

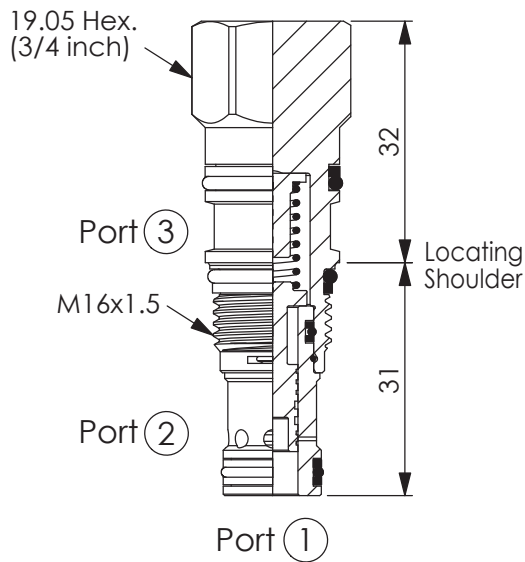


ZAWORY LOGICZNE

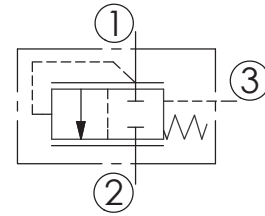
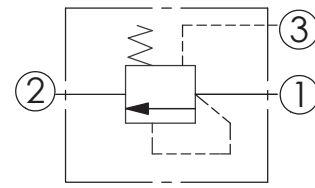
LOGIC ELEMENTS

(Normally Closed Modulating Element)

Ordering Code: **LR-163A-X-Y-Z**

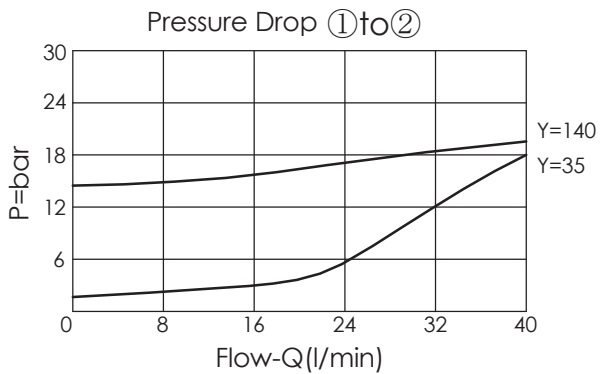


UNIT:mm



TECHNICAL DATA

Max. pressure:	350	bar
Rated flow:	30	l/min
Cavity-Tooling:	163A-3	
Installation torque:	27-33	Nm
Weight:	0.09	kg



X

OPERATION

30

External Pilot
(bypass compensator)

Y

SPRINGS

Cracking pressure

35 3.5 bar

70 7.0 bar

140 14.0 bar

Z

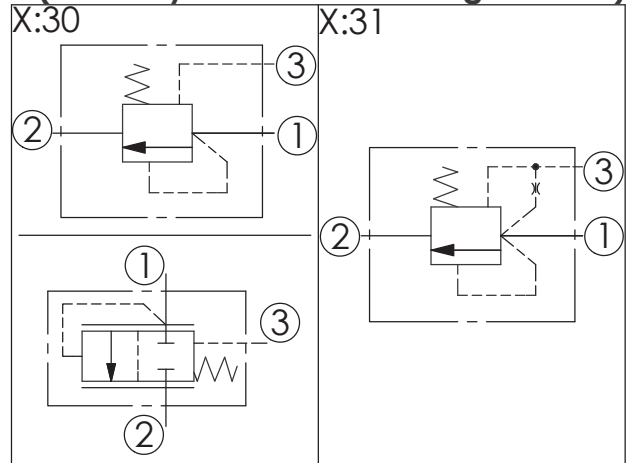
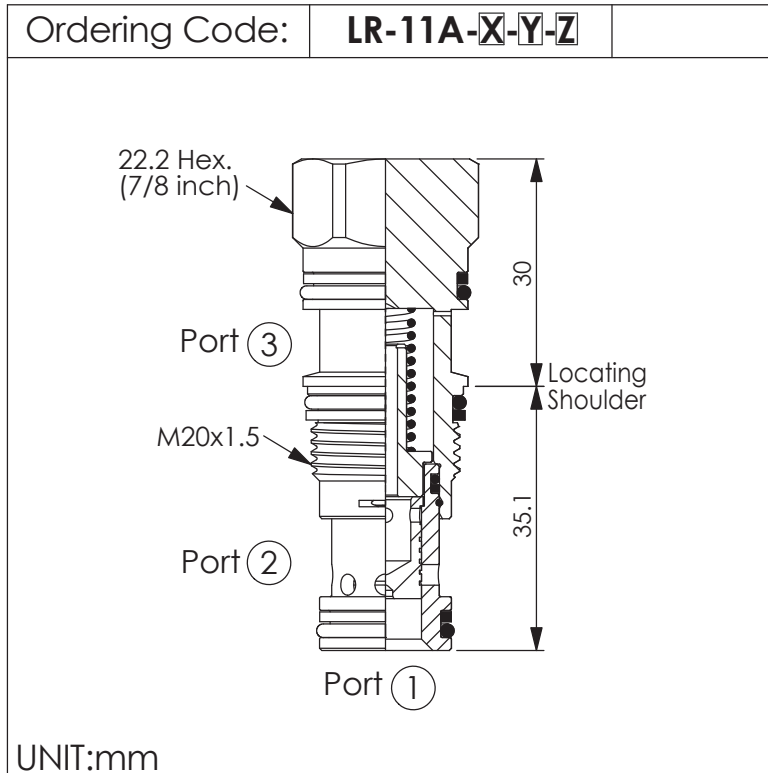
OPTION

N

Non-adjustable

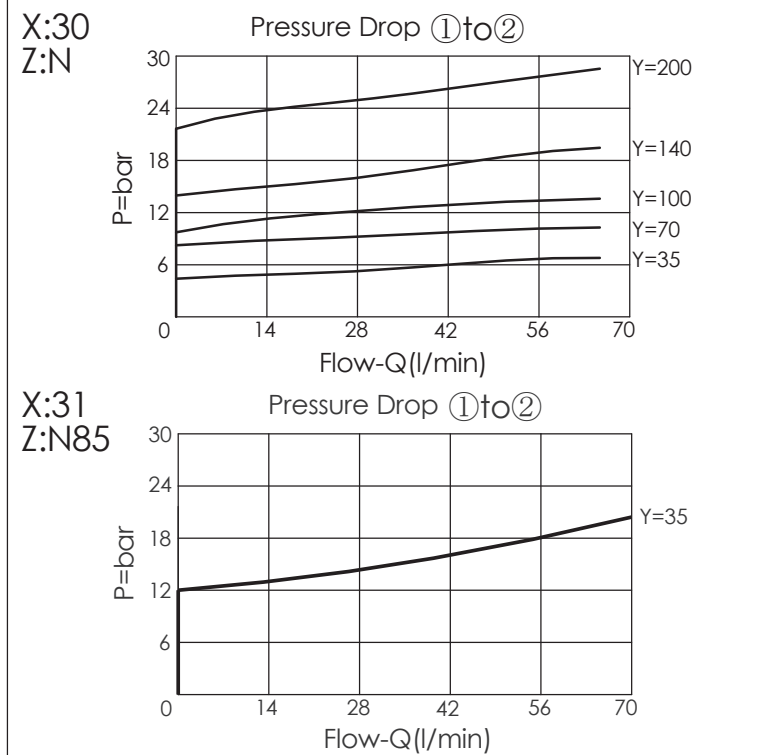
LOGIC ELEMENTS

(Normally Closed Modulating Element)



TECHNICAL DATA

Max. pressure:	350	bar
Rated flow:	60	l/min
Cavity-Tooling:	11A-3	
Installation torque:	40-50	Nm
Weight:	0.12	kg



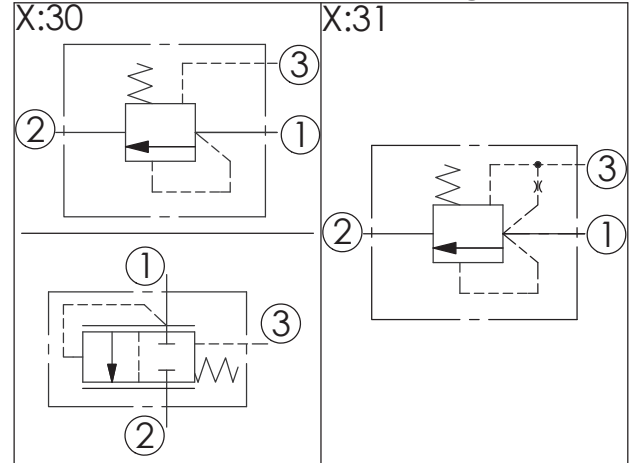
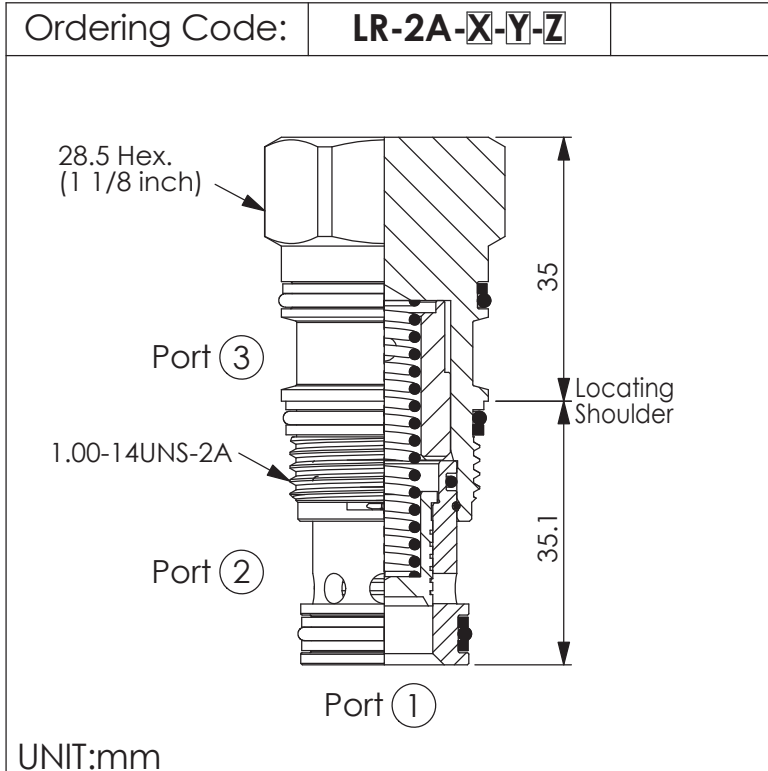
X	OPERATION	
30	External Pilot (bypass compensator)	+\$ 0.00
31	Internal Pilot (Port 1 to Port3) (mainstage relief element)	+\$ 3.70

Y	SPRINGS	
	Cracking pressure	
10	1.0 bar (Only X=31)	
35	3.5 bar	
70	7.0 bar	
100	10.0 bar	
140	14.0 bar	
200	20.0 bar	

Z	OPTION	
N	Non-adjustable	
N85	Fast-acting	

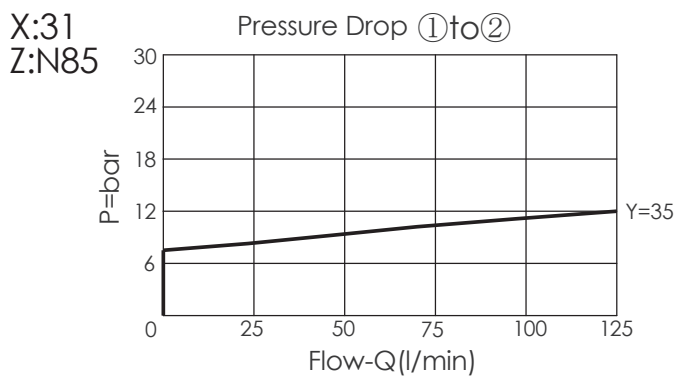
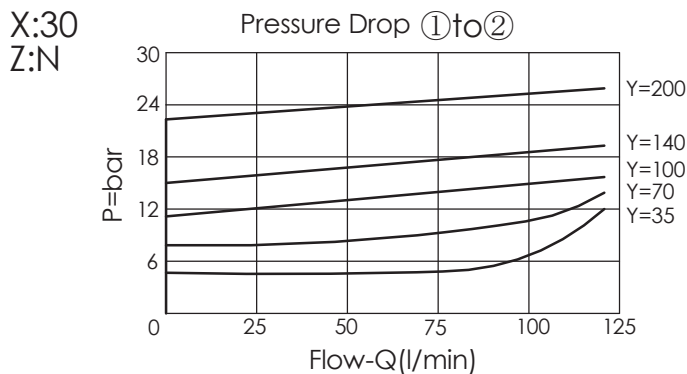
LOGIC ELEMENTS

(Normally Closed Modulating Element)



TECHNICAL DATA

Max. pressure:	350	bar
Rated flow:	120	l/min
Cavity-Tooling:	2A-3	
Installation torque:	60-70	Nm
Weight:	0.22	kg

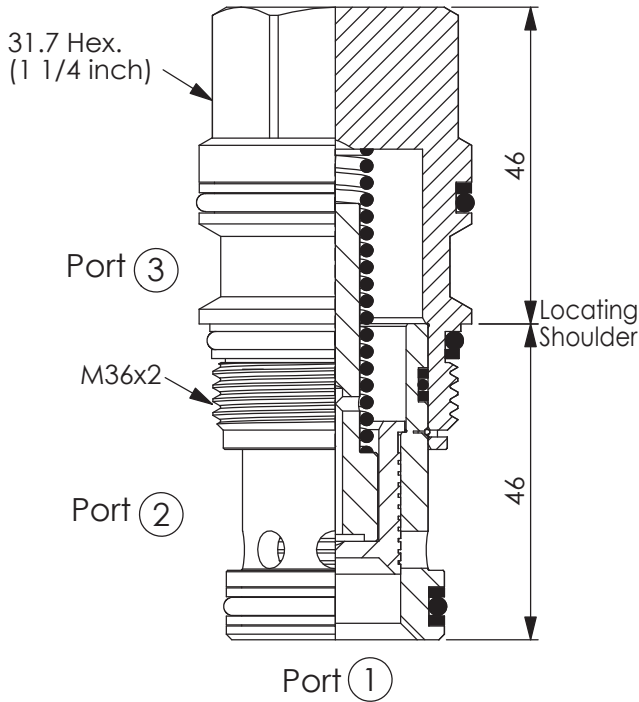


X	OPERATION	
30	External Pilot (bypass compensator)	
31	Internal Pilot (Port 1 to Port 3) (mainstage relief element)	

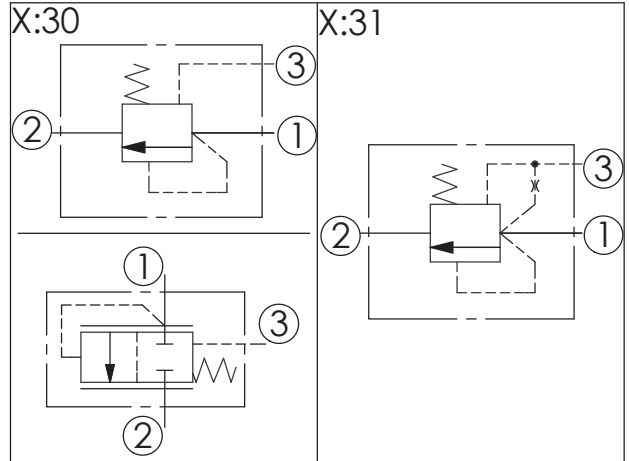
Y	SPRINGS	
	Cracking pressure	
10	1.0 bar	(Only X=31)
35	3.5 bar	
70	7.0 bar	
100	10.0 bar	
140	14.0 bar	
200	20.0 bar	

Z	OPTION	
N	Non-adjustable	
N85	Fast-acting	

Ordering Code: **LR-17A-X-Y-Z**



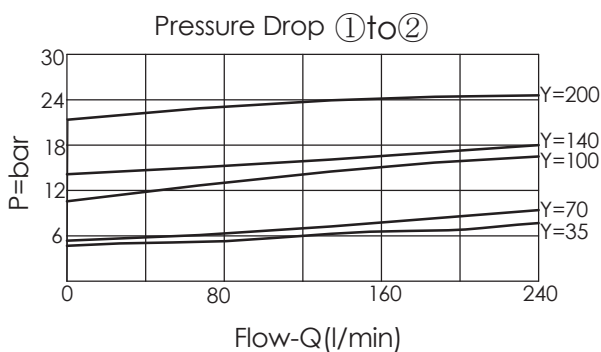
UNIT:mm



TECHNICAL DATA

Max. pressure:	350	bar
Rated flow:	240	l/min
Cavity-Tooling:	17A-3	
Installation torque:	200-215	Nm
Weight:	0.49	kg

X:30



X OPERATION

30 External Pilot
(bypass compensator)

31 Internal Pilot
(Port 1 to Port3)
(mainstage relief element)

Y SPRINGS

Cracking pressure

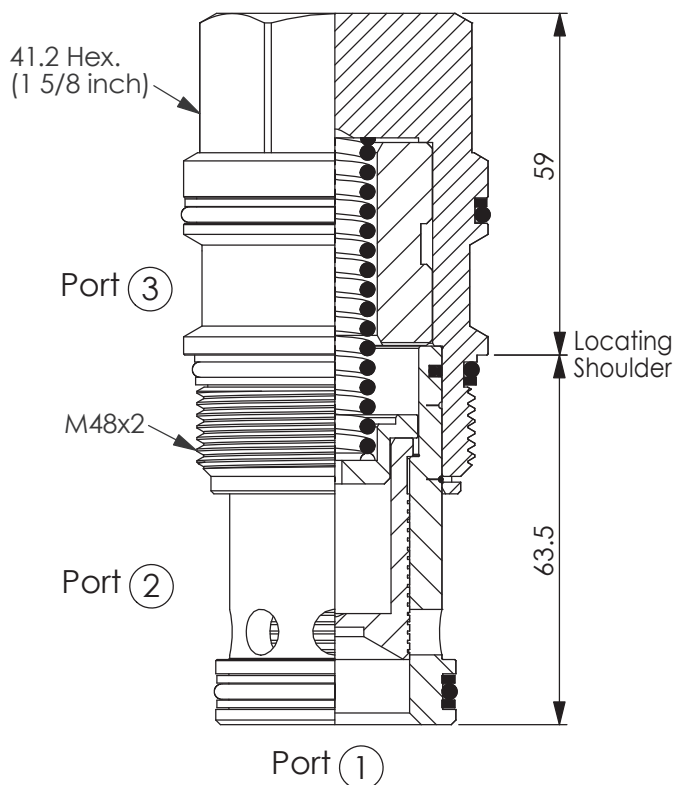
Y	Cracking pressure
10	1.0 bar (Only X=31)
35	3.5 bar
70	7.0 bar
100	10.0 bar
140	14.0 bar
200	20.0 bar

Z OPTION

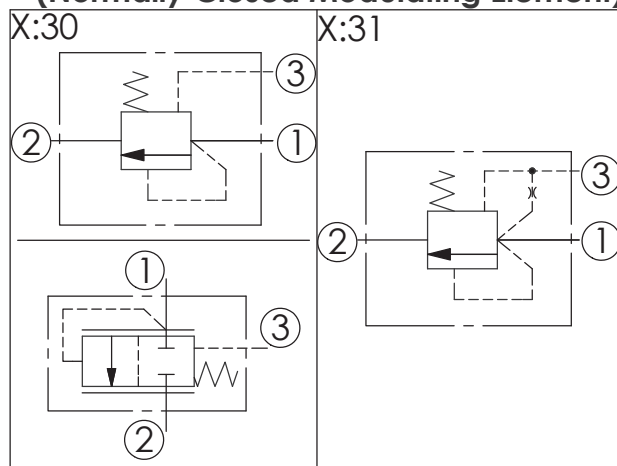
N Non-adjustable

(Normally Closed Modulating Element)

Ordering Code: **LR-19A-X-Y-Z**



UNIT:mm



TECHNICAL DATA

Max. pressure:	350	bar
Rated flow:	480	l/min
Cavity-Tooling:	19A-3	
Installation torque:	465-500	Nm
Weight:	1.19	kg

X

OPERATION

30

External Pilot
(bypass compensator)

31

Internal Pilot
(Port 1 to Port3)
(mainstage relief element)

Y

SPRINGS

Cracking pressure

10 1.0 bar (Only X=31)

35 3.5 bar

70 7.0 bar

100 10.0 bar

140 14.0 bar

200 20.0 bar

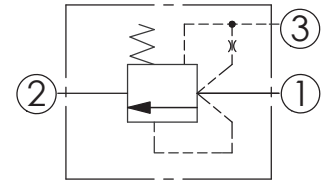
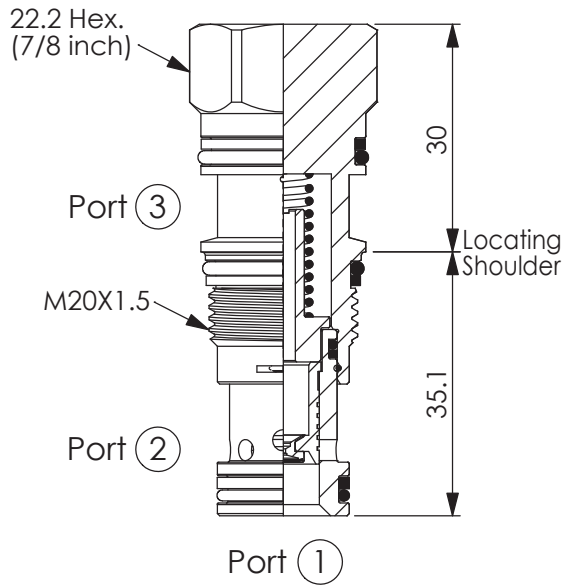
Z

