



45L GM

GMS

hydraulic

Specifications

Spool: 1,2,3,4,5,6 / Double - Single - Closed Center- Motor- Floating - Regenerative Spool

Liter: 45L Nominal - 65L Max

Ports: 3/8 Standard- 1/2-M18x1,5 Optional

Front Cap: Handle - Mechanical Joystick- Hydraulic Joystick- Remote Cable Control - Lock Handle

End Cap: Spring - Detent- Floating - Wood Splitter - Pneumatic - Proportional Coil - Hydraulic Control-Electro Hydraulic-Remote Cable Control

Open Center / Carry over / Parallel Circuit

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45L GM

GM Series

Valve general informations

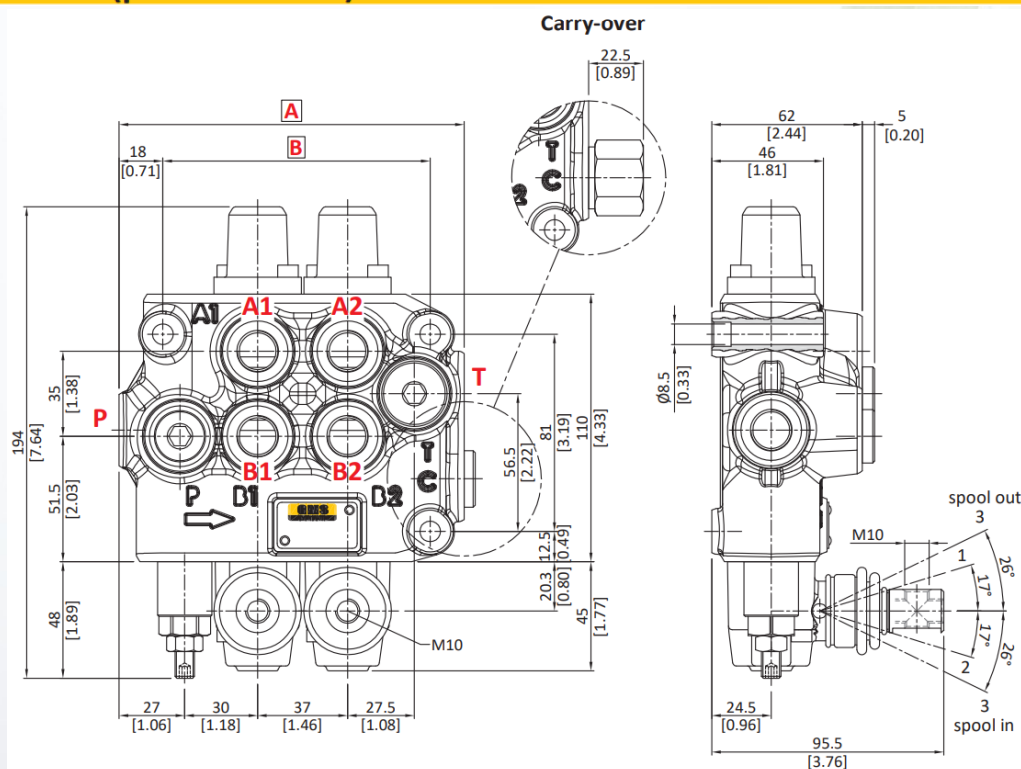
Working conditions

This catalogue shows technical specifications and diagrams measured with mineral oil of 46 mm²/s – 46cSt viscosity at 40°C temperature.

Nominal flow rating	45 l/min.		
Max. flow	65 l		
Operating pressure (max.)	315 bar		4600 psi
Max. back pressure	on outlet port T	20 bar	290 psi
Internal leakage A(B)→T	Δp=100 bar – 1450psi with fluid and valve at 40°C		3cm ³ /min. 0.18 in ³ /min.
Hydraulic fluid	Mineral base oil		
Fluid temperature	with NBR seals	from - 20° to 80°C	
	with FPM (VITON) seals	from - 20° to 100°C	
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
Max. level of contamination	19/16 – ISO 4406		

Dimensional data (parallel circuit)

Directional valve with left inlet



TYPE	A		B		Weight	
	mm	in	mm	in	kg	lb
45L GM 08/1-P	105	4.13	73	2.87	3.1	6.83
45L GM 08/2-P	142	5.60	110	4.33	4.4	9.70
45L GM 08/3-P	179	7.05	147	5.79	5.7	12.57

TYPE	A		B		Weight	
	mm	in	mm	in	kg	lb
45L GM 08/4-P	216	8.50	184	7.24	7.2	15.87
45L GM 08/5-P	253	9.96	221	8.70	8.7	19.18
45L GM 08/6-P	290	11.42	258	10.16	10.2	22.49

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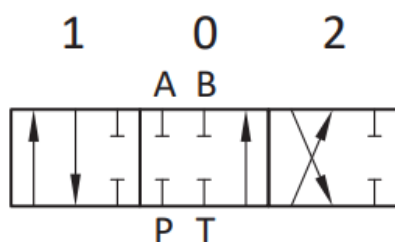
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Type 1 (30 01 3501)

Standard



+ 6 mm / 0.24 in

(1) ►

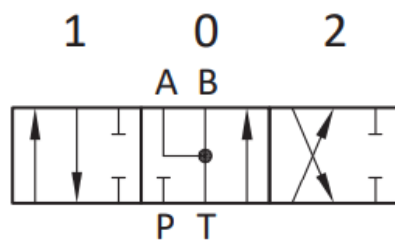
◄ ► (0)

◄ (2)

- 6 mm / 0.24 in

Type 2 (30 01 3503)

Motor spool



+ 6 mm / 0.24 in

(1) ►

◄ ► (0)

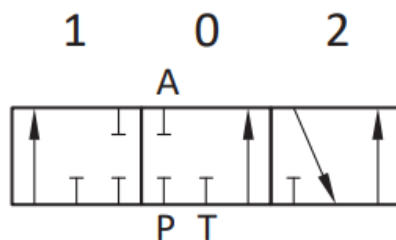
◄ (2)

- 6 mm / 0.24 in

Type 3 (30 01 3507)

Single action

For 8T kit



+ 4.2 mm / 0.17 in

(1) ►

◄ ► (0)

