



ZAWORY REDUKCYJNO-PRZELEWOWE

REDUCING/RELIEVING VALVE (Direct Acting)

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

Control Option:
Maximum extension
from locating shoulder.
(L Control shown)

Ø19

22.2 Hex.
(7/8 inch)

76

Tank ③

M20x1.5

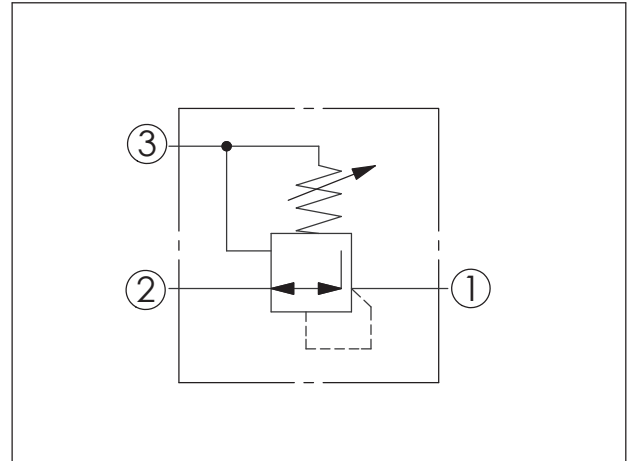
Inlet ②

Reduced Pressure ①

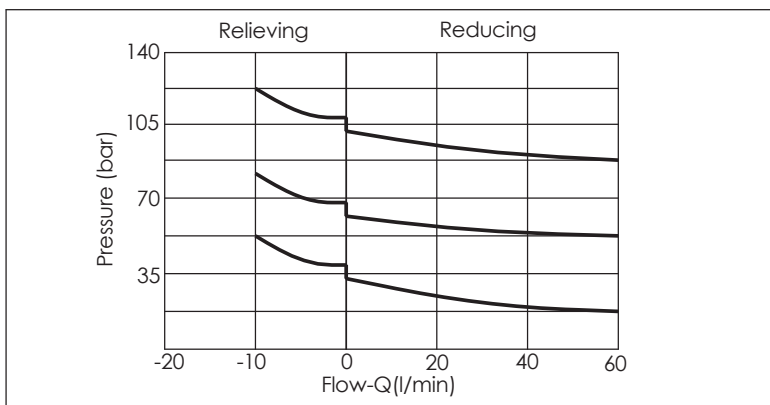
Locating Shoulder

35.1

UNIT:mm



TECHNICAL DATA	
Max.Operating pressure:	350 bar
Rated flow:	40 l/min
Cavity-Tooling:	11A-3
Installation torque:	40-50 Nm
Weight:	0.19 (Z:L) kg



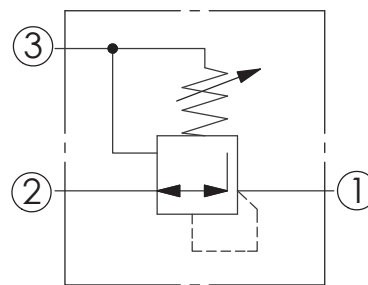
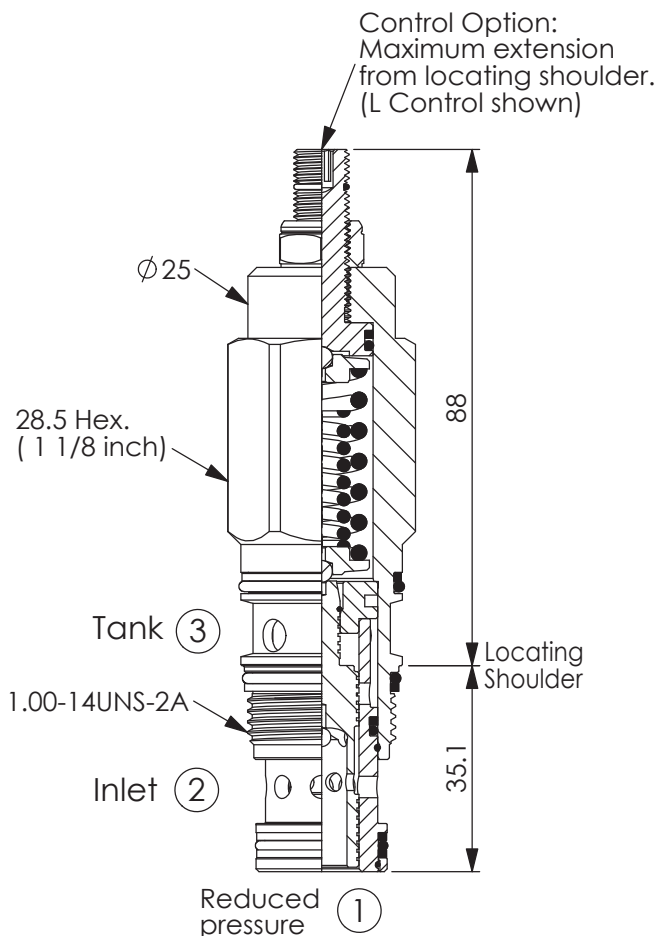
X	OPERATION	
30	Standard Type	
• Maximum Leakage (30 cc/min./70 bar) (46 cSt, 40°C)		

Y	SPRINGS	
	ADJUSTMENT RANGES	
A	35-210 bar (50 bar Standard Setting)	
B	3.5-105 bar (14 bar Standard Setting)	
D	1.7-55 bar (14 bar Standard Setting)	
E	1.7-28 bar (14 bar Standard Setting)	
H	7-210 bar (50 bar Standard Setting)	
S	1.7-14 bar (7 bar Standard Setting)	
W	50-315 bar (70 bar Standard Setting)	

Z	OPTIONS	
L	Leakproof hex. socket screw.	
LP	Leakproof hex. socket screw. With stainless steel external metal components	
C	Stainless Steel Tamper Resistant Cover.	
T	Three-winged Handknob Kit.	

