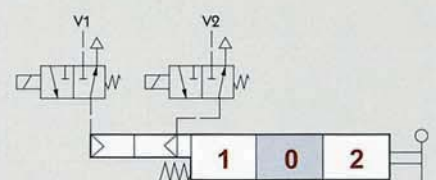


Solenoid operating features :

NOMINAL VOLTAGE: 24VDC

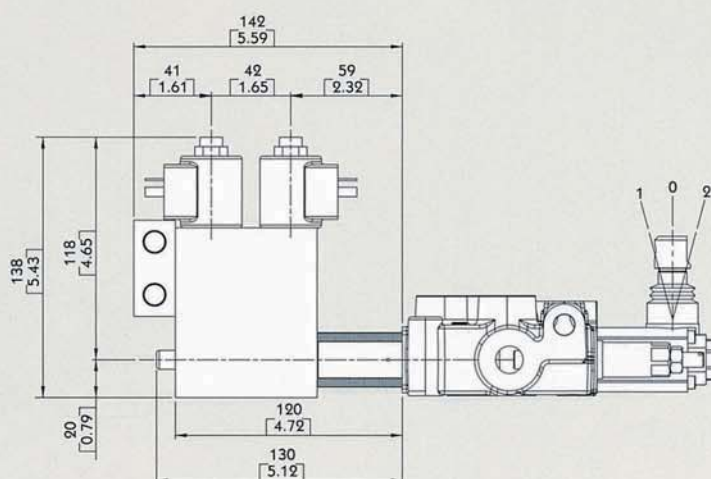
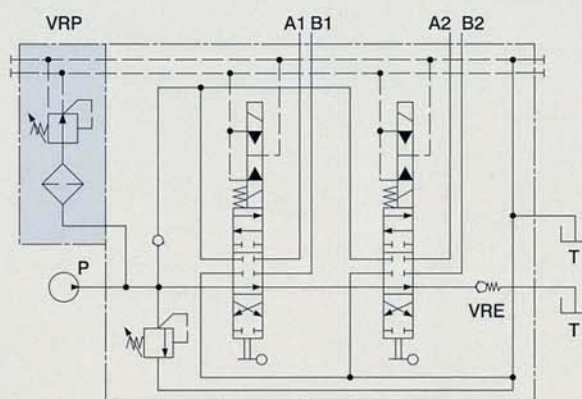
NOMINAL VOLTAGE TOLERANCE: $\pm 10\%$

POWER RATING: 5W



MB-3

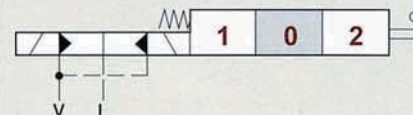
Technical drawing of the front view of a 4/3-way valve. The drawing shows the valve body with four main ports at the top and two at the bottom. A central handle is shown in the open position. Dimensions are provided for the overall width (146.5 mm) and the distance between the two main ports (5.77 mm). A label 'VRP' points to the top left port. A label 'VRE' points to the bottom right port. A dimension of 32.5 mm is shown for the distance between the two bottom ports, with a sub-dimension of 1.28 mm. A small '1' is marked near the bottom right port.



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

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

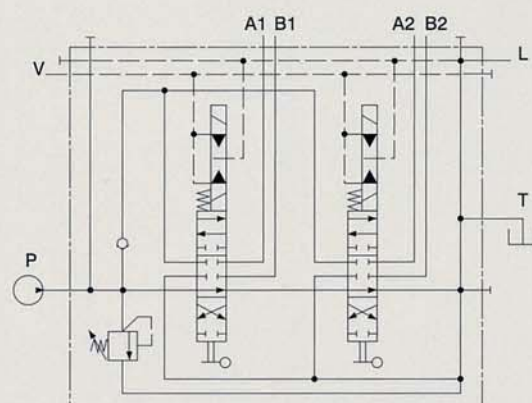
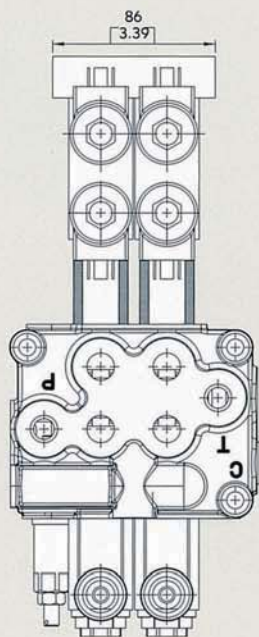
NOMINAL VOLTAGE TOLERANCE: $\pm 10\%$
ELECTRIC POWER: 21 W
STANDARD VOLTAGE: 12 VDC / 24 VDC



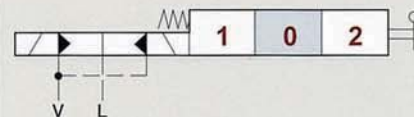
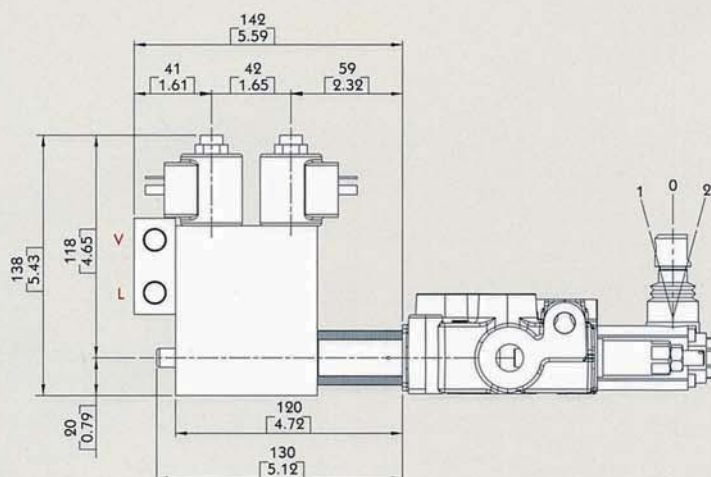
MB-3 B Side

Monoblock Directional Control Valves

Type 8ER3



MB-3



Operating features :

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

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

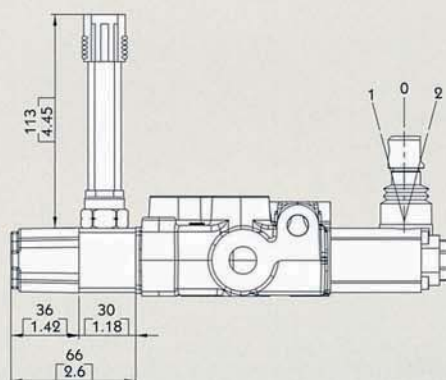
Coil features :

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

MB-3 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:

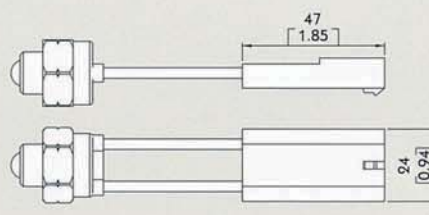
MICROSWITCH WITH MALE/FEMALE CONNECTOR, OPERATED IN POS. 2



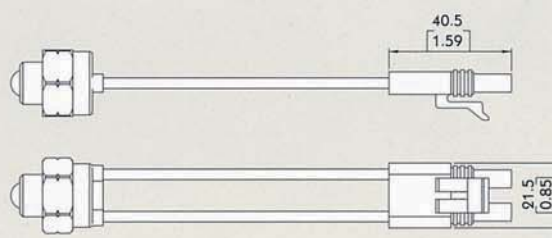
8MG3 Kit:

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

With NO contact (female connector with male end)



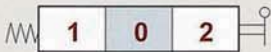
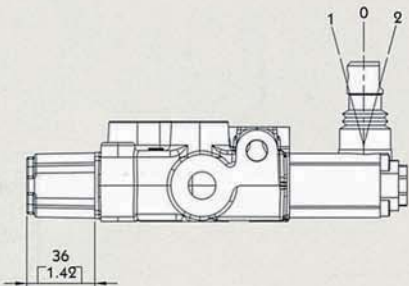
With NC contact (male connector with female end)



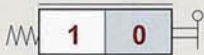
MB-3 B Side

Monoblock Directional Control Valves

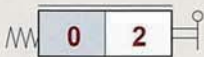
Type 8



8 Kit:
SPRING RETURN TO NEUTRAL POSITION.

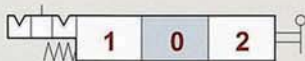
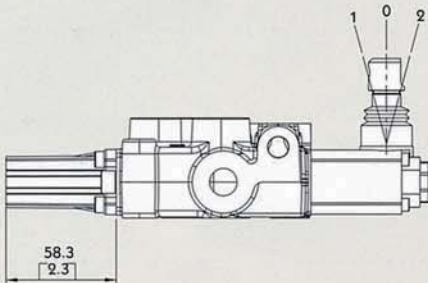


8-1 Kit:
SPRING RETURN TO NEUTRAL POSITION.
(2 POSITIONS)



8-2 Kit:
SPRING RETURN TO NEUTRAL POSITION.
(2 POSITIONS)

Type 9



9-1 Kit:
DETENT IN POS. 1, 2 WITH SPRING CENTERED



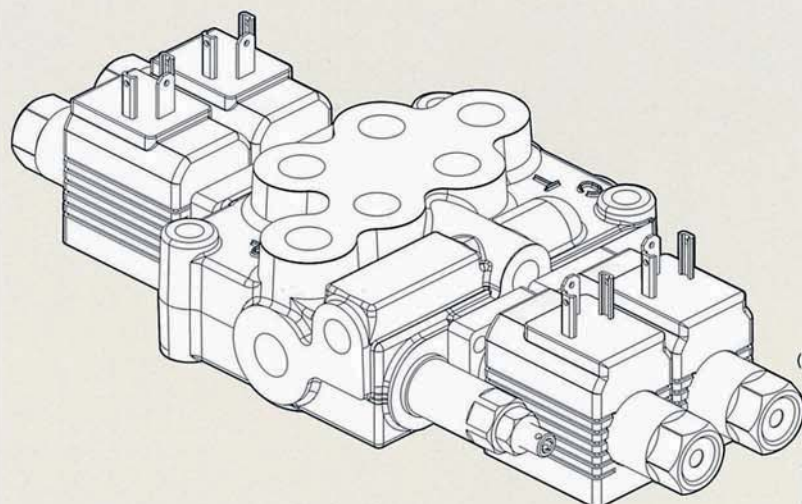
9-2 Kit:
DETENT IN POS. 2 WITH SPRING CENTERED



9-3 Kit:
DETENT IN POS. 1 WITH SPRING CENTERED

MB-3 B Side (Optional controls)

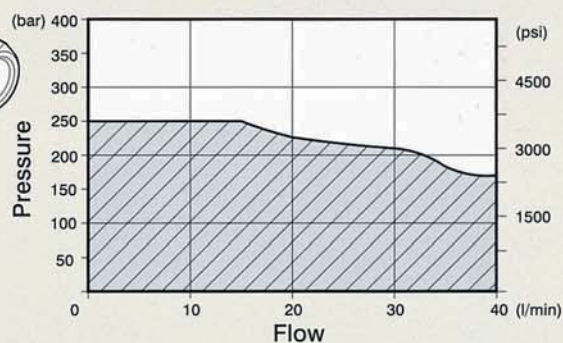
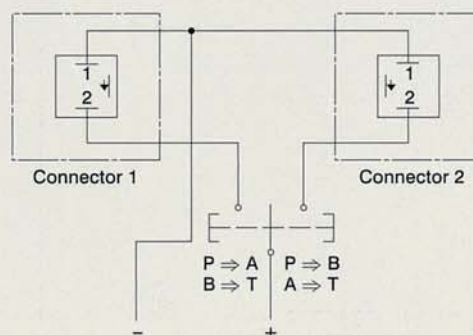
Monoblock Directional Control Valves



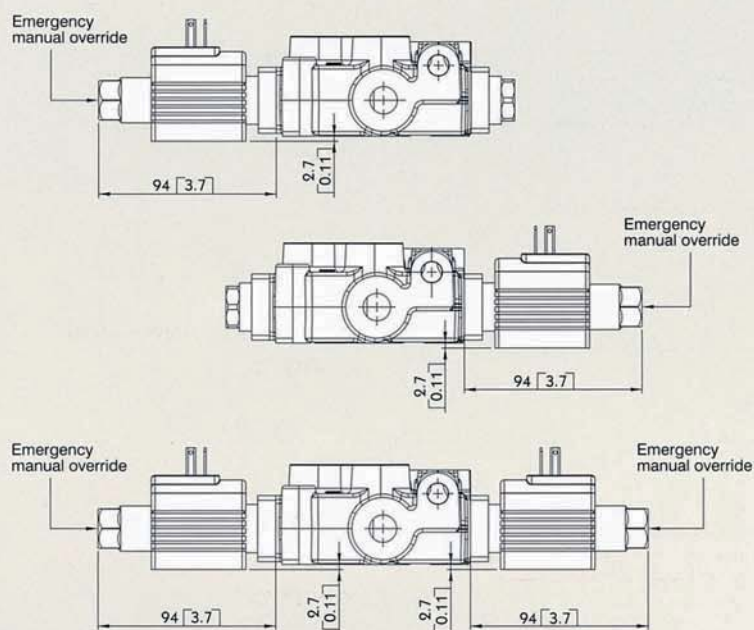
Coil features :

NOMINAL VOLTAGE TOLERANCE: $\pm 10\%$
 ELECTRIC POWER: 36 W
 STANDARD VOLTAGE: 12 VDC / 24 VDC

Electric wiring example



Type 8ES



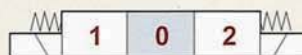
8ES1 Kit:

ACTING IN 1



8ES2 Kit:

ACTING IN 2



8ES3 Kit:

ACTING IN 1 & 2

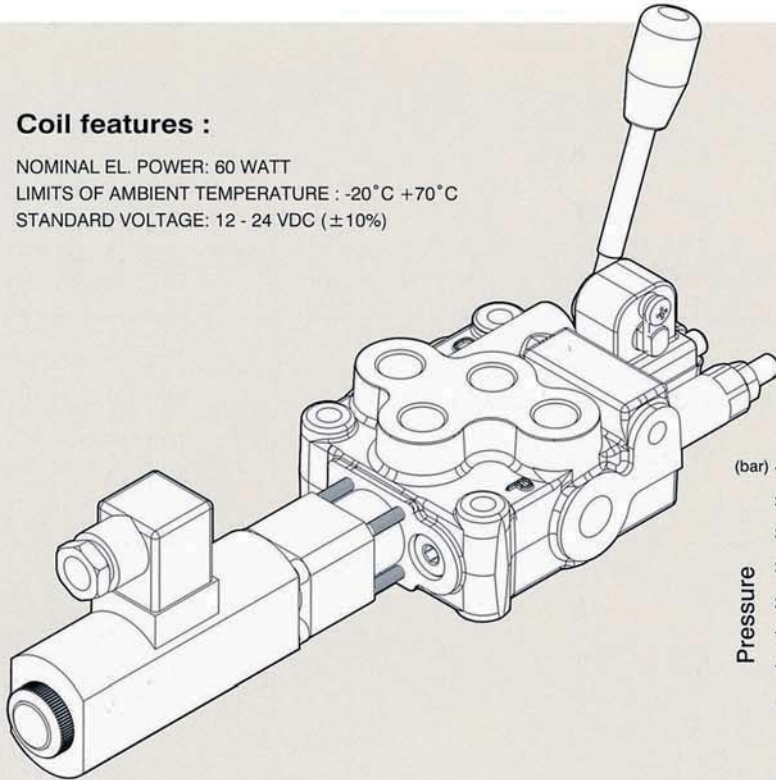
MB-3 B Side (Optional controls)

Monoblock Directional Control Valves

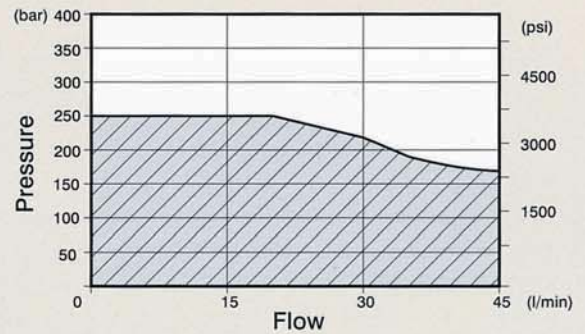
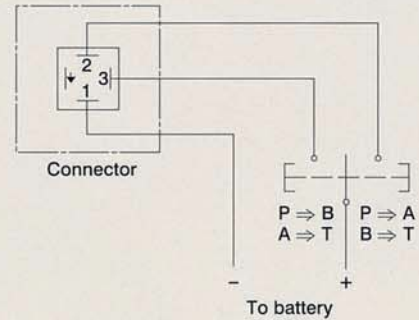
MB-3

Coil features :

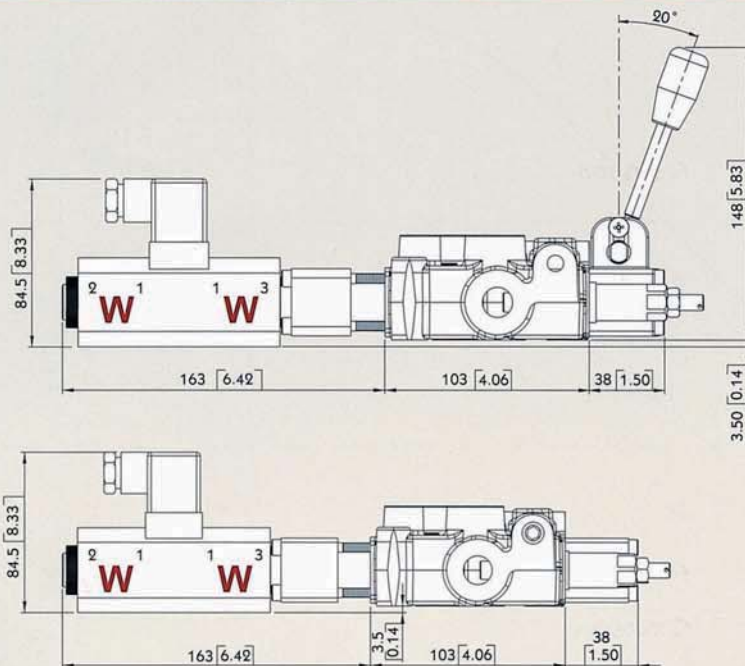
NOMINAL EL. POWER: 60 WATT
LIMITS OF AMBIENT TEMPERATURE : -20°C +70°C
STANDARD VOLTAGE: 12 - 24 VDC (±10%)



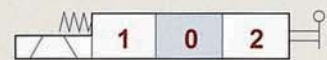
Electric wiring example



Type 8ESN



8ESNLES Kit:



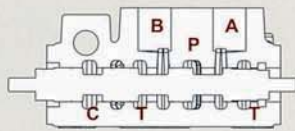
8ESNCAE Kit:



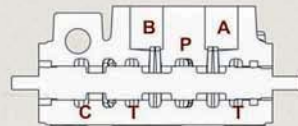
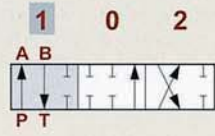
MB-3 Special spool (Options for 8ES Kit)

Monoblock Directional Control Valves

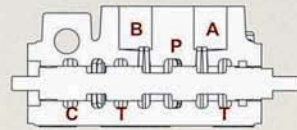
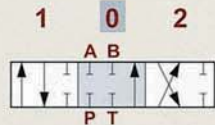
Type 8ES3#1



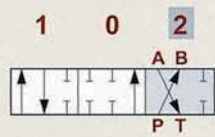
P → A
B → T
 C closed



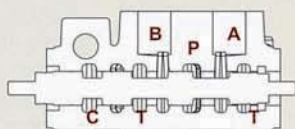
A & B & P & T closed
 C open



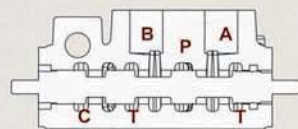
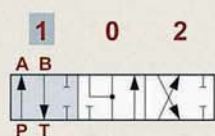
P → B
A → T
 C closed



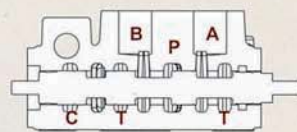
Type 8ES3#2



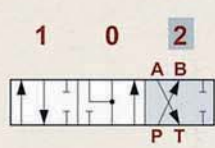
P → A
B → T
 C closed



A & B → T
 P closed
 C open



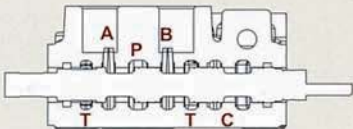
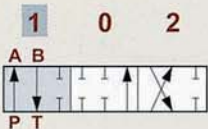
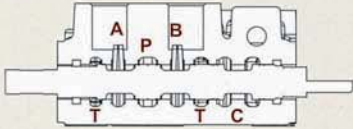
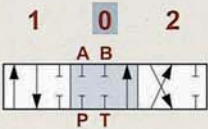
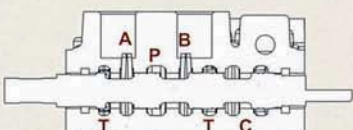
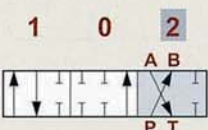
P → B
A → T
 C closed



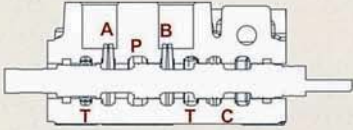
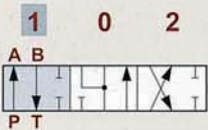
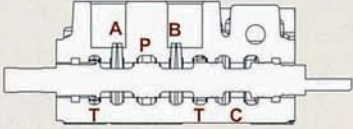
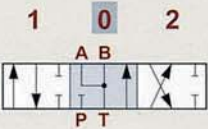
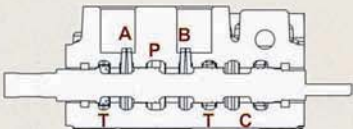
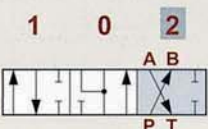
MB-3 Special spool (Options for 8ESN Kit)

Monoblock Directional Control Valves

Type 8ESN#1

	<p>P → A</p> <p>B → T</p> <p>C closed</p>	
	<p>P & T & A & B closed</p> <p>C open</p>	
	<p>P → B</p> <p>A → T</p> <p>C closed</p>	

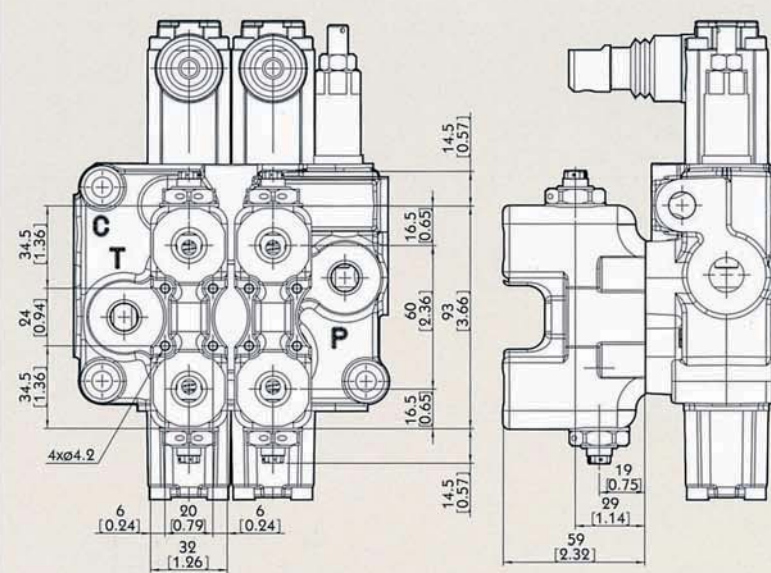
Type 8ESN#2

	<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>	
	<p>P → B</p> <p>A → T</p> <p>C closed</p>	

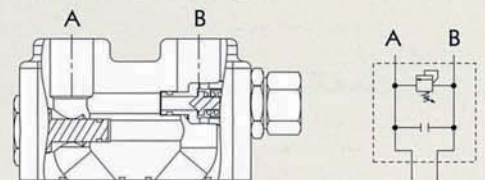
MB-3 service and auxiliary valves

Monoblock Directional Control Valves

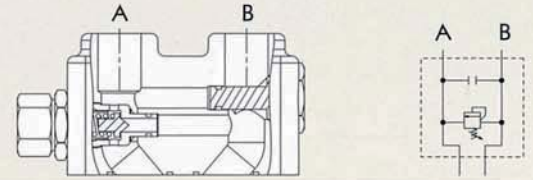
Type P



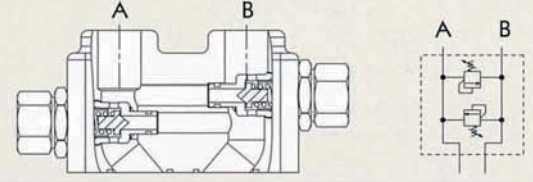
P1 Kit: Block with valve on port A



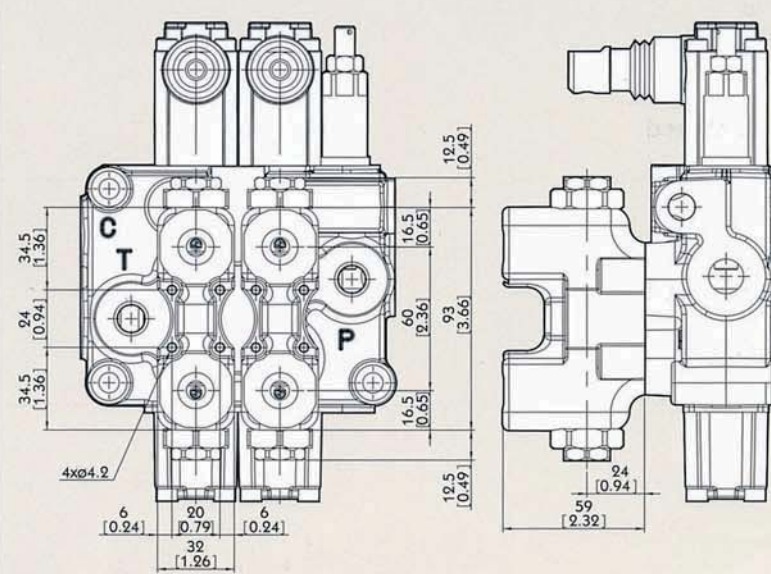
P2 Kit: Block with valve on port B



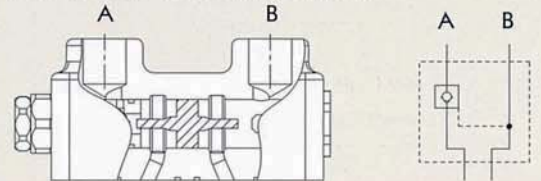
P3 Kit: Block with valve on port A and B



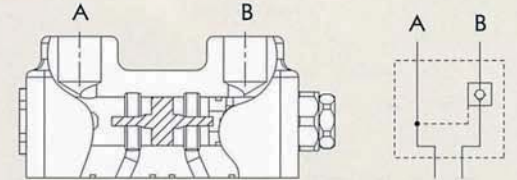
Type BPS Pilot check valves (With Pre-opening, supplied with mounting block)



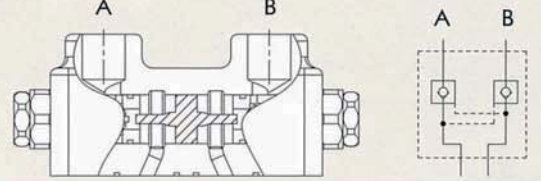
BPS1 Kit: Block with valve on port A



BPS2 Kit: Block with valve on port B



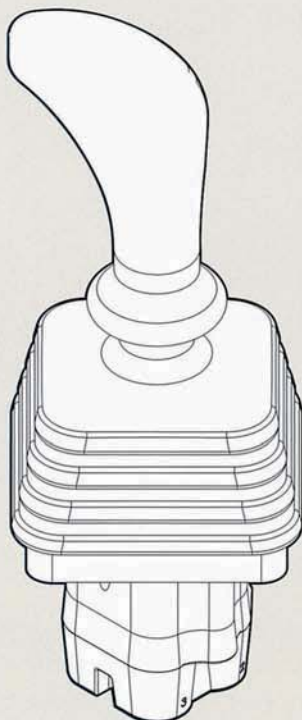
BPS3 Kit: Block with valve on port A and B



MB-3 Accessories

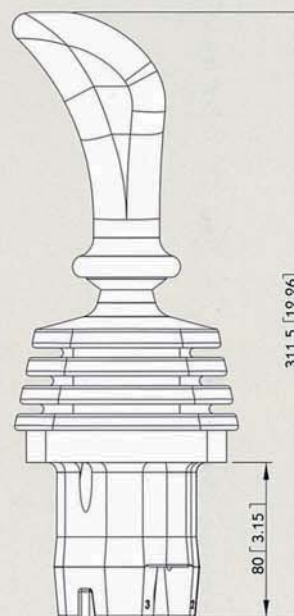
Sectional Directional Control Valves

Type JHP-2

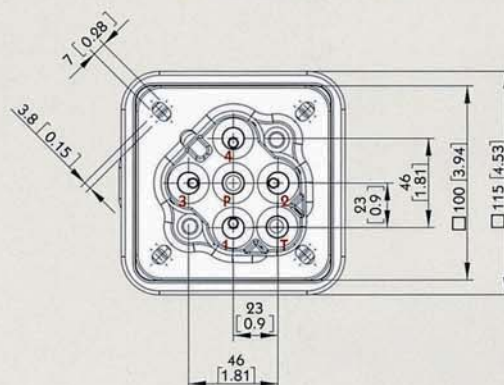
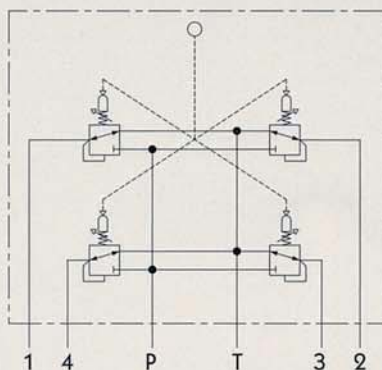


Specifications:

- This data sheet shows technical spec. with mineral oil of 46 mm²/s (cSt) viscosity at 40°C (104°F)
- Flow : 5 ~ 20 LPM
- Feeding pressure : 30 ~ 100 bar
- Max. backpressure : 3 bar
- Internal leakage at 30 bar : 10 ~ 18 cm³/min
- Fluid : mineral oil
- Fluid temperature : - 10 ~ 80°C
- Ambient temperature : - 40 ~ 60°C



HYDRAULIC SCHEME:



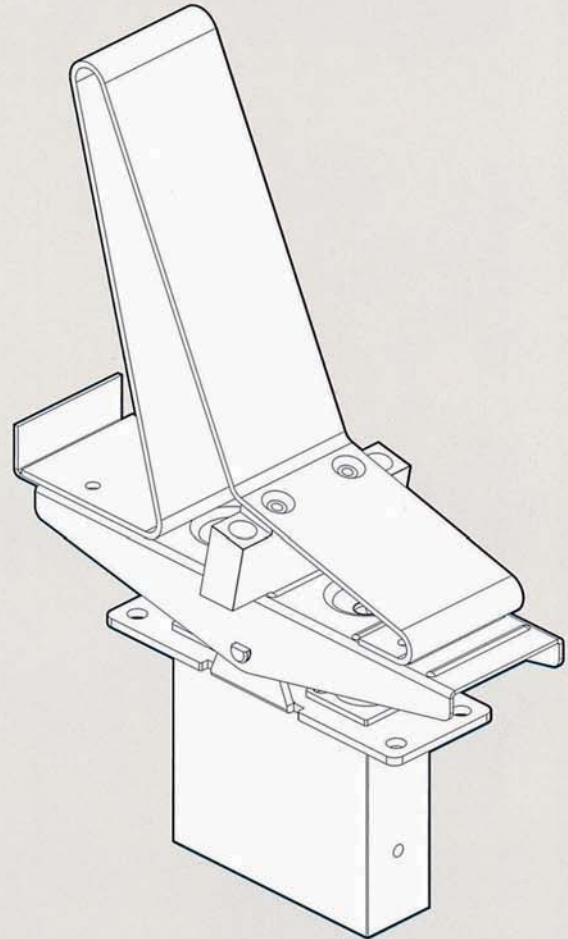
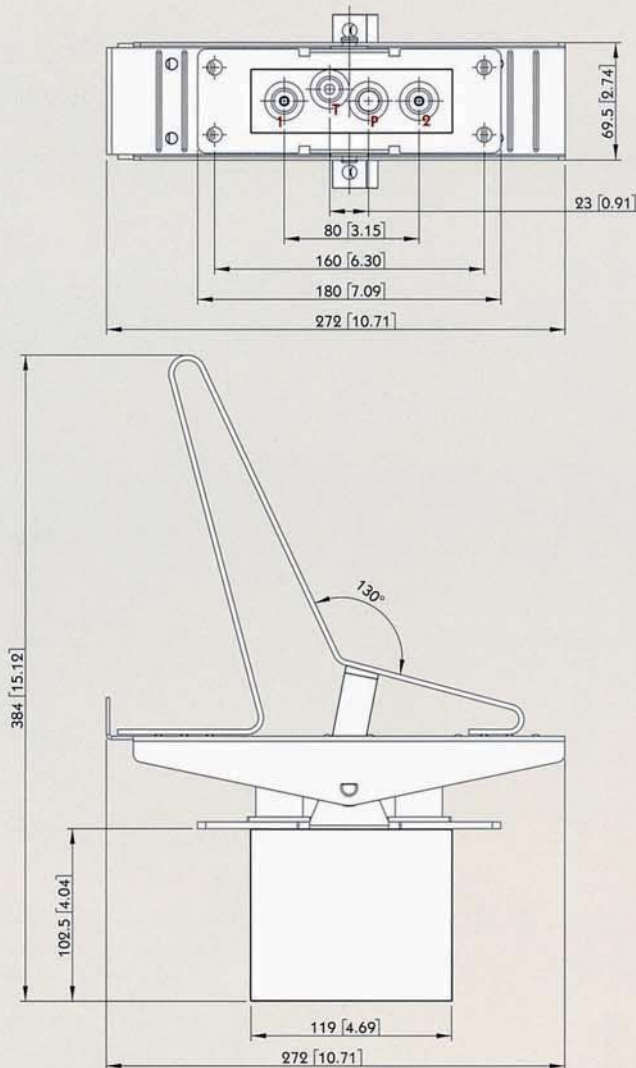
MB-3 Accessories

Sectional Directional Control Valves

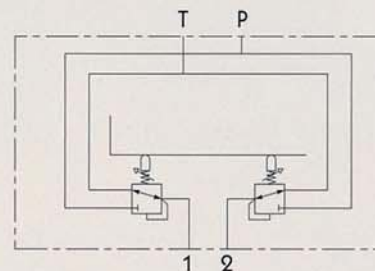
Type PHP-1

Specifications:

- This data sheet shows technical spec. with mineral oil of 46 mm²/s (cSt) viscosity at 40°C (104°F)
- Flow : 5 ~ 20 LPM
- Feeding pressure : 30 ~ 100 bar
- Max. backpressure : 3 bar
- Internal leakage at 30 bar : 10 ~ 18 cm³/min
- Fluid : mineral oil
- Fluid temperature : - 10 ~ 80°C
- Ambient temperature : - 40 ~ 60°C



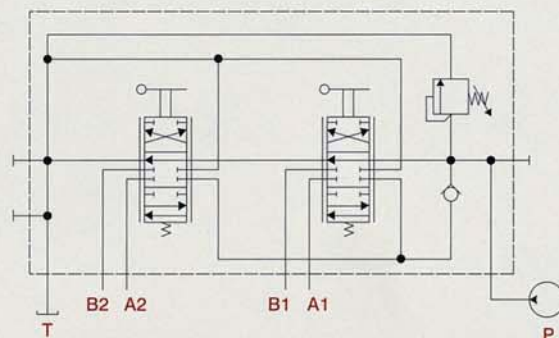
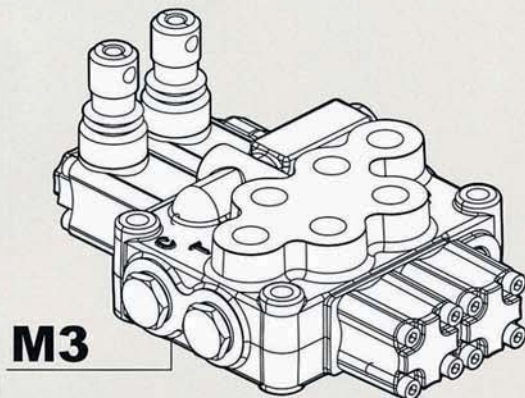
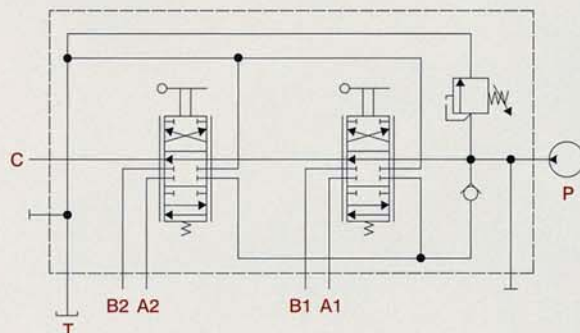
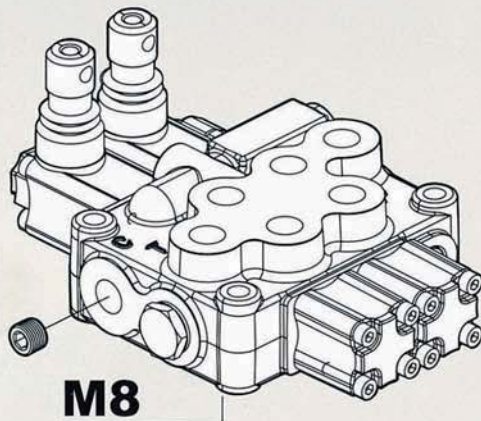
HYDRAULIC SCHEME:



MB-3 Outlet

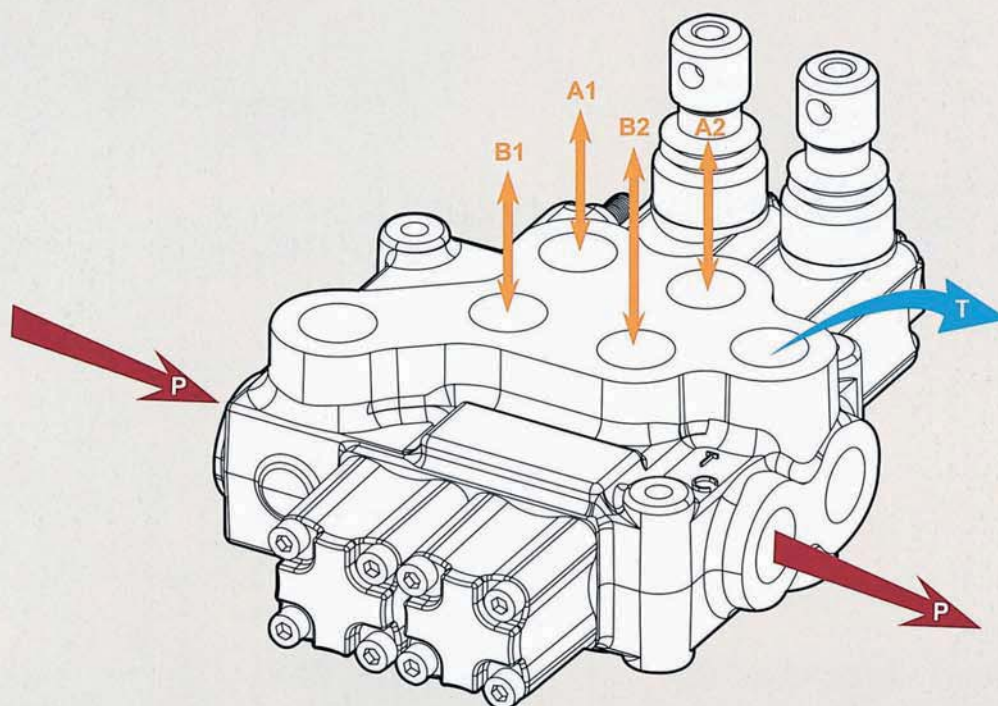
Monoblock Directional Control Valves

Power Beyond Conversion plug
(Closed center plug)



MB-4

Monoblock Directional Control Valves



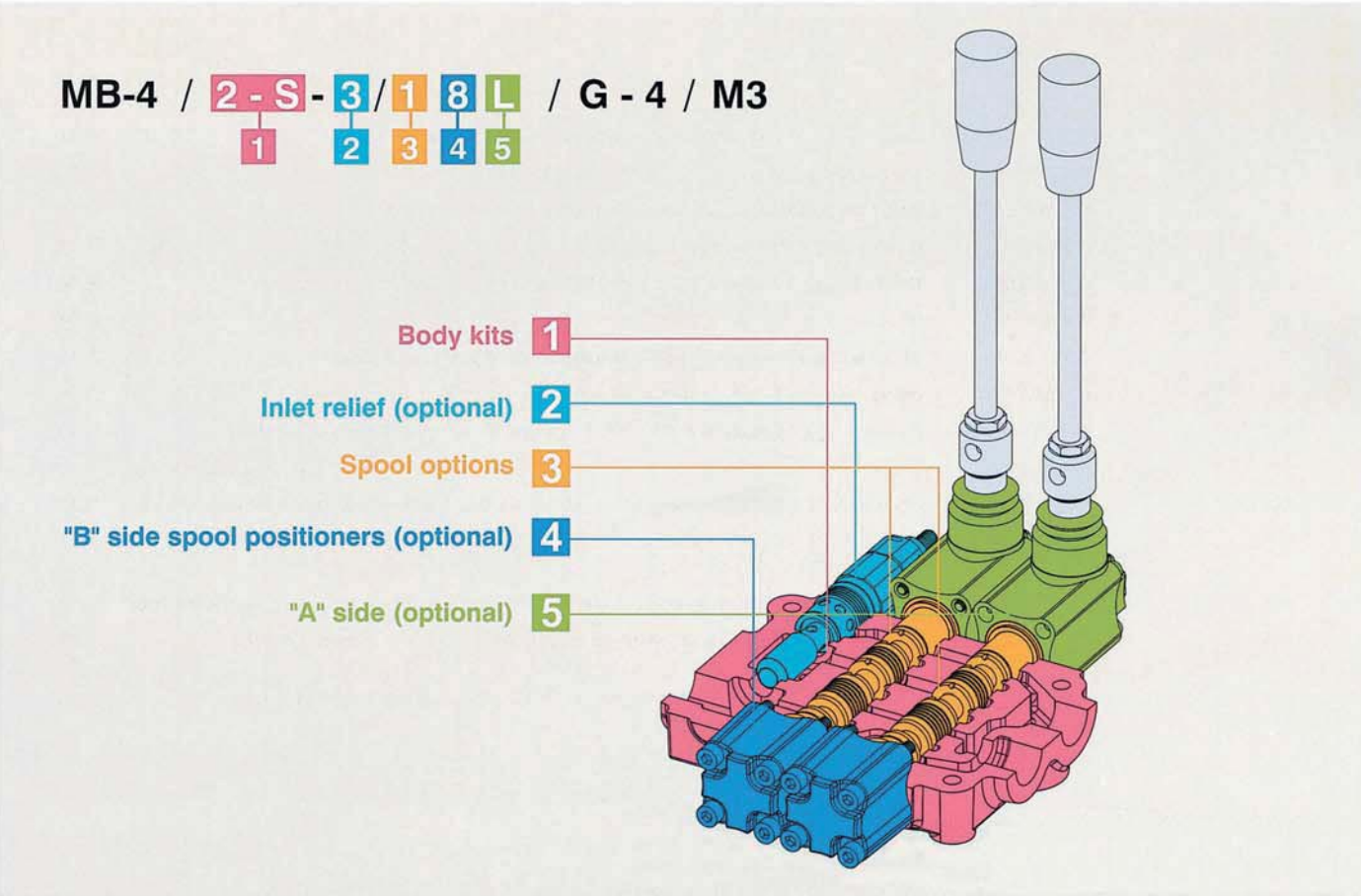
MB-4 Specifications

Nominal flow rate		60 l/min	16 US gpm
Operating pressure (maximum)	parallel or tandem circuit	315 bar	4600 psi
	series circuit	210 bar	3050 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 mm²/s	from 15 to 75 cst
	min	12 mm²/s	12 cst
	max.	400 mm²/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

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	PAGE
	MG-2	YLMB42002	P. 57
	MG-3	YLMB42003	P. 57
	MG-4	YLMB42004	P. 57
	SV	YLMB42100	P. 57

MB-4

Monoblock Directional Control Valves

MB-4

3: Spool options			
TYPE	CODE	DESCRIPTION	PAGE
1	YLMB43001	Double acting, 3 positions, with A, B closed in neutral position	P. 58
2	YLMB43002	Double acting, 3 positions, with A, B open to Tank in neutral position	P. 58
3	YLMB43003	Single acting on A closed in neutral position, 3 positions, B plugged	P. 59
4	YLMB43004	Single acting on B closed in neutral position, 3 positions, A plugged	P. 59
5	YLMB43005	Double acting, 3 positions, with B open to Tank in neutral position	P. 60
6	YLMB43006	Double acting, 3 positions, with A open to Tank in neutral position	P. 60
7	YLMB43007	Single acting on A open to Tank in neutral position, 3 positions, B plugged	P. 61
8	YLMB43008	Single acting on B open to Tank in neutral position, 3 positions, A plugged	P. 61
9	YLMB43009	Double acting, 3 positions, with P, T, A, B closed in neutral position (Closed center)	P. 62
1 0	YLMB43010	Double acting, 3 positions, with A, B open to Tank and P, T closed in neutral position (Closed center)	P. 62
5DY	YLMB43052	Double acting, 4 position, floating circuit in 4th position with A, B open to Tank by pulling the lever	P. 63
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. 63
5PY	YLMB43051	Double acting, 4 positions, floating circuit in 4th position with A, B open to Tank by pushing the lever	P. 64
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. 64
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. 65

4: B Side Spool Positioners			
TYPE	CODE	DESCRIPTION	PAGE
6-1	YLMB44061	Detent in pos. 1-0-2, without spring centered	P. 69
6-2	YLMB44062	2 positions, detent in pos. 0-2, without spring centered	P. 69
6-3	YLMB44063	2 positions, detent in pos. 1-0, without spring centered	P. 69
8D2	YLMB44200	With spring return to neutral position and pin with M8 male thread for dual control	P. 69
8EP3	YLMB44300	ON/OFF Electro-Pneumatic actuator	P. 70
8P	YLMB44080	ON/OFF Pneumatic actuator	P. 70
8MG1 (NO)	YLMB44801	Microswitch kit operated in pos. 1 (Normally Open)	P. 73
8MG2 (NO)	YLMB44802	Microswitch kit operated in pos. 2 (Normally Open)	P. 73
8MG3 (NO)	YLMB44803	Microswitch kit operated in pos. 1&2 (Normally Open)	P. 73
MG (NO)	YLMB44804	Microswitch with NO terminal	P. 73
8MG1 (NC)	YLMB448011	Microswitch kit operated in pos. 1 (Normally Closed)	P. 73
8MG2 (NC)	YLMB448021	Microswitch kit operated in pos. 2 (Normally Closed)	P. 73
8MG3 (NC)	YLMB448031	Microswitch kit operated in pos. 1&2 (Normally Closed)	P. 73
MG (NC)	YLMB448041	Microswitch with NC terminal	P. 73
8	YLMB44008	With spring return to neutral position	P. 74
8-1	YLMB44081	2 positions, with spring centered from pos. 1	P. 74
8-2	YLMB44082	2 positions, with spring centered from pos. 2	P. 74
9-1	YLMB44091	Detent in pos. 1, 2 with spring centered	P. 74
9-2	YLMB44092	Detent in pos. 2 with spring centered	P. 74
9-3	YLMB44093	Detent in pos. 1 with spring centered	P. 74

MB-4

Monoblock Directional Control Valves

MB-4

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

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

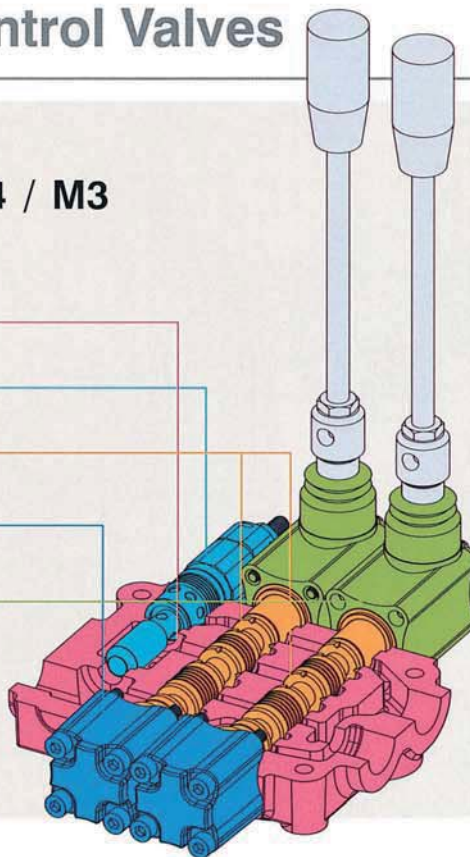
Body kits **1**

Inlet relief (optional) **2**

Spool options **3**

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

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



4: B Side Spool Positioners

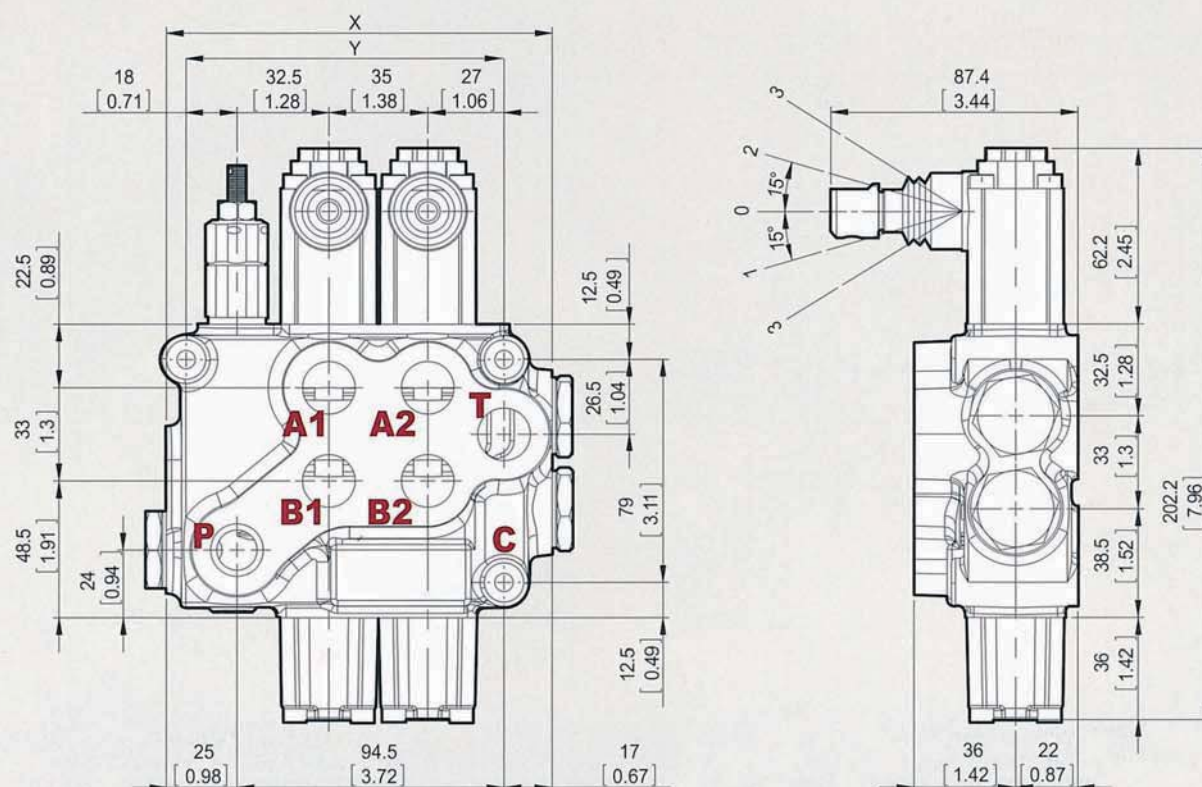
TYPE	CODE	DESCRIPTION	PAGE
8ED3+RV-KE1R3	YLMB44201	1S: ON/OFF Electro-Hydraulic control kit with pilot and drain line+backpressure valve (12/24 VDC)	P. 71
8ED3+RV-KE2R3	YLMB44202	2S: ON/OFF Electro-Hydraulic control kit with pilot and drain line+backpressure valve (12/24 VDC)	P. 71
8ED3+RV-KE3R3	YLMB44203	3S: ON/OFF Electro-Hydraulic control kit with pilot and drain line+backpressure valve (12/24 VDC)	P. 71
8ED3+RV-KE4R3	YLMB44204	4S: ON/OFF Electro-Hydraulic control kit with pilot and drain line+backpressure valve (12/24 VDC)	P. 71
8ED3+RV-KE5R3	YLMB44205	5S: ON/OFF Electro-Hydraulic control kit with pilot and drain line+backpressure valve (12/24 VDC)	P. 71
8ED3+RV-KE6R3	YLMB44206	6S: ON/OFF Electro-Hydraulic control kit with pilot and drain line+backpressure valve (12/24 VDC)	P. 71
8ER3+KE1S0	YLMB44401	1S: ON/OFF Electro-hydraulic control kit with collector kit for external pilot and drain	P. 72
8ER3+KE2S0	YLMB44402	2S: ON/OFF Electro-hydraulic control kit with collector kit for external pilot and drain	P. 72
8ER3+KE3S0	YLMB44403	3S: ON/OFF Electro-hydraulic control kit with collector kit for external pilot and drain	P. 72
8ER3+KE4S0	YLMB44404	4S: ON/OFF Electro-hydraulic control kit with collector kit for external pilot and drain	P. 72
8ER3+KE5S0	YLMB44405	5S: ON/OFF Electro-hydraulic control kit with collector kit for external pilot and drain	P. 72
8ER3+KE6S0	YLMB44406	6S: ON/OFF Electro-hydraulic control kit with collector kit for external pilot and drain	P. 72

5: A Side (optional)

TYPE	CODE	DESCRIPTION	PAGE
L	YLMB45000	Standard lever box	P. 66
SLP	YLMB45001	Without lever box, with dust-proof plate	P. 66
LCB	YLMB45002	Joystick lever for 2 section operation	P. 67
TQ	YLMB45003	Flexible cable connection	P. 68

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

Standard dimensions

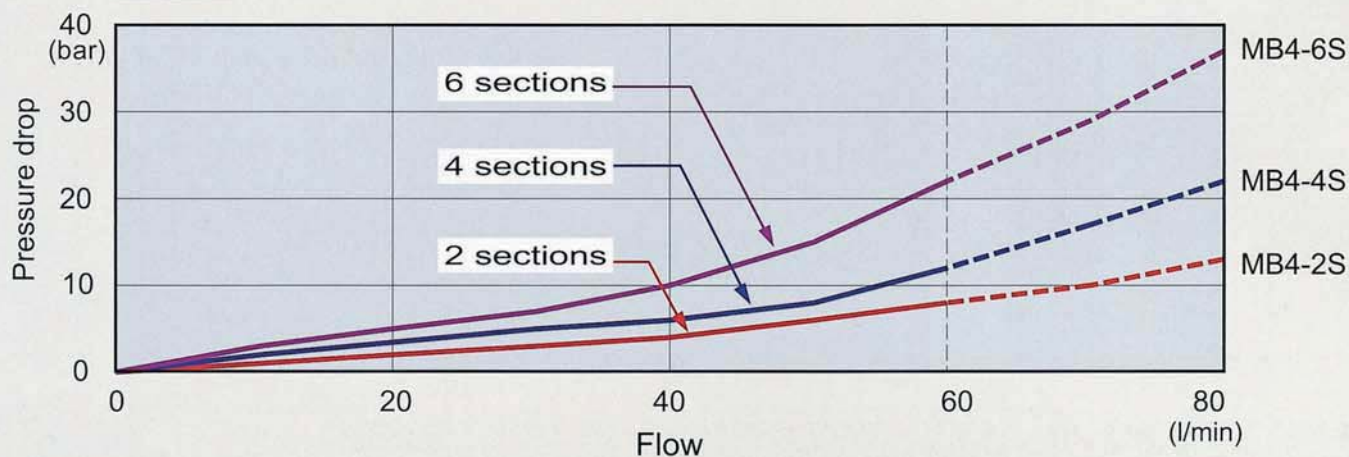
TYPE	X		Y	
	mm	in	mm	in
MB4 /1S	101.5	4	77.5	3.05
MB4 /2S	136.5	5.37	112.5	4.33
MB4 /3S	171.5	6.75	147.5	5.81
MB4 /4S	206.5	8.13	182.5	7.19
MB4 /5S	241.5	9.51	217.5	8.56
MB4 /6S	276.5	10.89	252.5	9.94

MB-4 Performance curve chart

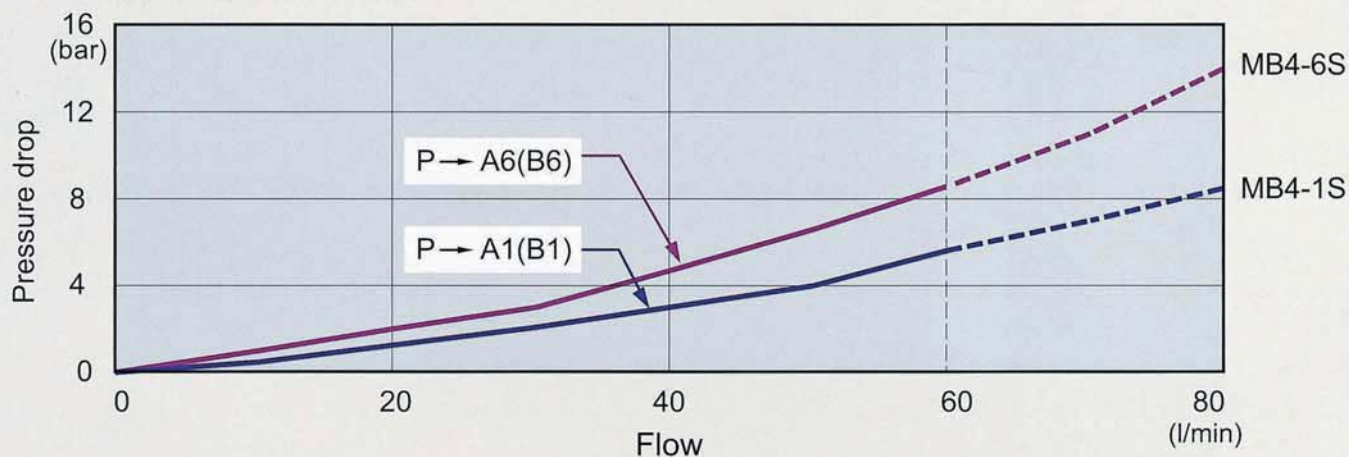
Monoblock Directional Control Valves

MB-4

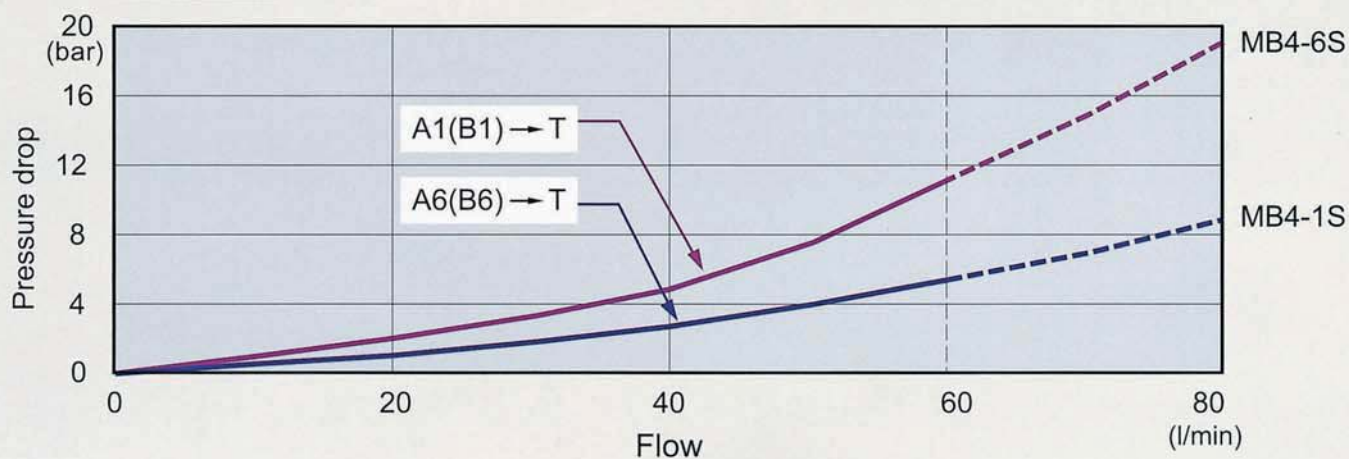
P to T



P to A(B)

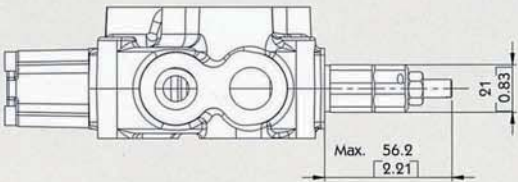


A(B) to T

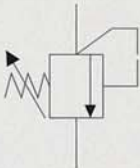


MB-4 Inlet Relief (Optional) Monoblock Directional Control Valves

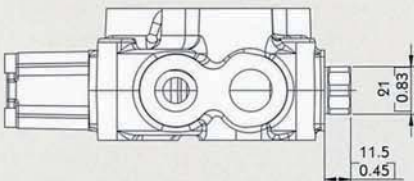
Type MG



Direct pressure relief valve:



Type SV



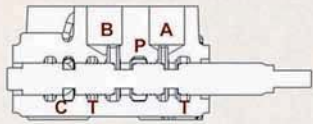
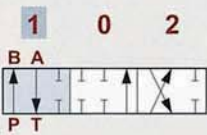
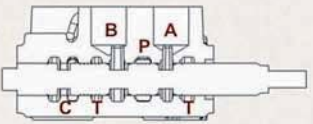
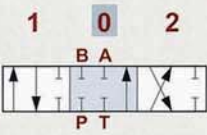
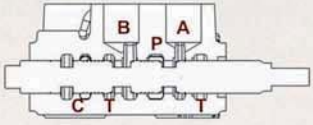
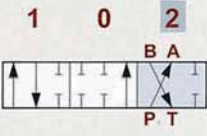
Relief valve blanking plug:



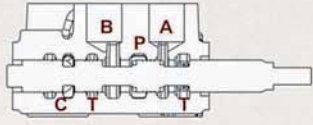
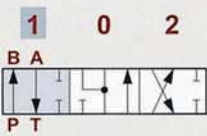
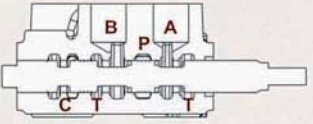
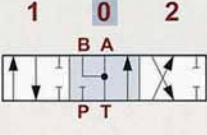
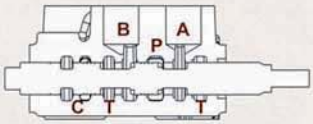
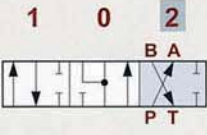
MB-4 Spool Options

Monoblock Directional Control Valves

TYPE 1

	<p>P → B</p> <p>A → T</p> <p>C closed</p>	
	<p>P & A & B & T close</p> <p>C open</p>	
	<p>P → A</p> <p>B → T</p> <p>C closed</p>	

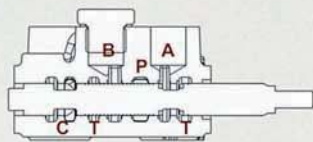
TYPE 2

	<p>P → B</p> <p>A → T</p> <p>C closed</p>	
	<p>A & B → T</p> <p>P 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

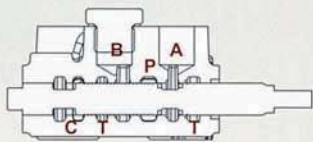
TYPE 3



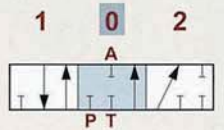
A → T
P closed
C open



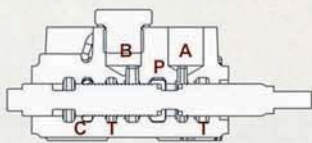
"B" port plugged



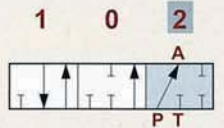
P & A & T close
C open



"B" port plugged

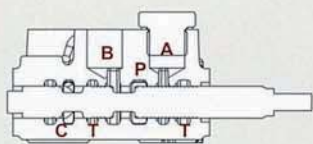


P → A
T & C closed

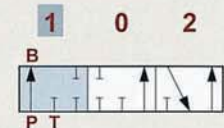


"B" port plugged

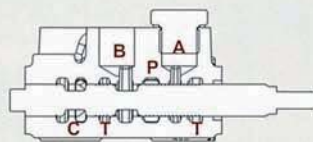
TYPE 4



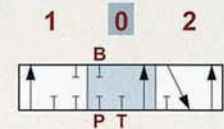
P → B
T & C closed



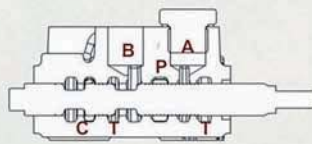
"A" port plugged



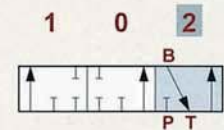
P & B & T close
C open



"A" port plugged



B → T
P closed
C open

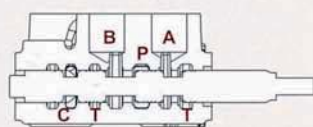


"A" port plugged

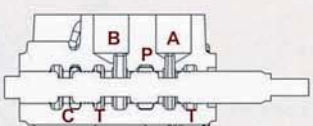
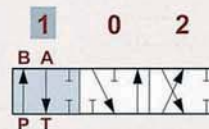
MB-4 Spool Options

Monoblock Directional Control Valves

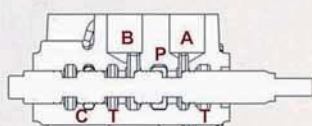
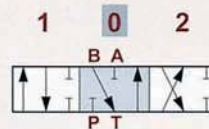
TYPE 5



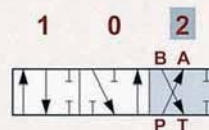
P → B
A → T
C closed



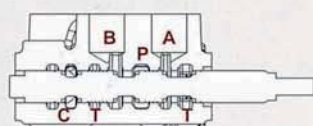
B → T
P & A close
C open



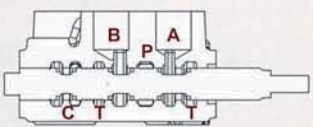
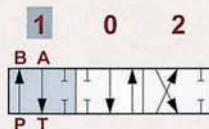
P → A
B → T
C closed



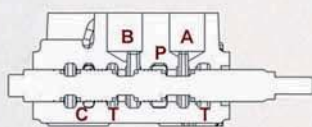
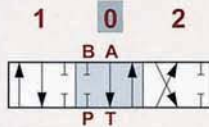
TYPE 6



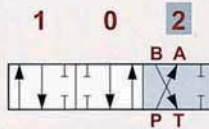
P → B
A → T
C closed



A → T
P & B closed
C open



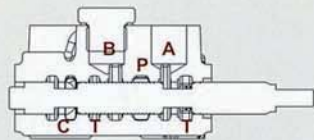
P → A
B → T
C closed



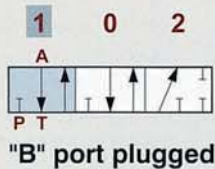
MB-4 Spool Options

Monoblock Directional Control Valves

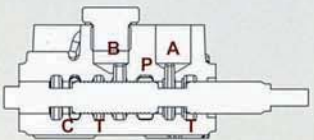
TYPE 7



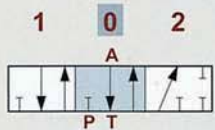
A → T
C open



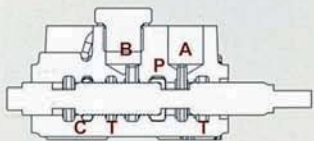
"B" port plugged



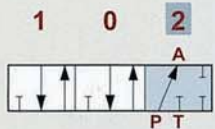
A → T
C open



"B" port plugged

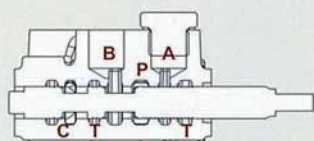


P → A
C closed

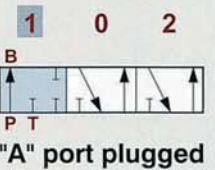


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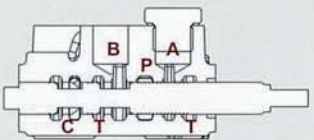
TYPE 8



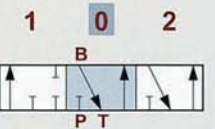
P → B
C closed



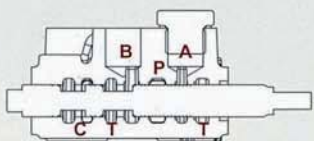
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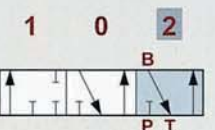
B → T
C open



"A" port plugged



B → T
C open



"A" port plugged

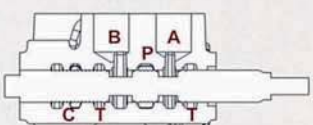
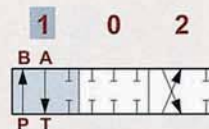
MB-4 Spool Options

Monoblock Directional Control Valves

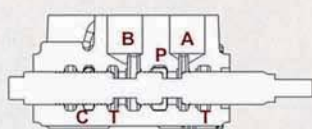
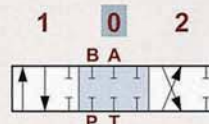
TYPE 9



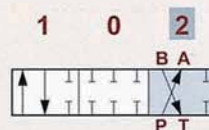
P → B
A → T
C closed



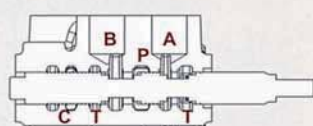
P & A & B & T closed
C closed



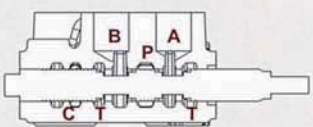
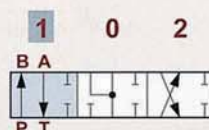
P → A
B → T
C closed



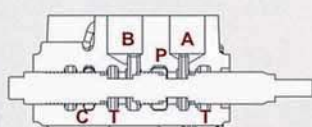
TYPE 10



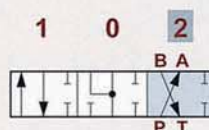
P → B
A → T
C closed



A & B → T
P & C close

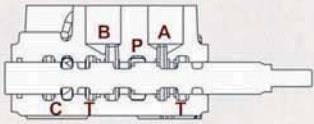
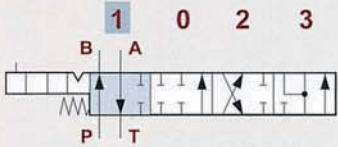
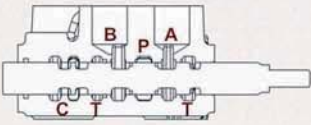
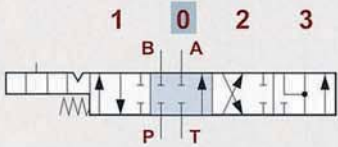
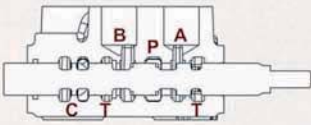
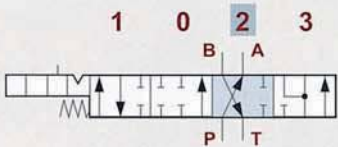
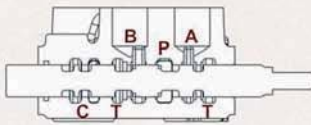
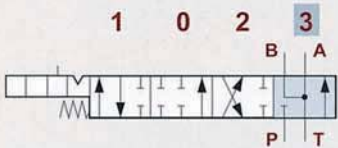


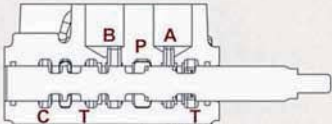
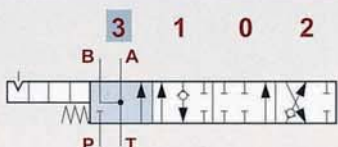
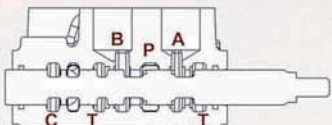
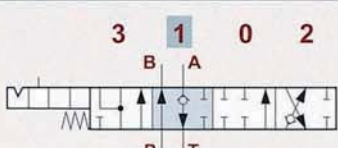
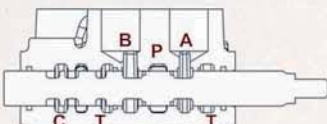
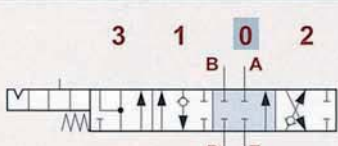
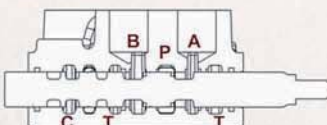
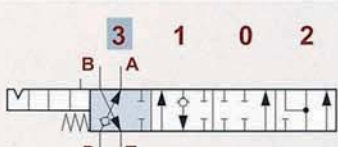
P → A
B → T
C closed



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>		

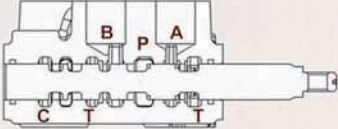
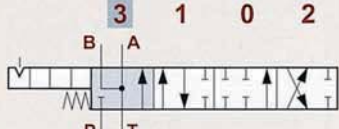
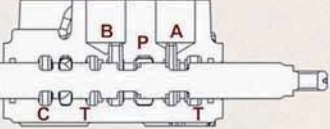

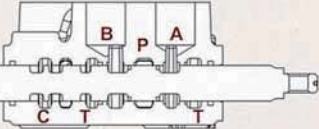
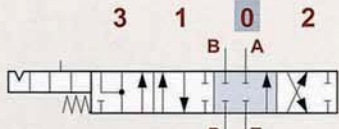
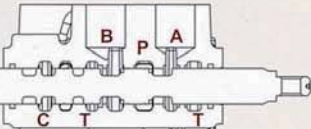
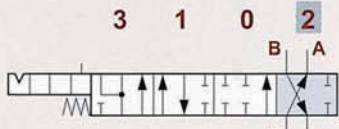
TYPE 5PYX		NOTE: WITH SPECIAL BODY AND SPECIAL POSITIONER	
	<p>A & B → T</p> <p>P closed</p> <p>C open</p>		
	<p>P → B</p> <p>A → T</p> <p>C closed</p>		
	<p>P & T & A & B closed</p> <p>C open</p>		
	<p>P → A</p> <p>B → T</p> <p>C closed</p>		

MB-4 Spool Options

Monoblock Directional Control Valves

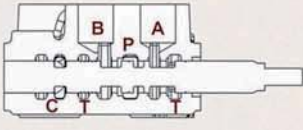
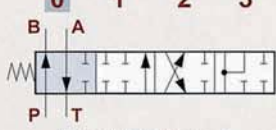
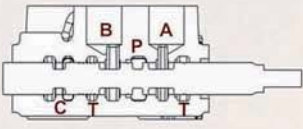

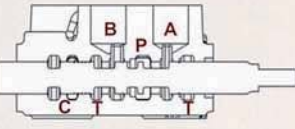

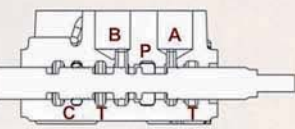
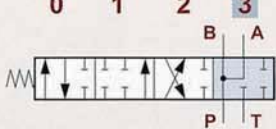
TYPE 5PY

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

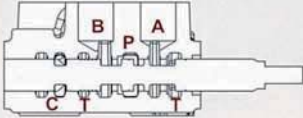
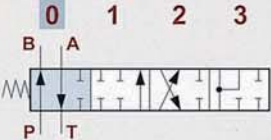
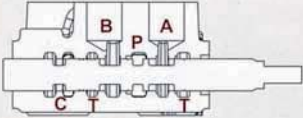
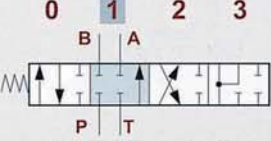

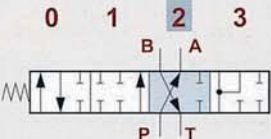
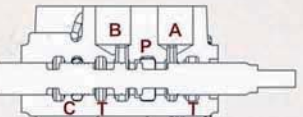
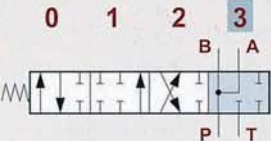
NOTE: WITH SPECIAL BODY AND SPECIAL POSITIONER

	<p>P → B A → T C closed</p>	
	<p>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