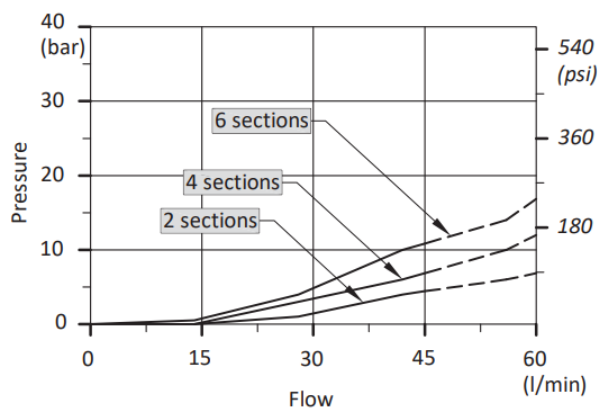
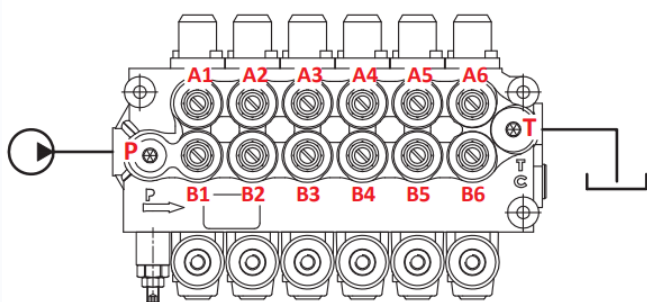
◄ (2)

- 4.2 mm / 0.17 in

Performance data (pressure drop vs. flow)

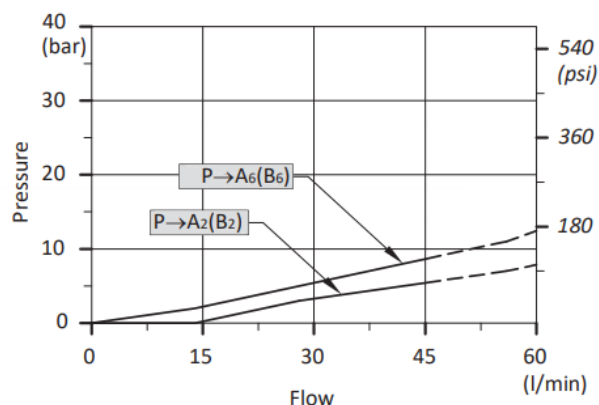
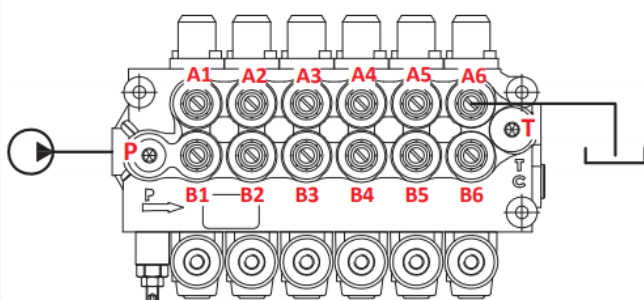
Open centre

From side inlet to side outlet.



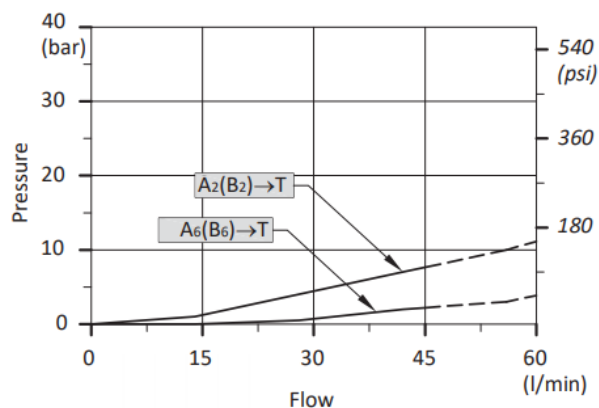
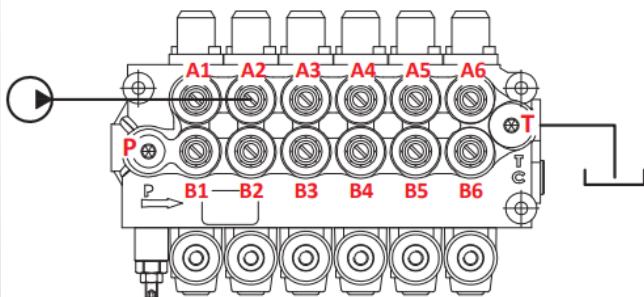
Inlet to work port

From side inlet to A port (spool in position 1) or B port (spool in position 2).



Work port to outlet

From A port (spool in position 2) or B port (spool in position 1) to side outlet.



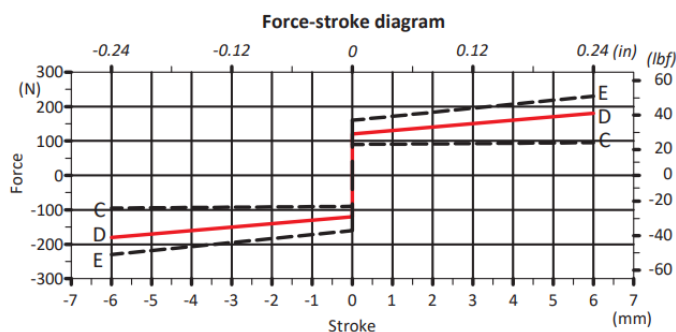
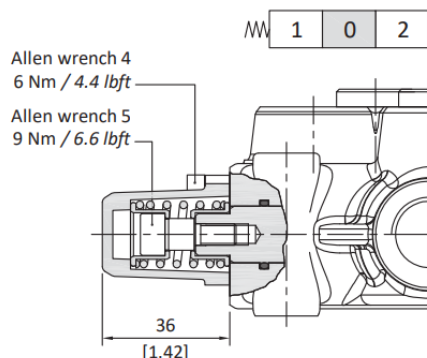
Directional valve with left inlet

"A" side spool positioners

With spring return in neutral position

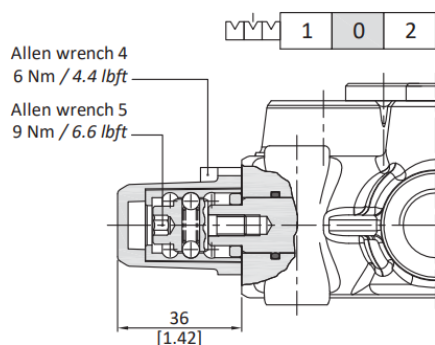
8 kit (30 07 5300)

It's supplied with standard spring type D (see force-stroke diagram) and available with lighter spring type C (8MC) or heavier type E (8ME).