REDUCING/RELIEVING VALVE (Direct Acting)

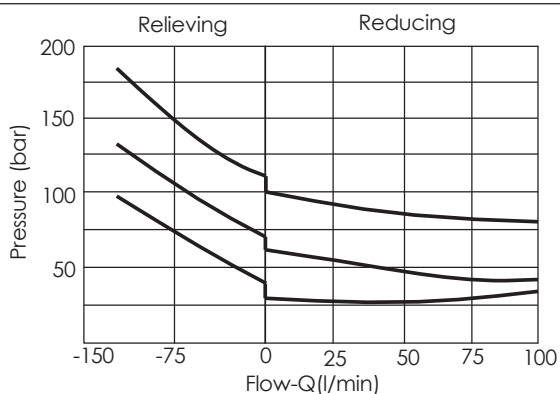
Ordering Code: **PD-2A-X-Y-Z**



TECHNICAL DATA

Max. Operating pressure:	350	bar
Rated flow:	80	l/min
Cavity-Tooling:	2A-3	
Installation torque:	60-70	Nm
Weight:	0.35 (Z:L)	kg

UNIT:mm



X OPERATION

30 Standard Type

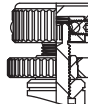
Maximum Leakage (50 cc/min./70 bar)
(46 cSt, 40°C)

Y SPRINGS

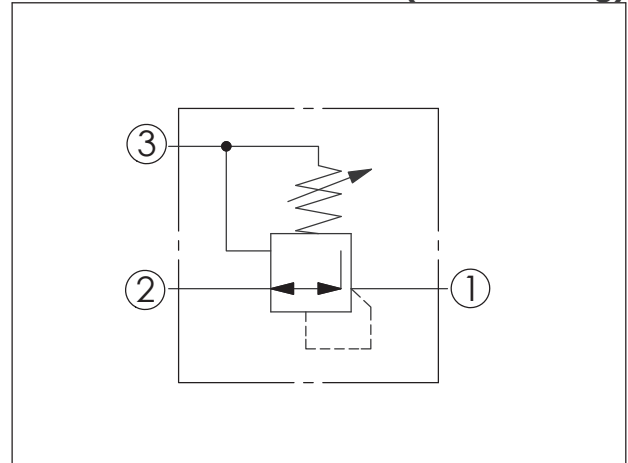
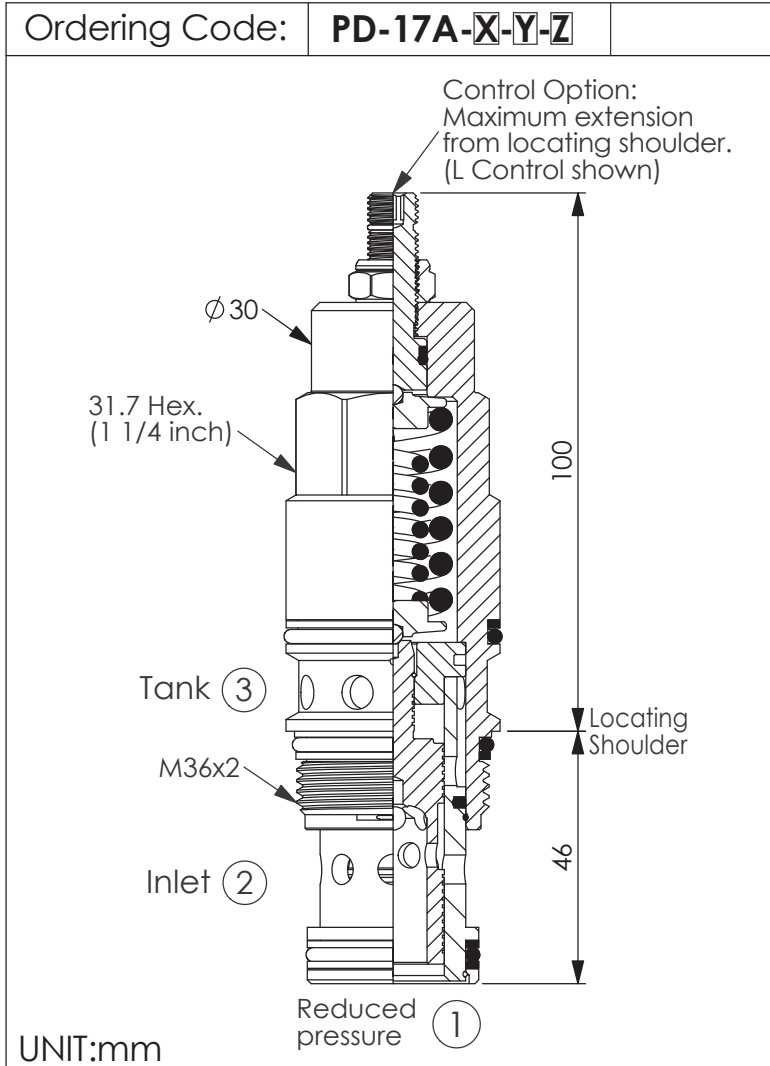
ADJUSTMENT RANGES