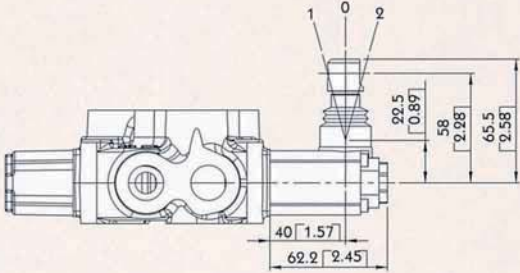
MB-4

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

MB-4 A Side

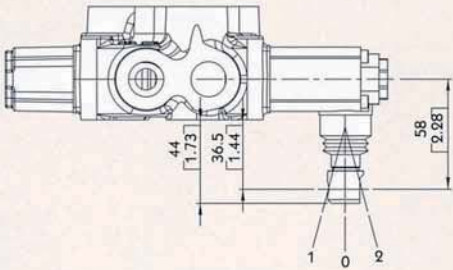
Monoblock Directional Control Valves

Type L



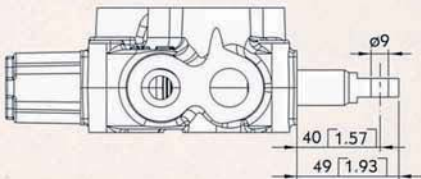
Type L:
STANDART LEVER KIT

Type R



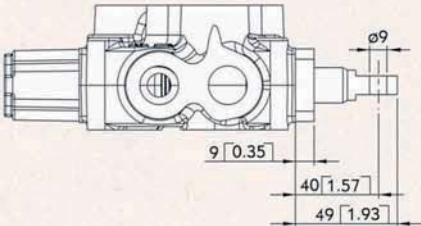
Type R:
STANDART LEVER KIT
(ROTATED 180 DEGREE)

Type SL



Type SL:
WITHOUT ANY COVER

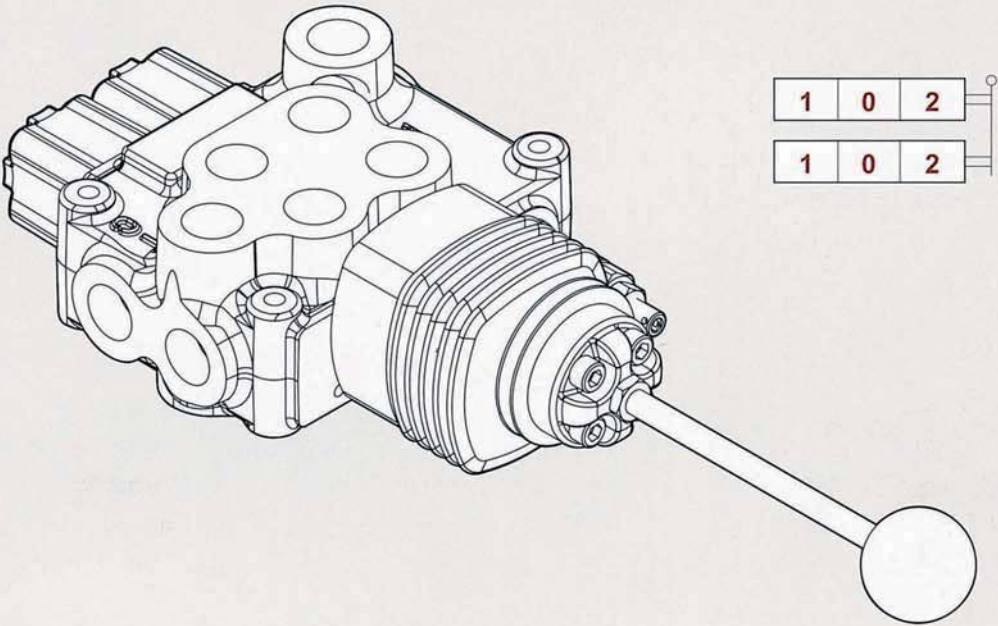
Type SLP



Type SLP:
WITH DUST-PROOF PLATE

MB-4 A Side Monoblock Directional Control Valves

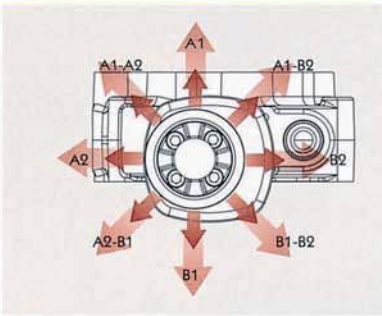
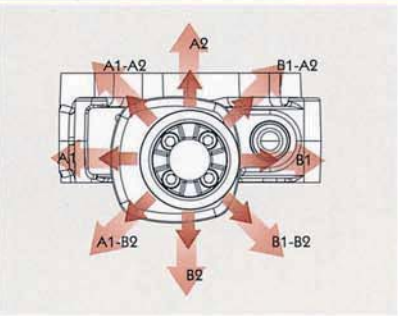
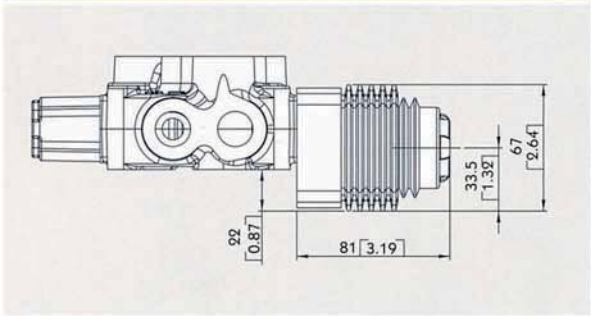
LCB: Joystick control



Type LCB

LCB1

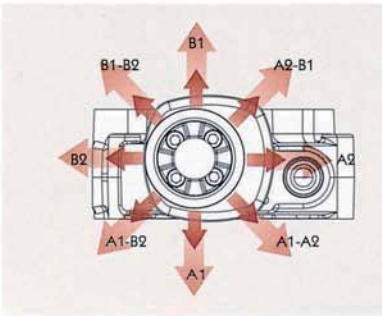
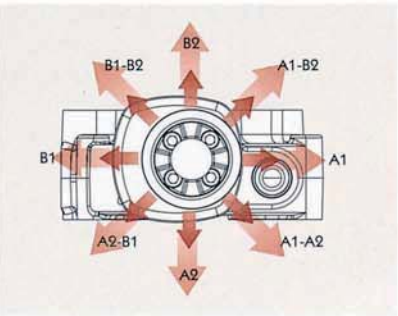
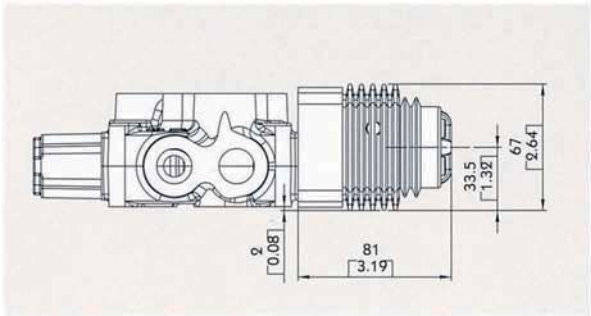
LCB2



Type LCB

LCB3

LCB4

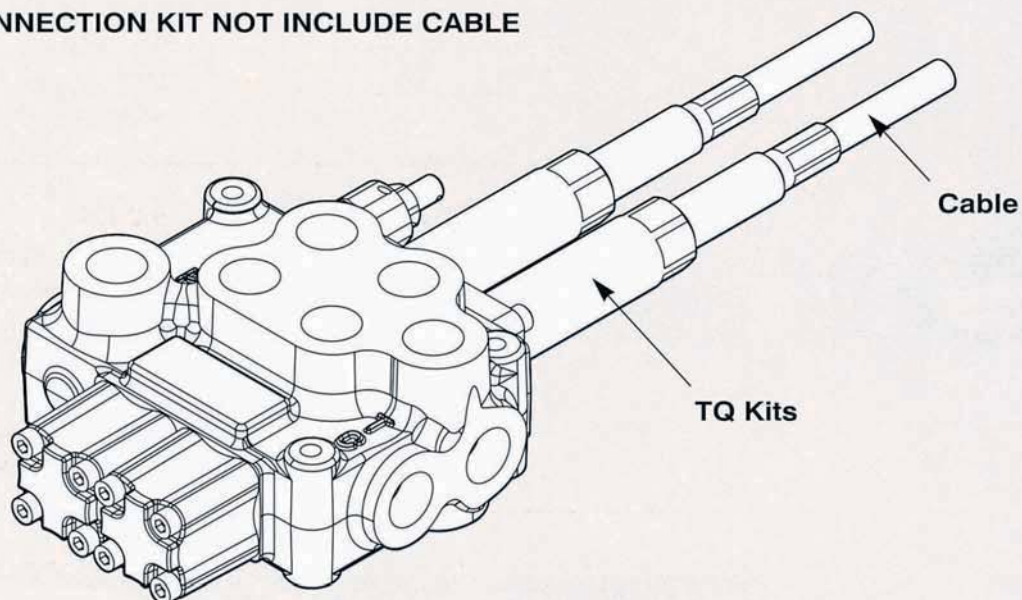


MB-4 A Side

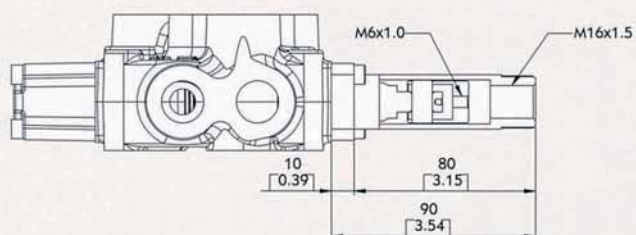
Monoblock Directional Control Valves

MB-4

Note : CONNECTION KIT NOT INCLUDE CABLE



Type TQ



TQ Kit:



MB-4 B Side

Monoblock Directional Control Valves

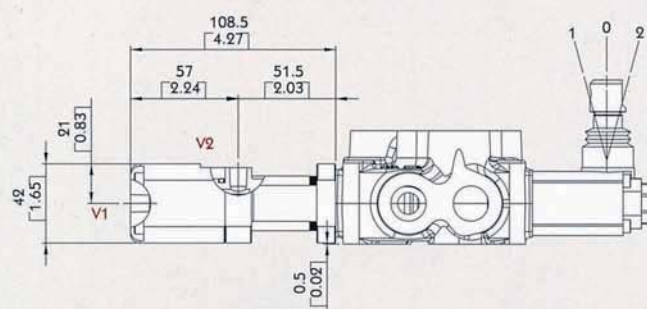
Type 6		
		6-1 Kit: DETENT IN POS. 1-0-2, WITHOUT SPRING CENTERED
		6-2 Kit: 2 POSITIONS, DETENT IN POS. 0-2, WITHOUT SPRING CENTERED
		6-3 Kit: 2 POSITIONS, DETENT IN POS. 1-0, WITHOUT SPRING CENTERED
Type 8D2		
		8D2 Kit: WITH SPRING RETURN TO NEUTRAL POSITION AND PIN WITH M8 MALE THREAD FOR DUAL CONTROL

MB-4 B Side

Monoblock Directional Control Valves

Type 8P

V1 & V2 : NPT 1/8 - 27



Operating feature :

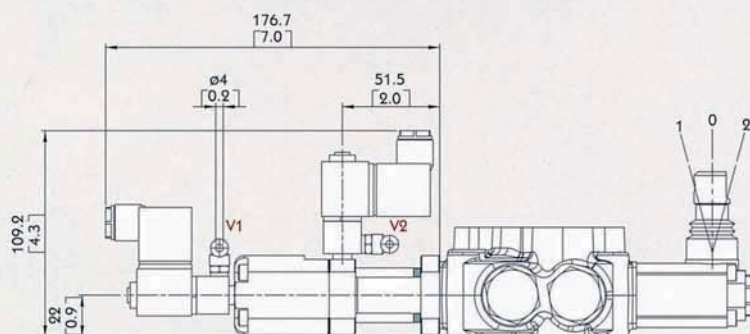
PILOT PRESSURE (MIN.) 5.5 BAR / 80 PSI

PILOT PRESSURE (MAX.) 10 BAR / 145 PSI



MB-4

Type 8EP3

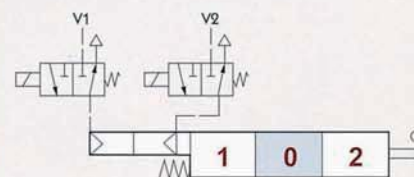


Solenoid operating features :

NOMINAL VOLTAGE: 24VDC

NOMINAL VOLTAGE TOLERANCE: $\pm 10\%$

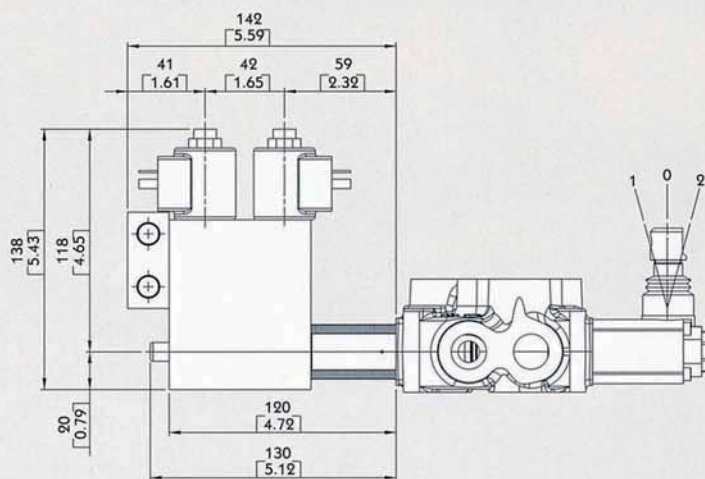
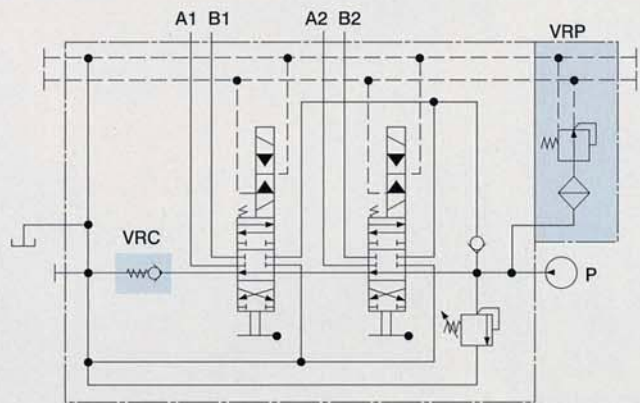
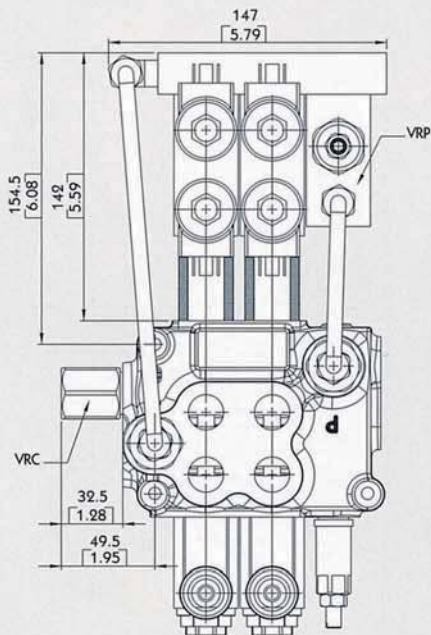
POWER RATING: 5W



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 :

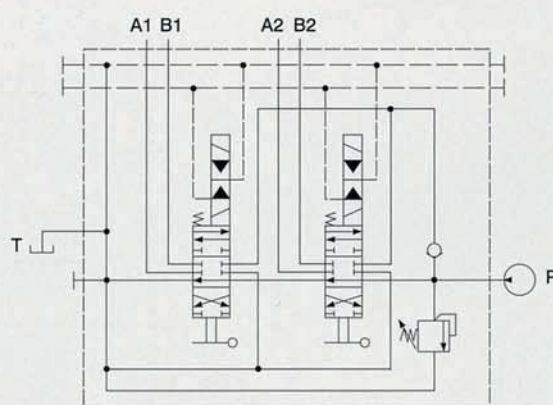
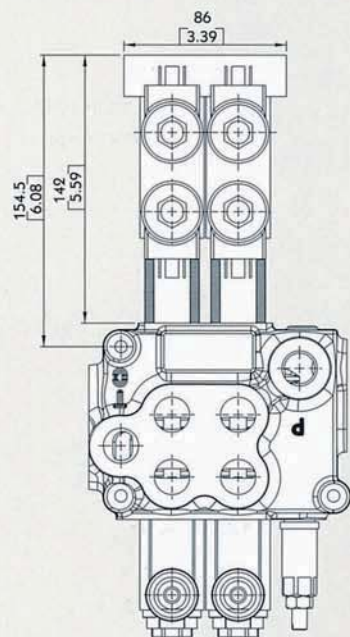
- NOMINAL VOLTAGE TOLERANCE: $\pm 10\%$
ELECTRIC POWER: 21 W
STANDARD VOLTAGE: 12 VDC / 24 VDC



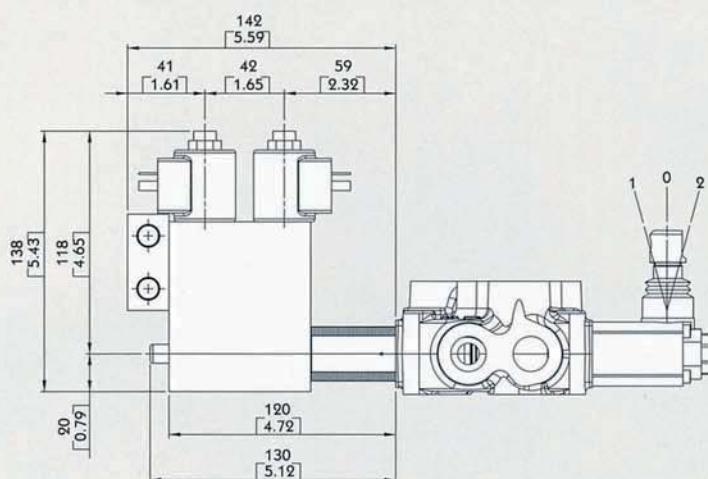
MB-4 B Side

Monoblock Directional Control Valves

Type 8ER3



MB-4



Operating features :

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

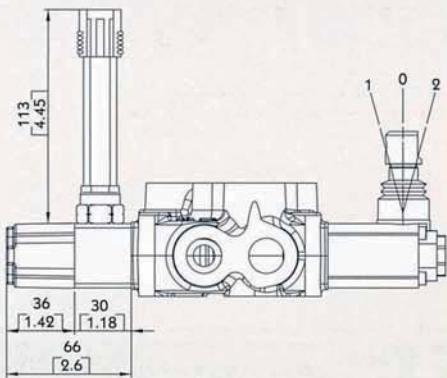
Coil features :

- 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

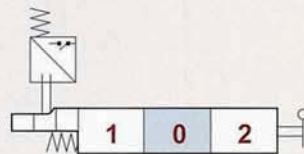
ELECTRICAL LIFE (RESISTIVE LOAD):

- 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:

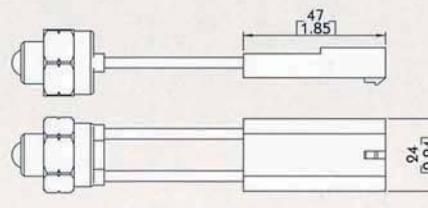
MICROSWITCH WITH MALE/FEMALE CONNECTOR, OPERATED IN POS. 2



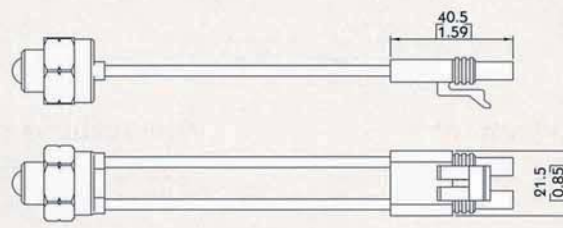
8MG3 Kit:

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

With NO contact (female connector with male end)



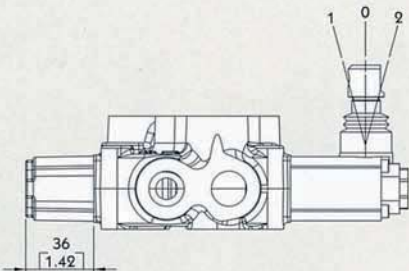
With NC contact (male connector with female end)



MB-4 B Side

Monoblock Directional Control Valves

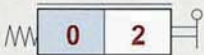
Type 8



8 Kit:
SPRING RETURN TO NEUTRAL POSITION

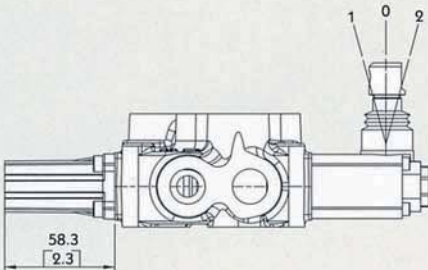


8-1 Kit:
SPRING RETURN TO NEUTRAL POSITION.
(2 POSITIONS)

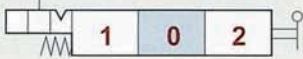


8-2 Kit:
SPRING RETURN TO NEUTRAL POSITION.
(2 POSITIONS)

Type 9



9-1 Kit:
DETENT IN POS. 1, 2 WITH SPRING CENTERED

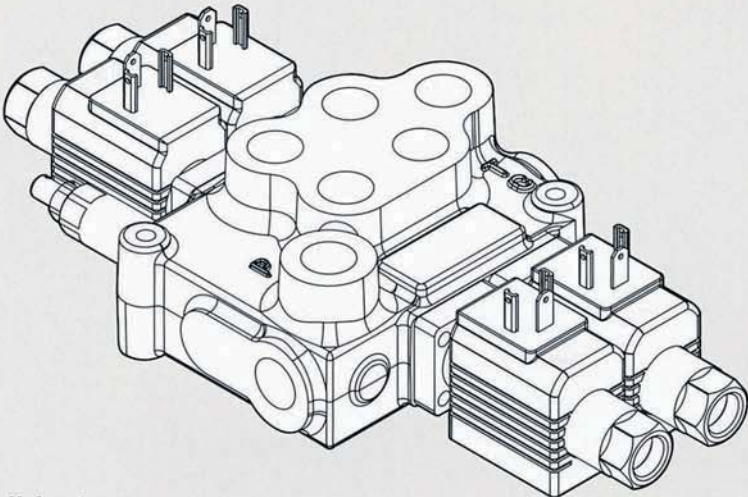


9-2 Kit:
DETENT IN POS. 2 WITH SPRING CENTERED

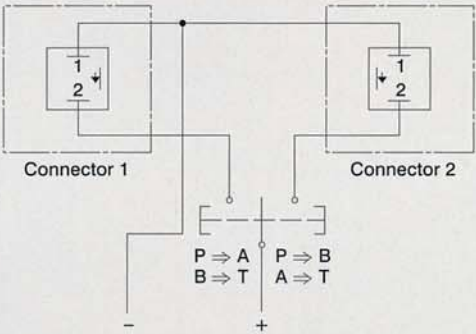


9-3 Kit:
DETENT IN POS. 1 WITH SPRING CENTERED

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



Electric wiring example



Coil features :

NOMINAL VOLTAGE TOLERANCE: $\pm 10\%$
 ELECTRIC POWER: 36 W
 STANDARD VOLTAGE: 12 VDC / 24 VDC

Type 8ES

		<p>8ES1 Kit: ACTING IN 1</p>
		<p>8ES2 Kit: ACTING IN 2</p>
		<p>8ES3 Kit: ACTING IN 1 & 2</p>

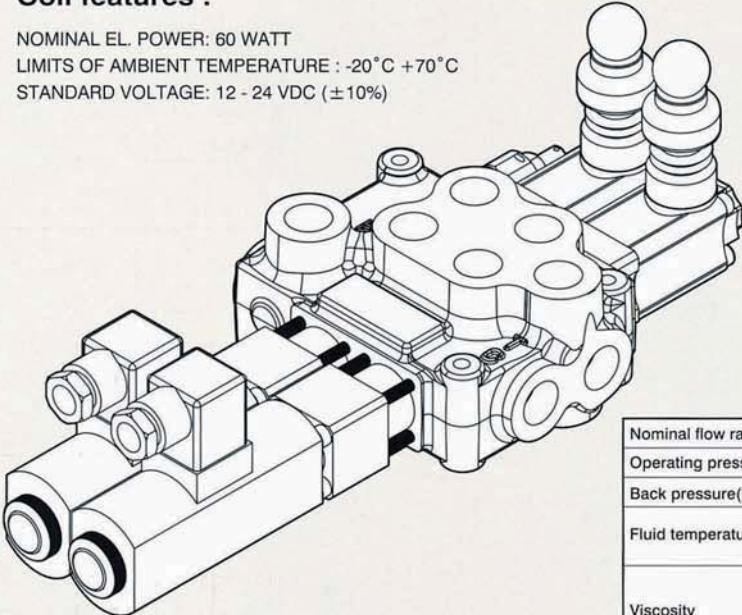
MB-4 B Side (Optional controls)

Monoblock Directional Control Valves

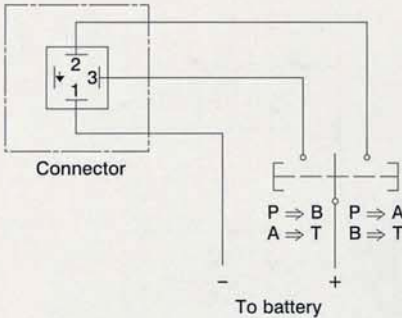
MB-4

Coil features :

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

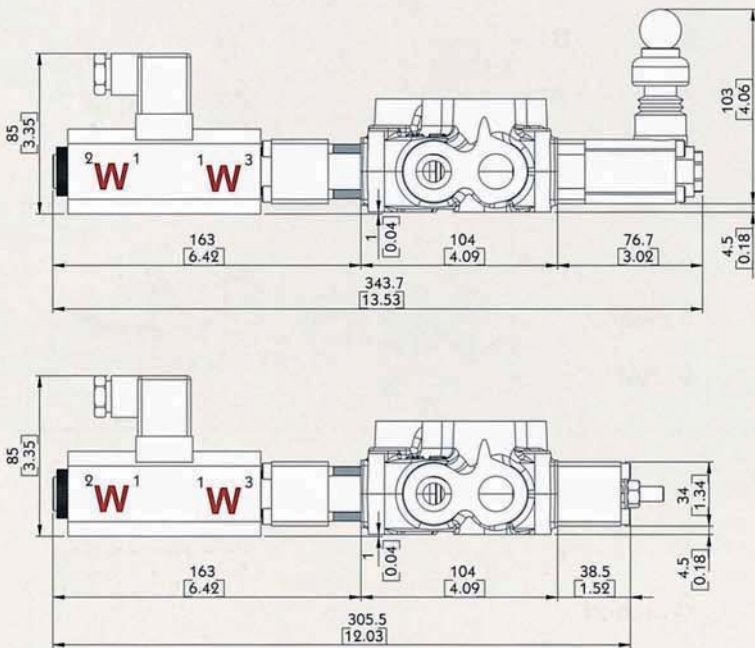


Electric wiring example



Nominal flow rating		60 L/min	16 US gpm
Operating pressure (Max.)	parallel circuit	250 bar	3600 psi
Back pressure(Max.)	on outlet port T	25 bar	360 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	15mm²/s ~ 75mm²/s	15 ~ 75 cst
	Max.	400mm²/s	400 cst
	Min.	12mm²/s	12 cst
Ambient temperature		-40°C ~ 60°C	-40°F ~ 140°F

Type 8ESN



8ESNLES Kit:



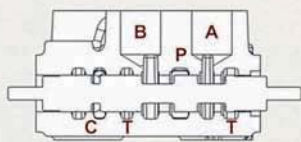
8ESNCAE Kit:



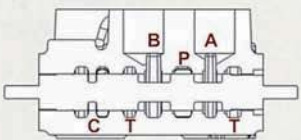
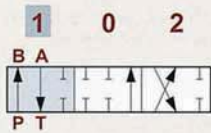
MB-4 Special spool (Options for 8ES Kit)

Monoblock Directional Control Valves

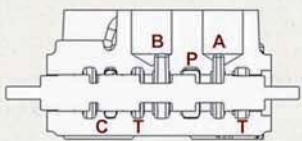
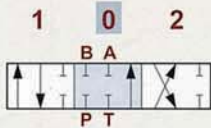
Type 8ES3#1



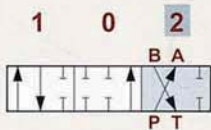
P → B
 A → T
 C closed



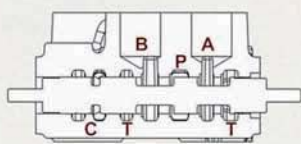
P & T & A & B closed
 C open



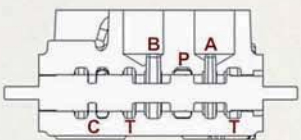
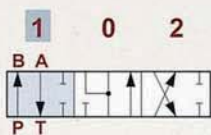
P → A
 B → T
 C closed



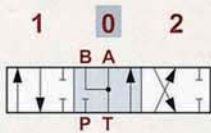
Type 8ES3#2



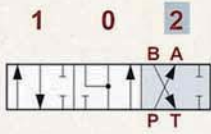
P → B
 A → T
 C closed



A & B → T
 P closed
 C open




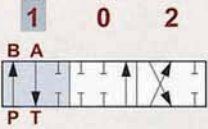
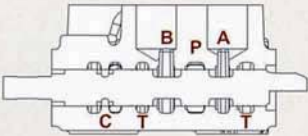
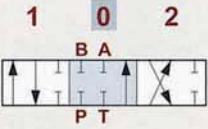
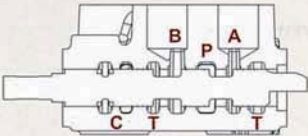
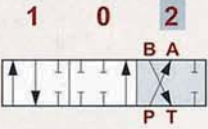
P → A
 B → T
 C closed



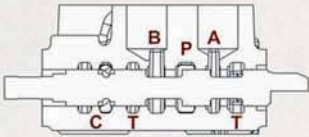
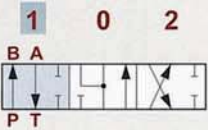
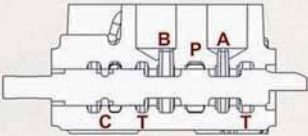
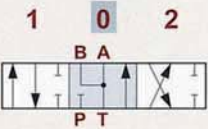
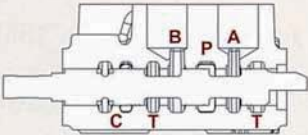
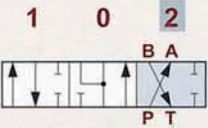
MB-4 Special spool (Options for 8ESN Kit)

Monoblock Directional Control Valves

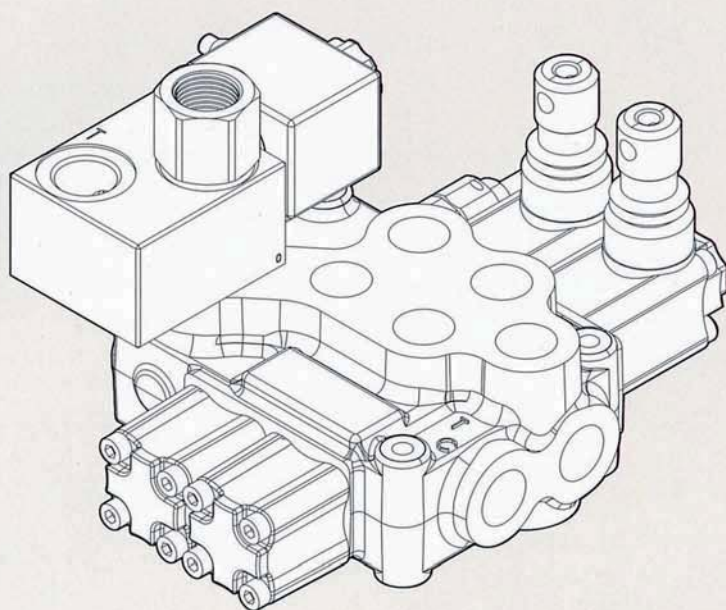
Type 8ESN#1

	<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>	

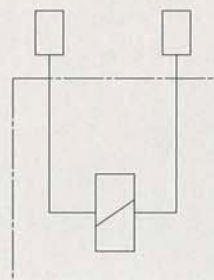
Type 8ESN#2

	<p>P → B</p> <p>A → T</p> <p>C closed</p>	
	<p>A & B → T</p> <p>P closed</p> <p>C open</p>	
	<p>P → A</p> <p>B → T</p> <p>C closed</p>	

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

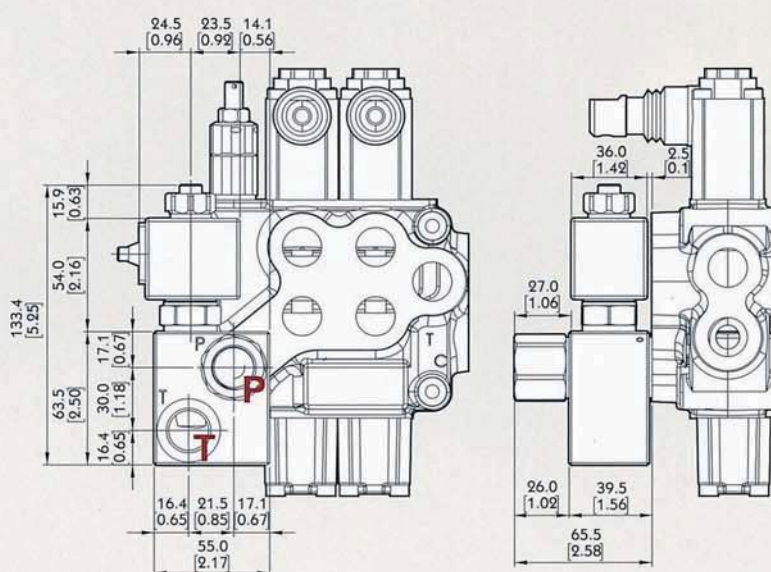


Electric wiring example

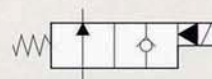


Coil features :

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



P & T : G1/2

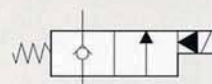


TYPE :

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

CODE :

YLMB45424
YLMB45412



TYPE :

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

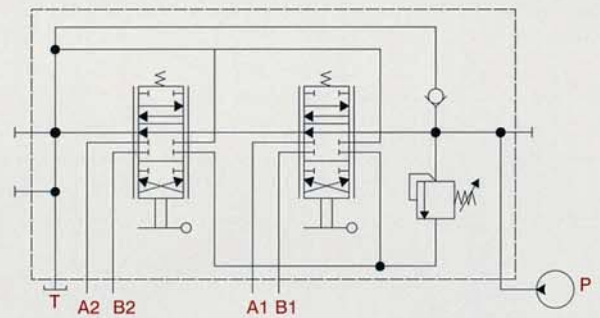
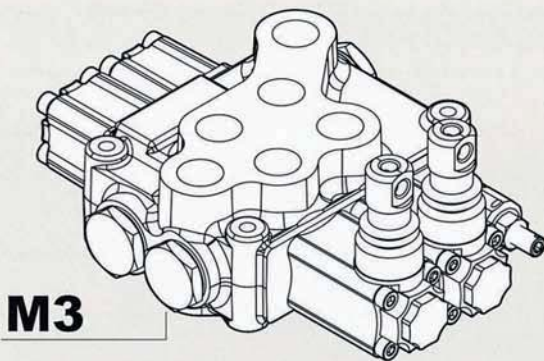
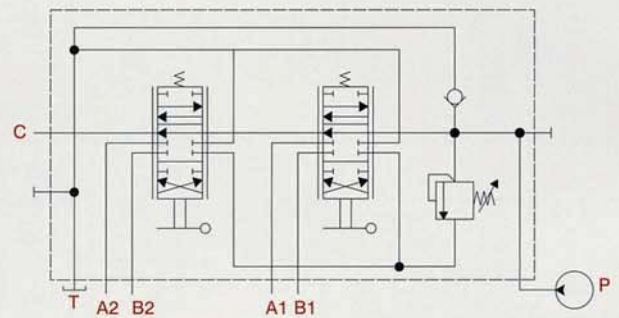
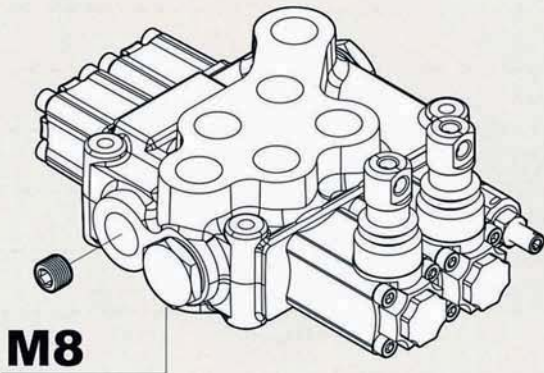
CODE :

YLMB454241
YLMB454121

MB-4 Outlet

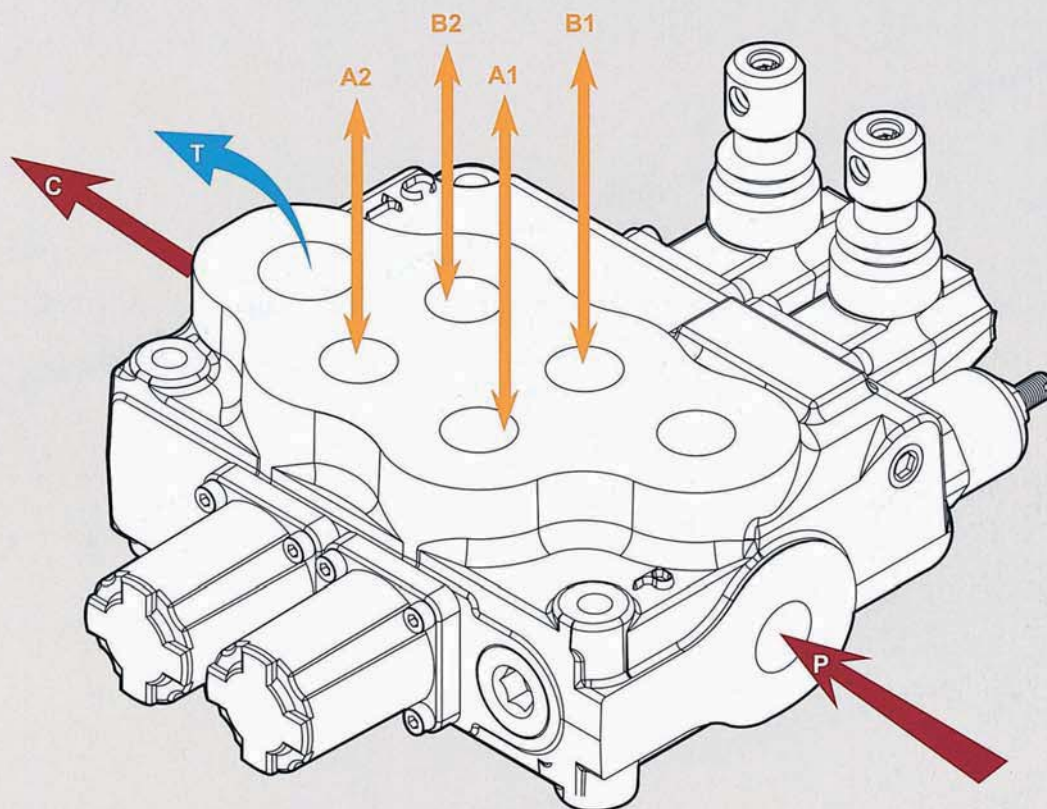
Monoblock Directional Control Valves

Power Beyond Conversion plug
(Closed center plug)



MB-5

Monoblock Directional Control Valves



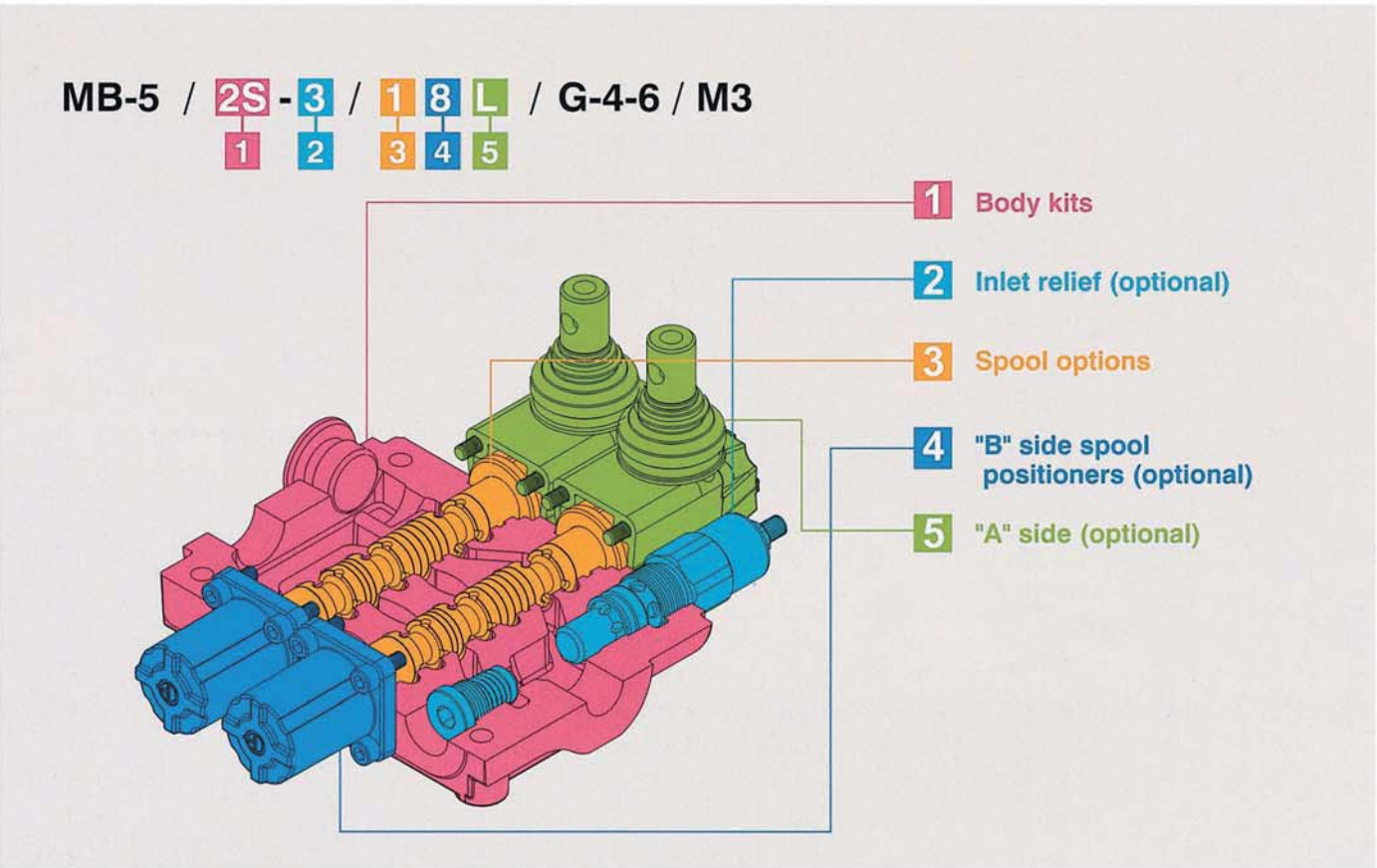
MB-5 Specifications

Nominal flow rate		80 l/min	21 US gpm
Operating pressure (maximum)	parallel or tandem circuit	315 bar	4600 psi
	series circuit	250 bar	3600 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 mm²/s	from 15 to 75 cst
	min.	12 mm²/s	12 cst
	max.	400 mm²/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-5

Monoblock Directional Control Valves



1:	Body kits	WITHOUT SERVICE PORT VALVES PREARRANGEMENT (INCLUDE BODY, SEALS, RINGS AND LOAD CHECK VALVE.)	
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
XAG		Y LX21000	Pilot operated pressure relief valve Range 25 to 315 bar/ 360 to 4600 psi, standard setting 125 bar/ 1800 psi	P. 87
AG-2		Y LMB52002	Direct pressure relief valve Range 80 to 160 bar/ 1150 to 2300 psi, standard setting 125 bar/ 1800 psi	P. 87
AG-3		Y LMB52003	Direct pressure relief valve Range 125 to 250 bar/ 1800 to 3600 psi, standard setting 175 bar/ 2500 psi	P. 87
AG-4		Y LMB52004	Direct pressure relief valve Range 200 to 315 bar/ 2900 to 4600 psi, standard setting 220 bar/ 3200 psi	P. 87
SV		Y LMB52100	Relief valve blanking plug	P. 87

MB-5

Monoblock Directional Control Valves

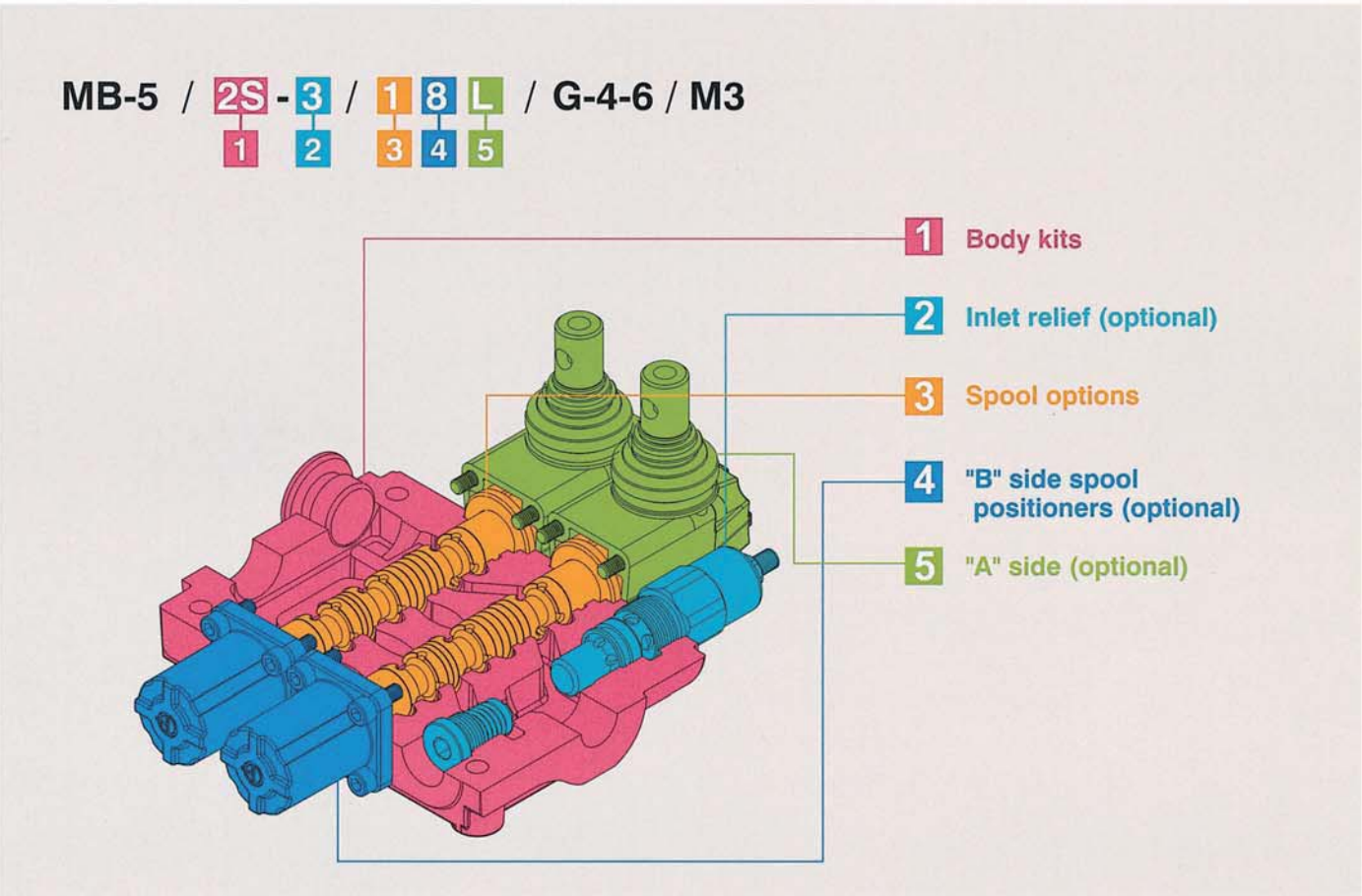
MB-5

3: Spool Options			
TYPE	CODE	DESCRIPTION	PAGE
1	YLMB53001	Double acting, 3 positions, with A, B closed in neutral position	P. 88
2	YLMB53002	Double acting, 3 positions, with A, B open to Tank in neutral position	P. 88
3	YLMB53003	Single acting on A closed in neutral position, 3 positions, B plugged	P. 89
4	YLMB53004	Single acting on B closed in neutral position, 3 positions, A plugged	P. 89
5	YLMB53005	Double acting, 3 positions, with B open to Tank in neutral position	P. 90
6	YLMB53006	Double acting, 3 positions, with A open to Tank in neutral position	P. 90
9	YLMB53009	Double acting, 3 positions, with P, T, A, B closed in neutral position (Closed center)	P. 91
10	YLMB53010	Double acting, 3 positions, with A, B open to Tank and P, T closed in neutral position (Closed center)	P. 91
5DY	YLMB53052	Double acting, 4 positions, floating circuit in 4th position with A,B open to Tank by pulling the lever	P. 92
5PY	YLMB53051	Double acting, 4 positions, floating circuit in 4th position with A, B open to Tank by pushing the lever	P. 93

4: B Side Spool Positioners			
TYPE	CODE	DESCRIPTION	PAGE
6-1	YLMB54061	Detent in pos. 1-0-2, without spring centered	P. 97
6-2	YLMB54062	2 positions, detent in pos. 0-2, without spring centered	P. 97
6-3	YLMB54063	2 positions, detent in pos. 1-0, without spring centered	P. 97
8D2	YLMB54082	With spring return to neutral position and pin with M8 male thread for dual control	P. 97
8EP3	YLMB54300	ON/OFF Electro-Pneumatic actuator	P. 98
8P	YLMB54080	ON/OFF Pneumatic actuator	P. 98
8MG1 (NO)	YLMB54801	Microswitch kit operated in pos. 1 (Normally Open)	P. 101
8MG2 (NO)	YLMB54802	Microswitch kit operated in pos. 2 (Normally Open)	P. 101
8MG3 (NO)	YLMB54803	Microswitch kit operated in pos. 1&2 (Normally Open)	P. 101
MG (NO)	YLMB54804	Microswitch with NO terminal	P. 101
8MG1 (NC)	YLMB548011	Microswitch kit operated in pos. 1 (Normally Closed)	P. 101
8MG2 (NC)	YLMB548021	Microswitch kit operated in pos. 2 (Normally Closed)	P. 101
8MG3 (NC)	YLMB548031	Microswitch kit operated in pos. 1&2 (Normally Closed)	P. 101
MG (NC)	YLMB548041	Microswitch with NC terminal	P. 101
8	YLMB54008	With spring return to neutral position	P. 102
8-1	YLMB54810	2 positions, with spring centered from pos. 1	P. 102
8-2	YLMB54820	2 positions, with spring centered from pos. 2	P. 102
9-1	YLMB54091	Detent in pos. 1, 2 with spring centered	P. 102
9-2	YLMB54092	Detent in pos. 2 with spring centered	P. 102
9-3	YLMB54093	Detent in pos. 1 with spring centered	P. 102
8ED3+RV-KE1R3	YLMB54201	1S: ON/OFF Electro-Hydraulic control kit with pilot and drain line+backpressure valve (12/24 VDC)	P. 99
8ED3+RV-KE2R3	YLMB54202	2S: ON/OFF Electro-Hydraulic control kit with pilot and drain line+backpressure valve (12/24 VDC)	P. 99
8ED3+RV-KE3R3	YLMB54203	3S: ON/OFF Electro-Hydraulic control kit with pilot and drain line+backpressure valve (12/24 VDC)	P. 99
8ED3+RV-KE4R3	YLMB54204	4S: ON/OFF Electro-Hydraulic control kit with pilot and drain line+backpressure valve (12/24 VDC)	P. 99
8ED3+RV-KE5R3	YLMB54205	5S: ON/OFF Electro-Hydraulic control kit with pilot and drain line+backpressure valve (12/24 VDC)	P. 99
8ED3+RV-KE6R3	YLMB54206	6S: ON/OFF Electro-Hydraulic control kit with pilot and drain line+backpressure valve (12/24 VDC)	P. 99

MB-5

Monoblock Directional Control Valves

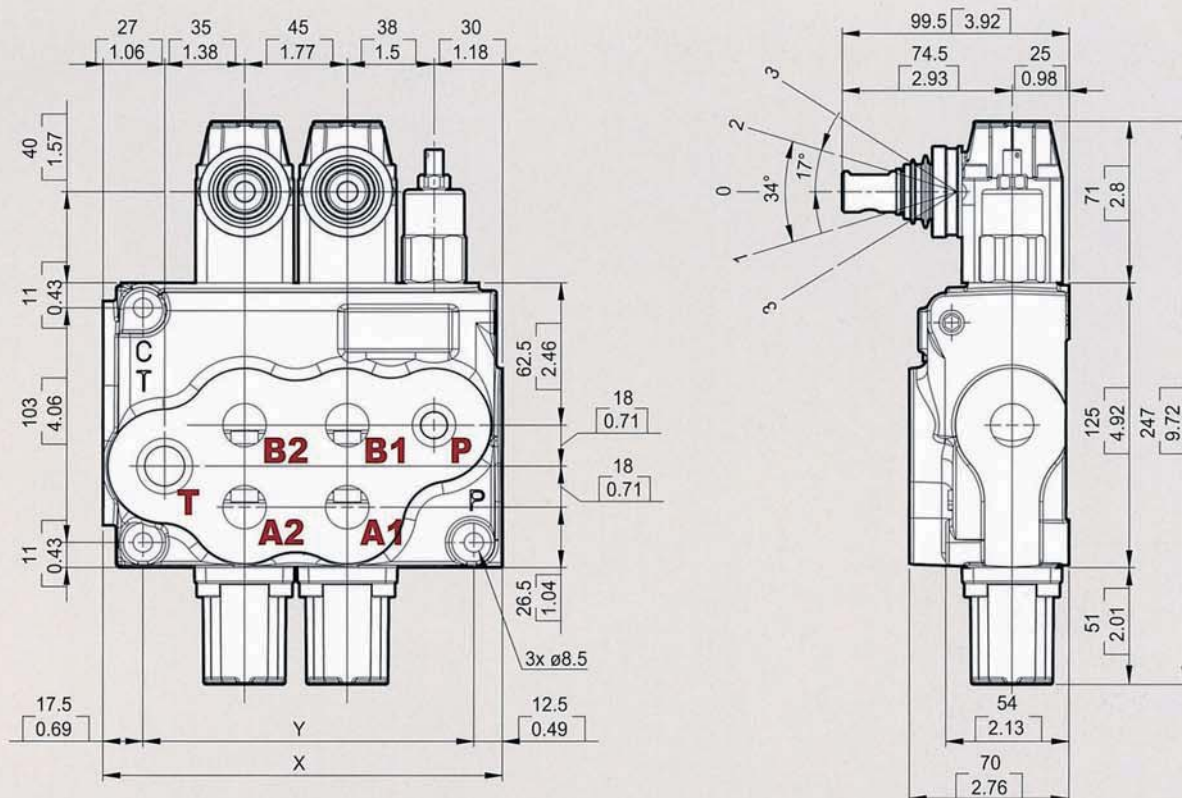


4: B Side Spool Positioners			
TYPE	CODE	DESCRIPTION	PAGE
8ER3+KE1S0	YLMB54401	1S: ON/OFF Electro-hydraulic control kit with collector kit for external pilot and drain	P. 100
8ER3+KE2S0	YLMB54402	2S: ON/OFF Electro-hydraulic control kit with collector kit for external pilot and drain	P. 100
8ER3+KE3S0	YLMB54403	3S: ON/OFF Electro-hydraulic control kit with collector kit for external pilot and drain	P. 100
8ER3+KE4S0	YLMB54404	4S: ON/OFF Electro-hydraulic control kit with collector kit for external pilot and drain	P. 100
8ER3+KE5S0	YLMB54405	5S:ON/OFF Electro-hydraulic control kit with collector kit for external pilot and drain	P. 100
8ER3+KE6S0	YLMB54406	6S: ON/OFF Electro-hydraulic control kit with collector kit for external pilot and drain	P. 100

5: A Side (optional)			
TYPE	CODE	DESCRIPTION	PAGE
L	YLMB55000	Standard lever box	P. 94
SLP	YLMB55001	Without lever box, with dust-proof plate	P. 94
LCB	YLMB55002	Joystick lever for 2 section operation	P. 95
TQ	YLMB55003	Flexible cable connection	P. 96

MB-5 Dimensions

Monoblock Directional Control Valves



Standard threads

Ports	Inlet P	A and B	Outlet T and carry-over C
BSP	G1/2	G1/2	G3/4
UN-UNF	1" 1/16-12 UN (SAE 12)	7/8-14 UNF (SAE 10)	1" 1/16-12 UN (SAE 12)
METRIC	M18x1.5	M18x1.5	M22x1.5

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

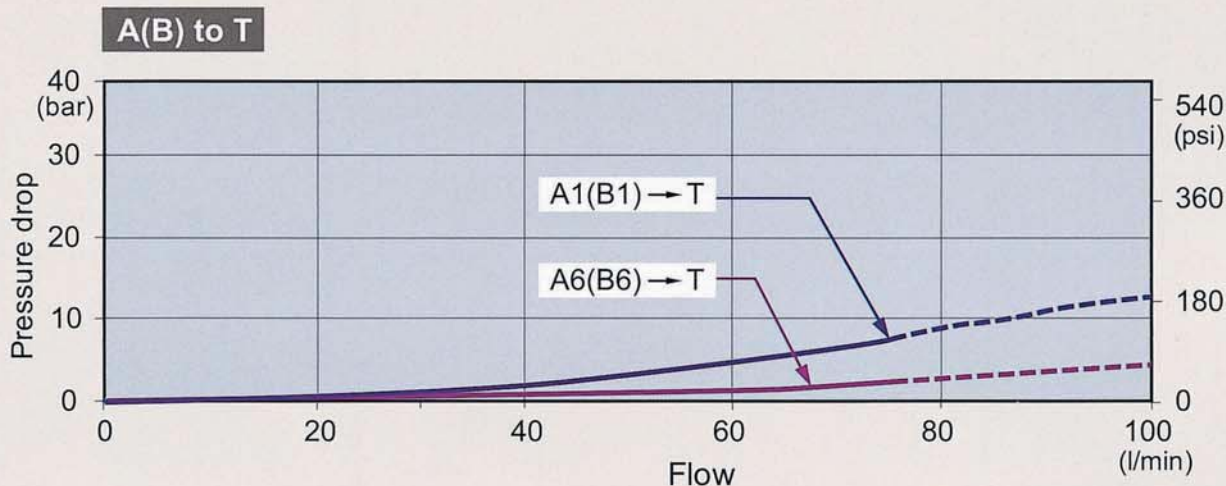
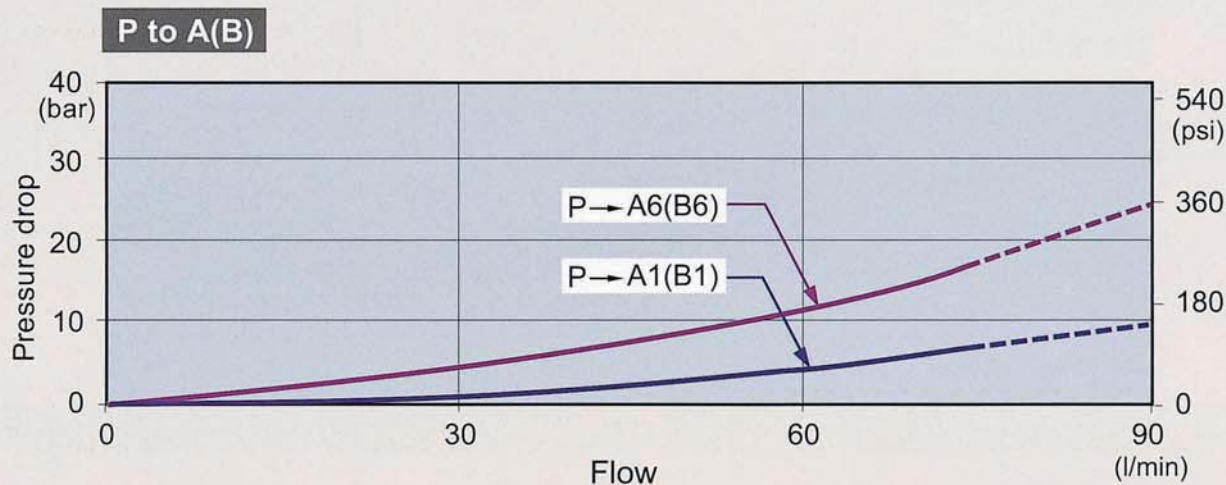
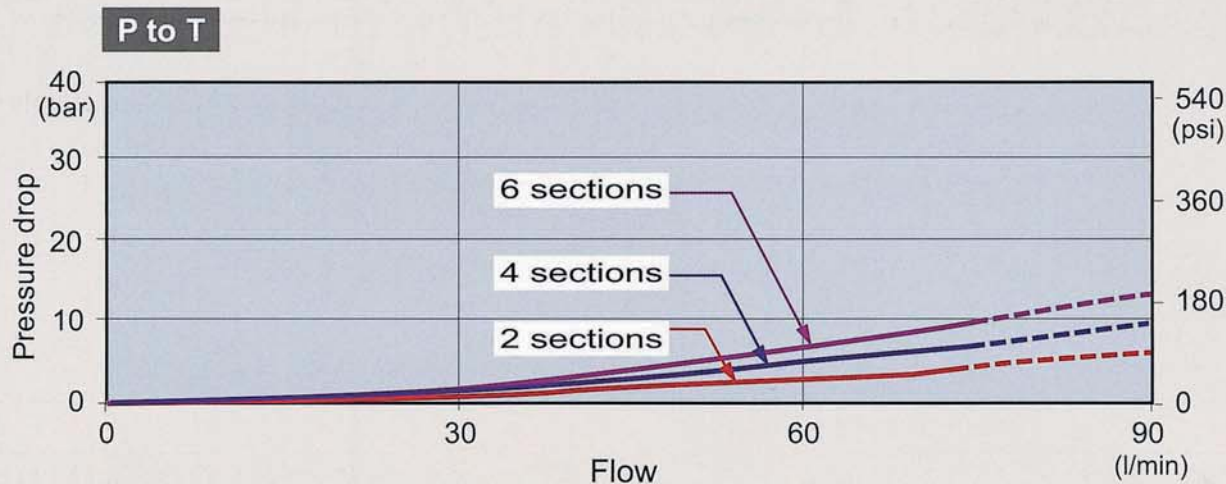
Standard dimensions

TYPE	X		Y	
	mm	in	mm	in
MB5 /1S	130	5.12	100	3.94
MB5 /2S	174.5	6.87	145	5.71
MB5 /3S	219.5	8.64	190	7.48
MB5 /4S	264.5	10.41	235	9.25
MB5 /5S	309.5	12.19	280	11.02
MB5 /6S	354.5	13.96	325	12.80

MB-5 Performance curve chart

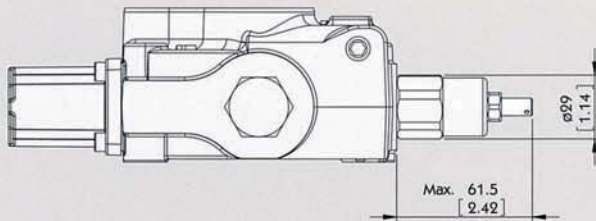
Monoblock Directional Control Valves

MB-5

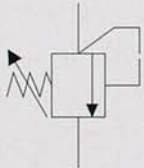


MB-5 Inlet Relief (Optional) Monoblock Directional Control Valves

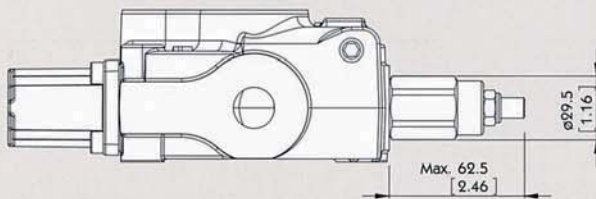
Type AG



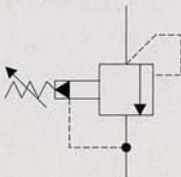
Direct pressure relief valve:



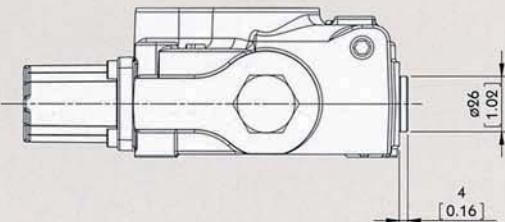
Type XAG



Pilot operated pressure relief valve:



Type SV



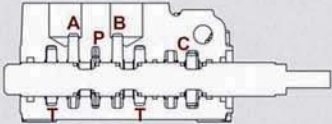
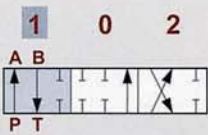
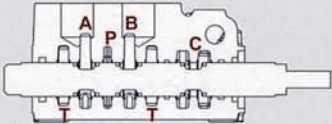
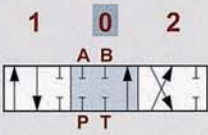
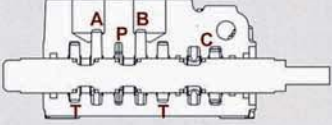
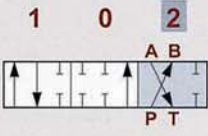
Relief valve blanking plug:



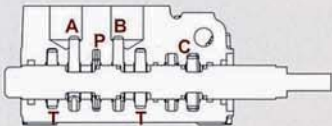
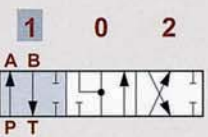
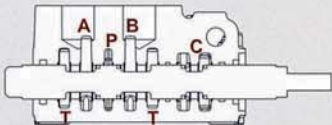
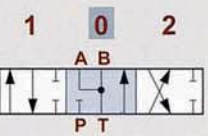
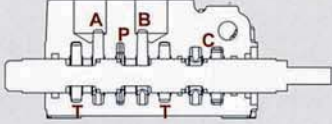
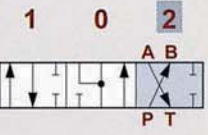
MB-5 Spool Options

Monoblock Directional Control Valves

TYPE 1

	<p>P → A</p> <p>B → T</p> <p>C closed</p>	
	<p>P & T & A & B closed</p> <p>C open</p>	
	<p>P → B</p> <p>A → T</p> <p>C closed</p>	

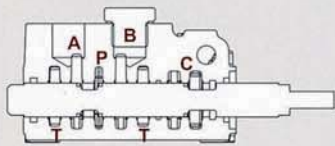
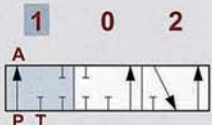
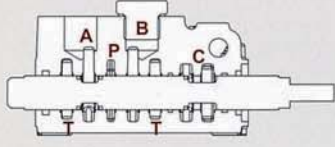
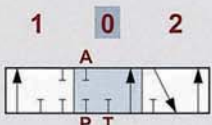
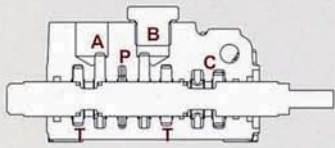
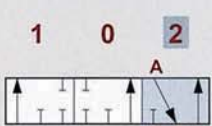
TYPE 2

	<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>	
	<p>P → B</p> <p>A → T</p> <p>C closed</p>	

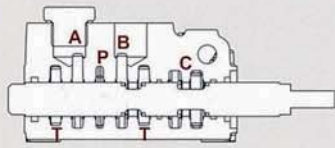
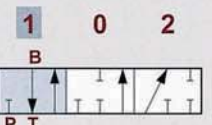
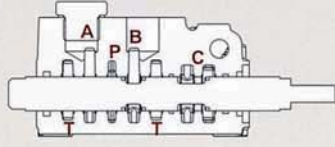
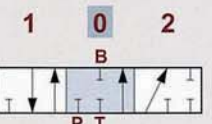
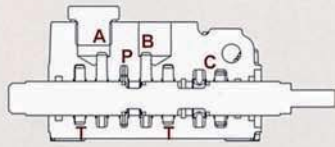
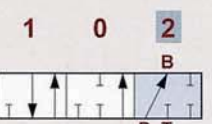
MB-5 Spool Options

Monoblock Directional Control Valves

TYPE 3

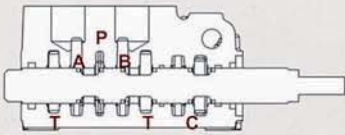
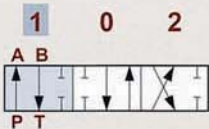
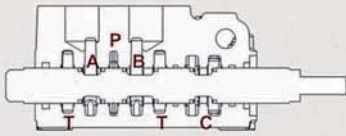
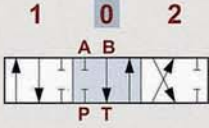
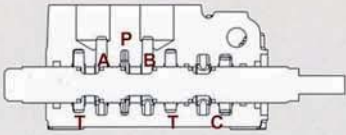
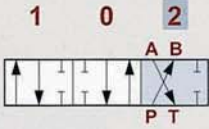
	<p>P → A T & C closed</p>	 <p>"B" port plugged</p>
	<p>P & A & T closed C open</p>	 <p>"B" port plugged</p>
	<p>A → T P closed C open</p>	 <p>"B" port plugged</p>

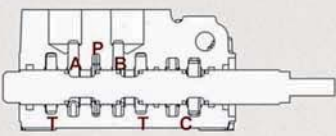
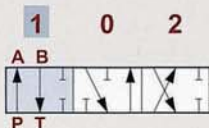
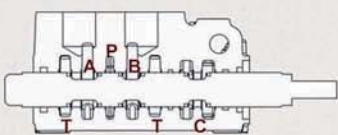
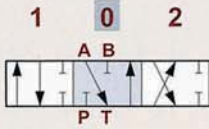
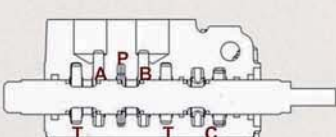
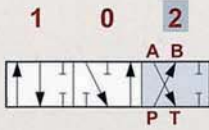
TYPE 4

	<p>B → T P closed C open</p>	 <p>"A" port plugged</p>
	<p>P & B & T closed C open</p>	 <p>"A" port plugged</p>
	<p>P → B P & T closed</p>	 <p>"A" port plugged</p>

MB-5 spool Options

Monoblock Directional Control Valves

TYPE 5		
	P → A B → T C closed	
	B → T P & A closed C open	
	P → B A → T C closed	

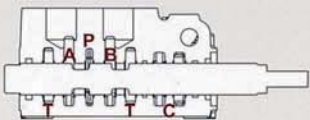
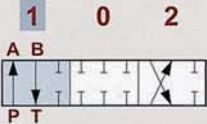
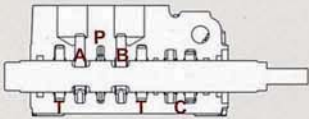
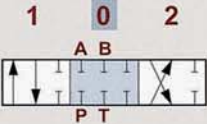
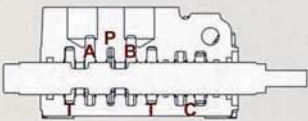
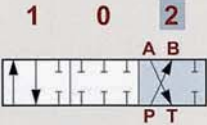
TYPE 6		
	P → A B → T C closed	
	A → T P & B closed C open	
	P → B A → T C closed	

MB-5 Spool Options

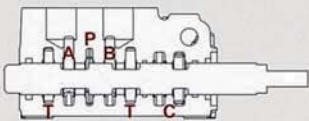
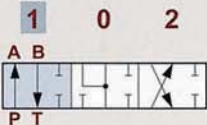
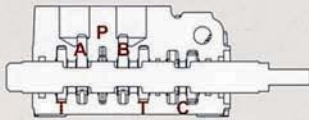
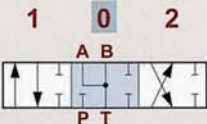
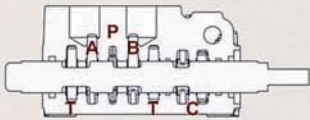
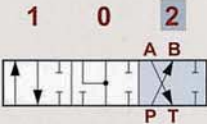
Monoblock Directional Control Valves

MB-5

TYPE 9

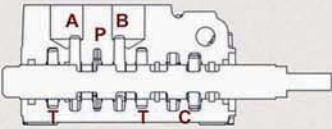
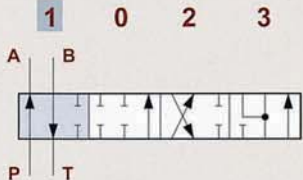
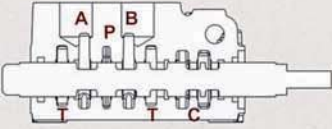
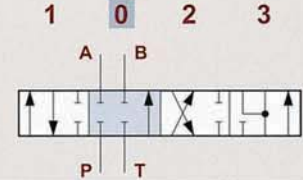
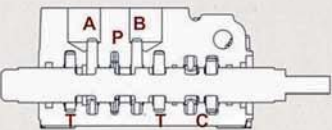
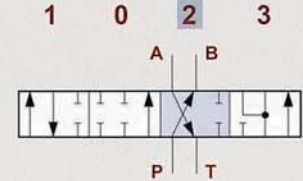
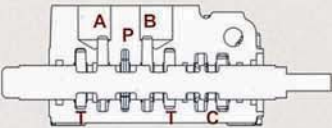
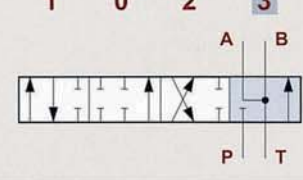
	<p>P → A</p> <p>B → T</p> <p>C closed</p>	
	<p>P & T & A & B closed</p> <p>C closed</p>	
	<p>P → B</p> <p>A → T</p> <p>C closed</p>	

TYPE 10

	<p>P → A</p> <p>B → T</p> <p>C closed</p>	
	<p>A & B → T</p> <p>P & C closed</p>	
	<p>P → B</p> <p>A → T</p> <p>C closed</p>	

MB-5 Spool Options

Monoblock Directional Control Valves

TYPE 5DY		NOTE: WITH SPECIAL BODY AND SPECIAL POSITIONER	
	P → A B → T C closed		
	P & T & A & B closed C open		
	P → B A → T C closed		
	A & B → T P closed C open		

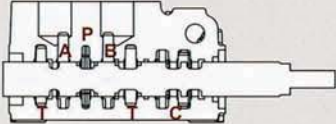
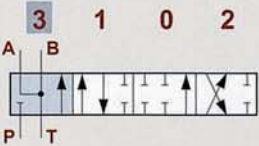
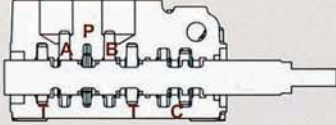
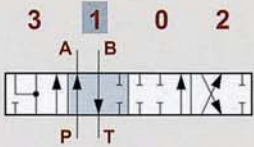
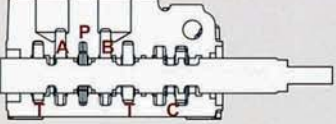
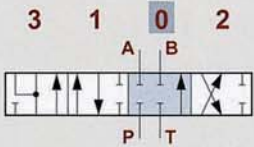

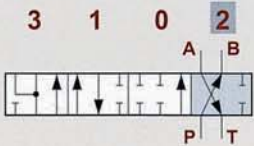
MB-5 Spool Options

Monoblock Directional Control Valves

MB-5

TYPE 5PY

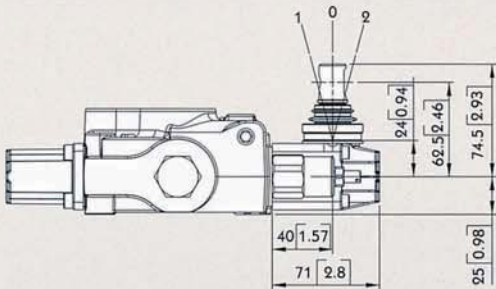
NOTE: WITH SPECIAL BODY AND SPECIAL POSITIONER

	<p>A & B → P</p> <p>P closed</p> <p>C open</p>	
	<p>P → A</p> <p>B → T</p> <p>C closed</p>	
	<p>P & T & A & B closed</p> <p>C open</p>	
	<p>P → B</p> <p>A → T</p> <p>C closed</p>	

MB-5 A Side

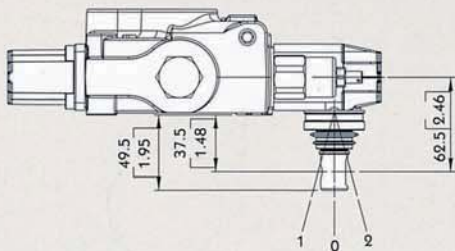
Monoblock Directional Control Valves

Type L



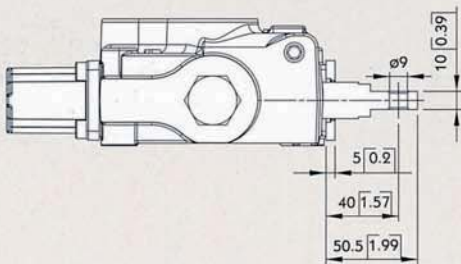
Type L :
STANDART LEVER KIT

Type R



Type R :
STANDART LEVER KIT
(ROTATED 180 DEGREE)