OPTION

N

Non-adjustable

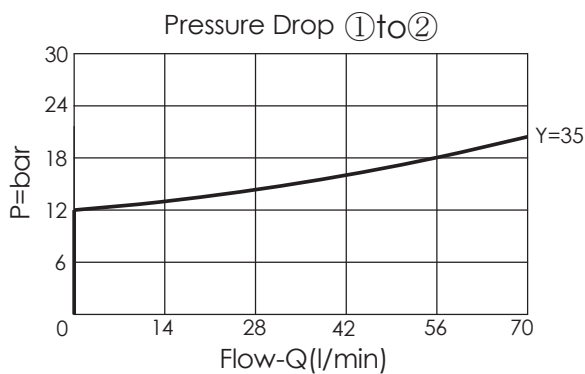
Ordering Code: **LR-11A-X-Y-Z-85**



TECHNICAL DATA

Max. pressure:	350	bar
Rated flow:	60	l/min
Cavity-Tooling:	11A-3	
Installation torque:	40-50	Nm
Weight:	0.12	kg

UNIT:mm



X OPERATION

31 Internal Pilot
(Port 1 to Port 3)
(mainstage relief element)

Y SPRINGS

Cracking pressure

Y	Cracking pressure
10	1.0 bar
35	3.5 bar
70	7.0 bar
100	10.0 bar
140	14.0 bar
200	20.0 bar

Z OPTION

N Non-adjustable

Ordering Code: **LR-2A-X-Y-Z-85**

28.5 Hex.
(1 1/8 inch)

Port ③

1.00-14UNS-2A

Port ②

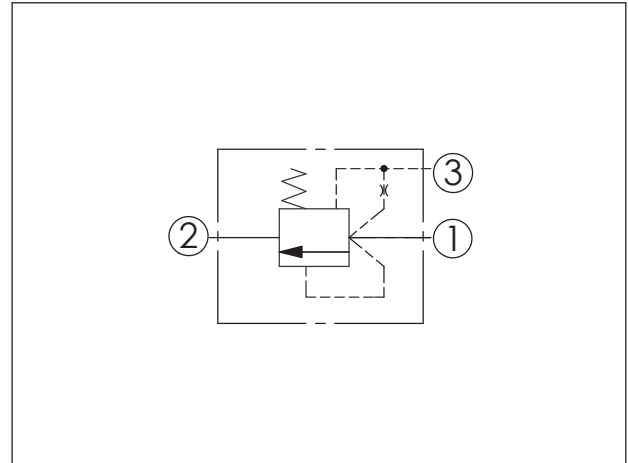
Port ①

35

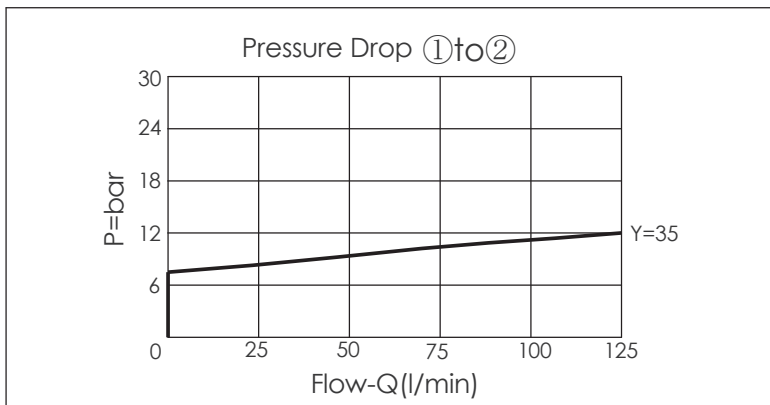
35.1

Locating Shoulder

UNIT:mm



TECHNICAL DATA		
Max. pressure:	350	bar
Rated flow:	120	l/min
Cavity-Tooling:	2A-3	
Installation torque:	60-70	Nm
Weight:	0.22	kg



X	OPERATION	
31	Internal Pilot (Port 1 to Port 3) (mainstage relief element)	

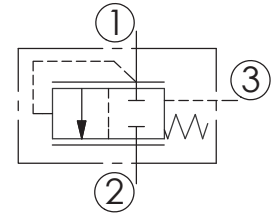
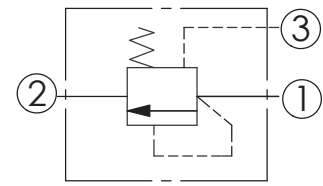
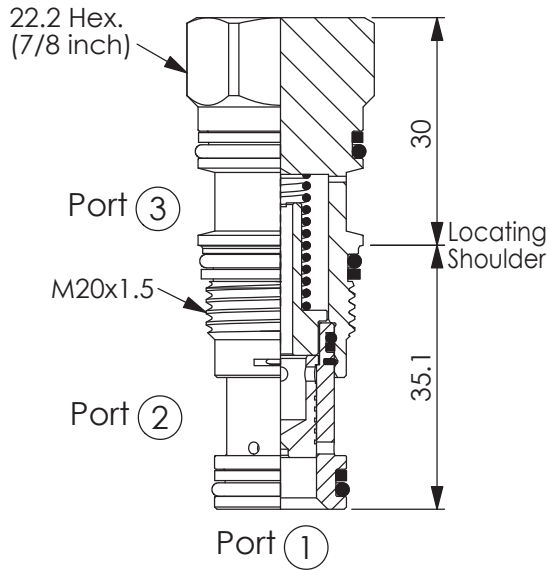
Y	SPRINGS	
	Cracking pressure	
10	1.0 bar	
35	3.5 bar	
70	7.0 bar	
100	10.0 bar	
140	14.0 bar	
200	20.0 bar	

Z	OPTION	
N	Non-adjustable	

LOGIC ELEMENTS

(Normally Closed Modulating Element)

Ordering Code: **LR-11A-X-Y-Z**



TECHNICAL DATA

Max. pressure:	350	bar
Rated flow:	6	l/min
Cavity-Tooling:	11A-3	
Installation torque:	40-50	Nm
Weight:	0.13	kg

UNIT:mm

X OPERATION

36 Max. Flow:6 LPM
External Pilot
(bypass compensator)

Y SPRINGS

Cracking pressure

35	3.5 bar
70	7.0 bar
100	10.0 bar
140	14.0 bar

Z OPTION

N Non-adjustable

Ordering Code: **LR-11A-X-Y-Z**

22.2 Hex.
(7/8 inch)

Port ③

Port ②

Port ①

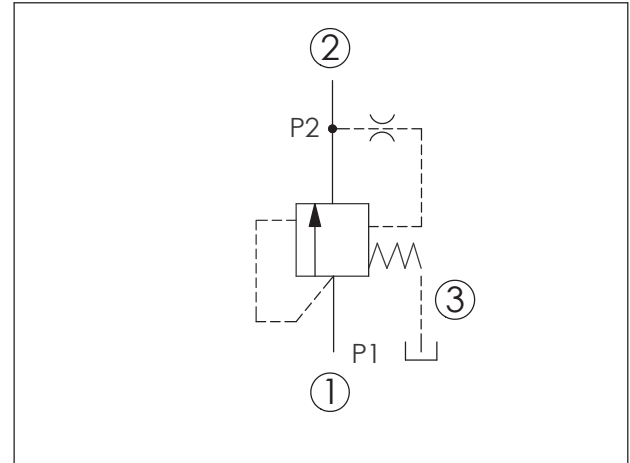
30

35.1

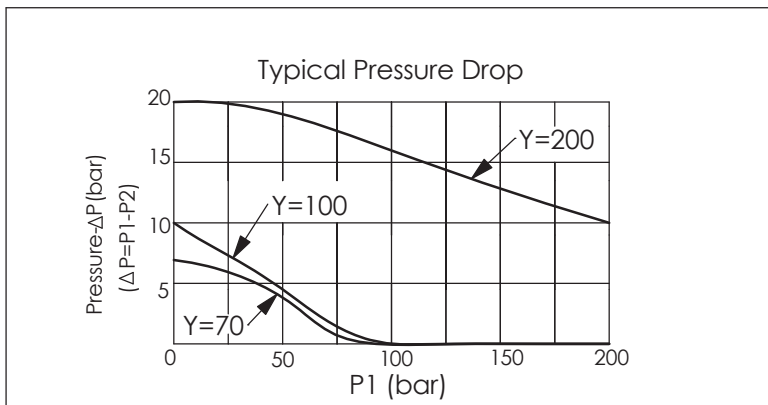
Locating Shoulder

M20x1.5

UNIT:mm



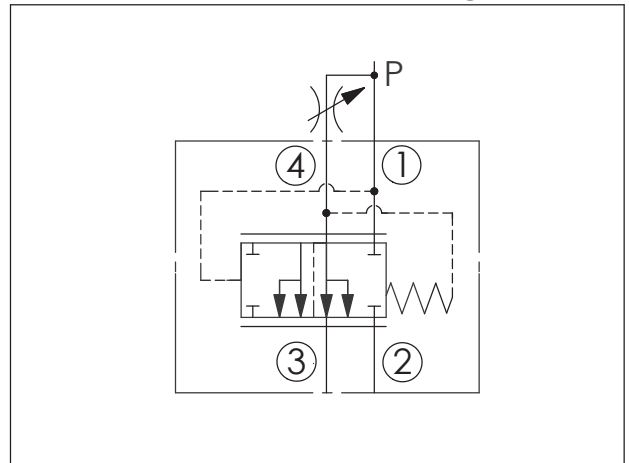
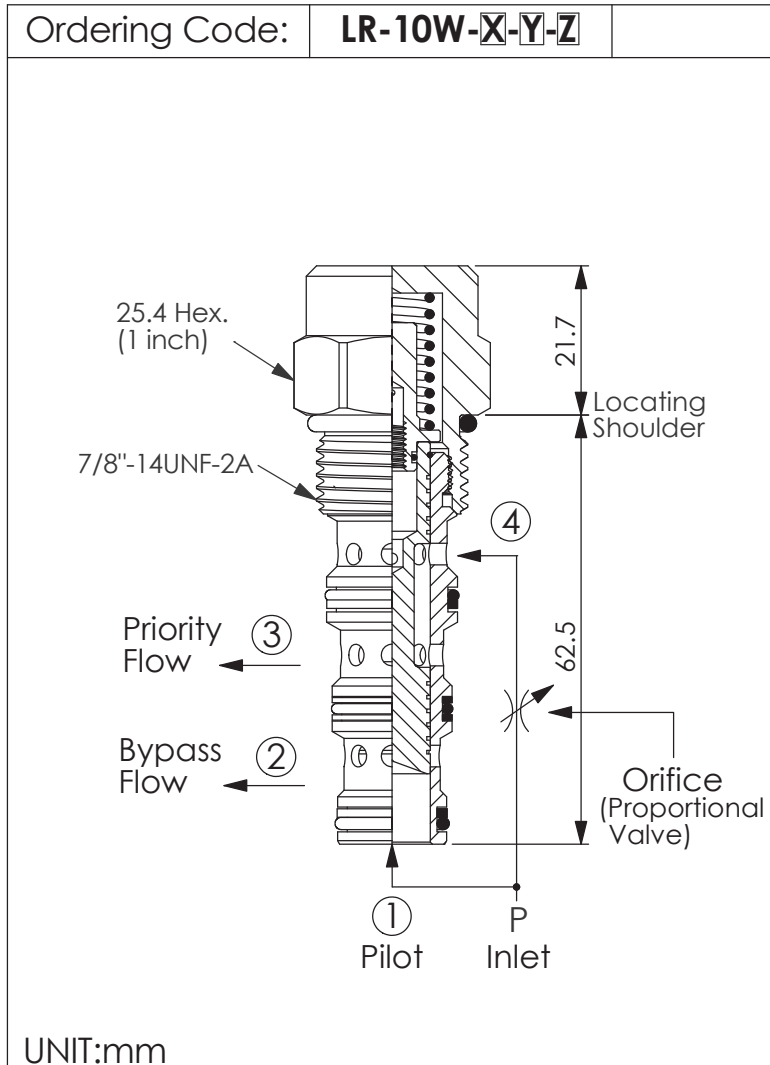
TECHNICAL DATA		
Max. pressure:	350	bar
Rated flow:	60	l/min
Cavity-Tooling:	11A-3	
Installation torque:	40-50	Nm
Weight:	0.12	kg



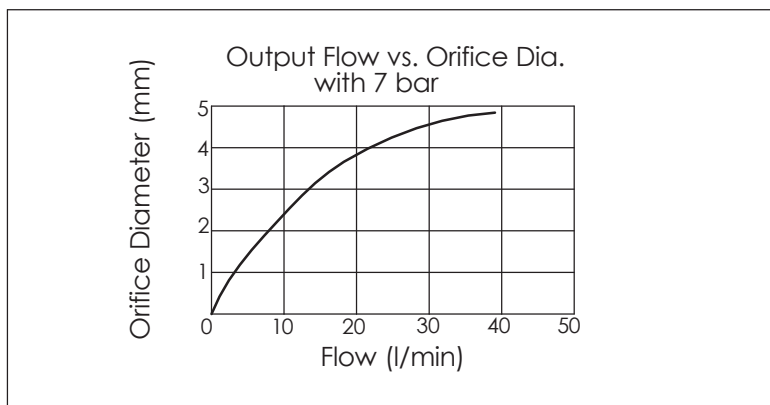
X	OPERATION	
32	Pressure Pre	

Y	SPRINGS	
	Cracking Pressure	
70	7 bar	
100	10 bar	
140	14 bar	
200	20 bar	

Z	OPTION	
N	Non-adjustable	



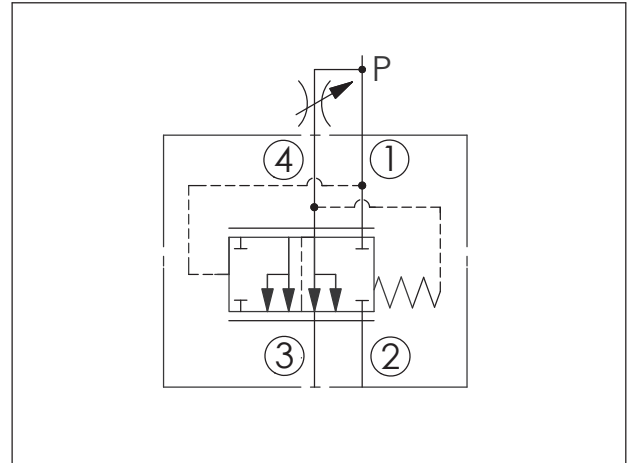
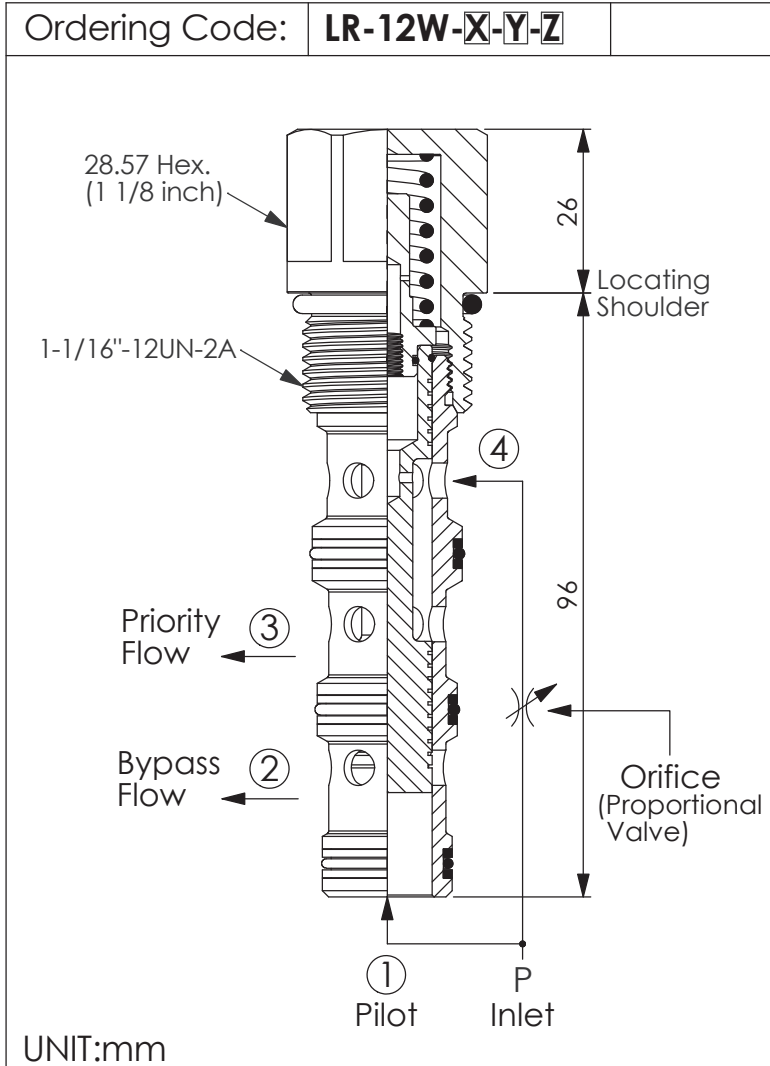
TECHNICAL DATA		
Max. pressure:	240	bar
Rated flow:	38	l/min
Cavity-Tooling:	10W-4	
Installation torque:	35-45	Nm
Weight:	0.16	kg



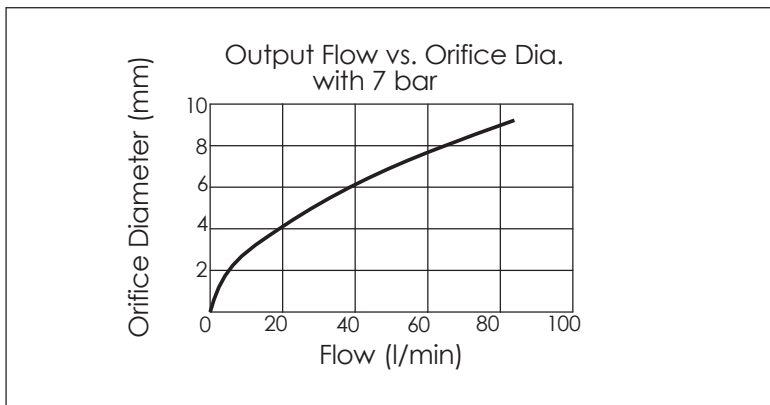
X	OPERATION	
40	Pilot on Port 1 (In front of orifice)	

Y	SPRINGS	
	Cracking pressure	
55	5.5 bar	

Z	OPTION	
N	Non-adjustable	



TECHNICAL DATA		
Max. pressure:	240	bar
Rated flow:	80	l/min
Cavity-Tooling:	12W-4	
Installation torque:	45-55	Nm
Weight:	0.25	kg



X	OPERATION	
40	Pilot on Port 1 (In front of orifice)	

Y	SPRINGS	
	Cracking pressure	
70	7.0 bar	

Z	OPTION	
N	Non-adjustable	

Ordering Code: **LR-31A-X-Y-Z**

22.2 Hex.
(7/8 inch)

M20x1.5

Port ④

Port ③

Port ②

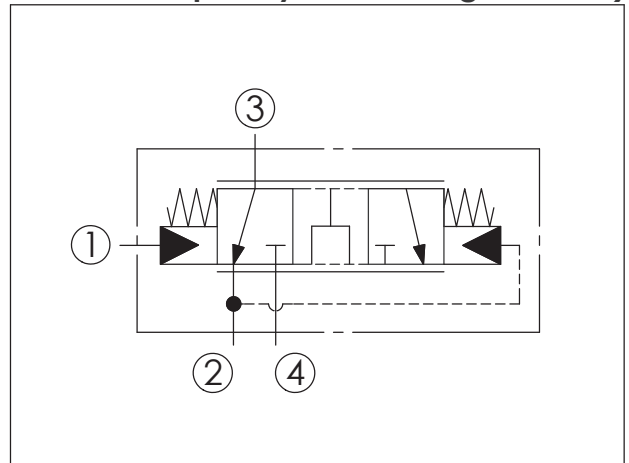
Port ①

30.2

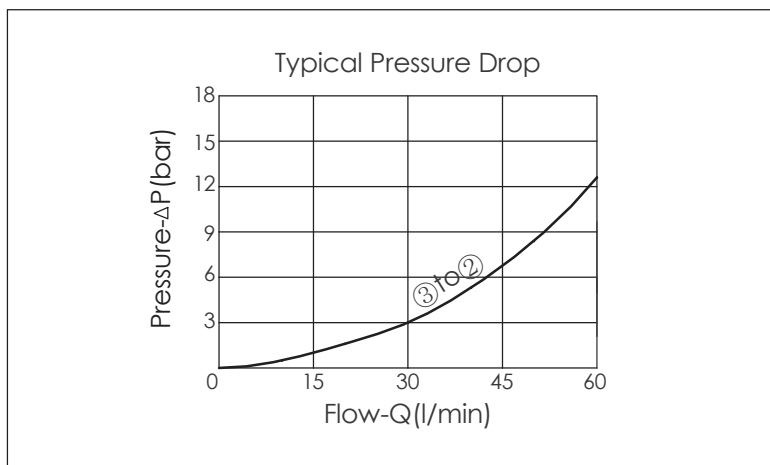
85

Locating Shoulder

UNIT:mm



TECHNICAL DATA		
Max. pressure:	350	bar
Rated flow:	60	l/min
Cavity-Tooling:	31A-4	
Installation torque:	40-50	Nm
Weight:	0.17	kg