With detent

11 kit (30 07 5303)

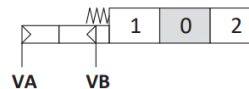
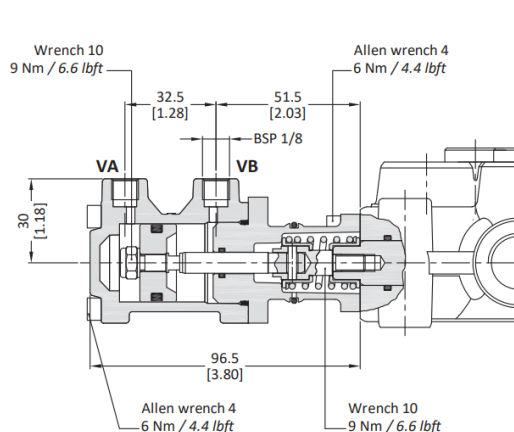


Operating features

Locking and release force : 120 N / 27 lbf $\pm 10\%$

ON/OFF pneumatic kit type 8P (30 07 5329)

With spring return to neutral position.



Operating features

Pilot pressure : min. 5.5 bar / 80 psi
: max. 10 bar / 145 psi

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Directional valve with left inlet

"A" side spool positioners

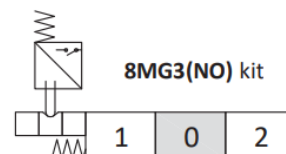
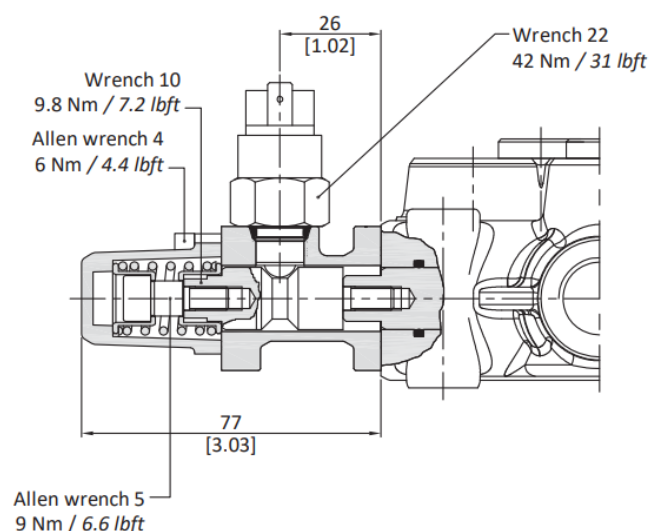
With microswitch type 8MG3(NO) (30 07 5319)

With spring return in neutral position and microswitch operated in both directions.

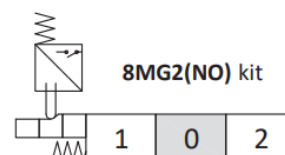
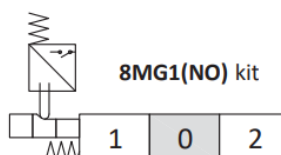
Also available **8MG1(NO)** configuration (microswitch operated in position 1) and **8MG2(NO)** configuration (microswitch operated in position 2); dimensions are the same of **8MG3(NO)** configuration.

Same configurations are available with normally closed (NC) contact.

For more information contact Sales Department.



Other configurations



Operating features

MICROSWITCH

Mechanical life

: 5×10^5 operations

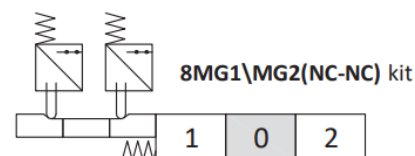
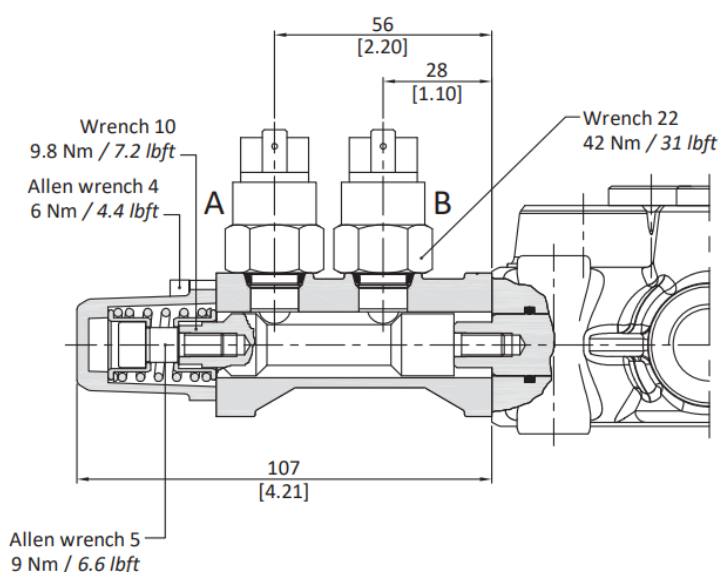
Electrical life (resistive load)

: 5×10^4 operations 10A / 12VDC

: 5×10^4 operations 3A / 24VDC

Type 8MG1\MG2(NC-NC) (30 07 5326)

With double microswitch in position 1 and 2.