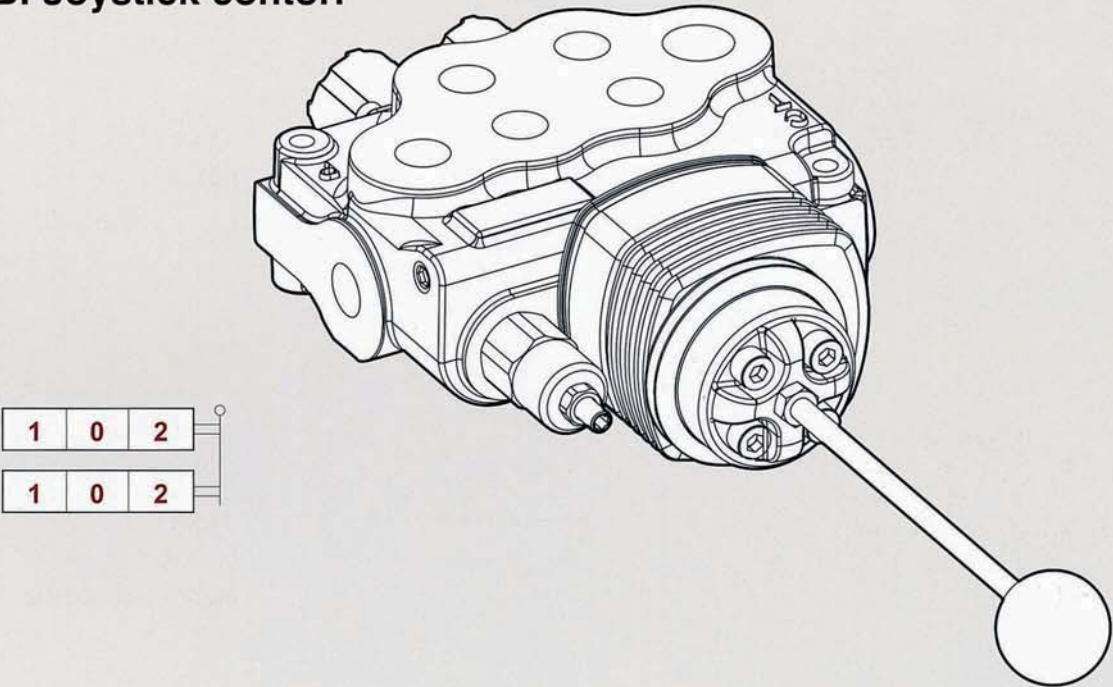
Type SLP



Type SLP :
WITH DUST-PROOF PLATE

MB-5 A Side Monoblock Directional Control Valves

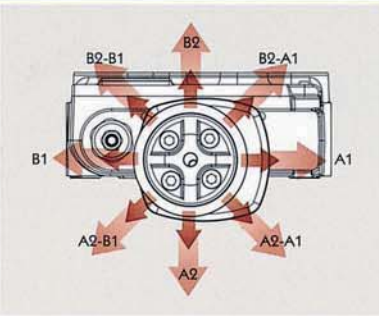
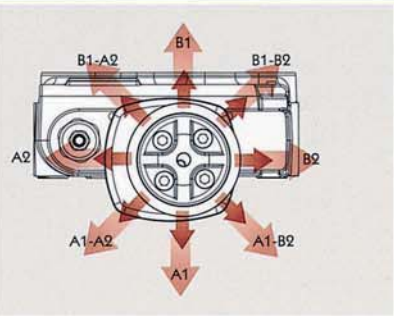
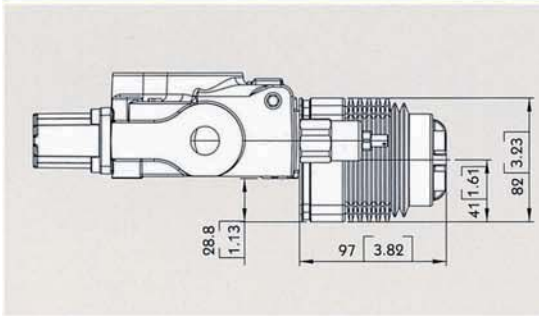
LCB: Joystick control



Type LCB

LCB1

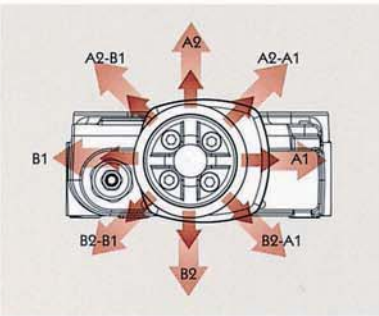
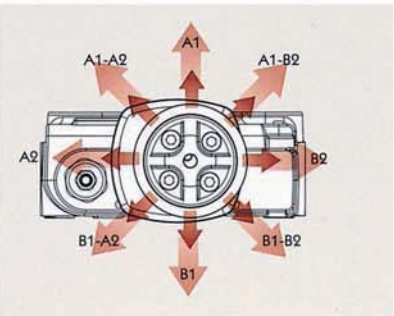
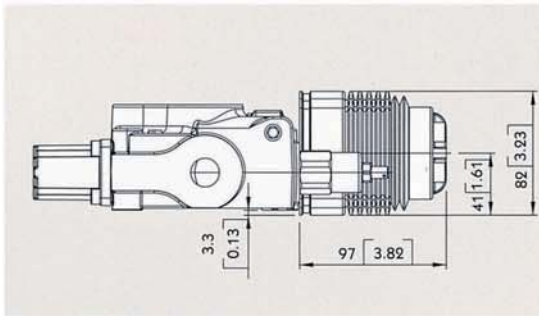
LCB2



Type LCB

LCB3

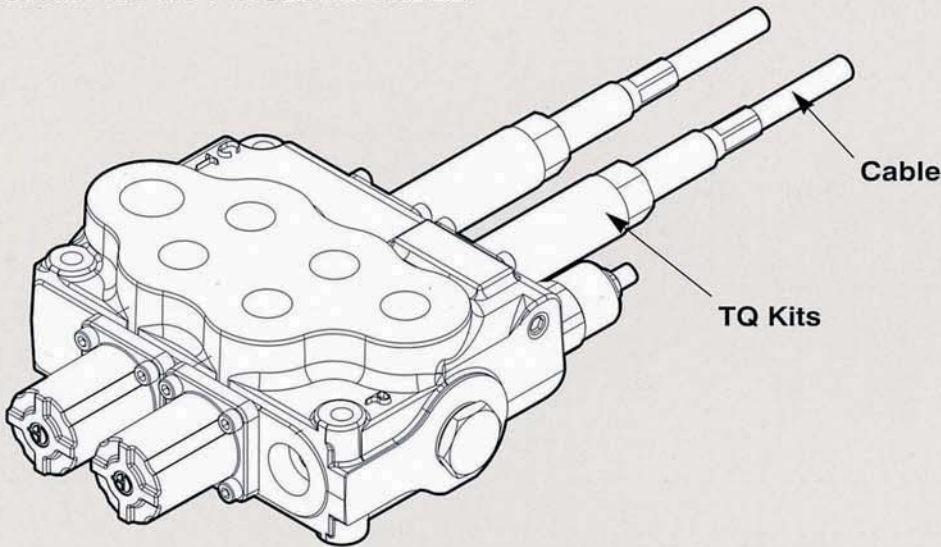
LCB4



MB-5 A Side

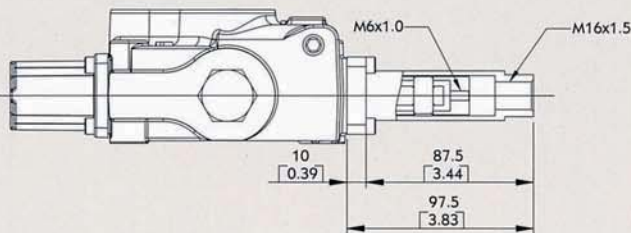
Monoblock Directional Control Valves

Note : CONNECTION KIT NOT INCLUDE CABLE



MB-5

Type TQ



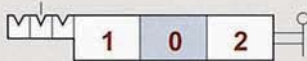
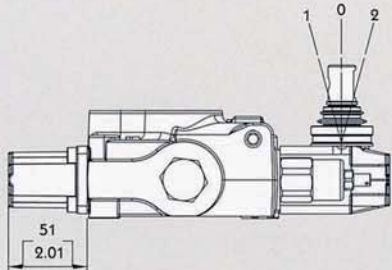
TQ Kit:



MB-5 B Side

Monoblock Directional Control Valves

Type 6



6-1 Kit:
DETENT IN POS. 1-0-2, WITHOUT SPRING CENTERED

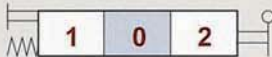
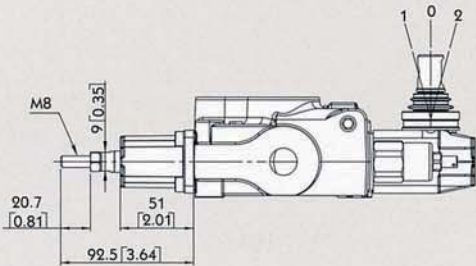


6-2 Kit:
2 POSITIONS, DETENT IN POS. 0-2, WITHOUT SPRING CENTERED



6-3 Kit:
2 POSITIONS, DETENT IN POS. 1-0, WITHOUT SPRING CENTERED

Type 8D2



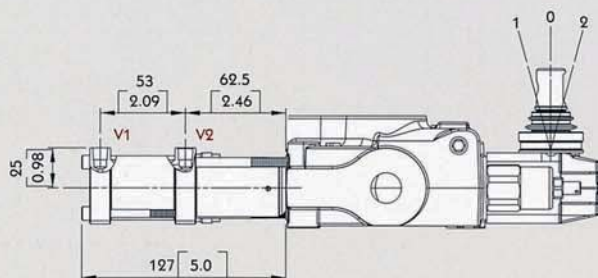
8D2 Kit:
WITH SPRING RETURN TO NEUTRAL POSITION AND PIN WITH M8 MALE THREAD FOR DUAL CONTROL

MB-5 B Side

Monoblock Directional Control Valves

Type 8P

V1 & V2: NPT 1/8 - 27



Operating feature :

PILOT PRESSURE (MIN.): 6 BAR / 87 PSI

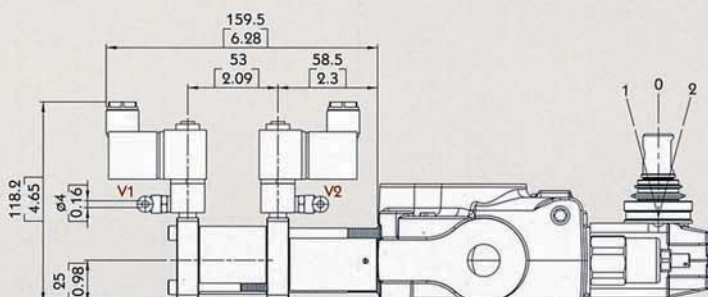
PILOT PRESSURE (MAX.): 12 BAR / 174 PSI

ON/OFF PNEUMATIC KIT



MB-5

Type 8EP3

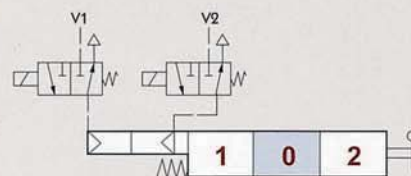


Solenoid operating features :

NOMINAL VOLTAGE: 24VDC

NOMINAL VOLTAGE TOLERANCE: $\pm 10\%$

POWER RATING: 5W

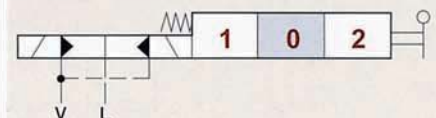
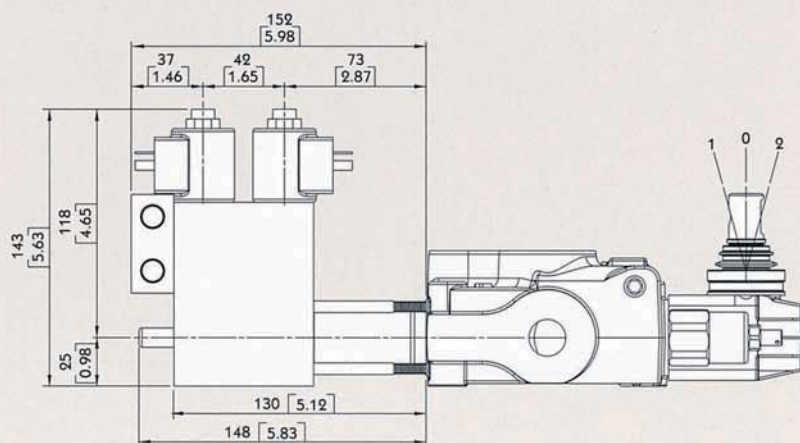
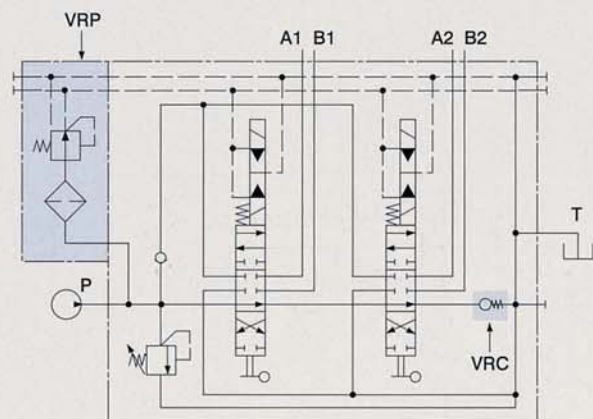
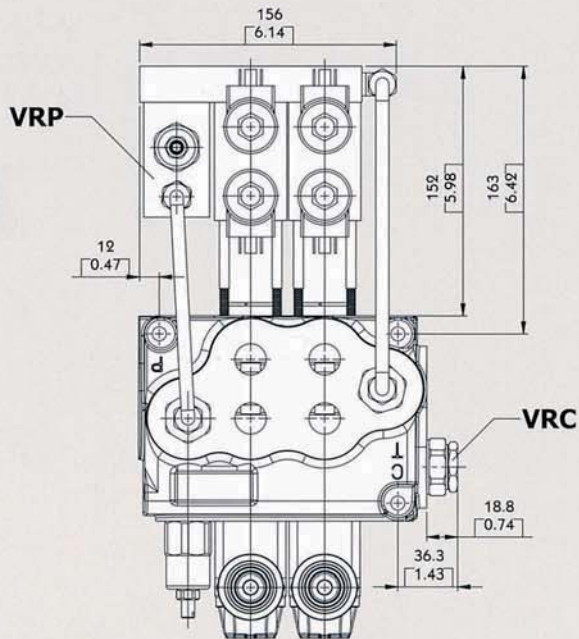


MB-5 B Side

Monoblock Directional Control Valves

MB-5

Type 8ED3



Operating features :

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

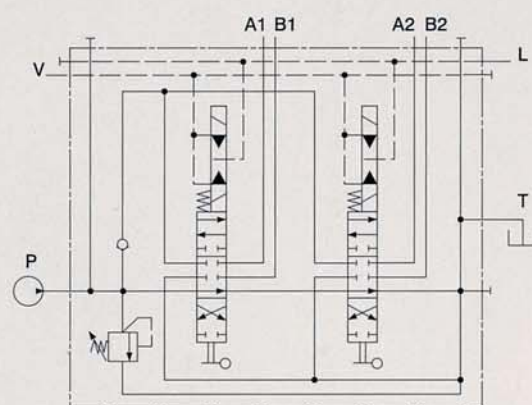
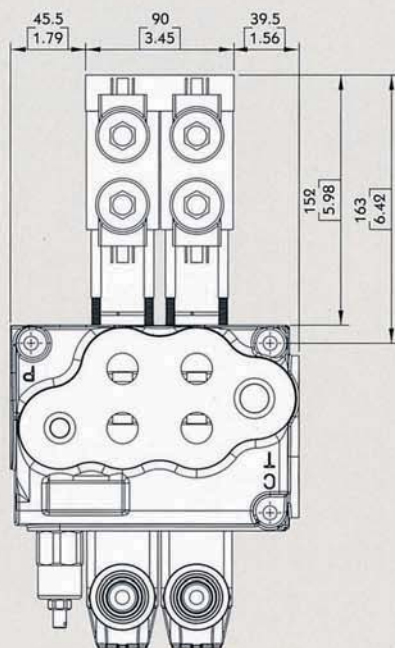
Coil features :

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

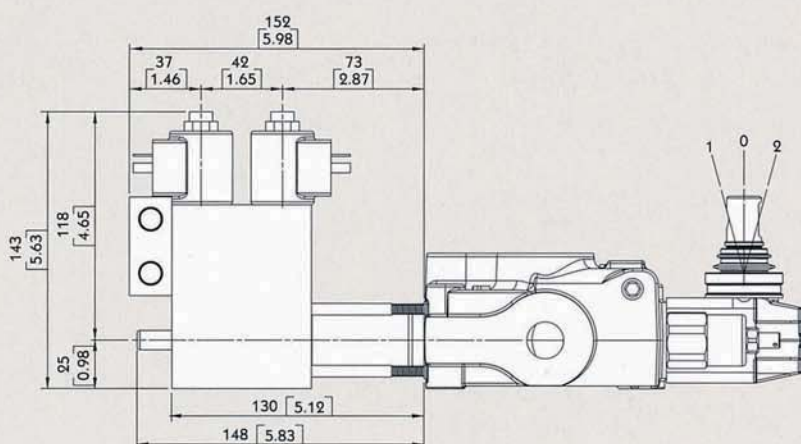
MB-5 B Side

Monoblock Directional Control Valves

Type 8ER3



MB-5



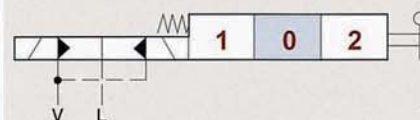
Operating features :

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

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

Coil features :

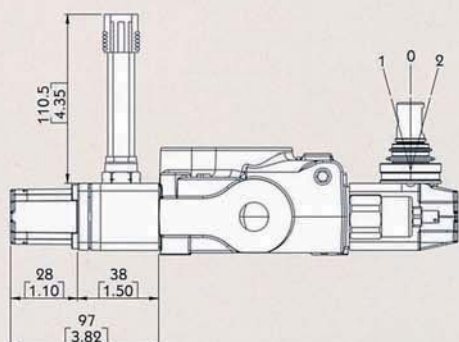
NOMINAL VOLTAGE TOLERANCE: $\pm 10\%$
ELECTRIC POWER: 21 W
STANDARD VOLTAGE: 12 VDC / 24 VDC



MB-5 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:

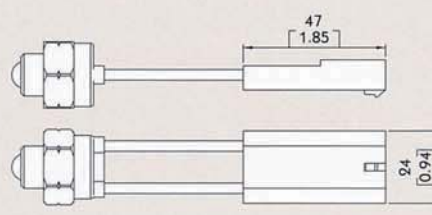
MICROSWITCH WITH MALE/FEMALE CONNECTOR, OPERATED IN POS. 2



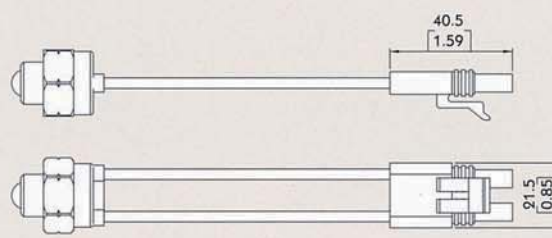
8MG3 Kit:

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

With NO contact (female connector with male end)



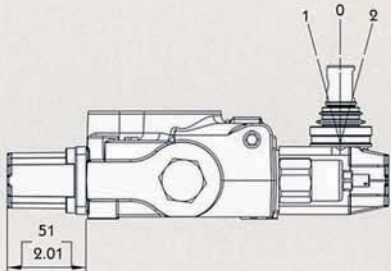



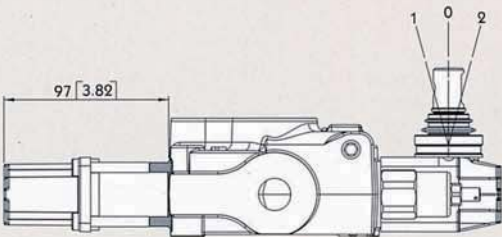
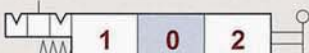
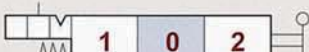
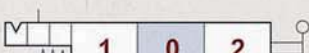
With NC contact (male connector with female end)



MB-5 B Side

Monoblock Directional Control Valves

MB-5

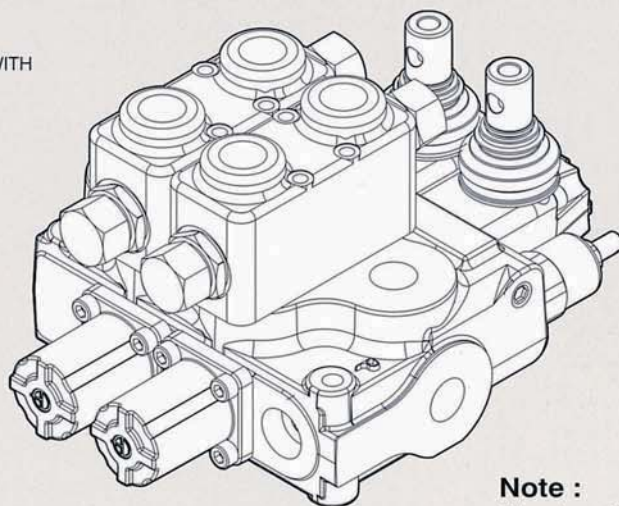
Type 8		
		8 Kit: SPRING RETURN TO NEUTRAL POSITION.
		8-1 Kit: SPRING RETURN TO NEUTRAL POSITION. (2 POSITIONS)
		8-2 Kit: SPRING RETURN TO NEUTRAL POSITION. (2 POSITIONS)
Type 9		
		9-1 Kit: DETENT IN POS. 1, 2 WITH SPRING CENTERED
		9-2 Kit: DETENT IN POS. 2 WITH SPRING CENTERED
		9-3 Kit: DETENT IN POS. 1 WITH SPRING CENTERED

MB-5 service and auxiliary valves

Monoblock Directional Control Valves

Anti-shock valves

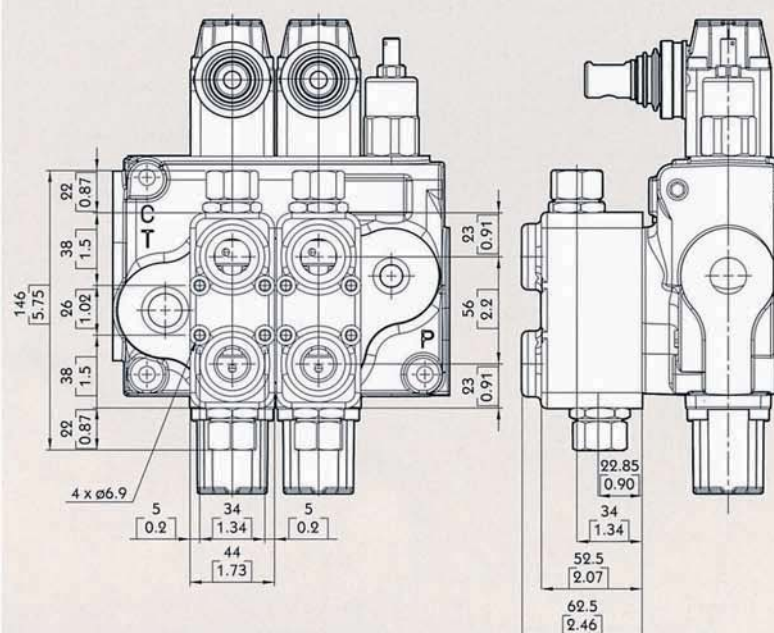
(CROSS RETURN TYPE, SUPPLIED WITH MOUNTING BLOCK)



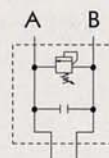
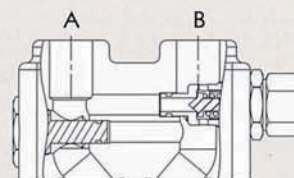
Note :

All service and auxiliary valves need special body

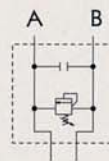
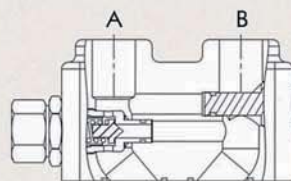
Type P



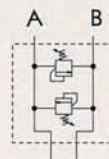
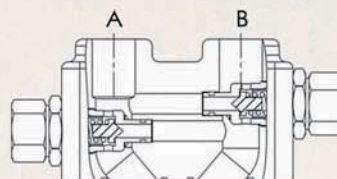
P1 Kit: YLMB56001, Block with valve on port A



P2 Kit: YLMB56002, Block with valve on port B



P3 Kit: YLMB56003, Block with valve on port A and B



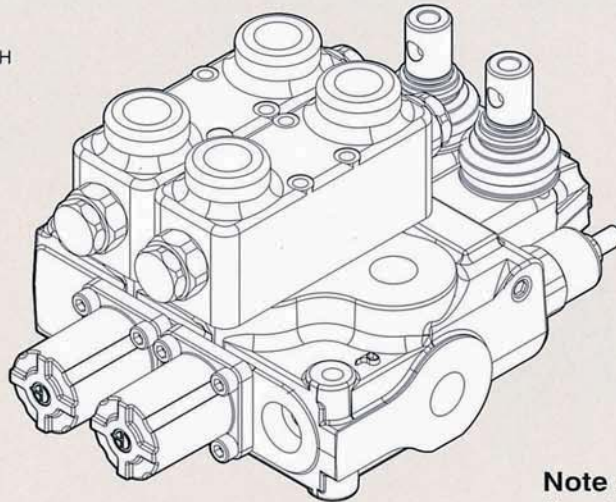
MB-5 service and auxiliary valves

Monoblock Directional Control Valves

MB-5

Pilot check valves

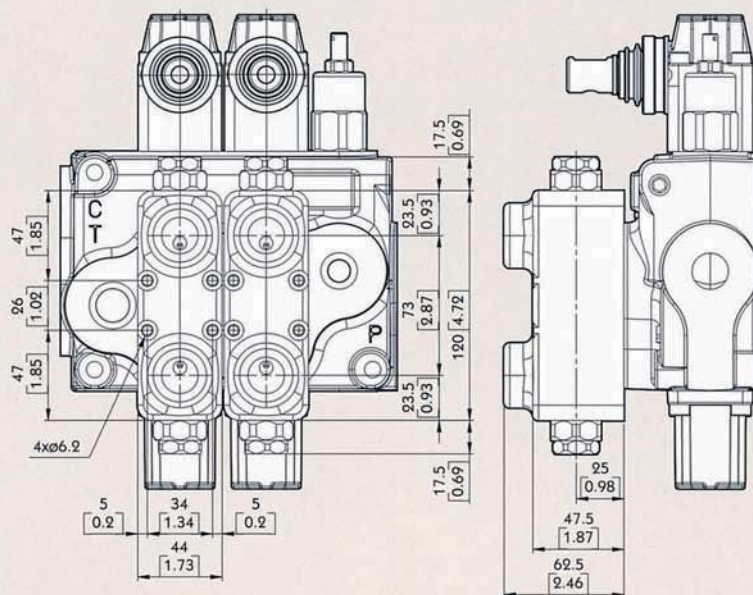
(WITH PRE-OPENING, SUPPLIED WITH MOUNTING BLOCK)



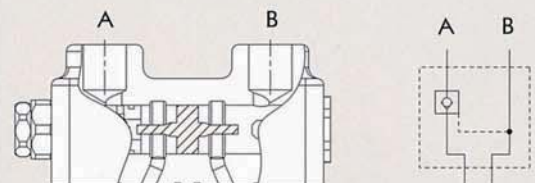
Note :

All service and auxiliary valves need special body

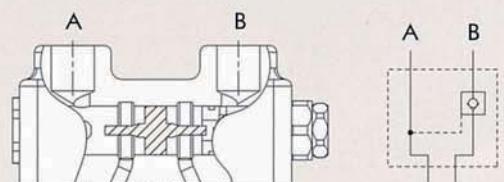
Type BSP Pilot check valves (With Pre-opening, supplied with mounting block)



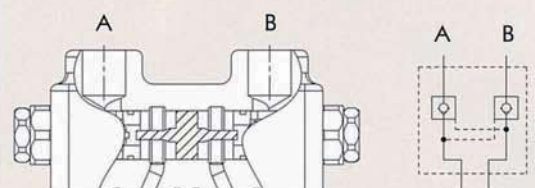
BSP1 Kit: YLMB57001, Block with valve on port A



BSP2 Kit: YLMB57002, Block with valve on port B



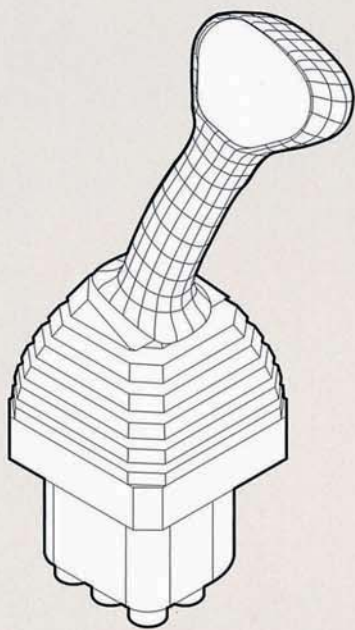
BSP3 Kit: YLMB57003, Block with valve on port A and B



MB-5 Accessories

Monoblock Directional Control Valves

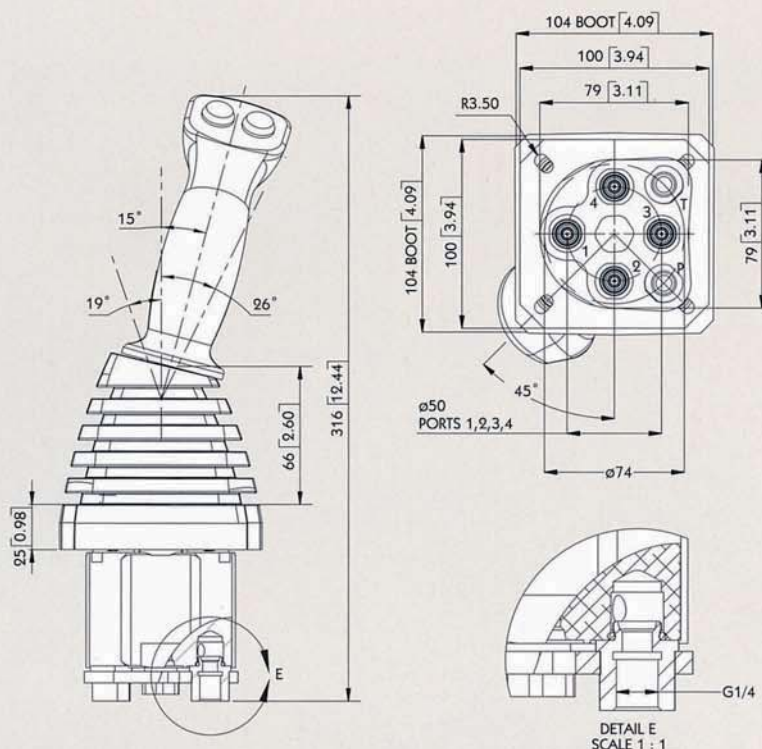
Type JS



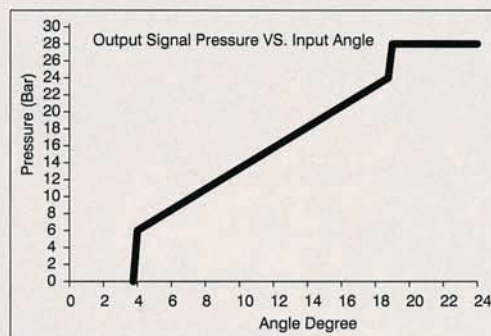
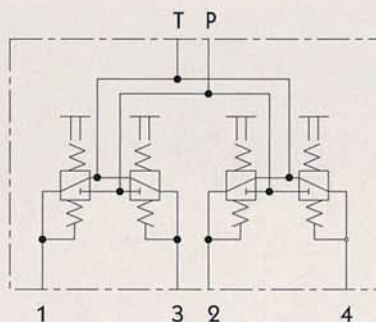
CODE: YLJS446 Hydraulic Pilot Valve - handle type

Specifications:

- This data sheet shows technical spec. with mineral oil of 46 mm²/s (cSt) viscosity at 40°C (104°F)
- Flow : 5 ~ 20 LPM
- Feeding pressure : 30 ~ 100 bar
- Max. backpressure : 3 bar
- Output pressure : see diagram
- Internal leakage at 30 bar : 18 ~ 24 cm³/min
- Fluid : mineral oil
- Fluid temperature : - 10 ~ 80°C
- Ambient temperature : - 40 ~ 60°C



HYDRAULIC SCHEME:



MB-5 Accessories

Monoblock Directional Control Valves

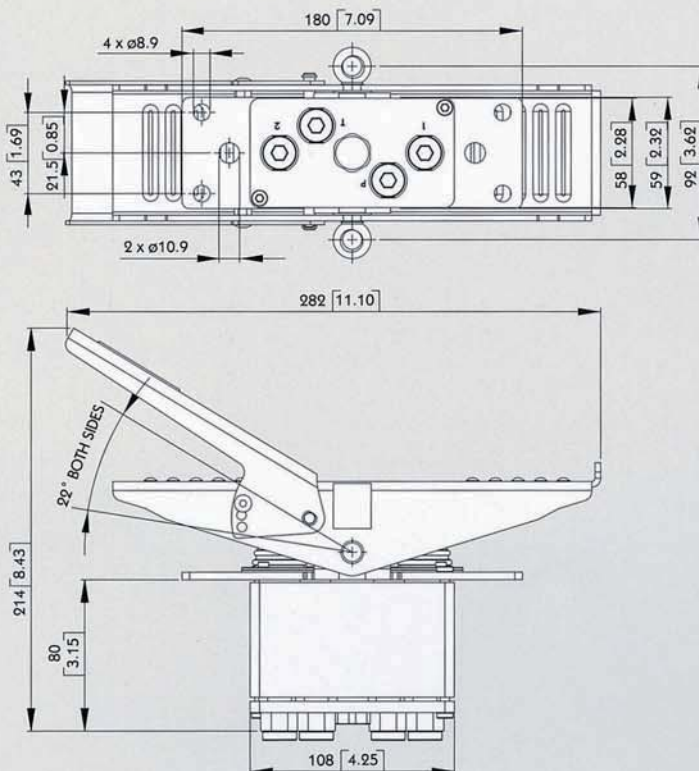
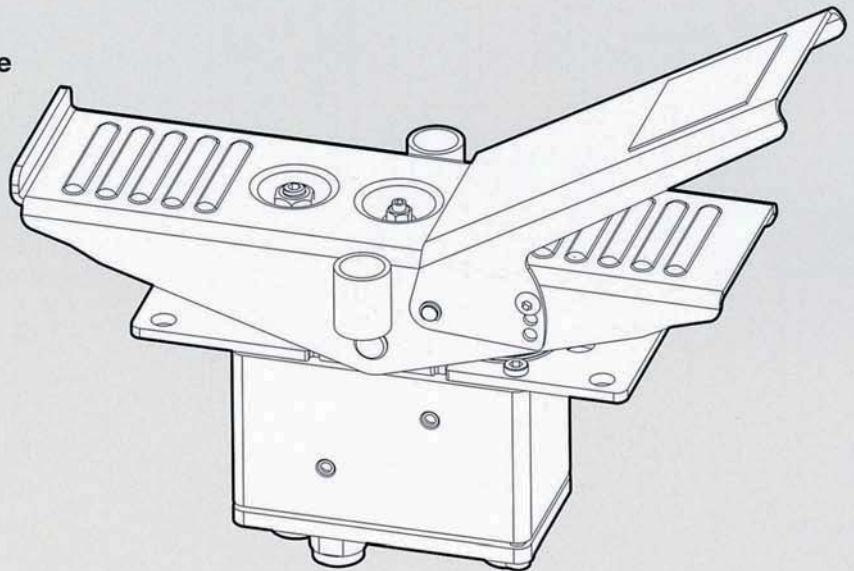
Type FP

MB-5

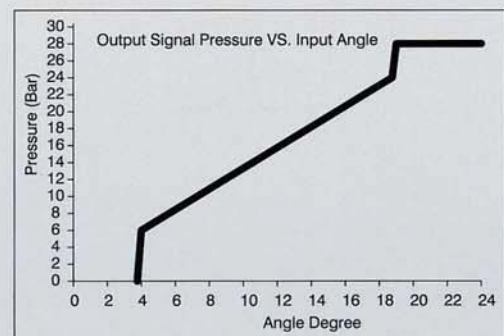
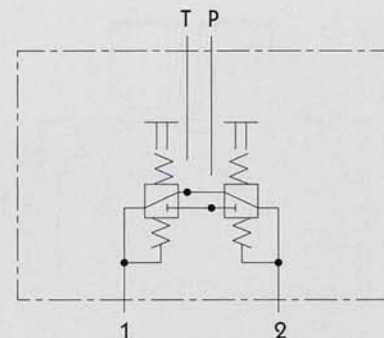
CODE: YLFP246 Hydraulic Pilot Valve - pedal type

Specifications:

- This data sheet shows technical spec. with mineral oil of 46 mm²/s (cSt) viscosity at 40°C (104°F)
- Flow : 5 ~ 20 LPM
- Feeding pressure : 30 ~ 100 bar
- Max. backpressure : 3 bar
- Output pressure : see diagram
- Internal leakage at 30 bar : 18 ~ 24 cm³/min
- Fluid : mineral oil
- Fluid temperature : - 10 ~ 80°C
- Ambient temperature : - 40 ~ 60°C



HYDRAULIC SCHEME:

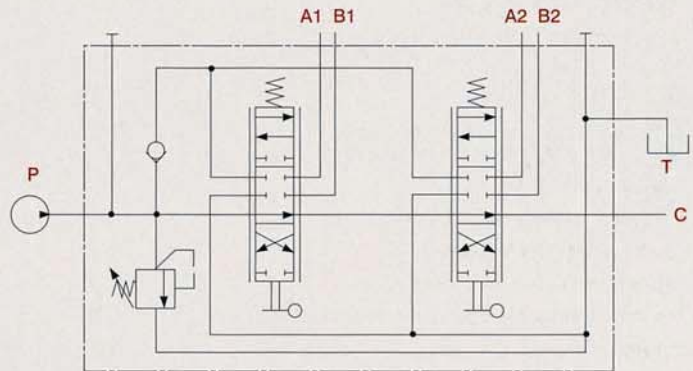
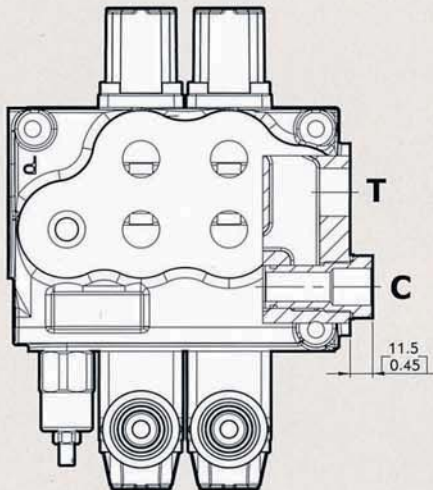


MB-5 Outlet

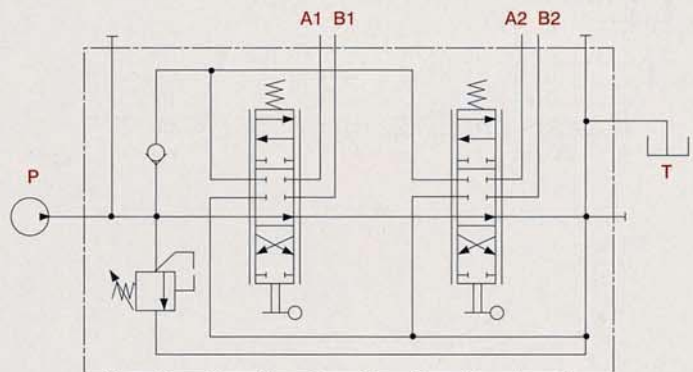
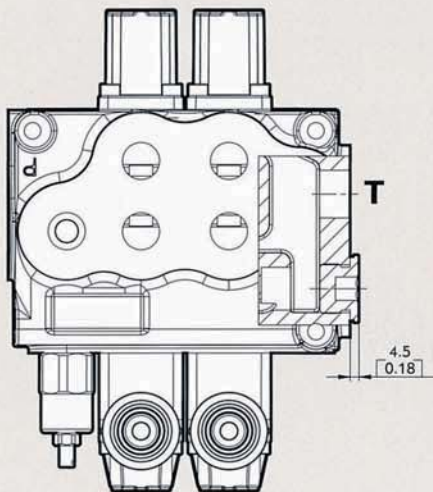
Monoblock Directional Control Valves

M8

Power Beyond Conversion plug
(Closed center plug)

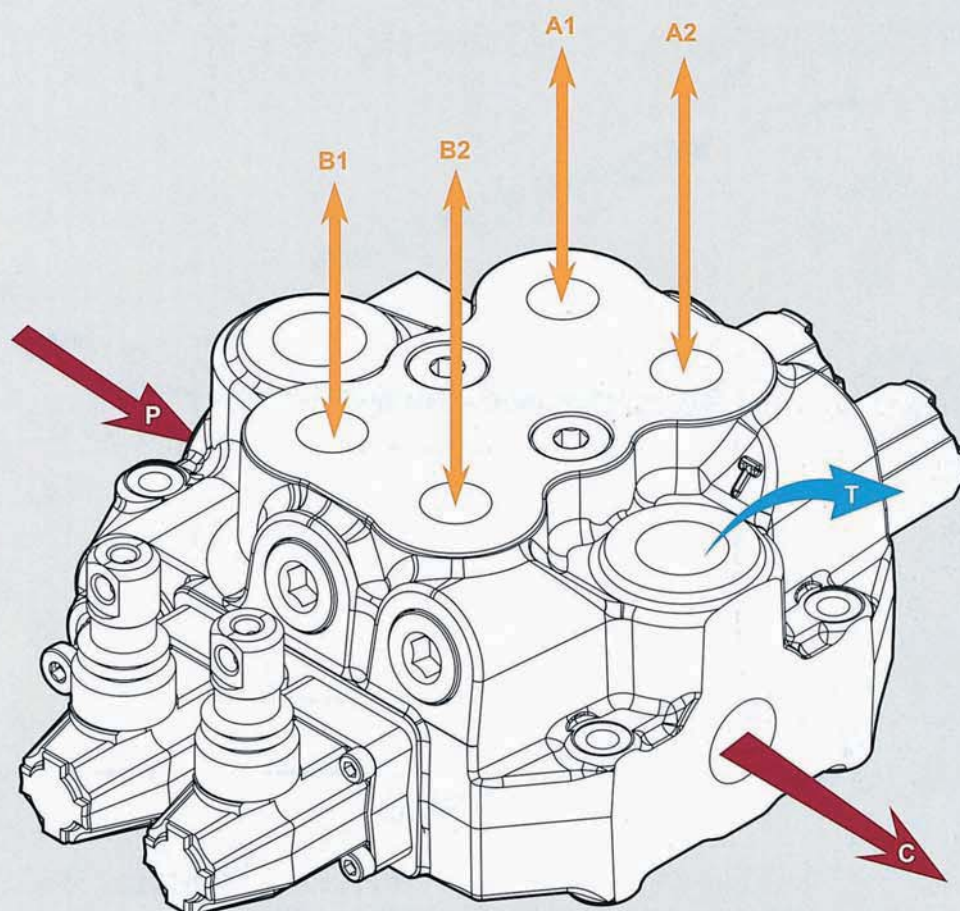


M3



MSB-5

Monoblock Directional Control Valves



MSB-5

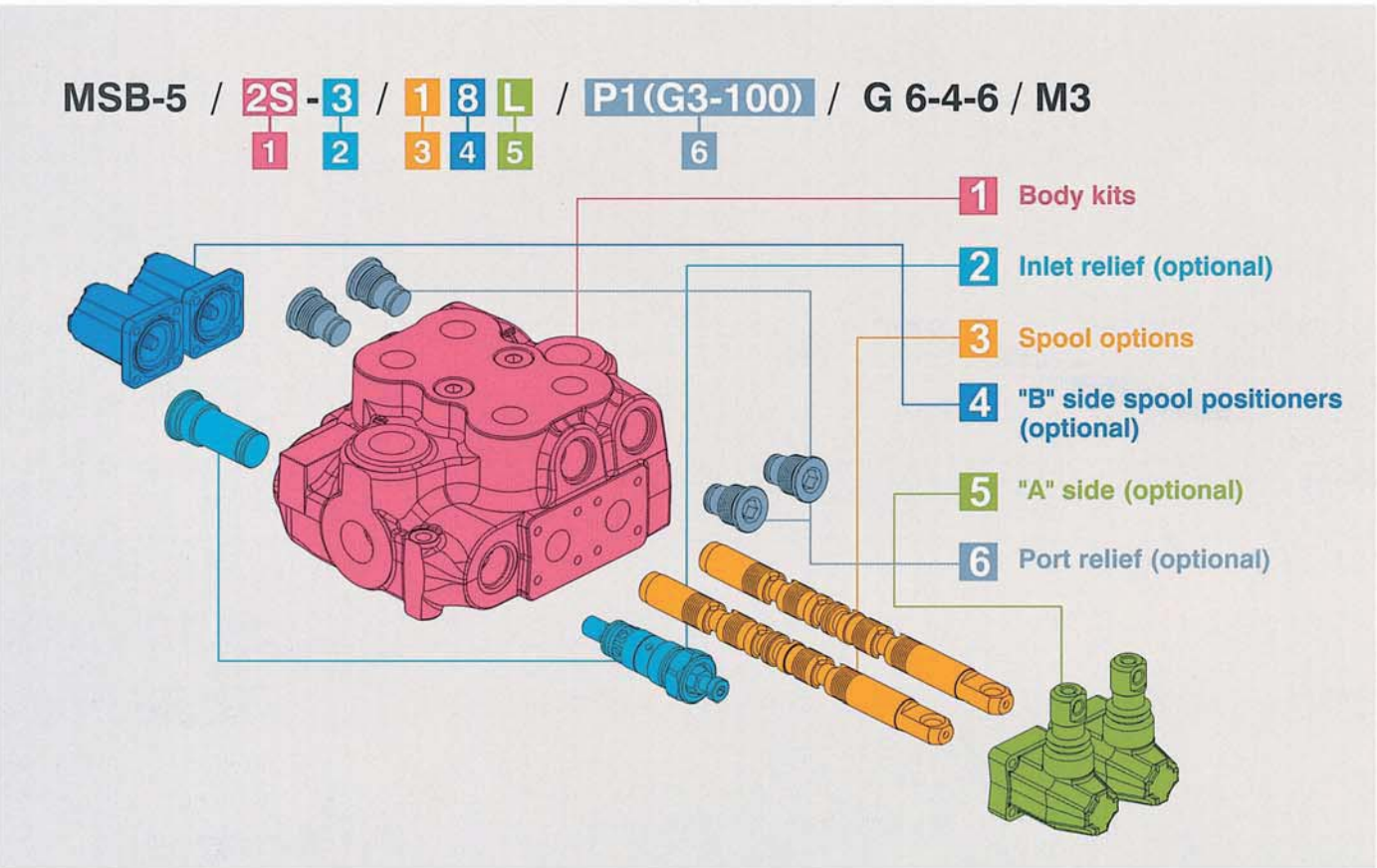
MSB-5 Specifications

Nominal flow rate		80 l/min	21 US gpm
Operating pressure (maximum)	parallel or tandem circuit	315 bar	4600 psi
	series circuit	250 bar	3600 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 mm²/s	from 15 to 75 cst
	min.	12 mm²/s	12 cst
	max.	400 mm²/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.

MSB-5

Monoblock Directional Control Valves



1:	Body Kits	WITHOUT SERVICE PORT VALVES PREARRANGEMENT (INCLUDE BODY, SEALS, RINGS AND LOAD CHECK VALVE.)
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
XWG	YLMSB52001	Pilot operated pressure relief valve Range 25 to 315 bar/ 360 to 4600 psi, standard setting 125 bar/ 1800 psi	P. 114
WG-2	YLMSB52002	Direct pressure relief valve Range 80 to 160 bar/ 1150 to 2300 psi, standard setting 125 bar/ 1800 psi	P. 114
WG-3	YLMSB52003	Direct pressure relief valve Range 125 to 250 bar/ 1800 to 3600 psi, standard setting 175 bar/ 2500 psi	P. 114
WG-4	YLMSB52004	Direct pressure relief valve Range 200 to 315 bar/ 2900 to 4600 psi, standard setting 220 bar/ 3200 psi	P. 114
SV	YLMSB52100	Relief valve blanking plug	P. 114

3: Spool Options			
TYPE	CODE	DESCRIPTION	PAGE
1	YLMSB53001	Double acting, 3 positions, with A, B closed in neutral position	P. 115
2	YLMSB53002	Double acting, 3 positions, with A, B open to Tank in neutral position	P. 115
3	YLMSB53003	Single acting on A closed in neutral position, 3 positions, B plugged	P. 116
4	YLMSB53004	Single acting on B closed in neutral position, 3 positions, A plugged	P. 116
5	YLMSB53005	Double acting, 3 positions, with B open to Tank in neutral position	P. 117
6	YLMSB53006	Double acting, 3 positions, with A open to Tank in neutral position	P. 117
7	YLMSB53007	Single acting on A open to Tank in neutral position, 3 positions, B plugged	P. 118
8	YLMSB53008	Single acting on B open to Tank in neutral position, 3 positions, A plugged	P. 118

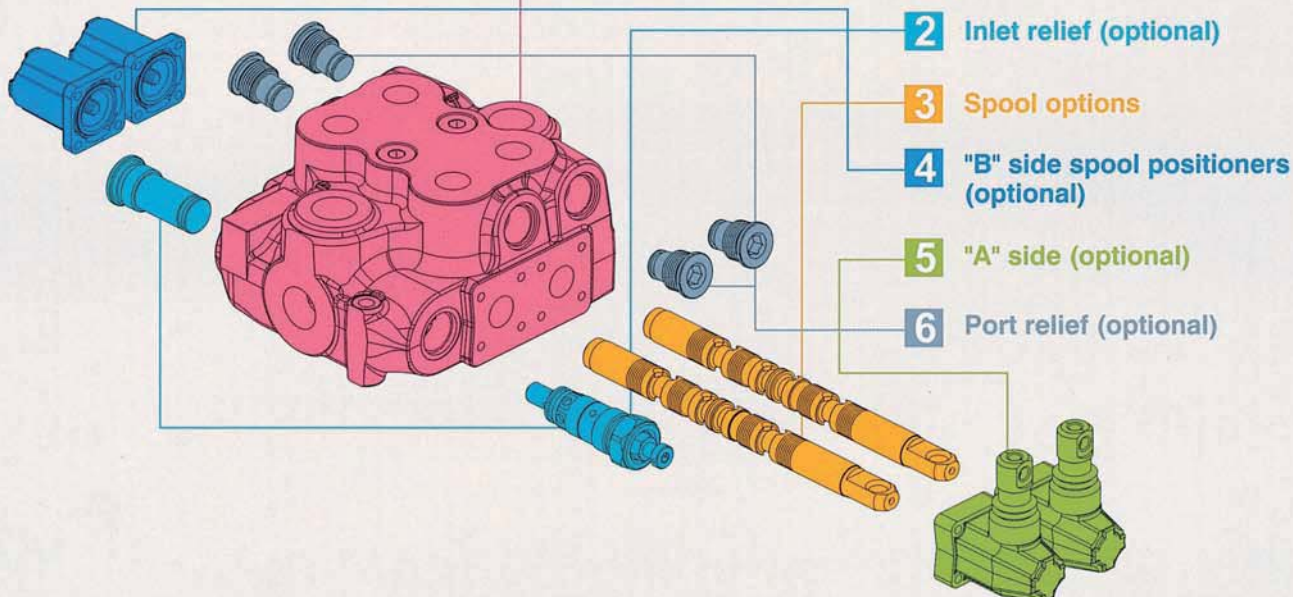
4: B Side Spool Positioners			
TYPE	CODE	DESCRIPTION	PAGE
6-1	YLWSN43061	Detent in pos. 1-0-2, without spring centered	P. 123
6-2	YLWSN43062	2 positions, detent in pos. 0-2, without spring centered	P. 123
6-3	YLWSN43063	2 positions, detent in pos. 1-0, without spring centered	P. 123
8D2	YLWSN43082	With spring return to neutral position and pin with M8 male thread for dual control	P. 123
8EP3	YLWSN44300	ON/OFF Electro-Pneumatic actuator	P. 124
8P	YLWSN43080	ON/OFF Pneumatic actuator	P. 124
8MG1 (NO)	YLWSN43801	Microswitch kit operated in pos. 1 (Normally Open)	P. 127
8MG2 (NO)	YLWSN43802	Microswitch kit operated in pos. 2 (Normally Open)	P. 127
8MG3 (NO)	YLWSN43803	Microswitch kit operated in pos. 1&2 (Normally Open)	P. 127
MG (NO)	YLWSN43804	Microswitch with NO terminal	P. 127
8MG1 (NC)	YLWSN438011	Microswitch kit operated in pos. 1 (Normally Closed)	P. 127
8MG2 (NC)	YLWSN438021	Microswitch kit operated in pos. 2 (Normally Closed)	P. 127
8MG3 (NC)	YLWSN438031	Microswitch kit operated in pos. 1&2 (Normally Closed)	P. 127
MG (NC)	YLWSN438041	Microswitch with NC terminal	P. 127
8	YLWSN43008	With spring return to neutral position	P. 128
8-1	YLWSN44801	2 positions, with spring centered from pos. 1	P. 128
8-2	YLWSN44082	2 positions, with spring centered from pos. 2	P. 128
9-1	YLWSN43091	Detent in pos. 1, 2 with spring centered	P. 128
9-2	YLWSN43092	Detent in pos. 2 with spring centered	P. 128
9-3	YLWSN43093	Detent in pos. 1 with spring centered	P. 128
8ED3+RV-KE1R3	YLMSB54201	1S: ON/OFF Electro-Hydraulic control kit with pilot and drain line+backpressure valve (12/24 VDC)	P. 125
8ED3+RV-KE2R3	YLMSB54202	2S: ON/OFF Electro-Hydraulic control kit with pilot and drain line+backpressure valve (12/24 VDC)	P. 125
8ED3+RV-KE3R3	YLMSB54203	3S: ON/OFF Electro-Hydraulic control kit with pilot and drain line+backpressure valve (12/24 VDC)	P. 125
8ED3+RV-KE4R3	YLMSB54204	4S: ON/OFF Electro-Hydraulic control kit with pilot and drain line+backpressure valve (12/24 VDC)	P. 125
8ED3+RV-KE5R3	YLMSB54205	5S: ON/OFF Electro-Hydraulic control kit with pilot and drain line+backpressure valve (12/24 VDC)	P. 125
8ED3+RV-KE6R3	YLMSB54206	6S: ON/OFF Electro-Hydraulic control kit with pilot and drain line+backpressure valve (12/24 VDC)	P. 125
8ER3+KE1S0	YLMSB54401	1S: ON/OFF Electro-hydraulic control kit with collector kit for external pilot and drain	P. 126
8ER3+KE2S0	YLMSB54402	2S: ON/OFF Electro-hydraulic control kit with collector kit for external pilot and drain	P. 126
8ER3+KE3S0	YLMSB54403	3S: ON/OFF Electro-hydraulic control kit with collector kit for external pilot and drain	P. 126
8ER3+KE4S0	YLMSB54404	4S: ON/OFF Electro-hydraulic control kit with collector kit for external pilot and drain	P. 126
8ER3+KE5S0	YLMSB54405	5S: ON/OFF Electro-hydraulic control kit with collector kit for external pilot and drain	P. 126
8ER3+KE6S0	YLMSB54406	6S: ON/OFF Electro-hydraulic control kit with collector kit for external pilot and drain	P. 126

MSB-5

Monoblock Directional Control Valves

MSB-5 / **2S** - **3** / **1** **8** **L** / **P1(G3-100)** / **G 6-4-6** / **M3**

1 **2** **3** **4** **5** **6**



5: A Side (Optional)

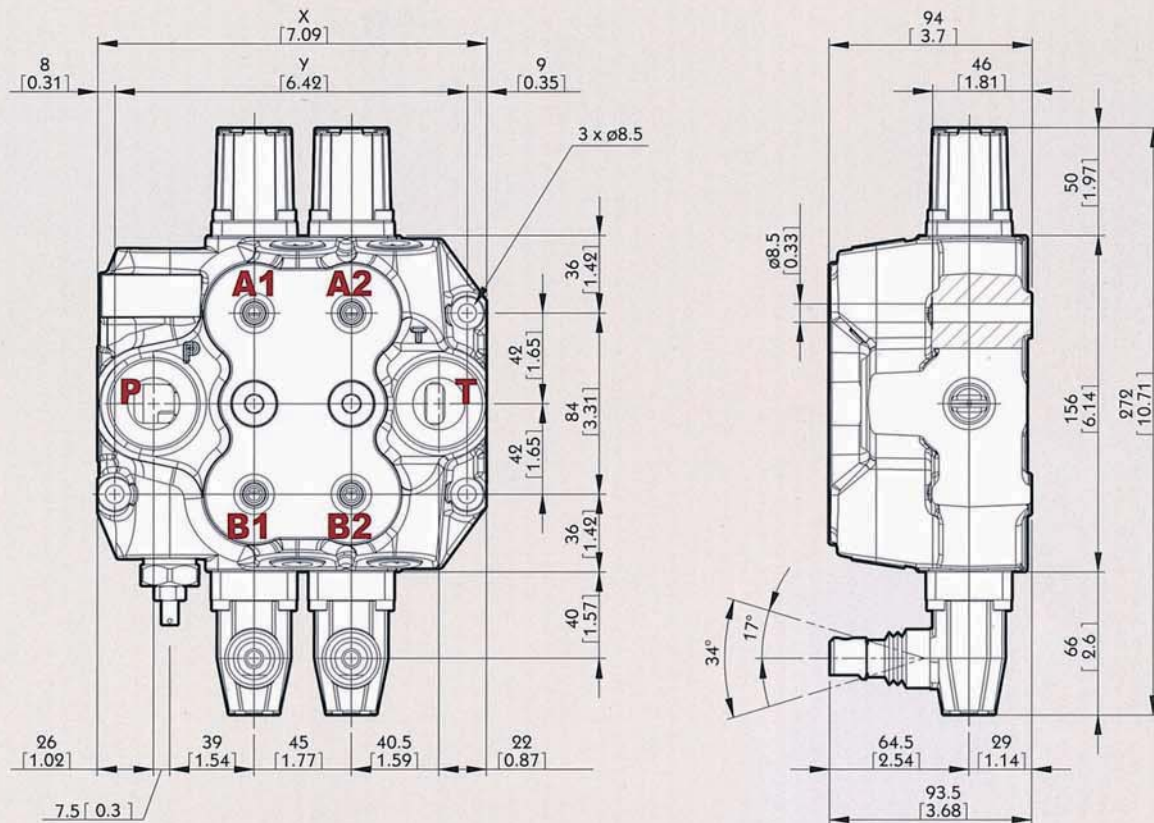
TYPE	CODE	DESCRIPTION	PAGE
L	YLWSN44000	Standard lever box	P. 119
SLP	YLWSN44001	Without lever box, with dust-proof plate	P. 119
LCB	YLWSN45002	Joystick lever for 2 section operation	P. 120
TQ	YLWSN44003	Flexible cable connection	P. 121

6: Port Relief (Optional)

TYPE	CODE	DESCRIPTION	PAGE
P (G2-63)	YLWSN45002	Anti-shock valve, range 63 to 125 bar / form 900 to 1800 psi standard setting 63 bar / 900 psi	P. 130
P (G3-100)	YLWSN45003	Anti-shock valve, range 100 to 250 bar / form 1450 to 3600 psi standard setting 100 bar / 1450 psi	P. 130
P (G4-200)	YLWSN45004	Anti-shock valve, range 200 to 315 bar / form 2900 to 4600 psi standard setting 200 bar / 2900 psi	P. 130
PM (G2-63)	YLWSN45005	Anti-shock valve, range 63 to 125 bar / form 900 to 1800 psi standard setting 63 bar / 900 psi, for low setting	P. 130
U (G2-63)	YLWSN45012	Anti-shock valve and Anti-cavitation valve, range 63 to 125 bar / form 900 to 1800 psi standard setting 63 bar / 900 psi	P. 130
U (G3-100)	YLWSN45013	Anti-shock valve and Anti-cavitation valve, range 100 to 250 bar / form 1450 to 3600 psi standard setting 100 bar / 1450 psi	P. 130
U (G4-200)	YLWSN45014	Anti-shock valve and Anti-cavitation valve, range 200 to 315 bar / form 2900 to 4600 psi standard setting 200 bar / 2900 psi	P. 130
C	YLWSN45100	Anti - cavitation	P. 130

MSB-5 Dimensions

Monoblock Directional Control Valves



MSB-5

Standard threads

Ports	Inlet P	A and B ports	Outlet T and poewr beyond C
BSP	G3/4	G1/2	G3/4
UN-UNF	1" 1/16-12 UN (SAE 12)	7/8-14 UNF (SAE 10)	1" 1/16-12 UN (SAE 12)
METRIC	M27x2	M22x1.5	M27x2

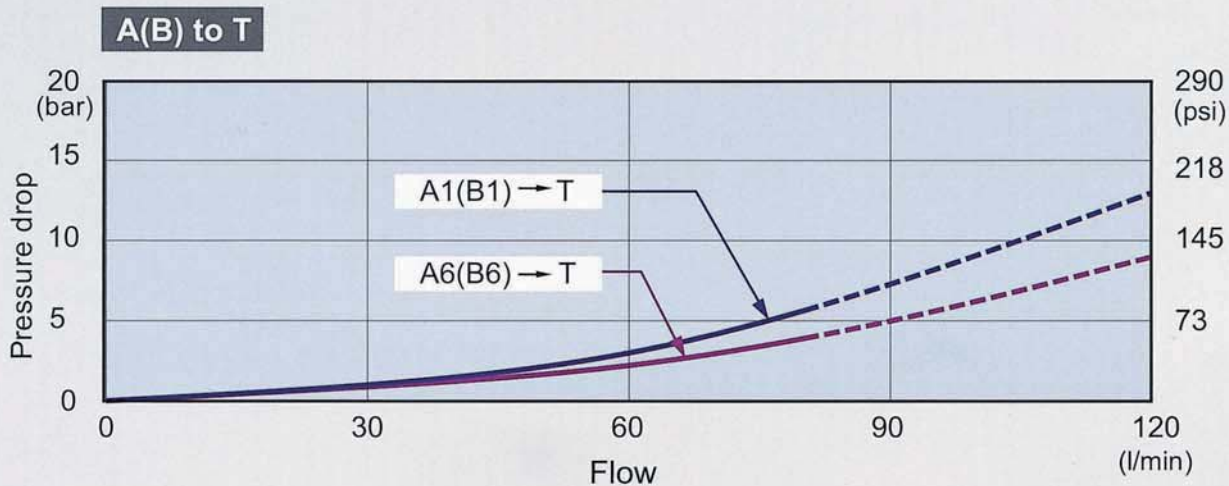
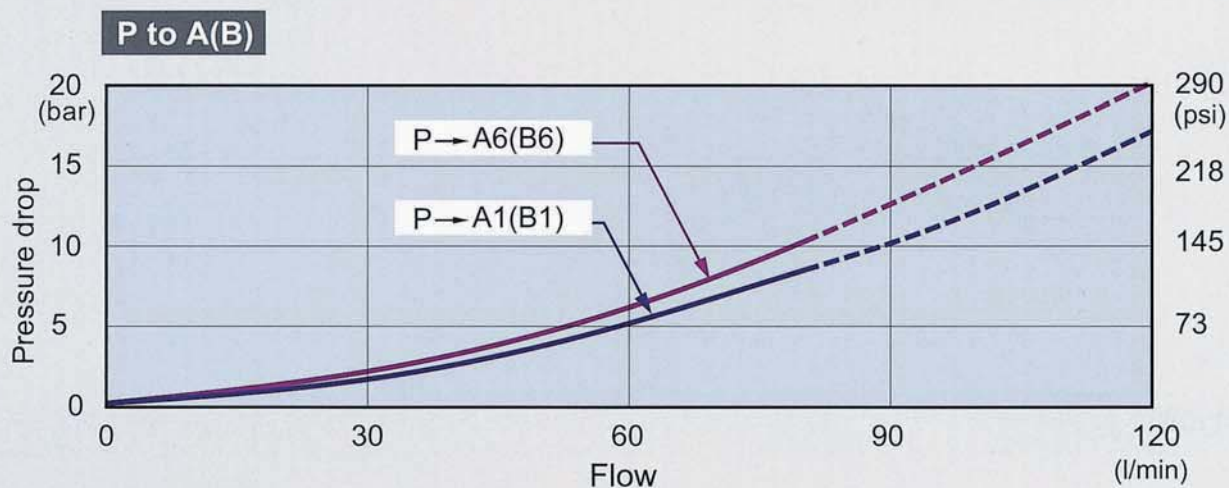
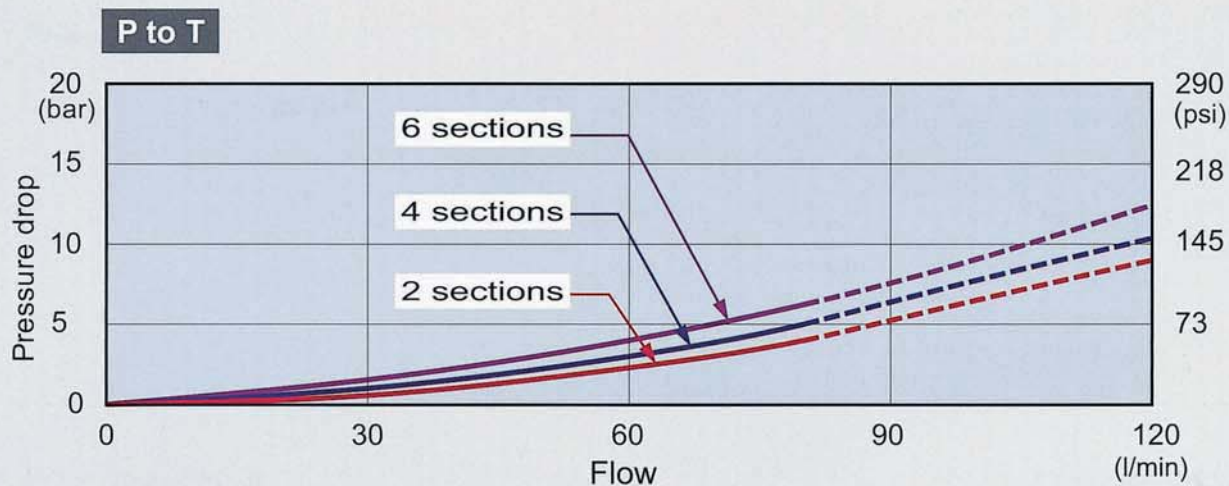
• G-1/2 : G4 G-3/8 : G3 G-3/4 : G6
 • SAE 8: E8 SAE 10: E10 SAE 12: E12 SAE 16: E16

Standard dimensions

TYPE	X		Y	
	mm	in	mm	in
MSB5 /1S	135	5.32	118	4.65
MSB5 /2S	180	7.09	163	6.42
MSB5 /3S	225	8.86	208	8.19
MSB5 /4S	270	10.63	253	9.96
MSB5 /5S	315	12.40	298	11.73
MSB5 /6S	360	14.17	343	13.50

MSB-5 Performance Curve Chart

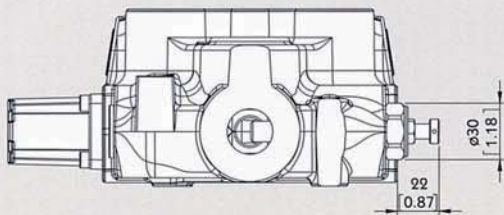
Monoblock Directional Control Valves



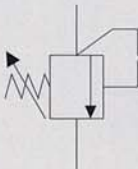
MSB-5 Inlet Relief (Optional)

Monoblock Directional Control Valves

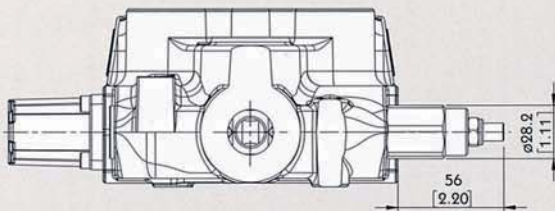
Type WG



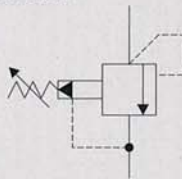
Direct pressure relief valve:



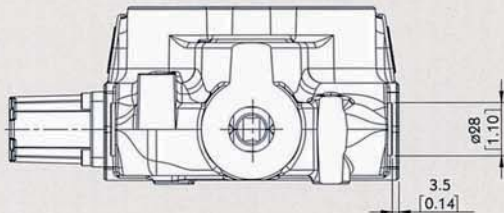
Type XWG



Pilot operated pressure relief valve:



Type SV



Relief valve blanking plug:



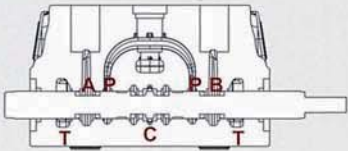
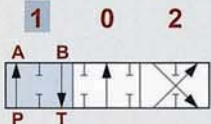
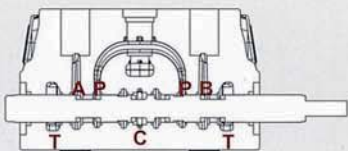
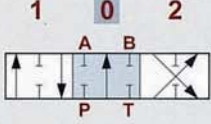
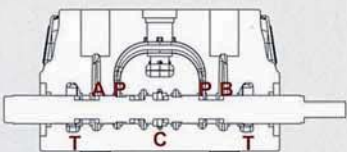
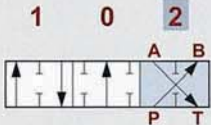
MSB-5

MSB-5 spool Options

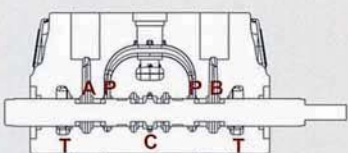
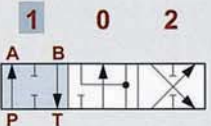
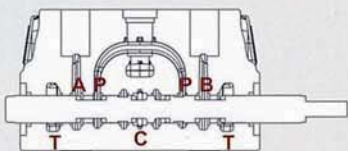
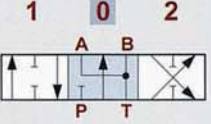
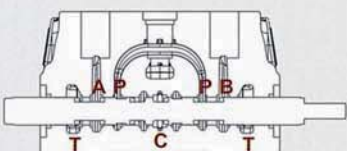
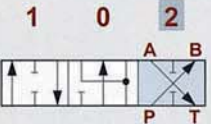
Monoblock Directional Control Valves

MSB-5

TYPE 1

	<p>P & T & A & B closed C open</p>	
	<p>P → A B → T C closed</p>	
	<p>P → B A → T C open</p>	

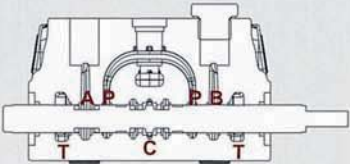
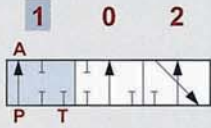
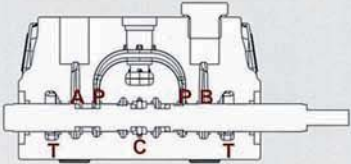
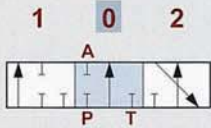
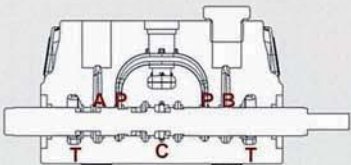
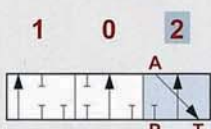
TYPE 2

	<p>A & B → T P closed C open</p>	
	<p>P → A B → T C closed</p>	
	<p>P → B A → T C open</p>	

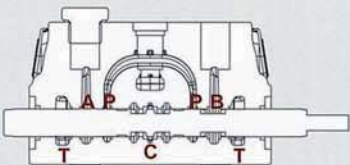
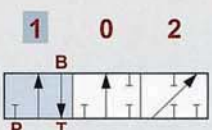
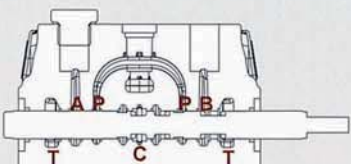
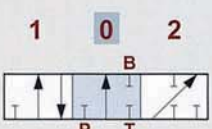
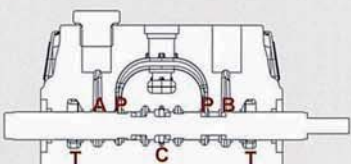
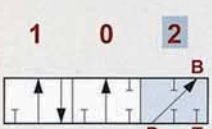
MSB-5 spool Options

Monoblock Directional Control Valves

TYPE 3

	<p>P & T & A closed</p> <p>C open</p>	 <p>"B" port plugged</p>
	<p>P → A</p> <p>C closed</p>	 <p>"B" port plugged</p>
	<p>A → T</p> <p>C open</p>	 <p>"B" port plugged</p>

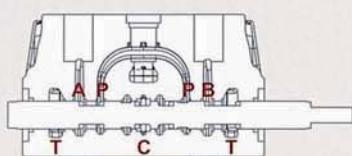
TYPE 4

	<p>P & T & B closed</p> <p>C open</p>	 <p>"A" port plugged</p>
	<p>B → T</p> <p>C closed</p>	 <p>"A" port plugged</p>
	<p>P → B</p> <p>C closed</p>	 <p>"A" port plugged</p>

MSB-5 spool Options

Monoblock Directional Control Valves

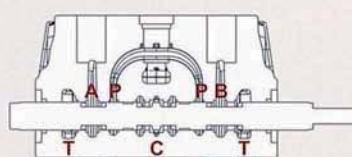
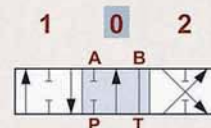
TYPE 5



P → A

B → T

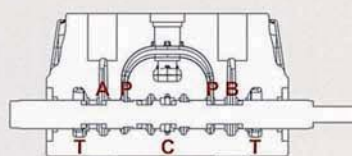
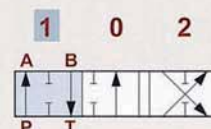
C closed



B → T

P & A closed

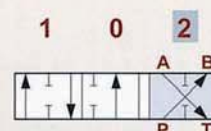
C open



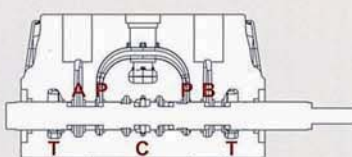
P → B

A → T

C closed



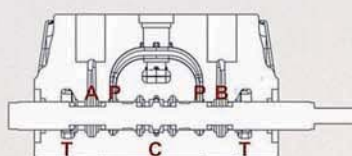
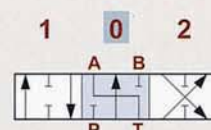
TYPE 6



P → A

B → T

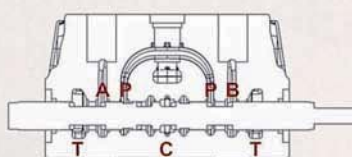
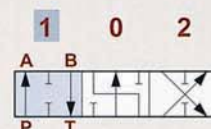
C closed



B → T

P & A closed

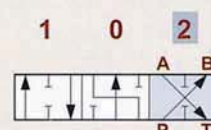
C open



P → B

A → T

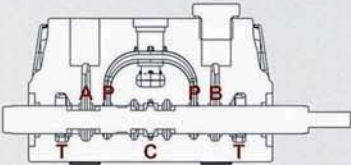

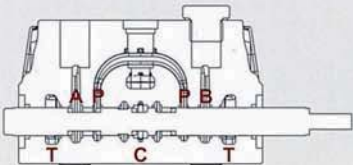
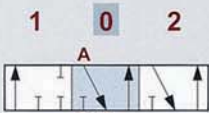
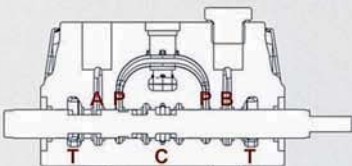

C closed



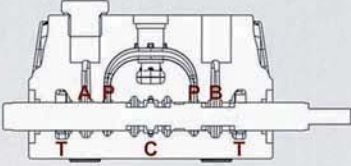

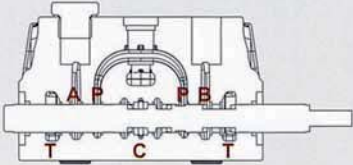
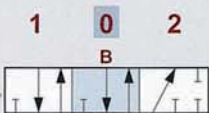
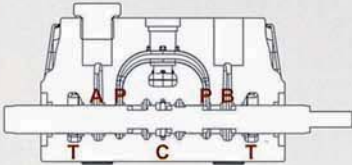