Y	SPRINGS	
		Differential pressure
70	7.0 bar	

X	OPERATION	
41	Pilot at Port ①	

Z	OPTIONS	
N	Non-adjustable	

LOGIC ELEMENTS

(Normally Open Modulating Element)

Ordering Code: **LP-11A-X-Y-Z**

22.2 Hex. (7/8 inch)

Port ③

M20X1.5

Port ②

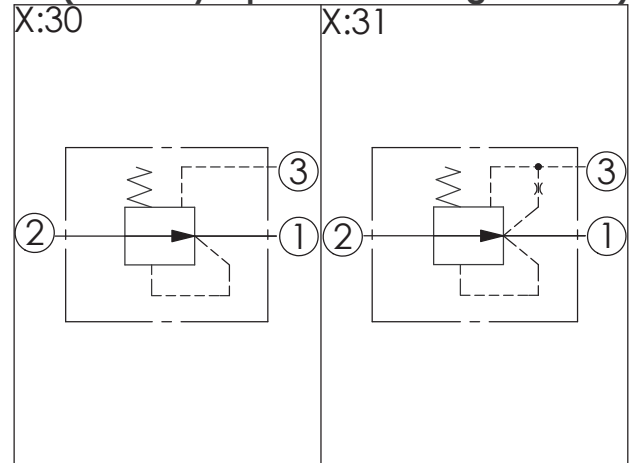
Port ①

30

Locating Shoulder

35.1

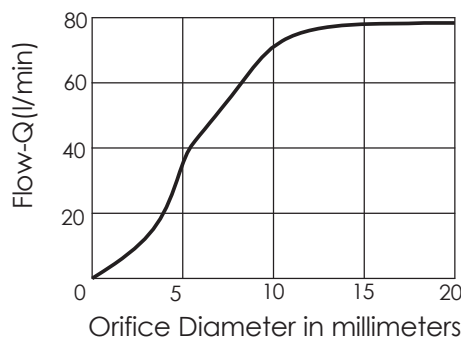
UNIT:mm



TECHNICAL DATA

Max. pressure:	350	bar
Rated flow:	60	l/min
Cavity-Tooling:	11A-3	
Installation torque:	40-50	Nm
Weight:	0.13	kg

X:30 Capacity as a Restrictive Compensator



X

OPERATION

30 External Pilot (restrictive compensator)

31 Internal Pilot Port 1 to Port3 (mainstage reducing element)

Y

SPRINGS

Cracking pressure

35 3.5 bar

70 7.0 bar

100 10.0 bar

140 14.0 bar

Z

OPTION

N

Non-adjustable

Ordering Code: **LP-2A-X-Y-Z**

28.5 Hex.
(1 1/8 inch)

Port ③

1.00-14UNS-2A

Port ②

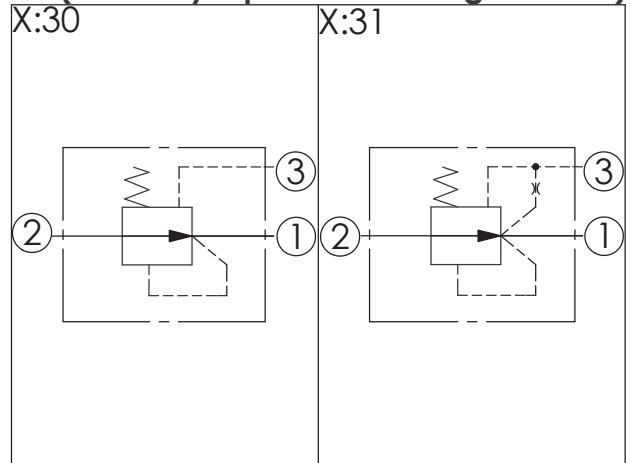
Port ①

35

Locating Shoulder

35.1

UNIT:mm

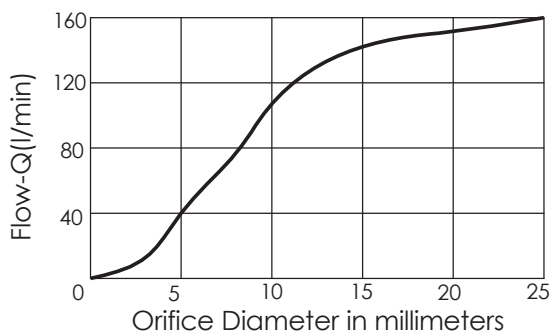


TECHNICAL DATA

Max. pressure:	350	bar
Rated flow:	120	l/min
Cavity-Tooling:	2A-3	
Installation torque:	60-70	Nm
Weight:	0.23	kg

X:30

Capacity as a Restrictive Compensator



X

OPERATION

30 External Pilot
(restrictive compensator)

31 Internal Pilot Port 1 to Port 3
(mainstage reducing element)

Y

SPRINGS

Cracking pressure

35	3.5 bar
70	7.0 bar
100	10.0 bar
140	14.0 bar

Z

OPTION

N

Non-adjustable

LOGIC ELEMENTS

(Normally Open Modulating Element)

Ordering Code: **LP-17A-X-Y-Z**

31.7 Hex.
(1 1/4 inch)

Port ③

M36X2

Port ②

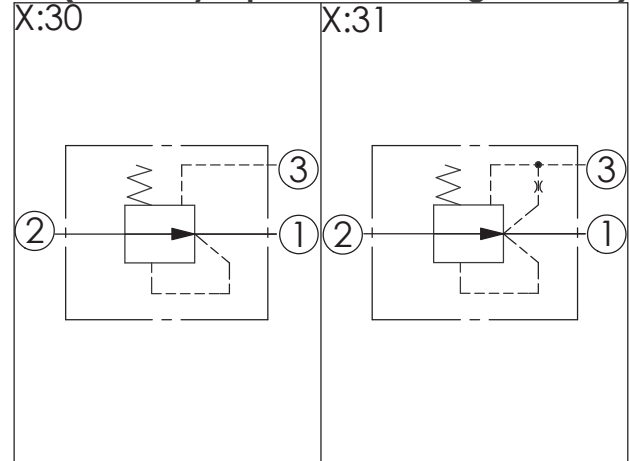
Port ①

46

46

Locating Shoulder

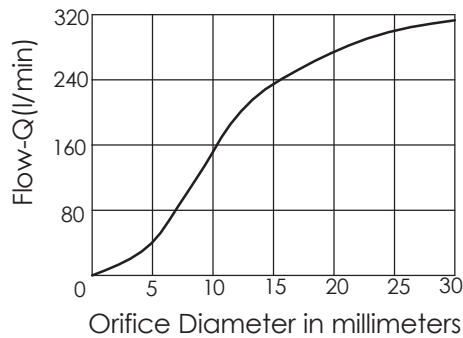
UNIT:mm



TECHNICAL DATA

Max. pressure:	350	bar
Rated flow:	240	l/min
Cavity-Tooling:	17A-3	
Installation torque:	200-215	Nm
Weight:	0.50	kg

X:30 Capacity as a Restrictive Compensator



X

OPERATION

30 External Pilot
(restrictive compensator)

31 Internal Pilot Port 1 to Port3
(mainstage reducing element)

Y

SPRINGS

Cracking pressure

35 3.5 bar

70 7.0 bar

100 10.0 bar

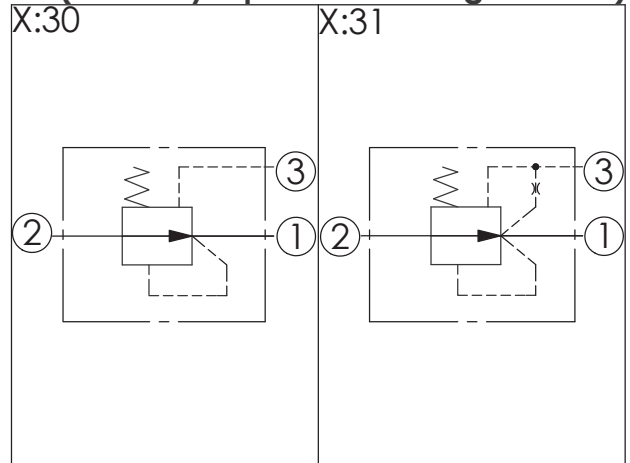
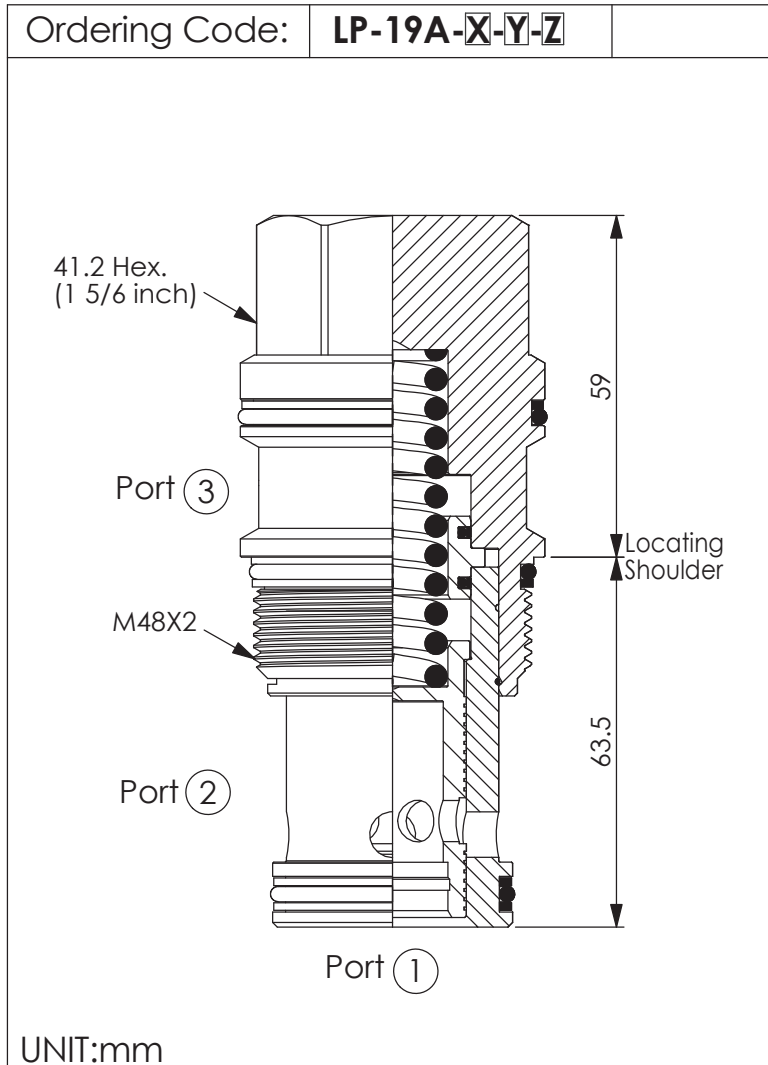
140 14.0 bar

Z

OPTION

N

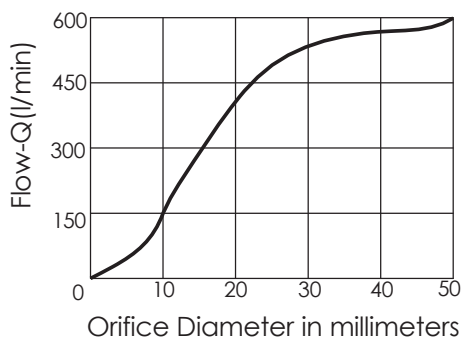
Non-adjustable



TECHNICAL DATA

Max. pressure:	350	bar
Rated flow:	480	l/min
Cavity-Tooling:	19A-3	
Installation torque:	465-500	Nm
Weight:	1.17	kg

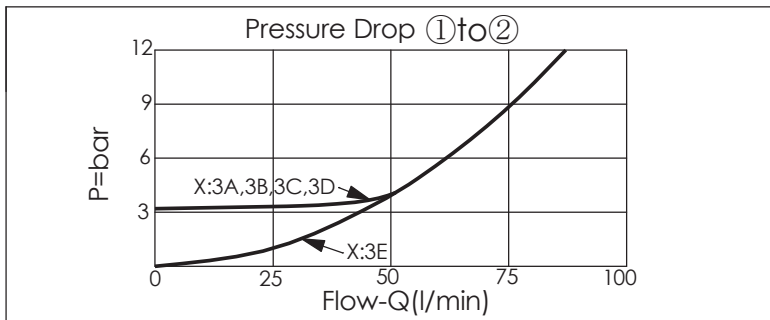
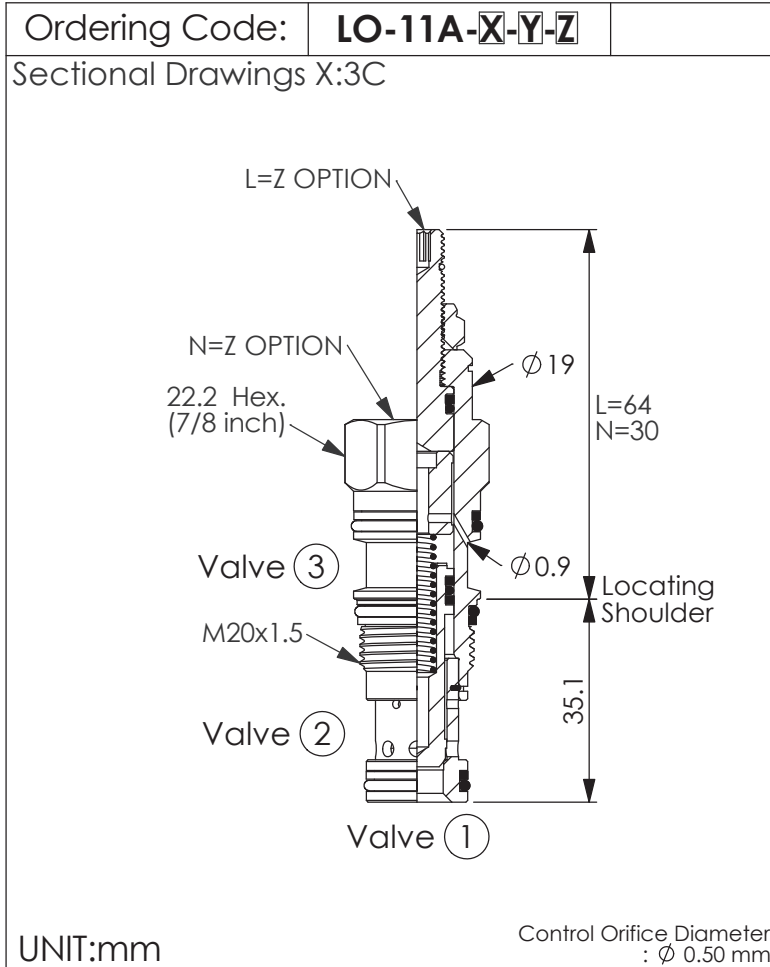
X:30 Capacity as a Restrictive Compensator



X	OPERATION	
30	External Pilot	(restrictive compensator)
31	Internal Pilot Port 1 to Port 3	(mainstage reducing element)

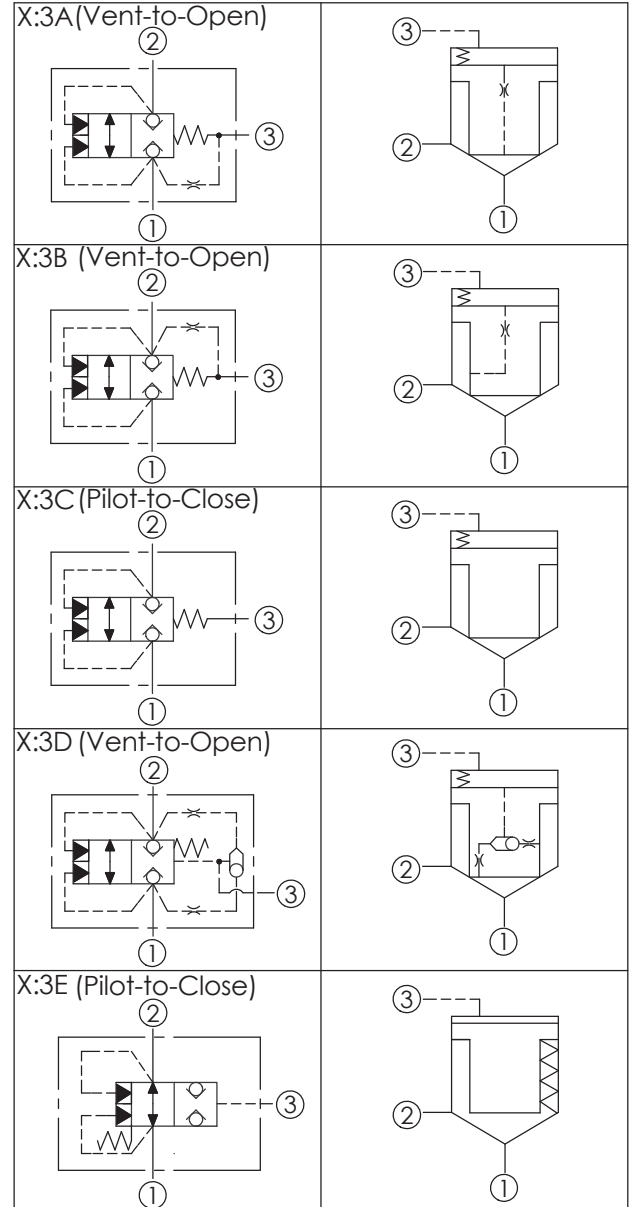
Y	SPRINGS	
	Cracking pressure	
35	3.5 bar	
70	7.0 bar	
100	10.0 bar	
140	14.0 bar	

Z	OPTION	
N	Non-adjustable	



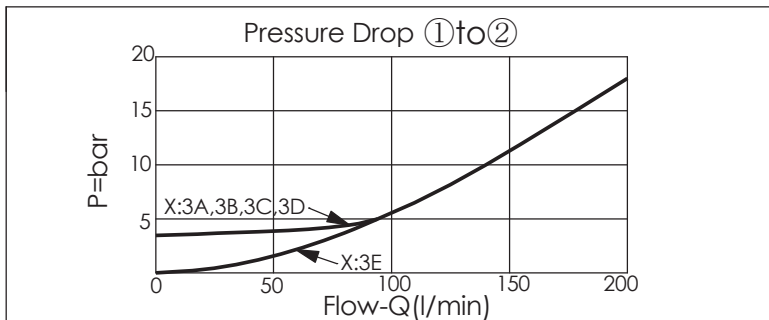
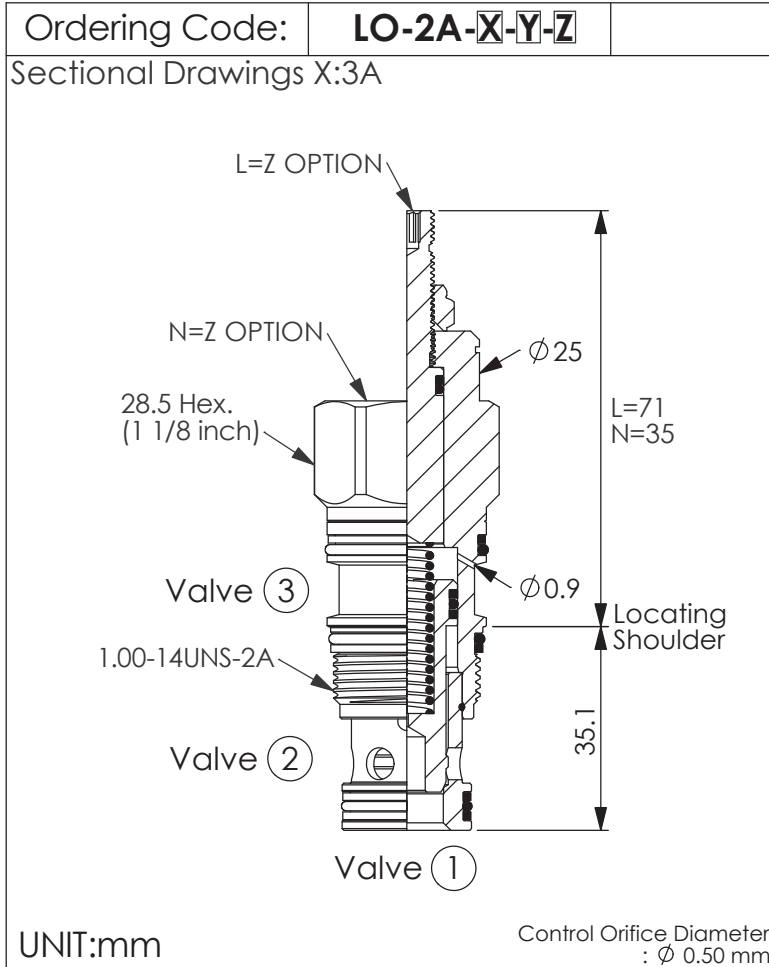
X	OPERATION
3A	Spring biased closed pilot source from Port 1
3B	Spring biased closed pilot source from Port 2
3C	Spring biased closed Port 3 pilot source
3D	Spring biased closed Higher of Ports 1 or 2 pilot source
3E	Spring biased Open Port 3 pilot source

Y	SPRINGS
	Cracking pressure
35	3.5 bar at port ①



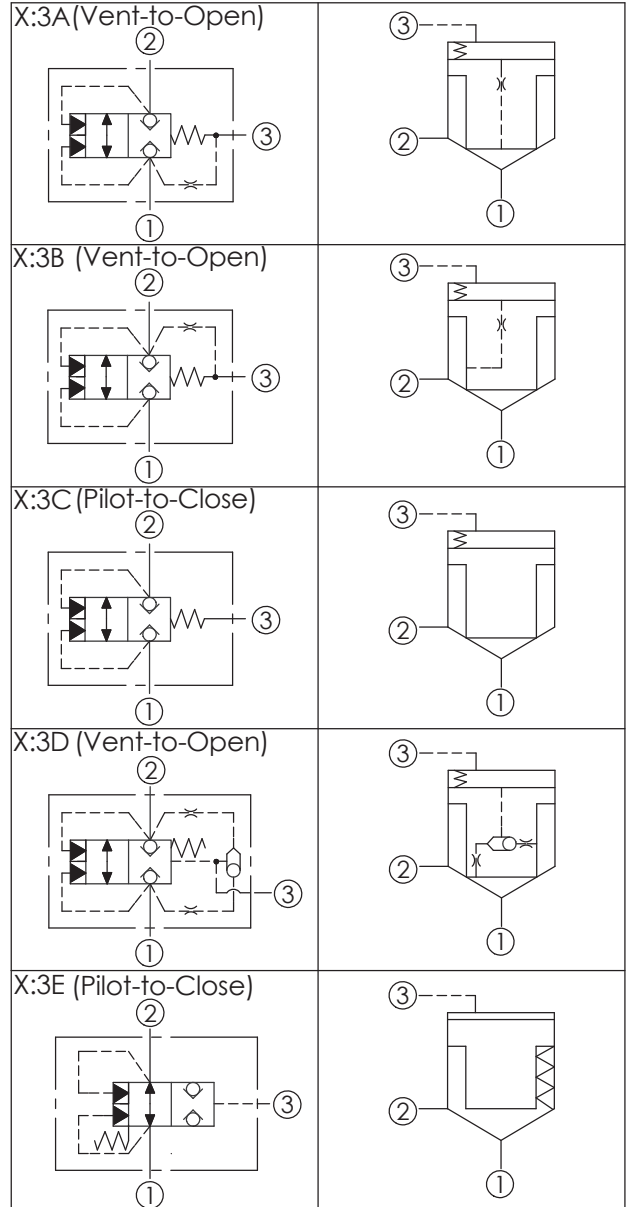
TECHNICAL DATA		
Max. pressure:	350	bar
Rated flow:	95	l/min
Cavity-Tooling:	11A-3	
Installation torque:	40-50	Nm
Weight:	0.13 (X:3D; Z:N,L) 0.16 (X:3B,3C,3E; Z:N,L)	kg
<ul style="list-style-type: none"> Area ratio:A3 to A1 = 1.8:1 Area ratio:A3 to A2 = 2.25:1 With Sealed Piston. All ports will accept 350 bar. 		