A	50-210 bar (70 bar Standard Setting)
B	20-105 bar (35 bar Standard Setting)
D	14-55 bar (28 bar Standard Setting)
E	7-28 bar (14 bar Standard Setting)
W	76-315 bar (76 bar Standard Setting)

Z OPTIONS

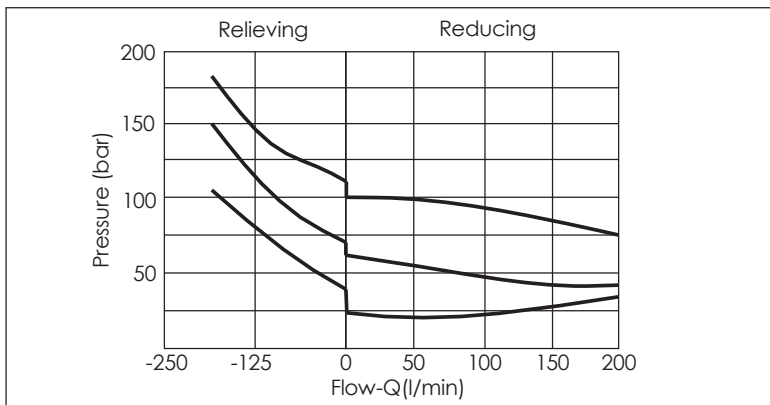
L	Leakproof hex. socket screw.	
C	Stainless Steel Tamper Resistant Cover.	
K	Handknob with Lock Knob.	

REDUCING/RELIEVING VALVE (Direct Acting)



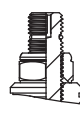
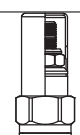
TECHNICAL DATA

Max.Operating pressure:	350	bar
Rated flow:	160	l/min
Cavity-Tooling:	17A-3	
Installation torque:	200-215	Nm
Weight:	0.70	kg

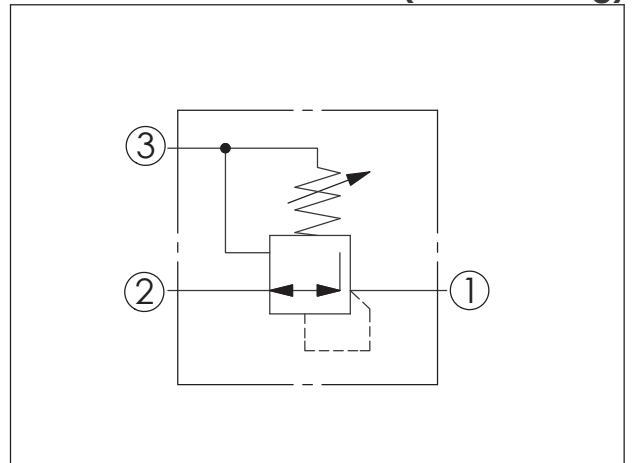
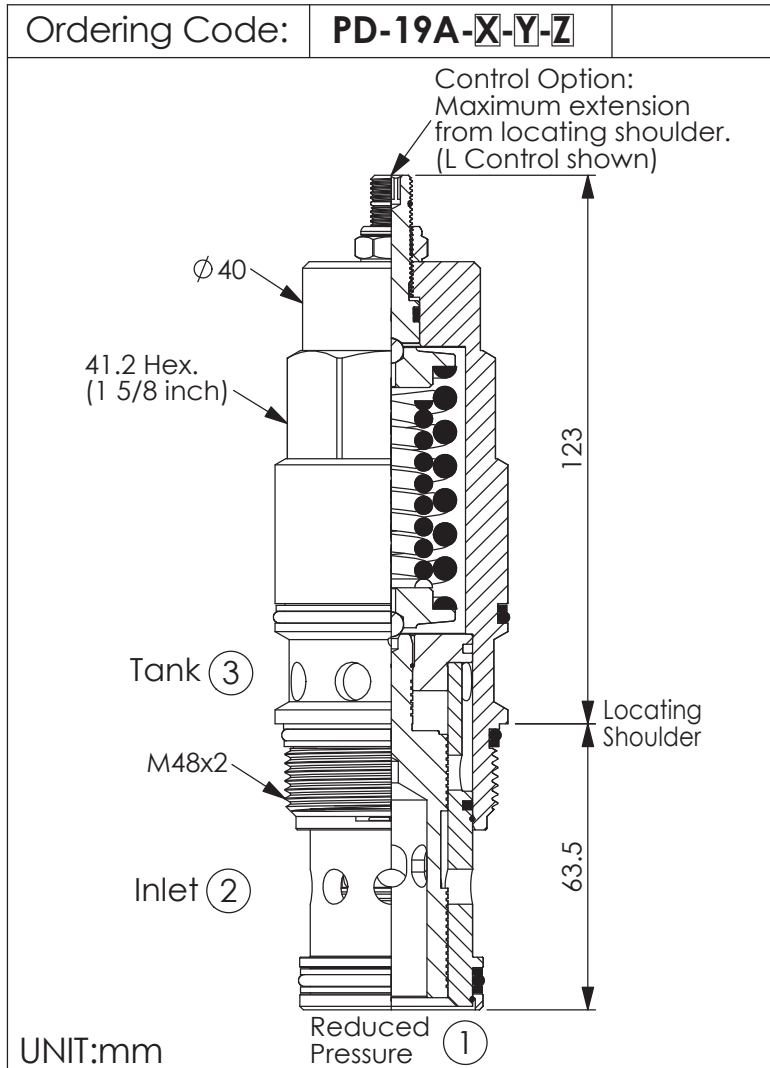