Positions	A	B
1		
0		
2		

Operating features

MICROSWITCH

Mechanical life

: 5×10^5 operations

Electrical life (resistive load)

: 5×10^4 operations 10A / 12VDC

: 5×10^4 operations 3A / 24VDC

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Directional valve with left inlet

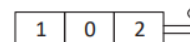
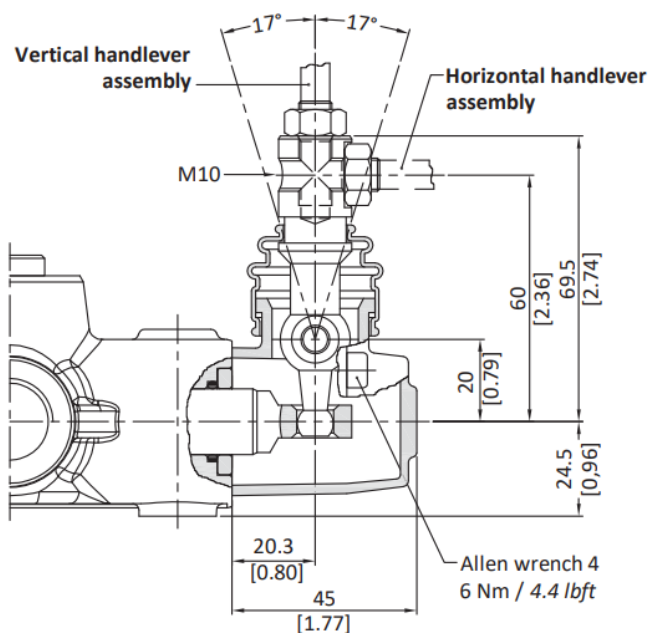
"B" side options

Lever control

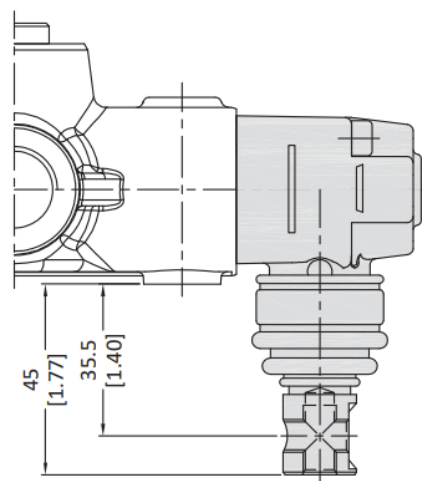
Type L (30 07 5335)

Type L180 (30 07 5336)

Alluminium with protection boot lever pivot box; it can be rotated 180° (execution LM10180).



Execution L180



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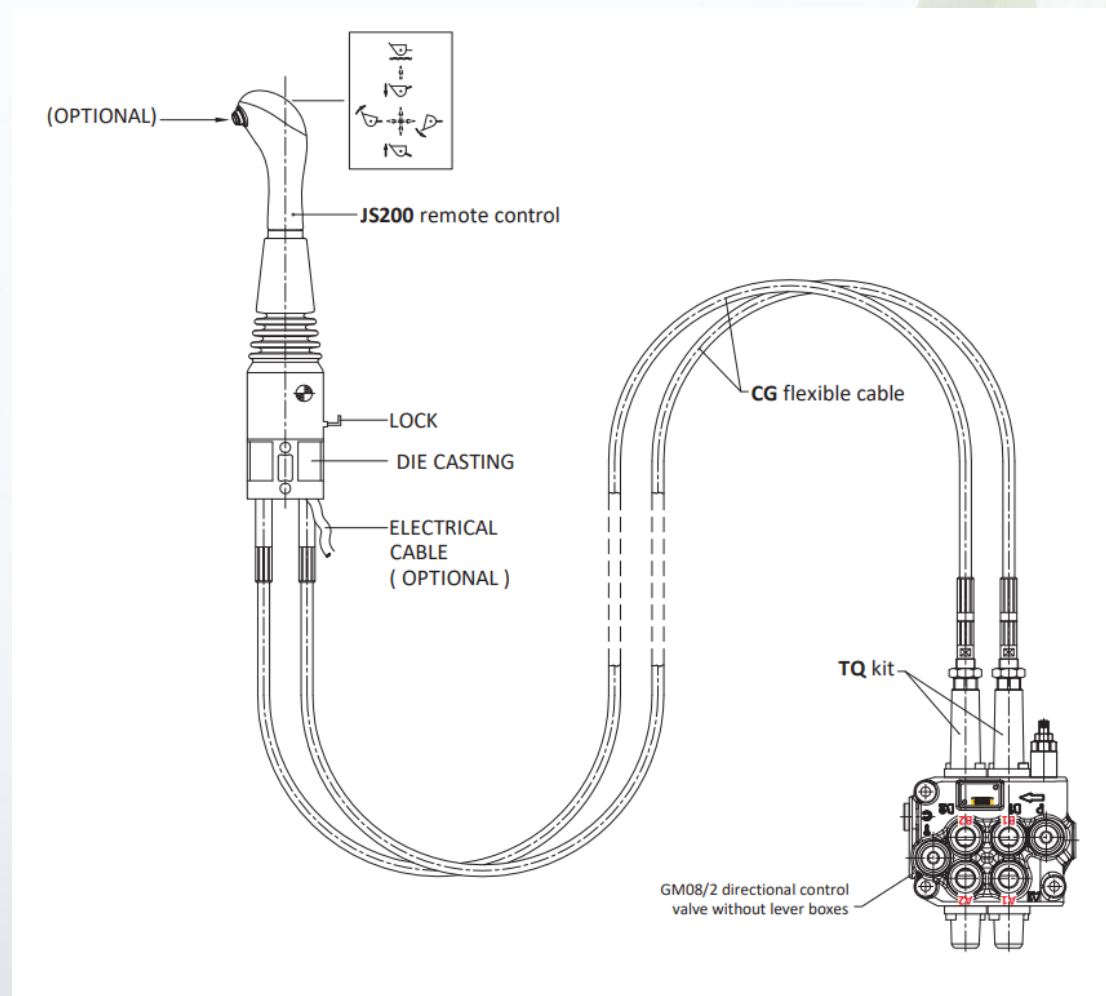
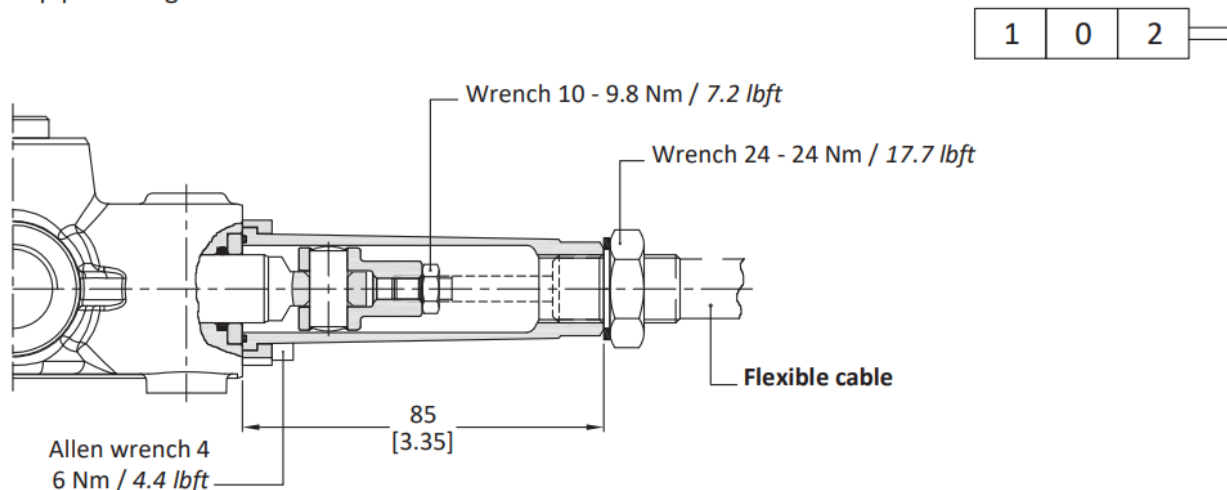
GM Series