Z	OPTIONS
N	Non-adjustable
L	Stroke Adjustment



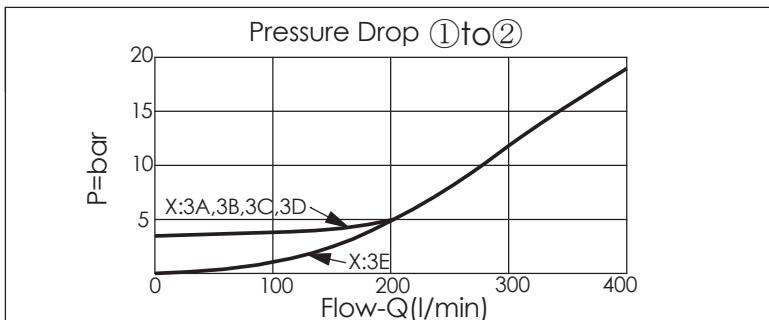
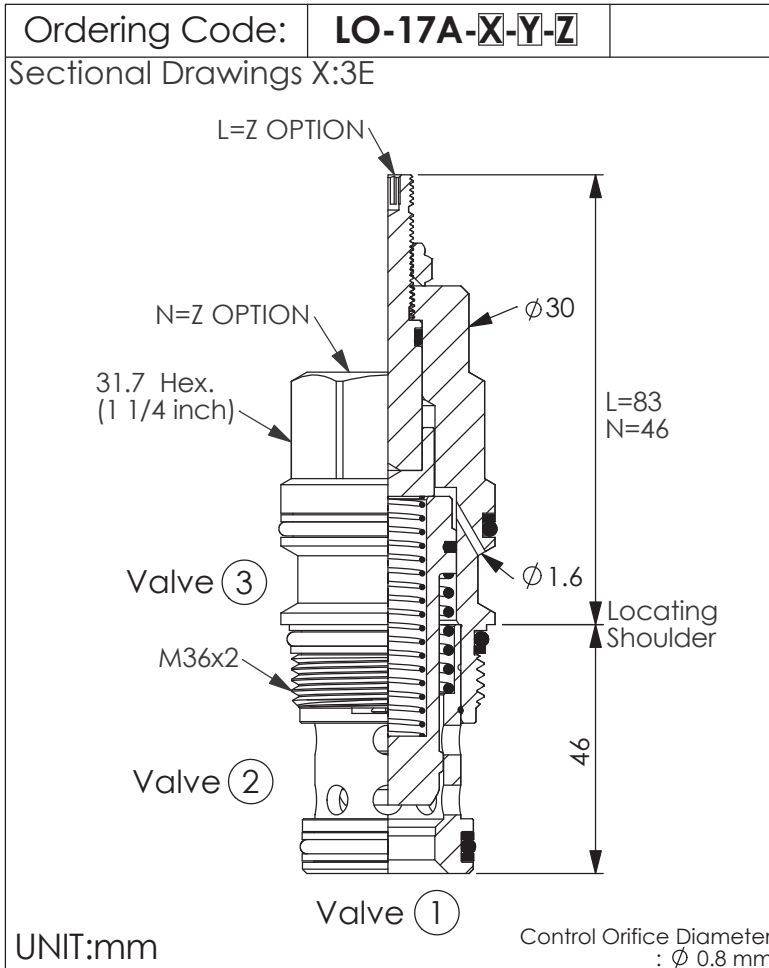
X	OPERATION
3A	Spring biased closed pilot source from Port 1 (Only Y=35)
3B	Spring biased closed pilot source from Port 2 (Only Y=35)
3C	Spring biased closed Port 3 pilot source (Only Y=35)
3D	Spring biased closed Higher of Ports 1 or 2 pilot source (Only Y=35)
3E	Spring biased Open Port 3 pilot source

Y	SPRINGS
	Cracking pressure
20	2.0 bar at port ①
35	3.5 bar at port ①



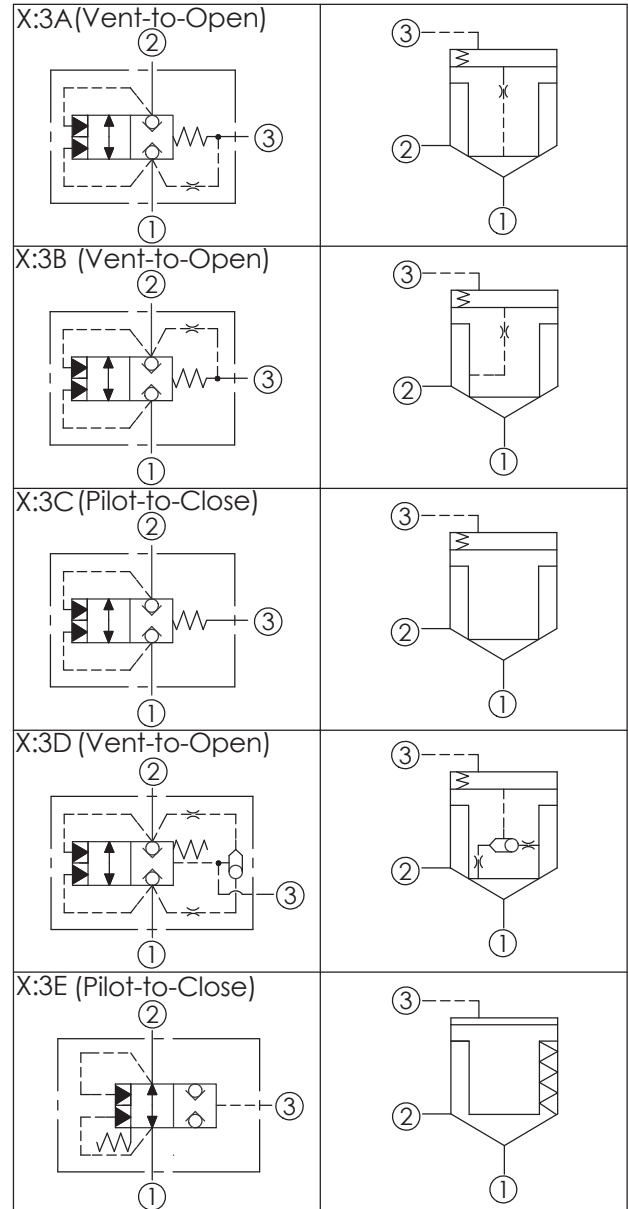
TECHNICAL DATA		
Max. pressure:	350	bar
Rated flow:	200	l/min
Cavity-Tooling:	2A-3	
Installation torque:	60-70	Nm
Weight:	0.23 (X:3A,3D,3E; Z:N) 0.30 (X:3A,3C; Z:L)	kg
<ul style="list-style-type: none"> • Area ratio:A3 to A1 = 1.8:1 • Area ratio:A3 to A2 = 2.25:1 • With Sealed Piston. • All ports will accept 350 bar. 		

Z	OPTIONS
N	Non-adjustable
L	Stroke Adjustment



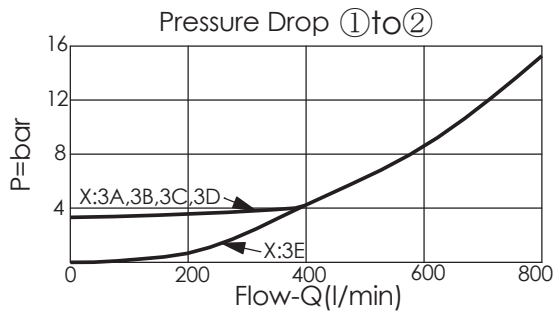
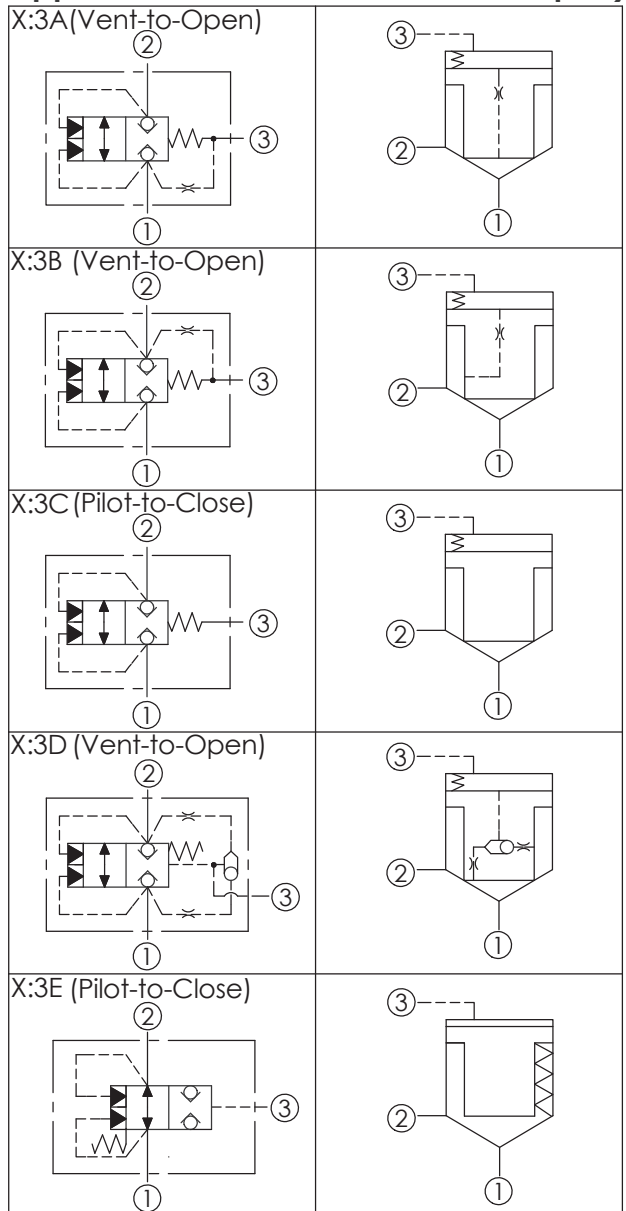
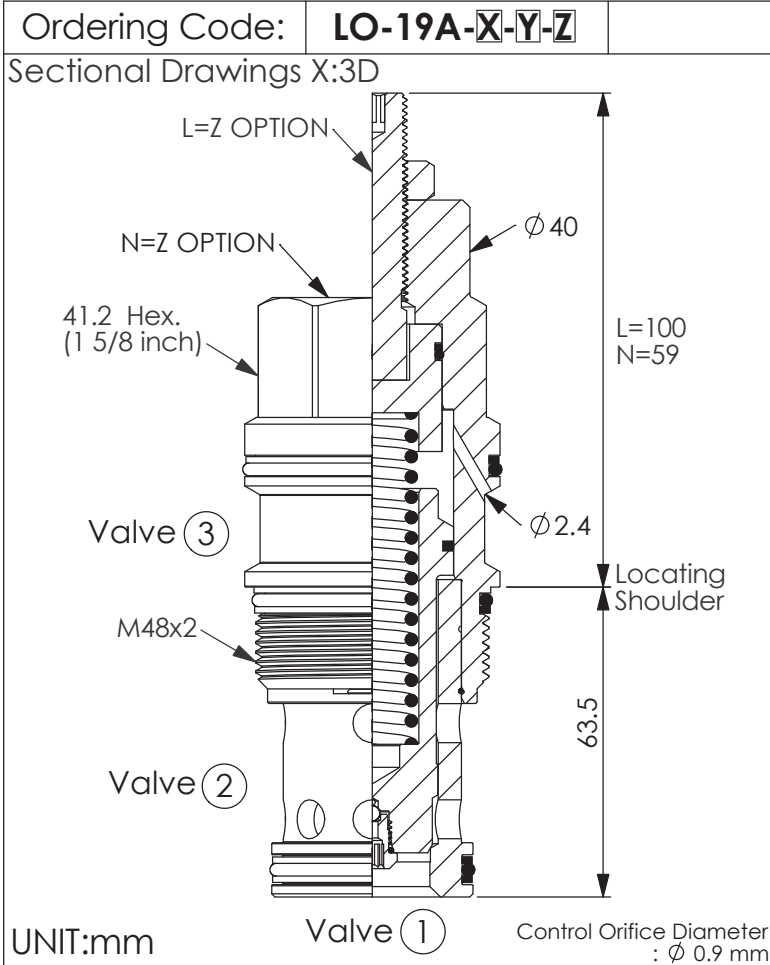
X	OPERATION
3A	Spring biased closed pilot source from Port 1 (Only Y=35)
3B	Spring biased closed pilot source from Port 2 (Only Y=35)
3C	Spring biased closed Port 3 pilot source (Only Y=35)
3D	Spring biased closed Higher of Ports 1 or 2 pilot source (Only Y=35)
3E	Spring biased Open Port 3 pilot source

Y	SPRINGS
	Cracking pressure
20	2.0 bar at port ①
35	3.5 bar at port ①



TECHNICAL DATA		
Max. pressure:	350	bar
Rated flow:	380	l/min
Cavity-Tooling:	17A-3	
Installation torque:	200-215	Nm
Weight:	0.50 (X:3A,3B,3C,3D,3E; Z:N) 0.59 (X:3A,3B,3D; Z:L) 0.59 (X:3C,3E; Z:L)	kg
<ul style="list-style-type: none"> • Area ratio:A3 to A1 = 1.8:1 • Area ratio:A3 to A2 = 2.25:1 • With Sealed Piston. • All ports will accept 350 bar. 		

Z	OPTIONS
N	Non-adjustable
L	Stroke Adjustment



TECHNICAL DATA		
Max. pressure:	350	bar
Rated flow:	760	l/min
Cavity-Tooling:	19A-3 (19AB-3)	
Installation torque:	465-500	Nm
Weight:	1.19 (X:3A,3B,3C,3D,3E; Z:N)(X:3C; Z:L) 1.29 (X:3D; Z:L) 1.39 (X:3A,3B; Z:L)	
	<ul style="list-style-type: none"> • Area ratio:A3 to A1 = 1.8:1 • Area ratio:A3 to A2 = 2.25:1 • With Sealed Piston. • All ports will accept 350 bar. 	

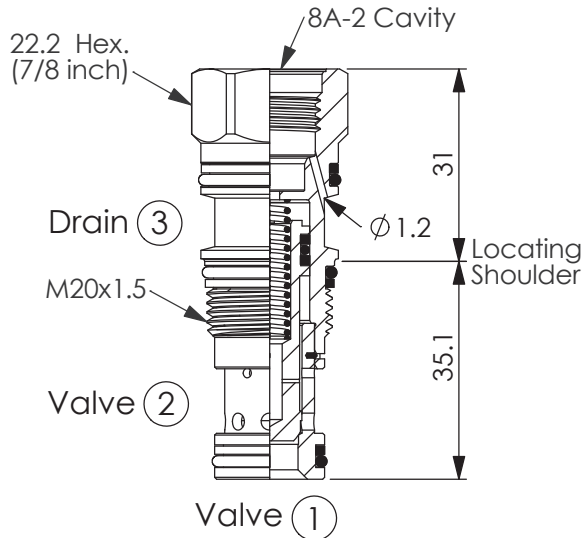
X	OPERATION	
3A	Spring biased closed pilot source from Port 1	
3B	Spring biased closed pilot source from Port 2	
3C	Spring biased closed Port 3 pilot source	
3D	Spring biased closed Higher of Ports 1 or 2 pilot source	
3E	Spring biased Open Port 3 pilot source	

Y	SPRINGS	
	Cracking pressure	
35	3.5 bar at port ①	

Z	OPTIONS	
N	Non-adjustable	
L	Stroke Adjustment	

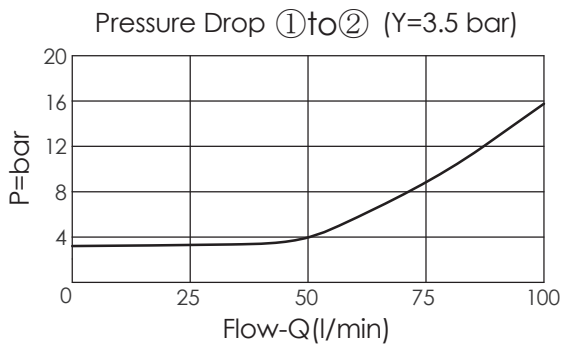
Ordering Code: **LO-11A-X-Y-Z**

Sectional Drawings X:3B

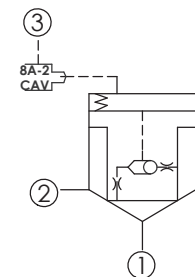
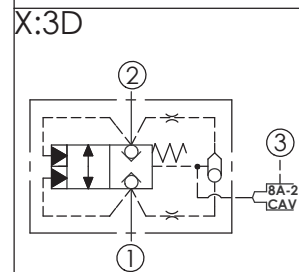
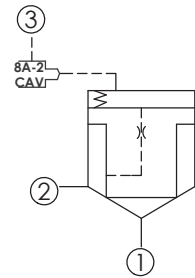
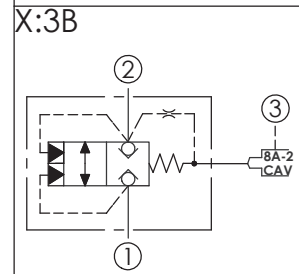
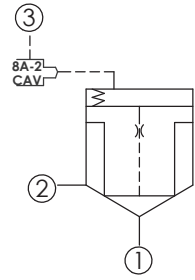
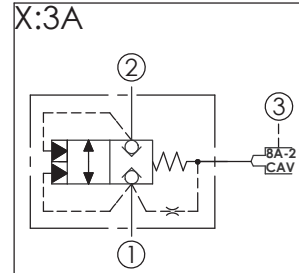


UNIT:mm

Control Orifice Diameter : \varnothing 0.50 mm



Y	SPRINGS	
	Cracking pressure	
D	3.5 bar at port ①	



TECHNICAL DATA

Max. pressure: 350 bar

Rated flow: 95 l/min

Cavity-Tooling: 11A-3

Installation torque: 40-50 Nm

Weight: 0.10 kg

- Area ratio:A3 to A1 = 1.8:1
- Area ratio:A3 to A2 = 2.25:1
- With Sealed Piston.
- All ports will accept 350 bar.