MSB-5 spool Options

Monoblock Directional Control Valves

TYPE 7

	<p>A → T</p> <p>P closed</p> <p>C open</p>	 <p>"B" port plugged</p>
	<p>P → A</p> <p>C closed</p>	 <p>"B" port plugged</p>
	<p>A → T</p> <p>P closed</p> <p>C open</p>	 <p>"B" port plugged</p>

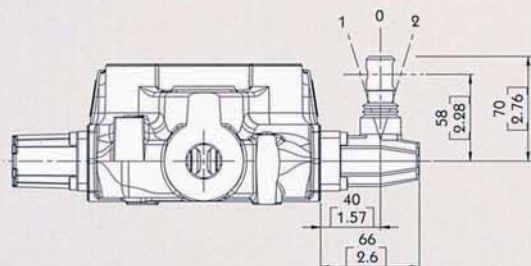
TYPE 8

	<p>B → T</p> <p>P closed</p> <p>C open</p>	 <p>"A" port plugged</p>
	<p>B → T</p> <p>P closed</p> <p>C open</p>	 <p>"A" port plugged</p>
	<p>B → T</p> <p>C closed</p>	 <p>"A" port plugged</p>

MSB-5 A side

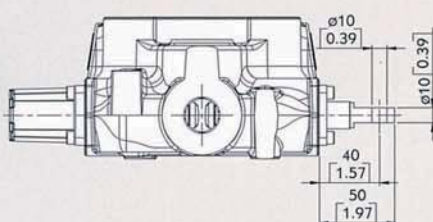
Monoblock Directional Control Valves

Type L



Type L :
STANDART LEVER KIT

Type SLP

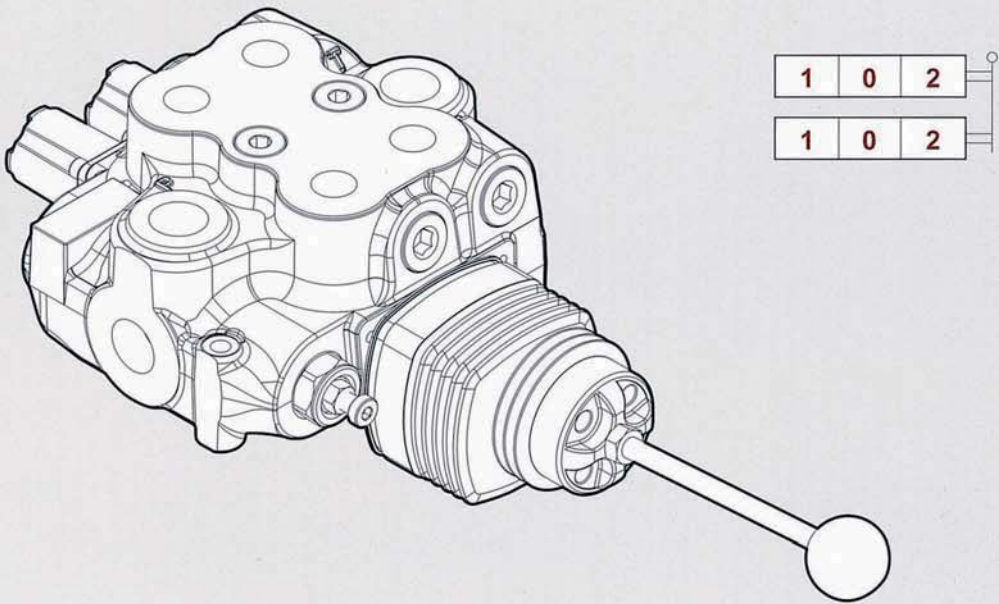


Type SLP :
WITH DUST-PROOF PLATE

MSB-5 A Side

Monoblock Directional Control Valves

LCB: Joystick control



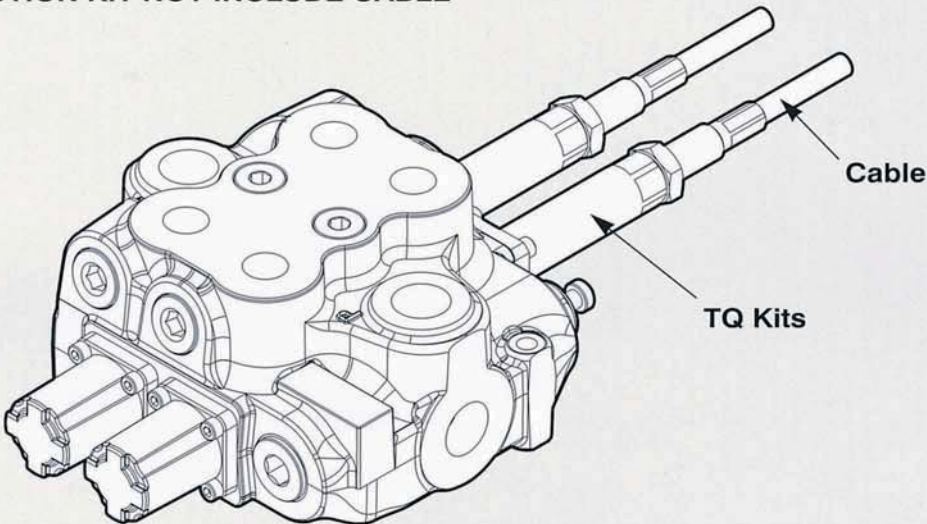
MSB-5

Type LCB	LCB1	LCB2
Type LCB	LCB3	LCB4

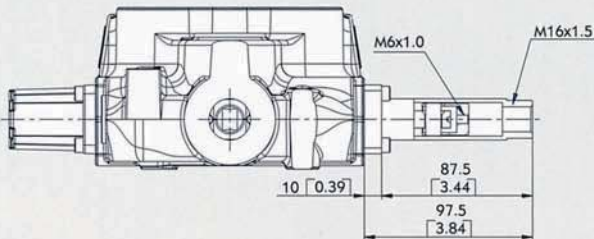
MSB-5 A Side

Monoblock Directional Control Valves

Note : CONNECTION KIT NOT INCLUDE CABLE



Type TQ



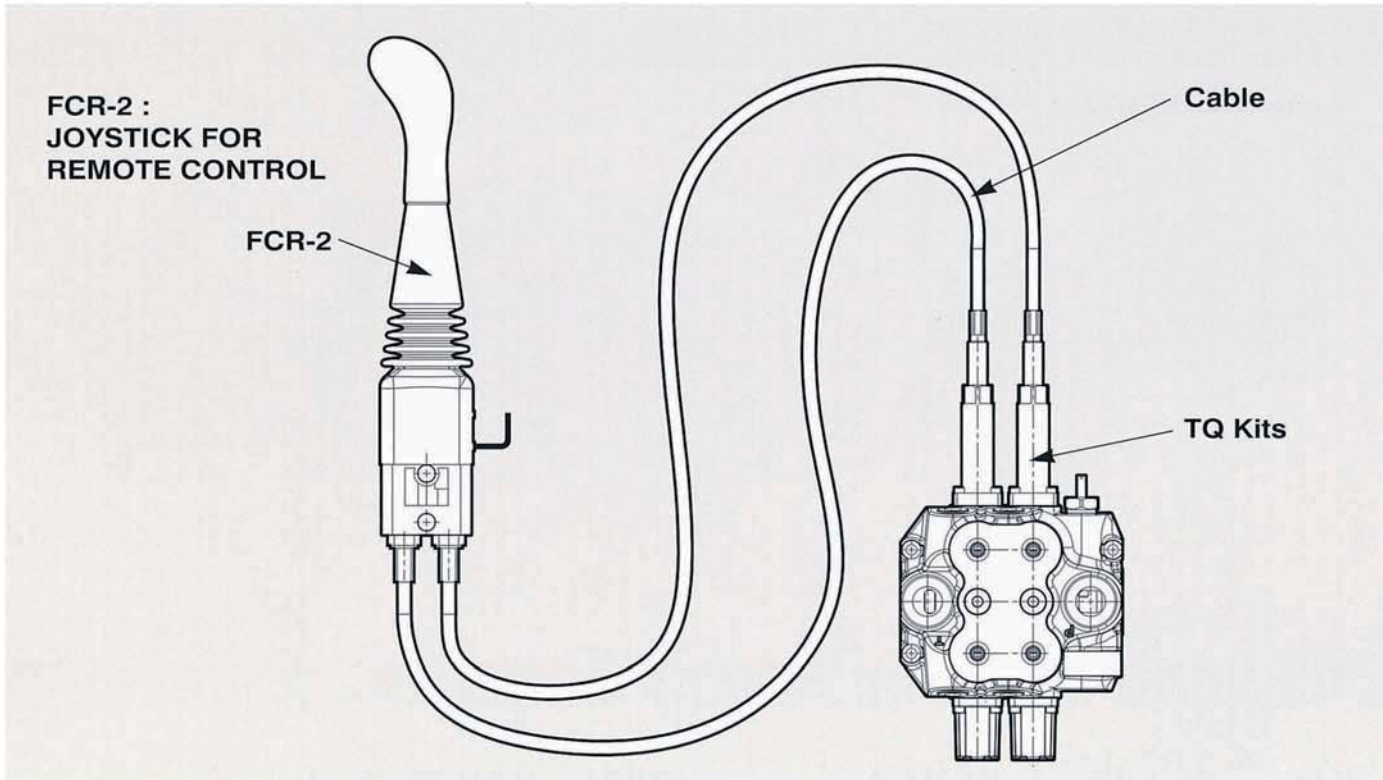
TQ Kit:



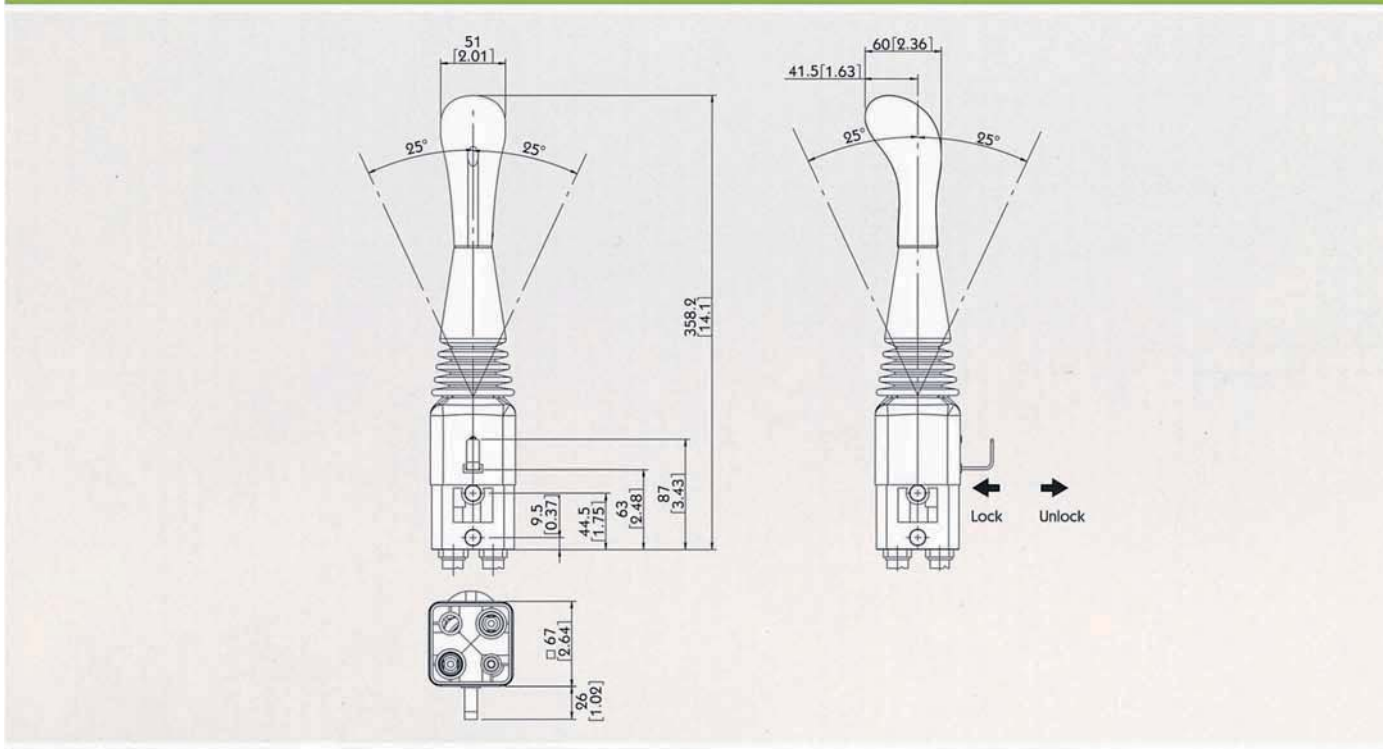
MSB-5 A Side

Monoblock Directional Control Valves

MSB-5

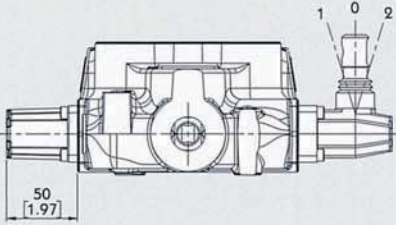
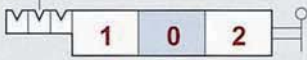

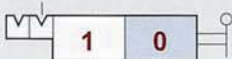
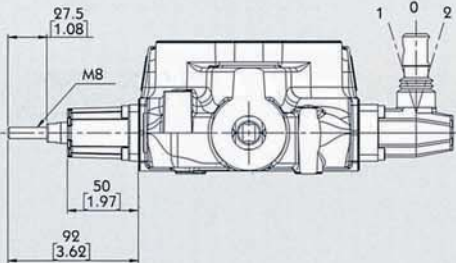



Type FCR-2



MSB-5 B Side

Monoblock Directional Control Valves

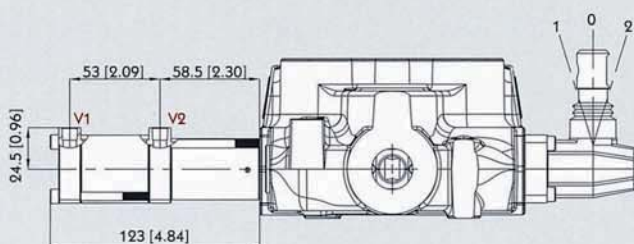
Type 6		
		6-1 Kit: DETENT IN POS. 1-0-2, WITHOUT SPRING CENTERED
		6-2 Kit: 2 POSITIONS, DETENT IN POS. 0-2, WITHOUT SPRING CENTERED
		6-3 Kit: 2 POSITIONS, DETENT IN POS. 1-0, WITHOUT SPRING CENTERED
Type 8D2		
		8D2 Kit: WITH SPRING RETURN TO NEUTRAL POSITION AND PIN WITH M8 MALE THREAD FOR DUAL CONTROL

MSB-5 B Side

Monoblock Directional Control Valves

Type 8P

V1 & V2: NPT 1/8 - 27



Operating feature :

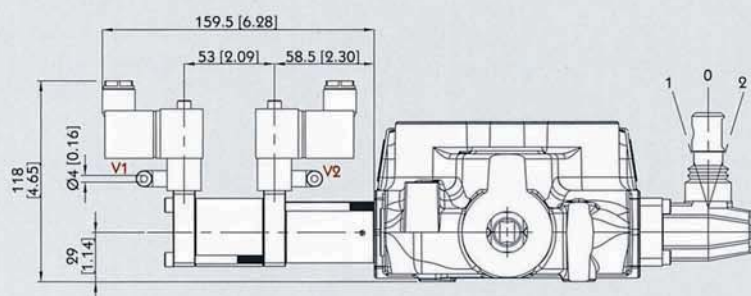
PILOT PRESSURE (MIN.): 6 BAR / 87 PSI

PILOT PRESSURE (MAX.): 12 BAR / 174 PSI

ON/OFF PNEUMATIC KIT



Type 8EP3

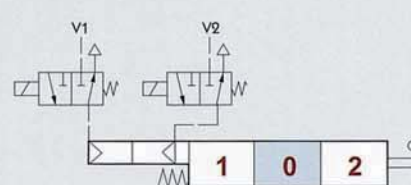


Solenoid operating features :

NOMINAL VOLTAGE: 24VDC

NOMINAL VOLTAGE TOLERANCE: $\pm 10\%$

POWER RATING: 5W

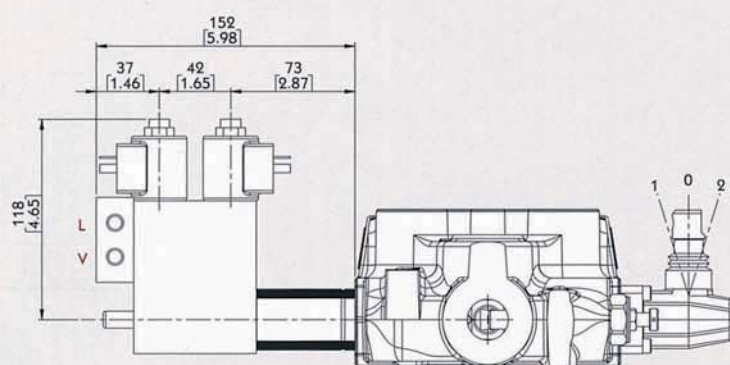
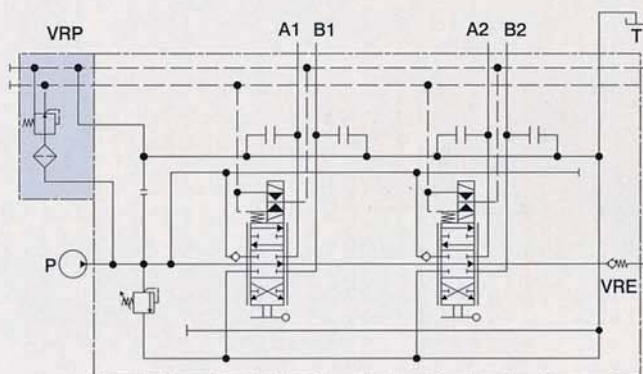
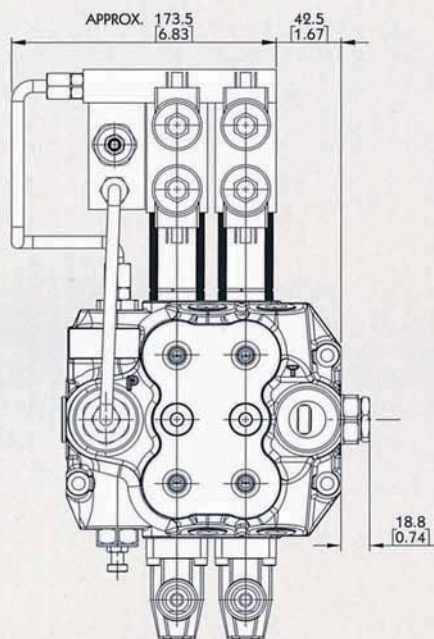


MSB-5 B Side

Monoblock Directional Control Valves

MSB-5

Type 8ED3



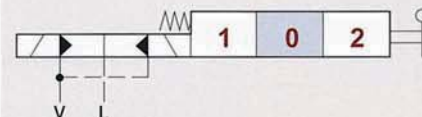
Operating features :

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

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

Coil features :

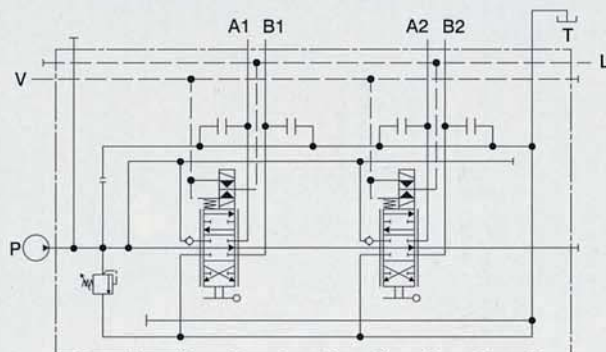
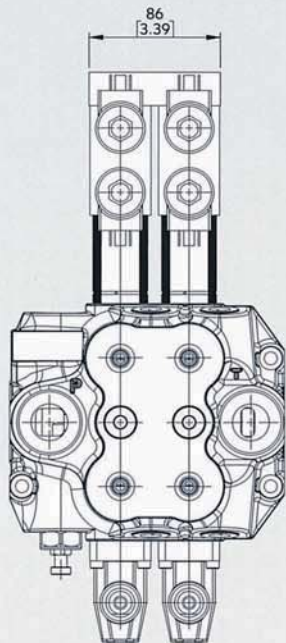
NOMINAL VOLTAGE TOLERANCE: $\pm 10\%$
ELECTRIC POWER: 21 W
STANDARD VOLTAGE: 12 VDC / 24 VDC



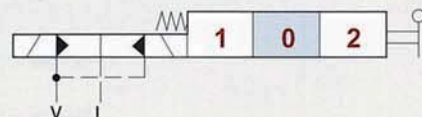
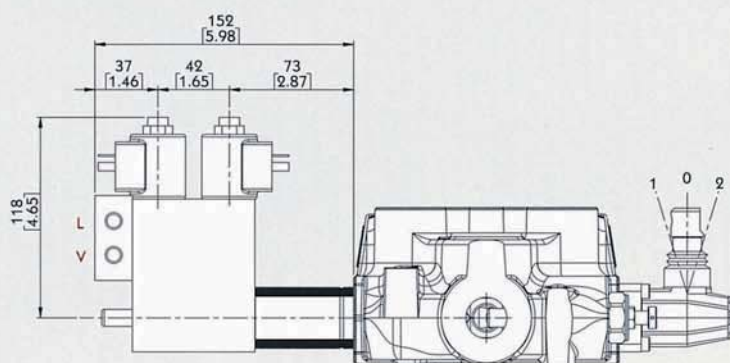
MSB-5 B Side

Monoblock Directional Control Valves

Type 8ER3



MSB-5



Operating features :

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

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

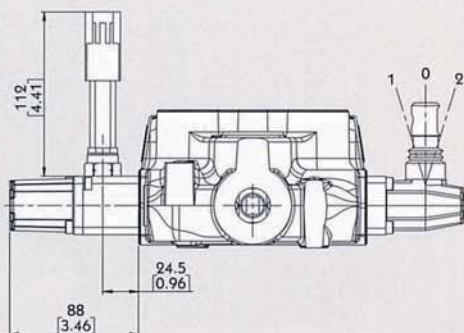
Coil features :

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

MSB-5 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:

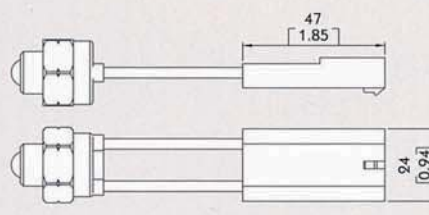
MICROSWITCH WITH MALE/FEMALE CONNECTOR, OPERATED IN POS. 2



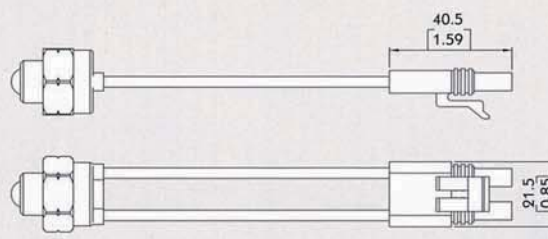
8MG3 Kit:

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

With NO contact (female connector with male end)

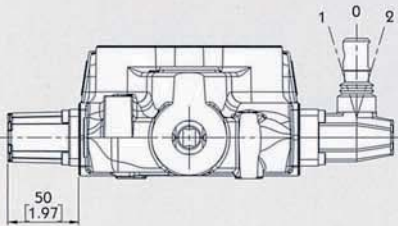



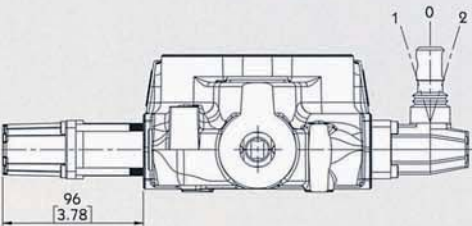

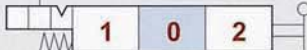
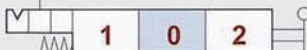


With NC contact (male connector with female end)



MSB-5 B Side

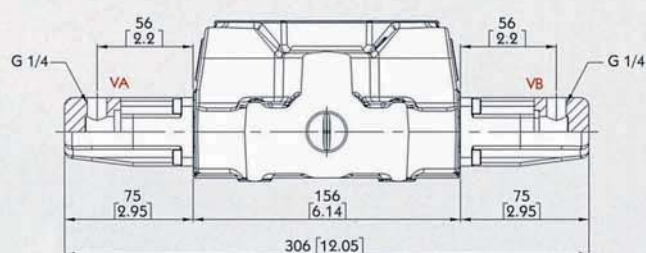
Monoblock Directional Control Valves

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

MSB-5 B Side

Monoblock Directional Control Valves

Type 8IM



Operating features :

PILOT PRESSURE : MAX. 50 BAR

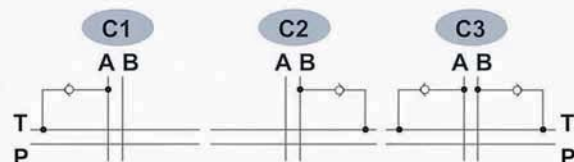
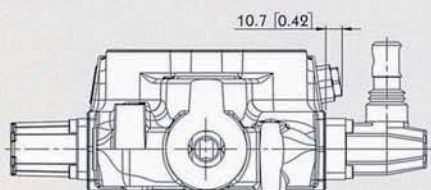
INTERNAL LEAKAGE A(B) -> T : MAX. 6 CM³/MIN
(100 BAR / 40°C)



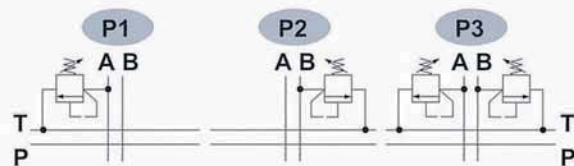
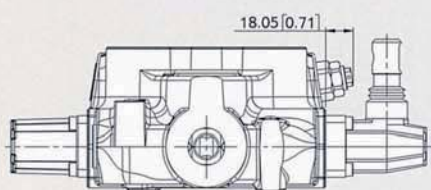
MSB-5 Port Relief

Monoblock Directional Control Valves

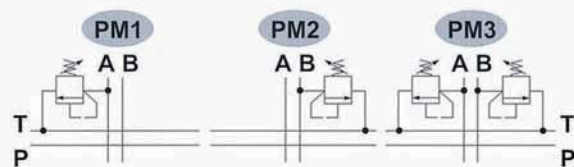
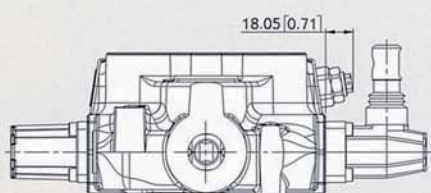
TYPE C



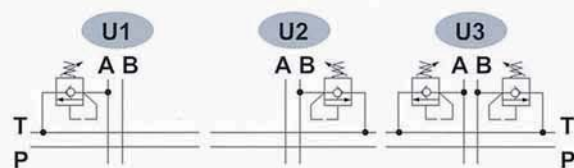
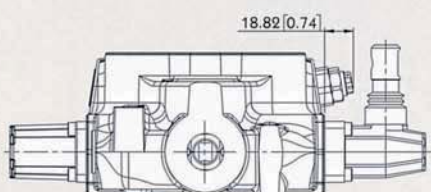
TYPE P



TYPE PM



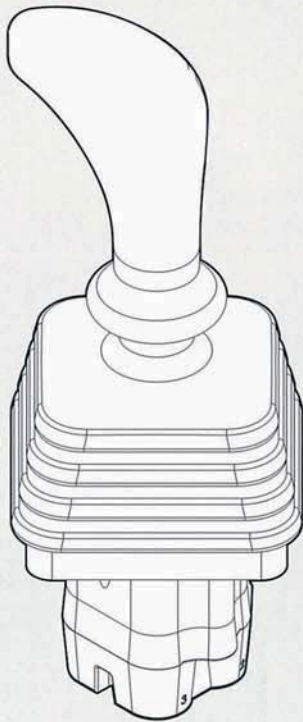
TYPE U



MSB-5 Accessories

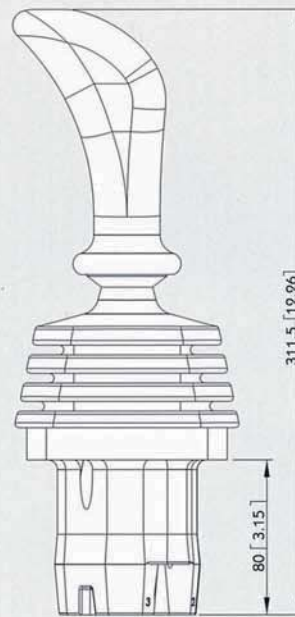
Monoblock Directional Control Valves

Type JHP-2

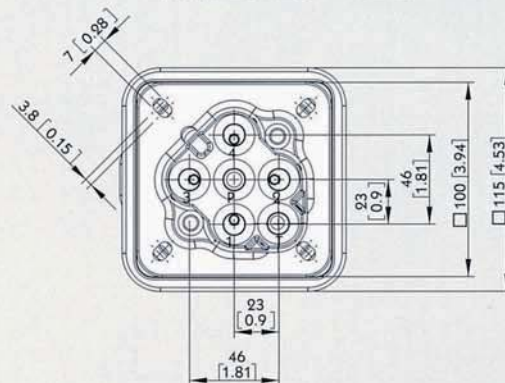
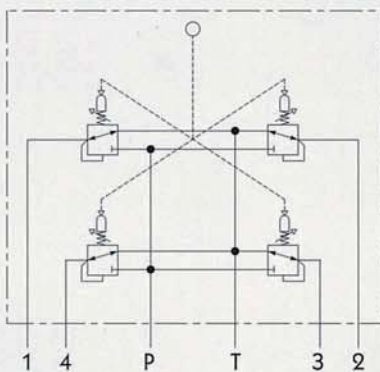


Specifications:

- This data sheet shows technical spec. with mineral oil of 46 mm²/s (cSt) viscosity at 40°C (104°F)
- Flow : 5 ~ 20 LPM
- Feeding pressure : 30 ~ 100 bar
- Max. backpressure : 3 bar
- Internal leakage at 30 bar : 10 ~ 18 cm³/min
- Fluid : mineral oil
- Fluid temperature : - 10 ~ 80°C
- Ambient temperature : - 40 ~ 60°C



HYDRAULIC SCHEME:



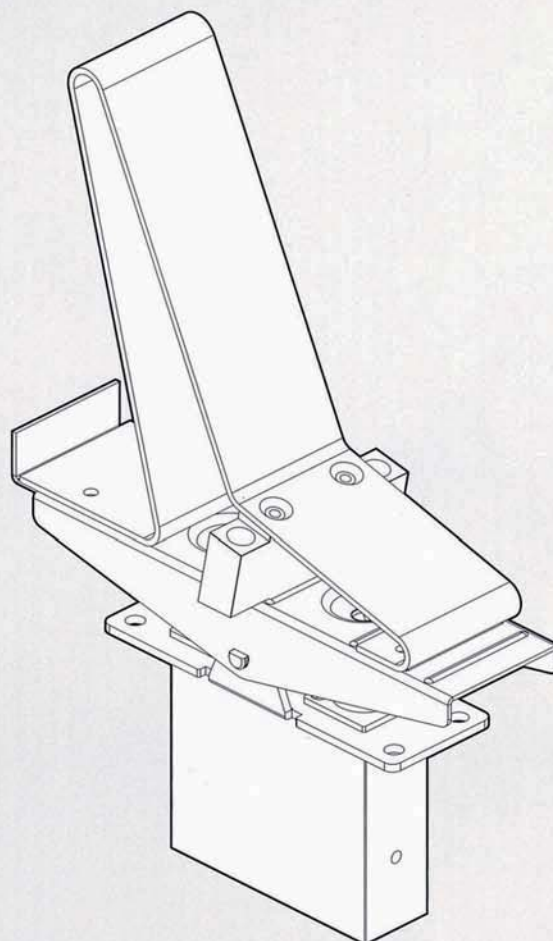
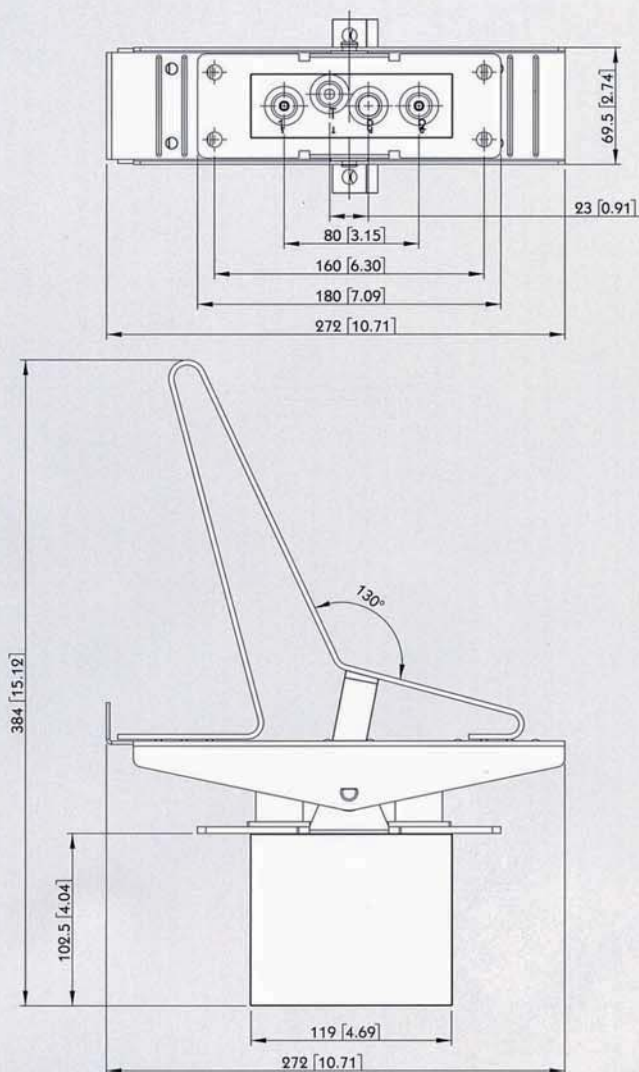
MSB-5 Accessories

Monoblock Directional Control Valves

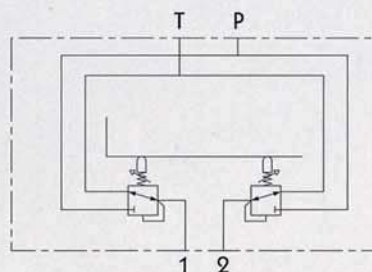
Type PHP-1

Specifications:

- This data sheet shows technical spec. with mineral oil of 46 mm²/s (cSt) viscosity at 40°C (104°F)
- Flow : 5 ~ 20 LPM
- Feeding pressure : 30 ~ 100 bar
- Max. backpressure : 3 bar
- Internal leakage at 30 bar : 10 ~ 18 cm³/min
- Fluid : mineral oil
- Fluid temperature : - 10 ~ 80°C
- Ambient temperature : - 40 ~ 60°C



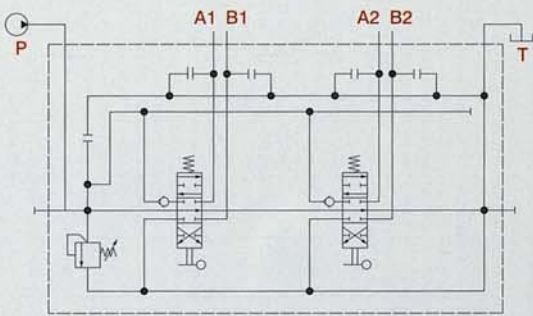
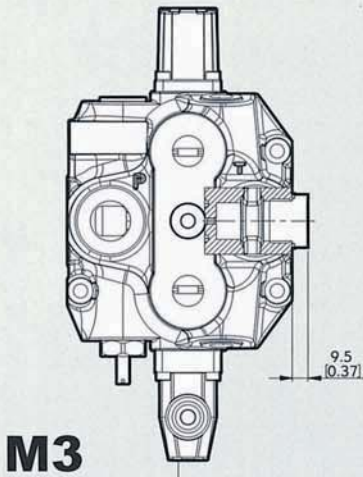
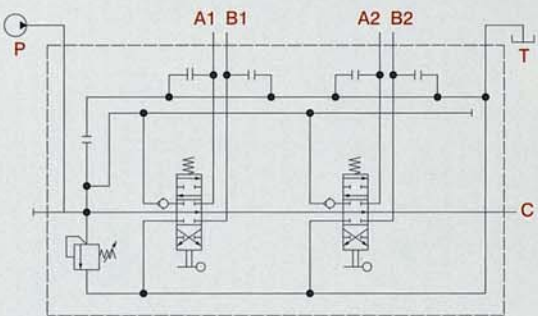
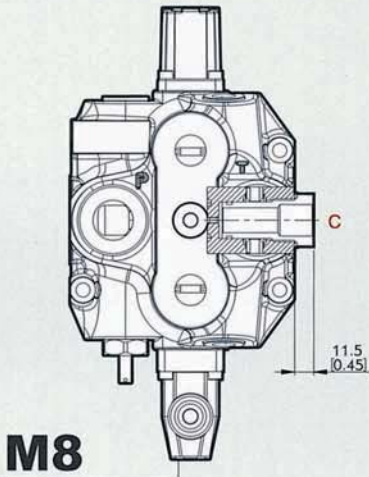
HYDRAULIC SCHEME:



MSB-5 outlet

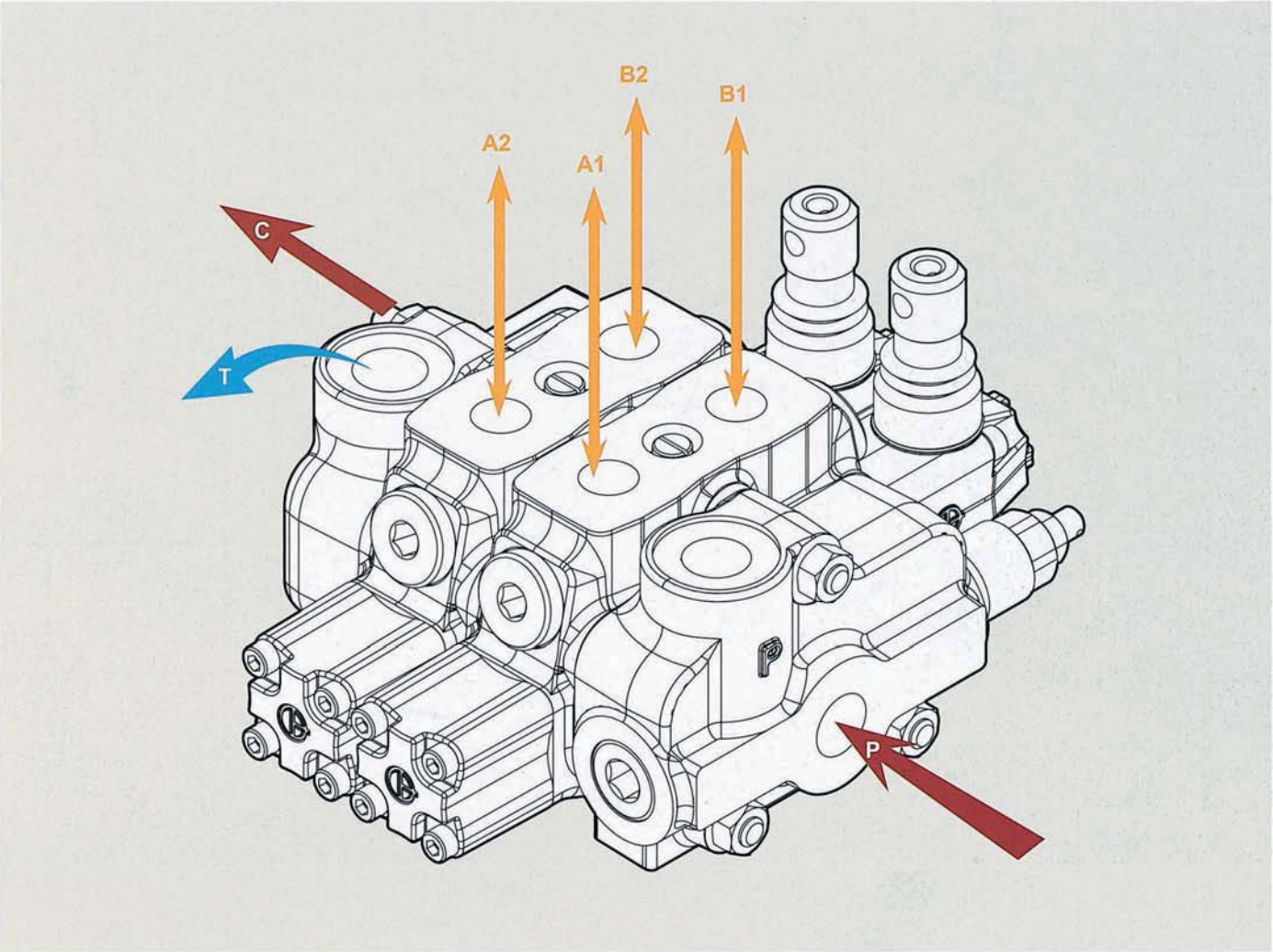
Monoblock Directional Control Valves

Power Beyond Conversion plug
(Closed center plug)



SN-3

Sectional Directional Control Valves



SN-3

SN-3 Specifications

Nominal flow rate		50 l/min	13 US gpm
Operating pressure (maximum)	parallel or tandem circuit	315 bar	4600 psi
	series circuit	210 bar	3050 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 mm²/s	from 15 to 75 cst
	min.	12 mm²/s	12 cst
	max.	400 mm²/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.

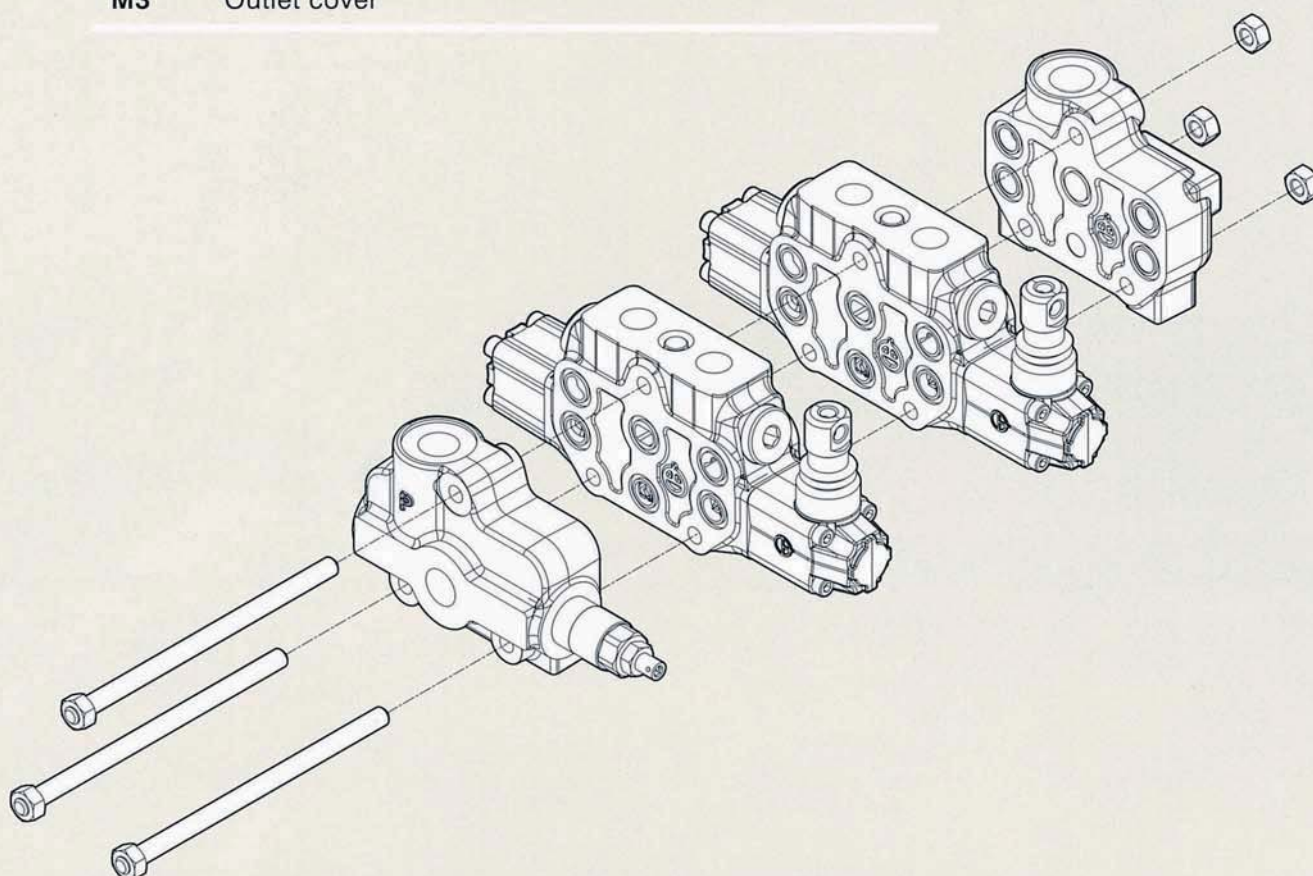
SN-3 Complete

Sectional Directional Control Valves

HOW TO ORDER FOR A COMPLETE ASSEMBLED VALVE

SN-3 / 2S - 3 / 18L / 28L / G-3-4 / M3

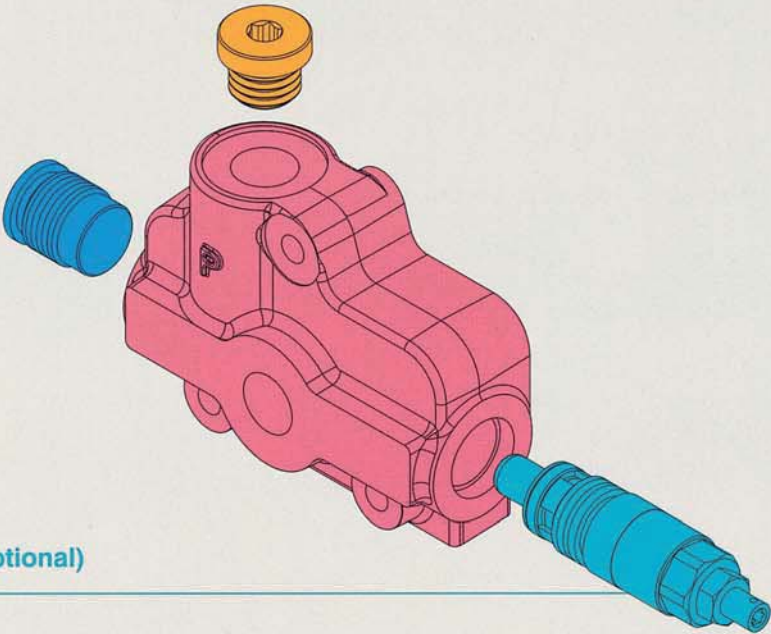
2S	No. of working section
3	Inlet cover with a main pressure relief valve
18L	1st section (complete working section)
28L	Following section (complete working section)
G-3-4	BSP ports
M3	Outlet cover



SN-3 Inlet Section

Sectional Directional Control Valves

FP SN-3 / YG-3 / G3



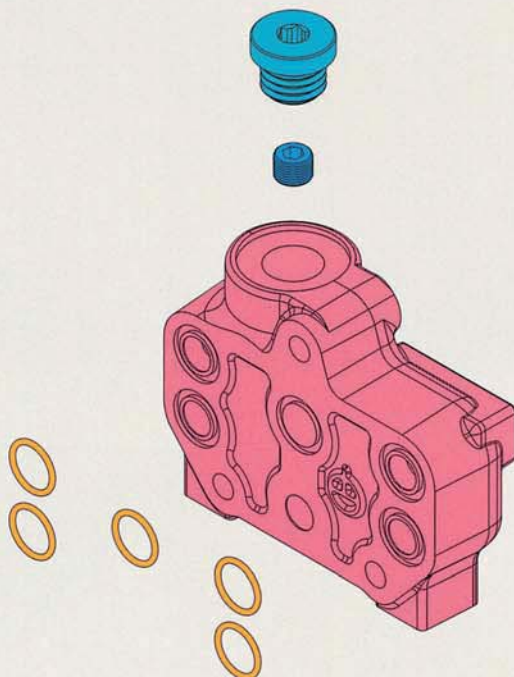
Inlet relief (optional)

Inlet Relief (optional)			
TYPE	CODE	DESCRIPTION	PAGE
YG-2	YLPSN33002	Range 40 to 80 bar / 1150 to 2300 psi , standard setting 125 bar / 1800 psi	P. 143
YG-3	YLPSN33003	Range 63 to 200 bar / 1800 to 3600 psi , standard setting 175 bar / 2500 psi	P. 143
YG-4	YLPSN33004	Range 160 to 315 bar / 2900 to 4600 psi , standard setting 220 bar / 3200 psi	P. 143
		Standard setting is referred to 10 l/min - 2.6 US gpm flow.	P. 143
SV	YLPSN34000	Relief valve blanking plug	P. 143
XYG	YLPSN33000	Pilot operated pressure relief valve Range 25 to 315 bar/ 360 to 4600 psi, standard setting 125 bar/ 1800 psi	P. 143

SN-3 Outlet Section

Sectional Directional Control Valves

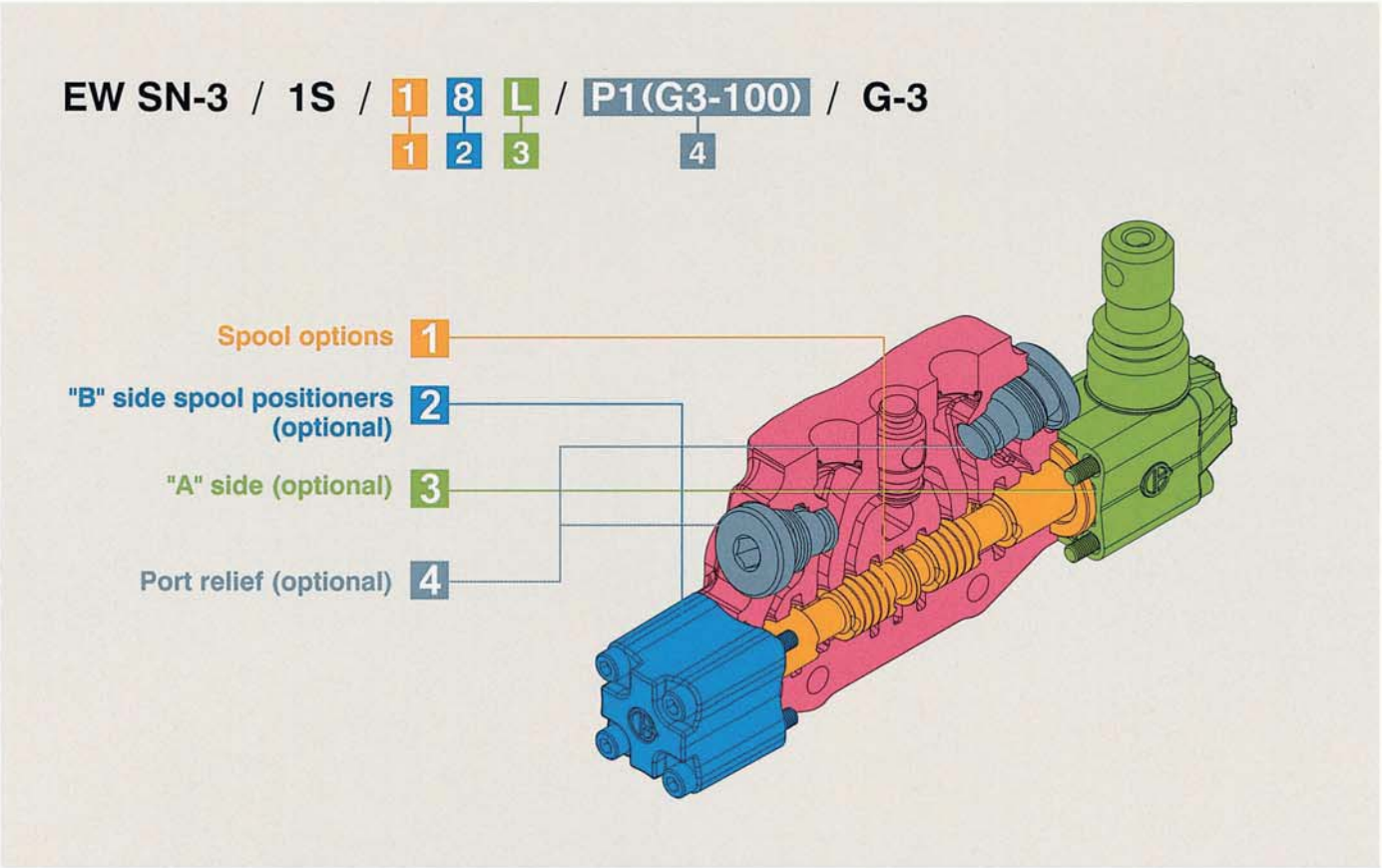
FT SN-3 / G-4 / M3



SN-3

SN-3 Working Section

Sectional Directional Control Valves



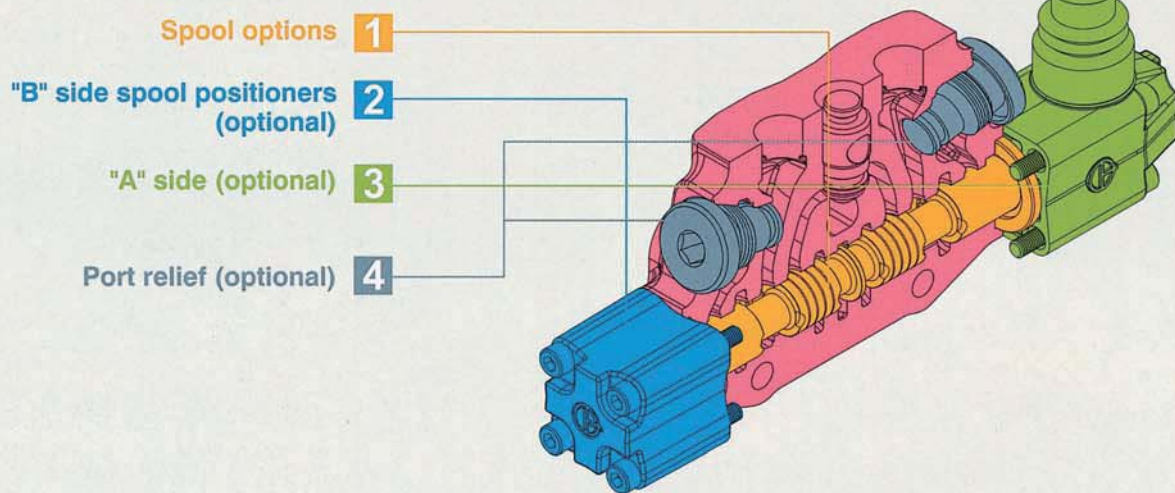
1:	Spool Symbol		
TYPE	CODE	DESCRIPTION	PAGE
1	YLWSN32001	Double acting,3 positions,with A and B closed in neutral position	P. 144
1S	YLWSN32010	Double acting,3 positions,with A and B closed in neutral position, for series circuit	P. 147
2	YLWSN32002	Double acting,3 positions,with A and B open to tank in neutral position	P. 144
3	YLWSN32003	Single acting on A closed in neutral position, 3 positions, B plugged	P. 145
4	YLWSN32004	Single acting on B closed in neutral position, 3 positions, A plugged	P. 145
5	YLWSN32005	Double acting, 3 positions, with B open to Tank in neutral position	P. 146
6	YLWSN32006	Double acting, 3 positions, with A open to Tank in neutral position	P. 146
5PY	YLWSN33051	Double acting, 4 positions, floating circuit in 4th position with A, B open to Tank by pushing the lever	P. 148
2H	YLWSN32020	Double acting with A, B open partially to Tank in neutral	P. 147

SN-3 Working Section

Sectional Directional Control Valves

EW SN-3 / 1S / **1** **8** **L** / **P1(G3-100)** / **G-3**

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



2: B Side Spool Positioners			
TYPE	CODE	DESCRIPTION	PAGE
6-1	YLWSN33061	Detent in pos. 1-0-2, without spring centered	P. 153
6-2	YLWSN33062	2 positions, detent in pos. 0-2, without spring centered	P. 153
6-3	YLWSN33063	2 positions, detent in pos. 1-0, without spring centered	P. 153
8D2	YLWSN33082	With spring return to neutral position and pin with M8 male thread for dual control	P. 153
8P	YLWSN33080	ON/OFF Pneumatic actuator	P. 154
8EP3	YLWSN34300	ON/OFF Electro-Pneumatic actuator	P. 154
8MG1 (NO)	YLWSN34801	Microswitch kit operated in pos. 1 (Normally Open)	P. 157
8MG2 (NO)	YLWSN34802	Microswitch kit operated in pos. 2 (Normally Open)	P. 157
8MG3 (NO)	YLWSN34803	Microswitch kit operated in pos. 1&2 (Normally Open)	P. 157
MG (NO)	YLWSN34804	Microswitch with NO terminal	P. 157
8MG1 (NC)	YLWSN348011	Microswitch kit operated in pos. 1 (Normally Closed)	P. 157
8MG2 (NC)	YLWSN348021	Microswitch kit operated in pos. 2 (Normally Closed)	P. 157
8MG3 (NC)	YLWSN348031	Microswitch kit operated in pos. 1&2 (Normally Closed)	P. 157
MG (NC)	YLWSN348041	Microswitch with NC terminal	P. 157
8	YLWSN33008	With spring return to neutral position	P. 158
8-1	YLWSN34081	2 positions, with spring centered from pos. 1	P. 158
8-2	YLWSN34082	2 positions, with spring centered from pos. 2	P. 158
9-1	YLWSN33091	Detent in pos. 1, 2 with spring centered	P. 158
9-2	YLWSN33092	Detent in pos. 2 with spring centered	P. 158
9-3	YLWSN33093	Detent in pos. 1 with spring centered	P. 158

2: B Side Spool Positioners

TYPE	CODE	DESCRIPTION	PAGE
8ED3+RV-KE1R3	YLWSN34201	1S: ON/OFF Electro-Hydraulic control kit with pilot and drain line+backpressure valve (12/24 VDC)	P. 155
8ED3+RV-KE2R3	YLWSN34202	2S: ON/OFF Electro-Hydraulic control kit with pilot and drain line+backpressure valve (12/24 VDC)	P. 155
8ED3+RV-KE3R3	YLWSN34203	3S: ON/OFF Electro-Hydraulic control kit with pilot and drain line+backpressure valve (12/24 VDC)	P. 155
8ED3+RV-KE4R3	YLWSN34204	4S: ON/OFF Electro-Hydraulic control kit with pilot and drain line+backpressure valve (12/24 VDC)	P. 155
8ED3+RV-KE5R3	YLWSN34205	5S: ON/OFF Electro-Hydraulic control kit with pilot and drain line+backpressure valve (12/24 VDC)	P. 155
8ED3+RV-KE6R3	YLWSN34206	6S: ON/OFF Electro-Hydraulic control kit with pilot and drain line+backpressure valve (12/24 VDC)	P. 155
8ED3+RV-KE7R3	YLWSN34207	7S: ON/OFF Electro-Hydraulic control kit with pilot and drain line+backpressure valve (12/24 VDC)	P. 155
8ED3+RV-KE8R3	YLWSN34208	8S: ON/OFF Electro-Hydraulic control kit with pilot and drain line+backpressure valve (12/24 VDC)	P. 155
8ED3+RV-KE9R3	YLWSN34209	9S: ON/OFF Electro-Hydraulic control kit with pilot and drain line+backpressure valve (12/24 VDC)	P. 155
8ED3+RV-KE10R3	YLWSN34210	10S: ON/OFF Electro-Hydraulic control kit with pilot and drain line+backpressure valve (12/24 VDC)	P. 155
8ED3+RV-KE11R3	YLWSN34211	11S: ON/OFF Electro-Hydraulic control kit with pilot and drain line+backpressure valve (12/24 VDC)	P. 155
8ED3+RV-KE12R3	YLWSN34212	12S: ON/OFF Electro-Hydraulic control kit with pilot and drain line+backpressure valve (12/24 VDC)	P. 155
8ER3+KE1S0	YLWSN33401	1S: ON/OFF Electro-hydraulic control kit with collector kit for external pilot and drain	P. 156
8ER3+KE2S0	YLWSN33402	2S: ON/OFF Electro-hydraulic control kit with collector kit for external pilot and drain	P. 156
8ER3+KE3S0	YLWSN33403	3S: ON/OFF Electro-hydraulic control kit with collector kit for external pilot and drain	P. 156
8ER3+KE4S0	YLWSN33404	4S: ON/OFF Electro-hydraulic control kit with collector kit for external pilot and drain	P. 156
8ER3+KE5S0	YLWSN33405	5S: ON/OFF Electro-hydraulic control kit with collector kit for external pilot and drain	P. 156
8ER3+KE6S0	YLWSN33406	6S: ON/OFF Electro-hydraulic control kit with collector kit for external pilot and drain	P. 156
8ER3+KE7S0	YLWSN33407	7S: ON/OFF Electro-hydraulic control kit with collector kit for external pilot and drain	P. 156
8ER3+KE8S0	YLWSN33408	8S: ON/OFF Electro-hydraulic control kit with collector kit for external pilot and drain	P. 156
8ER3+KE9S0	YLWSN33409	9S: ON/OFF Electro-hydraulic control kit with collector kit for external pilot and drain	P. 156
8ER3+KE10S0	YLWSN33410	10S: ON/OFF Electro-hydraulic control kit with collector kit for external pilot and drain	P. 156
8ER3+KE11S0	YLWSN33411	11S: ON/OFF Electro-hydraulic control kit with collector kit for external pilot and drain	P. 156
8ER3+KE12S0	YLWSN33412	12S: ON/OFF Electro-hydraulic control kit with collector kit for external pilot and drain	P. 156

3: A Side (Optional)

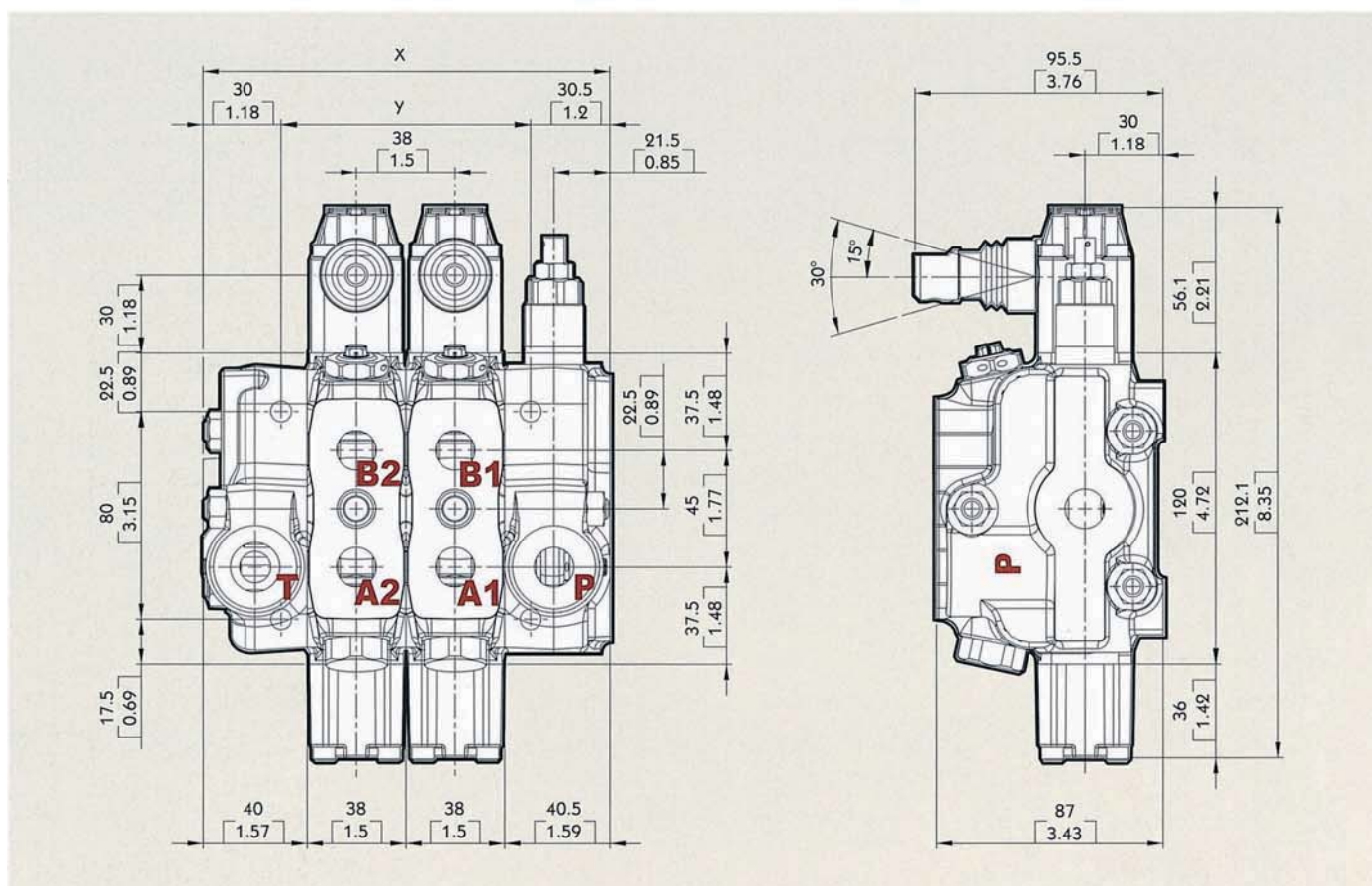
TYPE	CODE	DESCRIPTION	PAGE
L	YLWSN34000	Standard lever	P. 149
SLP	YLWSN34003	Without lever, with dust proof plate	P. 149
LCB	YLWSN34002	Joystick lever for 2 section operation	P. 150
TQ	YLWSN34004	Flexible cable connection	P. 151

4: Port Relief (Optional)

TYPE	CODE	DESCRIPTION	PAGE
P (G2-63)	YLWSN35002	Anti-shock valve, range 63 to 125 bar / form 900 to 1800 psi standard setting 63 bar / 900 psi	P. 162
P (G3-100)	YLWSN35003	Anti-shock valve, range 100 to 250 bar / form 1450 to 3600 psi standard setting 100bar / 1450 psi	P. 162
P (G4-200)	YLWSN35004	Anti-shock valve, range 200 to 315 bar / form 2900 to 4600 psi standard setting 200 bar / 2900 psi	P. 162
U (G2-63)	YLWSN35012	Anti-shock valve and Anti-cavitation valve, range 63 to 125 bar / form 900 to 1800 psi standard setting 63 bar / 900 psi	P. 162
U (G3-100)	YLWSN35013	Anti-shock valve and Anti-cavitation valve, range 100 to 250 bar / form 1450 to 3600 psi standard setting 100 bar / 1450 psi	P. 162
U (G4-200)	YLWSN35014	Anti-shock valve and Anti-cavitation valve, range 200 to 315 bar / form 2900 to 4600 psi standard setting 200 bar / 2900 psi	P. 162
C	YLWSN35100	Anti - cavitation	P. 162

SN-3 Dimensions

Sectional Directional Control Valves



Standard threads

Ports	BSP	UN-UNF	METRIC
P	G 3/8	7/8-14 (SAE 10)	M18 x 1.5
A and B	G 3/8	3/4-16 (SAE 8)	M18 x 1.5
T and C	G 1/2	7/8-14 (SAE 10)	M22 x 1.5

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

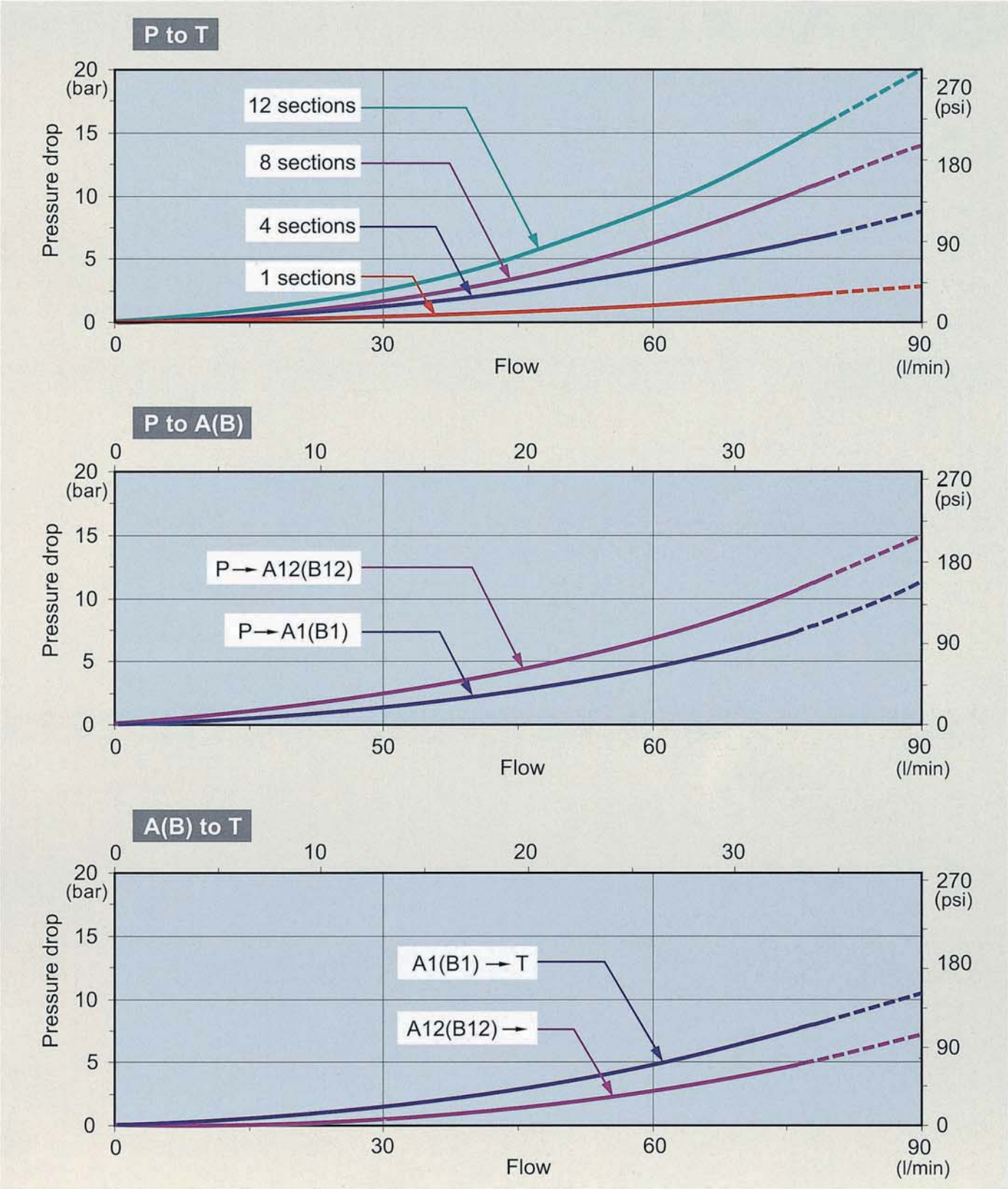
Standard dimensions

TYPE	X		Y		TYPE	X		Y	
	mm	in	mm	in		mm	in	mm	in
SN3 /1S	118.5	4.66	58	2.28	SN3 /7S	346.5	13.65	286	11.26
SN3 /2S	156.5	6.16	96	3.78	SN3 /8S	384.5	15.15	324	12.76
SN3 /3S	194.5	7.66	134	5.28	SN3 /9S	422.5	16.65	362	14.26
SN3 /4S	232.5	9.15	172	6.77	SN3 /10S	460.5	18.15	400	15.76
SN3 /5S	270.5	10.65	210	8.27	SN3 /11S	498.5	19.65	438	17.26
SN3 /6S	308.5	12.15	248	9.76	SN3 /12S	536.5	21.15	476	18.76

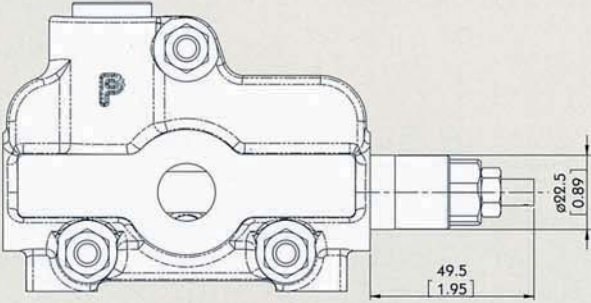
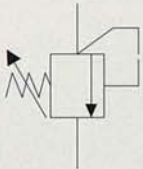
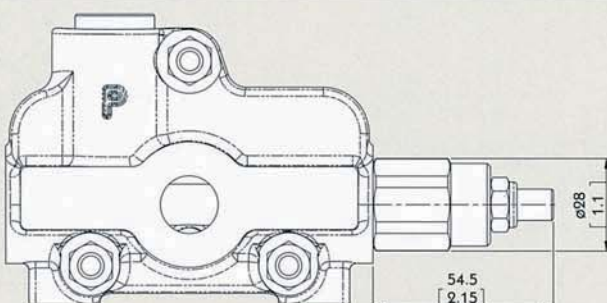
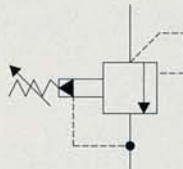
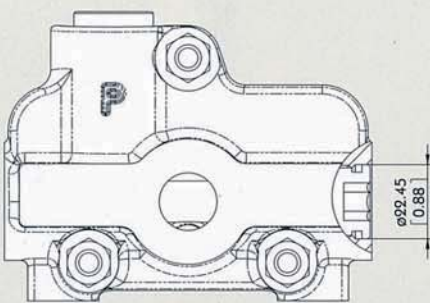

SN-3 Performance Curve Chart

Sectional Directional Control Valves

SN-3



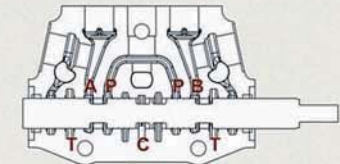
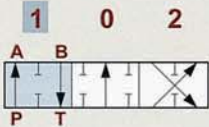
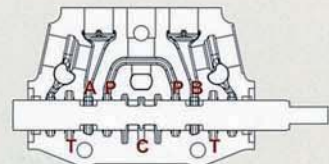
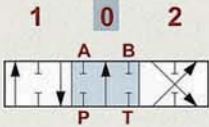
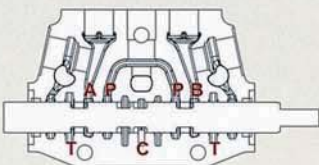
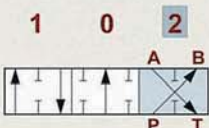
SN-3 Inlet Relief (Optional) Sectional Directional Control Valves

Type YG	
	<p>Direct pressure relief valve:</p> 
Type XYG	
	<p>Pilot operated pressure relief valve:</p> 
Type SV	
	<p>Relief valve blanking plug:</p> 

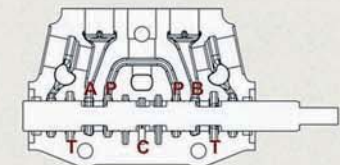
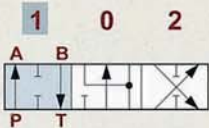
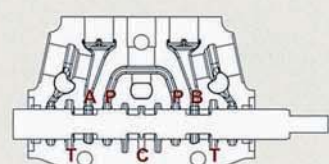
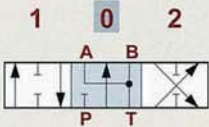
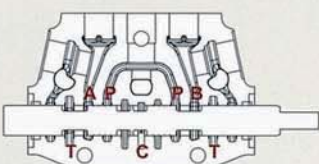
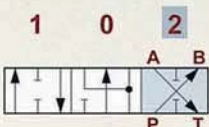
SN-3 spool Options

Sectional Directional Control Valves

TYPE 1

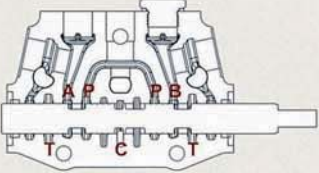
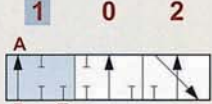
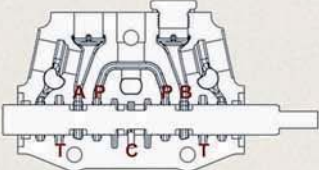
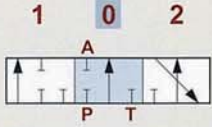
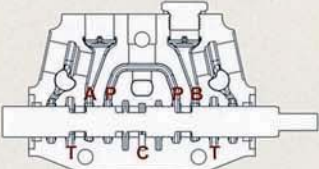
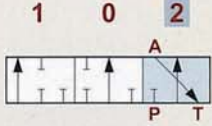
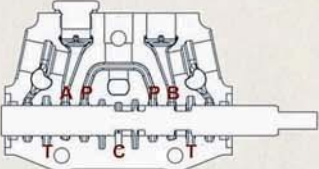
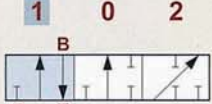
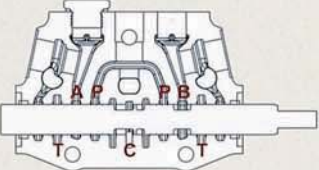
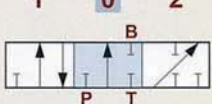
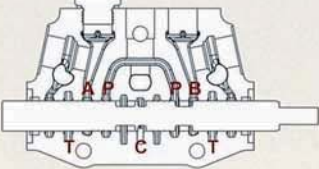
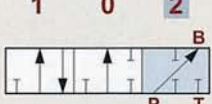
	<p>P → A</p> <p>B → T</p> <p>C closed</p>	
	<p>P & T & A & B closed</p> <p>C open</p>	
	<p>P → B</p> <p>A → T</p> <p>C closed</p>	