X	OPERATION
30	Standard Type
Maximum Leakage (66 cc/min./70 bar)	

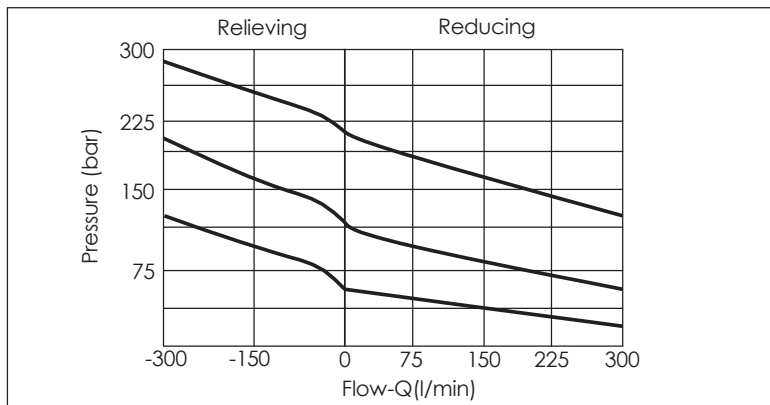
Y	SPRINGS
	ADJUSTMENT RANGES
A	50-210 bar (70 bar Standard Setting)
B	20-105 bar (35 bar Standard Setting)
D	14-55 bar (28 bar Standard Setting)
E	7-28 bar (14 bar Standard Setting)
W	76-315 bar (76 bar Standard Setting)

Z	OPTIONS
L	Leakproof hex. socket screw. 
C	Stainless Steel Tamper Resistant Cover. 

REDUCING/RELIEVING VALVE (Direct Acting)



TECHNICAL DATA	
Max.Operating pressure:	350 bar
Rated flow:	320 l/min
Cavity-Tooling:	19A-3
Installation torque:	465-500 Nm
Weight:	1.50 kg



X	OPERATION	
30	Standard Type	
Maximum Leakage (82 cc/min./70 bar)		

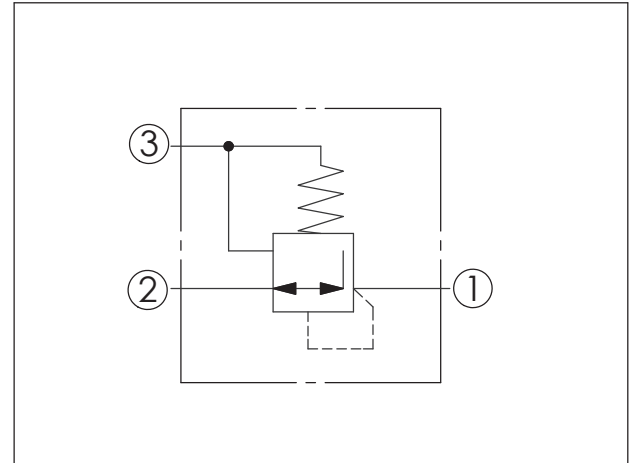
Y	SPRINGS	
ADJUSTMENT RANGES		
A	50-210 bar	(70 bar Standard Setting)
B	20-105 bar	(35 bar Standard Setting)
D	14-55 bar	(28 bar Standard Setting)
E	7-28 bar	(14 bar Standard Setting)
W	76-315 bar	(76 bar Standard Setting)

Z	OPTIONS	
L	Leakproof hex. socket screw.	
C	Stainless Steel Tamper Resistant Cover.	

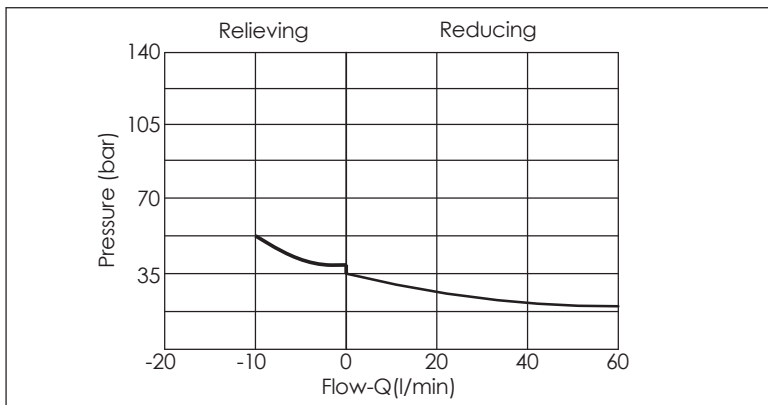
REDUCING/RELIEVING VALVE (Direct Acting, Fixed Setting)