Directional valve with left inlet

"B" side options

TQ cable remote control kit

Waterproof cap prearranged for remote control with flexible cable.



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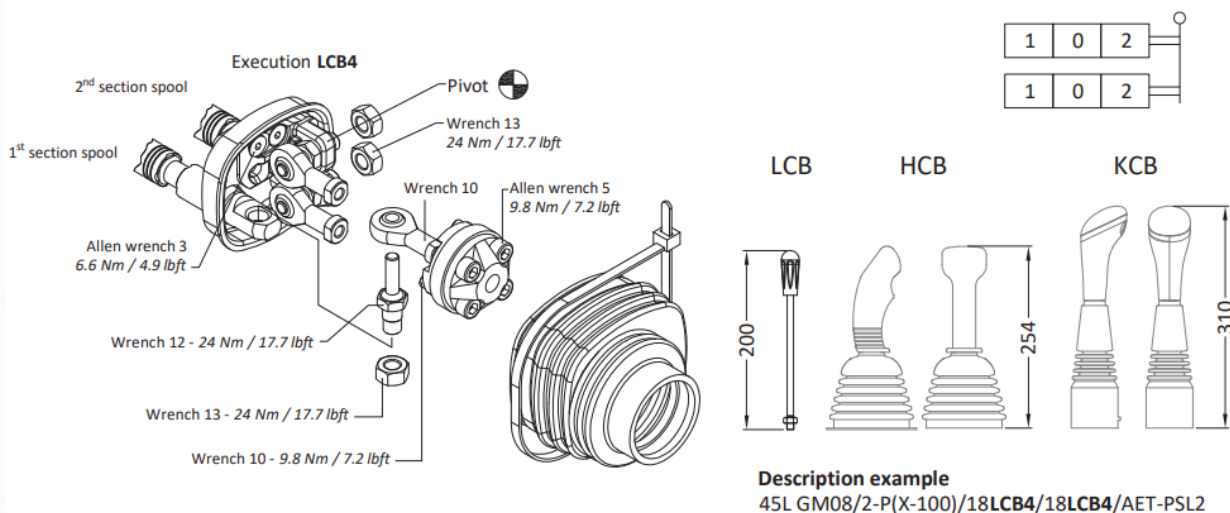
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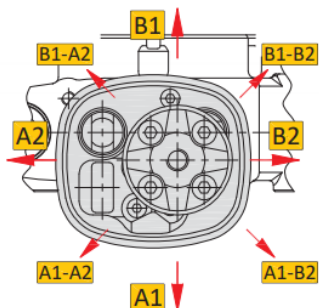
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LCB mechanical joystick for two sections control (30 07 5426)

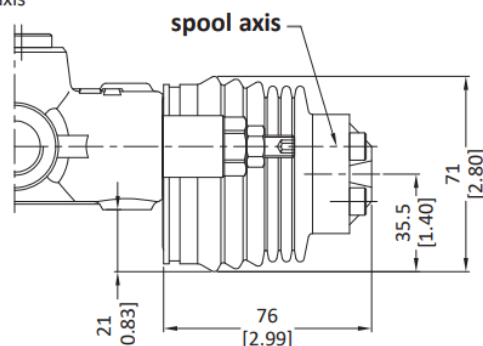
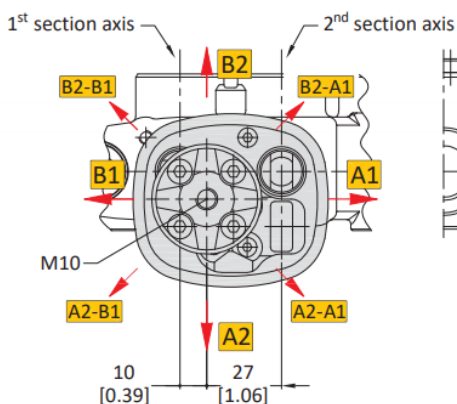


Dimensions and movement scheme

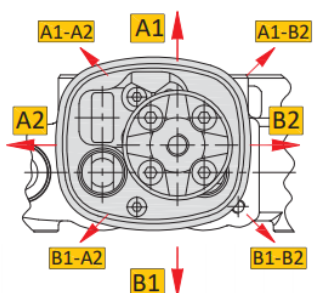
Execution LCB1
pivot placed down on the left



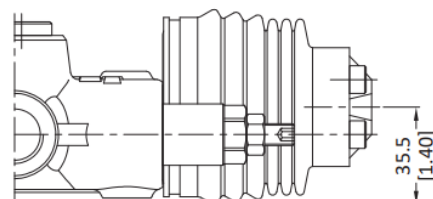
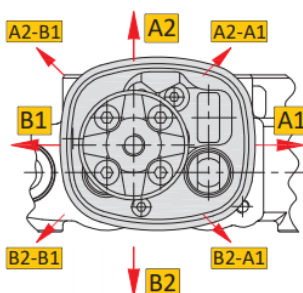
Execution LCB2
pivot placed down on the right