TYPE 2

	<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>	
	<p>P → B</p> <p>A → T</p> <p>C closed</p>	

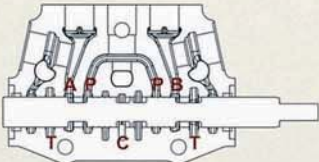
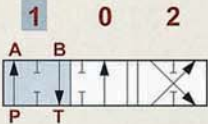
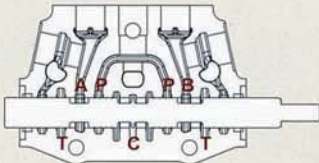
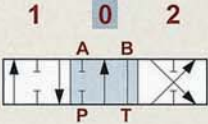
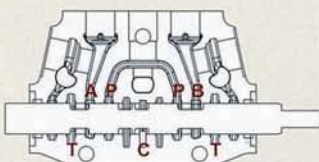
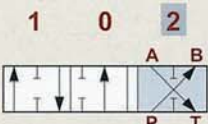
SN-3 spool Options

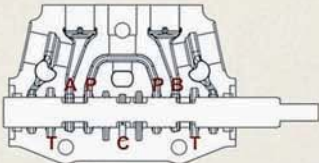
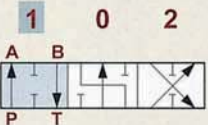
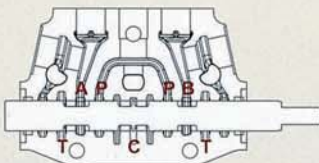
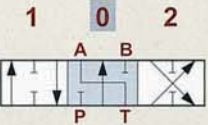
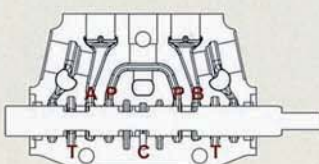
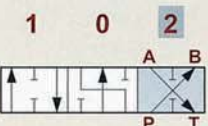
Sectional Directional Control Valves

TYPE 3		
	<p>P → A</p> <p>C closed</p>	 <p>"B" port plugged</p>
	<p>P & T & A & B closed</p> <p>C open</p>	 <p>"B" port plugged</p>
	<p>A → T</p> <p>C open</p>	 <p>"B" port plugged</p>
TYPE 4		
	<p>B → T</p> <p>C open</p>	 <p>"A" port plugged</p>
	<p>P & T & B closed</p> <p>C open</p>	 <p>"A" port plugged</p>
	<p>P → B</p> <p>C closed</p>	 <p>"A" port plugged</p>

SN-3 Spool Options

Sectional Directional Control Valves

TYPE 5		
	<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>	
	<p>P → B</p> <p>A → T</p> <p>C closed</p>	

TYPE 6		
	<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>	
	<p>P → B</p> <p>A → T</p> <p>C closed</p>	

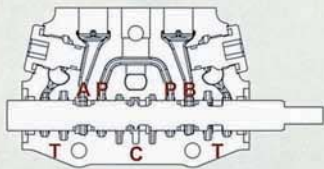
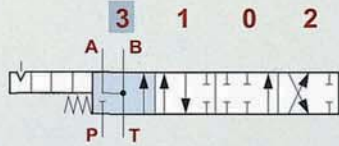
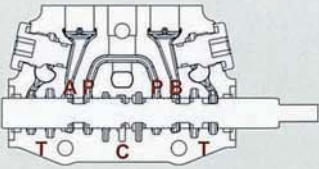
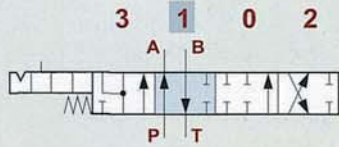
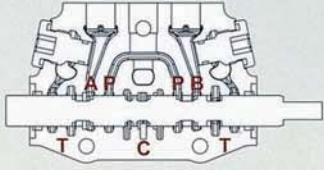
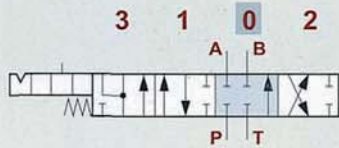
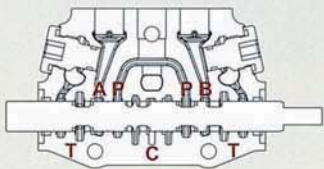
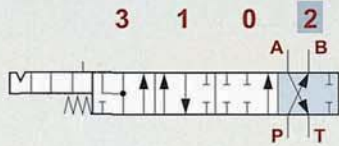
SN-3 spool Options

Sectional Directional Control Valves

TYPE 2H		
	<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>	
	<p>P → B</p> <p>A → T</p> <p>C closed</p>	
TYPE 1S		
	<p>P → B</p> <p>A → C</p>	
	<p>P & T & A & B closed</p> <p>C open</p>	
	<p>P → A</p> <p>B → C</p>	

SN-3 spool Options

Sectional Directional Control Valves

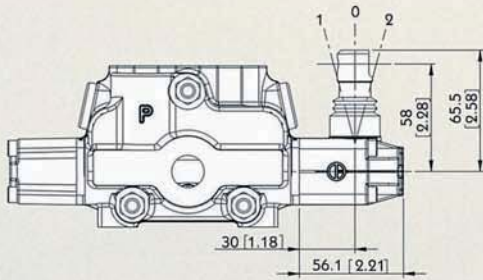
TYPE 5PY		NOTE: WITH SPECIAL BODY AND SPECIAL POSITIONER	
	<p>A & B → T</p> <p>P closed</p> <p>C open</p>		
	<p>P → A</p> <p>B → T</p> <p>C closed</p>		
	<p>P & A & B & T closed</p> <p>C open</p>		
	<p>P → B</p> <p>A → T</p> <p>C closed</p>		

SN-3

SN-3 A Side

Sectional Directional Control Valves

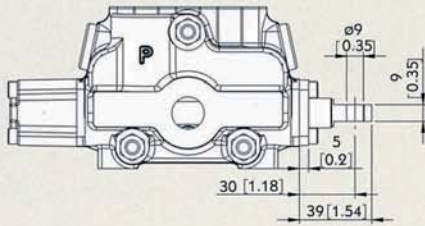
Type L



1 0 2

Type L:
STANDART LEVER KIT

Type SLP

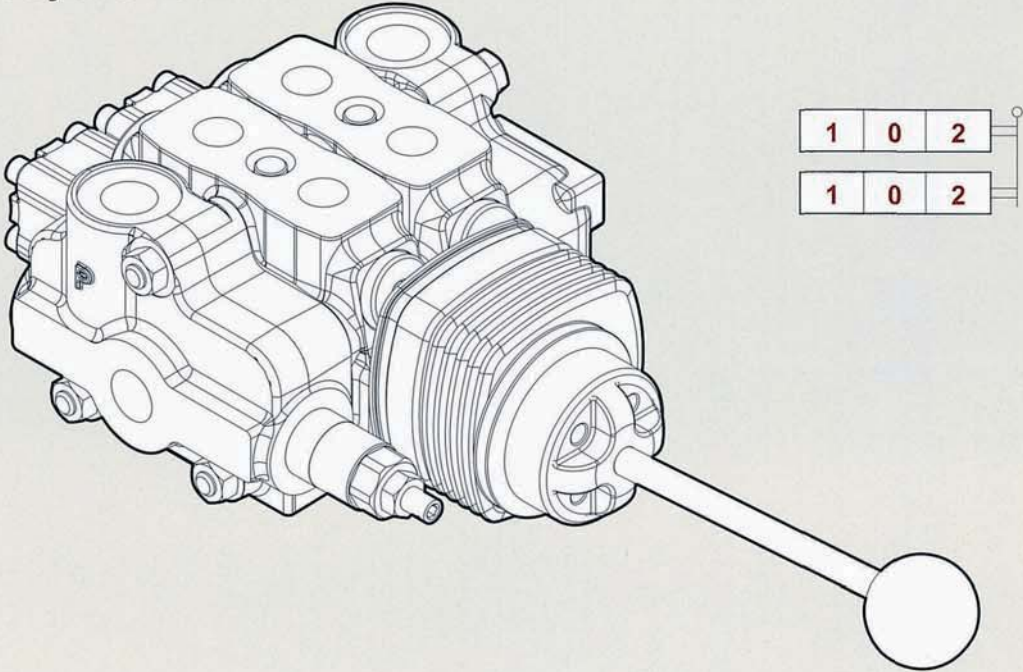


1 0 2

Type SLP:
WITH DUST-PROOF PLATE

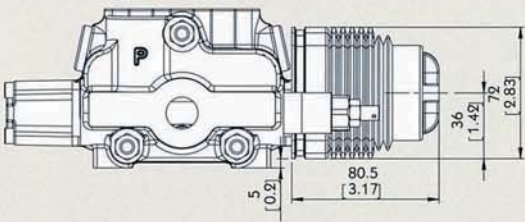
SN-3 A Side Sectional Directional Control Valves

LCB: Joystick control

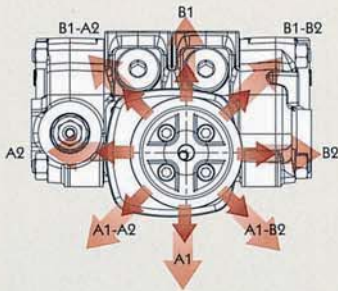


SN-3

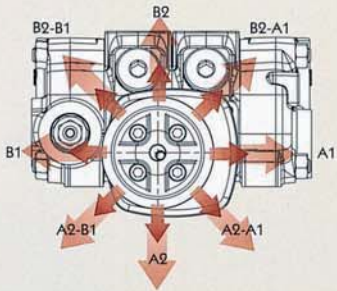
Type LCB



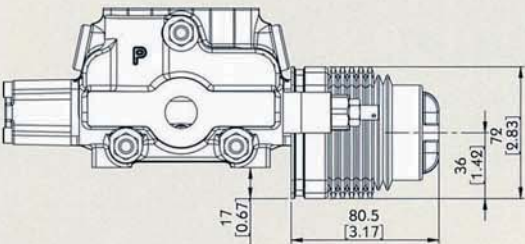
LCB1



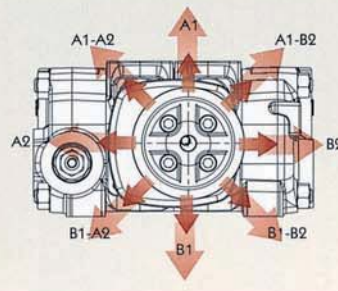
LCB2



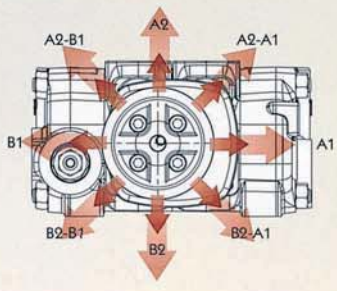
Type LCB



LCB3

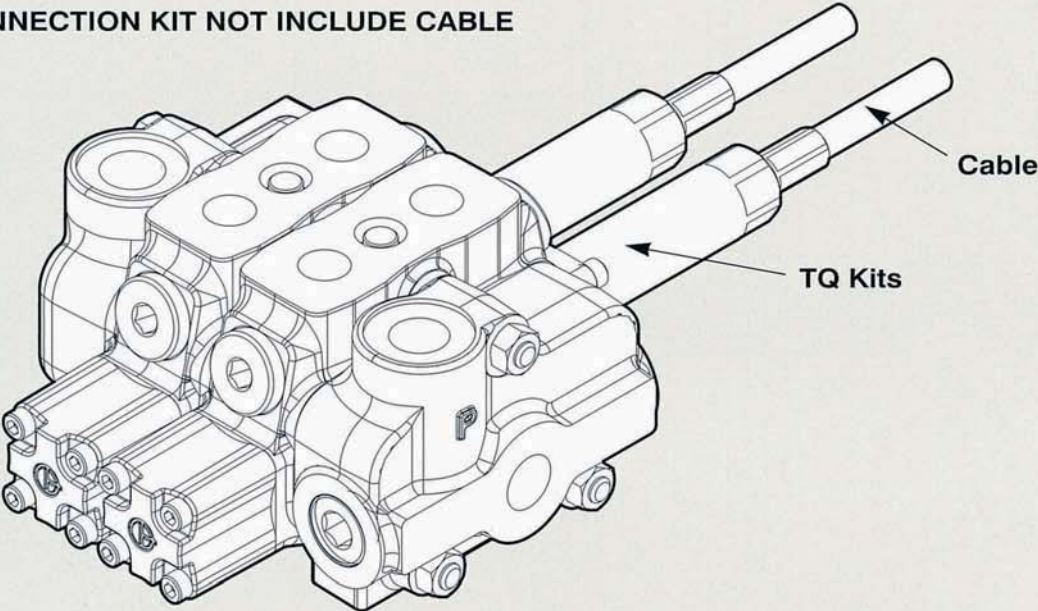


LCB4

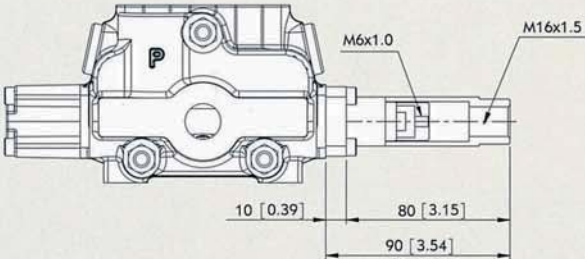


SN-3 A Side Sectional Directional Control Valves

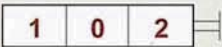
Note : CONNECTION KIT NOT INCLUDE CABLE



Type TQ



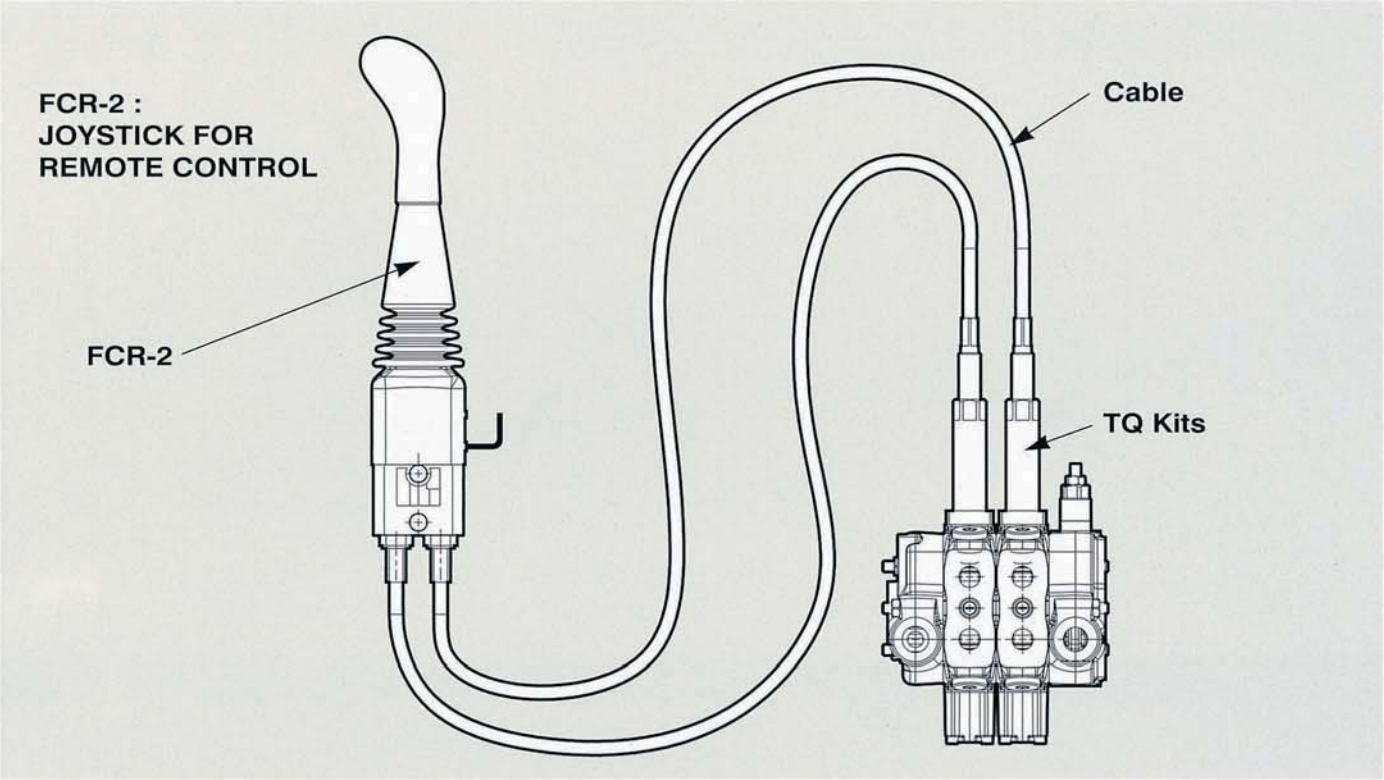
TQ Kit:



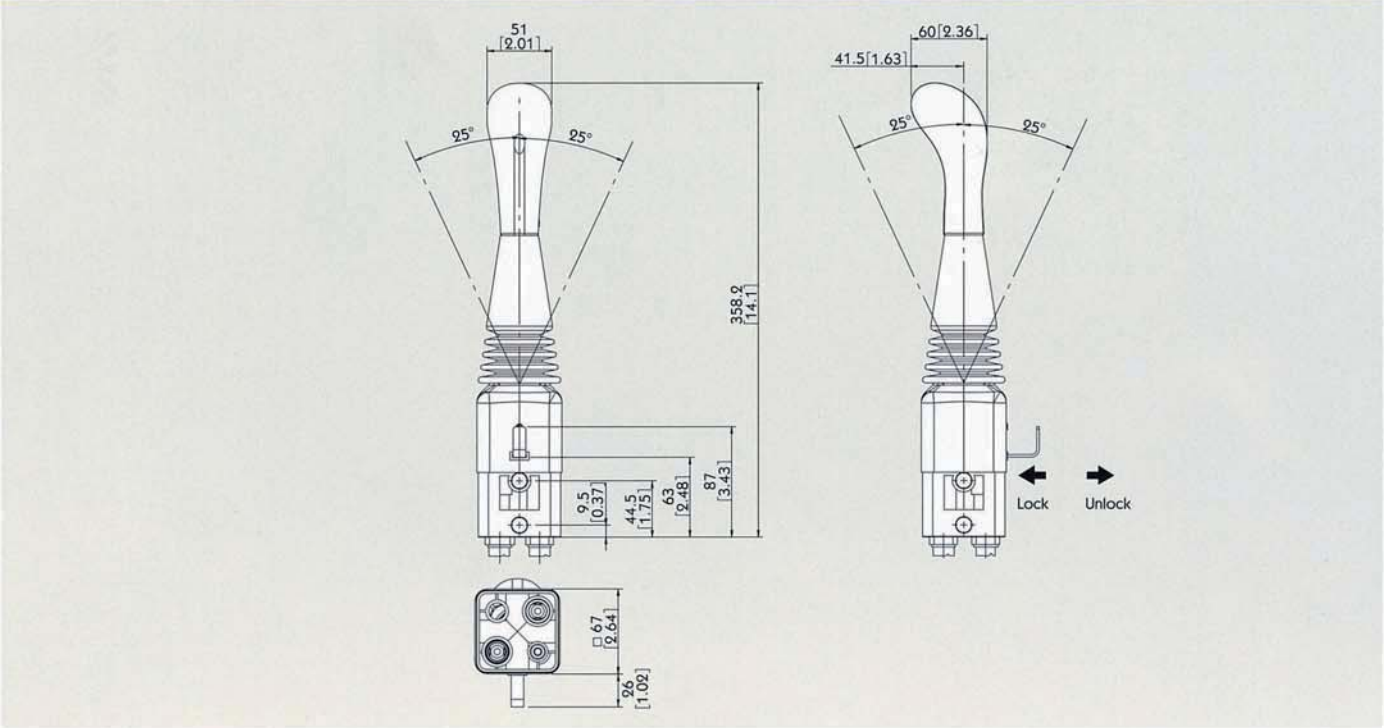
SN-3 A Side

Sectional Directional Control Valves

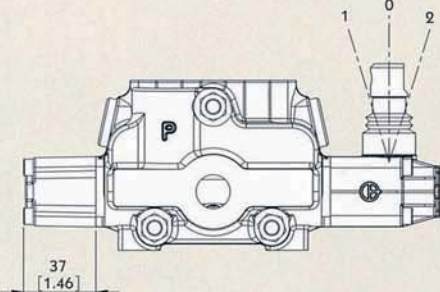



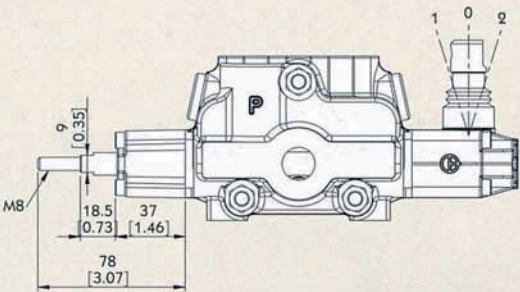

SN-3



Type FCR-2



SN-3 B Side Sectional Directional Control Valves

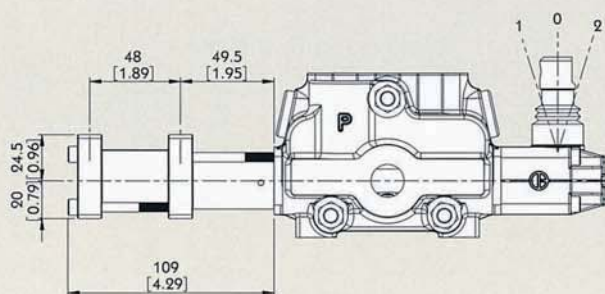
Type 6		
		6-1 Kit: DETENT IN POS. 1-0-2, WITHOUT SPRING CENTERED
		6-2 Kit: 2 POSITIONS, DETENT IN POS. 0-2, WITHOUT SPRING CENTERED
		6-3 Kit: 2 POSITIONS, DETENT IN POS. 1-0, WITHOUT SPRING CENTERED
Type 8D2		
		8D2 Kit: WITH SPRING RETURN TO NEUTRAL POSITION AND PIN WITH M8 MALE THREAD FOR DUAL CONTROL

SN-3 B Side

Sectional Directional Control Valves

Type 8P

V1 & V2 : NPT 1/8 - 27

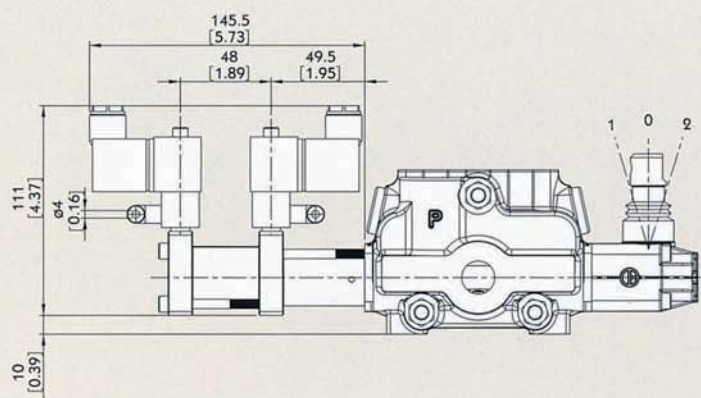


Pilot pressure : FROM 7 TO 10 BAR / 101 TO 145 PSI



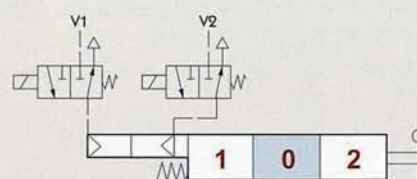
SN-3

Type 8EP3



Solenoid operating features :

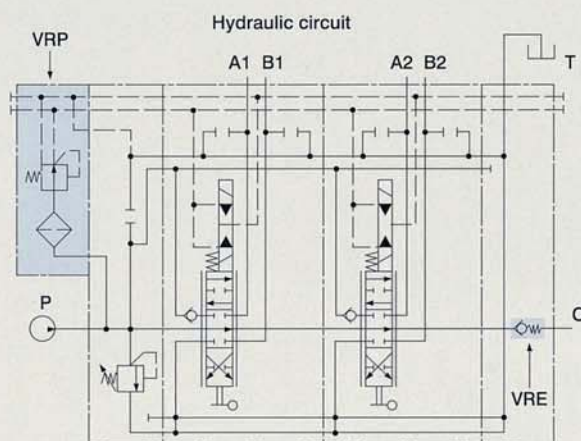
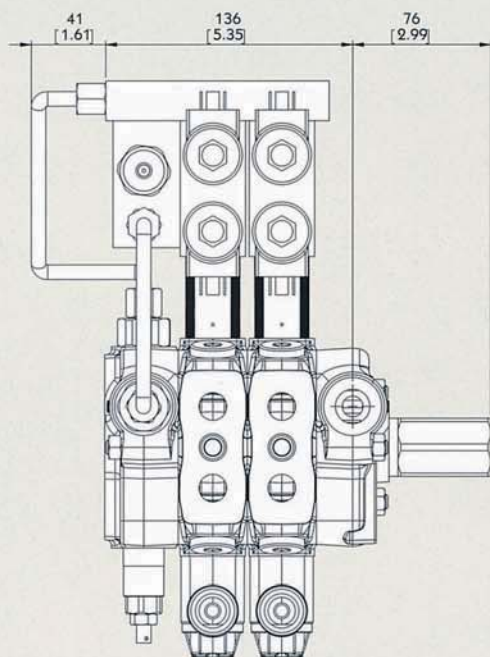
NOMINAL VOLTAGE: 24VDC
 NOMINAL VOLTAGE TOLERANCE: $\pm 10\%$
 POWER RATING: 5W



SN-3 B Side

Sectional Directional Control Valves

Type 8ED3

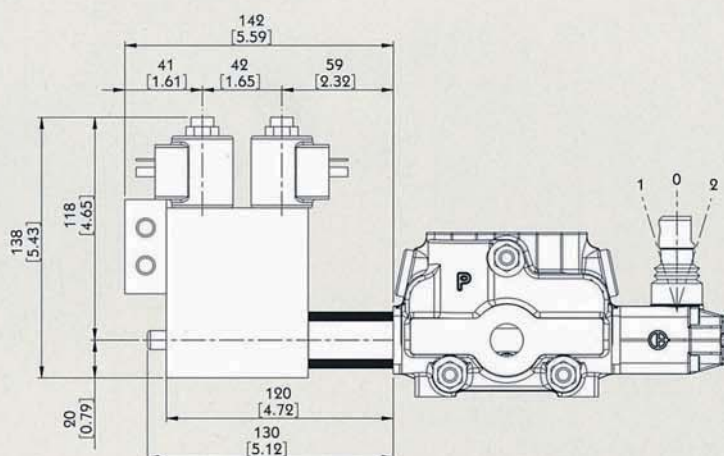


VRP valve operating features :

OUTLET PRESSURE: 25 BAR / 363 PSI

MAX. FLOW: 8 L/MIN / 2.1 US GPM

FLTERING: 80 μ



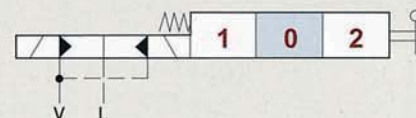
Operating features :

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

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

Solenoid operating features :

NOMINAL VOLTAGE: 12VDC / 24 VDC
POWER RATING: 21 W
DUTY CYCLE: 100 %



SN-3 B Side

Sectional 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 / 360PSI

Solenoid operating features :

NOMINAL VOLTAGE: 12VDC / 24 VDC

POWER RATING: 21 W

DUTY CYCLE: 100 %

1

0

2

V

L

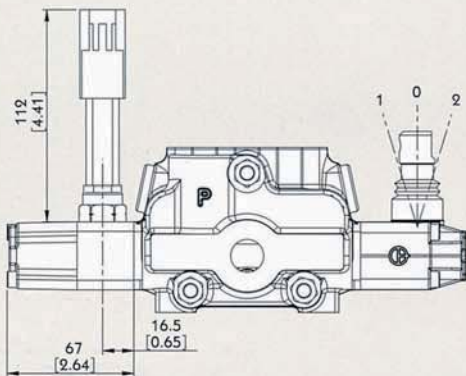
SN-3

P156

SN-3 B Side

Sectional Directional Control Valves

Type 8MG



MICROSWITCH

Operating features :

MECHANICAL LIFE: • 5X10⁵ OPERATIONS

ELECTRICAL LIFE (RESISTIVE LOAD):

- 10⁵ 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:

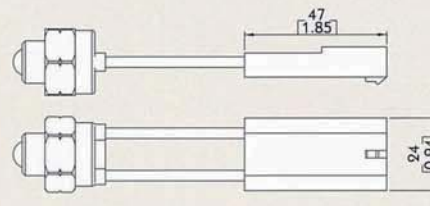
MICROSWITCH WITH MALE/FEMALE CONNECTOR, OPERATED IN POS. 2



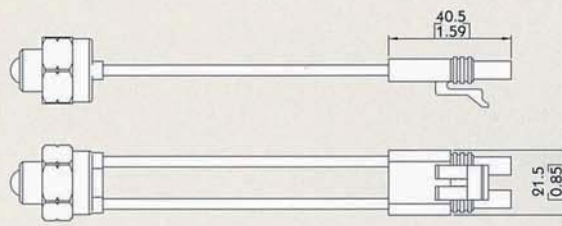
8MG3 Kit:

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

With NO contact (female connector with male end)



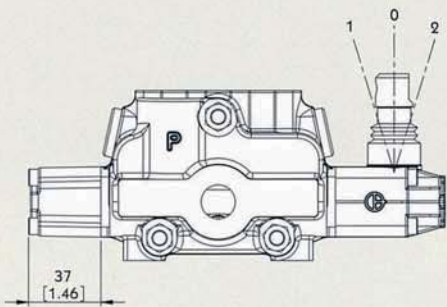
With NC contact (male connector with female end)



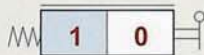
SN-3 B Side

Sectional Directional Control Valves

Type 8



8 Kit:
SPRING RETURN TO NEUTRAL POSITION

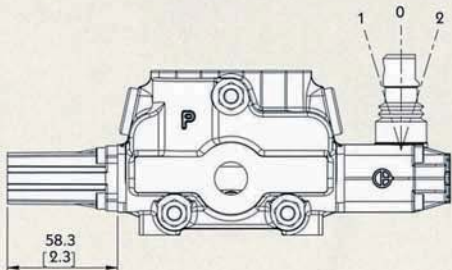


8-1 Kit:
SPRING RETURN TO NEUTRAL POSITION.
(2 POSITIONS)



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

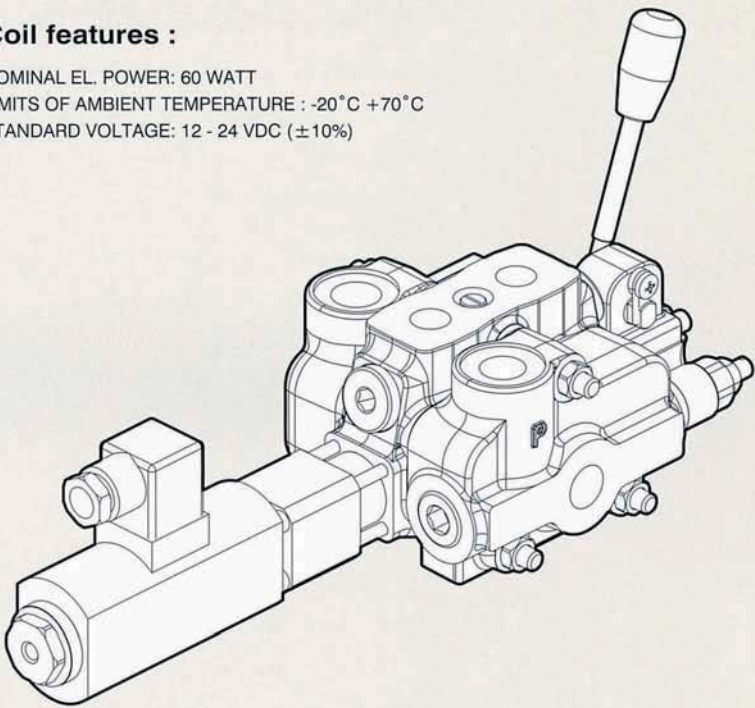


9-3 Kit:
DETENT IN POS. 1 WITH SPRING CENTERED

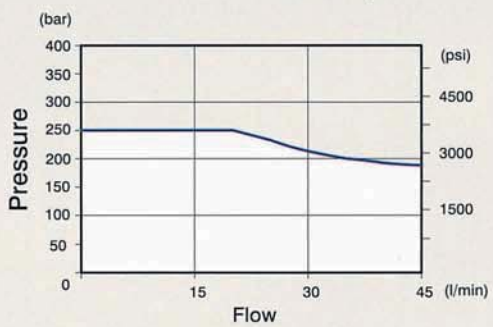
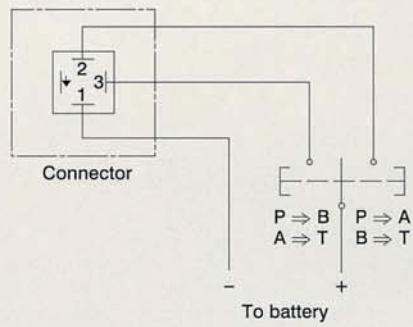
SN-3 B Side (Optional controls) Sectional Directional Control Valves

Coil features :

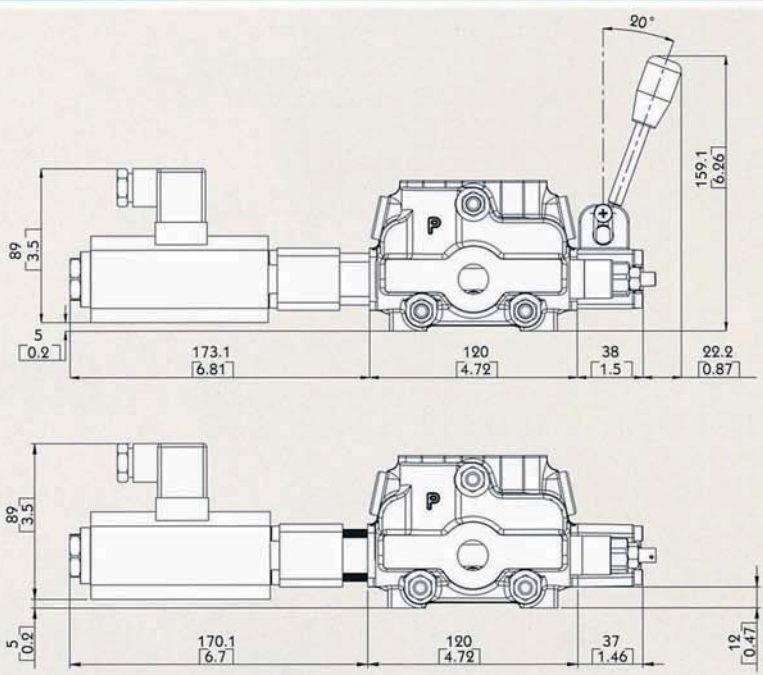
NOMINAL EL. POWER: 60 WATT
LIMITS OF AMBIENT TEMPERATURE : -20°C +70°C
STANDARD VOLTAGE: 12 - 24 VDC (±10%)



Electric wiring example



Type 8ESN



8ESNLES Kit:

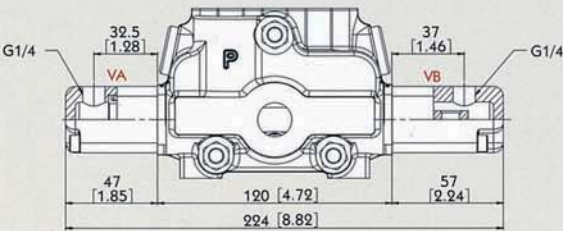


8ESNCAE Kit:



SN-3 B Side (Optional controls) Sectional Directional Control Valves

Type 8IM



Operating features :

PILOT PRESSURE : MAX. 50 BAR
INTERNAL LEAKAGE A(B) -> T : MAX. 6 CM ^3/MIN
(100 BAR / 40°C)

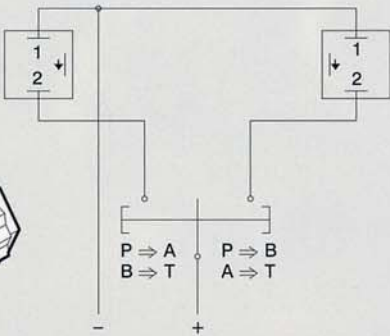
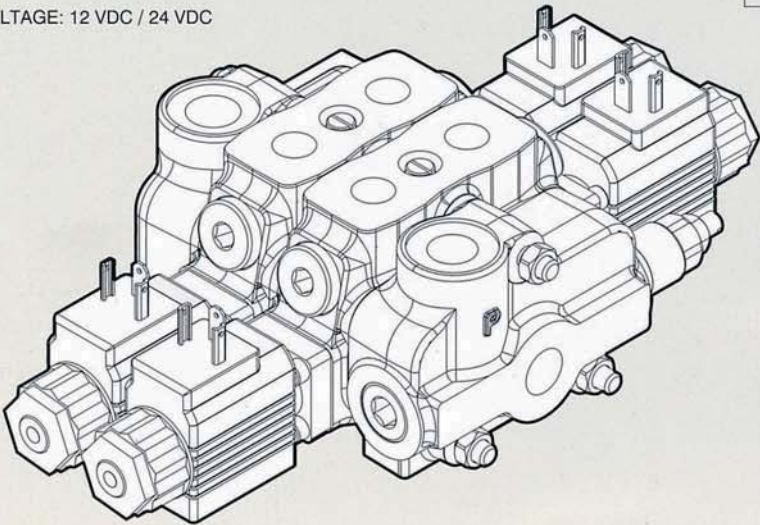


SN-3

Type 8ES3

Coil features :

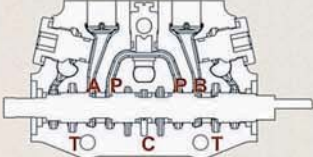
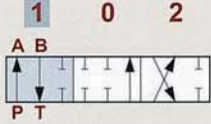
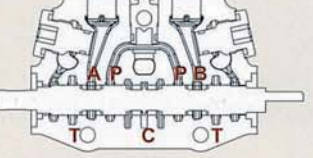
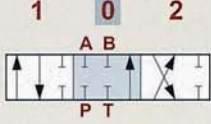
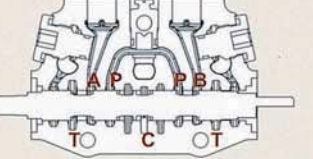
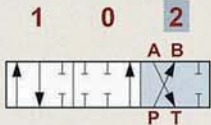
NOMINAL VOLTAGE TOLERANCE: 10%
ELECTRIC POWER: 36 W
STANDARD VOLTAGE: 12 VDC / 24 VDC



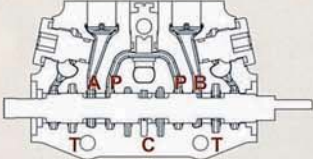
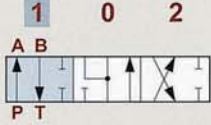
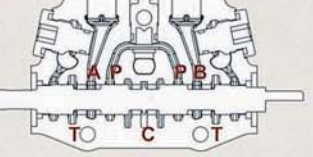
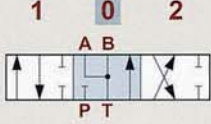
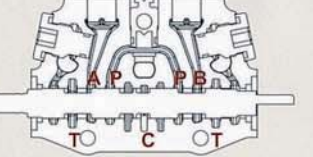
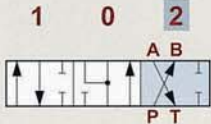
SN-3 special spool (Options for 8ESN Kit)

Sectional Directional Control Valves

Type 8ESN#1 (CODE: YLWSN32001-8ESN)

	<p>P → A</p> <p>B → T</p> <p>C closed</p>	
	<p>A & B & P & T closed</p> <p>C open</p>	
	<p>P → B</p> <p>A → T</p> <p>C closed</p>	

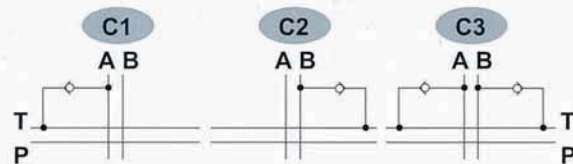
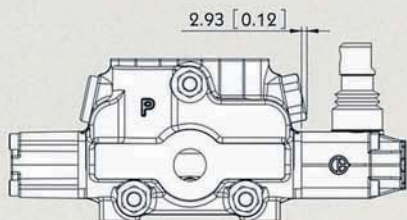
Type 8ESN#2 (CODE: YLWSN32002-8ESN)

	<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>	
	<p>P → B</p> <p>A → T</p> <p>C closed</p>	

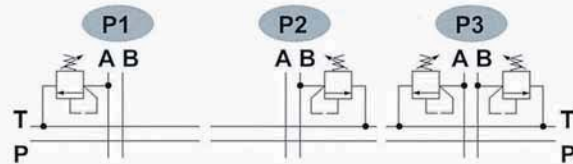
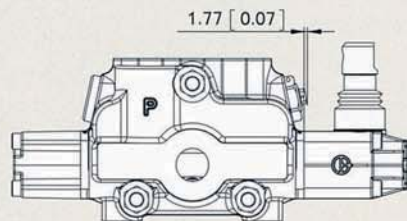
SN-3 Port Relief

Sectional Directional Control Valves

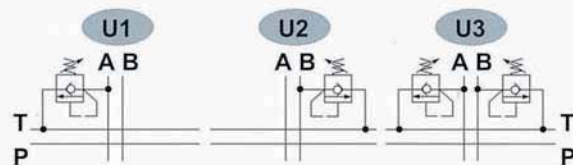
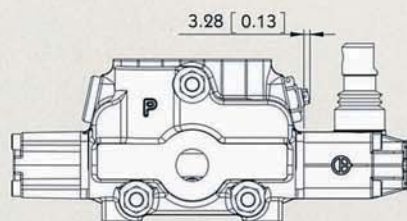
TYPE C



TYPE P



TYPE U



SN-3

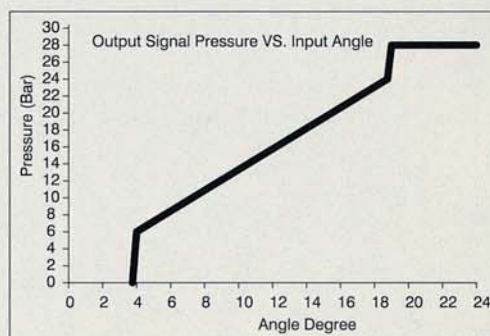
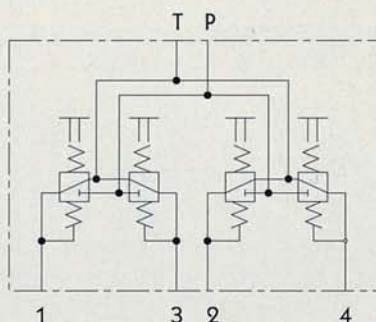
SN-3

A wireframe drawing of a joystick. The base is a multi-tiered, hexagonal structure. A handle with a grid pattern rises from the center of the base, curving slightly to the right. The top of the handle is a rounded, grid-patterned cap.

Hydraulic Pilot Valve - handle type

- This data sheet shows technical spec. with mineral oil of 46 mm²/s (cSt) viscosity at 40°C (104°F)

- Flow : 5 ~ 20 LPM
- Feeding pressure : 30 ~ 100 bar
- Max. backpressure : 3 bar
- Output pressure : see diagram
- Internal leakage at 30 bar : 18 ~ 24 cm³/min
- Fluid : mineral oil
- Fluid temperature : - 10 ~ 80°C
- Ambient temperature : - 40 ~ 60°C



SN-3 Accessories

Sectional Directional Control Valves

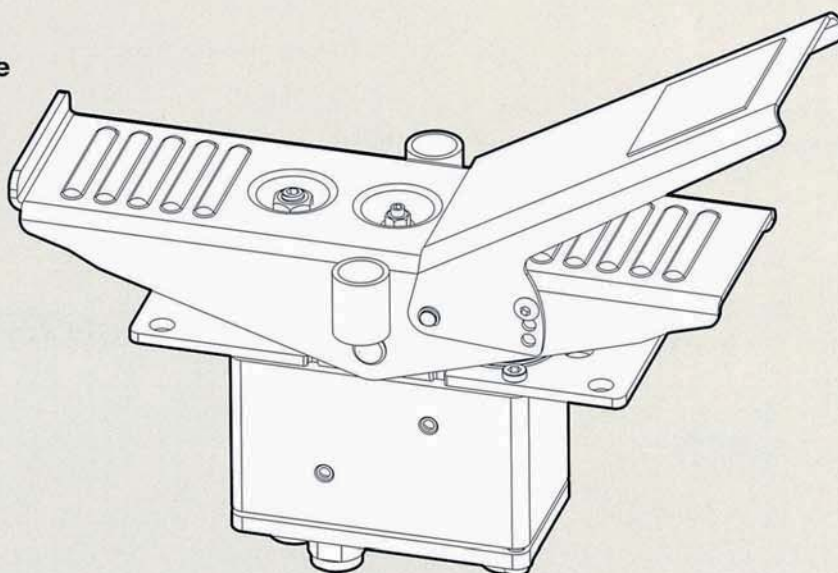
Type FP

CODE: YLFP246

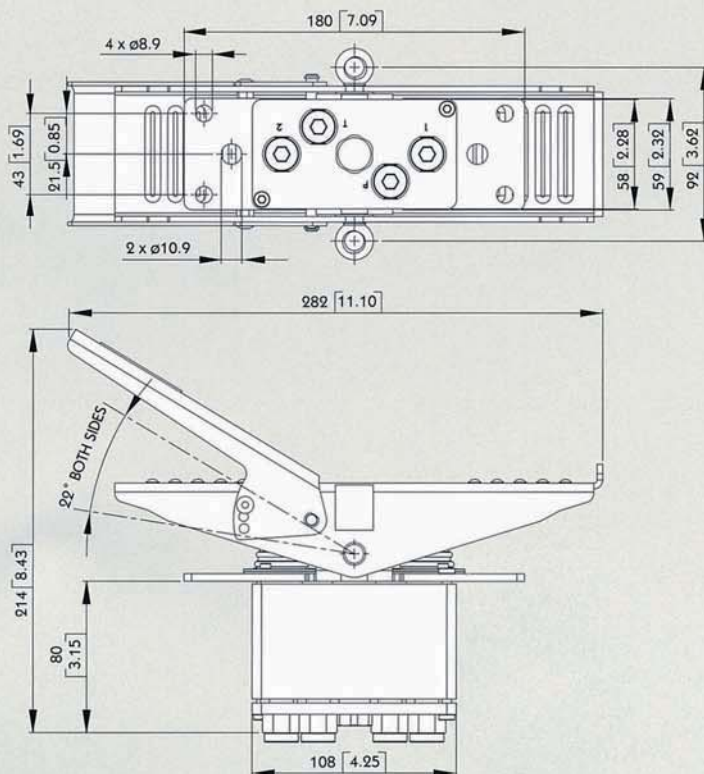
Hydraulic Pilot Valve - pedal type

Specifications:

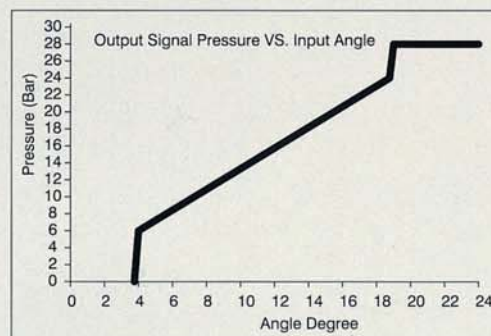
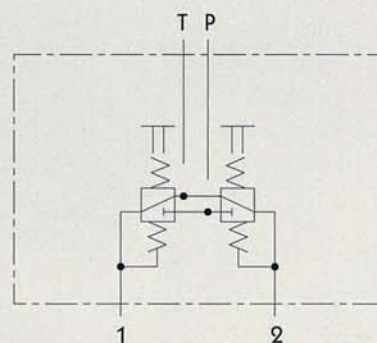
- This data sheet shows technical spec. with mineral oil of 46 mm²/s (cSt) viscosity at 40°C (104°F)
- Flow : 5 ~ 20 LPM
- Feeding pressure : 30 ~ 100 bar
- Max. backpressure : 3 bar
- Output pressure : see diagram
- Internal leakage at 30 bar : 18 ~ 24 cm³/min
- Fluid : mineral oil
- Fluid temperature : - 10 ~ 80°C
- Ambient temperature : - 40 ~ 60°C



SN-3



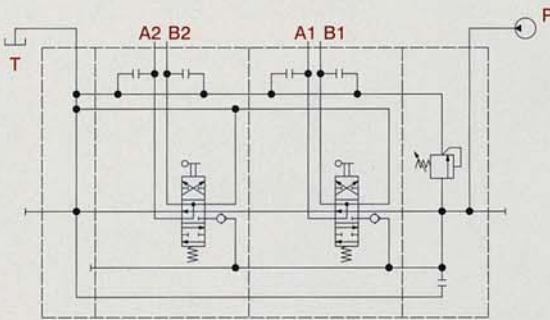
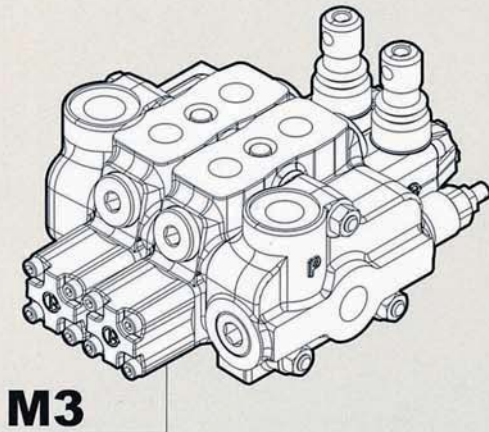
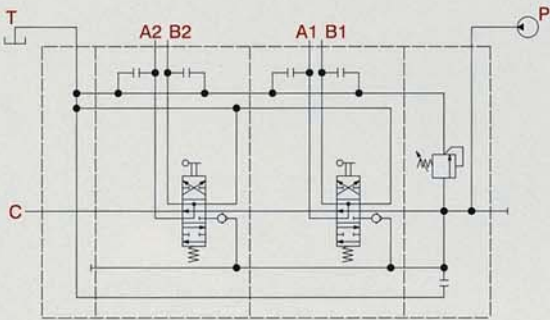
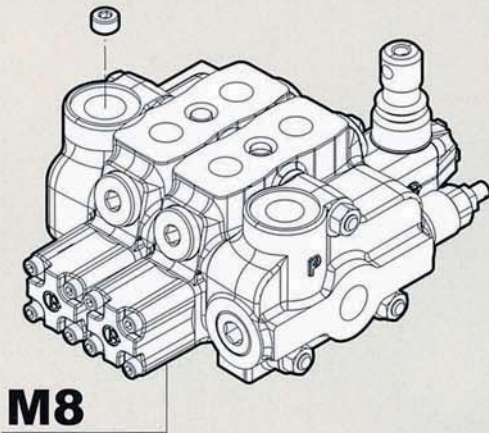
HYDRAULIC SCHEME:



SN-3 Outlet

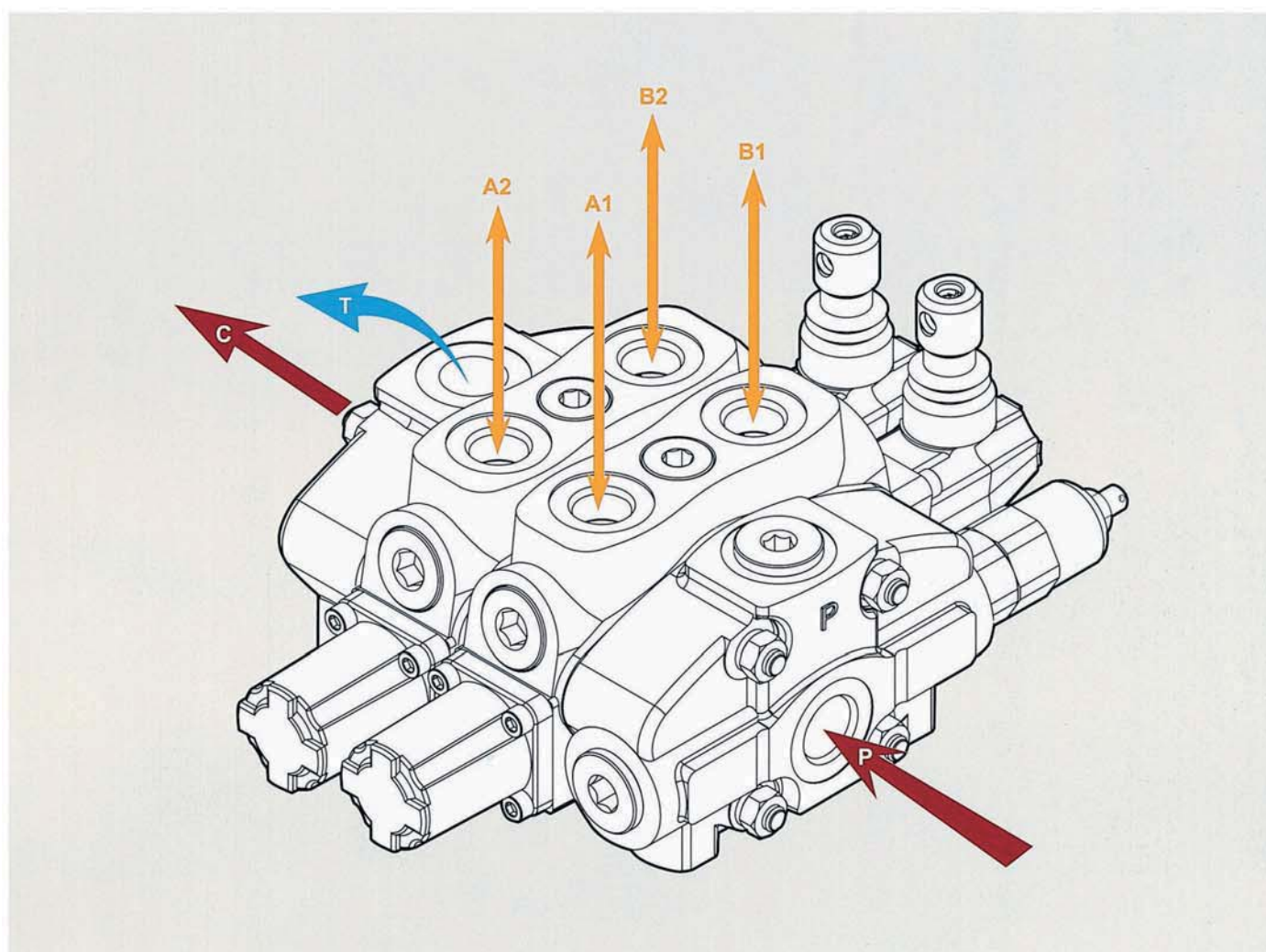
Sectional Directional Control Valves

Power Beyond Conversion plug
(Closed center plug)



SN-4

Sectional Directional Control Valves



SN-4

SN-4 Specifications

Nominal flow rate		80 l/min	21 US gpm
Operating pressure (maximum)	parallel or tandem circuit	315 bar	4600 psi
	series circuit	210 bar	3050 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.

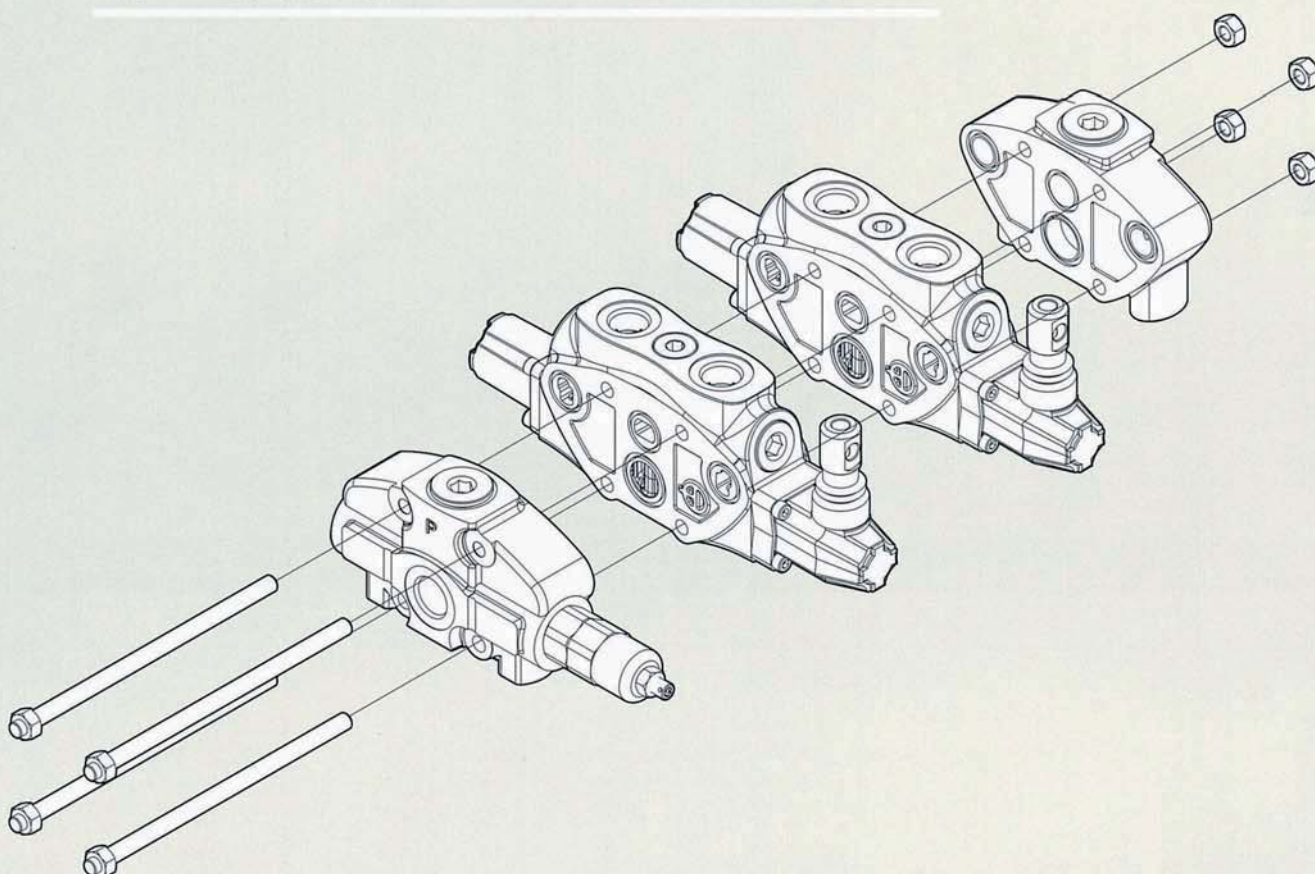
SN-4 Complete

Sectional Directional Control Valves

HOW TO ORDER FOR A COMPLETE ASSEMBLED VALVE

SN-4 / 2S - 3 / 18L / 28L / G-4-6 / M3

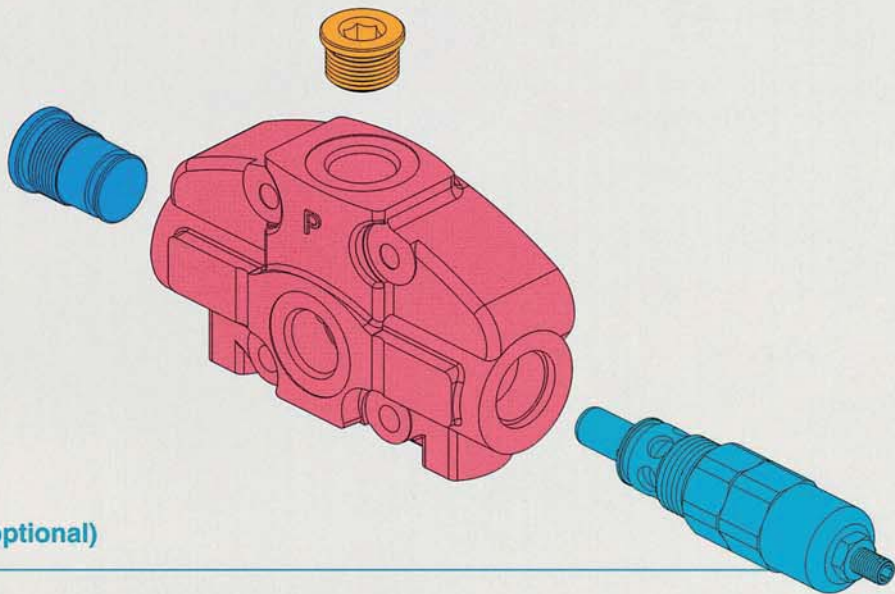
2S	No. of working section
3	Inlet cover with a main pressure relief valve
18L	1st section (complete working section)
28L	Following section (complete working section)
G-4-6	BSP ports
M3	Outlet cover



SN-4 Inlet Section

Sectional Directional Control Valves

FP SN-4 / SG-3 / G4



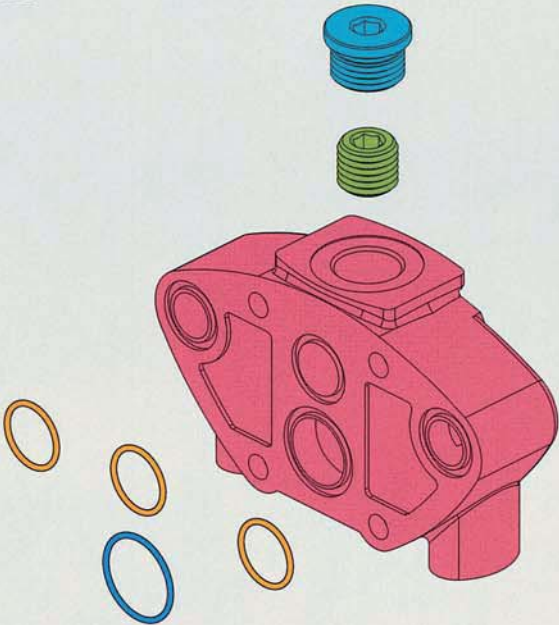
Inlet relief (optional)

Inlet Relief (optional)			
TYPE	CODE	DESCRIPTION	PAGE
SG-2	YLPSN43002	Range 80 to 160 bar / 1150 to 2300 psi , standard setting 125 bar / 1800 psi	P. 175
SG-3	YLPSN43003	Range 125 to 250 bar / 1800 to 3600 psi , standard setting 175 bar / 2500 psi	P. 175
SG-4	YLPSN43004	Range 200 to 315bar / 2900 to 4600 psi , standard setting 220 bar / 3200 psi	P. 175
		Standard setting is referred to 10 l/min - 2.6 US gpm flow.	P. 175
SV	YLPSN44000	Relief valve blanking plug	P. 175
XSG	YLX21000	Pilot operated pressure relief valve Range 25 to 315 bar/ 360 to 4600 psi, standard setting 125 bar/ 1800 psi	P. 175

SN-4 Outlet Section

Sectional Directional Control Valves

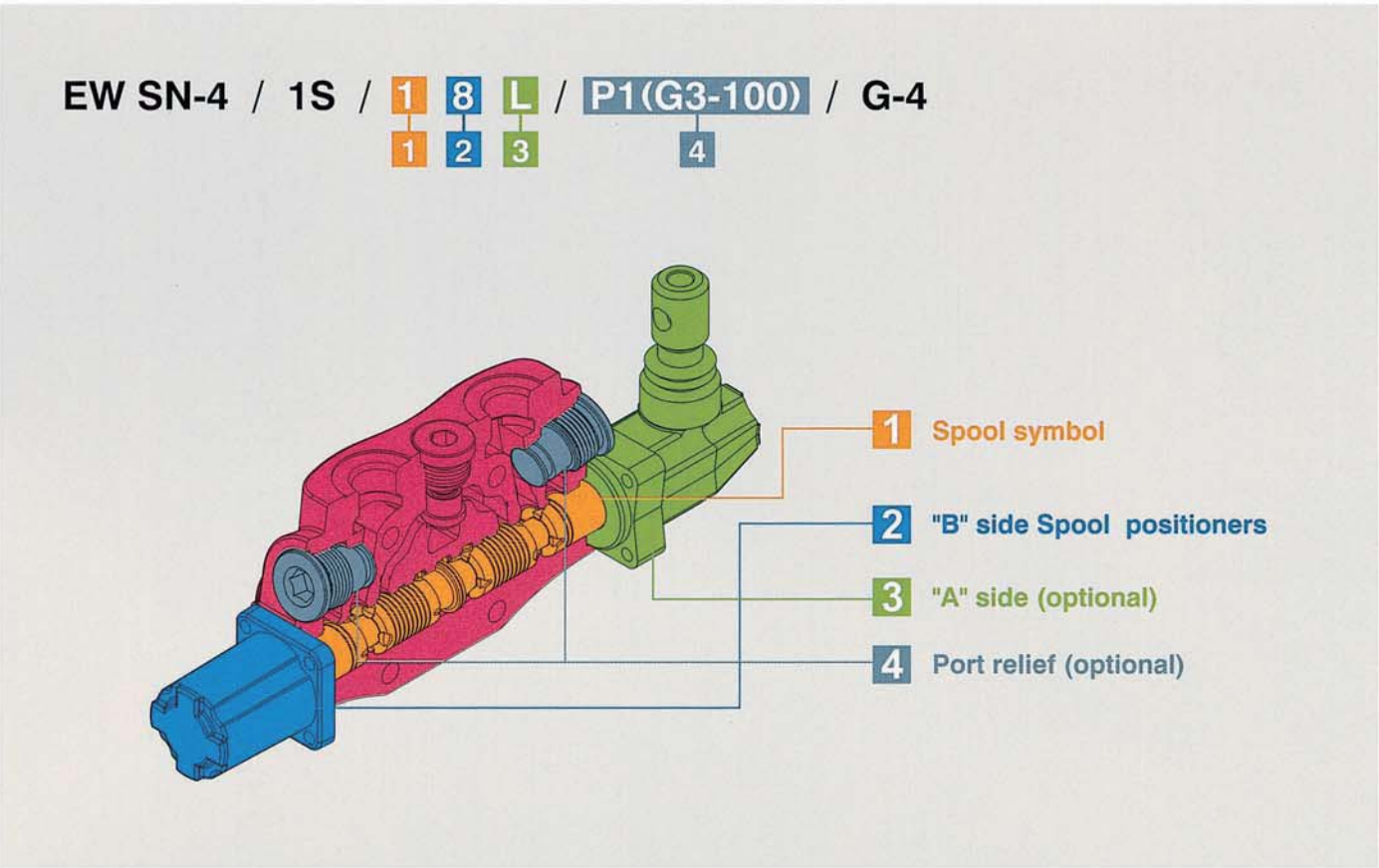
FT SN-4 / G-6 / M3



SN-4

SN-4 Working Section

Sectional Directional Control Valves



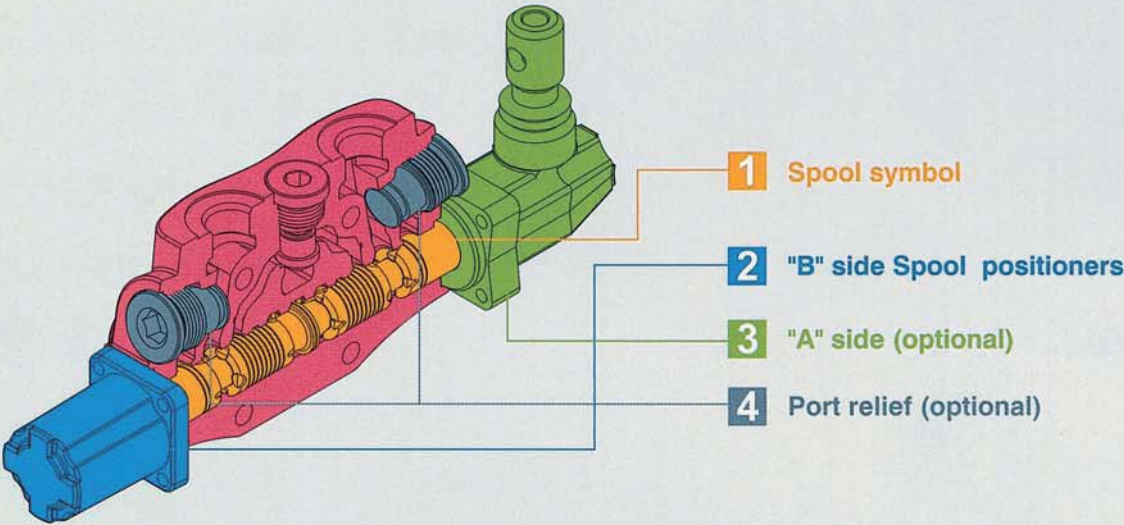
1: Spool Symbol			
TYPE	CODE	DESCRIPTION	PAGE
1	YLWSN42001	Double acting,3 positions,with A and B closed in neutral position	P. 176
1S	YLWSN42010	Double acting,3 positions,with A and B closed in neutral position, for series circuit	P. 179
2	YLWSN42002	Double acting,3 positions,with A and B open to tank in neutral position	P. 176
3	YLWSN42003	Single acting on A closed in neutral position, 3 positions, B plugged	P. 177
4	YLWSN42004	Single acting on B closed in neutral position, 3 positions, A plugged	P. 177
5	YLWSN42005	Double acting, 3 positions, with B open to Tank in neutral position	P. 178
6	YLWSN42006	Double acting, 3 positions, with A open to Tank in neutral position	P. 178
5PY	YLWSN43051	Double acting, 4 positions, floating circuit in 4th position with A, B open to Tank by pushing the lever	P. 180

SN-4 Working Section

Sectional Directional Control Valves

EW SN-4 / 1S / 1 8 L / P1(G3-100) / G-4

1 2 3 4



2: B Side Spool Positioners			
TYPE	CODE	DESCRIPTION	PAGE
6-1	YLWSN43061	Detent in pos. 1-0-2, without spring centered	P. 184
6-2	YLWSN43062	2 positions, detent in pos. 0-2, without spring centered	P. 184
6-3	YLWSN43063	2 positions, detent in pos. 1-0, without spring centered	P. 184
8D2	YLWSN43082	With spring return to neutral position and pin with M8 male thread for dual control	P. 184
8P	YLWSN43080	ON/OFF Pneumatic actuator	P. 185
8EP3	YLWSN44300	ON/OFF Electro-Pneumatic actuator	P. 185
8MG1 (NO)	YLWSN43801	Microswitch kit operated in pos. 1 (Normally Open)	P. 188
8MG2 (NO)	YLWSN43802	Microswitch kit operated in pos. 2 (Normally Open)	P. 188
8MG3 (NO)	YLWSN43803	Microswitch kit operated in pos. 1&2 (Normally Open)	P. 188
MG (NO)	YLWSN43804	Microswitch with NO terminal	P. 188
8MG1 (NC)	YLWSN438011	Microswitch kit operated in pos. 1 (Normally Closed)	P. 188
8MG2 (NC)	YLWSN438021	Microswitch kit operated in pos. 2 (Normally Closed)	P. 188
8MG3 (NC)	YLWSN438031	Microswitch kit operated in pos. 1&2 (Normally Closed)	P. 188
MG (NC)	YLWSN438041	Microswitch with NC terminal	P. 188
8	YLWSN43008	With spring return to neutral position	P. 189
8-1	YLWSN44081	2 positions, with spring centered from pos. 1	P. 189
8-2	YLWSN44082	2 positions, with spring centered from pos. 2	P. 189
9-1	YLWSN43091	Detent in pos. 1, 2 with spring centered	P. 189
9-2	YLWSN43092	Detent in pos. 2 with spring centered	P. 189
9-3	YLWSN43093	Detent in pos. 1 with spring centered	P. 189

2: B Side Spool Positioners

TYPE	CODE	DESCRIPTION	PAGE
8ED3+RV-KE1R3	YLWSN43201	1S: ON/OFF Electro-Hydraulic control kit with pilot and drain line+backpressure valve (12/24 VDC)	P. 186
8ED3+RV-KE2R3	YLWSN43202	2S: ON/OFF Electro-Hydraulic control kit with pilot and drain line+backpressure valve (12/24 VDC)	P. 186
8ED3+RV-KE3R3	YLWSN43203	3S: ON/OFF Electro-Hydraulic control kit with pilot and drain line+backpressure valve (12/24 VDC)	P. 186
8ED3+RV-KE4R3	YLWSN43204	4S: ON/OFF Electro-Hydraulic control kit with pilot and drain line+backpressure valve (12/24 VDC)	P. 186
8ED3+RV-KE5R3	YLWSN43205	5S: ON/OFF Electro-Hydraulic control kit with pilot and drain line+backpressure valve (12/24 VDC)	P. 186
8ED3+RV-KE6R3	YLWSN43206	6S: ON/OFF Electro-Hydraulic control kit with pilot and drain line+backpressure valve (12/24 VDC)	P. 186
8ED3+RV-KE7R3	YLWSN43207	7S: ON/OFF Electro-Hydraulic control kit with pilot and drain line+backpressure valve (12/24 VDC)	P. 186
8ED3+RV-KE8R3	YLWSN43208	8S: ON/OFF Electro-Hydraulic control kit with pilot and drain line+backpressure valve (12/24 VDC)	P. 186
8ED3+RV-KE9R3	YLWSN43209	9S: ON/OFF Electro-Hydraulic control kit with pilot and drain line+backpressure valve (12/24 VDC)	P. 186
8ED3+RV-KE10R3	YLWSN43210	10S: ON/OFF Electro-Hydraulic control kit with pilot and drain line+backpressure valve (12/24 VDC)	P. 186
8ED3+RV-KE11R3	YLWSN43211	11S: ON/OFF Electro-Hydraulic control kit with pilot and drain line+backpressure valve (12/24 VDC)	P. 186
8ED3+RV-KE12R3	YLWSN43212	12S: ON/OFF Electro-Hydraulic control kit with pilot and drain line+backpressure valve (12/24 VDC)	P. 186
8ER3+RV-KE1S0	YLWSN43401	1S: ON/OFF Electro-hydraulic control kit with collector kit for external pilot and drain	P. 187
8ER3+RV-KE2S0	YLWSN43402	2S: ON/OFF Electro-hydraulic control kit with collector kit for external pilot and drain	P. 187
8ER3+RV-KE3S0	YLWSN43403	3S: ON/OFF Electro-hydraulic control kit with collector kit for external pilot and drain	P. 187
8ER3+RV-KE4S0	YLWSN43404	4S: ON/OFF Electro-hydraulic control kit with collector kit for external pilot and drain	P. 187
8ER3+RV-KE5S0	YLWSN43405	5S: ON/OFF Electro-hydraulic control kit with collector kit for external pilot and drain	P. 187
8ER3+RV-KE6S0	YLWSN43406	6S: ON/OFF Electro-hydraulic control kit with collector kit for external pilot and drain	P. 187
8ER3+RV-KE7S0	YLWSN43407	7S: ON/OFF Electro-hydraulic control kit with collector kit for external pilot and drain	P. 187
8ER3+RV-KE8S0	YLWSN43408	8S: ON/OFF Electro-hydraulic control kit with collector kit for external pilot and drain	P. 187
8ER3+RV-KE9S0	YLWSN43409	9S: ON/OFF Electro-hydraulic control kit with collector kit for external pilot and drain	P. 187
8ER3+RV-KE10S0	YLWSN43410	10S: ON/OFF Electro-hydraulic control kit with collector kit for external pilot and drain	P. 187
8ER3+RV-KE11S0	YLWSN43411	11S: ON/OFF Electro-hydraulic control kit with collector kit for external pilot and drain	P. 187
8ER3+RV-KE12S0	YLWSN43412	12S: ON/OFF Electro-hydraulic control kit with collector kit for external pilot and drain	P. 187

3: A Side (Optional)