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

UNIT:mm



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



X	OPERATION	
30	Standard Type	

Y	SPRINGS	
	Pressure Setting	
040	35-40 bar	

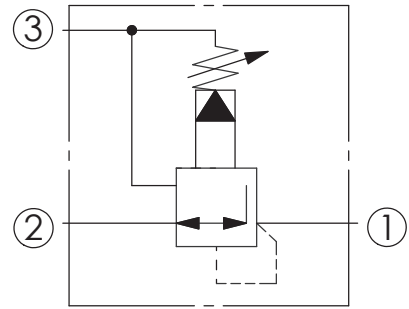
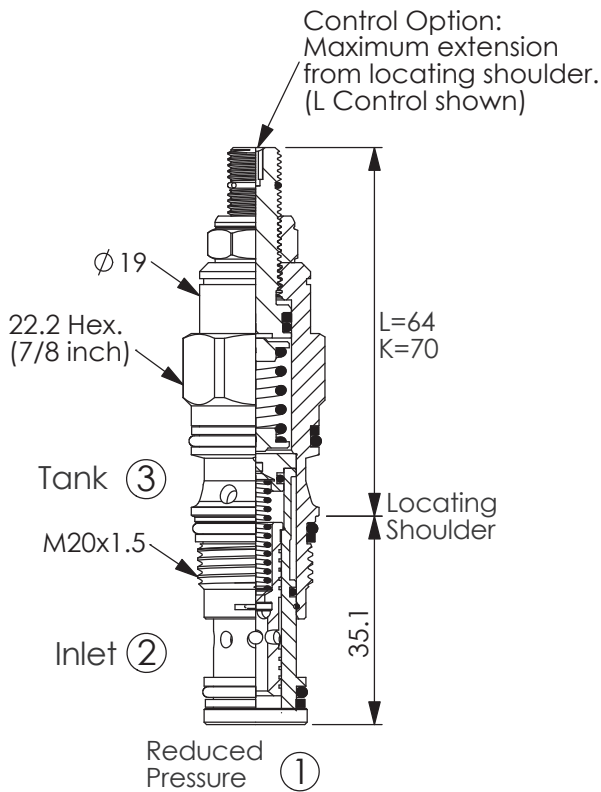
Z	OPTIONS	
N	Non-adjustable	

· This valve is customized.
Please advise the pressure range when ordering.

REDUCING/RELIEVING VALVE

(Pilot Operated Reducing/Relieving)

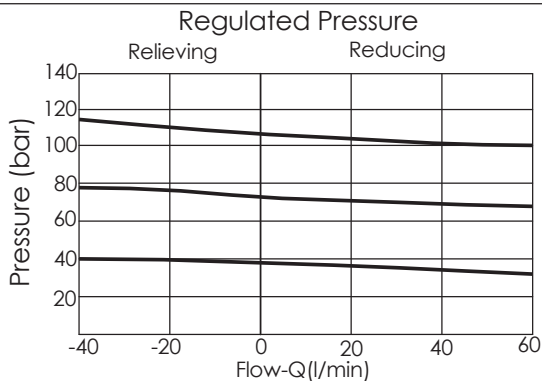
Ordering Code: **PP-11A-X-Y-Z**



TECHNICAL DATA

Max. Operating pressure:	350	bar
Rated flow:	40	l/min
Cavity-Tooling:	11A-3	
Installation torque:	40-50	Nm
Weight:	0.15 (Z:L,LP) 0.16 (Z:KF)	kg
Control Pilot Flow (0.11-0.16 L/min.)		

UNIT:mm



X OPERATION

30	Standard Type Low Leakage
33	Option Type Improved Dynamic Response
35	Impact Resistant Type (Without Filter)

Z OPTIONS

L	Leakproof hex. socket screw.	
K	Handknob with Lock Knob.	
KF	Handknob with Panel Mount.	
LP	Leakproof hex. socket screw. With stainless steel external metal components	

Y SPRINGS

ADJUSTMENT RANGES

A	7-210 bar (14 bar Standard Setting) Maximum Differential=210 bar
B	3.5-105 bar (14 bar Standard Setting) Maximum Differential=210 bar
D	1.7-55 bar (14 bar Standard Setting) Maximum Differential=140 bar
E	1.7-28 bar (14 bar Standard Setting) Maximum Differential=140 bar
N	4-55 bar (14 bar Standard Setting) Maximum Differential=140 bar
Q	4-28 bar (14 bar Standard Setting) Maximum Differential=140 bar
W	10.5-315 bar (14 bar Standard Setting) 350 bar inlet pressure

REDUCING/RELIEVING VALVE

(Pilot Operated Reducing/Relieving)

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

Control Option:
Maximum extension
from locating shoulder.
(L Control shown)

Ø25

28.5 Hex.
(1 1/8 inch)

L=71
K=78

Tank (3)

1.00-14UNS-2A

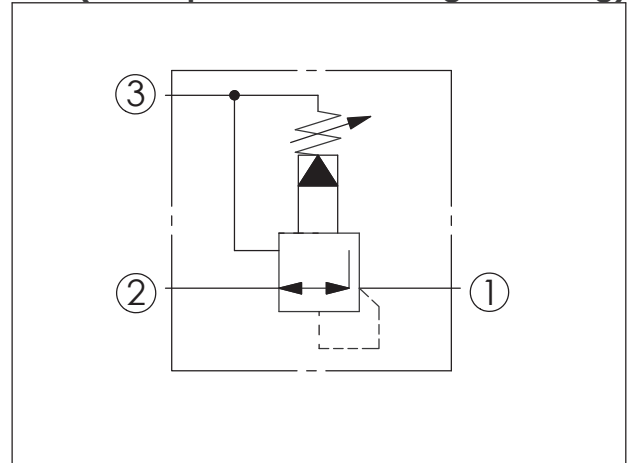
Inlet (2)

35.1

Reduced Pressure (1)