X	OPERATION	
3A	Spring biased closed pilot source from Port 1	
3B	Spring biased closed pilot source from Port 2	
3D	Spring biased closed Higher of Ports 1 or 2 pilot source	

Z	CAVITIES	
8	8A-2 Cavity	

Ordering Code: **LO-2A-X-Y-Z**

Sectional Drawings X:3A

28.5 Hex.
(1 1/8 inch)

8A-2 / 08W-2 Cavity

Drain ③

1.00-14UNS-2A

Valve ②

Valve ①

35

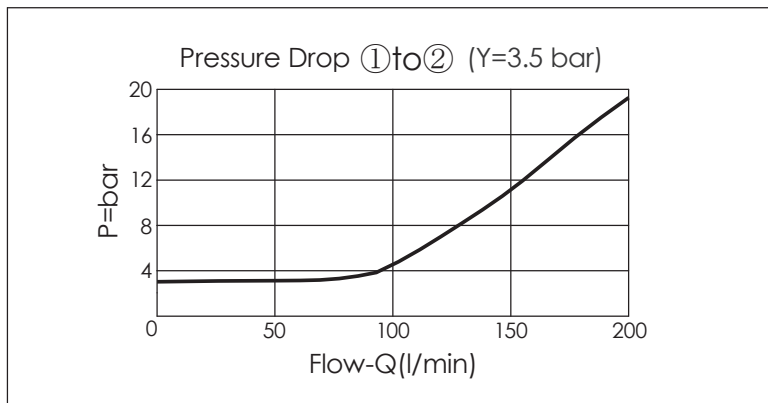
35.1

Locating Shoulder

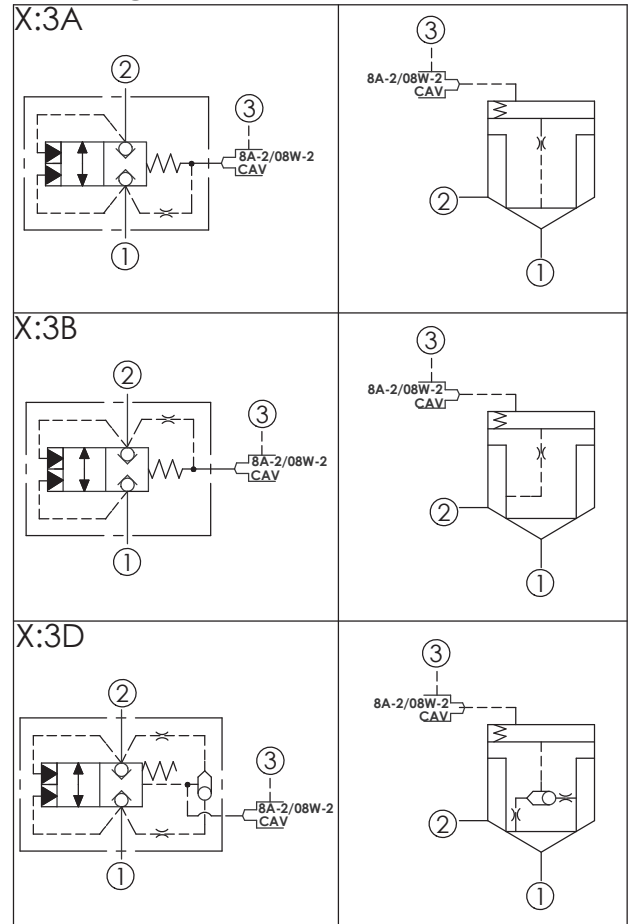
Ø 1.2

UNIT:mm

Control Orifice Diameter
: Ø 0.50 mm



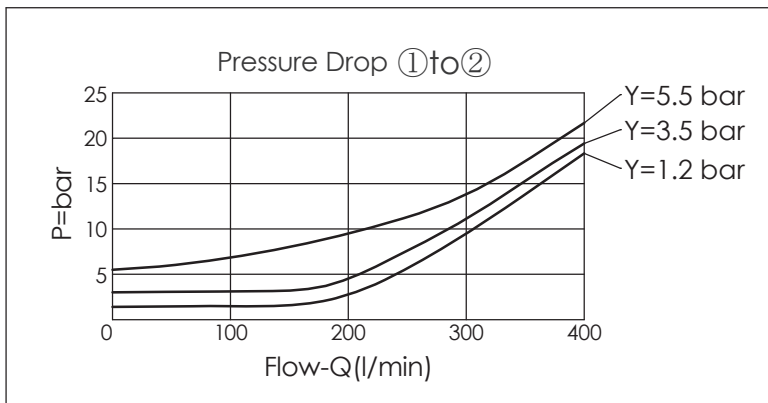
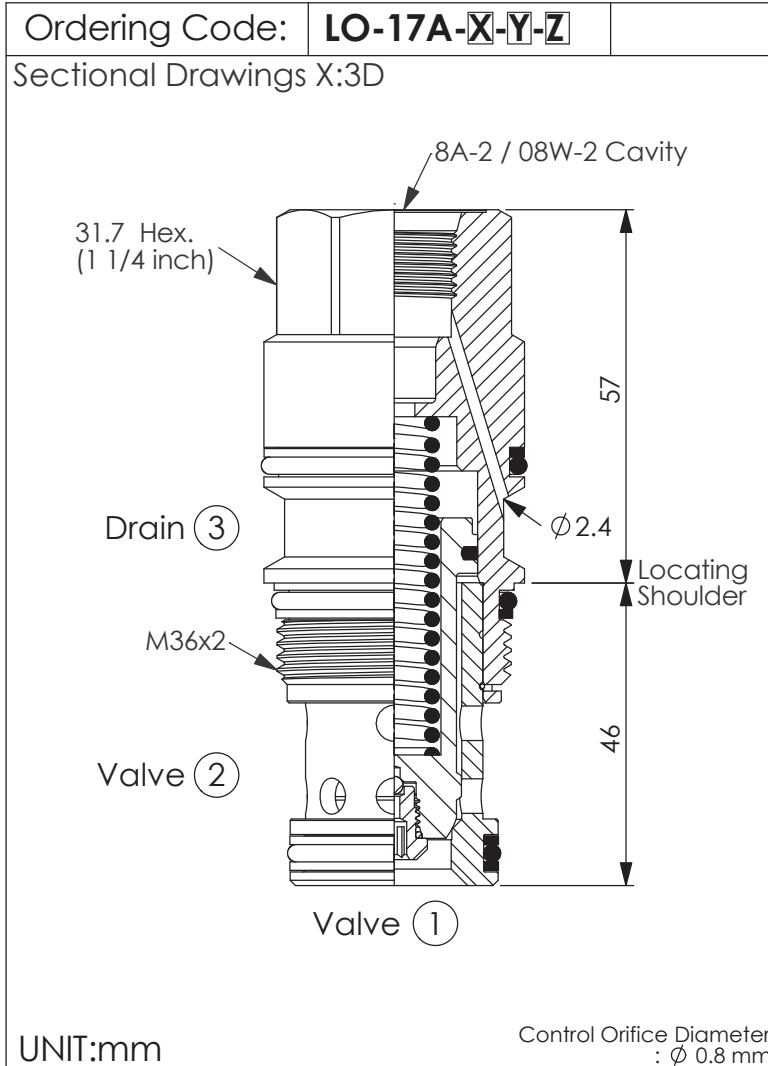
Y	SPRINGS	
	Cracking pressure	
D	3.5 bar at port ①	



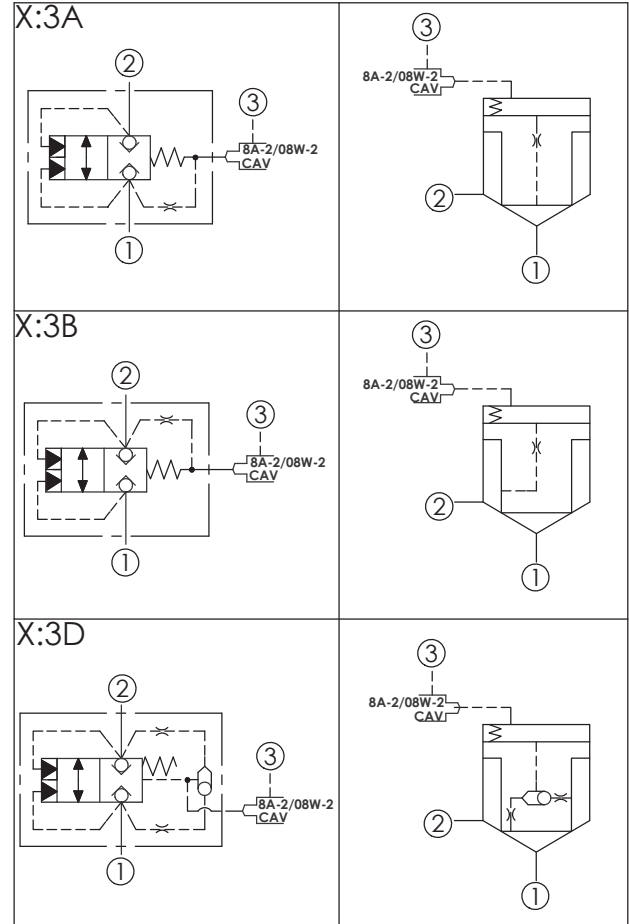
TECHNICAL DATA		
Max. pressure:	350	bar
Rated flow:	200	l/min
Cavity-Tooling:	2A-3	
Installation torque:	60-70	Nm
Weight:	0.20	kg
<ul style="list-style-type: none"> • Area ratio:A3 to A1 = 1.8:1 • Area ratio:A3 to A2 = 2.25:1 • With Sealed Piston. • All ports will accept 350 bar. 		

X	OPERATION	
3A	Spring biased closed pilot source from Port 1	
3B	Spring biased closed pilot source from Port 2	
3D	Spring biased closed Higher of Ports 1 or 2 pilot source	

Z	CAVITIES	
8	8A-2 Cavity	
8W	08W-2 Cavity (For solenoid operated, Please refer to EP08W2A51*04 or EP08W2A52*04)	



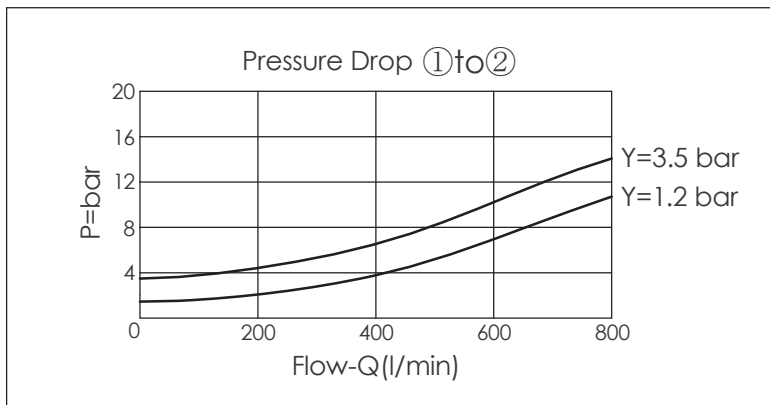
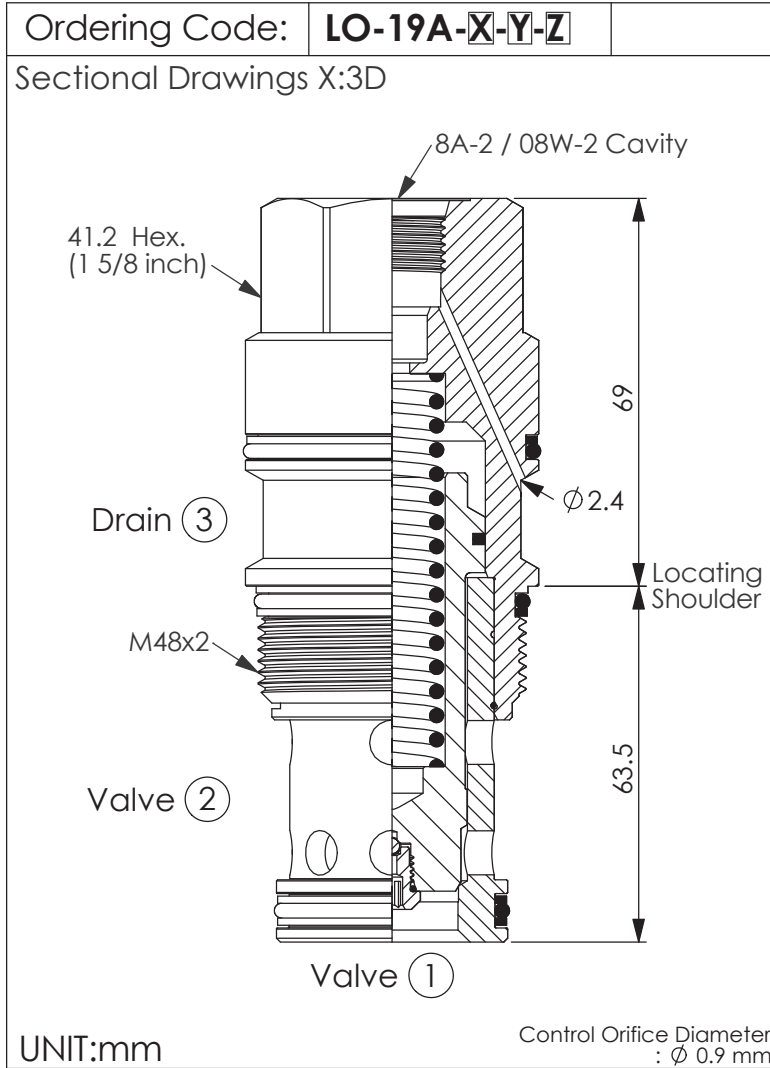
Y	SPRINGS	
	Cracking pressure	
B	1.2 bar at port ①	
D	3.5 bar at port ①	
E	5.5 bar at port ①	



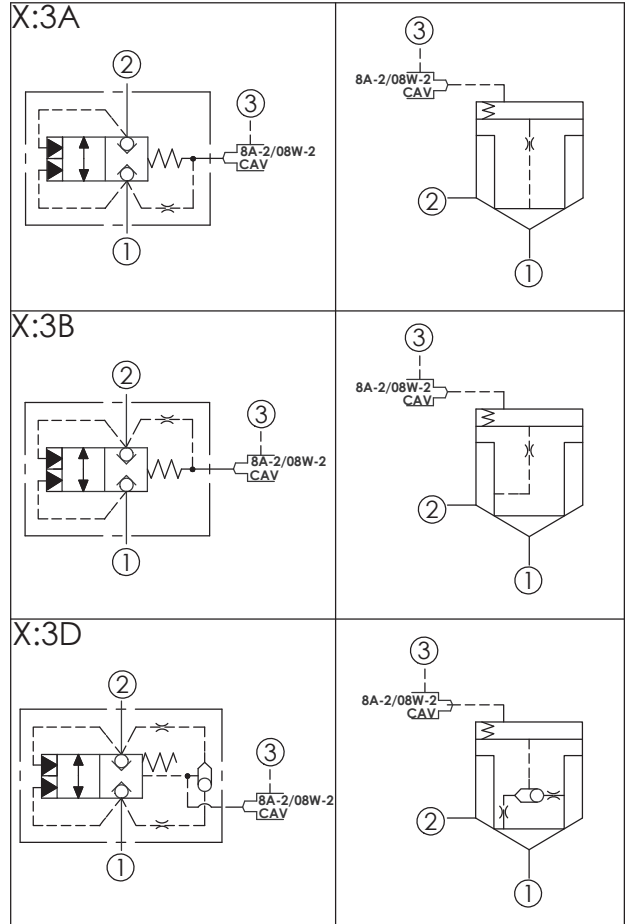
TECHNICAL DATA		
Max. pressure:	350	bar
Rated flow:	380	l/min
Cavity-Tooling:	17A-3	
Installation torque:	200-215	Nm
Weight:	0.48 (X:3B) 0.55 (X:3A,3D) kg	
	<ul style="list-style-type: none"> • Area ratio:A3 to A1 = 1.8:1 • Area ratio:A3 to A2 = 2.25:1 • With Sealed Piston. • All ports will accept 350 bar. 	

X	OPERATION	
3A	Spring biased closed pilot source from Port 1	
3B	Spring biased closed pilot source from Port 2	
3D	Spring biased closed Higher of Ports 1 or 2 pilot source	

Z	CAVITIES	
8	8A-2 Cavity	
8W	08W-2 Cavity (For solenoid operated, Please refer to EP08W2A51*04 or EP08W2A52*04)	



Y	SPRINGS	
	Cracking pressure	
B	1.2 bar at port ①	
D	3.5 bar at port ①	

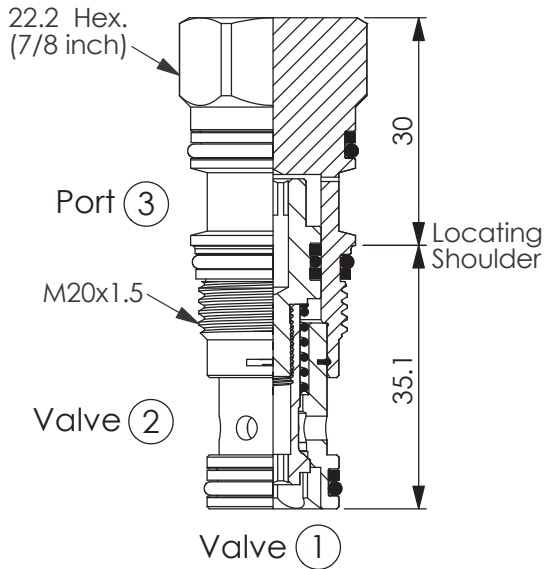


TECHNICAL DATA		
Max. pressure:	350	bar
Rated flow:	760	l/min
Cavity-Tooling:	19A-3 (19AB-3)	
Installation torque:	465-500	Nm
Weight:	1.22 (Z:8)	1.29 (Z:8W) kg
<ul style="list-style-type: none"> • Area ratio:A3 to A1 = 1.8:1 • Area ratio:A3 to A2 = 2.25:1 • With Sealed Piston. • All ports will accept 350 bar. 		

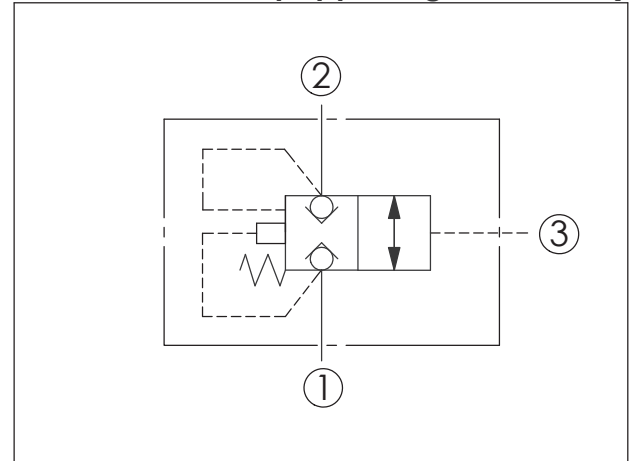
X	OPERATION	
3A	Spring biased closed pilot source from Port 1	
3B	Spring biased closed pilot source from Port 2	
3D	Spring biased closed Higher of Ports 1 or 2 pilot source	

Z	CAVITIES	
8	8A-2 Cavity	
8W	08W-2 Cavity (For solenoid operated, Please refer to EP08W2A51*04 or EP08W2A52*04)	

Ordering Code: **LC-11A-X-Y-Z**



UNIT:mm



TECHNICAL DATA

Max. pressure: 350 bar

Rated flow: 60 l/min

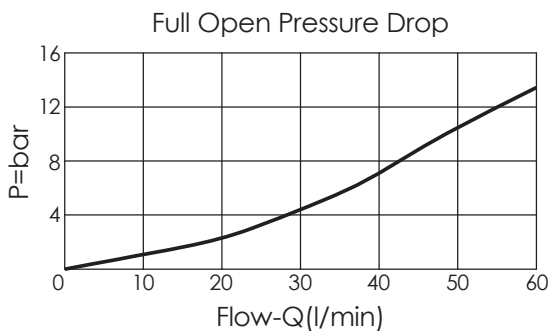
Cavity-Tooling: 11A-3

Installation torque: 40-50 Nm

Weight: 0.13 kg

Area ratio:A3 to A1 = 1.8:1

Area ratio:A3 to A2 = 2.25:1



X

OPERATION

3C

Port 3 pilot source

- Maximum Leakage (0.7 cc/min./70 bar) (46 cSt, 40°C)
- All ports will accept 350 bar.

Y

SPRINGS

Cracking pressure

35

3.5 bar at port 3

Z

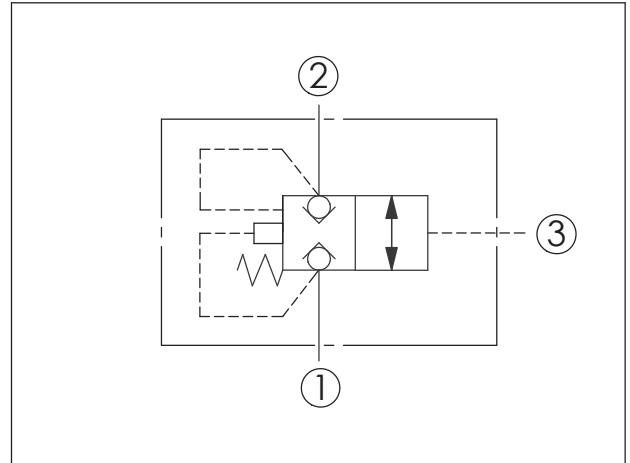
OPTIONS

N

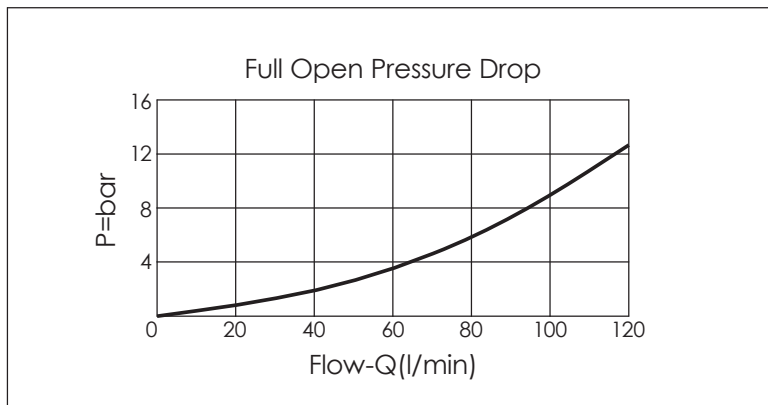
Non-adjustable

Ordering Code: **LC-2A-X-Y-Z**

UNIT:mm



TECHNICAL DATA		
Max. pressure:	350	bar
Rated flow:	120	l/min
Cavity-Tooling:	2A-3	
Installation torque:	60-70	Nm
Weight:	0.23	kg
Area ratio:A3 to A1 = 1.8:1		
Area ratio:A3 to A2 = 2.25:1		

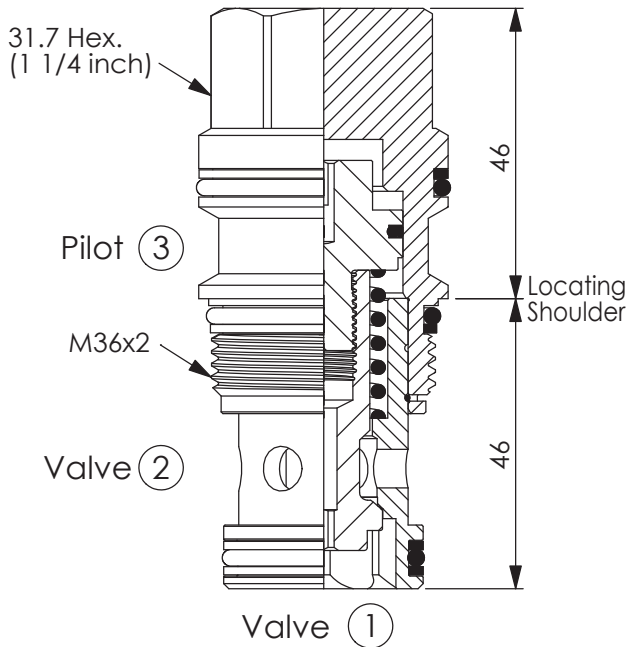


X	OPERATION	
3C	Port 3 pilot source	
<ul style="list-style-type: none"> Maximum Leakage (0.7 cc/min./70 bar) (46 cSt, 40°C) All ports will accept 350 bar. 		