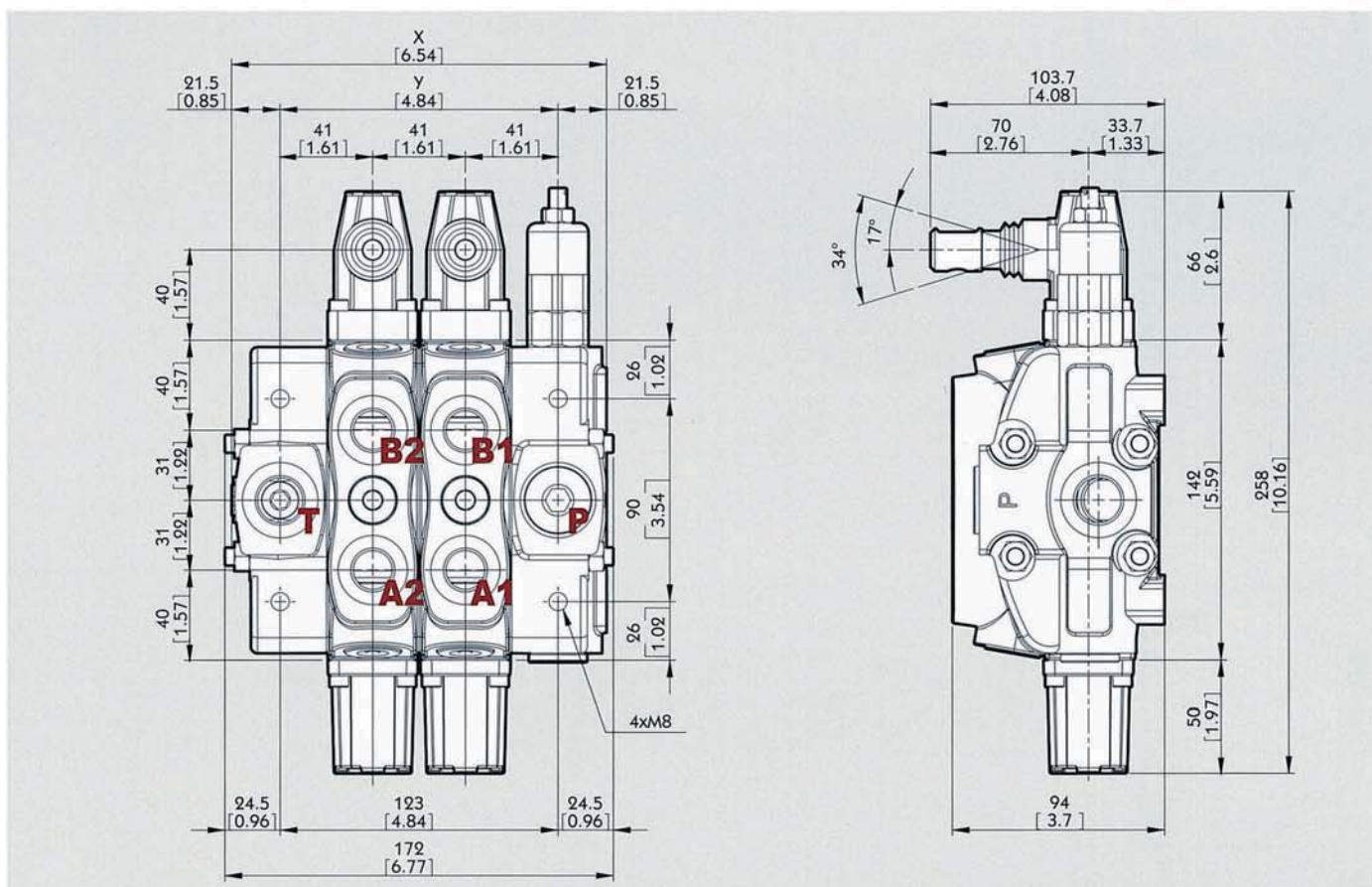
TYPE	CODE	DESCRIPTION	PAGE
L	YLWSN44000	Standard lever	P. 181
SLP	YLWSN44001	Without lever, with dust proof plate	P. 181
LCB	YLWSN44002	Joystick lever for 2 section operation	P. 182
TQ	YLWSN44003	Flexible cable connection	P. 183

4: Port Relief (Optional)

TYPE	CODE	DESCRIPTION	PAGE
P (G2-63)	YLWSN45002	Anti-shock valve, range 63 to 125 bar / form 900 to 1800 psi standard setting 63 bar / 900 psi	P. 190
P (G3-100)	YLWSN45003	Anti-shock valve, range 100 to 250 bar / form 1450 to 3600 psi standard setting 100bar / 1450 psi	P. 190
P (G4-200)	YLWSN45004	Anti-shock valve, range 200 to 315 bar / form 2900 to 4600 psi standard setting 200 bar / 2900 psi	P. 190
PM (G2-63)	YLWSN45005	Anti-shock valve, range 63 to 125 bar / form 900 to 1800 psi standard setting 63 bar / 900 psi, for low setting	P. 190
U (G2-63)	YLWSN45012	Anti-shock valve and Anti-cavitation valve, range 63 to 125 bar / form 900 to 1800 psi standard setting 63 bar / 900 psi	P. 190
U (G3-100)	YLWSN45013	Anti-shock valve and Anti-cavitation valve, range 100 to 250 bar / form 1450 to 3600 psi standard setting 100 bar / 1450 psi	P. 190
U (G4-200)	YLWSN45014	Anti-shock valve and Anti-cavitation valve, range 200 to 315 bar / form 2900 to 4600 psi standard setting 200 bar / 2900 psi	P. 190
C	YLWSN45100	Anti - cavitation	P. 190

SN-4 Dimensions

Sectional Directional Control Valves



Standard threads

Ports	Inlet P and carry-over C	A and B	Outlet T
BSP	G1/2	G1/2	G3/4
UN-UNF	7/8-14 UNF-2B (SAE 10)	3/4-16 UNF-2B (SAE 8)	7/8-14 UNF-2B (SAE 10)
METRIC	M22x1.5	M22x1.5	M22x1.5

Pilot ports	Hydraulic	Pneumatic
BSP	G1/4	NPTF 1/8-27
UN-UNF	9/16-18 UNF-2B (SAE 6)	NPTF 1/8-27
METRIC	G1/4	NPTF 1/8-27

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

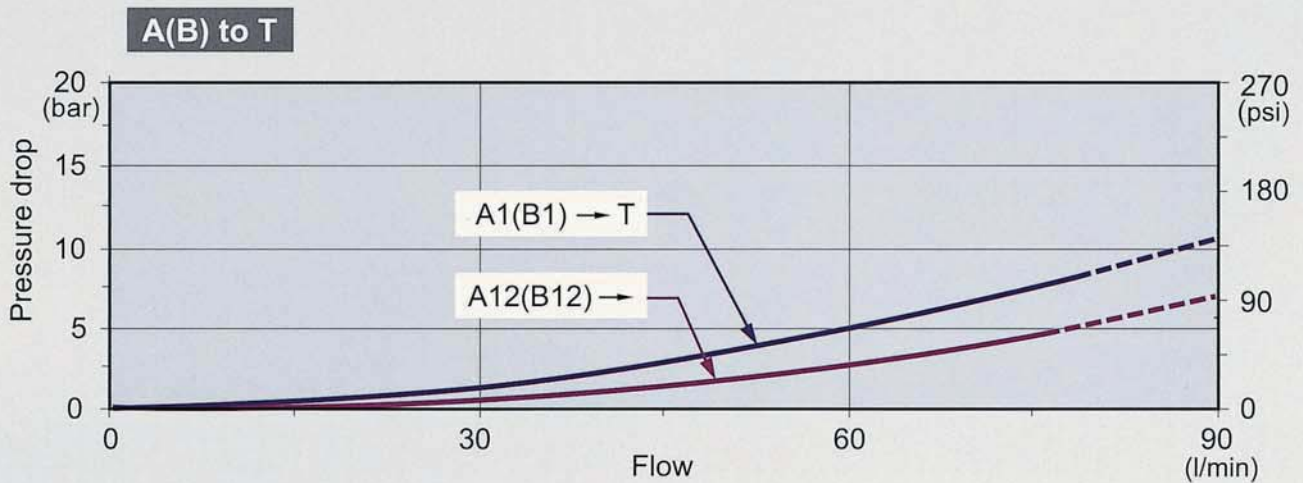
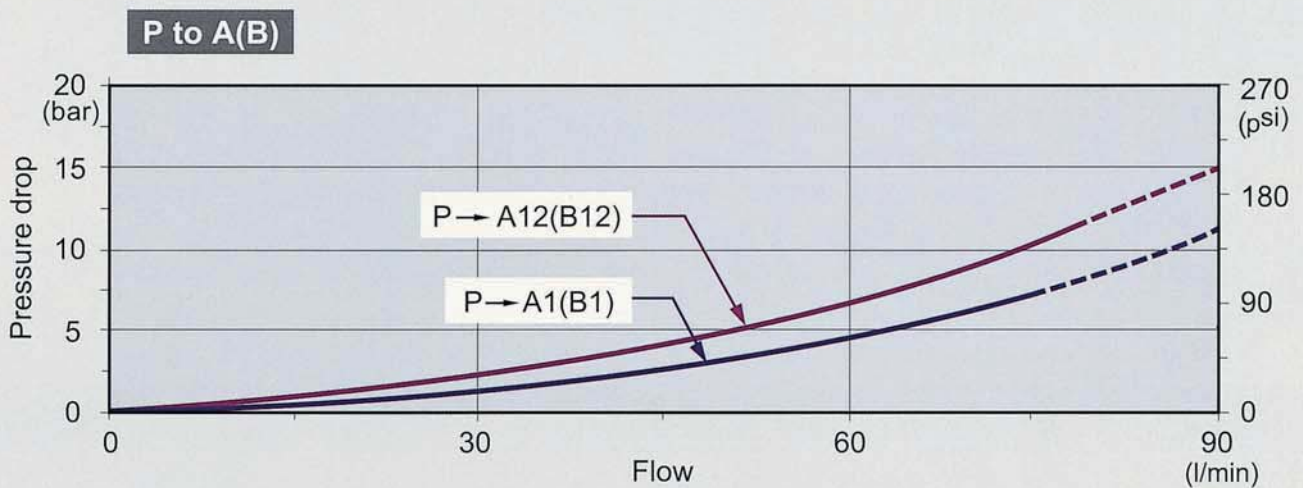
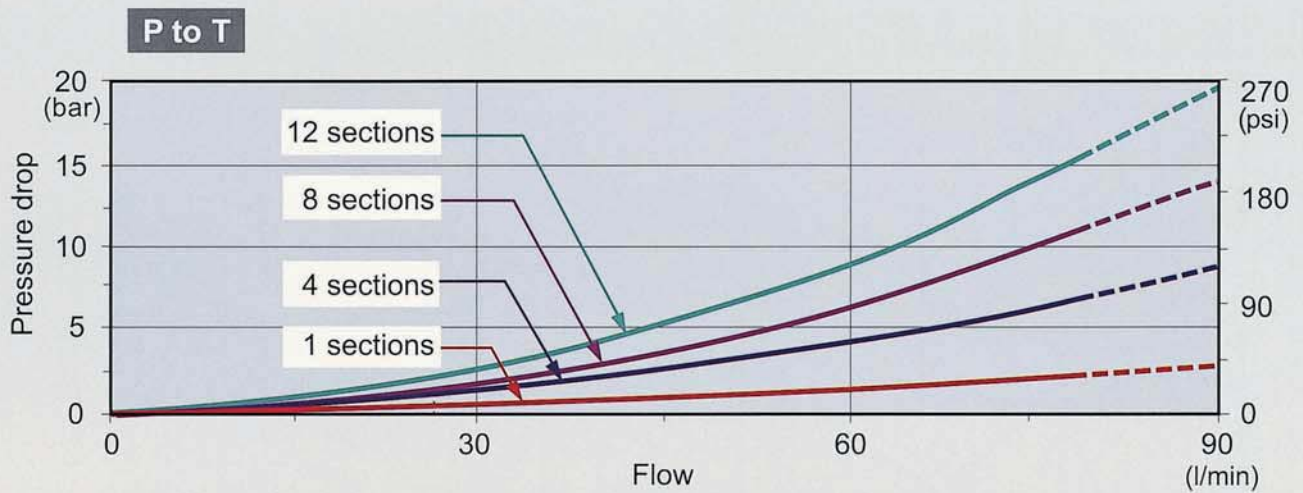
Standard dimensions

TYPE	X		Y		TYPE	X		Y	
	mm	in	mm	in		mm	in	mm	in
SN4 /1S	128	5.04	82	3.23	SN4 /7S	374	14.72	328	12.91
SN4 /2S	169	6.65	123	4.84	SN4 /8S	415	16.33	369	14.52
SN4 /3S	210	8.27	164	6.46	SN4 /9S	456	17.94	410	16.13
SN4 /4S	251	9.88	205	8.07	SN4 /10S	497	19.55	451	17.74
SN4 /5S	292	11.5	246	9.69	SN4 /11S	538	21.16	492	19.35
SN4 /6S	333	13.11	267	11.3	SN4 /12S	579	22.77	533	20.96

SN-4 Performance Curve Chart

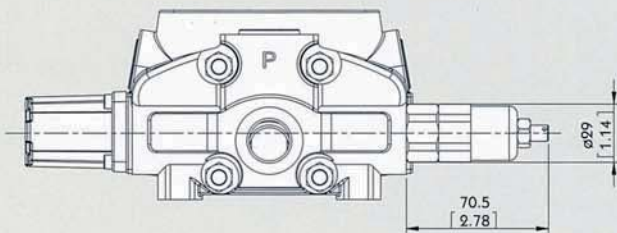
Sectional Directional Control Valves

SN-4

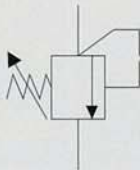


SN-4 Inlet Relief (Optional) Sectional Directional Control Valves

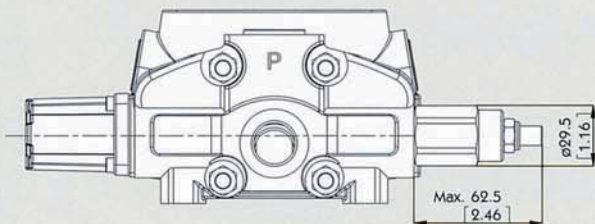
Type SG



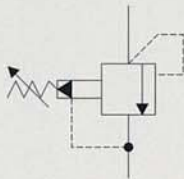
Direct pressure relief valve:



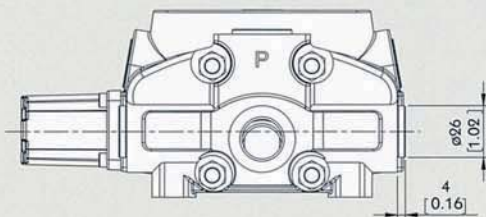
Type XSG



Pilot operated pressure relief valve:



Type SV



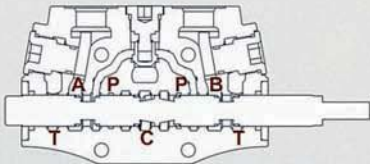
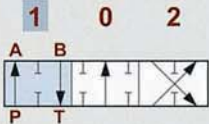
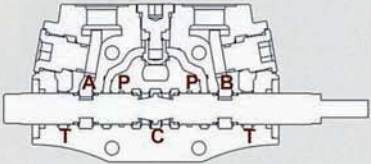
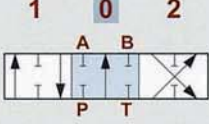
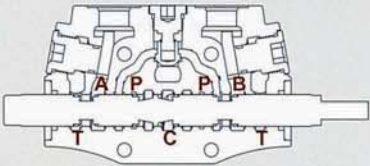
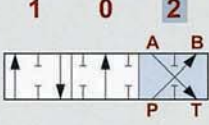
Relief valve blanking plug:



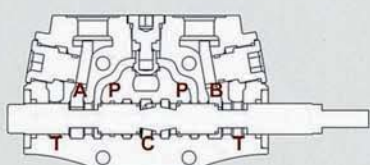
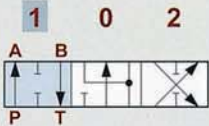
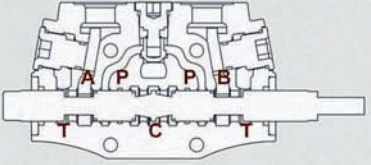
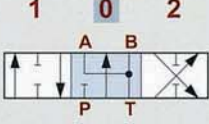
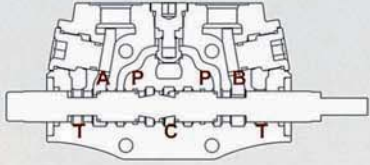
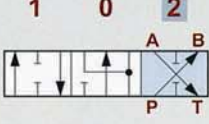
SN-4 spool Options

Sectional Directional Control Valves

TYPE 1

	<p>P → A</p> <p>B → T</p> <p>C closed</p>	
	<p>P & T & A & B closed</p> <p>C open</p>	
	<p>P → B</p> <p>A → T</p> <p>C closed</p>	

TYPE 2

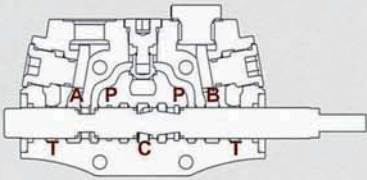
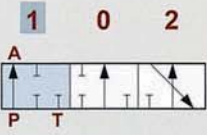
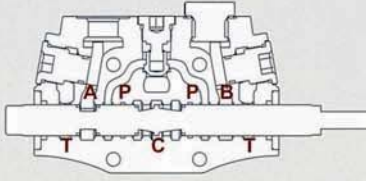
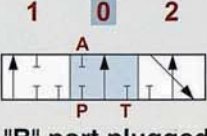
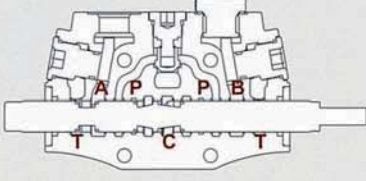
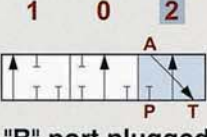
	<p>P → A</p> <p>B → T</p> <p>C closed</p>	
	<p>A & B → T</p> <p>P closed</p> <p>C open</p>	
	<p>P → B</p> <p>A → T</p> <p>C closed</p>	

SN-4 spool Options

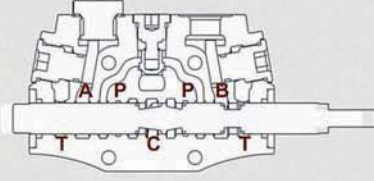
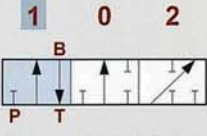
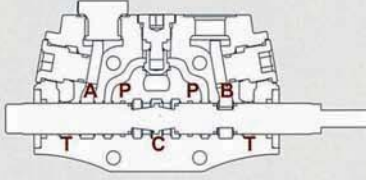
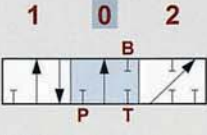
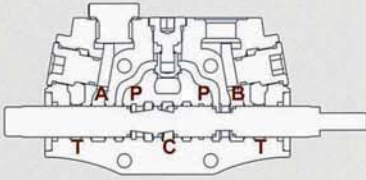
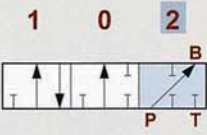
Sectional Directional Control Valves

SN-4

TYPE 3

	<p>$P \rightarrow A$</p> <p>C closed</p>	 <p>"B" port plugged</p>
	<p>P & A closed</p> <p>C open</p>	 <p>"B" port plugged</p>
	<p>$A \rightarrow T$</p> <p>P closed</p> <p>C open</p>	 <p>"B" port plugged</p>

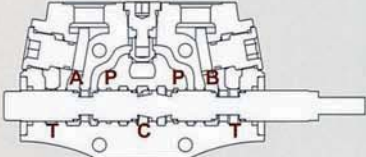
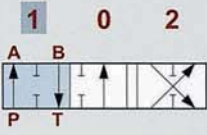
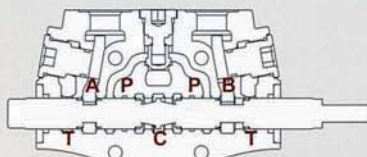
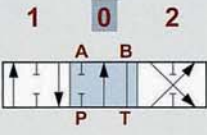
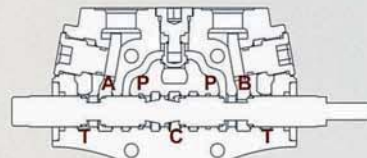
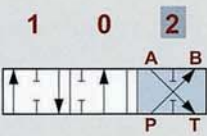
TYPE 4

	<p>$B \rightarrow T$</p> <p>P closed</p> <p>C open</p>	 <p>"A" port plugged</p>
	<p>P & B closed</p> <p>C open</p>	 <p>"A" port plugged</p>
	<p>$P \rightarrow B$</p> <p>C closed</p>	 <p>"A" port plugged</p>

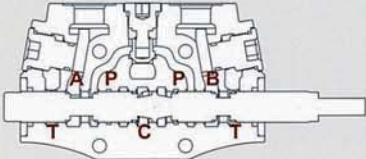
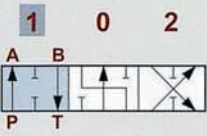
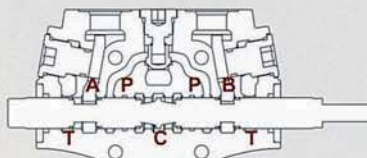
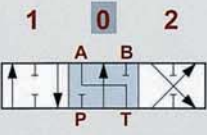
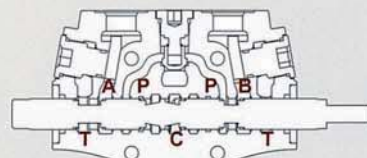
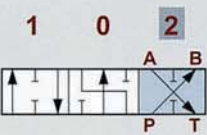
SN-4 Spool Options

Sectional Directional Control Valves

TYPE 5

	<p>P → A</p> <p>B → T</p> <p>C closed</p>	
	<p>B → T</p> <p>P & A closed</p> <p>C open</p>	
	<p>P → B</p> <p>A → T</p> <p>C closed</p>	

TYPE 6

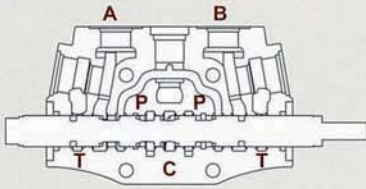
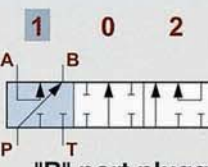
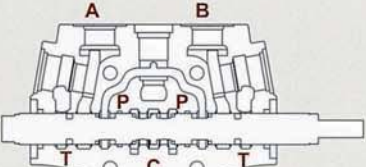
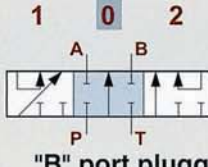
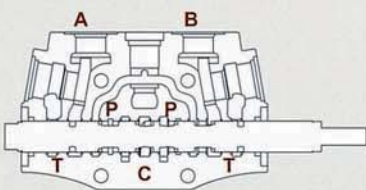

	<p>P → A</p> <p>B → T</p> <p>C closed</p>	
	<p>B → T</p> <p>P & A closed</p> <p>C open</p>	
	<p>P → B</p> <p>A → T</p> <p>C closed</p>	

SN-4 Spool Options

Sectional Directional Control Valves

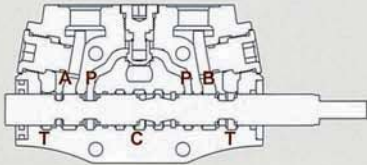
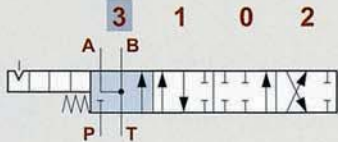
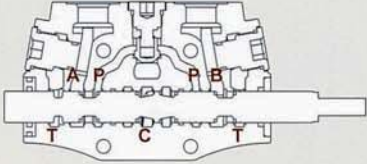
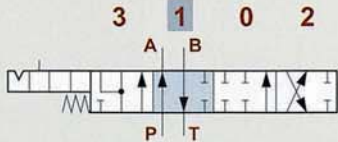
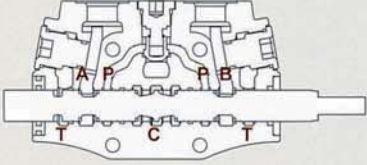
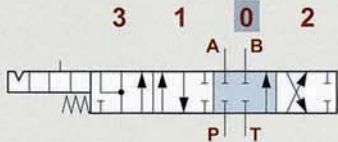
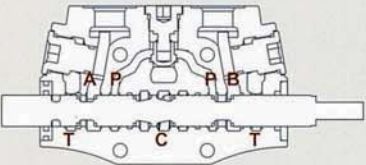
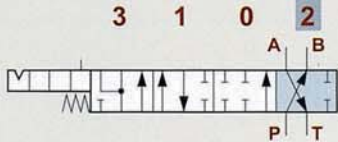
SN-4

TYPE 1S

	<p>P → A</p> <p>B → C</p> <p>T closed</p>	 <p>"B" port plugged</p>
	<p>P & A & B & T closed</p> <p>C open</p>	 <p>"B" port plugged</p>
	<p>P → B</p> <p>A → C</p> <p>T closed</p>	 <p>"B" port plugged</p>

SN-4 spool Options

Sectional Directional Control Valves

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

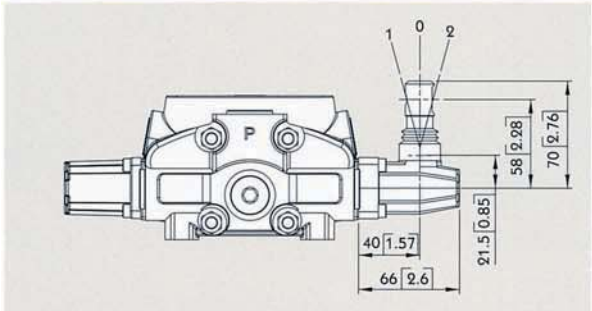
SN-4

SN-4 A Side

Sectional Directional Control Valves

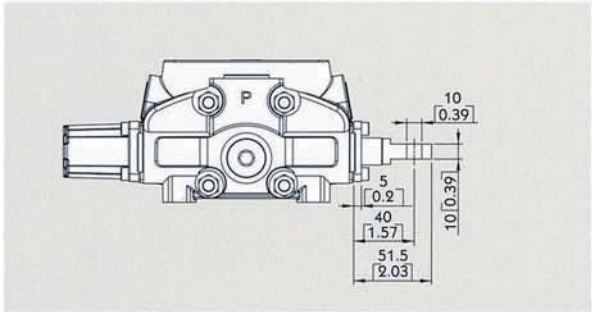
SN-4

Type L



Type L:
STANDART LEVER KIT

Type SLP

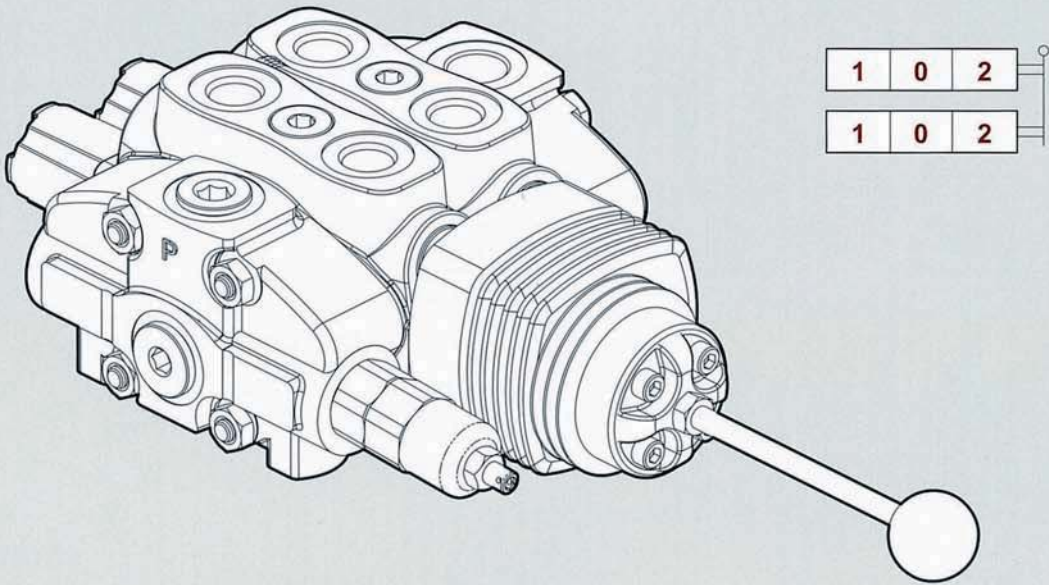


Type SLP:
WITH DUST-PROOF PLATE

SN-4 A Side

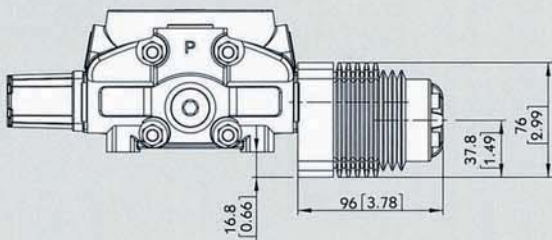
Sectional Directional Control Valves

LCB: Joystick control

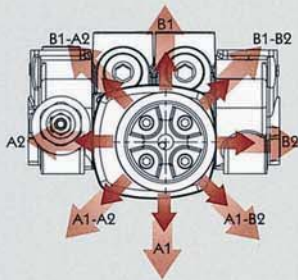


SN-4

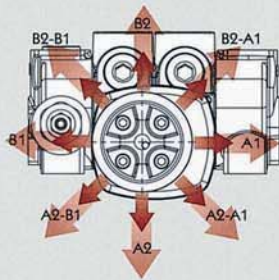
Type LCB



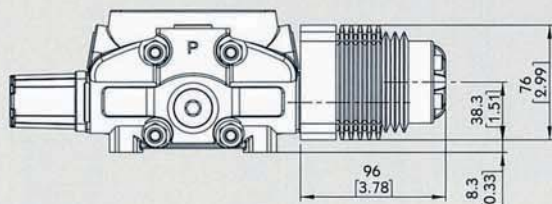
LCB1



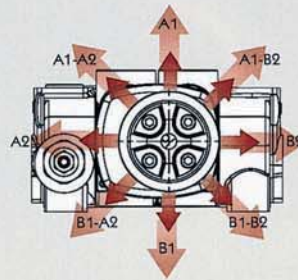
LCB2



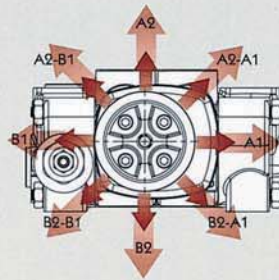
Type LCB



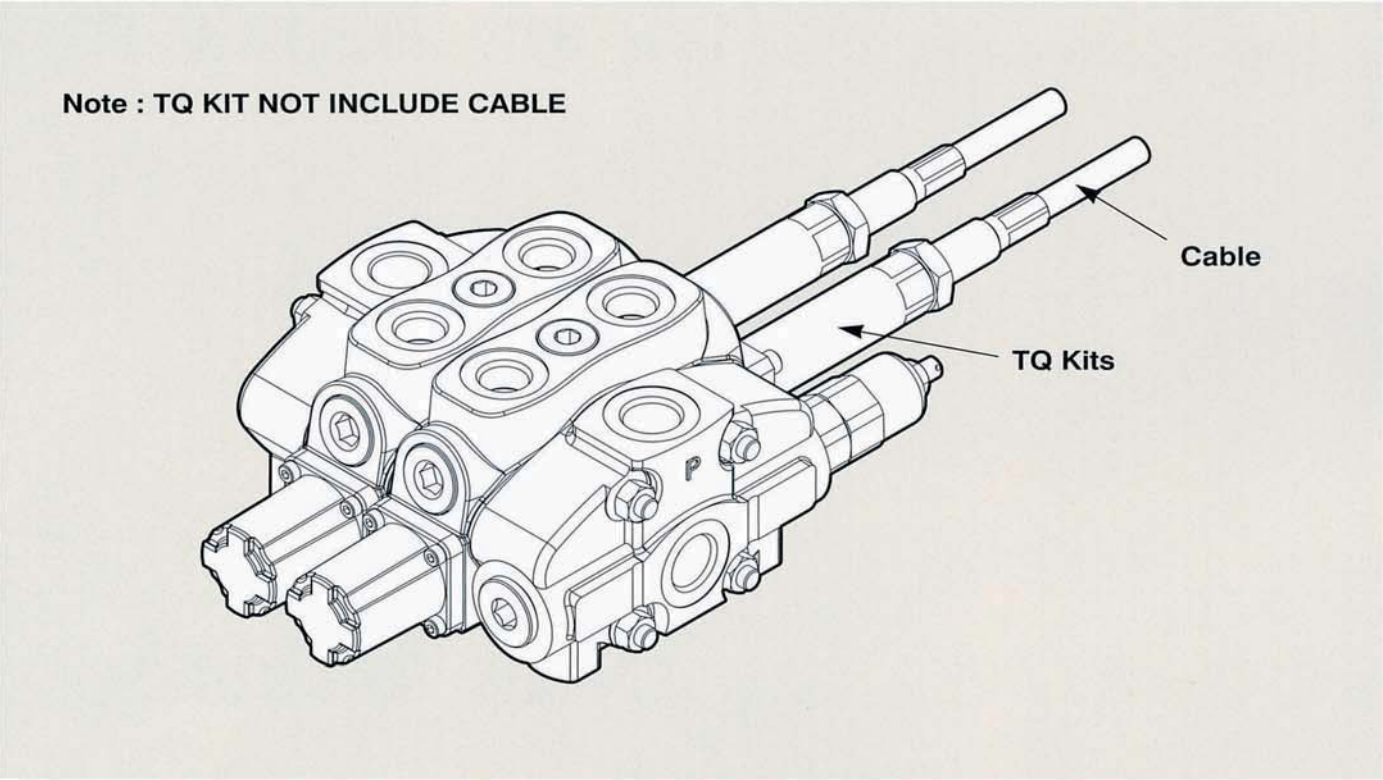
LCB3

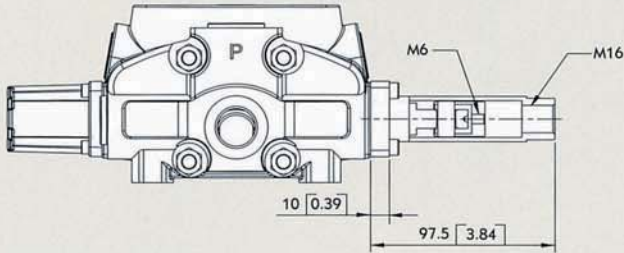


LCB4



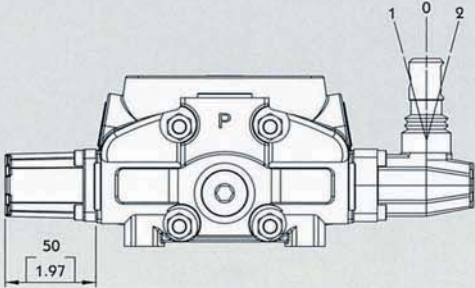



SN-4 A Side Sectional Directional Control Valves

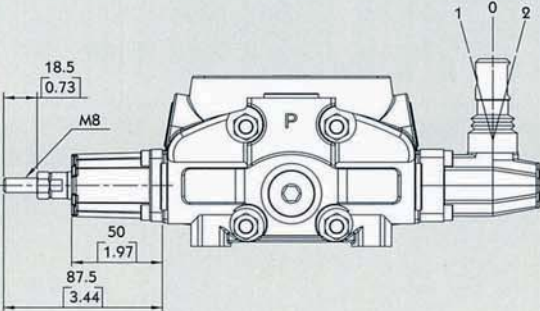



Type TQ				
	<p>TQ Kit:</p> <table border="1" data-bbox="1142 1471 1364 1514"><tr><td>1</td><td>0</td><td>2</td></tr></table>	1	0	2
1	0	2		

SN-4 B Side

Sectional Directional Control Valves

Type 6		
		6-1 Kit: DETENT IN POS. 1-0-2, WITHOUT SPRING CENTERED
		6-2 Kit: 2 POSITIONS, DETENT IN POS. 0-2, WITHOUT SPRING CENTERED
		6-3 Kit: 2 POSITIONS, DETENT IN POS. 1-0, WITHOUT SPRING CENTERED

Type 8D2		
		8D2 Kit: WITH SPRING RETURN TO NEUTRAL POSITION AND PIN WITH M8 MALE THREAD FOR DUAL CONTROL

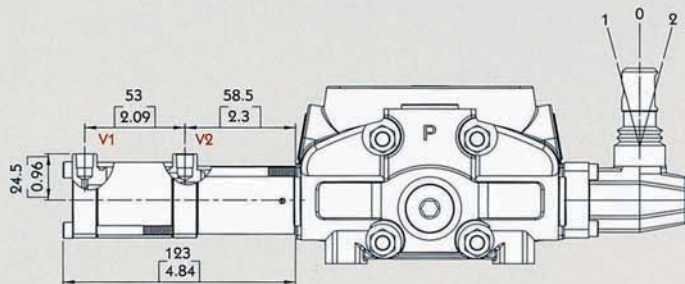
SN-4

SN-4 B Side

Sectional Directional Control Valves

Type 8P

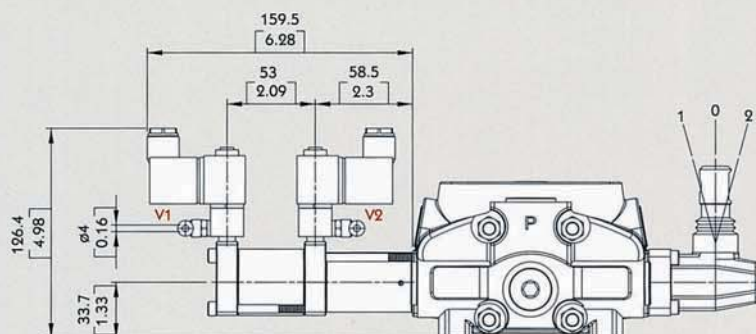
V1 & V2 : NPT 1/8 - 27



Pilot pressure : FROM 7 TO 10 BAR / 101 TO 145 PSI

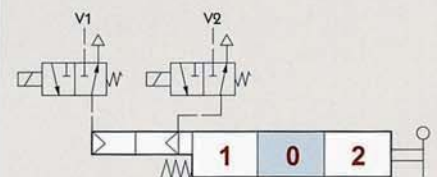


Type 8EP3



Solenoid operating features :

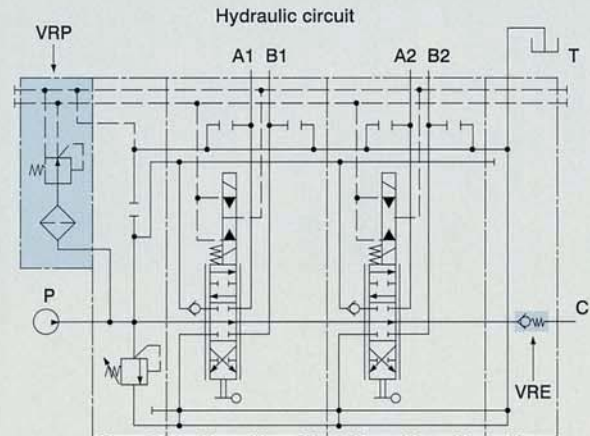
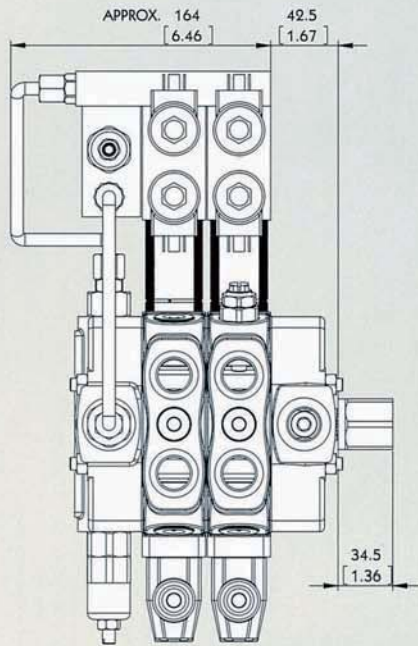
NOMINAL VOLTAGE: 24VDC
 NOMINAL VOLTAGE TOLERANCE: $\pm 10\%$
 POWER RATING: 5W



SN-4 B Side

Sectional Directional Control Valves

Type 8ED3



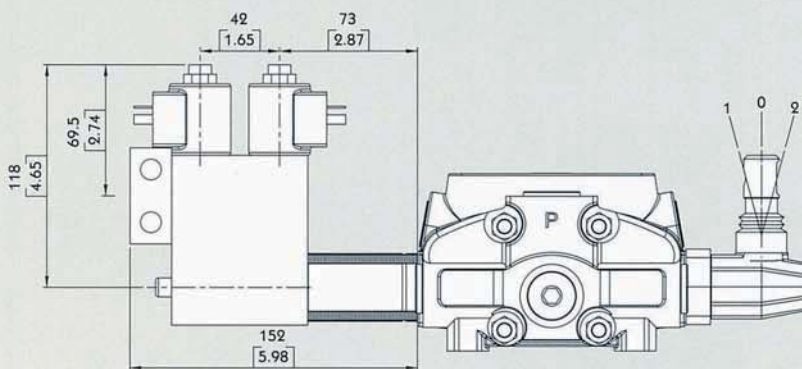
VRP valve operating features :

OUTLET PRESSURE: 25 BAR / 363 PSI

MAX. FLOW: 8 L/MIN / 2.1 US GPM

FLTERING: 80 μ

SN-4



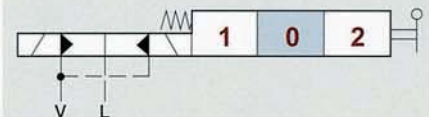
Operating features :

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

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

Solenoid operating features :

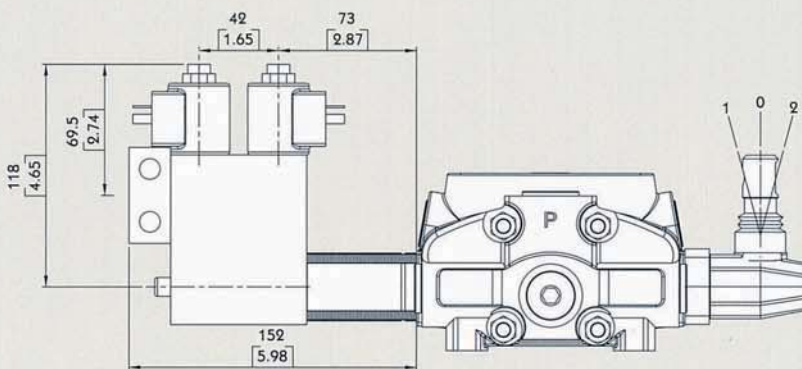
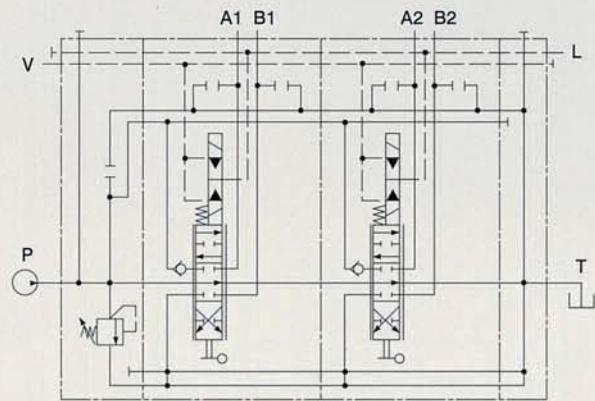
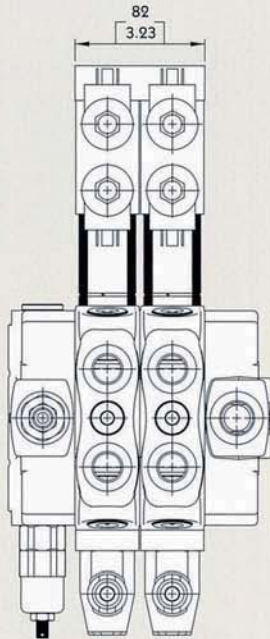
NOMINAL VOLTAGE: 12VDC / 24 VDC
POWER RATING: 21 W
DUTY CYCLE: 100 %



SN-4 B Side

Sectional 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 / 360PSI

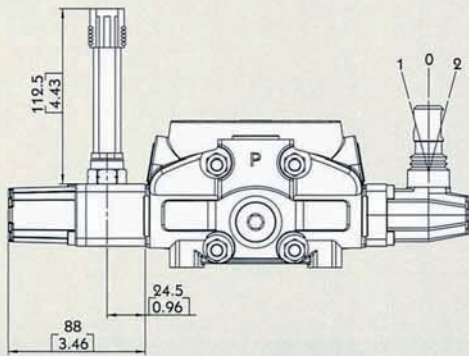
Solenoid operating features :

NOMINAL VOLTAGE: 12VDC / 24 VDC
POWER RATING: 21 W
DUTY CYCLE: 100 %

SN-4 B Side

Sectional Directional Control Valves

Type 8MG



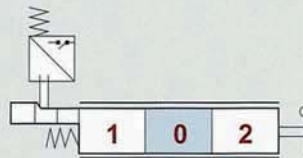
MICROSWITCH

Operating features :

MECHANICAL LIFE: • 5X10⁶ OPERATIONS

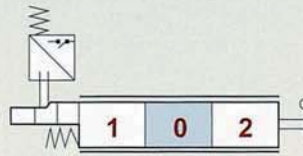
ELECTRICAL LIFE (RESISTIVE LOAD):

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



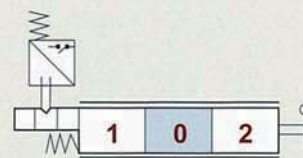
8MG1 Kit:

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



8MG2 Kit:

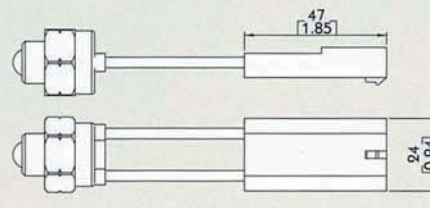
MICROSWITCH WITH MALE/FEMALE CONNECTOR, OPERATED IN POS. 2



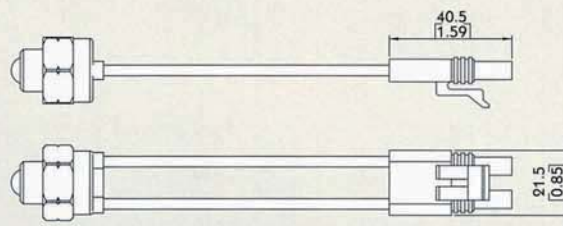
8MG3 Kit:

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

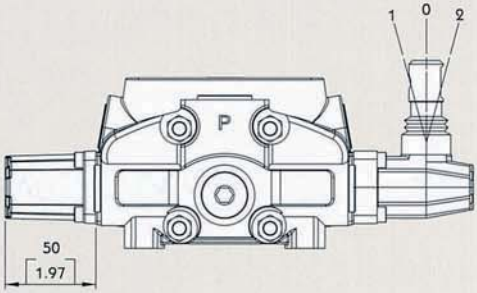



With NO contact (female connector with male end)

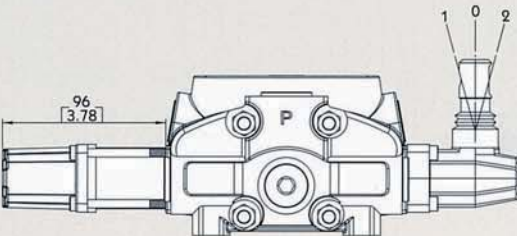





With NC contact (male connector with female end)



SN-4 B Side Sectional Directional Control Valves

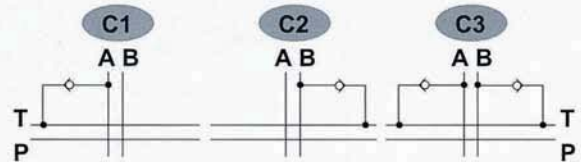
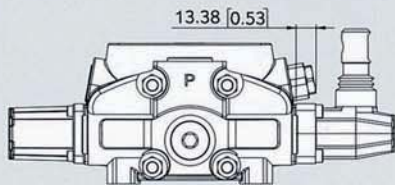
Type 8		
		8 Kit: SPRING RETURN TO NEUTRAL POSITION
		8-1 Kit: SPRING RETURN TO NEUTRAL POSITION. (2 POSITIONS)
		8-2 Kit: SPRING RETURN TO NEUTRAL POSITION. (2 POSITIONS)

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

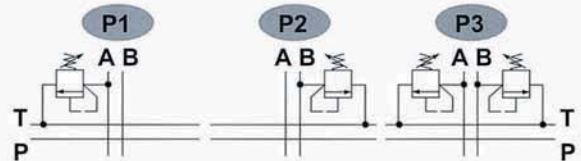
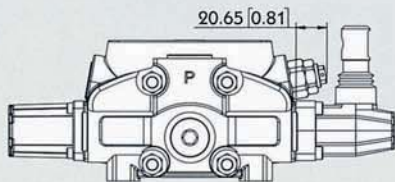
SN-4 Port Relief

Sectional Directional Control Valves

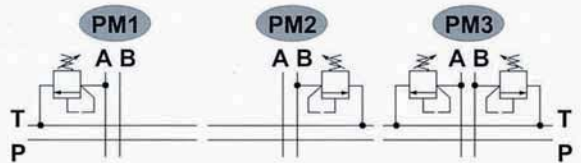
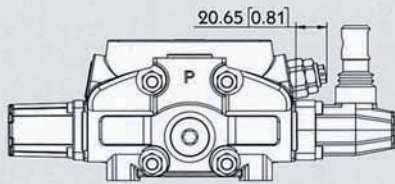
TYPE C



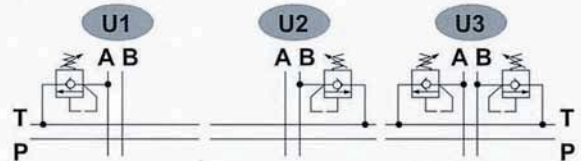
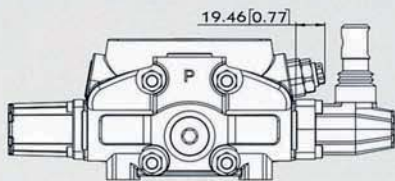
TYPE P



TYPE PM



TYPE U

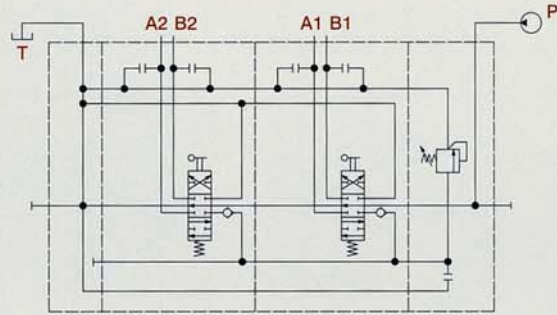
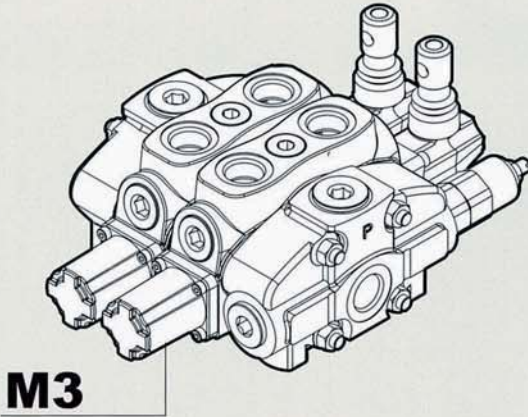
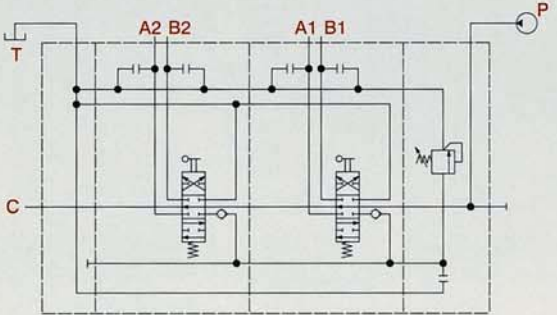
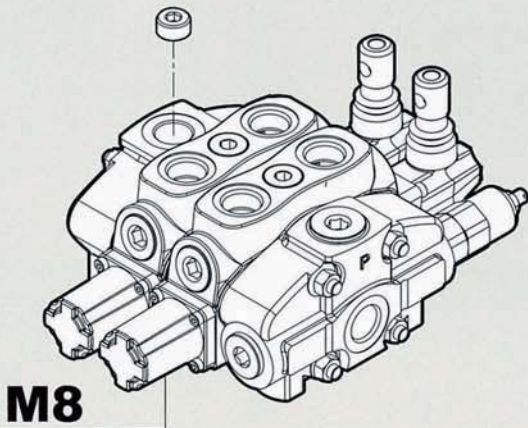


SN-4

SN-4 Outlet

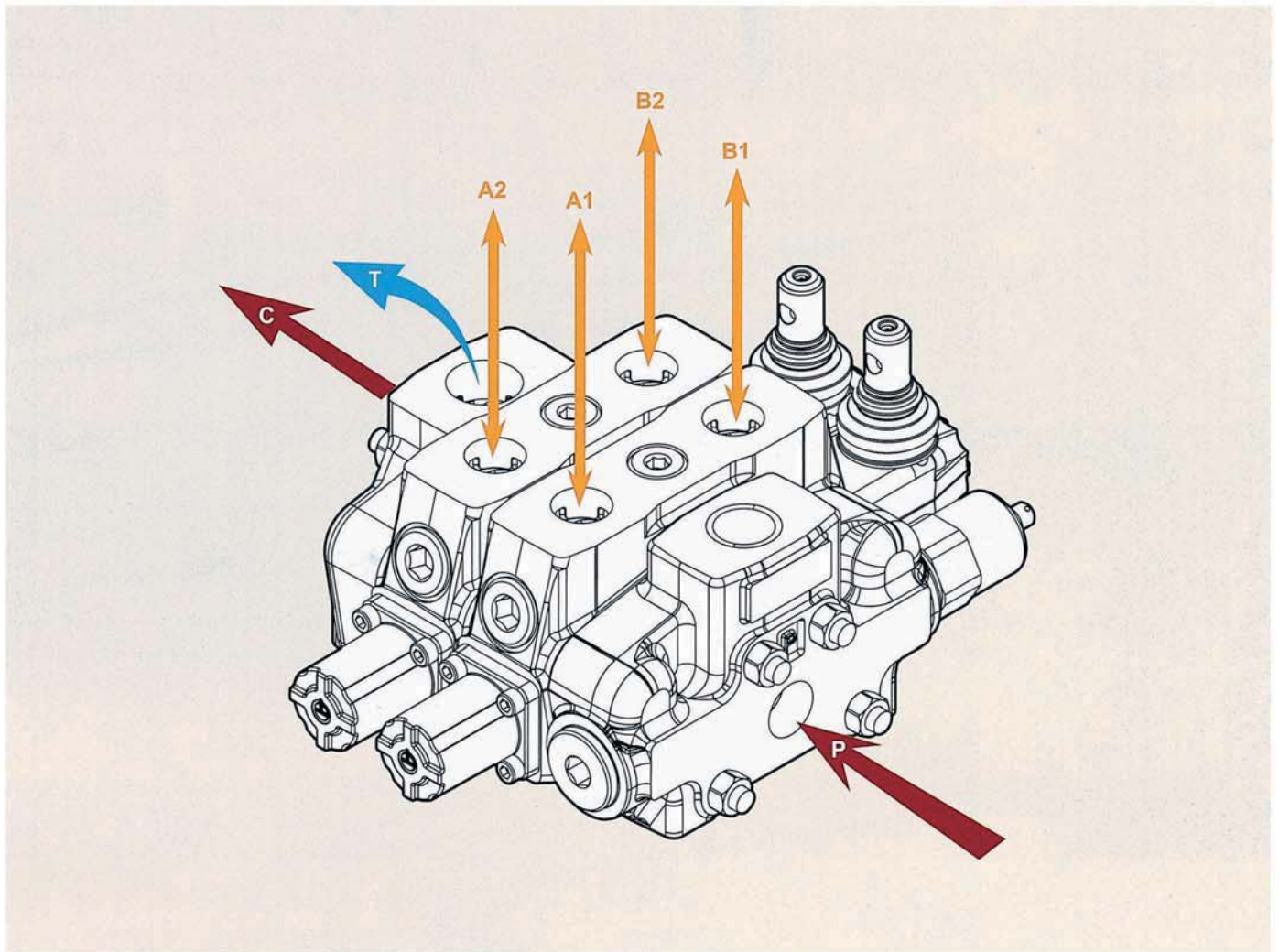
Sectional Directional Control Valves

Power Beyond Conversion plug
(Closed center plug)



SN-6

Sectional Directional Control Valves



SN-6

SN-6 Specifications

Nominal flow rate		140 l/min	37 US gpm
Operating pressure (maximum)	parallel or tandem circuit	315 bar	4600 psi
	series circuit	210 bar	3050 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 mm²/s	from 15 to 75 cst
	min.	12 mm²/s	12 cst
	max.	400 mm²/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.

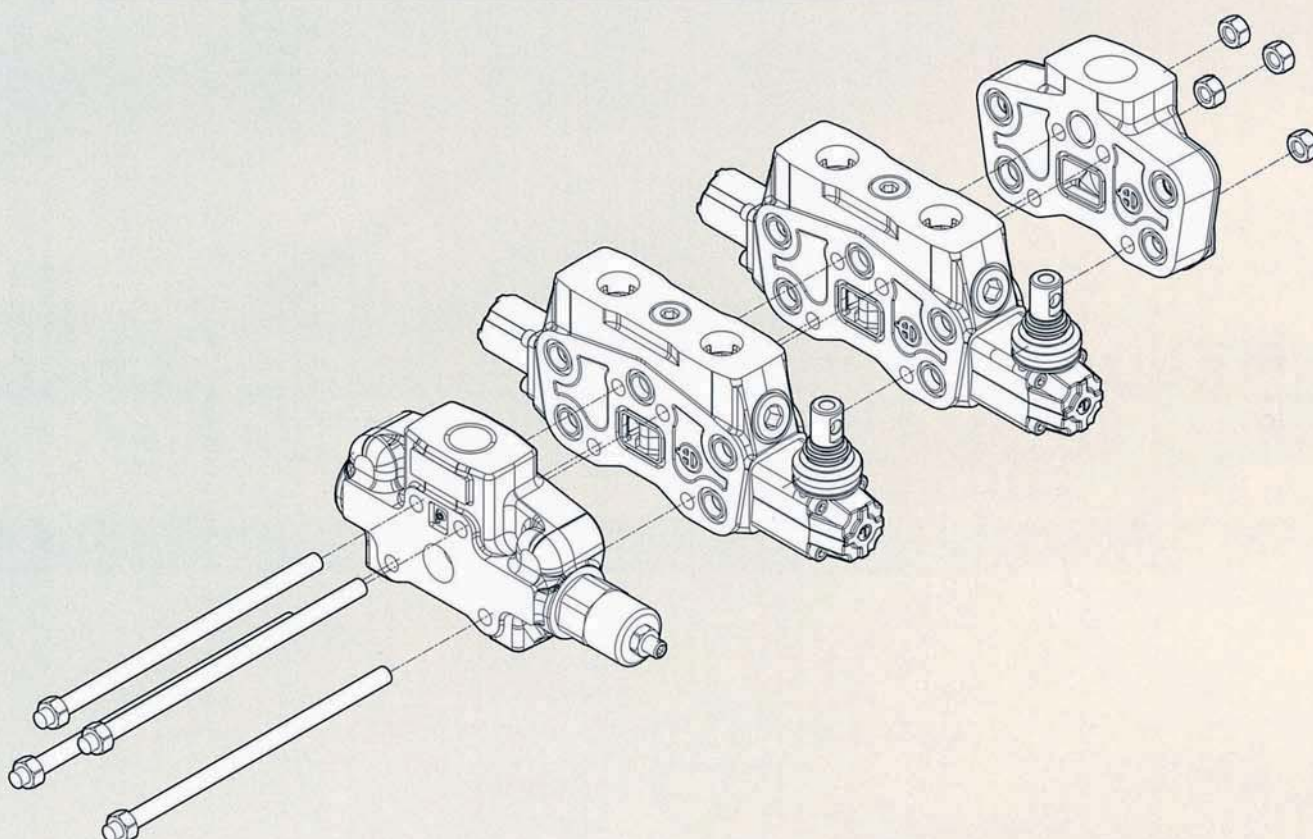
SN-6 Complete

Sectional Directional Control Valves

HOW TO ORDER FOR A COMPLETE ASSEMBLED VALVE

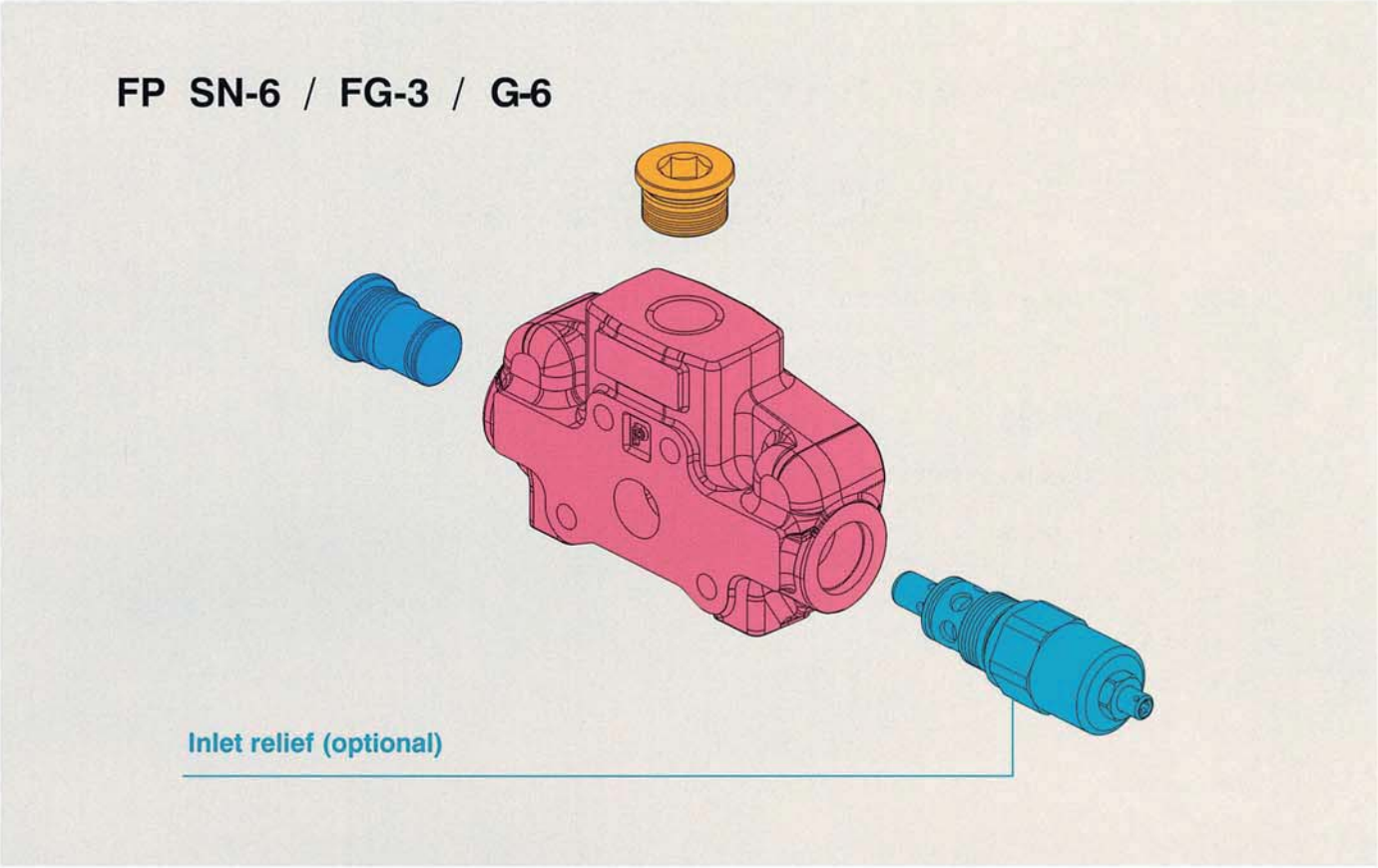
SN-6 / 2S - 3 / 18L / 28L / G-6-1 / M3

2S	No. of working section
3	Inlet cover with a main pressure relief valve
18L	1st section (complete working section)
28L	Following section (complete working section)
G-6-1	BSP ports
M3	Outlet cover



SN-6 Inlet Section

Sectional Directional Control Valves

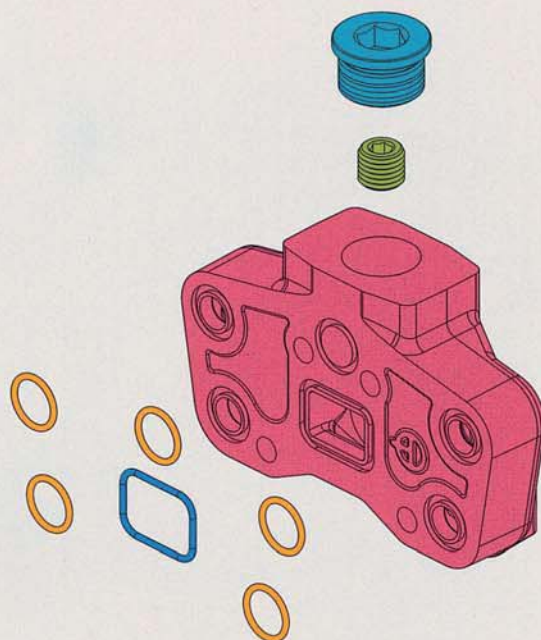


Inlet Relief (optional)			
TYPE	CODE	DESCRIPTION	PAGE
FG-2	YLPSN63002	Range 80 to 160 bar / 1150 to 2300 psi , standard setting 125 bar / 1800 psi	P. 201
FG-3	YLPSN63003	Range 125 to 250 bar / 1800 to 3600 psi , standard setting 175 bar / 2500 psi	P. 201
SV	YLPSN64000	Relief valve blanking plug	P. 201
XFG	YLPSN63000	Pilot operated pressure relief valve Range 25 to 315 bar/ 360 to 4600 psi, standard setting 125 bar/ 1800 psi	P. 201

SN-6 Outlet Section

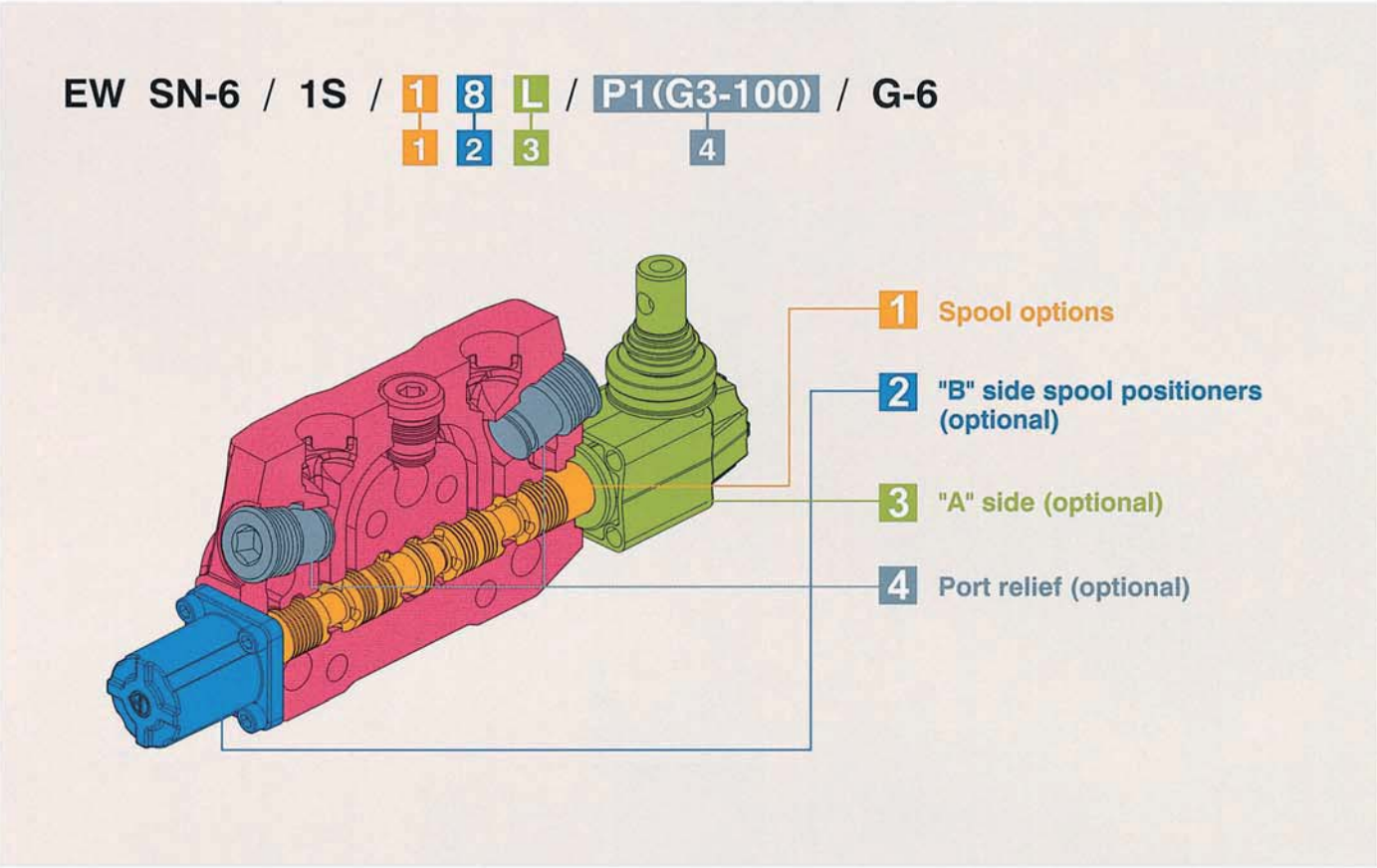
Sectional Directional Control Valves

FT SN-6 / G-1 / M3



SN-6 Working Section

Sectional Directional Control Valves



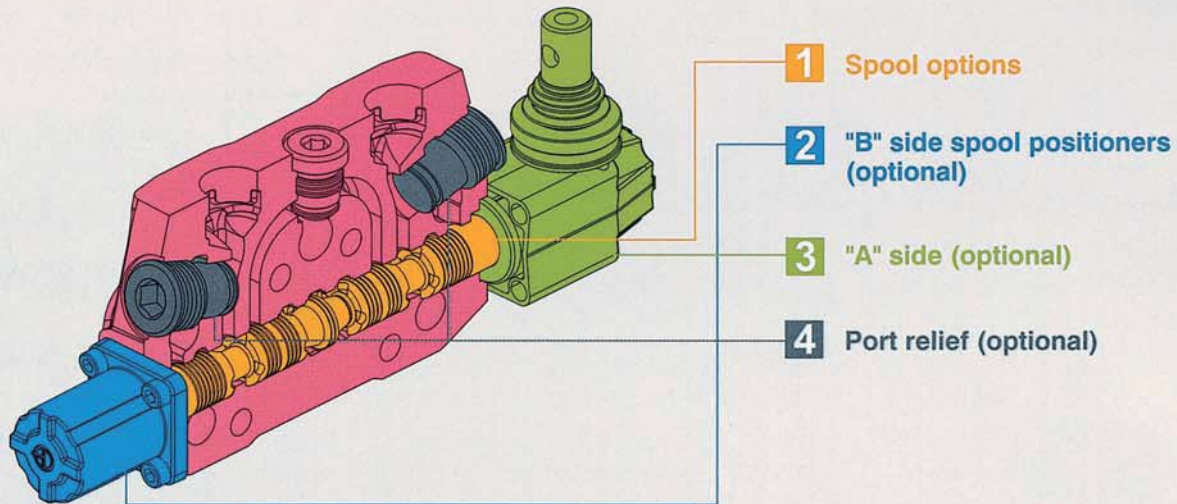
1:	Spool Symbol		
TYPE	CODE	DESCRIPTION	PAGE
1	YLWSN62001	Double acting,3 positions,with A and B closed in neutral position	P. 202
2	YLWSN62002	Double acting,3 positions,with A and B open to tank in neutral position	P. 202
3	YLWSN62003	Single acting on A closed in neutral position, 3 positions, B plugged	P. 203
4	YLWSN62004	Single acting on B closed in neutral position, 3 positions, A plugged	P. 203
5	YLWSN62005	Double acting, 3 positions, with B open to Tank in neutral position	P. 204
6	YLWSN62006	Double acting, 3 positions, with A open to Tank in neutral position	P. 204
5PY	YLWSN62051	Double acting, 4 positions, floating circuit in 4th position with A, B open to Tank by pushing the lever	P. 205

SN-6 Working Section

Sectional Directional Control Valves

EW SN-6 / 1S / **1 8 L** / **P1(G3-100)** / G-6

1 2 3 4



2: B Side Spool Positioners			
TYPE	CODE	DESCRIPTION	PAGE
6-1	YLWSN63061	Detent in pos. 1-0-2, without spring centered	P. 209
6-2	YLWSN63062	2 positions, detent in pos. 0-2, without spring centered	P. 209
6-3	YLWSN63063	2 positions, detent in pos. 1-0, without spring centered	P. 209
8D2	YLWSN63082	With spring return to neutral position and pin with M8 male thread for dual control	P. 209
8P	YLWSN63080	ON/OFF Pneumatic actuator	P. 210
8EP3	YLWSN64300	ON/OFF Electro-Pneumatic actuator	P. 210
8MG1 (NO)	YLWSN63801	Microswitch kit operated in pos. 1 (Normally Open)	P. 213
8MG2 (NO)	YLWSN63802	Microswitch kit operated in pos. 2 (Normally Open)	P. 213
8MG3 (NO)	YLWSN63803	Microswitch kit operated in pos. 1&2 (Normally Open)	P. 213
MG (NO)	YLWSN63804	Microswitch with NO terminal	P. 213
8MG1 (NC)	YLWSN638011	Microswitch kit operated in pos. 1 (Normally Closed)	P. 213
8MG2 (NC)	YLWSN638021	Microswitch kit operated in pos. 2 (Normally Closed)	P. 213
8MG3 (NC)	YLWSN638031	Microswitch kit operated in pos. 1&2 (Normally Closed)	P. 213
MG (NC)	YLWSN638041	Microswitch with NC terminal	P. 213
8	YLWSN63008	With spring return to neutral position	P. 214
8-1	YLWSN64081	2 positions, with spring centered from pos. 1	P. 214
8-2	YLWSN64082	2 positions, with spring centered from pos. 2	P. 214
9-1	YLWSN63091	Detent in pos. 1, 2 with spring centered	P. 214
9-2	YLWSN63092	Detent in pos. 2 with spring centered	P. 214
9-3	YLWSN63093	Detent in pos. 1 with spring centered	P. 214