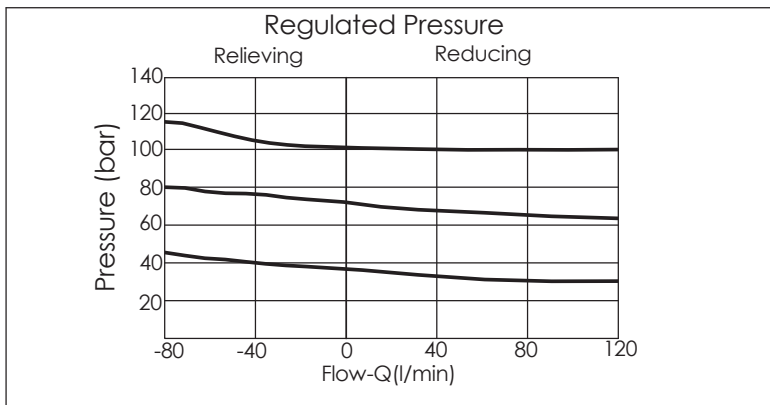
Locating Shoulder

UNIT:mm



TECHNICAL DATA

Max.Operating pressure:	350	bar
Rated flow:	80	l/min
Cavity-Tooling:	2A-3	
Installation torque:	60-70	Nm
Weight:	0.27	kg
Control Pilot Flow (0.16-0.25 L/min.)		



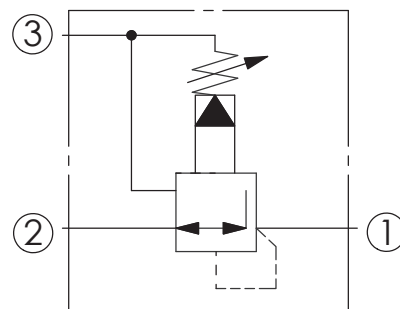
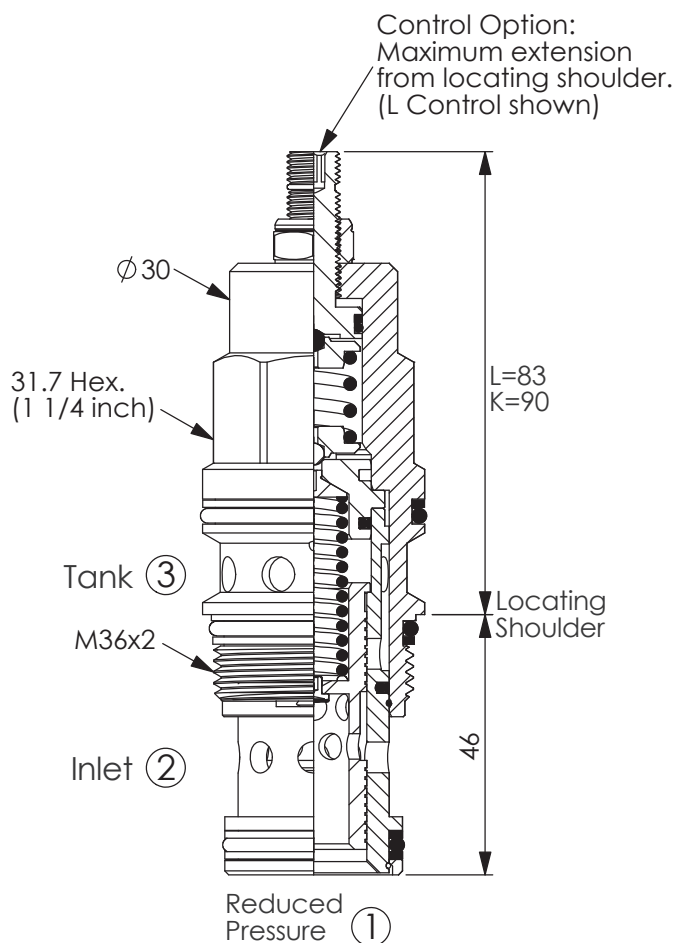
X	OPERATION	
30	Standard Type	Low Leakage
33	Option Type	Improved Dynamic Response
35	Impact Resistant Type	(Without Filter)

Y	SPRINGS	
ADJUSTMENT RANGES		
A	7-210 bar (14 bar Standard Setting)	Maximum Differential=210 bar
B	3.5-105 bar (14 bar Standard Setting)	Maximum Differential=210 bar
D	1.7-55 bar (14 bar Standard Setting)	Maximum Differential=140 bar
E	1.7-28 bar (14 bar Standard Setting)	Maximum Differential=140 bar
N	4-55 bar (14 bar Standard Setting)	Maximum Differential=140 bar
Q	4-28 bar (14 bar Standard Setting)	Maximum Differential=140 bar
W	10.5-315 bar (14 bar Standard Setting)	350 bar inlet pressure

Z	OPTIONS	
L	Leakproof hex. socket screw.	
K	Handknob with Lock Knob.	

REDUCING/RELIEVING VALVE (Pilot Operated Reducing/Relieving)

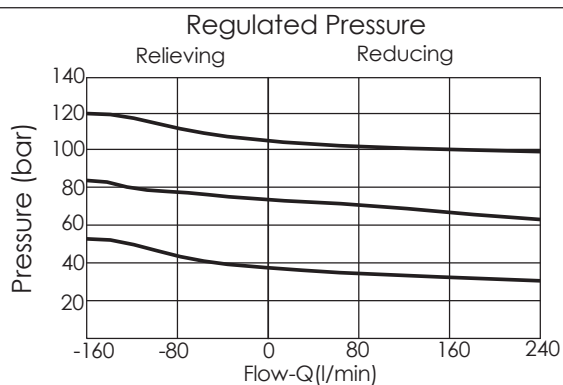
Ordering Code: **PP-17A-X-Y-Z**



TECHNICAL DATA

Max. Operating pressure:	350	bar
Rated flow:	160	l/min
Cavity-Tooling:	17A-3	
Installation torque:	200-215	Nm
Weight:	0.56	kg
Control Pilot Flow (0.25-0.33 L/min.)		