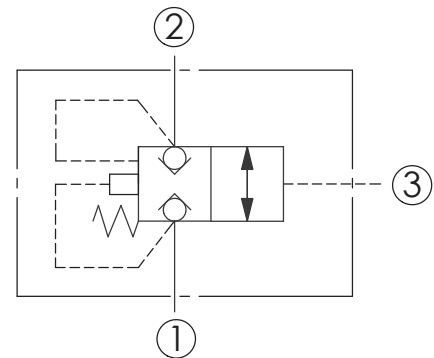
Y	SPRINGS	
	Cracking pressure	
35	3.5 bar at port ③	

Z	OPTIONS	
N	Non-adjustable	

Ordering Code: **LC-17A-X-Y-Z**

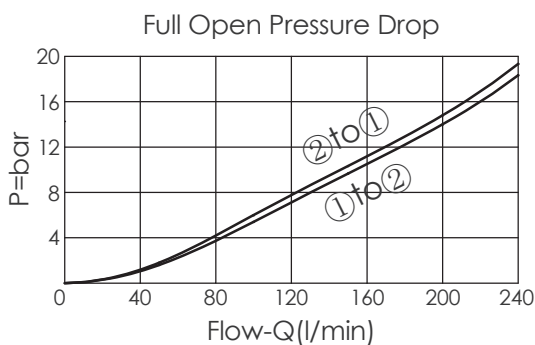


UNIT:mm



TECHNICAL DATA

Max. pressure:	350	bar
Rated flow:	240	l/min
Cavity-Tooling:	17A-3	
Installation torque:	200-215	Nm
Weight:	0.52	kg
Area ratio:A3 to A1 = 1.8:1		
Area ratio:A3 to A2 = 2.25:1		



X OPERATION

3C Port 3 pilot source

- Maximum Leakage (0.7 cc/min./70 bar) (46 cSt, 40°C)
- All ports will accept 350 bar.

Y SPRINGS

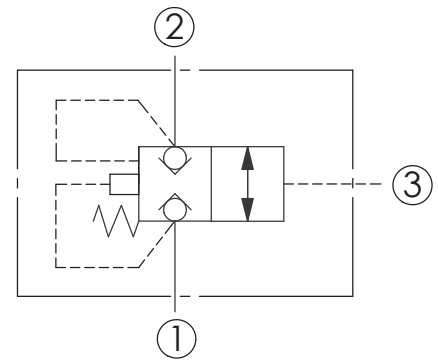
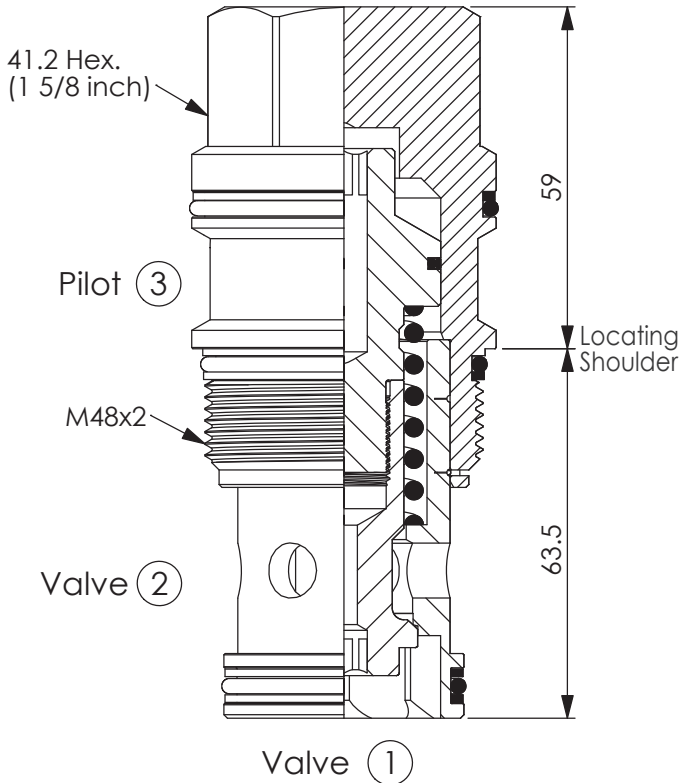
Cracking pressure

35 3.5 bar at port ③

Z OPTIONS

N Non-adjustable

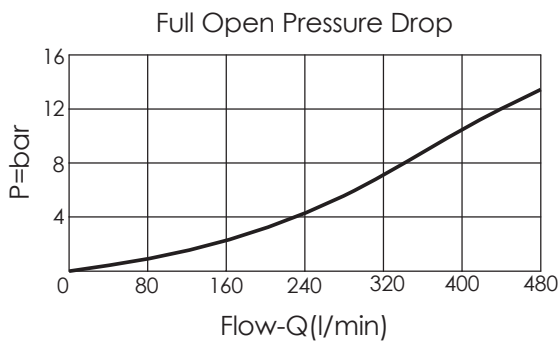
Ordering Code: **LC-19A-X-Y-Z**



TECHNICAL DATA

Max. pressure:	350	bar
Rated flow:	480	l/min
Cavity-Tooling:	19A-3 (19AB-3)	
Installation torque:	465-500	Nm
Weight:	1.20	kg
Area ratio:A3 to A1 = 1.8:1		
Area ratio:A3 to A2 = 2.25:1		

UNIT:mm



X OPERATION

3C Port 3 pilot source

- Maximum Leakage (0.7 cc/min./70 bar) (46 cSt, 40°C)
- All ports will accept 350 bar.

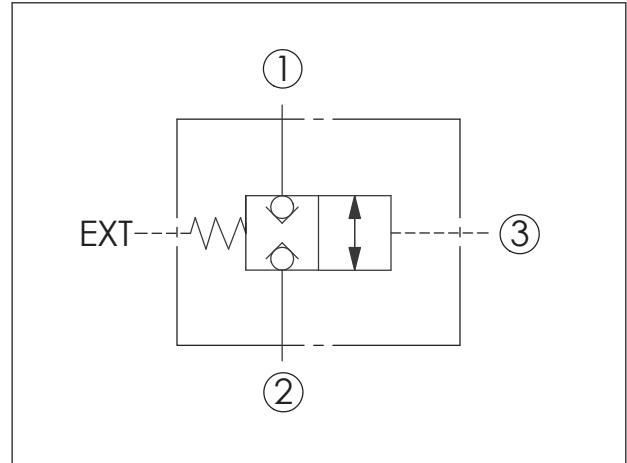
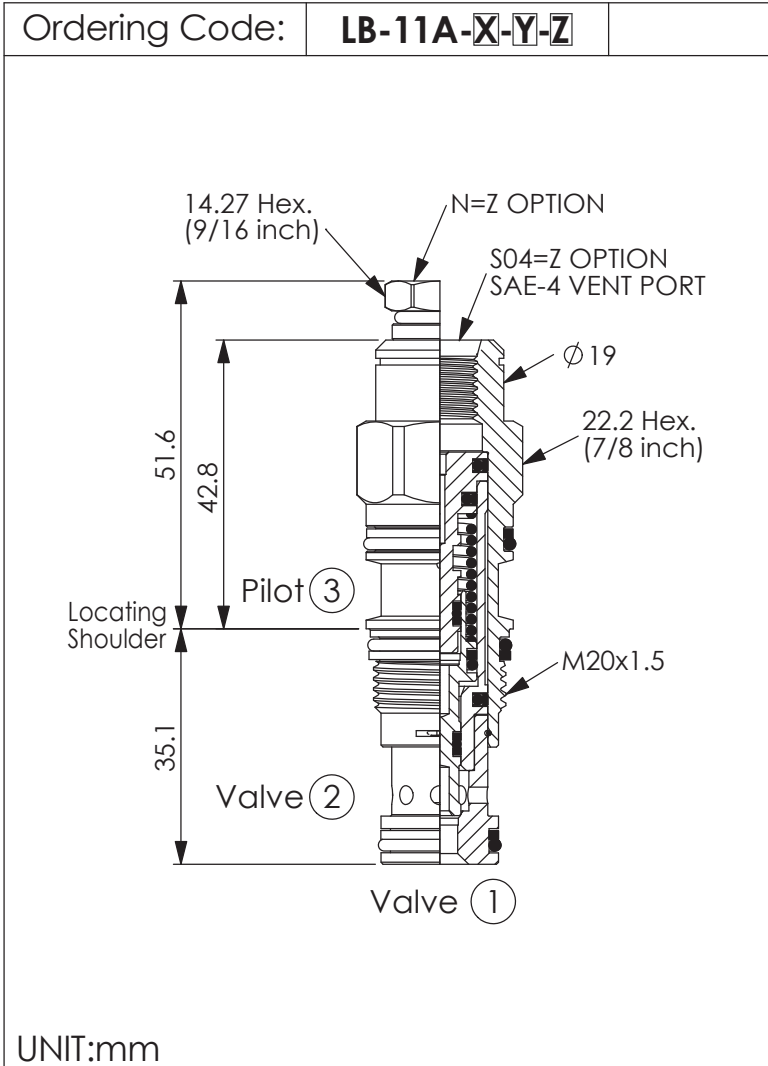
Y SPRINGS

Cracking pressure

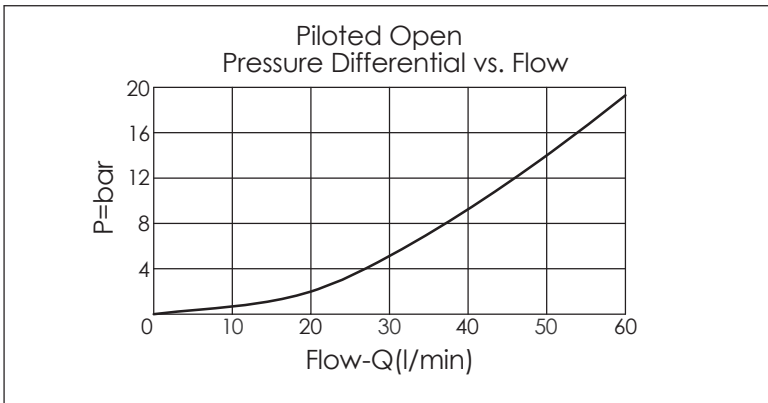
35 3.5 bar at port ③

Z OPTIONS

N Non-adjustable



TECHNICAL DATA		
Max. pressure:	350	bar
Rated flow:	60	l/min
Cavity-Tooling:	11A-3	
Installation torque:	40-50	Nm
Weight:	0.14 (Z:N)	kg
	0.13 (Z:S04)	



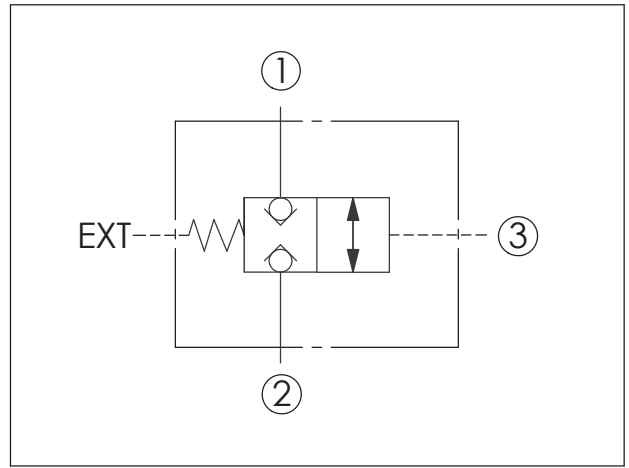
X	OPERATION	
3S	Normally Closed, Balanced Poppet	
	<ul style="list-style-type: none"> • Maximum Leakage (0.7 cc/min./70 bar) (46 cSt, 40°C) • All ports will accept 350 bar. 	

Y	SPRINGS	
	MINIMUM PILOT PRESSURE	
28	28 bar	

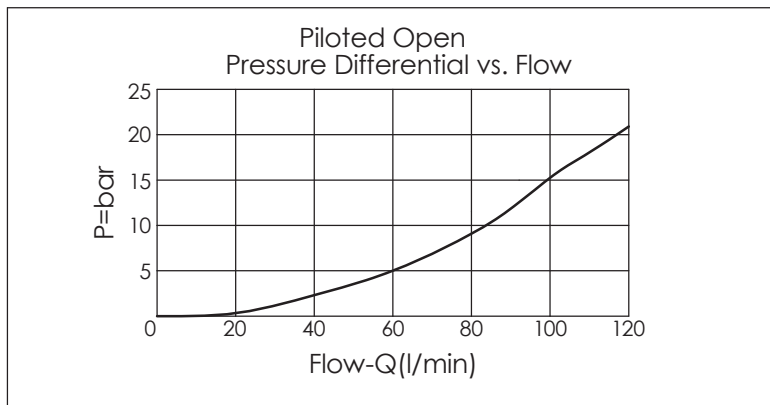
Z	OPTIONS	
N	Non-adjustable	
S04	External SAE-4 Port (7/16"-20UNF-2B)	

Ordering Code: **LB-2A-X-Y-Z**

UNIT:mm



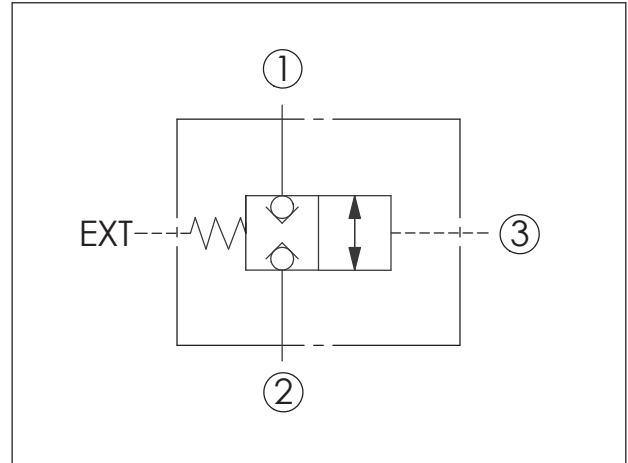
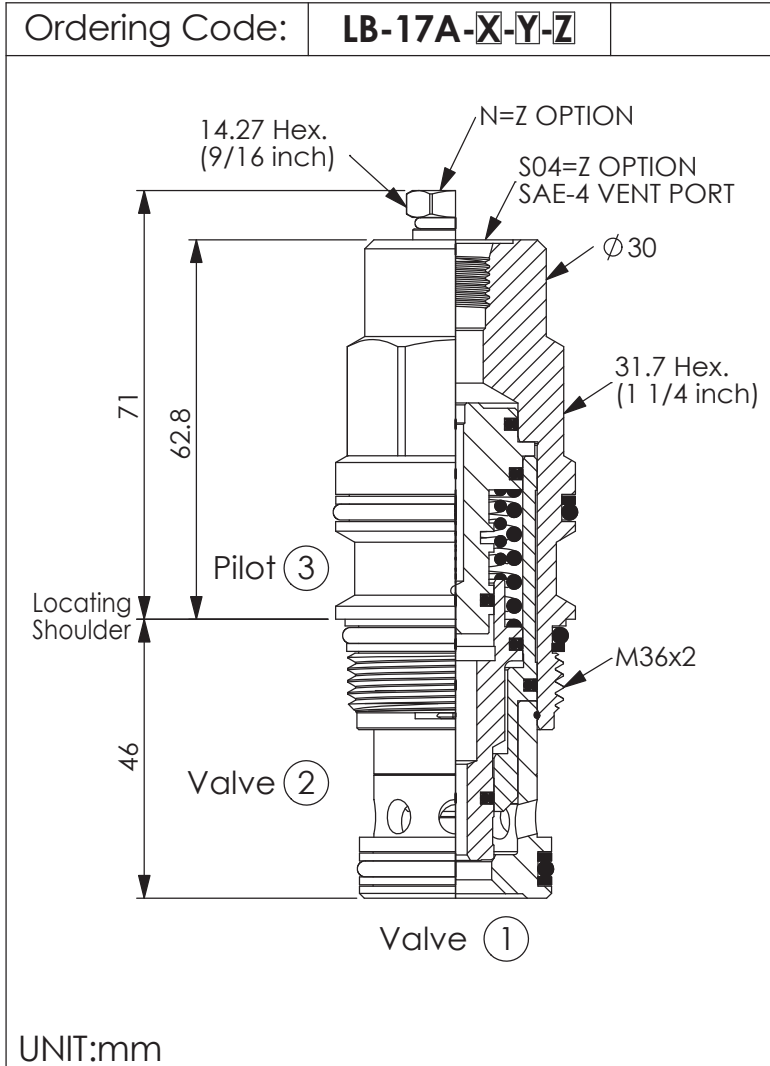
TECHNICAL DATA		
Max. pressure:	350	bar
Rated flow:	120	l/min
Cavity-Tooling:	2A-3	
Installation torque:	60-70	Nm
Weight:	0.27 (Z:N)	kg
	0.26 (Z:S04)	



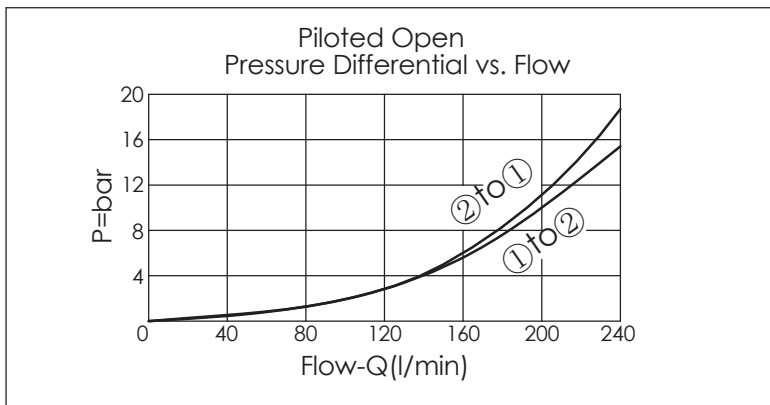
X	OPERATION	
3S	Normally Closed, Balanced Poppet	
	<ul style="list-style-type: none"> Maximum Leakage (0.7 cc/min./70 bar) (46 cSt, 40°C) All ports will accept 350 bar. 	