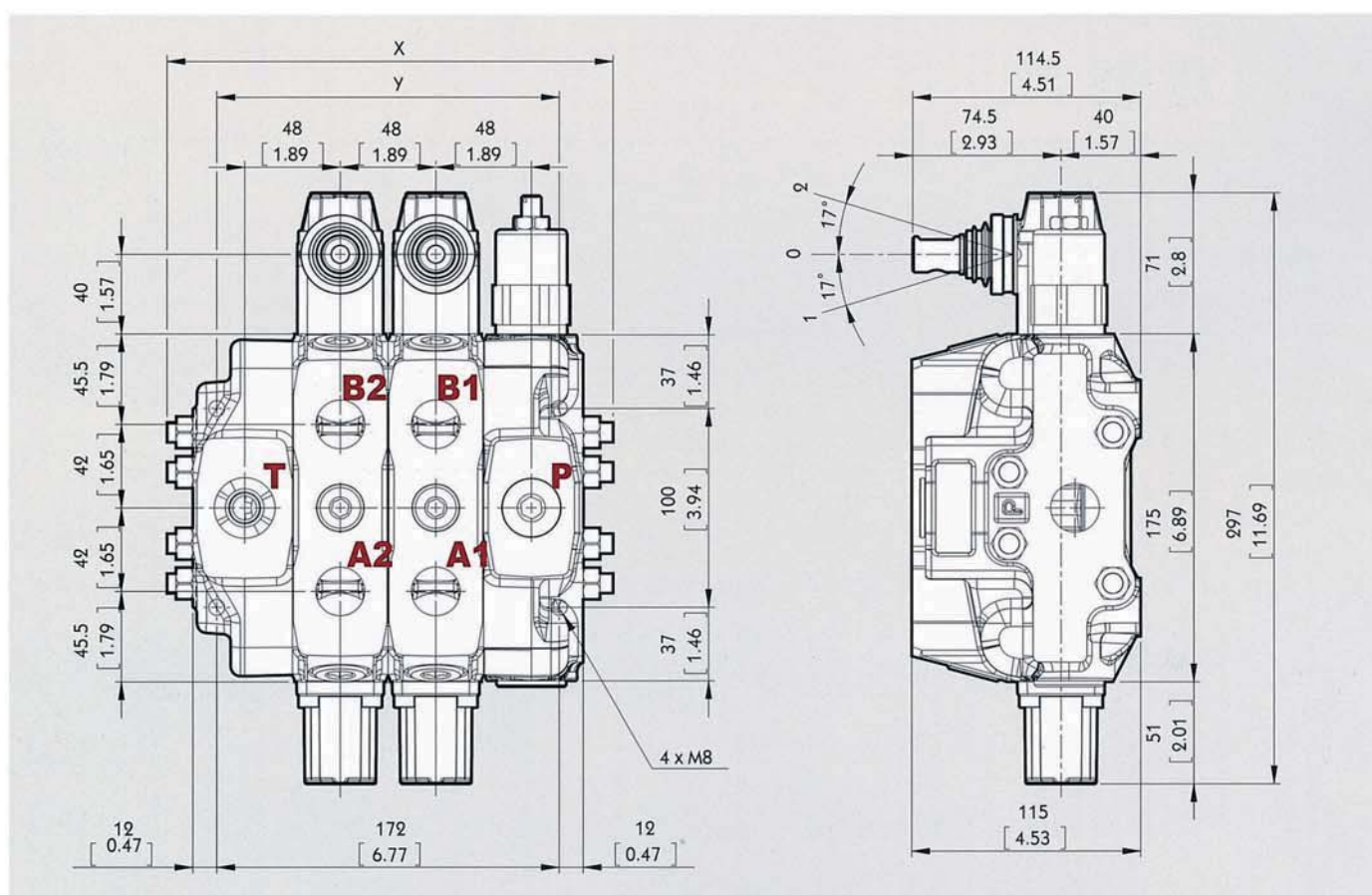
2: B Side Spool Positioners			
TYPE	CODE	DESCRIPTION	PAGE
8ED3+RV-KE1R3	YLWSN63201	1S: ON/OFF Electro-Hydraulic control kit with pilot and drain line+backpressure valve (12/24 VDC)	P. 211
8ED3+RV-KE2R3	YLWSN63202	2S: ON/OFF Electro-Hydraulic control kit with pilot and drain line+backpressure valve (12/24 VDC)	P. 211
8ED3+RV-KE3R3	YLWSN63203	3S: ON/OFF Electro-Hydraulic control kit with pilot and drain line+backpressure valve (12/24 VDC)	P. 211
8ED3+RV-KE4R3	YLWSN63204	4S: ON/OFF Electro-Hydraulic control kit with pilot and drain line+backpressure valve (12/24 VDC)	P. 211
8ED3+RV-KE5R3	YLWSN63205	5S: ON/OFF Electro-Hydraulic control kit with pilot and drain line+backpressure valve (12/24 VDC)	P. 211
8ED3+RV-KE6R3	YLWSN63206	6S: ON/OFF Electro-Hydraulic control kit with pilot and drain line+backpressure valve (12/24 VDC)	P. 211
8ED3+RV-KE7R3	YLWSN63207	7S: ON/OFF Electro-Hydraulic control kit with pilot and drain line+backpressure valve (12/24 VDC)	P. 211
8ED3+RV-KE8R3	YLWSN63208	8S: ON/OFF Electro-Hydraulic control kit with pilot and drain line+backpressure valve (12/24 VDC)	P. 211
8ED3+RV-KE9R3	YLWSN63209	9S: ON/OFF Electro-Hydraulic control kit with pilot and drain line+backpressure valve (12/24 VDC)	P. 211
8ED3+RV-KE10R3	YLWSN63210	10S: ON/OFF Electro-Hydraulic control kit with pilot and drain line+backpressure valve (12/24 VDC)	P. 211
8ED3+RV-KE11R3	YLWSN63211	11S: ON/OFF Electro-Hydraulic control kit with pilot and drain line+backpressure valve (12/24 VDC)	P. 211
8ED3+RV-KE12R3	YLWSN63212	12S: ON/OFF Electro-Hydraulic control kit with pilot and drain line+backpressure valve (12/24 VDC)	P. 211
8ER3+KE1S0	YLWSN63401	1S: ON/OFF Electro-hydraulic control kit with collector kit for external pilot and drain	P. 212
8ER3+KE2S0	YLWSN63402	2S: ON/OFF Electro-hydraulic control kit with collector kit for external pilot and drain	P. 212
8ER3+KE3S0	YLWSN63403	3S: ON/OFF Electro-hydraulic control kit with collector kit for external pilot and drain	P. 212
8ER3+KE4S0	YLWSN63404	4S: ON/OFF Electro-hydraulic control kit with collector kit for external pilot and drain	P. 212
8ER3+KE5S0	YLWSN63405	5S: ON/OFF Electro-hydraulic control kit with collector kit for external pilot and drain	P. 212
8ER3+KE6S0	YLWSN63406	6S: ON/OFF Electro-hydraulic control kit with collector kit for external pilot and drain	P. 212
8ER3+KE7S0	YLWSN63407	7S: ON/OFF Electro-hydraulic control kit with collector kit for external pilot and drain	P. 212
8ER3+KE8S0	YLWSN63408	8S: ON/OFF Electro-hydraulic control kit with collector kit for external pilot and drain	P. 212
8ER3+KE9S0	YLWSN63409	9S: ON/OFF Electro-hydraulic control kit with collector kit for external pilot and drain	P. 212
8ER3+KE10S0	YLWSN63410	10S: ON/OFF Electro-hydraulic control kit with collector kit for external pilot and drain	P. 212
8ER3+KE11S0	YLWSN63411	11S: ON/OFF Electro-hydraulic control kit with collector kit for external pilot and drain	P. 212
8ER3+KE12S0	YLWSN63412	12S: ON/OFF Electro-hydraulic control kit with collector kit for external pilot and drain	P. 212

3: A Side (Optional)			
TYPE	CODE	DESCRIPTION	PAGE
L	YLWSN64000	Standard lever	P. 206
SLP	YLWSN64001	Without lever, with dust proof plate	P. 206
LCB	YLWSN64002	Joystick lever for 2 section operation	P. 207
TQ	YLWSN64003	Flexible cable connection	P. 208

4: Port Relief (Optional)			
TYPE	CODE	DESCRIPTION	PAGE
P (G2-63)	YLWSN65002	Anti-shock valve, range 63 to 125 bar / form 900 to 1800 psi standard setting 63 bar / 900 psi	P. 215
P (G3-100)	YLWSN65003	Anti-shock valve, range 100 to 250 bar / form 1450 to 3600 psi standard setting 100bar / 1450 psi	P. 215
P (G4-200)	YLWSN65004	Anti-shock valve, range 200 to 315 bar / form 2900 to 4600 psi standard setting 200 bar / 2900 psi	P. 215
U (G2-63)	YLWSN65012	Anti-shock valve and Anti-cavitation valve, range 63 to 125 bar / form 900 to 1800 psi standard setting 63 bar / 900 psi	P. 215
U (G3-100)	YLWSN65013	Anti-shock valve and Anti-cavitation valve, range 100 to 250 bar / form 1450 to 3600 psi standard setting 100 bar / 1450 psi	P. 215
U (G4-200)	YLWSN65014	Anti-shock valve and Anti-cavitation valve, range 200 to 315 bar / form 2900 to 4600 psi standard setting 200 bar / 2900 psi	P. 215
C	YLWSN65100	Anti - cavitation	P. 215

SN-6 Dimensions

Sectional Directional Control Valves



Standard threads

Ports	Inlet P and carry-over C	A and B	Outlet T
BSP	G3/4	G3/4	G1
UN-UNF	1 5/16-12 UN-2B (SAE 16)	1 1/16-12 UN-2B (SAE 12)	1 5/16-12 UN-2B (SAE 16)

Pilot ports	Hydraulic	Pneumatic
BSP	G1/4	NPTF 1/8-27
UN-UNF	9/16-18 UNF-2B (SAE 6)	NPTF 1/8-27

• G-1/2 : G4 G-3/8 : G3 G-3/4 : G6 G-1 : G1
 • SAE 8: E8 SAE 10: E10 SAE 12: E12 SAE 16: E16

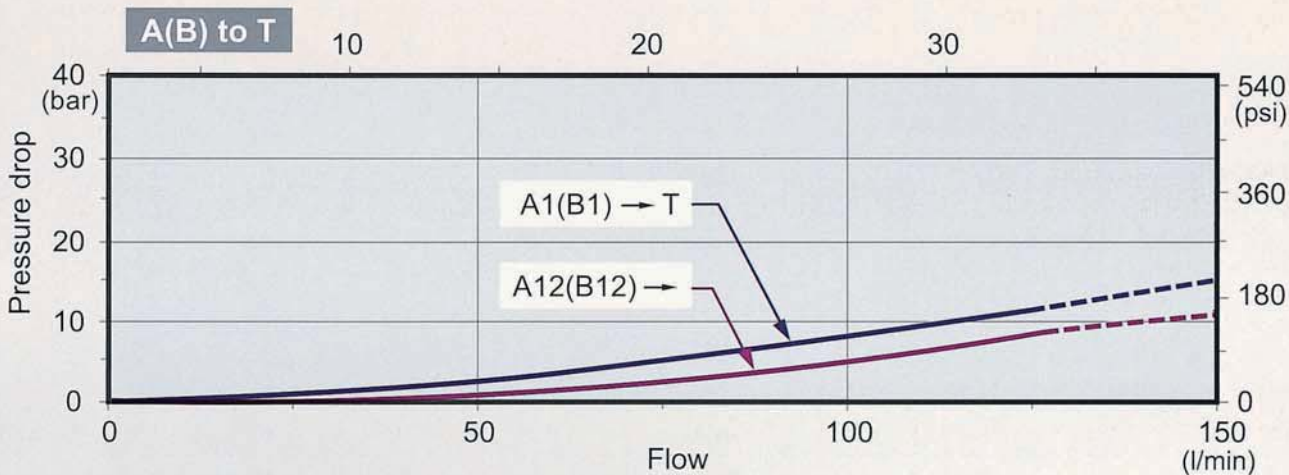
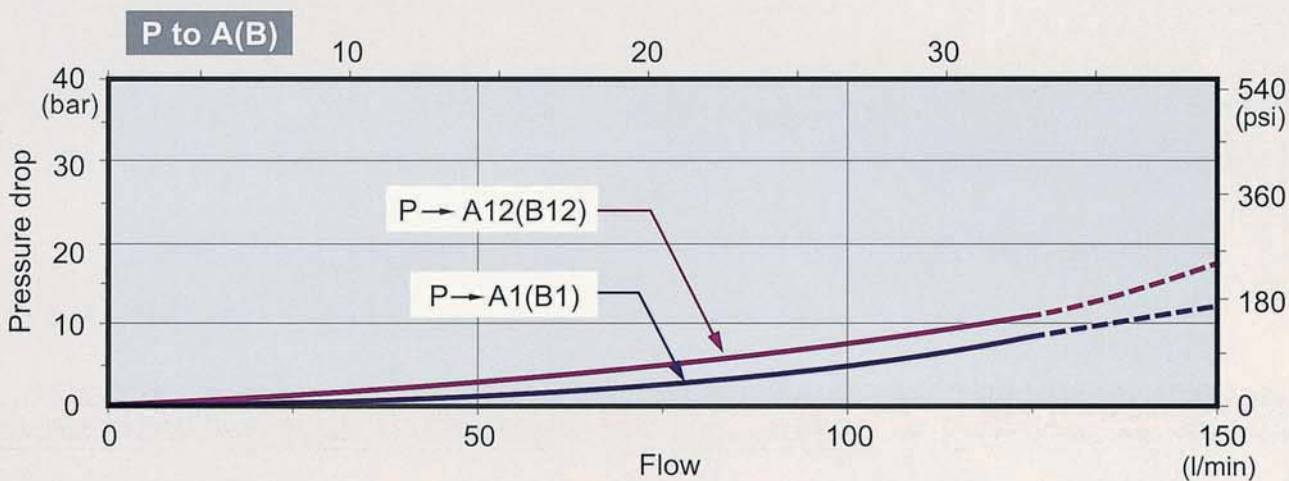
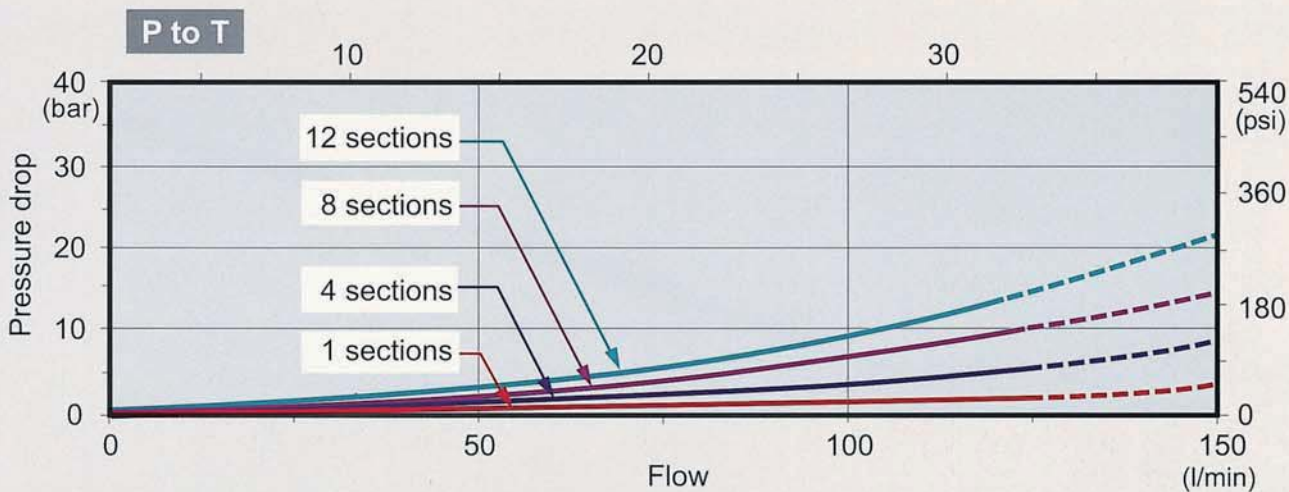
Standard dimensions

TYPE	X		Y		TYPE	X		Y	
	mm	in	mm	in		mm	in	mm	in
SN6 /1S	176	6.63	124	4.88	SN6 /7S	464	18.27	412	16.22
SN6 /2S	224	8.82	172	6.77	SN6 /8S	512	20.16	460	18.11
SN6 /3S	272	10.71	220	8.66	SN6 /9S	560	22.05	508	20
SN6 /4S	320	12.60	268	10.55	SN6 /10S	608	23.94	556	21.89
SN6 /5S	368	14.49	316	12.44	SN6 /11S	656	25.83	604	23.78
SN6 /6S	416	16.38	364	14.33	SN6 /12S	704	27.72	652	25.67

SN-6 Performance Curve Chart

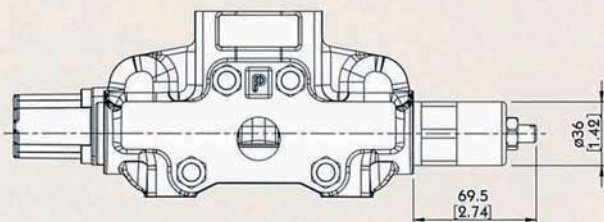
Sectional Directional Control Valves

SN-6

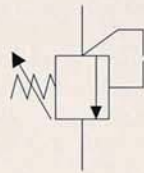


SN-6 Inlet Relief (Optional) Sectional Directional Control Valves

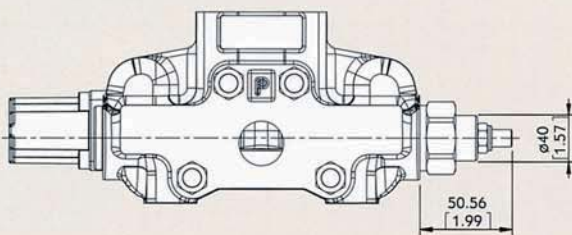
Type FG



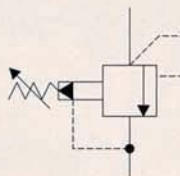
Direct pressure relief valve:



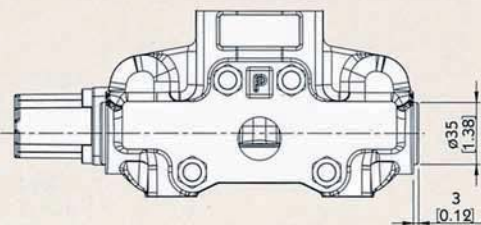
Type XFG



Pilot operated pressure relief valve:



Type SV



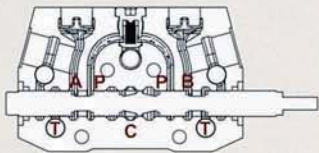
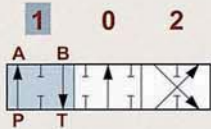
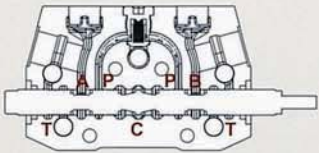
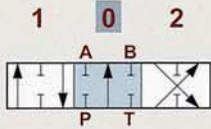
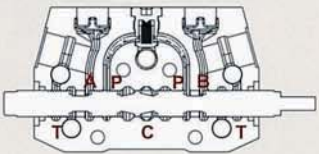
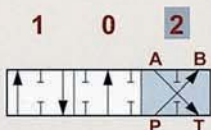
Relief valve blanking plug:



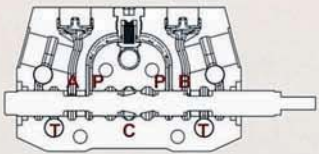
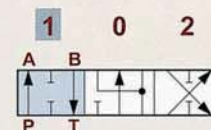
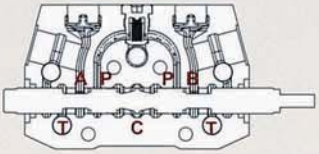
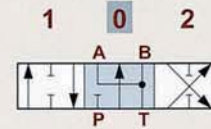
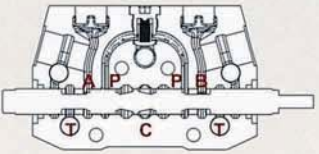
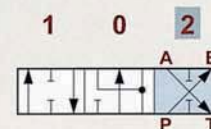
SN-6 spool Options

Sectional Directional Control Valves

TYPE 1

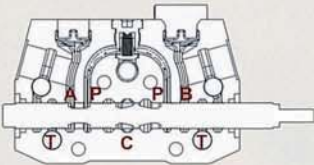
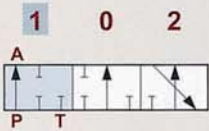
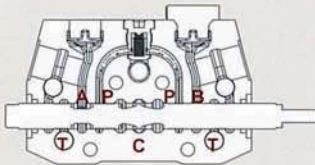
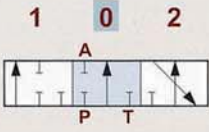
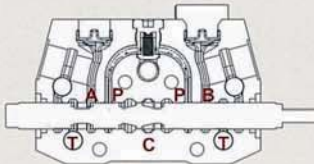
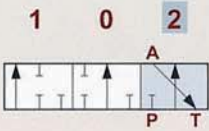
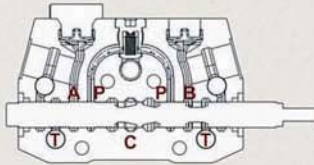
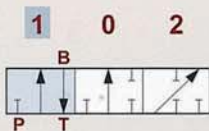
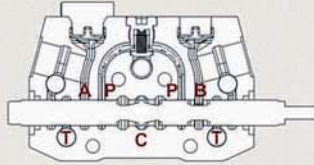
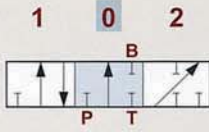
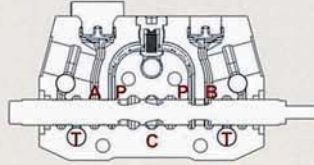
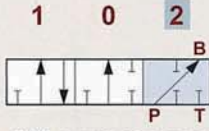
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	<p>P & A & B & T closed</p> <p>C open</p>	
	<p>P → B</p> <p>A → T</p> <p>C closed</p>	

TYPE 2

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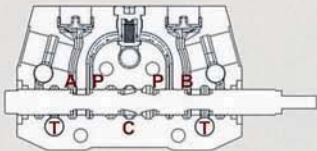
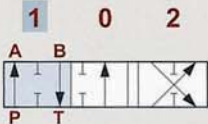
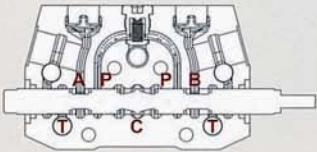
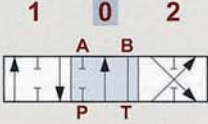
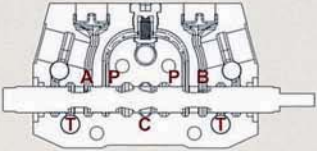
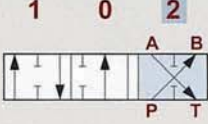
SN-6 spool Options

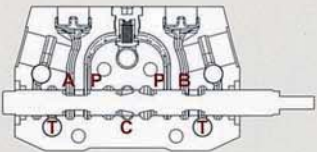
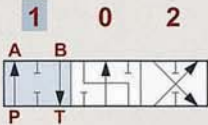
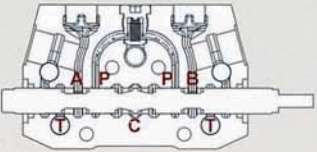
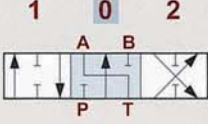
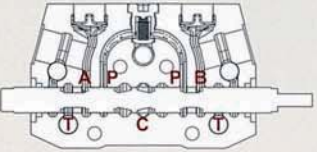
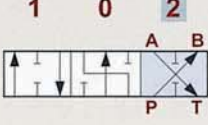
Sectional Directional Control Valves

TYPE 3		
	<p>$P \rightarrow A$</p> <p>T & C closed</p>	<p>1 0 2</p>  <p>"B" port plugged</p>
	<p>P & A & T closed</p> <p>C open</p>	<p>1 0 2</p>  <p>"B" port plugged</p>
	<p>$A \rightarrow T$</p> <p>P closed</p> <p>C open</p>	<p>1 0 2</p>  <p>"B" port plugged</p>
TYPE 4		
	<p>$B \rightarrow T$</p> <p>P closed</p> <p>C open</p>	<p>1 0 2</p>  <p>"A" port plugged</p>
	<p>P & B & T closed</p> <p>C open</p>	<p>1 0 2</p>  <p>"A" port plugged</p>
	<p>$P \rightarrow B$</p> <p>T & C closed</p>	<p>1 0 2</p>  <p>"A" port plugged</p>

SN-6 spool Options

Sectional Directional Control Valves

TYPE 5		
	P → A B → T C closed	
	B → T P & A closed C open	
	P → B A → T C closed	

TYPE 6		
	P → A B → T C closed	
	A → T P & B closed C open	
	P → B A → T C closed	

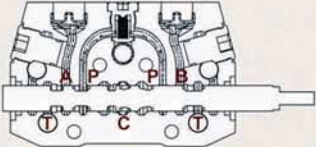
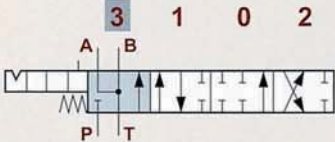
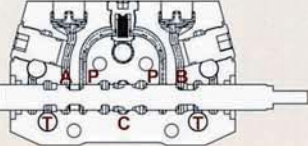
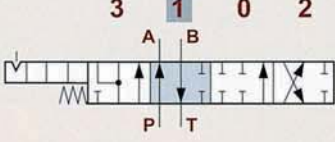
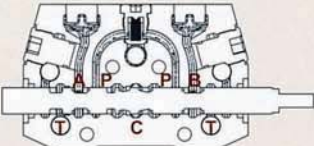
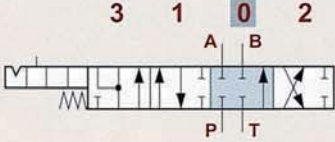
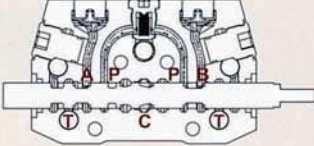
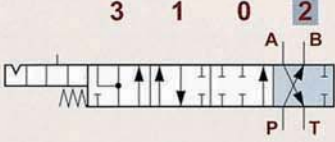
SN-6 spool Options

Sectional Directional Control Valves

SN-6

TYPE 5PY

NOTE : WITH SPECIAL BODY AND SPECIAL POSITIONER.

	<p>A & B → T</p> <p>P closed</p> <p>C open</p>	
	<p>P → A</p> <p>B → T</p> <p>C closed</p>	
	<p>P & T & A & B closed</p> <p>C open</p>	
	<p>P → B</p> <p>A → T</p> <p>C closed</p>	

SN-6 A Side

Sectional Directional Control Valves

Type L

Type L:
STANDART LEVER KIT

Type SLP

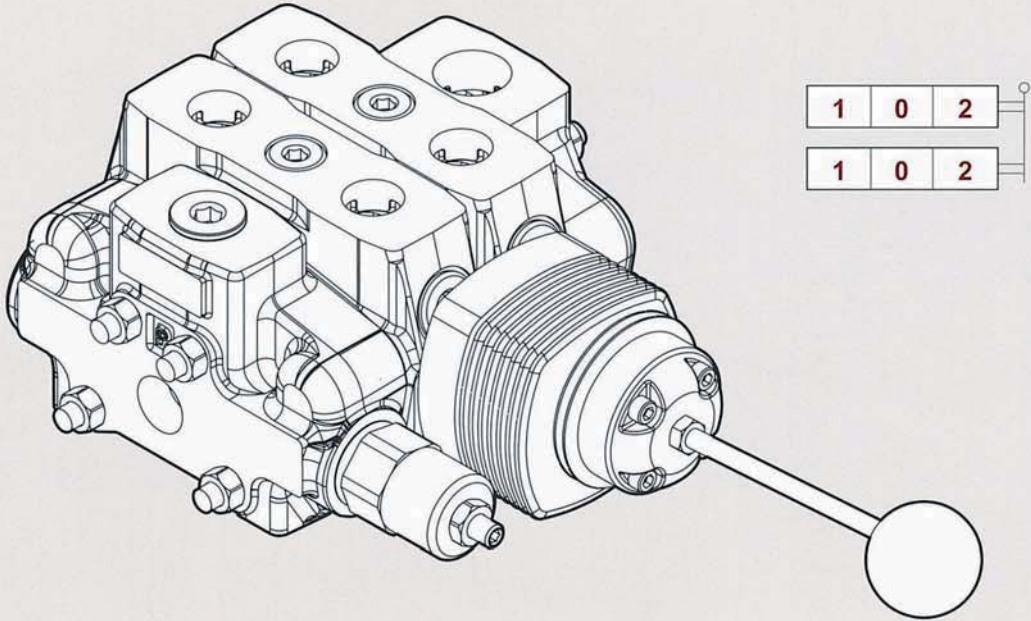
Type SLP:
WITH DUST-PROOF PLATE

SN-6

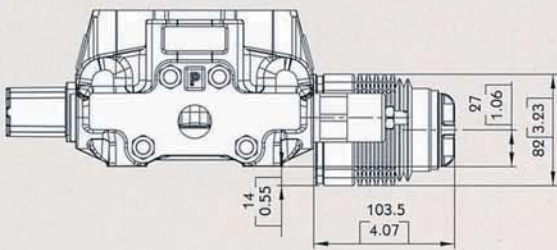
SN-6 A Side

Sectional Directional Control Valves

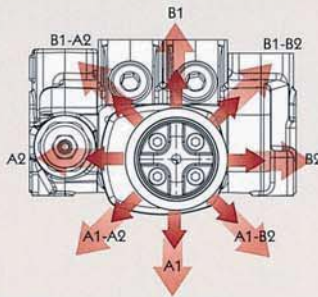
LCB: Joystick control



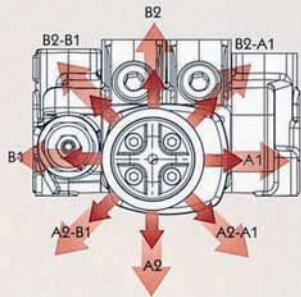
Type LCB



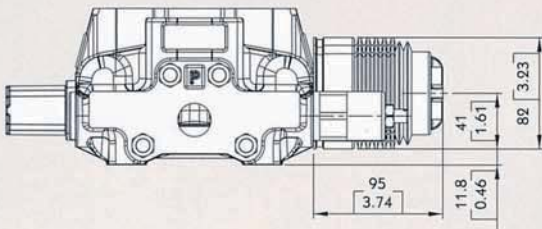
LCB1



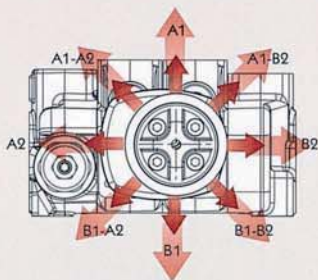
LCB2



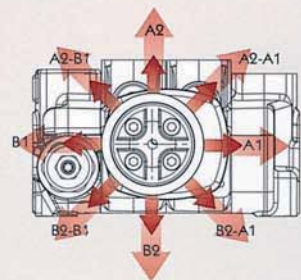
Type LCB



LCB3



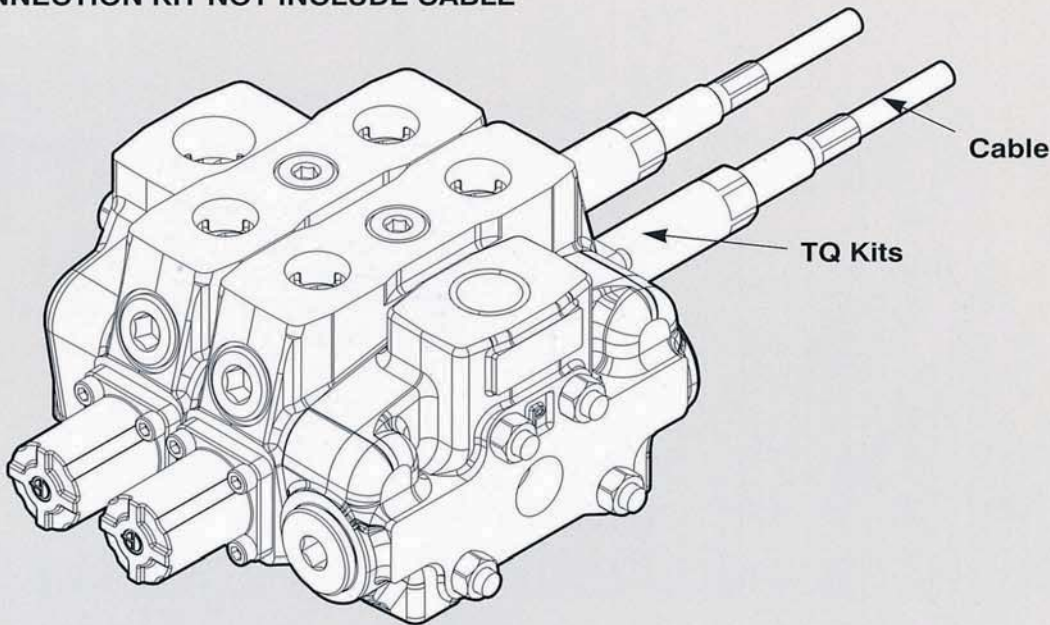
LCB4



SN-6 A Side

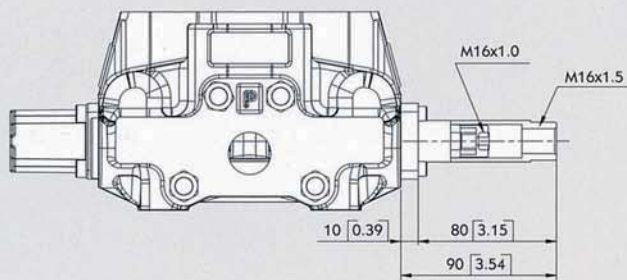
Sectional Directional Control Valves

Note : CONNECTION KIT NOT INCLUDE CABLE



SN-6

Type TQ



TQ Kit:

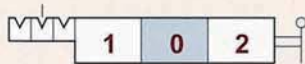
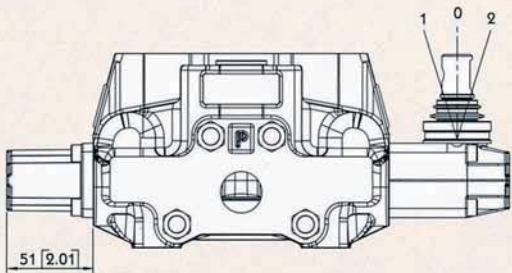


SN-6 B Side

Sectional Directional Control Valves

SN-6

Type 6



6-1 Kit:

DETENT IN POS. 1-0-2, WITHOUT SPRING CENTERED



6-2 Kit:

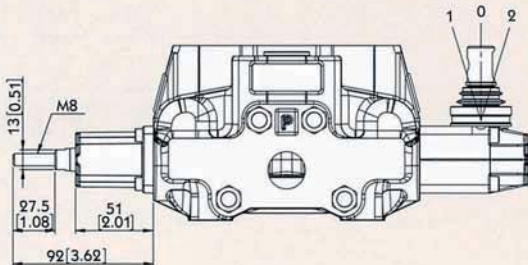
2 POSITIONS, DETENT IN POS. 0-2, WITHOUT SPRING CENTERED



6-3 Kit:

2 POSITIONS, DETENT IN POS. 1-0, WITHOUT SPRING CENTERED

Type 8D2



8D2 Kit:

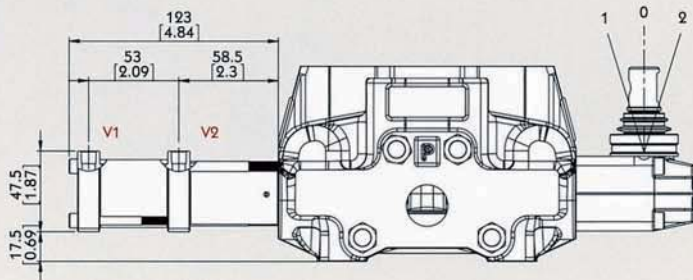
WITH SPRING RETURN TO NEUTRAL POSITION AND PIN WITH M8 MALE THREAD FOR DUAL CONTROL

SN-6 B Side

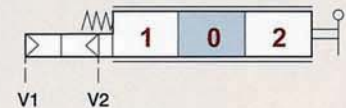
Sectional Directional Control Valves

Type 8P

V1 & V2 : NPT 1/8 - 27

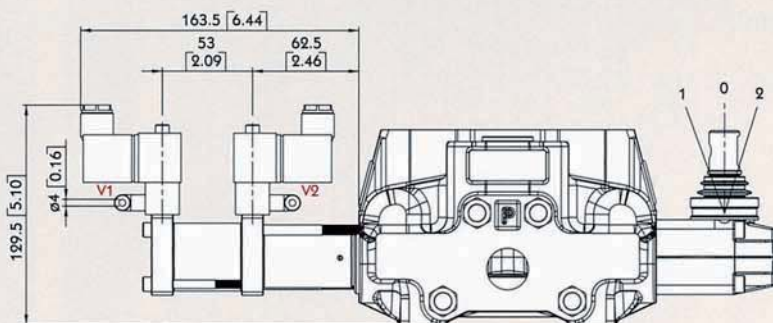


Pilot pressure : FROM 7 TO 10 BAR / 101 TO 145 PSI



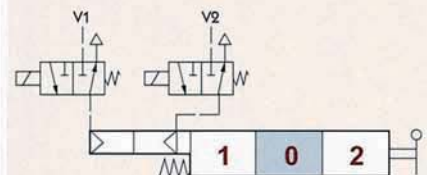
SN-6

Type 8EP3



Solenoid operating features :

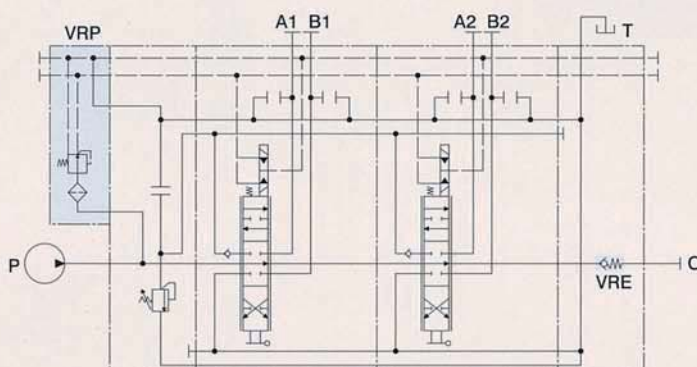
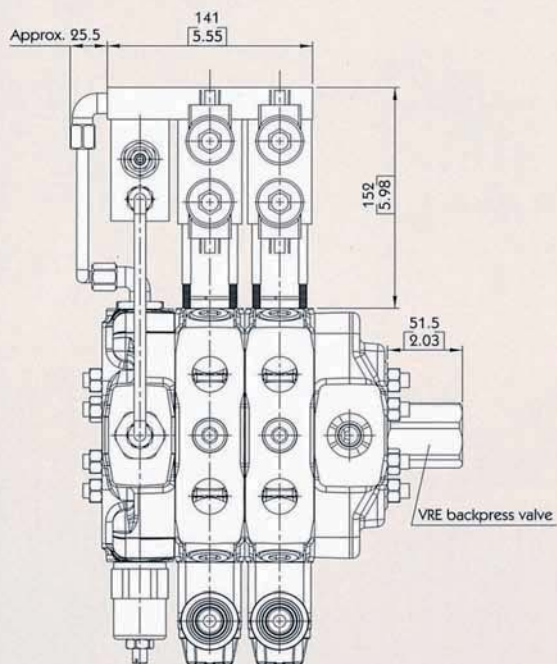
NOMINAL VOLTAGE: 24VDC
 NOMINAL VOLTAGE TOLERANCE: $\pm 10\%$
 POWER RATING: 5W



SN-6 B Side

Sectional Directional Control Valves

Type 8ED3

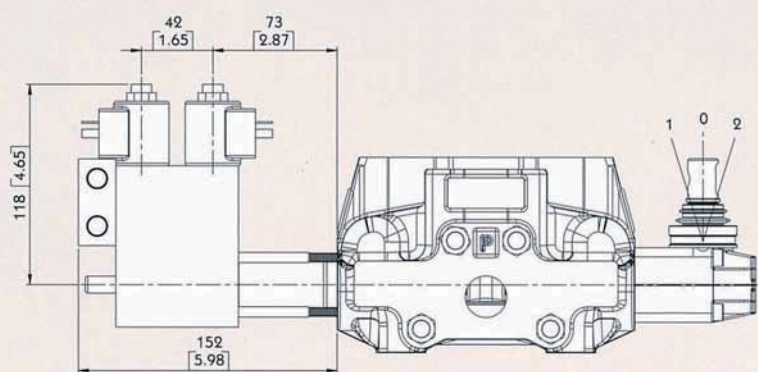


VRP valve operating features :

OUTLET PRESSURE: 25 BAR / 363 PSI

MAX. FLOW: 8 L/MIN / 2.1 US GPM

FLTERING: 80 μ



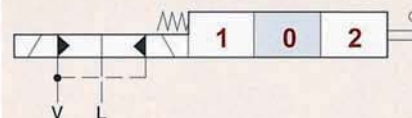
Operating features :

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

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

Solenoid operating features :

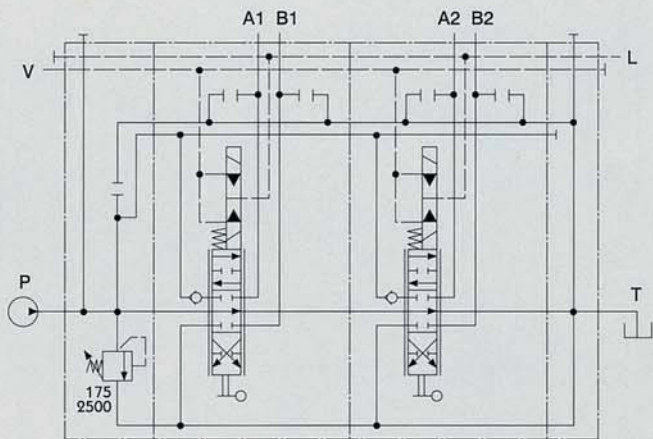
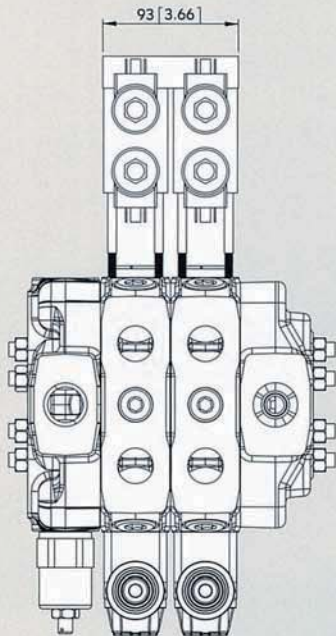
NOMINAL VOLTAGE: 12VDC / 24 VDC
POWER RATING: 21 W
DUTY CYCLE: 100 %



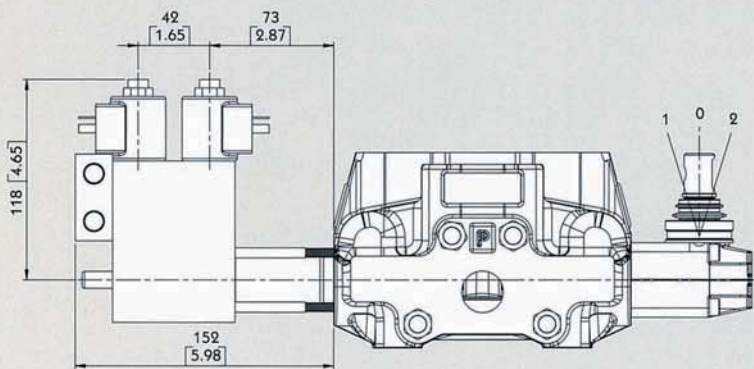
SN-6 B Side

Sectional Directional Control Valves

Type 8ER3



SN-6



Operating features :

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

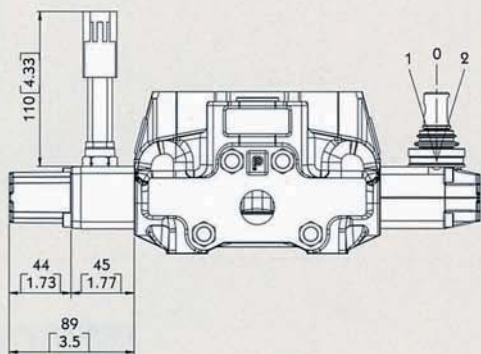
Solenoid operating features :

- NOMINAL VOLTAGE: 12VDC / 24 VDC
- POWER RATING: 21 W
- DUTY CYCLE: 100 %

SN-6 B Side

Sectional 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:

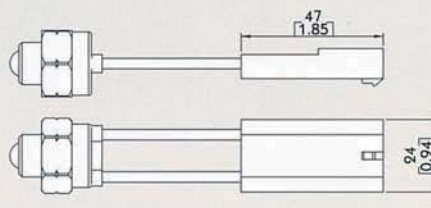
MICROSWITCH WITH MALE/FEMALE CONNECTOR, OPERATED IN POS. 2



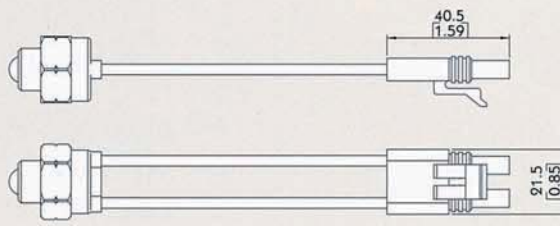
8MG3 Kit:

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

With NO contact (female connector with male end)



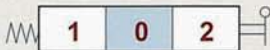
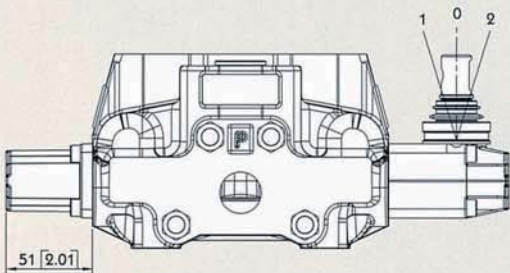
With NC contact (male connector with female end)



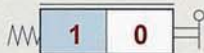
SN-6 B Side

Sectional Directional Control Valves

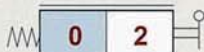
Type 8



8 Kit:
SPRING RETURN TO NEUTRAL POSITION

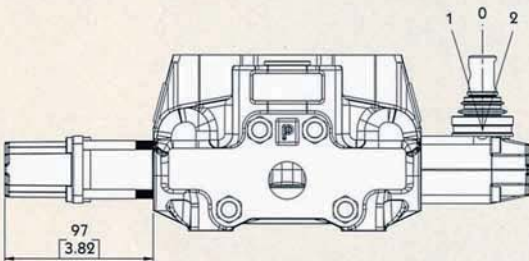


8-1 Kit:
SPRING RETURN TO NEUTRAL POSITION.
(2 POSITIONS)

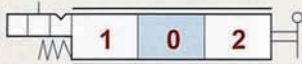


8-2 Kit:
SPRING RETURN TO NEUTRAL POSITION.
(2 POSITIONS)

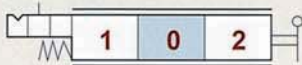
Type 9



9-1 Kit:
DETENT IN POS. 1, 2 WITH SPRING CENTERED



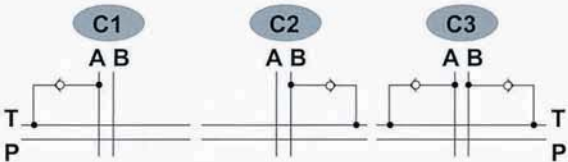
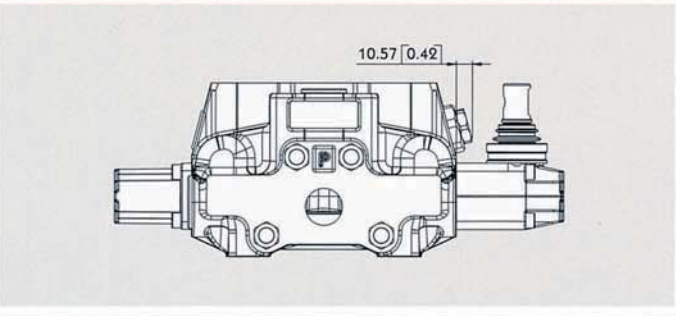
9-2 Kit:
DETENT IN POS. 2 WITH SPRING CENTERED



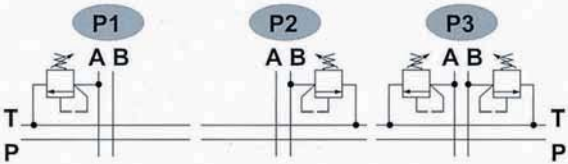
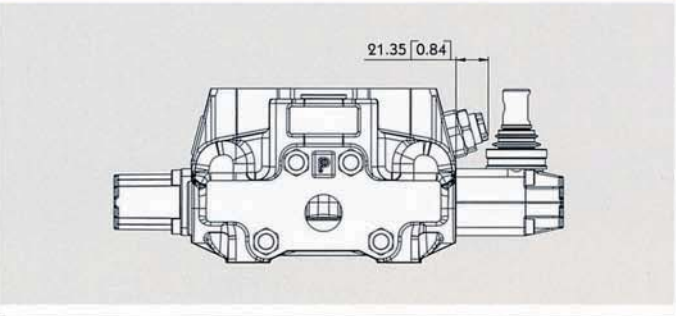
9-3 Kit:
DETENT IN POS. 1 WITH SPRING CENTERED

SN-6 Port Relief Sectional Directional Control Valves

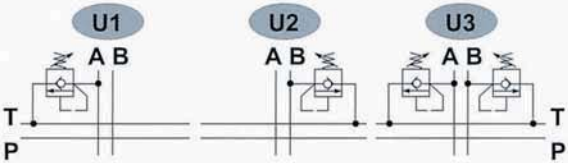
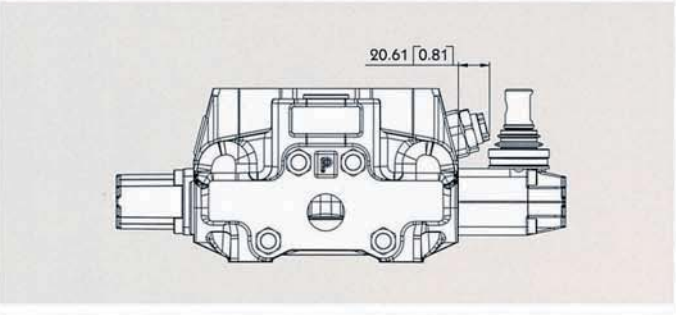
TYPE C



TYPE P



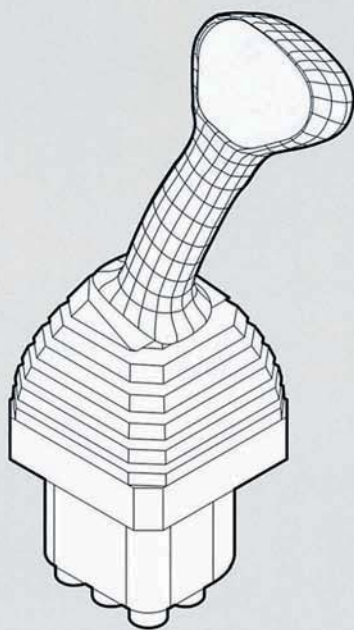
TYPE U



SN-6 Accessories

Sectional Directional Control Valves

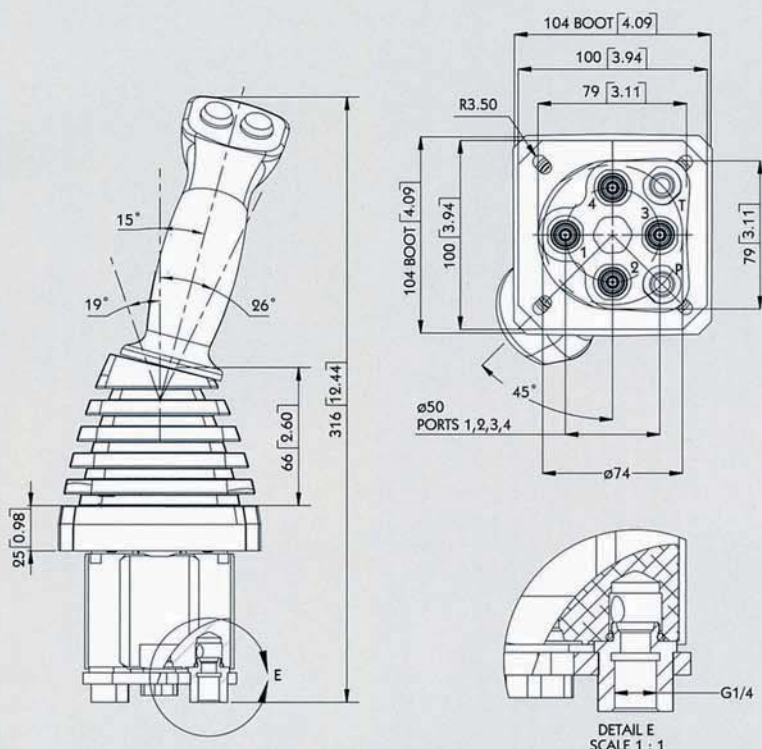
Type JS



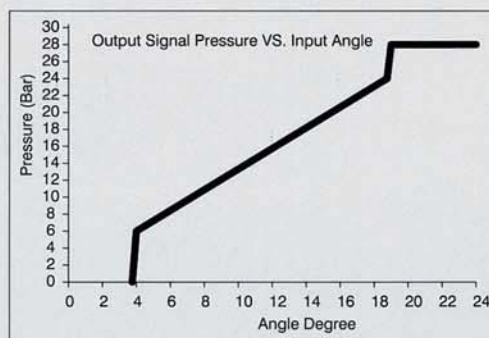
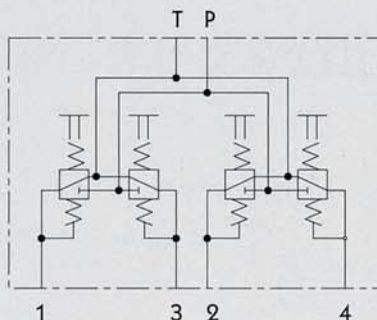
CODE: YLJS446 Hydraulic Pilot Valve - handle type

Specifications:

- This data sheet shows technical spec. with mineral oil of 46 mm²/s (cSt) viscosity at 40°C (104°F)
- Flow : 5 ~ 20 LPM
- Feeding pressure : 30 ~ 100 bar
- Max. backpressure : 3 bar
- Output pressure : see diagram
- Internal leakage at 30 bar : 18 ~ 24 cm³/min
- Fluid : mineral oil
- Fluid temperature : - 10 ~ 80°C
- Ambient temperature : - 40 ~ 60°C



HYDRAULIC SCHEME:



SN-6 Accessories

Sectional Directional Control Valves

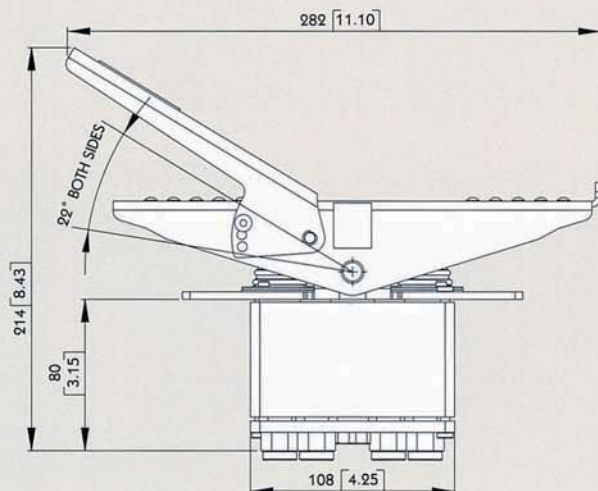
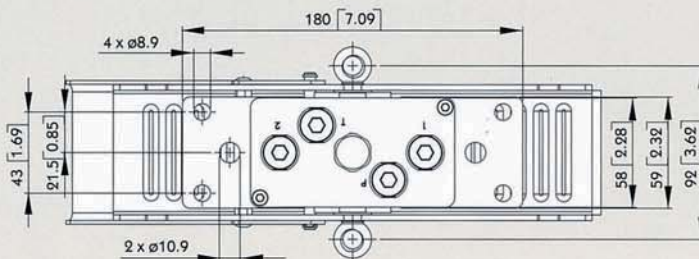
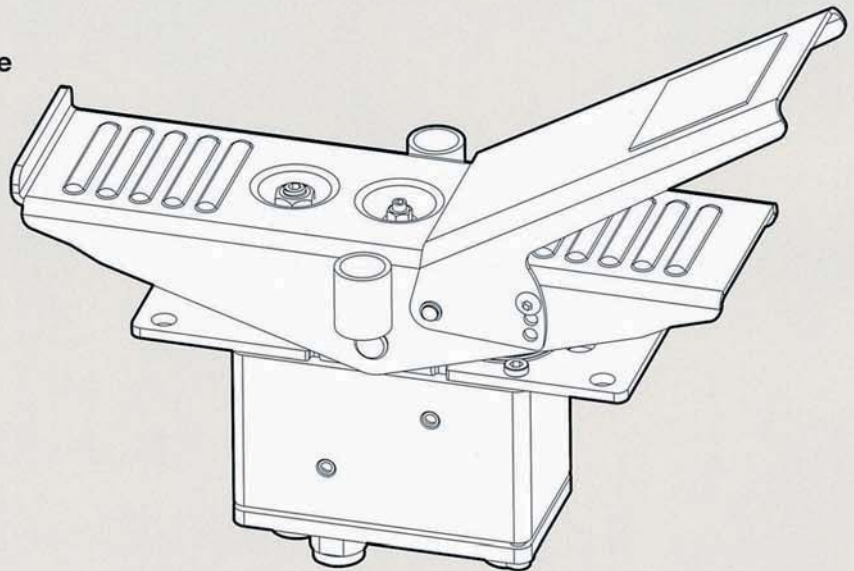
Type FP

CODE: YLFP246

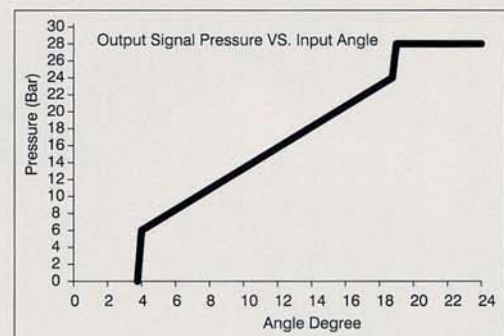
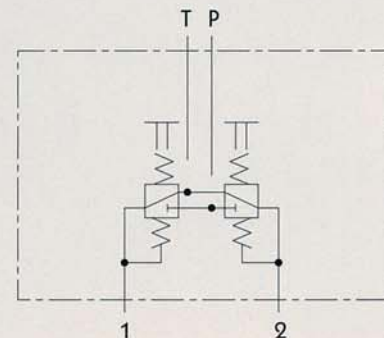
Hydraulic Pilot Valve - pedal type

Specifications:

- This data sheet shows technical spec. with mineral oil of 46 mm²/s (cSt) viscosity at 40°C (104°F)
- Flow : 5 ~ 20 LPM
- Feeding pressure : 30 ~ 100 bar
- Max. backpressure : 3 bar
- Output pressure : see diagram
- Internal leakage at 30 bar : 18 ~ 24 cm³/min
- Fluid : mineral oil
- Fluid temperature : - 10 ~ 80°C
- Ambient temperature : - 40 ~ 60°C



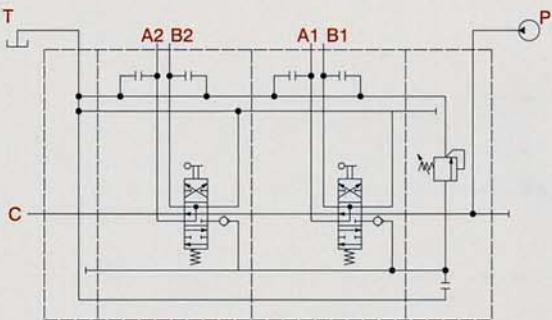
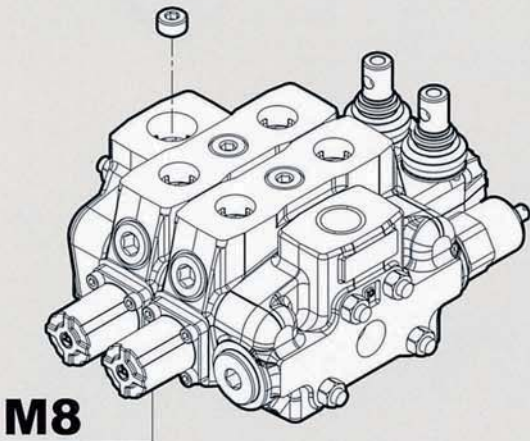
HYDRAULIC SCHEME:



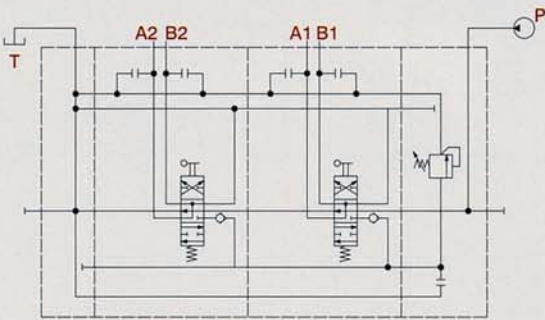
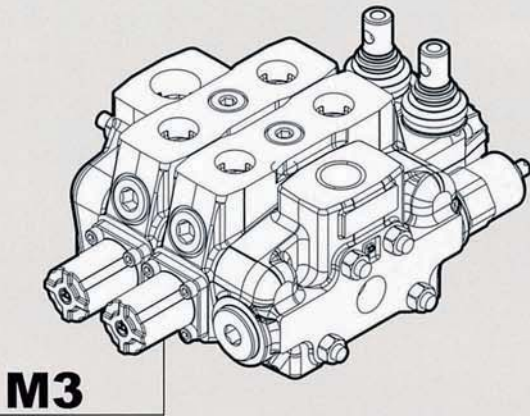
SN-6 outlet

Sectional Directional Control Valves

Power Beyond Conversion plug
(Closed center plug)

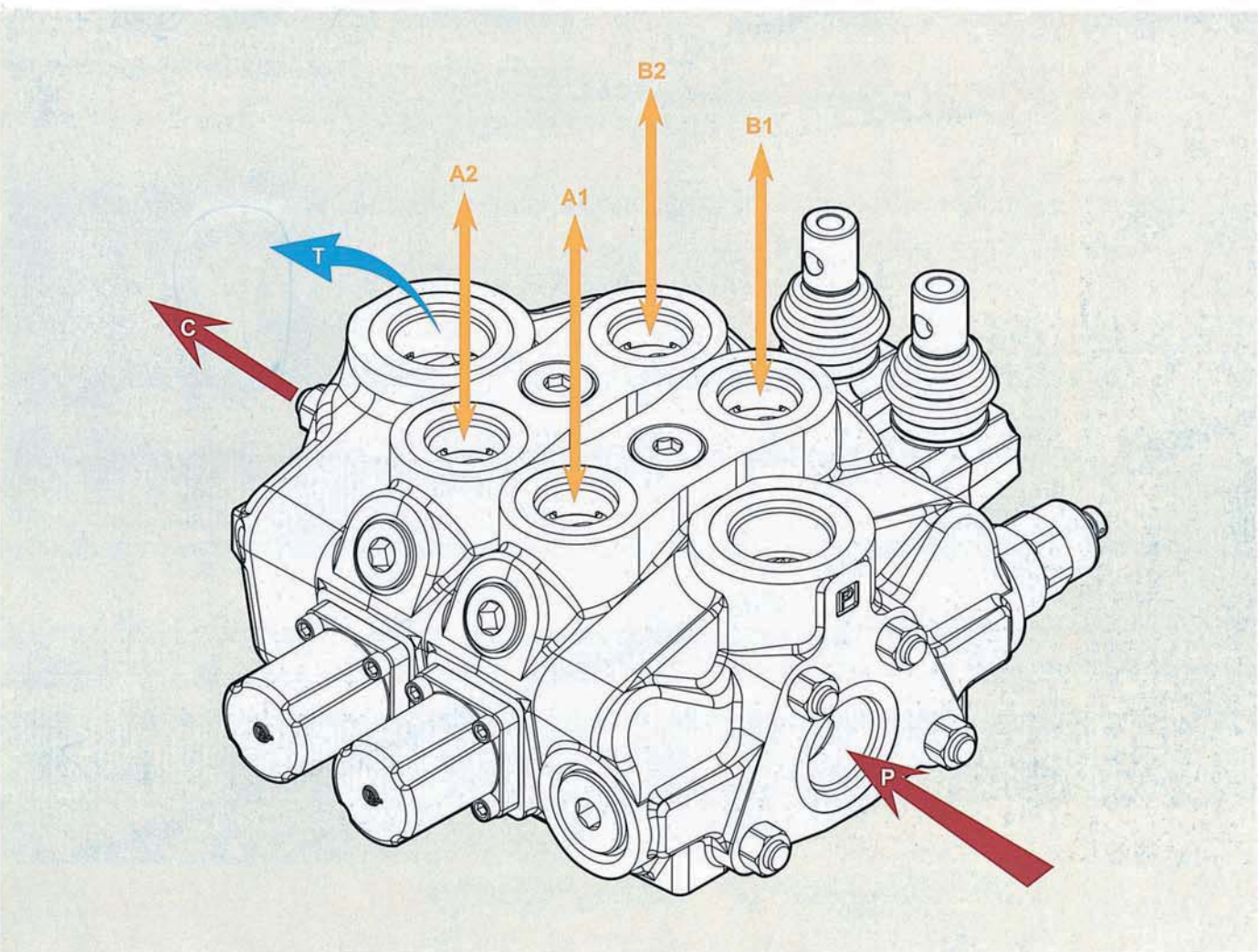


SN-6



SN-8

Sectional Directional Control Valves



SN-8 Specifications

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
Fluid temperature range	with NBR seals	from - 20° to 80°C	from - 4° to 176° F
	with FPM seal	from - 20° to 100°C	from - 4° to 212° F
Viscosity	operating range	from 15 to 75 mm²/s	from 15 to 75 cst
	min.	12 mm²/s	12 cst
	max.	400 mm²/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.

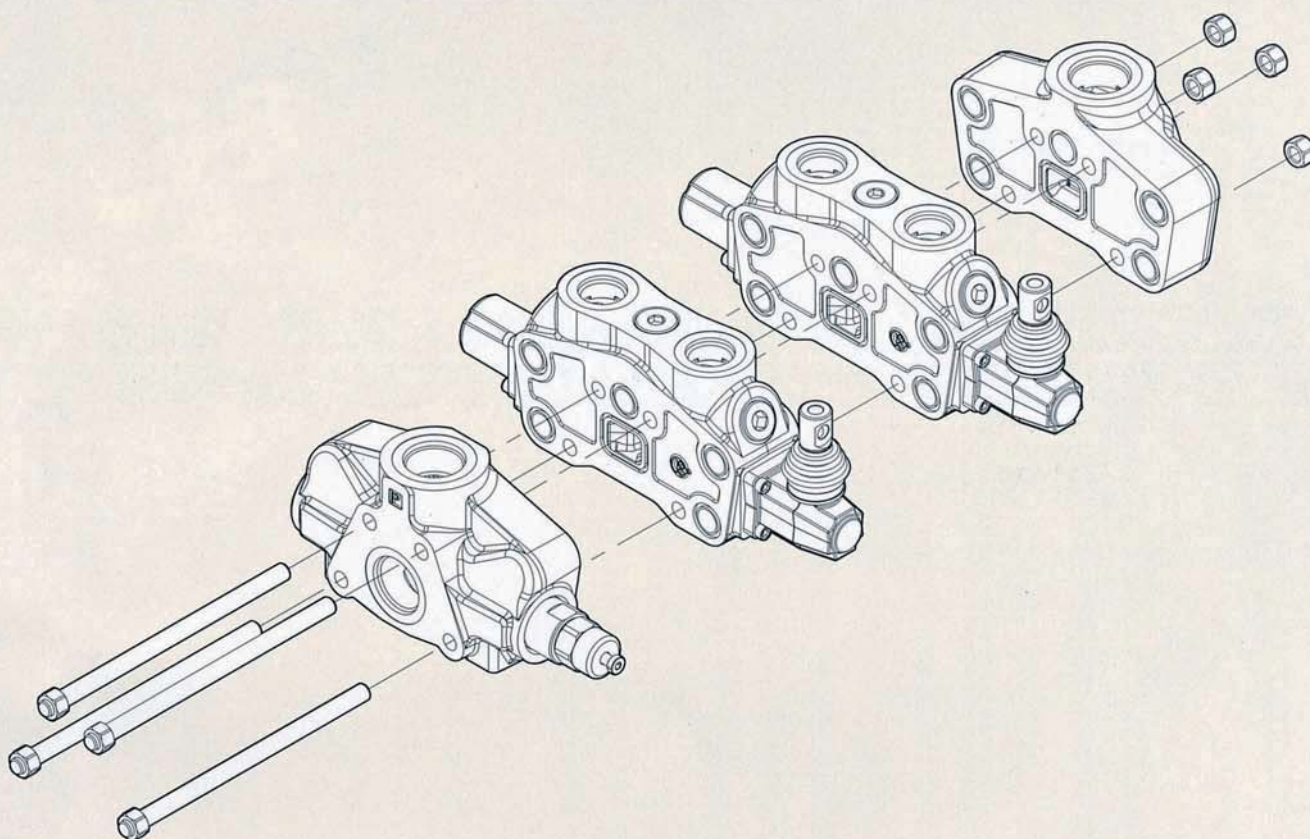
SN-8 Complete

Sectional Directional Control Valves

HOW TO ORDER FOR A COMPLETE ASSEMBLED VALVE

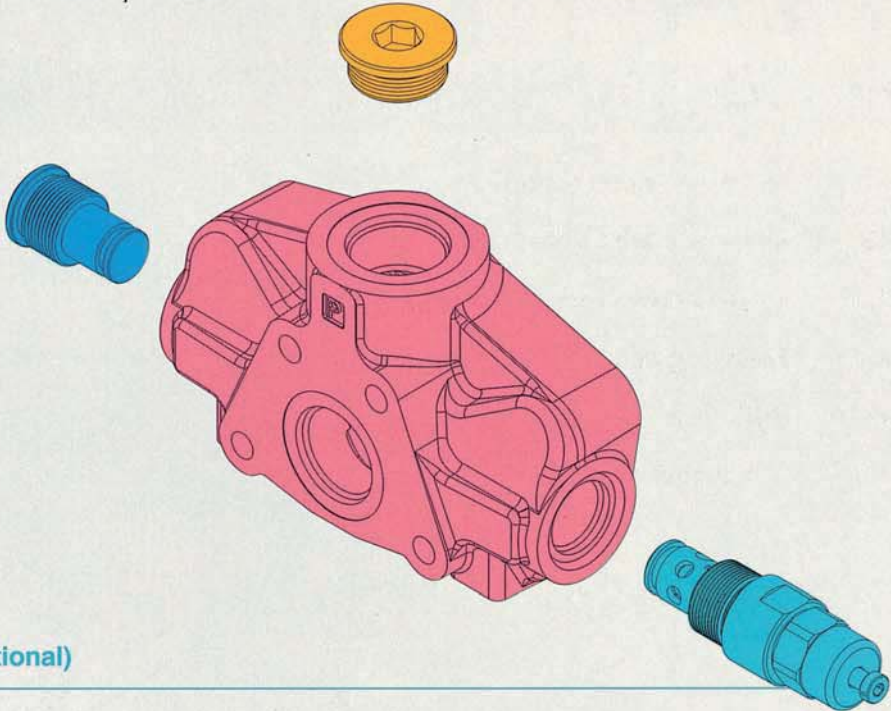
SN-8 / 2S - XHG / 18L / 28L / G-8-10 / M3

2S	No. of working section
XHG	Inlet cover with a main pressure relief valve
18L	1st section (complete working section)
28L	Following section (complete working section)
G-8-10	BSP ports
M3	Outlet cover



SN-8 Inlet Section Sectional Directional Control Valves

FP SN-8 / XHG / G-8

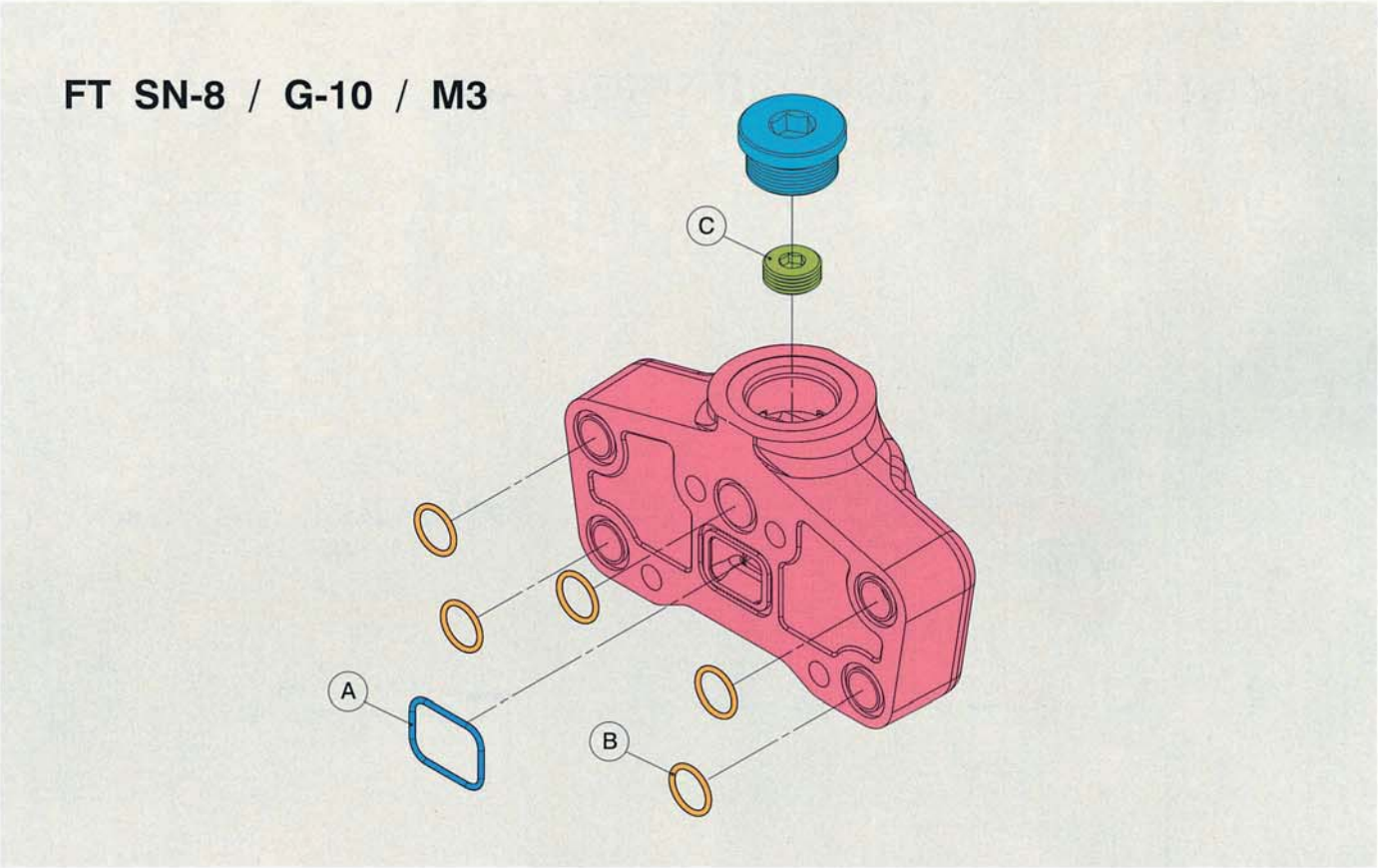


Inlet relief (optional)

Inlet Relief (optional)			
TYPE	CODE	DESCRIPTION	PAGE
SV	YLPSN84000	Relief valve blanking plug	P. 228
XHG	YLPSN83000	Pilot operated pressure relief valve Range 25 to 315 bar/ 360 to 4600 psi, standard setting 125 bar/ 1800 psi	P. 228

SN-8 Outlet Section

Sectional Directional Control Valves



SN-8

Outlet		
ITEM	DESCRIPTION	Q'TY
A	2.62 x 40.94	1
B	2.62 x 20.29	5
C	G3/4 Plug	1

SN-8 Working Section

Sectional Directional Control Valves

EW SN-8 / 1S /

18L

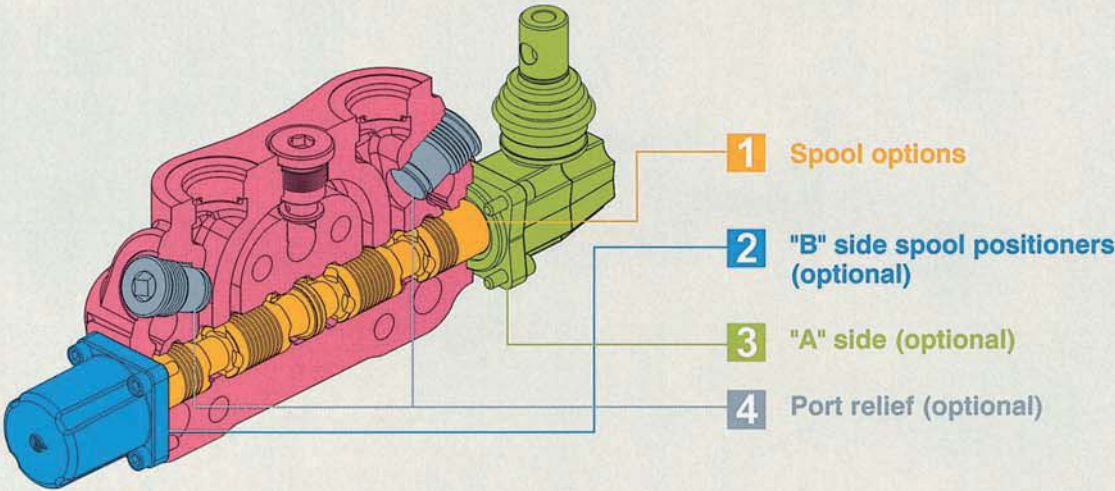
/

P1(G3-100)

/

G-8

11234



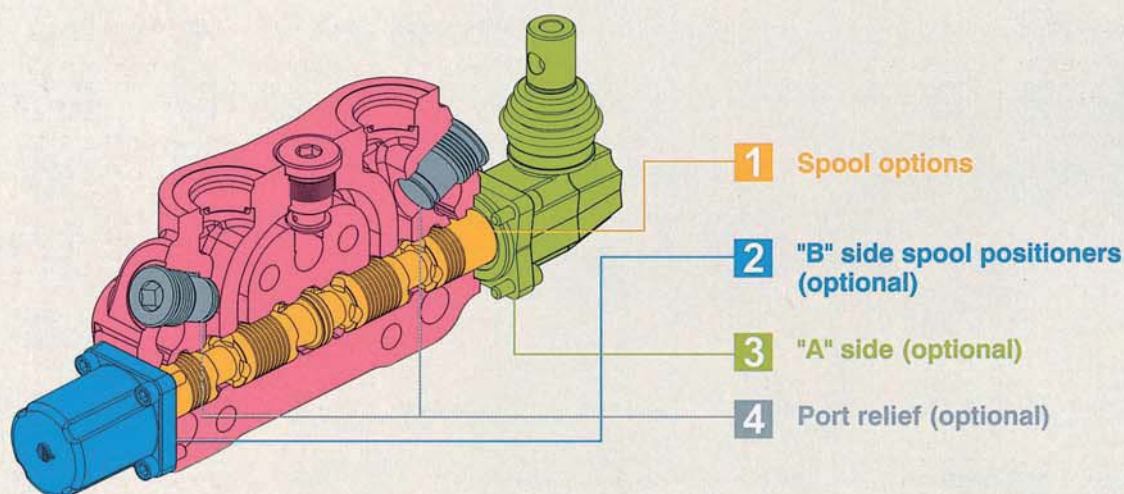
1: Spool options			
TYPE	CODE	DESCRIPTION	PAGE
1	YLWSN82001	Double acting,3 positions,with A and B closed in neutral position	P. 229
2	YLWSN82002	Double acting,3 positions,with A and B open to tank in neutral position	P. 229
3	YLWSN82003	Single acting on A closed in neutral position, 3 positions, B plugged	P. 230
4	YLWSN82004	Single acting on B closed in neutral position, 3 positions, A plugged	P. 230
5	YLWSN82005	Double acting, 3 positions, with B open to Tank in neutral position	P. 231
6	YLWSN82006	Double acting, 3 positions, with A open to Tank in neutral position	P. 231
5DY	YLWSN83052	Double acting, 4 positions, floating circuit in 4th position with A,B open to Tank by pulling the lever	P. 232
5PY	YLWSN83051	Double acting, 4 positions, floating circuit in 4th position with A, B open to Tank by pushing the lever	P. 233