UNIT:mm



X OPERATION


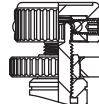
30	Standard Type Low Leakage
33	Option Type Improved Dynamic Response
35	Impact Resistant Type (Without Filter)

Y SPRINGS

ADJUSTMENT RANGES

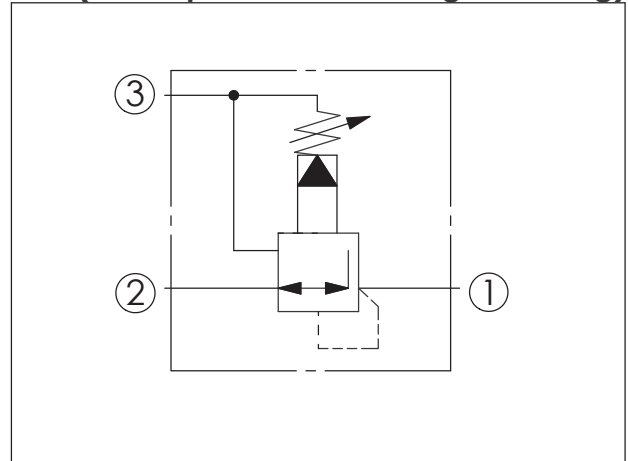
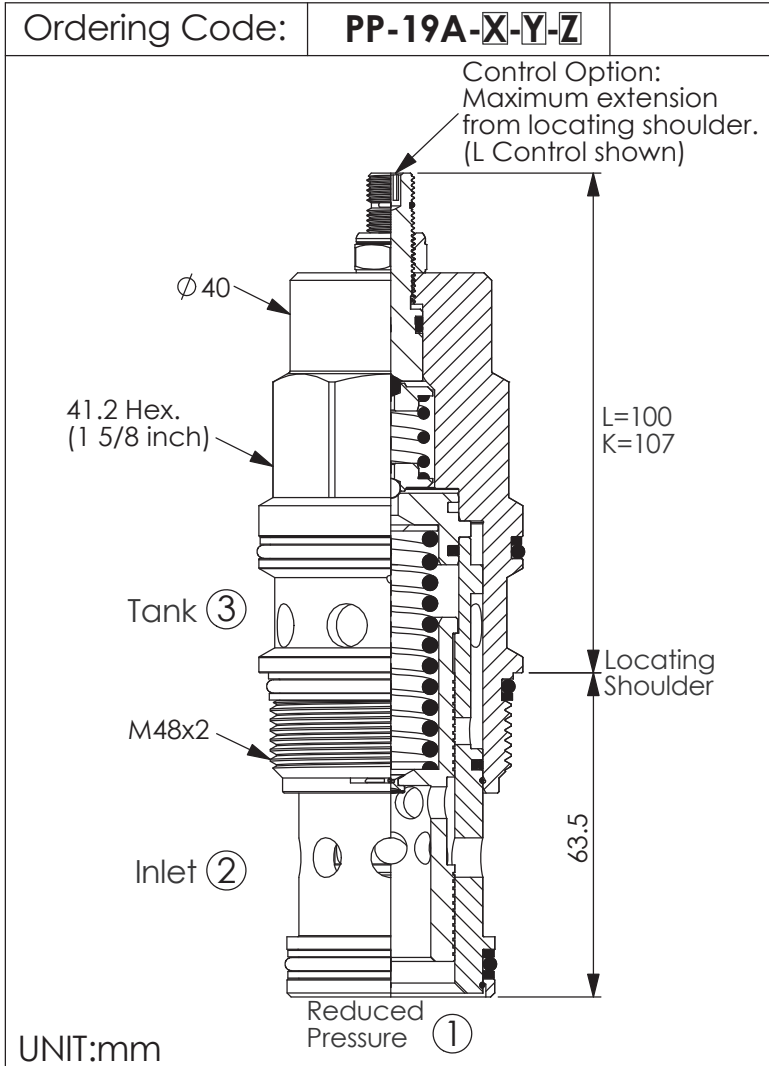
A	7-210 bar (14 bar Standard Setting) Maximum Differential=210 bar
B	3.5-105 bar (14 bar Standard Setting) Maximum Differential=210 bar
D	1.7-55 bar (14 bar Standard Setting) Maximum Differential=140 bar
E	1.7-28 bar (14 bar Standard Setting) Maximum Differential=140 bar
N	4-55 bar (14 bar Standard Setting) Maximum Differential=140 bar
Q	4-28 bar (14 bar Standard Setting) Maximum Differential=140 bar
W	10.5-315 bar (14 bar Standard Setting) 350 bar inlet pressure

Z OPTIONS

L	Leakproof hex. socket screw.	
K	Handknob with Lock Knob.	