Y	SPRINGS	
	MINIMUM PILOT PRESSURE	
20	20 bar	

Z	OPTIONS	
N	Non-adjustable	
S04	External SAE-4 Port (7/16"-20UNF-2B)	



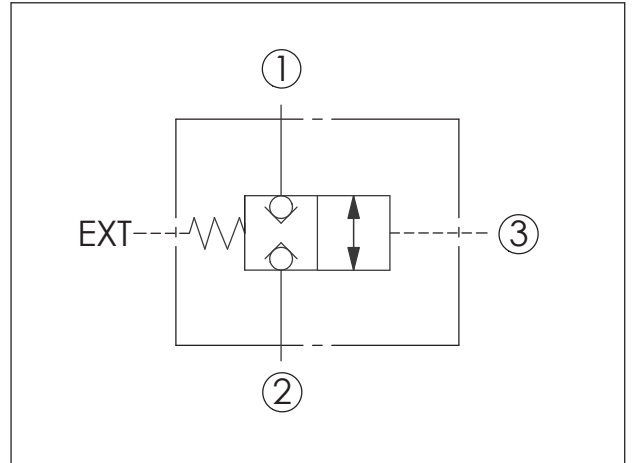
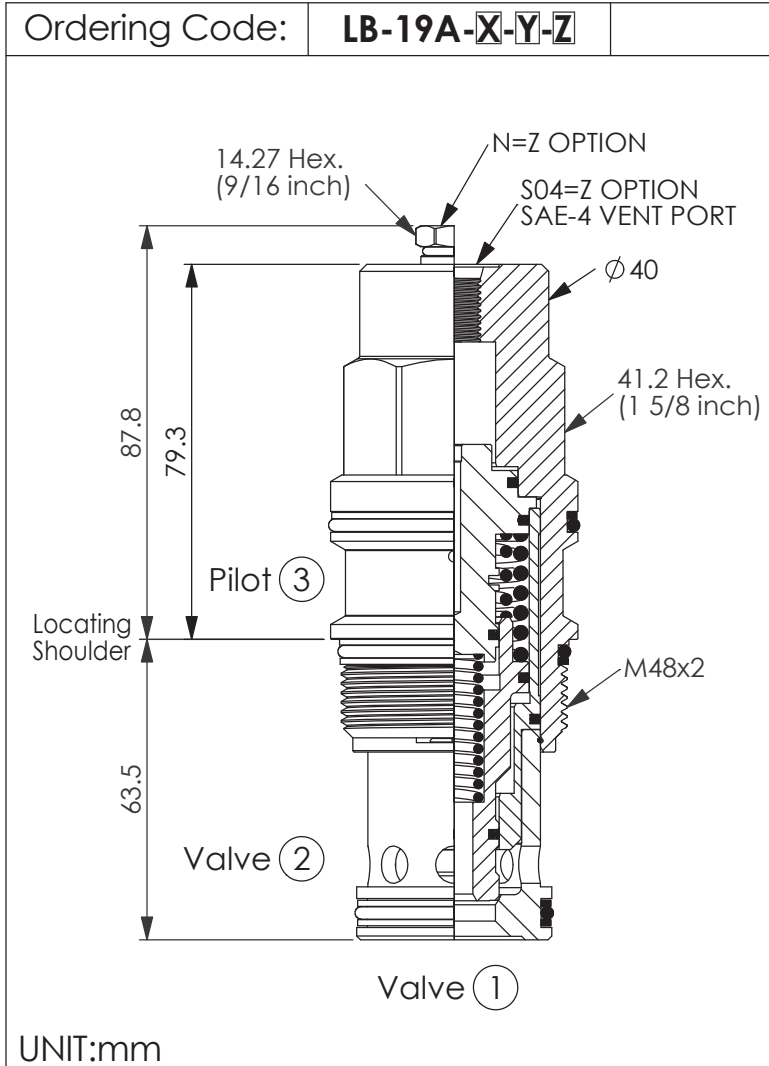
TECHNICAL DATA		
Max. pressure:	350	bar
Rated flow:	240	l/min
Cavity-Tooling:	17A-3	
Installation torque:	200-215	Nm
Weight:	0.60 (Z:N)	kg
	0.59 (Z:S04)	



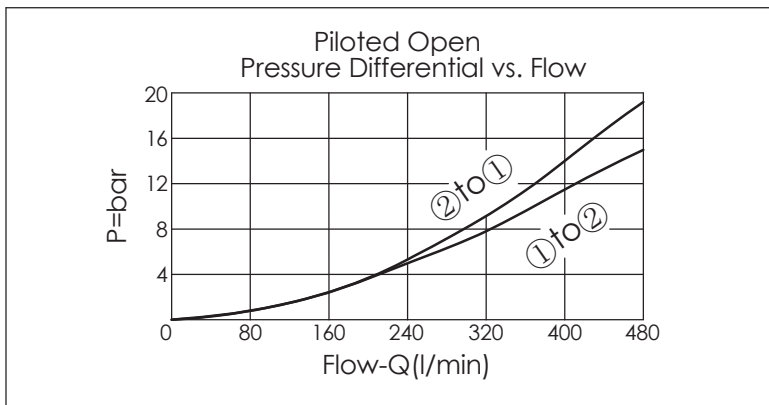
X	OPERATION	
3S	Normally Closed, Balanced Poppet	
	<ul style="list-style-type: none"> Maximum Leakage (0.7 cc/min./70 bar) (46 cSt, 40°C) All ports will accept 350 bar. 	

Y	SPRINGS	
	MINIMUM PILOT PRESSURE	
20	20 bar	

Z	OPTIONS	
N	Non-adjustable	
S04	External SAE-4 Port (7/16"-20UNF-2B)	



TECHNICAL DATA		
Max. pressure:	350	bar
Rated flow:	480	l/min
Cavity-Tooling:	19A-3	
Installation torque:	475-508	Nm
Weight:	1.40 (Z:N)	kg
	1.39 (Z:S04)	

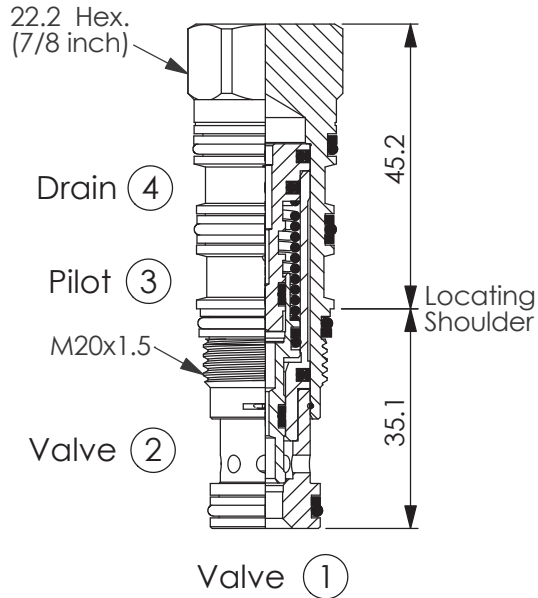


X	OPERATION	
3S	Normally Closed, Balanced Poppet	
<ul style="list-style-type: none"> Maximum Leakage (0.7 cc/min./70 bar) (46 cSt, 40°C) All ports will accept 350 bar. 		

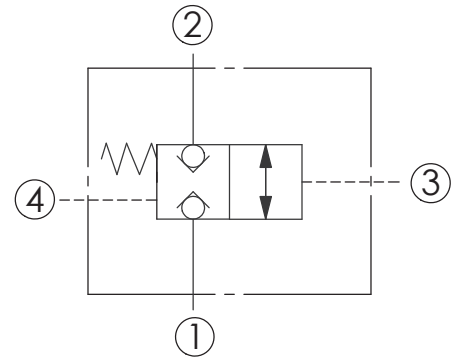
Y	SPRINGS	
	MINIMUM PILOT PRESSURE	
20	20 bar	

Z	OPTIONS	
N	Non-adjustable	
S04	External SAE-4 Port (7/16"-20UNF-2B)	

Ordering Code: **LB-21A-X-Y-Z**

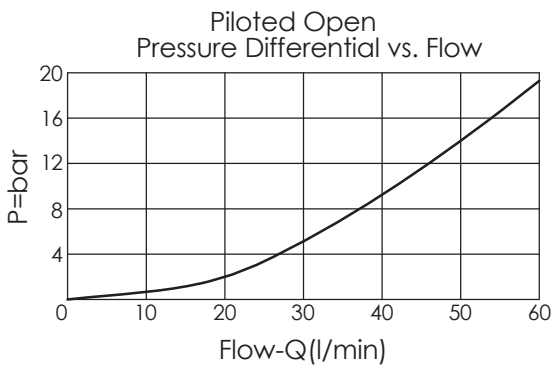


UNIT:mm



TECHNICAL DATA

Max. pressure:	350	bar
Rated flow:	60	l/min
Cavity-Tooling:	21A-4	
Installation torque:	40-50	Nm
Weight:	0.16	kg



X

OPERATION

4S

Normally Closed,
Balanced Poppet

- Maximum Leakage (0.7 cc/min./70 bar) (46 cSt, 40°C)
- All ports will accept 350 bar.

Y

SPRINGS

MINIMUM PILOT PRESSURE

28

28 bar

Z

OPTIONS

N

Non-adjustable

Ordering Code: **LB-22A-X-Y-Z**

31.7 Hex.
(1 1/4 inch)

Drain (4)

Pilot (3)

M36x2

Valve (2)

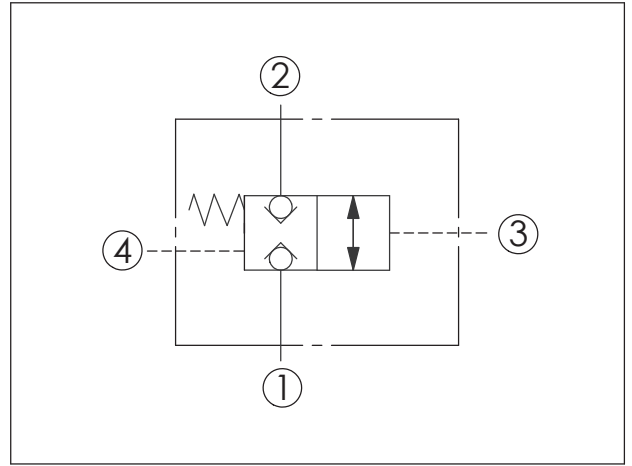
Valve (1)

50.8

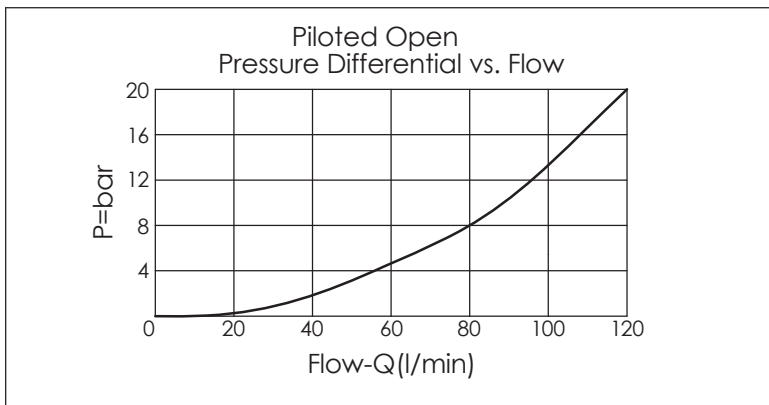
35.1

Locating Shoulder

UNIT:mm



TECHNICAL DATA		
Max. pressure:	350	bar
Rated flow:	120	l/min
Cavity-Tooling:	22A-4	
Installation torque:	60-70	Nm
Weight:	0.29	kg

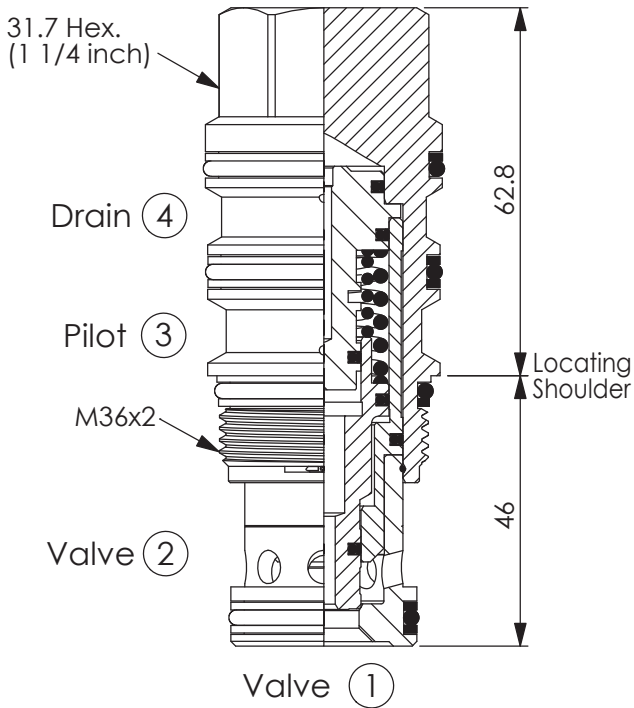


X	OPERATION	
4S	Normally Closed, Balanced Poppet	
<ul style="list-style-type: none"> Maximum Leakage (0.7 cc/min./70 bar) (46 cSt, 40°C) All ports will accept 350 bar. 		

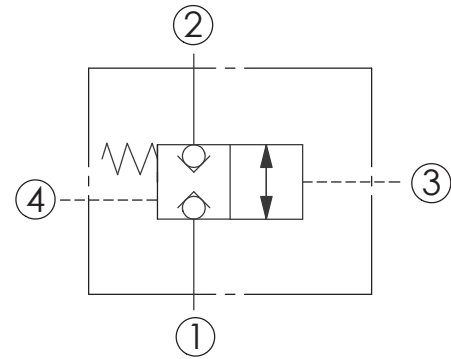
Y	SPRINGS	
	MINIMUM PILOT PRESSURE	
20	20 bar	

Z	OPTIONS	
N	Non-adjustable	

Ordering Code: **LB-23A-X-Y-Z**

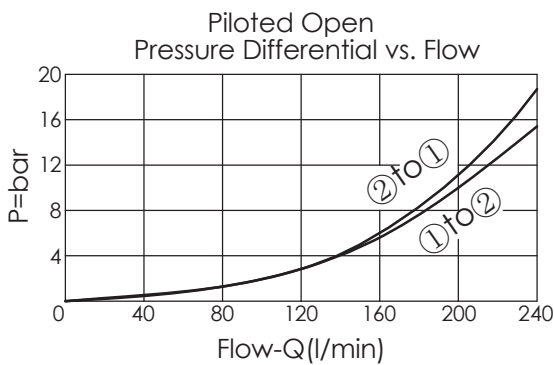


UNIT:mm



TECHNICAL DATA

Max. pressure:	350	bar
Rated flow:	240	l/min
Cavity-Tooling:	23A-4	
Installation torque:	200-215	Nm
Weight:	0.67	kg



X

OPERATION

4S

Normally Closed,
Balanced Poppet

- Maximum Leakage (0.7 cc/min./70 bar) (46 cSt, 40°C)
- All ports will accept 350 bar.

Y

SPRINGS

MINIMUM PILOT PRESSURE

20

20 bar

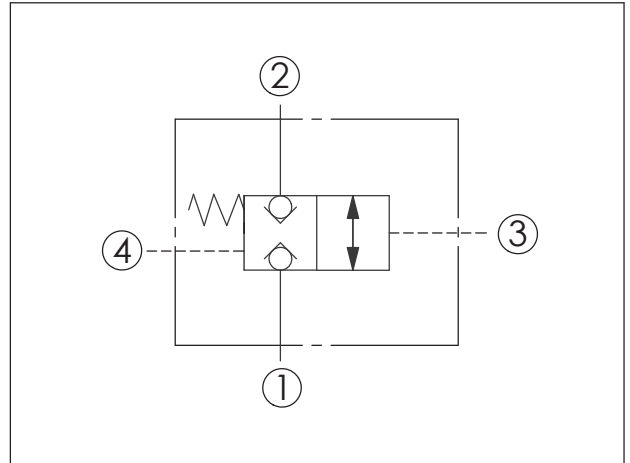
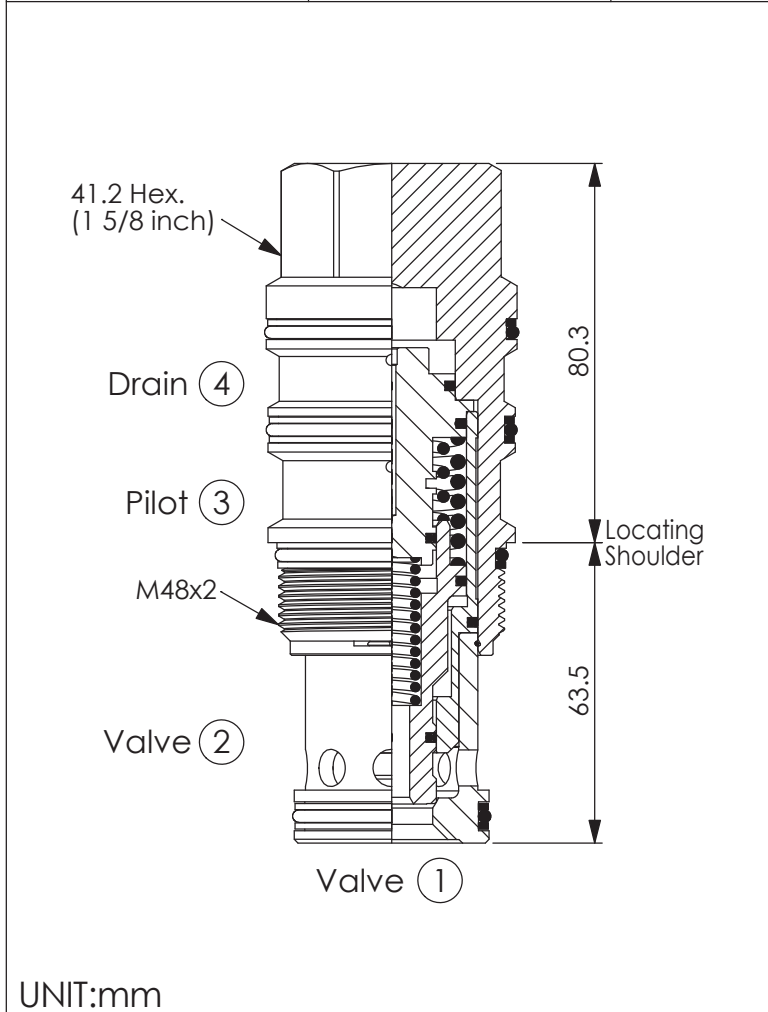
Z

OPTIONS

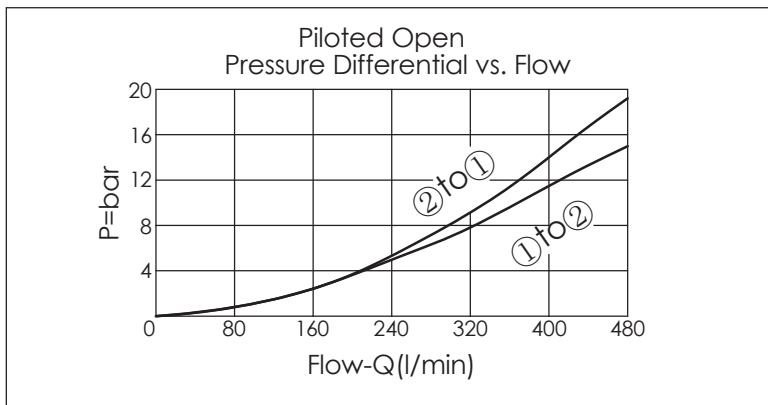
N

Non-adjustable

Ordering Code: **LB-24A-X-Y-Z**



TECHNICAL DATA		
Max. pressure:	350	bar
Rated flow:	480	l/min
Cavity-Tooling:	24A-4	
Installation torque:	475-500	Nm
Weight:	1.51	kg



X	OPERATION	
4S	Normally Closed, Balanced Poppet	
<ul style="list-style-type: none"> Maximum Leakage (0.7 cc/min./70 bar) (46 cSt, 40°C) All ports will accept 350 bar. 		

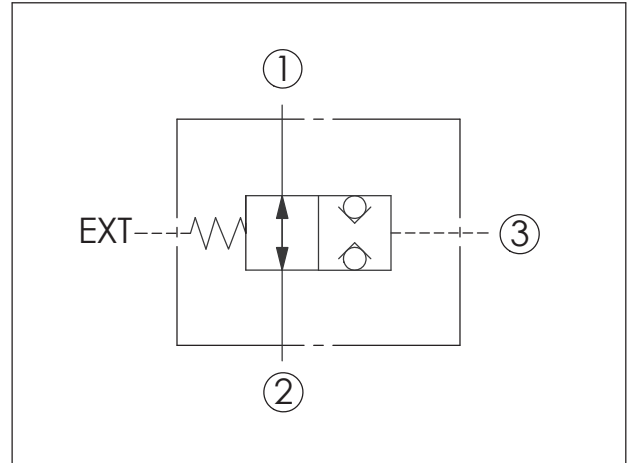
Y	SPRINGS	
	MINIMUM PILOT PRESSURE	
20	20 bar	

Z	OPTIONS	
N	Non-adjustable	

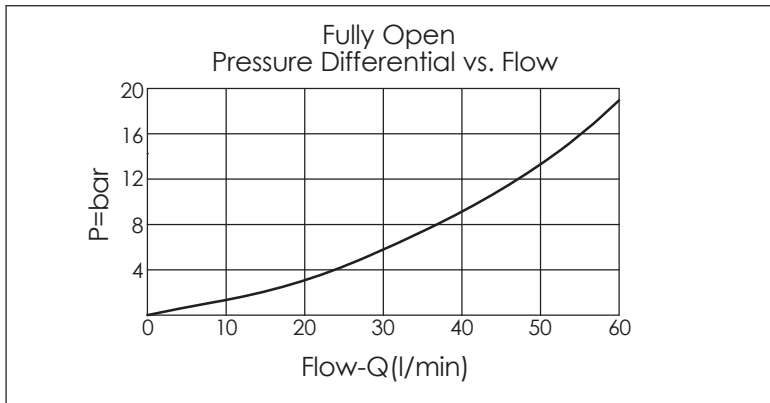
LOGIC ELEMENTS (Pilot-to-closed, Normally open, balanced poppet, logic element)

Ordering Code: **LN-11A-X-Y-Z**

UNIT:mm



TECHNICAL DATA		
Max. pressure:	350	bar
Rated flow:	60	l/min
Cavity-Tooling:	11A-3	
Installation torque:	40-50	Nm
Weight:	0.15	kg



X	OPERATION	
3S	Normally Open, Balanced Poppet	
<ul style="list-style-type: none"> Maximum Leakage (0.7 cc/min.) (46 cSt, 40°C) All ports will accept 350 bar. 		