Execution LCB3
pivot placed above on the left



Execution LCB4
pivot placed above on the right



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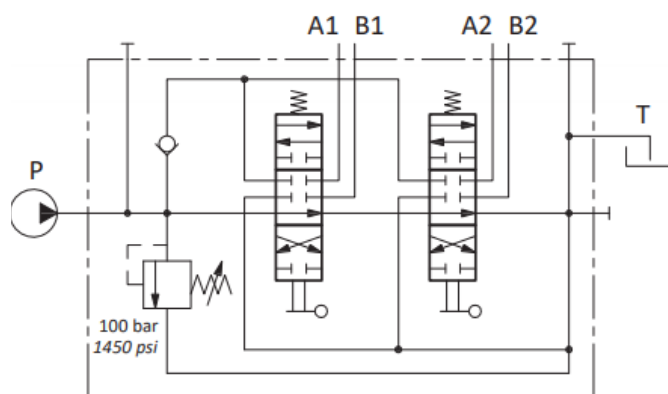
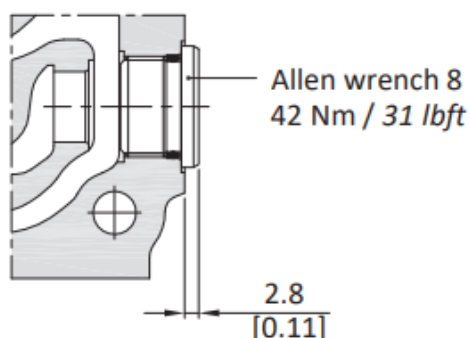
GM Series

Directional valve with left inlet

Outlet port options

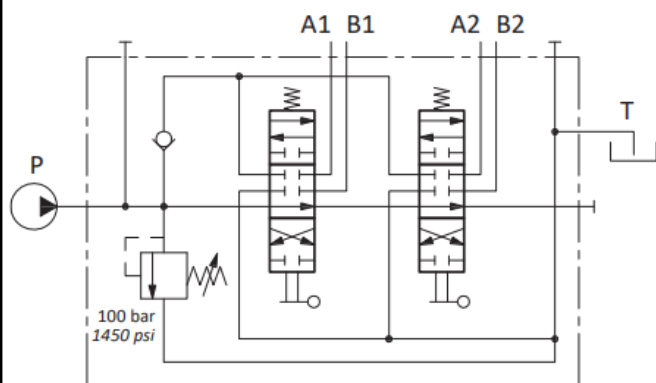
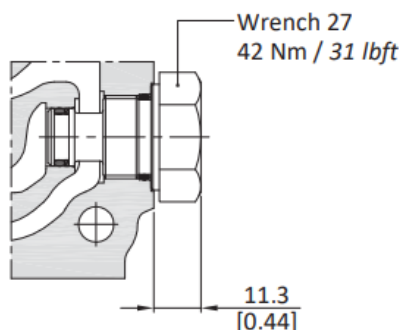
It's possible to have open centre, closed centre and carry-over.

AET: open centre (standard)



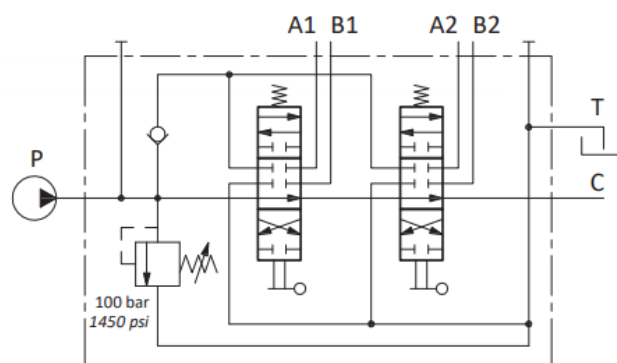
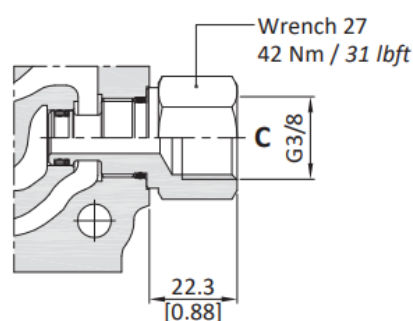
Description example
45L GM08/2-P(X-100)/18L/18L/AET-PSL2

AEK: closed centre



Description example
45L GM08/2-P(X-100)/18L/18L/AEK-PSL2

AE: with carry-over



Description example
45L GM08/2-P(X-100)/18L/18L/AE-PSL2

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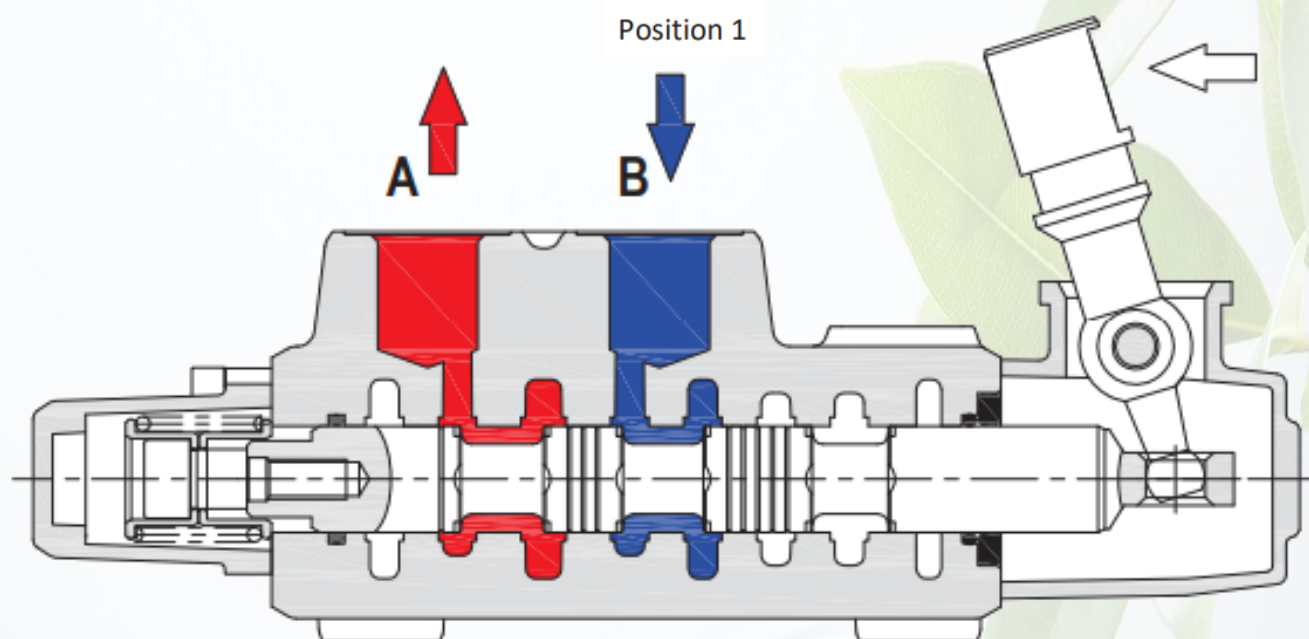
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GM Series