SN-8 Working Section

Sectional Directional Control Valves

EW SN-8 / 1S / **1 8 L** / P1(G3-100) / G-8

1 2 3 4



2: B Side Spool Positioners			
TYPE	CODE	DESCRIPTION	PAGE
6-1	YLWSN83061	Detent in pos. 1-0-2, without spring centered	P. 238
6-2	YLWSN83062	2 positions, detent in pos. 0-2, without spring centered	P. 238
6-3	YLWSN83063	2 positions, detent in pos. 1-0, without spring centered	P. 238
8D2	YLWSN83082	With spring return to neutral position and pin with M8 male thread for dual control	P. 238
8IM	YLWSN830810	Hydraulic pilot kit	P. 238
8P	YLWSN83080	ON/OFF Pneumatic actuator	P. 239
8EP3	YLWSN84300	ON/OFF Electro-Pneumatic actuator	P. 239
8MG1 (NO)	YLWSN83801	Microswitch kit operated in pos. 1 (Normally Open)	P. 242
8MG2 (NO)	YLWSN83802	Microswitch kit operated in pos. 2 (Normally Open)	P. 242
8MG3 (NO)	YLWSN83803	Microswitch kit operated in pos. 1&2 (Normally Open)	P. 242
MG (NO)	YLWSN83804	Microswitch with NO terminal	P. 242
8MG1 (NC)	YLWSN838011	Microswitch kit operated in pos. 1 (Normally Closed)	P. 242
8MG2 (NC)	YLWSN838021	Microswitch kit operated in pos. 2 (Normally Closed)	P. 242
8MG3 (NC)	YLWSN838031	Microswitch kit operated in pos. 1&2 (Normally Closed)	P. 242
MG (NC)	YLWSN838041	Microswitch with NC terminal	P. 242
8	YLWSN83008	With spring return to neutral position	P. 243
8-1	YLWSN84081	2 positions, with spring centered from pos. 1	P. 243
8-2	YLWSN84082	2 positions, with spring centered from pos. 2	P. 243
9-1	YLWSN83091	Detent in pos. 1, 2 with spring centered	P. 243
9-2	YLWSN83092	Detent in pos. 2 with spring centered	P. 243

2: B Side Spool Positioners

TYPE	CODE	DESCRIPTION	PAGE
9-3	YLWSN83093	Detent in pos. 1 with spring centered	P. 243
8ED3+RV-KE1R3	YLWSN83201	1S: ON/OFF Electro-Hydraulic control kit with pilot and drain line+backpressure valve (12/24 VDC)	P. 240
8ED3+RV-KE2R3	YLWSN83202	2S: ON/OFF Electro-Hydraulic control kit with pilot and drain line+backpressure valve (12/24 VDC)	P. 240
8ED3+RV-KE3R3	YLWSN83203	3S: ON/OFF Electro-Hydraulic control kit with pilot and drain line+backpressure valve (12/24 VDC)	P. 240
8ED3+RV-KE4R3	YLWSN83204	4S: ON/OFF Electro-Hydraulic control kit with pilot and drain line+backpressure valve (12/24 VDC)	P. 240
8ED3+RV-KE5R3	YLWSN83205	5S: ON/OFF Electro-Hydraulic control kit with pilot and drain line+backpressure valve (12/24 VDC)	P. 240
8ED3+RV-KE6R3	YLWSN83206	6S: ON/OFF Electro-Hydraulic control kit with pilot and drain line+backpressure valve (12/24 VDC)	P. 240
8ED3+RV-KE7R3	YLWSN83207	7S: ON/OFF Electro-Hydraulic control kit with pilot and drain line+backpressure valve (12/24 VDC)	P. 240
8ED3+RV-KE8R3	YLWSN83208	8S: ON/OFF Electro-Hydraulic control kit with pilot and drain line+backpressure valve (12/24 VDC)	P. 240
8ED3+RV-KE9R3	YLWSN83209	9S: ON/OFF Electro-Hydraulic control kit with pilot and drain line+backpressure valve (12/24 VDC)	P. 240
8ED3+RV-KE10R3	YLWSN83210	10S: ON/OFF Electro-Hydraulic control kit with pilot and drain line+backpressure valve (12/24 VDC)	P. 240
8ED3+RV-KE11R3	YLWSN83211	11S: ON/OFF Electro-Hydraulic control kit with pilot and drain line+backpressure valve (12/24 VDC)	P. 240
8ED3+RV-KE12R3	YLWSN83212	12S: ON/OFF Electro-Hydraulic control kit with pilot and drain line+backpressure valve (12/24 VDC)	P. 240
8ER3+KE1S0	YLWSN83401	1S: ON/OFF Electro-hydraulic control kit with collector kit for external pilot and drain	P. 241
8ER3+KE2S0	YLWSN83402	2S: ON/OFF Electro-hydraulic control kit with collector kit for external pilot and drain	P. 241
8ER3+KE3S0	YLWSN83403	3S: ON/OFF Electro-hydraulic control kit with collector kit for external pilot and drain	P. 241
8ER3+KE4S0	YLWSN83404	4S: ON/OFF Electro-hydraulic control kit with collector kit for external pilot and drain	P. 241
8ER3+KE5S0	YLWSN83405	5S: ON/OFF Electro-hydraulic control kit with collector kit for external pilot and drain	P. 241
8ER3+KE6S0	YLWSN83406	6S: ON/OFF Electro-hydraulic control kit with collector kit for external pilot and drain	P. 241
8ER3+KE7S0	YLWSN83407	7S: ON/OFF Electro-hydraulic control kit with collector kit for external pilot and drain	P. 241
8ER3+KE8S0	YLWSN83408	8S: ON/OFF Electro-hydraulic control kit with collector kit for external pilot and drain	P. 241
8ER3+KE9S0	YLWSN83409	9S: ON/OFF Electro-hydraulic control kit with collector kit for external pilot and drain	P. 241
8ER3+KE10S0	YLWSN83410	10S: ON/OFF Electro-hydraulic control kit with collector kit for external pilot and drain	P. 241
8ER3+KE11S0	YLWSN83411	11S: ON/OFF Electro-hydraulic control kit with collector kit for external pilot and drain	P. 241
8ER3+KE12S0	YLWSN83412	12S: ON/OFF Electro-hydraulic control kit with collector kit for external pilot and drain	P. 241

3: A Side (Optional)

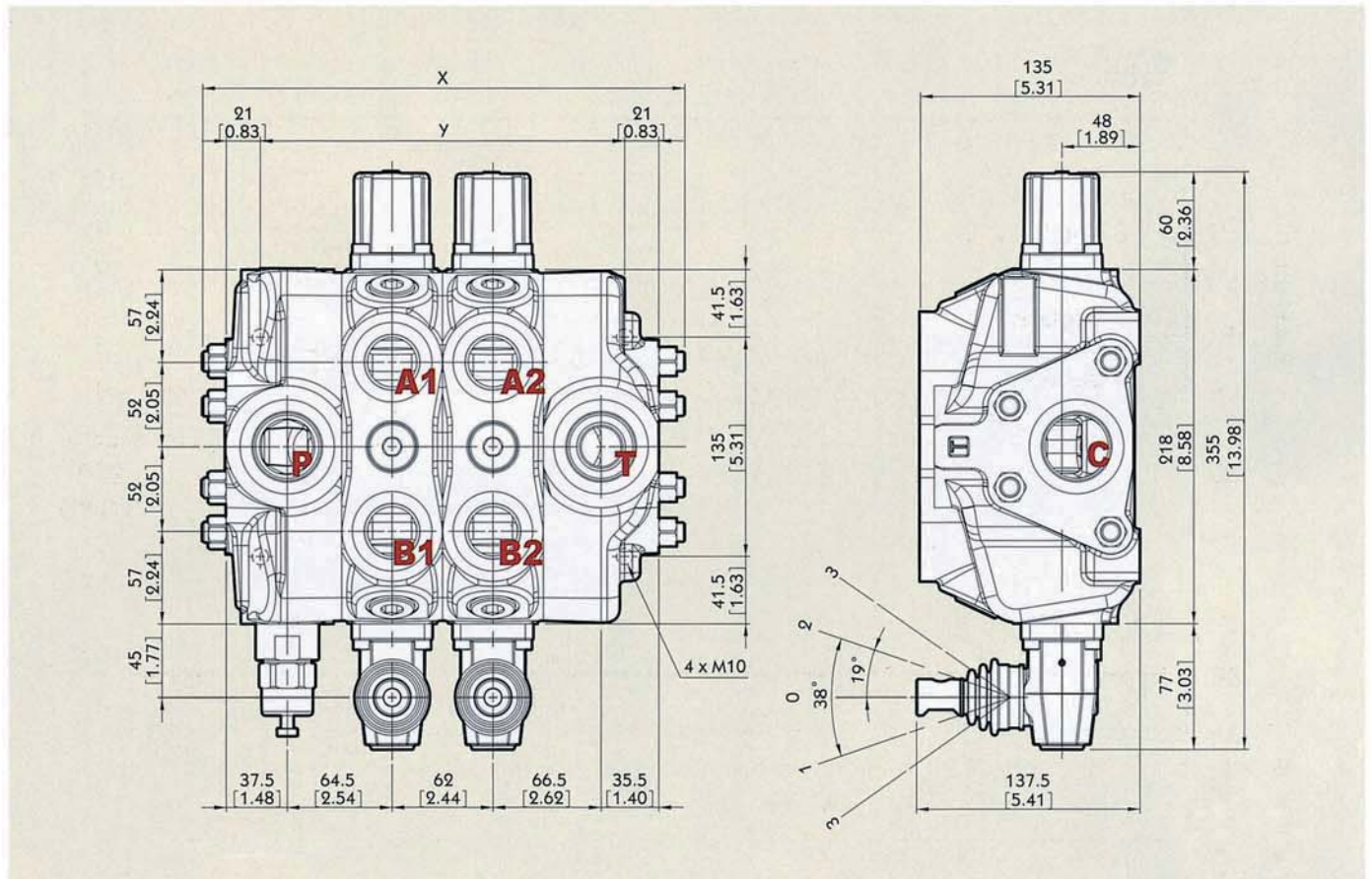
TYPE	CODE	DESCRIPTION	PAGE
L	YLWSN84000	Standard lever	P. 234
SLP	YLWSN84001	Without lever, with dust proof plate	P. 234
LCB	YLWSN84002	Joystick lever for 2 section operation	P. 235
TQ	YLWSN84003	Flexible cable connection	P. 236
FCR-2		Joystick for remote control	P. 237

4: Port Relief (Optional)

TYPE	CODE	DESCRIPTION	PAGE
P (G2-63)	YLWSN65002	Anti-shock valve, range 63 to 125 bar / from 900 to 1800 psi standard setting 63 bar / 900 psi	P. 244
P (G3-100)	YLWSN65003	Anti-shock valve, range 100 to 250 bar / from 1450 to 3600 psi standard setting 100bar / 1450 psi	P. 244
P (G4-200)	YLWSN65004	Anti-shock valve, range 200 to 315 bar / from 2900 to 4600 psi standard setting 200 bar / 2900 psi	P. 244
XU (G2-63)	YLWSN85012	Anti-shock valve and Anti-cavitation valve, range 63 to 125 bar / from 900 to 1800 psi standard setting 63 bar / 900 psi	P. 244
XU (G3-100)	YLWSN85013	Anti-shock valve and Anti-cavitation valve, range 100 to 250 bar / from 1450 to 3600 psi standard setting 100 bar / 1450 psi	P. 244
XU (G4-200)	YLWSN85014	Anti-shock valve and Anti-cavitation valve, range 200 to 315 bar / from 2900 to 4600 psi standard setting 200 bar / 2900 psi	P. 244
C	YLWSN65100	Anti - cavitation	P. 244

SN-8 Dimensions

Sectional Directional Control Valves



Standard threads

Ports	Inlet P	A and B	Outlet T and power beyond C
BSP	G1	G1	G1-1/4
UN-UNF	1-5/8-12 (SAE 20)	1-5/16-12 (SAE 16)	1-5/8-12 (SAE 20)

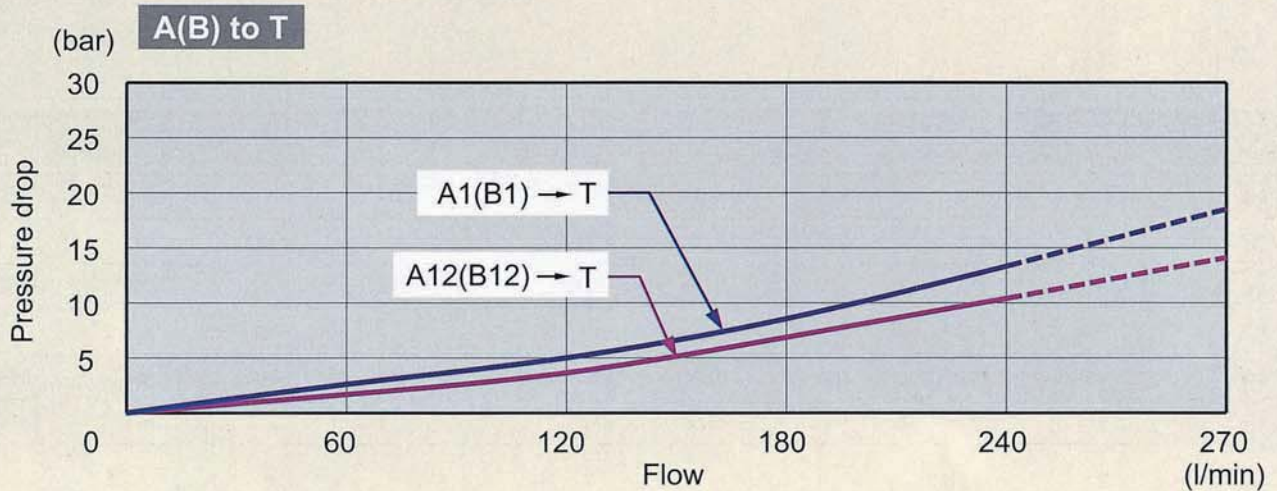
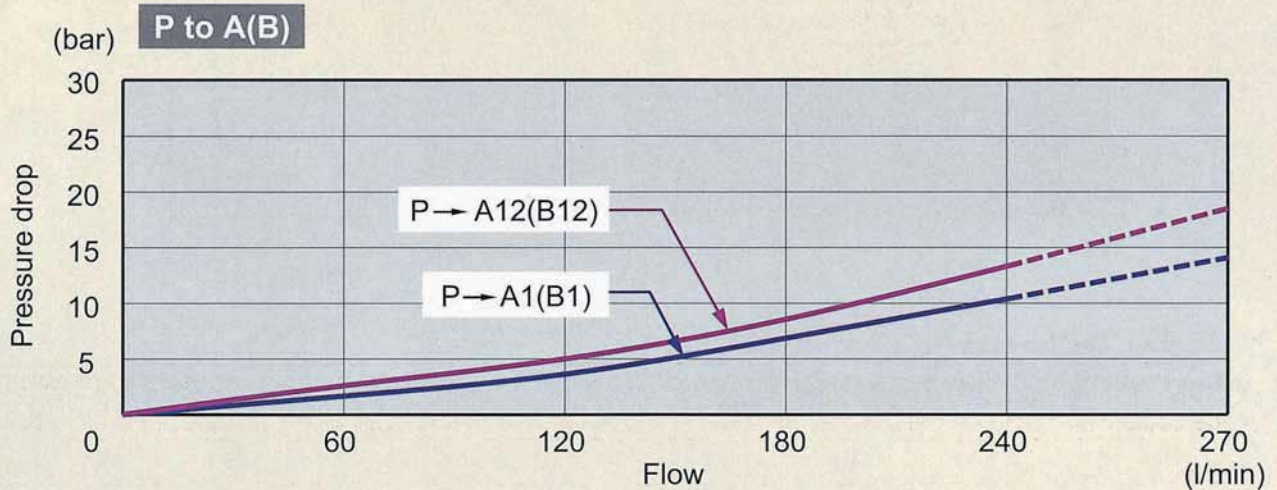
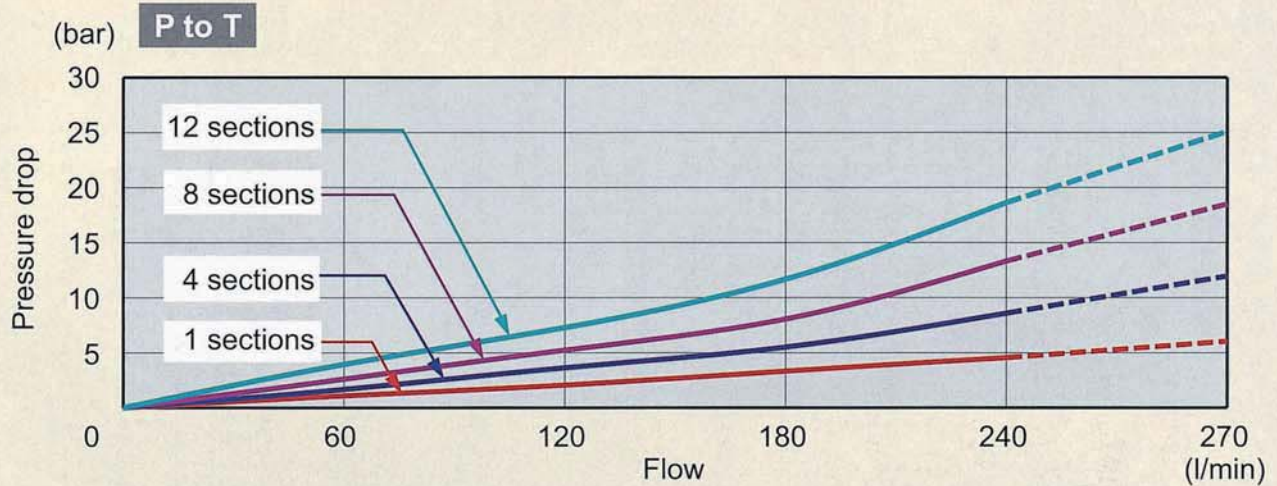
• G-1/2 : G4 G-3/8 : G3 G-3/4 : G6 G-1 : G8 G-1 1/4 : G10
 • SAE 8 : E8 SAE 10 : E10 SAE 12 : E12 SAE 16 : E16 SAE 20 : E20

Standard dimensions

TYPE	X		Y		TYPE	X		Y	
	mm	in	mm	in		mm	in	mm	in
SN8 /1S	235	9.25	162	6.38	SN8 /7S	607	23.90	534	21.02
SN8 /2S	297	11.69	224	8.28	SN8 /8S	669	26.34	596	23.46
SN8 /3S	359	14.13	286	11.26	SN8 /9S	731	28.78	658	25.90
SN8 /4S	421	16.57	348	13.70	SN8 /10S	793	31.22	720	28.34
SN8 /5S	483	19.02	410	16.14	SN8 /11S	855	33.66	782	30.78
SN8 /6S	545	21.46	472	18.58	SN8 /12S	917	36.10	844	33.22

SN-8 Performance Curve Chart

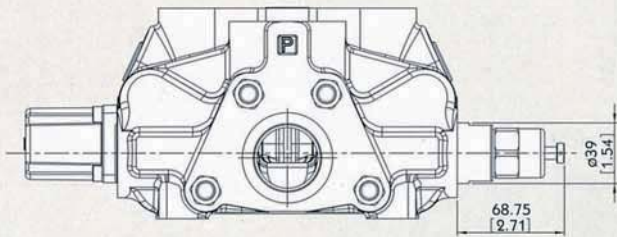
Sectional Directional Control Valves



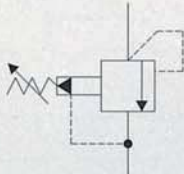
SN-8 Inlet Relief (Optional)

Sectional Directional Control Valves

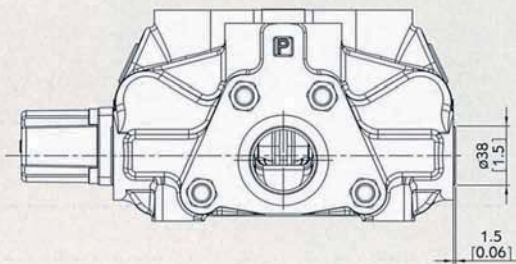
Type XHG



Pilot operated pressure relief valve:



Type SV



Relief valve blanking plug:



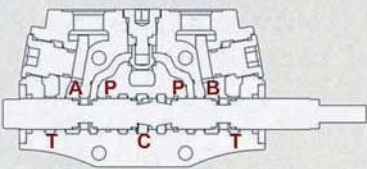
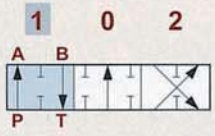
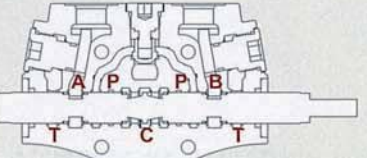
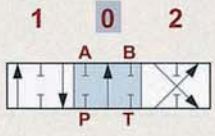
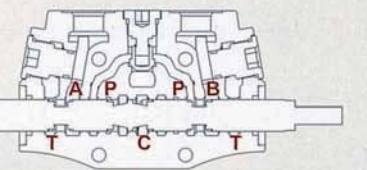
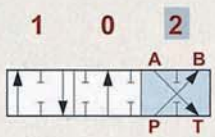
SN-8

SN-8 Spool Options

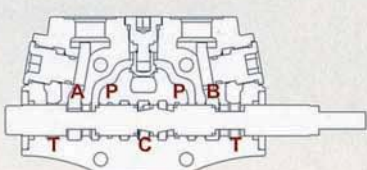
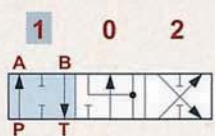
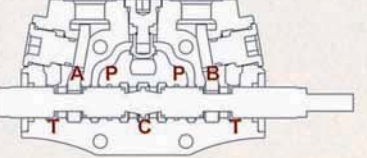
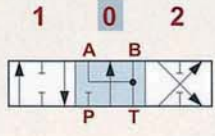
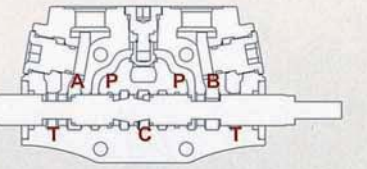
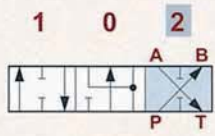
Sectional Directional Control Valves

SN-8

TYPE 1

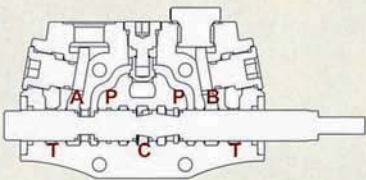
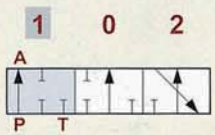
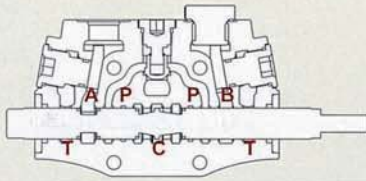
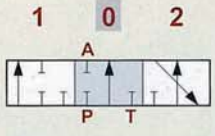
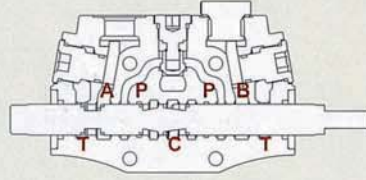
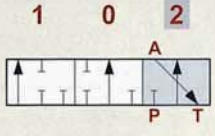
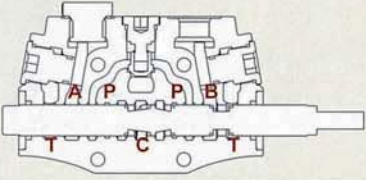
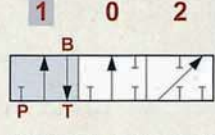
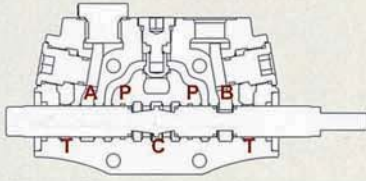
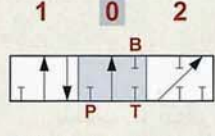
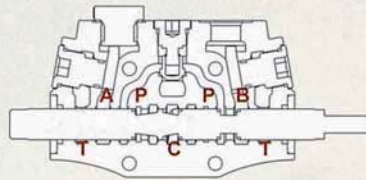
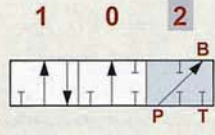
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	<p>P & T & A & B closed</p> <p>C open</p>	
	<p>P → B</p> <p>A → T</p> <p>C closed</p>	

TYPE 2

	<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>	
	<p>P → B</p> <p>A → T</p> <p>C closed</p>	

SN-8 Spool Options

Sectional Directional Control Valves

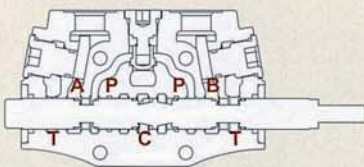
TYPE 3		
	<p>$P \rightarrow A$</p> <p>C & T closed</p>	 <p>"B" port plugged</p>
	<p>P & A & T closed</p> <p>C open</p>	 <p>"B" port plugged</p>
	<p>$A \rightarrow T$</p> <p>P closed</p> <p>C open</p>	 <p>"B" port plugged</p>
TYPE 4		
	<p>$B \rightarrow T$</p> <p>P closed</p> <p>C open</p>	 <p>"A" port plugged</p>
	<p>P & B & T closed</p> <p>C open</p>	 <p>"A" port plugged</p>
	<p>$P \rightarrow B$</p> <p>C & T closed</p>	 <p>"A" port plugged</p>

SN-8 Spool Options

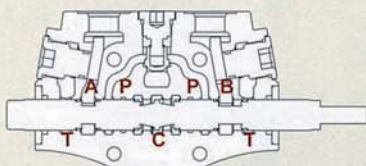
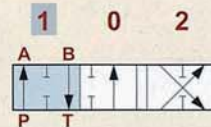
Sectional Directional Control Valves

SN-8

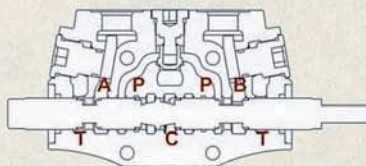
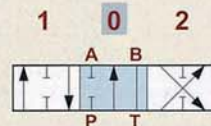
TYPE 5



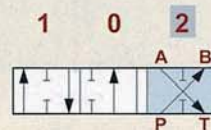
P → A
B → T
C closed



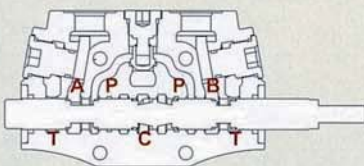
B → T
P & A closed
C open



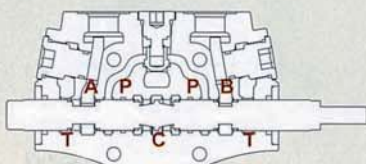
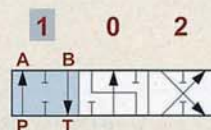
P → B
A → T
C closed



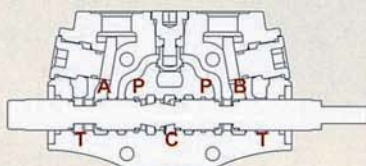
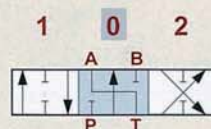
TYPE 6



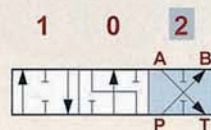
P → A
B → T
C closed



A → T
P & B closed
C open

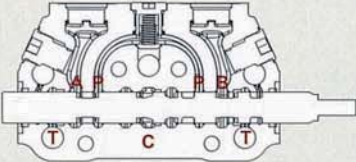
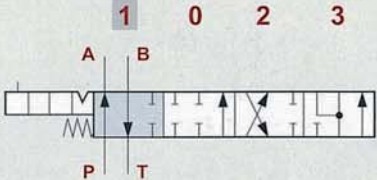
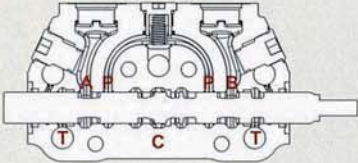
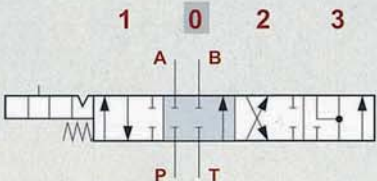
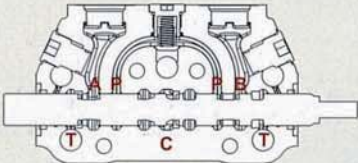
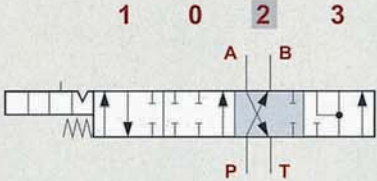
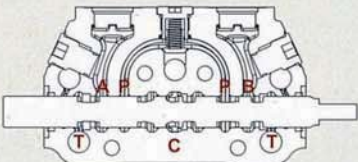
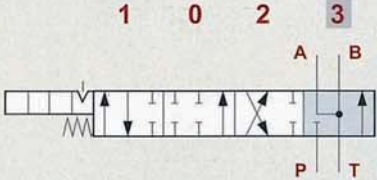


P → B
A → T
C closed



SN-8 spool Options

Sectional Directional Control Valves

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

SN-8

SN-8 spool Options

Sectional Directional Control Valves

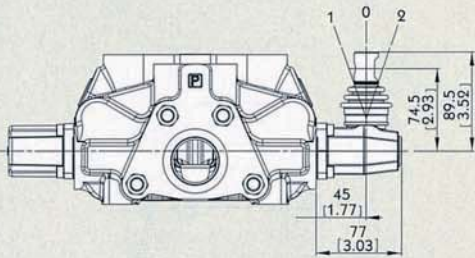
SN-8

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

SN-8 A Side

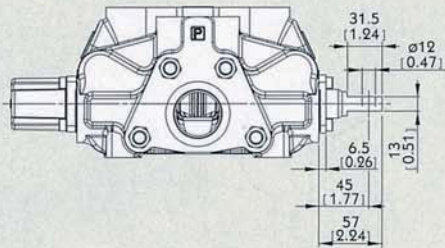
Sectional Directional Control Valves

Type L



Type L:
STANDART LEVER KIT

Type SLP



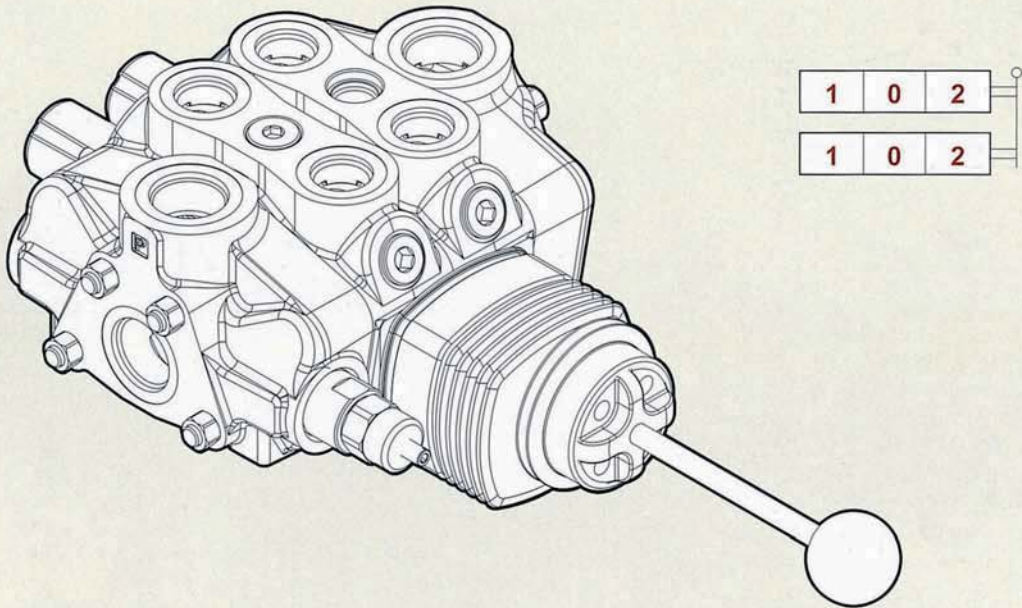
Type SLP:
WITH DUST-PROOF PLATE

SN-8

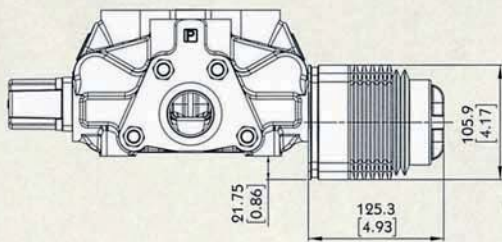
SN-8 A Side

Sectional Directional Control Valves

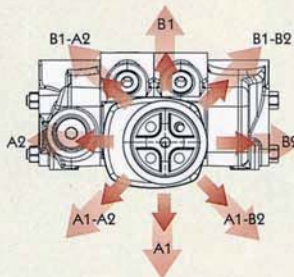
LCB: Joystick control



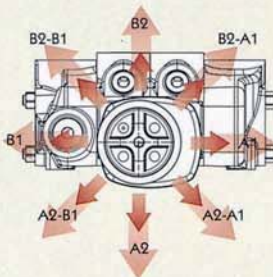
Type LCB



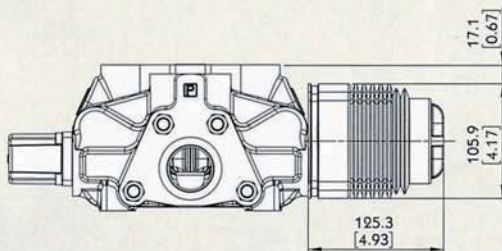
LCB1



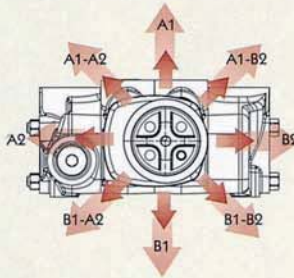
LCB2



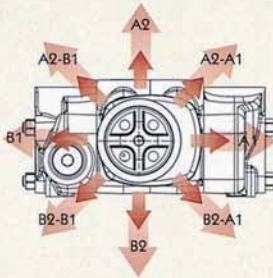
Type LCB



LCB3



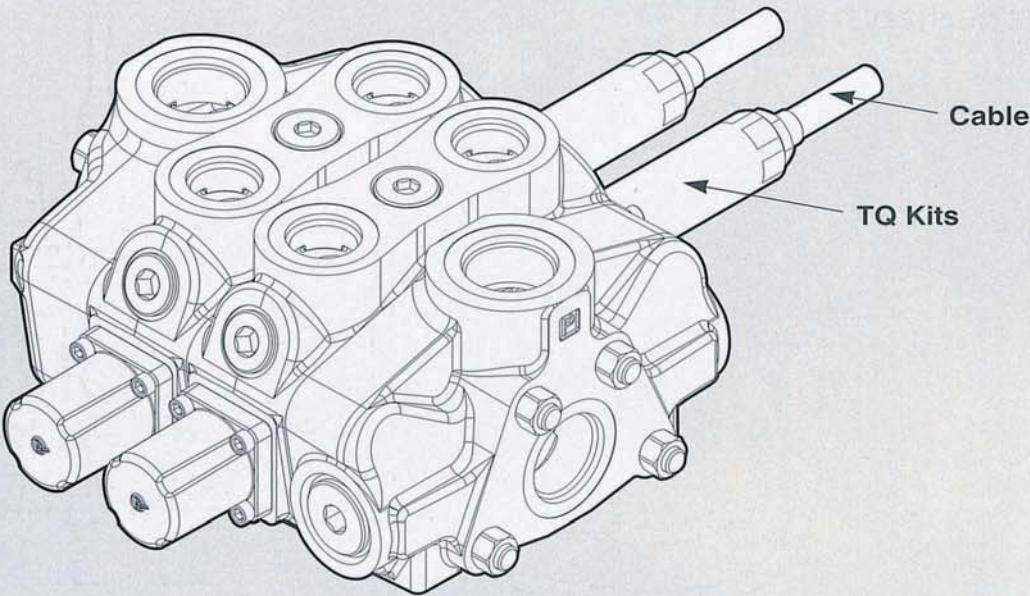
LCB4



SN-8 A Side

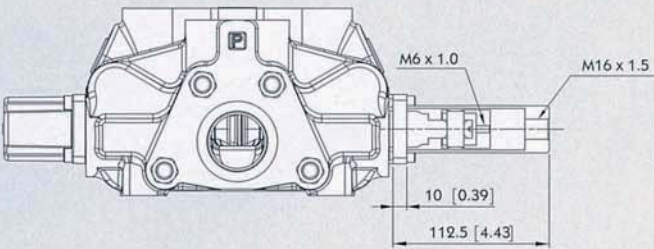
Sectional Directional Control Valves

Note : CONNECTION KIT NOT INCLUDE CABLE



SN-8

Type TQ

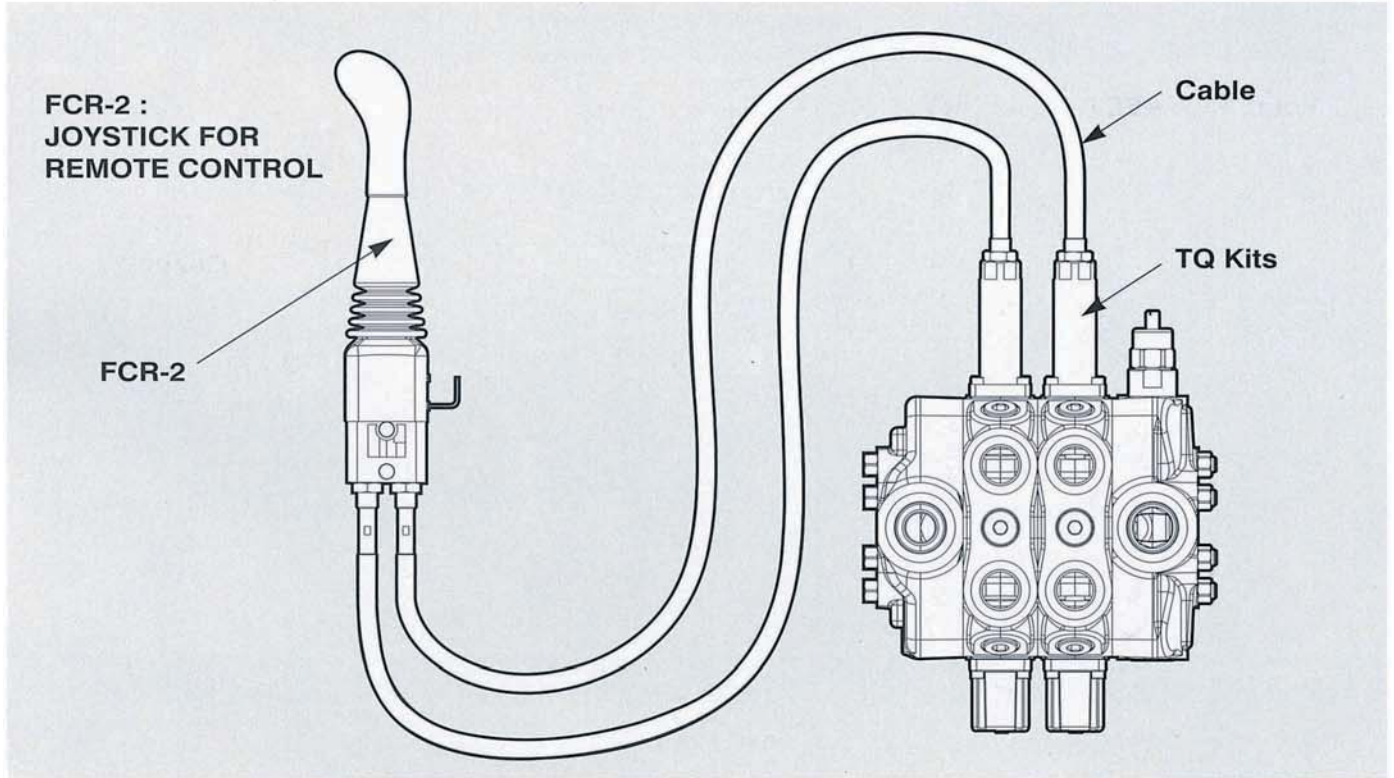


TQ Kit:

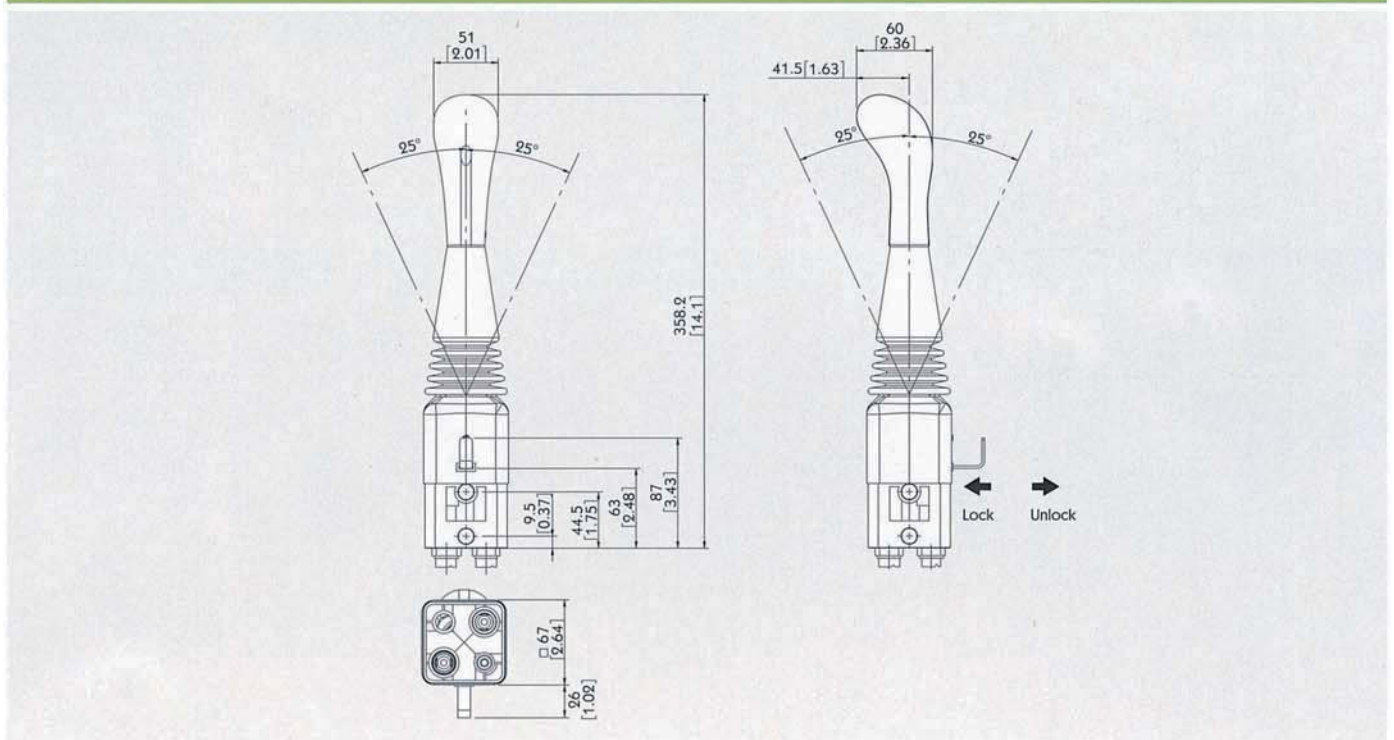


SN-8 A Side

Sectional Directional Control Valves



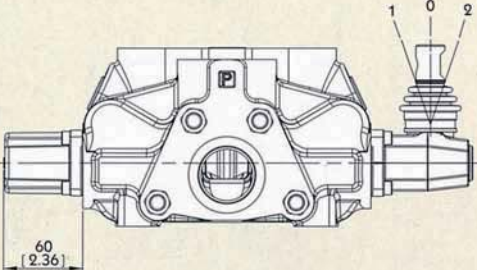



Type FCR-2



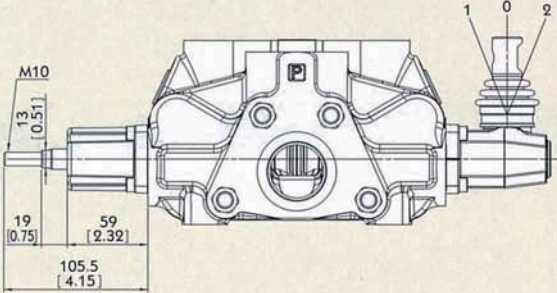

SN-8 B Side

Sectional Directional Control Valves

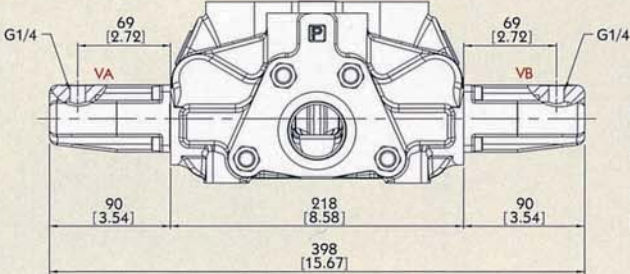

Type 6

		6-1 Kit: DETENT IN POS. 1-0-2, WITHOUT SPRING CENTERED
		6-2 Kit: 2 POSITIONS, DETENT IN POS. 0-2, WITHOUT SPRING CENTERED
		6-3 Kit: 2 POSITIONS, DETENT IN POS. 1-0, WITHOUT SPRING CENTERED

Type 8D2

		8D2 Kit: WITH SPRING RETURN TO NEUTRAL POSITION AND PIN WITH M8 MALE THREAD FOR DUAL CONTROL
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Type 8IM

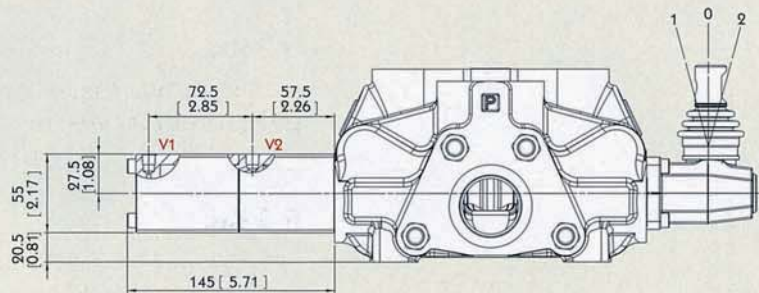
	<p>Operating features :</p> <p>PILOT PRESSURE : MAX. 50 BAR</p> <p>INTERNAL LEAKAGE A(B) -> T : MAX. 6 CM ^3/MIN (100 BAR / 40 °C)</p>	
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SN-8 B Side

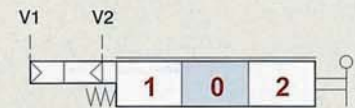
Sectional Directional Control Valves

Type 8P

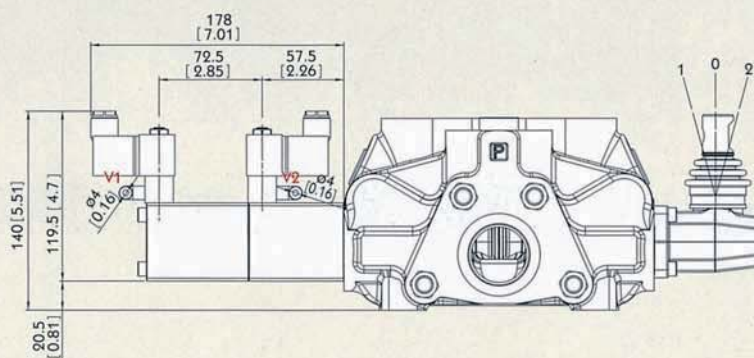
V1 & V2 : NPT 1/8 - 27



Pilot pressure : FROM 7 TO 10 BAR / 101 TO 145 PSI

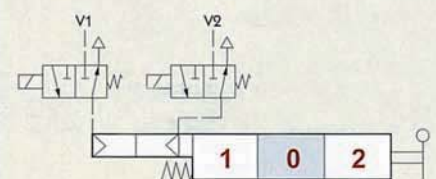


Type 8EP3



Solenoid operating features :

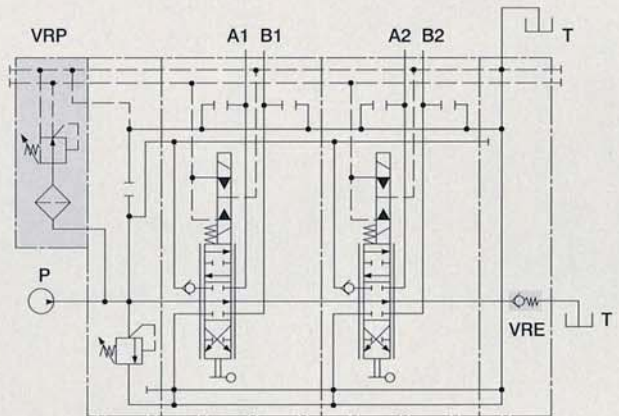
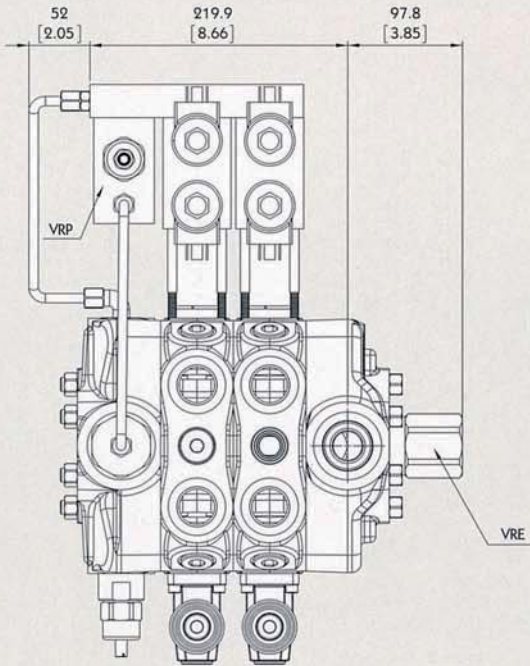
NOMINAL VOLTAGE: 24VDC
 NOMINAL VOLTAGE TOLERANCE: $\pm 10\%$
 POWER RATING: 5W



SN-8 B Side

Sectional Directional Control Valves

Type 8ED3

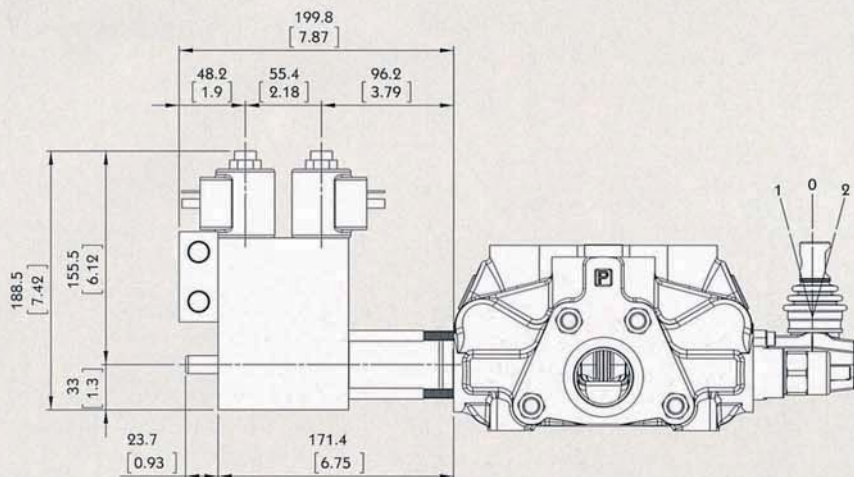


VRP valve operating features :

OUTLET PRESSURE: 25 BAR / 363 PSI

MAX. FLOW: 8 L/MIN / 2.1 US GPM

FLTERING: 80 μ



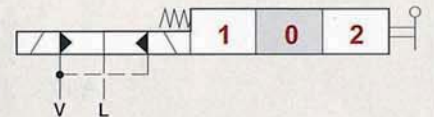
Operating features :

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

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

Solenoid operating features :

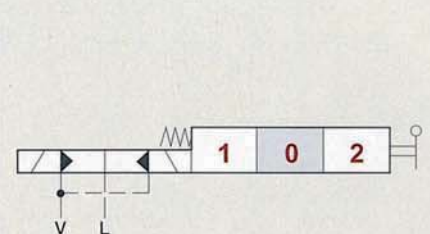
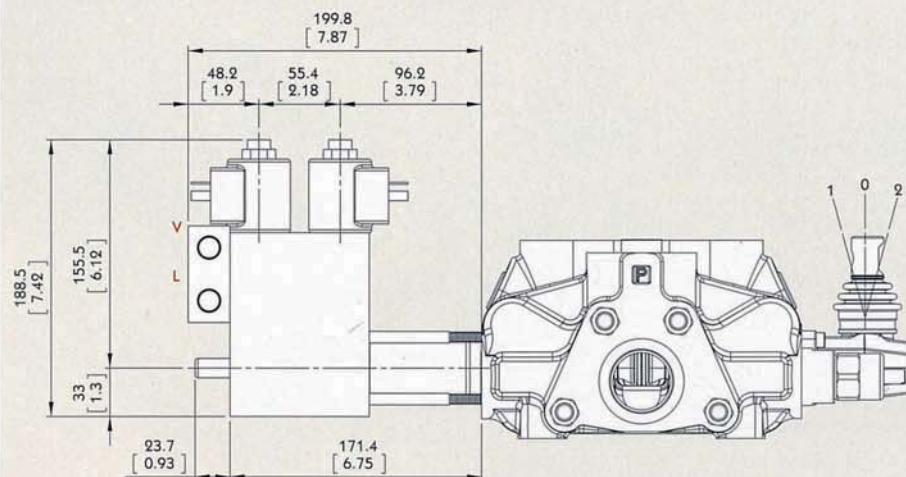
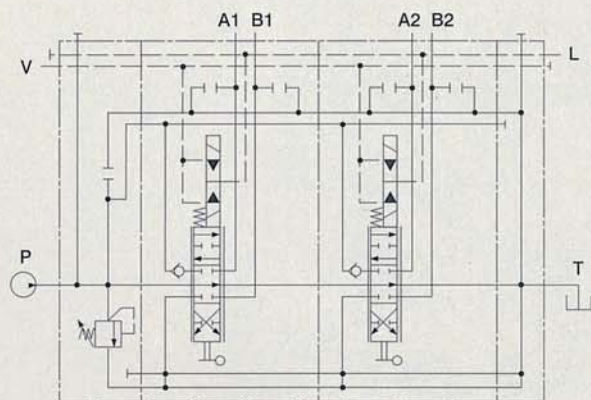
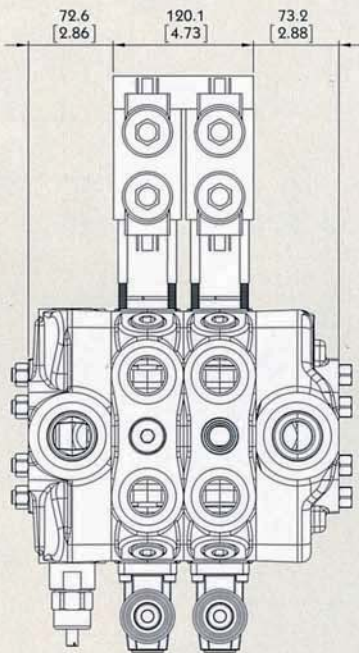
NOMINAL VOLTAGE: 12VDC / 24 VDC
POWER RATING: 21 W
DUTY CYCLE: 100 %



SN-8 B Side

Sectional Directional Control Valves

Type 8ER3



Operating features :

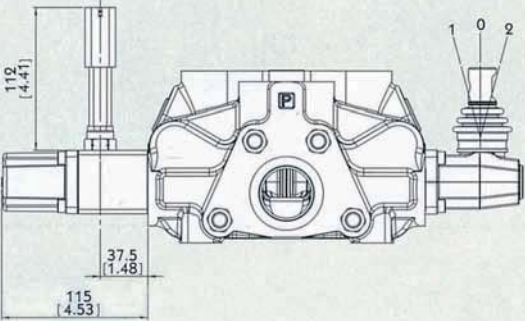



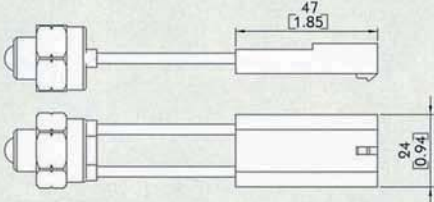
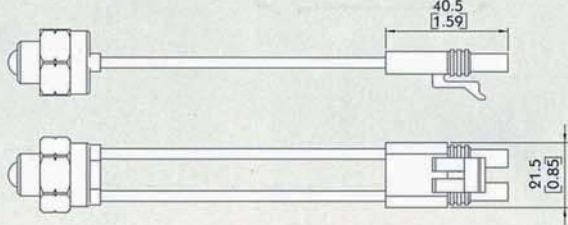
PILOT PRESSURE: • MIN. 10 BAR / 145 PSI
• MAX. 50 BAR / 725 PSI
MAX. BACKPRESSURE ON DRAIN L: 25 BAR / 360PSI

Solenoid operating features :

NOMINAL VOLTAGE: 12VDC / 24 VDC
POWER RATING: 21 W
DUTY CYCLE: 100 %

SN-8 B Side

Sectional Directional Control Valves

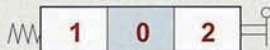
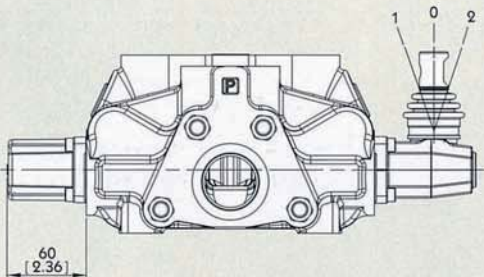
Type 8MG		
 <p>MICROSWITCH Operating features :</p> <p>MECHANICAL LITE: • 5X10⁶ OPERATIONS</p> <p>ELECTRICAL LITE (RESISTIVE LOAD):</p> <ul style="list-style-type: none"> • 10⁶ OPERATIONS - 7A / 13.5 VDC • 5x10⁶ OPERATIONS - 10A / 12 VDC • 5x10⁶ OPERATIONS - 3A / 28 VDC 	 <p>8MG1 Kit: MICROSWITCH WITH MALE/FEMALE CONNECTOR, OPERATED IN POS. 1</p>	
	 <p>8MG2 Kit: MICROSWITCH WITH MALE/FEMALE CONNECTOR, OPERATED IN POS. 2</p>	
	 <p>8MG3 Kit: MICROSWITCH WITH MALE/FEMALE CONNECTOR, OPERATED IN POS. 1 AND POS. 2</p>	
	<p>With NO contact (female connector with male end)</p> 	
	<p>With NC contact (male connector with female end)</p> 	

SN-8 B Side

Sectional Directional Control Valves

SN-8

Type 8



8 Kit:
SPRING RETURN TO NEUTRAL POSITION

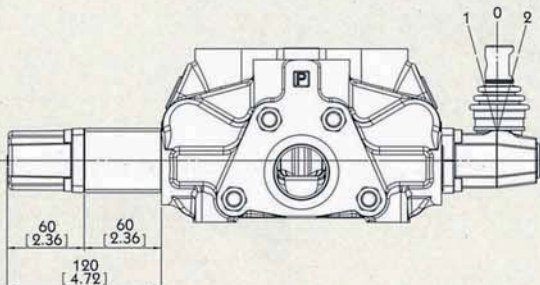


8-1 Kit:
SPRING RETURN TO NEUTRAL POSITION.
(2 POSITIONS)



8-2 Kit:
SPRING RETURN TO NEUTRAL POSITION.
(2 POSITIONS)

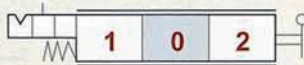
Type 9



9-1 Kit:
DETENT IN POS. 1, 2 WITH SPRING CENTERED



9-2 Kit:
DETENT IN POS. 2 WITH SPRING CENTERED

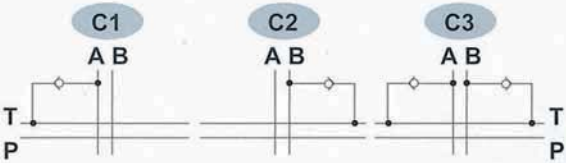
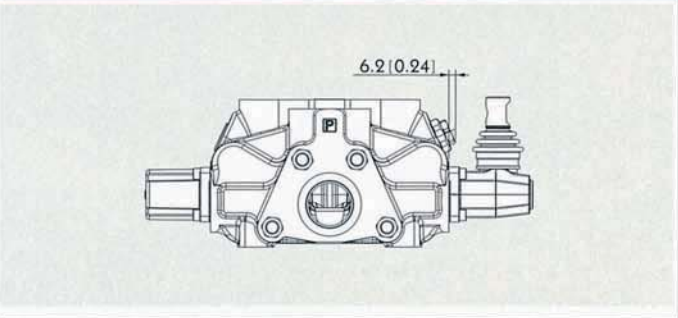


9-3 Kit:
DETENT IN POS. 1 WITH SPRING CENTERED

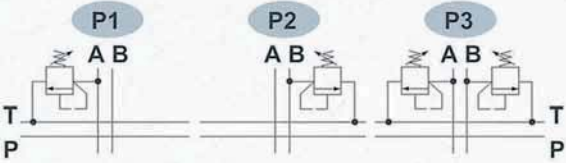
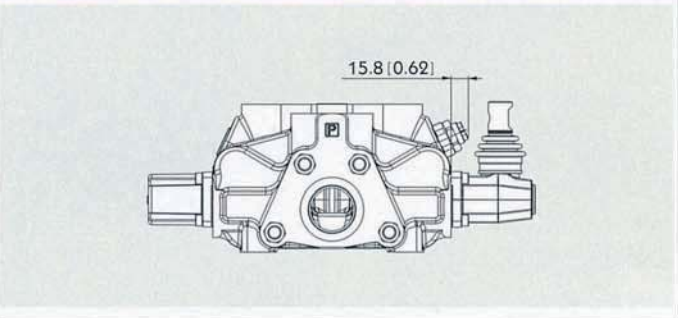
SN-8 Port Relief

Sectional Directional Control Valves

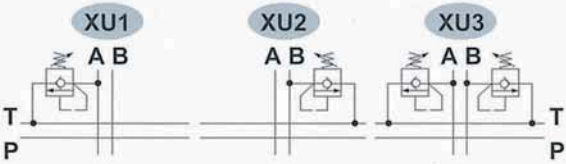
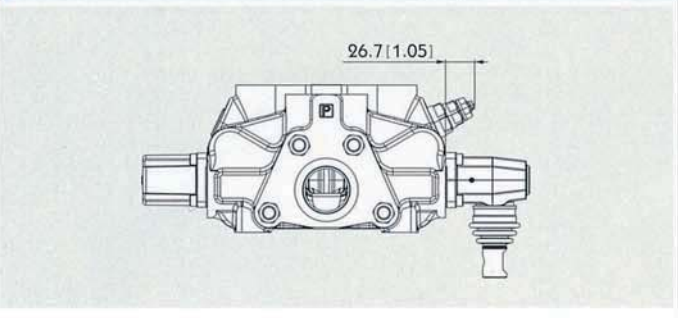
TYPE C



TYPE P



TYPE XU

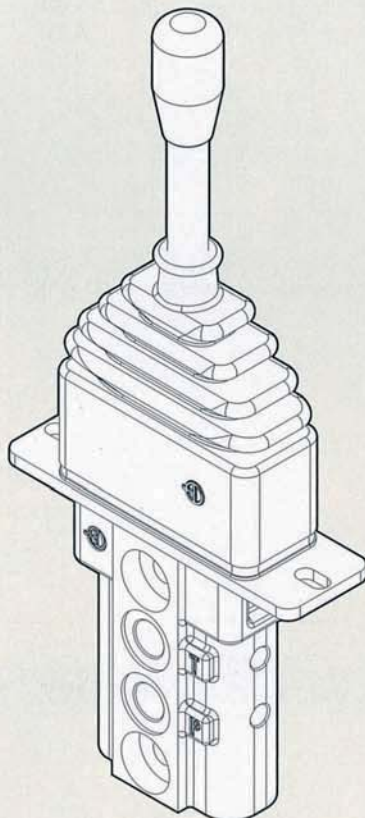


SN-8

SN-8 Accessories

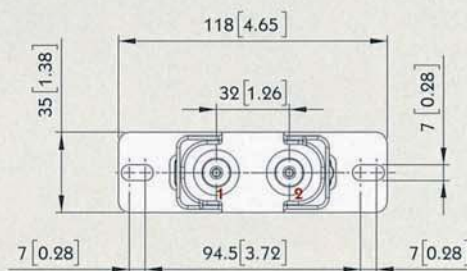
Sectional Directional Control Valves

Type JHP-1

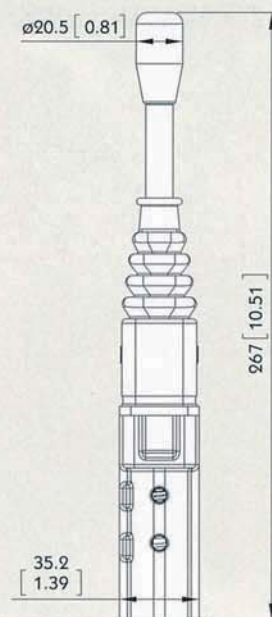
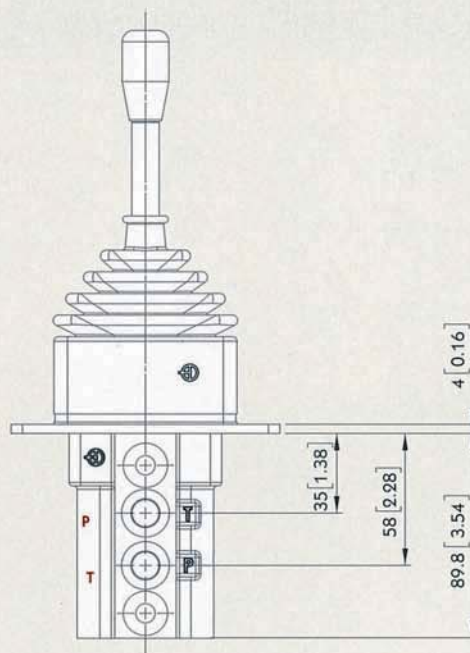
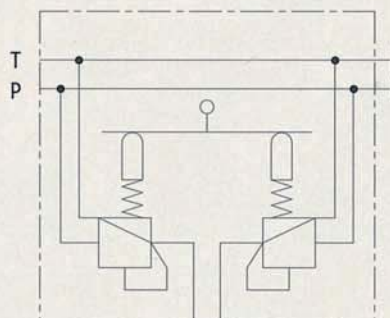


Specifications:

- This data sheet shows technical spec. with mineral oil of 46 mm²/s (cSt) viscosity at 40°C (104°F)
- Flow : 5 ~ 20 LPM
- Feeding pressure : 30 ~ 100 bar
- Max. backpressure : 3 bar
- Internal leakage at 30 bar : 10 ~ 18 cm³/min
- Fluid : mineral oil
- Fluid temperature : - 10 ~ 80°C
- Ambient temperature : - 40 ~ 60°C



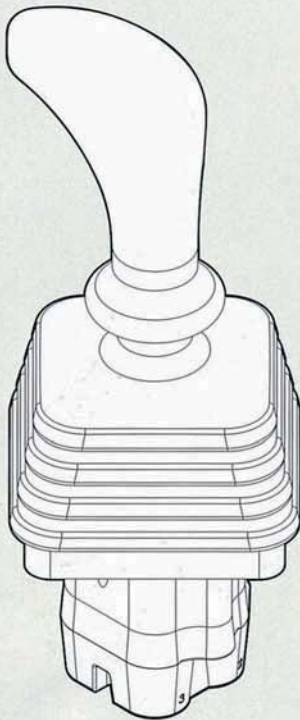
HYDRAULIC SCHEME:



SN-8 Accessories

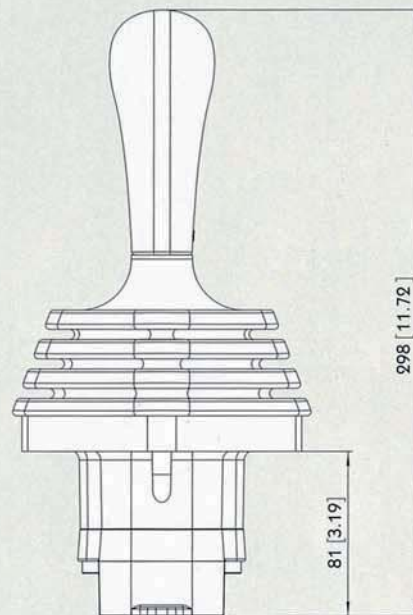
Sectional Directional Control Valves

Type JHP-2

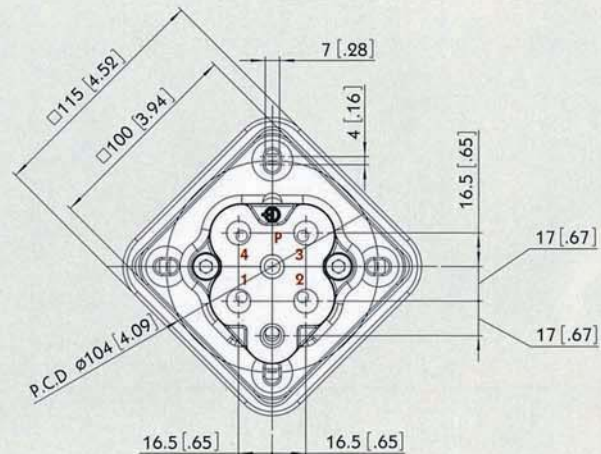
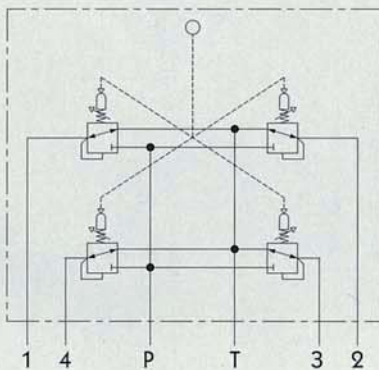


Specifications:

- This data sheet shows technical spec. with mineral oil of 46 mm²/s (cSt) viscosity at 40°C (104°F)
- Flow : 5 ~ 20 LPM
- Feeding pressure : 30 ~ 100 bar
- Max. backpressure : 3 bar
- Internal leakage at 30 bar : 10 ~ 18 cm³/min
- Fluid : mineral oil
- Fluid temperature : - 10 ~ 80°C
- Ambient temperature : - 40 ~ 60°C



HYDRAULIC SCHEME:



SN-8

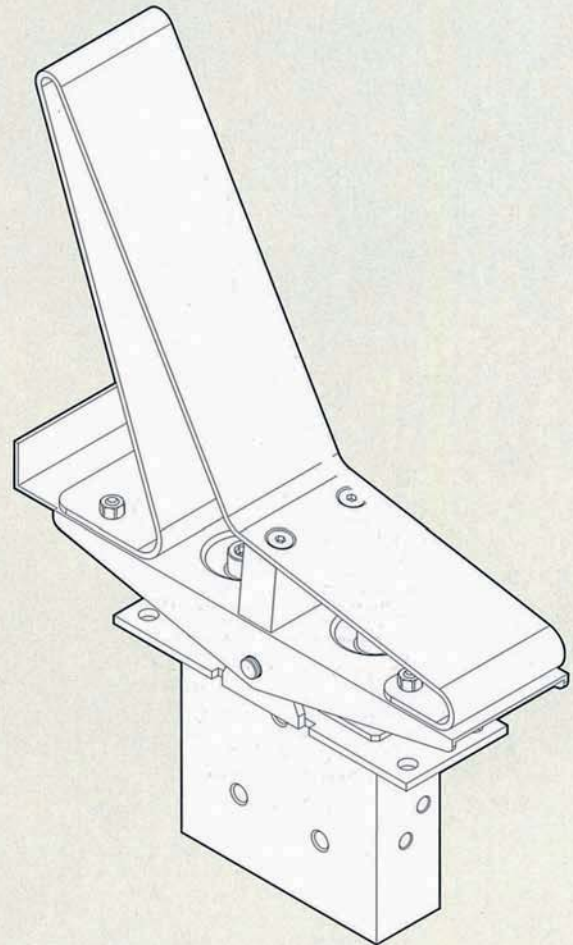
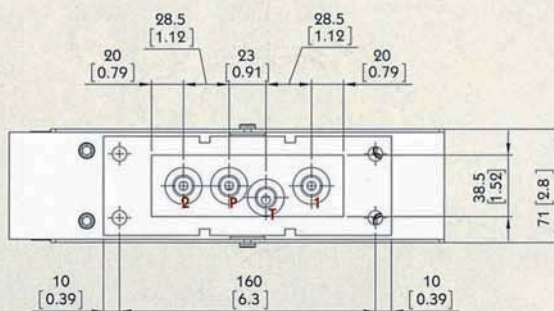
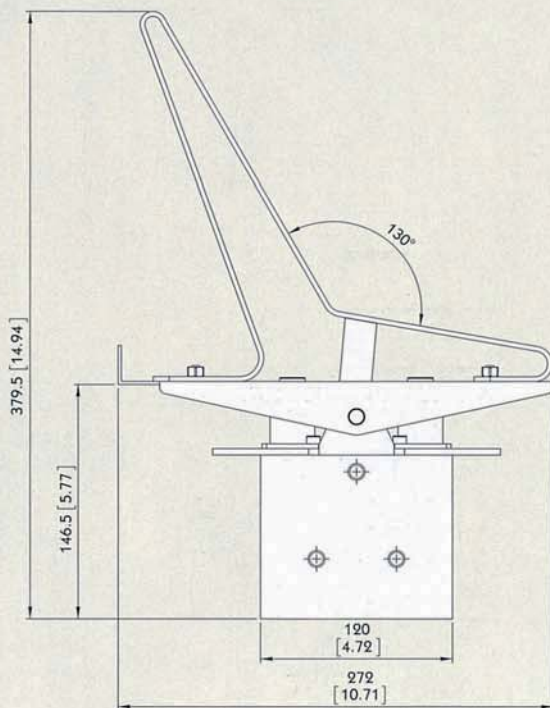
SN-8 Accessories

Sectional Directional Control Valves

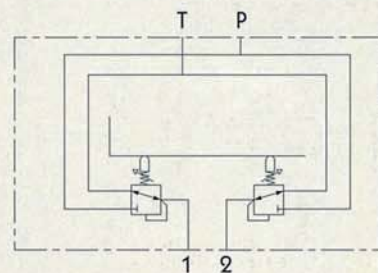
Type PHP-1

Specifications:

- This data sheet shows technical spec. with mineral oil of 46 mm²/s (cSt) viscosity at 40°C (104°F)
- Flow : 5 ~ 20 LPM
- Feeding pressure : 30 ~ 100 bar
- Max. backpressure : 3 bar
- Internal leakage at 30 bar : 10 ~ 18 cm³/min
- Fluid : mineral oil
- Fluid temperature : - 10 ~ 80°C
- Ambient temperature : - 40 ~ 60°C



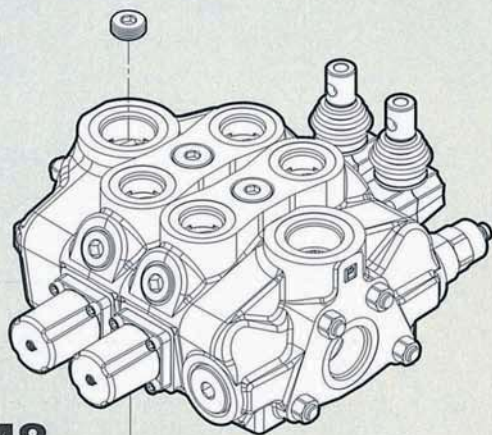
HYDRAULIC SCHEME:



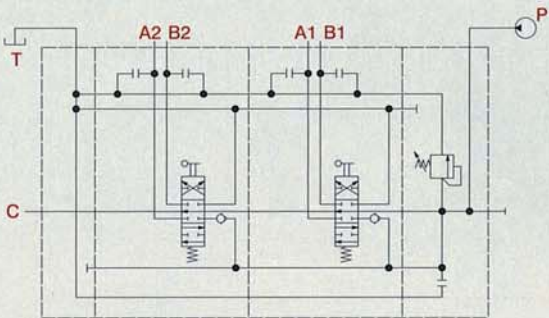
SN-8 Outlet

Sectional Directional Control Valves

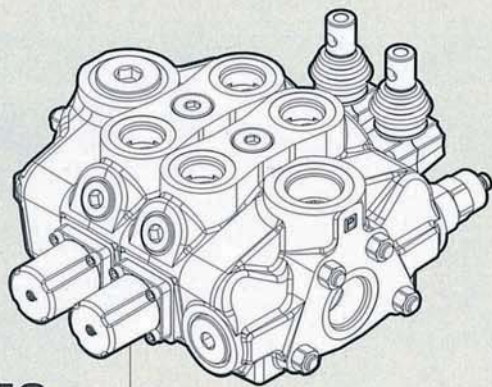
Power Beyond Conversion plug
(Closed center plug)



M8



SN-8



M3