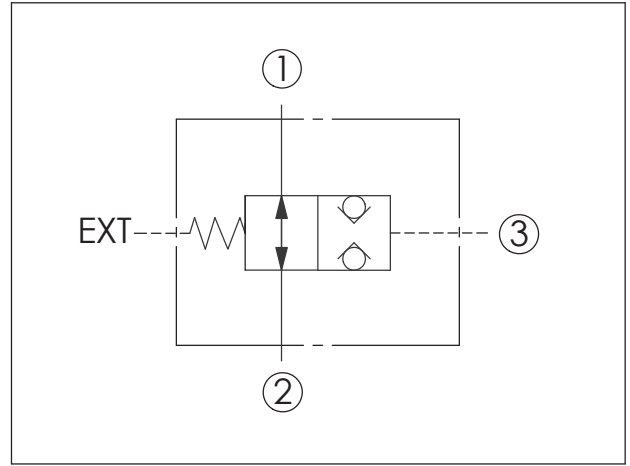
Y	SPRINGS	
	MINIMUM PILOT PRESSURE	
28	28 bar	

Z	OPTIONS	
N	Non-adjustable	

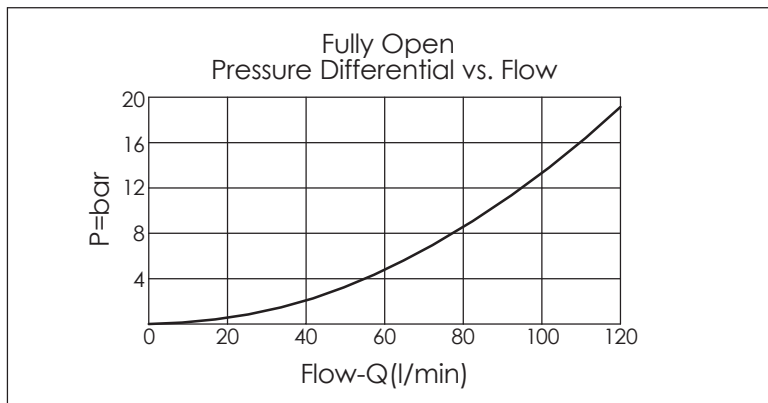
LOGIC ELEMENTS (Pilot-to-closed, Normally open, balanced poppet, logic element)

Ordering Code: **LN-2A-X-Y-Z**

UNIT:mm



TECHNICAL DATA		
Max. pressure:	350	bar
Rated flow:	120	l/min
Cavity-Tooling:	2A-3	
Installation torque:	60-70	Nm
Weight:	0.27	kg



X	OPERATION	
3S	Normally Open, Balanced Poppet	
<ul style="list-style-type: none"> Maximum Leakage (0.7 cc/min.) (46 cSt, 40°C) All ports will accept 350 bar. 		

Y	SPRINGS	
	MINIMUM PILOT PRESSURE	
20	20 bar	

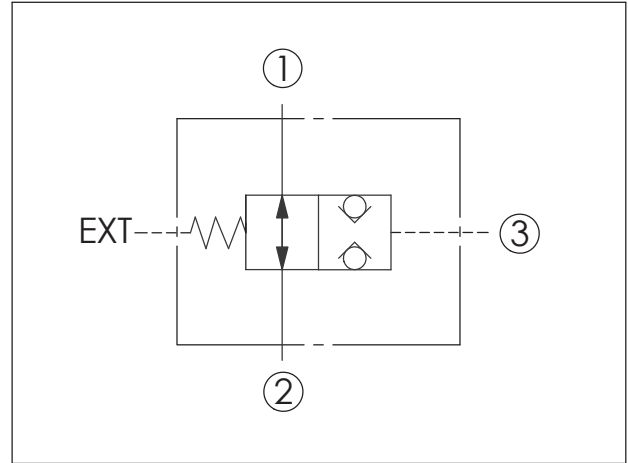
Z	OPTIONS	
N	Non-adjustable	

LOGIC ELEMENTS

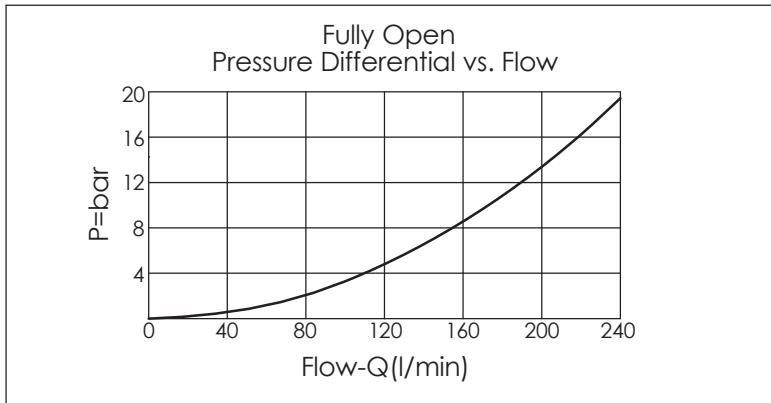
Ordering Code: **LN-17A-X-Y-Z**

14.27 Hex. (9/16 inch)
 N=Z OPTION
 31.7 Hex. (1 1/4 inch)
 62.8
 71
 Locating Shoulder
 46
 M36x2
 1
 2
 3

UNIT:mm



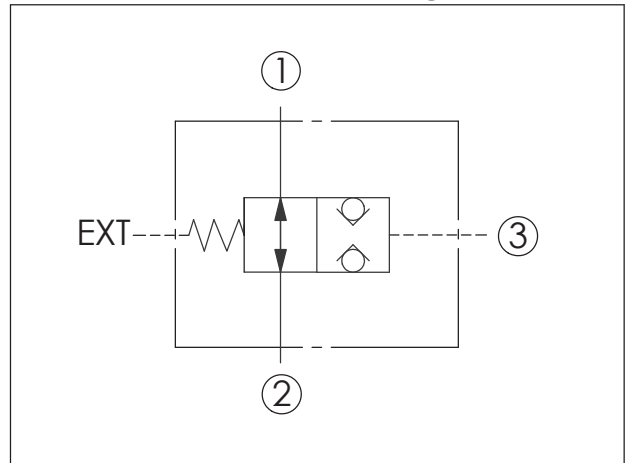
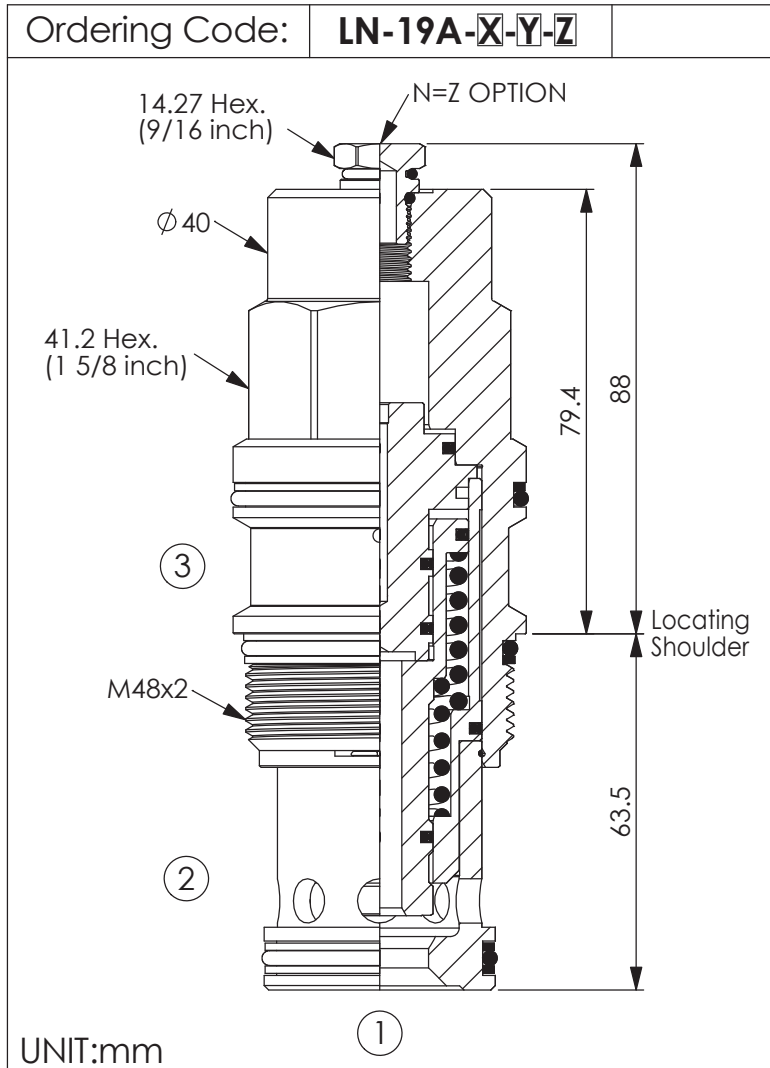
TECHNICAL DATA		
Max. pressure:	350	bar
Rated flow:	240	l/min
Cavity-Tooling:	17A-3	
Installation torque:	200-215	Nm
Weight:	0.60	kg



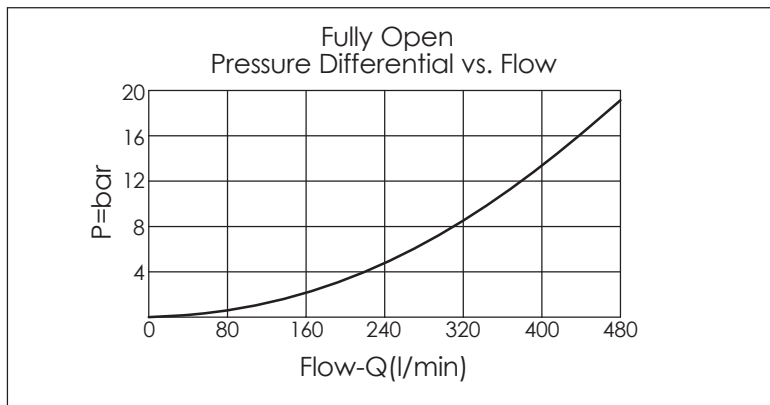
X	OPERATION	
3S	Normally Open, Balanced Poppet	
<ul style="list-style-type: none"> Maximum Leakage (0.7 cc/min.) (46 cSt, 40°C) All ports will accept 350 bar. 		

Y	SPRINGS	
	MINIMUM PILOT PRESSURE	
20	20 bar	

Z	OPTIONS	
N	Non-adjustable	



TECHNICAL DATA		
Max. pressure:	350	bar
Rated flow:	480	l/min
Cavity-Tooling:	19A-3	
Installation torque:	465-500	Nm
Weight:	1.38	kg



X	OPERATION	
3S	Normally Open, Balanced Poppet	
<ul style="list-style-type: none"> Maximum Leakage (0.7 cc/min.) (46 cSt, 40°C) All ports will accept 350 bar. 		

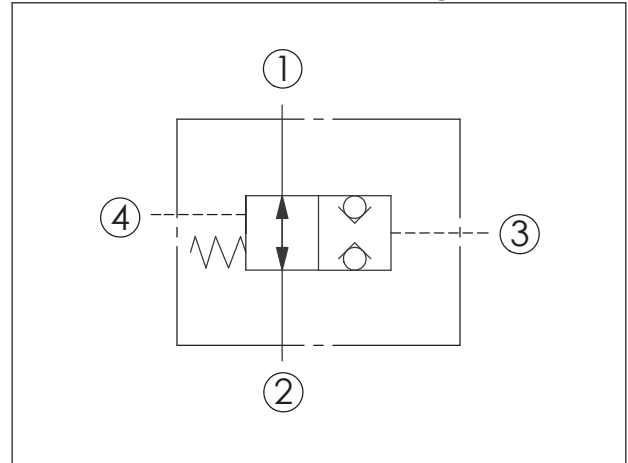
Y	SPRINGS	
	MINIMUM PILOT PRESSURE	
20	20 bar	

Z	OPTIONS	
N	Non-adjustable	

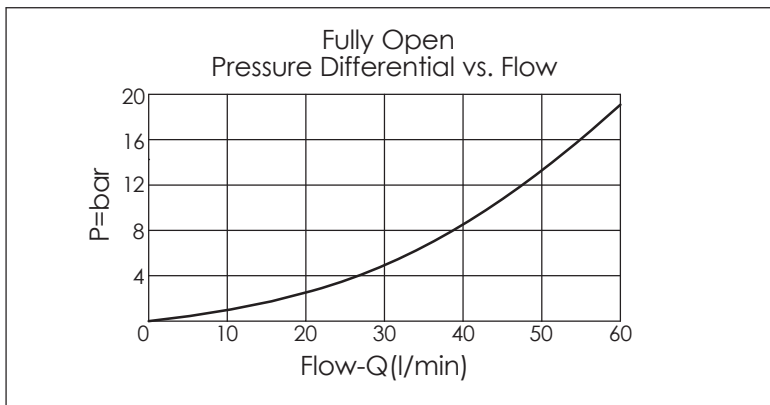
LOGIC ELEMENTS (Pilot-to-closed, Normally open, balanced poppet, logic element)

Ordering Code: **LN-21A-X-Y-Z**

UNIT:mm



TECHNICAL DATA		
Max. pressure:	350	bar
Rated flow:	60	l/min
Cavity-Tooling:	21A-4	
Installation torque:	40-50	Nm
Weight:	0.16	kg



X	OPERATION	
4S	Normally Open, Balanced Poppet	
<ul style="list-style-type: none"> Maximum Leakage (0.7 cc/min.) (46 cSt, 40°C) All ports will accept 350 bar. 		

Y	SPRINGS	
	MINIMUM PILOT PRESSURE	
28	28 bar	

Z	OPTIONS	
N	Non-adjustable	

Ordering Code: **LN-22A-X-Y-Z**

28.57 Hex.
(1 1/8 inch)

Drain ④

Pilot ③

1.00-14UNS-2A

Valve ②

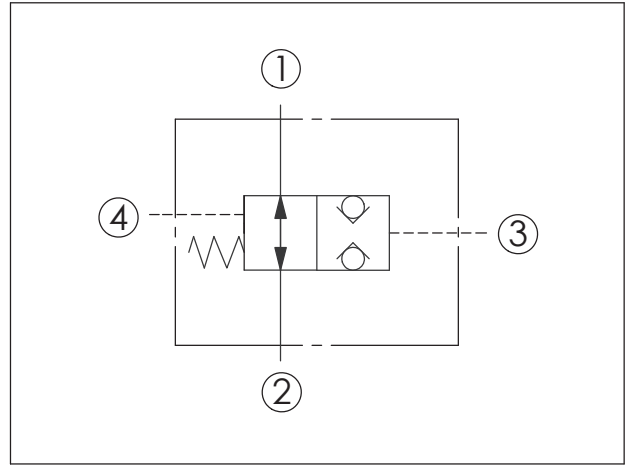
Valve ①

50.8

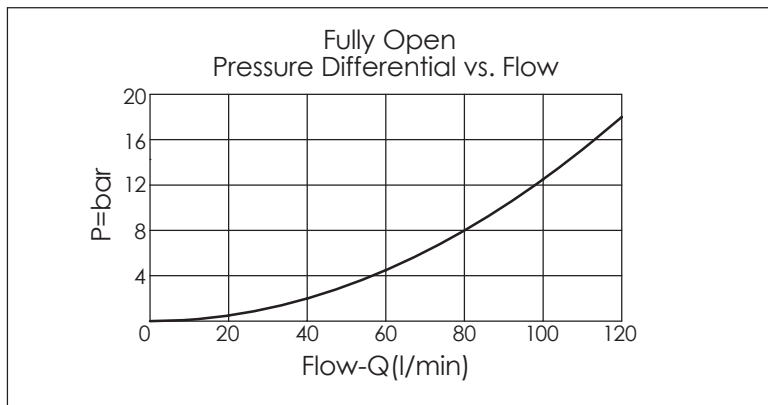
35.1

Locating Shoulder

UNIT:mm



TECHNICAL DATA		
Max. pressure:	350	bar
Rated flow:	120	l/min
Cavity-Tooling:	22A-4	
Installation torque:	60-70	Nm
Weight:	0.28	kg



X	OPERATION	
4S	Normally Open, Balanced Poppet	
<ul style="list-style-type: none"> Maximum Leakage (0.7 cc/min.) (46 cSt, 40°C) All ports will accept 350 bar. 		

Y	SPRINGS	
	MINIMUM PILOT PRESSURE	
20	20 bar	

Z	OPTIONS	
N	Non-adjustable	

(Pilot-to-closed, Normally open, balanced poppet, logic element)

LOGIC ELEMENTS

Ordering Code: **LN-23A-X-Y-Z**

31.7 Hex.
(1 1/4 inch)

Drain ④

Pilot ③

M36x2

Valve ②

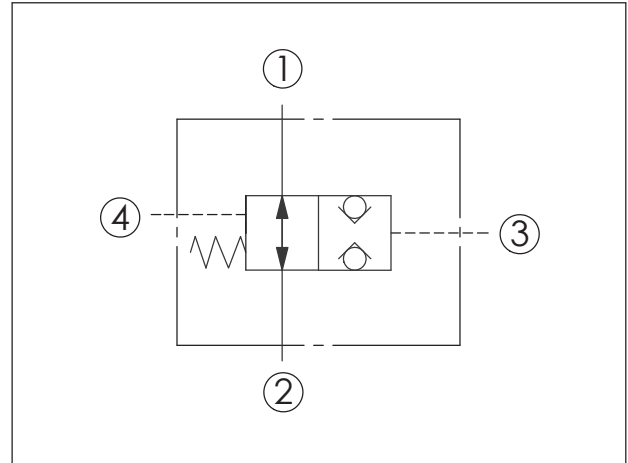
Valve ①

63

46

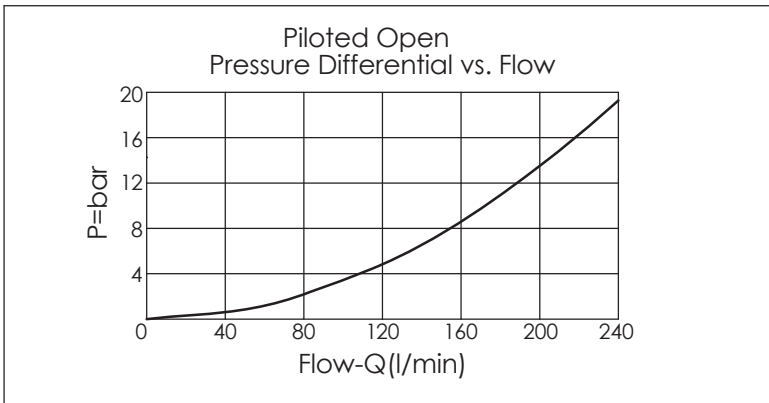
Locating Shoulder

UNIT:mm



TECHNICAL DATA

Max. pressure:	350	bar
Rated flow:	240	l/min
Cavity-Tooling:	23A-4	
Installation torque:	200-215	Nm
Weight:	0.67	kg



X

OPERATION

4S

Normally Open,
Balanced Poppet

- Maximum Leakage (0.7 cc/min.) (46 cSt, 40°C)
- All ports will accept 350 bar.

Y

SPRINGS

MINIMUM PILOT PRESSURE

20

20 bar

Z

OPTIONS

N

Non-adjustable

LOGIC ELEMENTS (Pilot-to-closed, Normally open, balanced poppet, logic element)

Ordering Code: **LN-24A-X-Y-Z**

41.2 Hex.
(1 5/8 inch)

Drain (4)

Pilot (3)

M48x2

Valve (2)

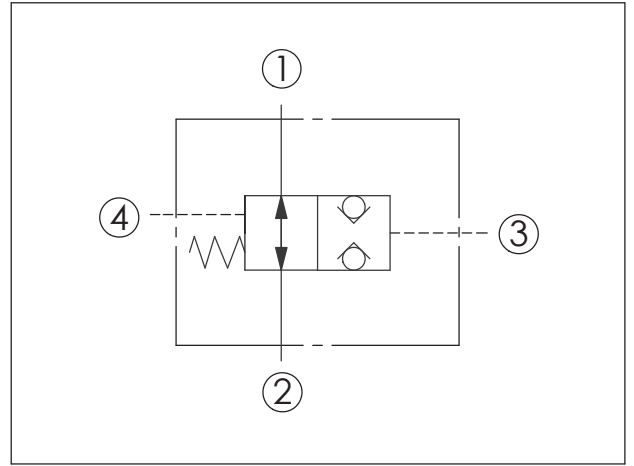
Valve (1)

Locating Shoulder

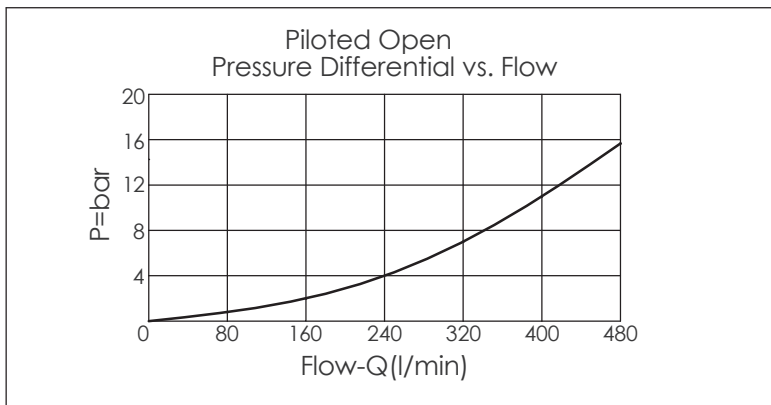
80

64

UNIT:mm



TECHNICAL DATA		
Max. pressure:	350	bar
Rated flow:	480	l/min
Cavity-Tooling:	24A-4	
Installation torque:	465-500	Nm
Weight:	1.52	kg



X	OPERATION	
4S	Normally Open, Balanced Poppet	
<ul style="list-style-type: none"> • Maximum Leakage (0.7 cc/min.) (46 cSt, 40°C) • All ports will accept 350 bar. 		

Y	SPRINGS	
	MINIMUM PILOT PRESSURE	
20	20 bar	

Z	OPTIONS	
N	Non-adjustable	

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