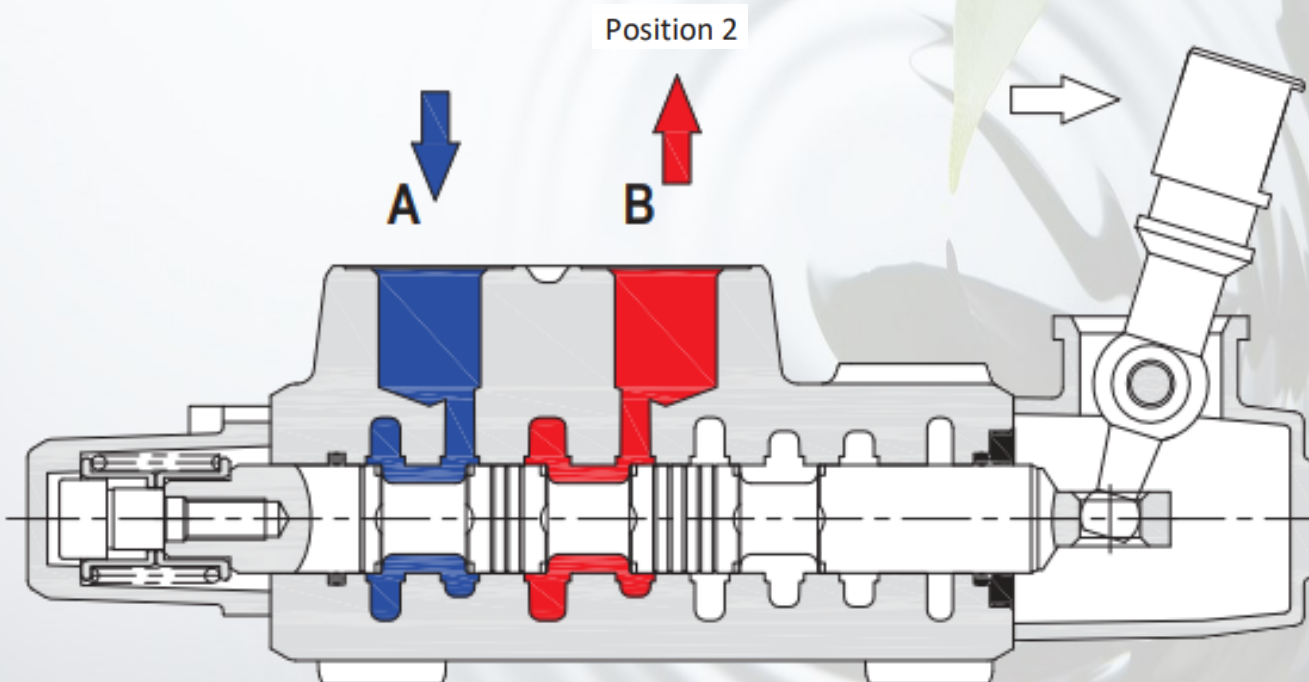
Technical Information

Sectional drawing

When hand lever pushed (spool out position) P to A port. B to T port.



When hand lever pulled (spool in position) P to B port. A to T port.



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Ordering codes

Electric Control

Directional valve with right inlet

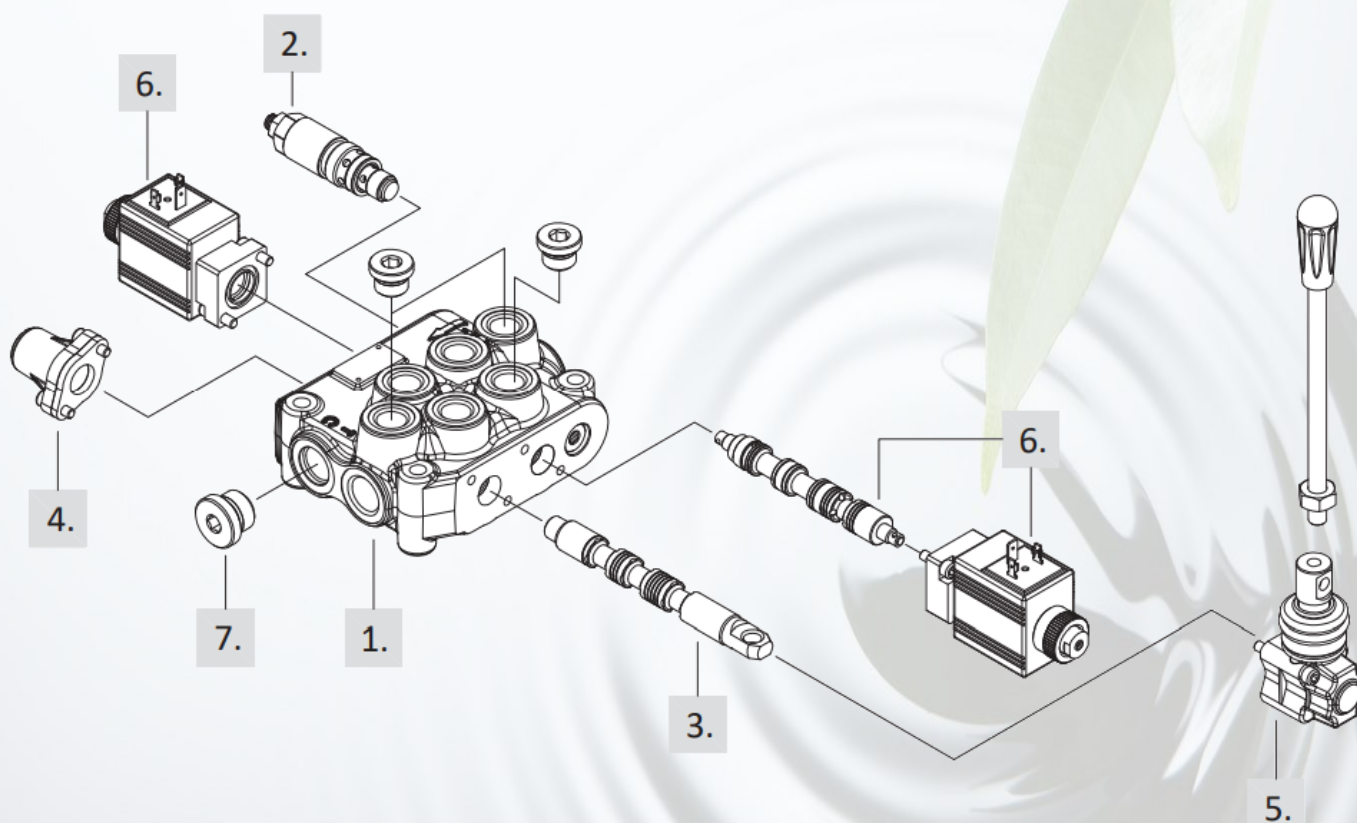
Description example:

45L GM08 / 2 - P (X - 100) / ED - 1 8 L / ED - 18ES3 / AET - PSL2

1. 2. 3. 4. 5. 6. 7. 8.

1st section following section

Valve setting (bar)



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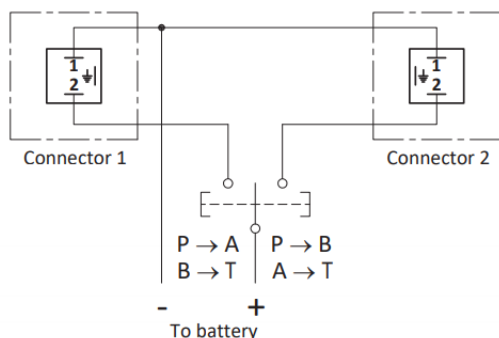
GM Series

Complete controls

Directional valve with left inlet

8ES solenoid control

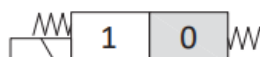
Electric wiring example



8ES3 kit
double acting



8ES1 kit
single acting on A



8ES2 kit
single acting on B



Operating features

CONTROL

Internal leakage A(B)→T

($\Delta p = 100 \text{ bar} - 1450 \text{ psi} / T = 40^\circ\text{C}$) : max. $15 \text{ cm}^3/\text{min} - 0.91 \text{ in}^3/\text{min}$

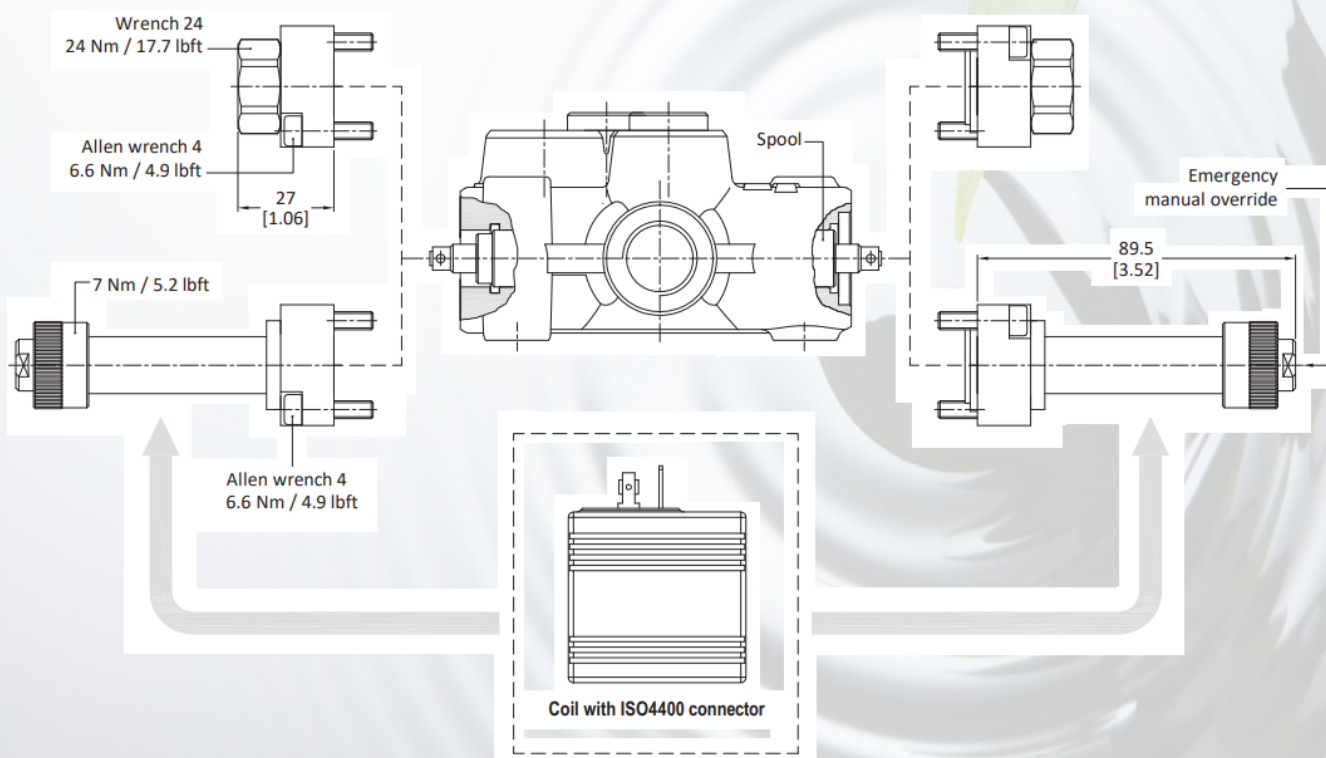
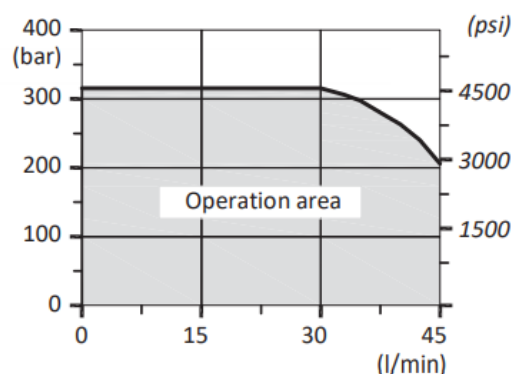
COIL

Nominal voltage tolerance : $\pm 10\%$

Power rating : 36 W

Coil insulation : class H

Duty cycle : 100%



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