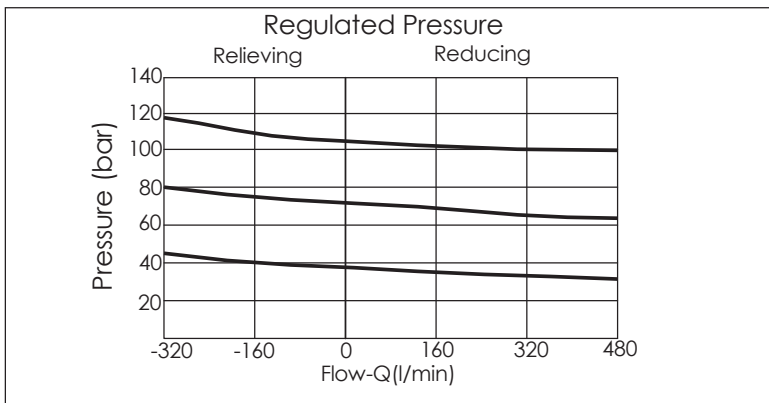
REDUCING/RELIEVING VALVE

(Pilot Operated Reducing/Relieving)



TECHNICAL DATA

Max.Operating pressure:	350	bar
Rated flow:	320	l/min
Cavity-Tooling:	19A-3	
Installation torque:	465-500	Nm
Weight:	1.29	kg
Control Pilot Flow (0.25-0.33 L/min.)		



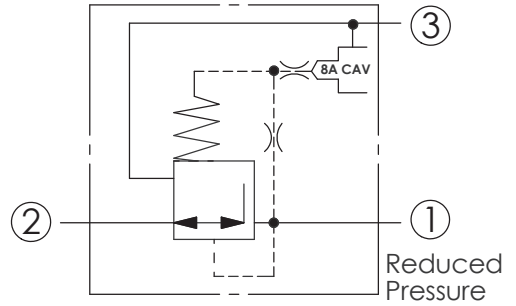
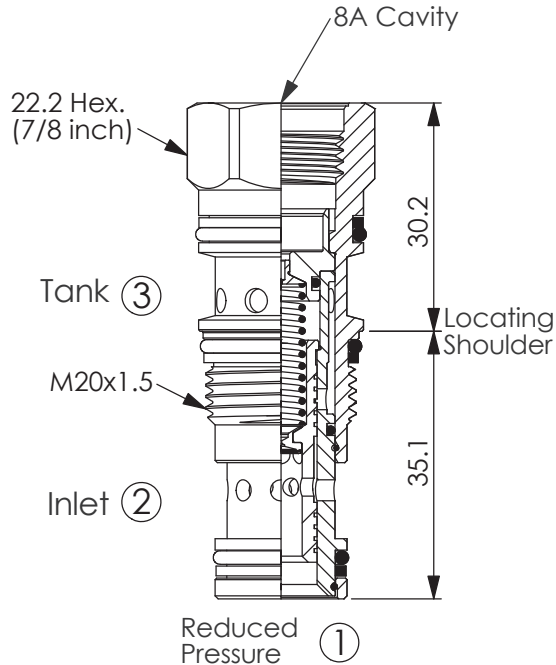
X	OPERATION	
30	Standard Type Low Leakage	
33	Option Type Improved Dynamic Response	
35	Impact Resistant Type (Without Filter)	

Y	SPRINGS	
ADJUSTMENT RANGES		
A	7-210 bar (14 bar Standard Setting) Maximum Differential=210 bar	
B	3.5-105 bar (14 bar Standard Setting) Maximum Differential=210 bar	
D	1.7-55 bar (14 bar Standard Setting) Maximum Differential=140 bar	
E	1.7-28 bar (14 bar Standard Setting) Maximum Differential=140 bar	
N	4-55 bar (14 bar Standard Setting) Maximum Differential=140 bar	
Q	4-28 bar (14 bar Standard Setting) Maximum Differential=140 bar	
W	10.5-315 bar (14 bar Standard Setting) 350 bar inlet pressure	

Z	OPTIONS	
L	Leakproof hex. socket screw.	
K	Handknob with Lock Knob.	

REDUCING/RELIEVING VALVE (Pilot operated, pressure reducing/relieving main stage with integral 8A control cavity)

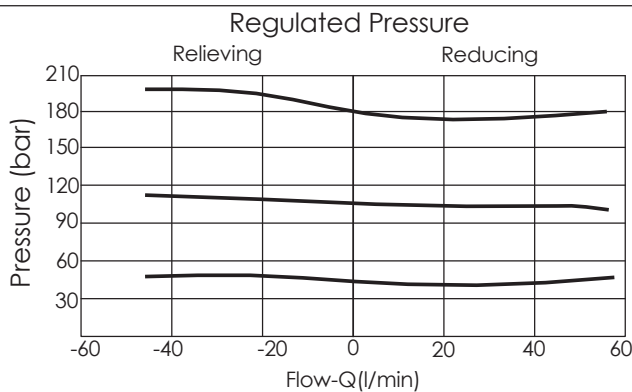
Ordering Code: **PP-11A-X-Y-8**



TECHNICAL DATA

Max. Operating pressure:	350	bar
Rated flow:	40	l/min
Cavity-Tooling:	11A-3	
Installation torque:	40-50	Nm
Weight:	0.1	kg
Control Pilot Flow (0.11-0.16 L/min.)		

UNIT:mm



X OPERATION

30	Standard Type Low Leakage
33	Option Type Improved Dynamic Response

Y

SPRINGS

MINIMUM CONTROL PRESSURE

D

1.7 bar (25 psi)

W

7 bar (100 psi)

Maximum inlet pressure is determined by the bias spring. The D spring is limited to 140 bar (2000 psi) maximum differential pressure and the W spring is limited to 350 bar (5000 psi) maximum inlet pressure.

REDUCING/RELIEVING VALVE (Pilot operated, pressure reducing/relieving main stage with integral 8A control cavity)

Ordering Code: **PP-2A-X-Y-8**

28.5 Hex. (1 1/8 inch)

8A Cavity

35.1

Tank (3)

1.00-14UNS-2A

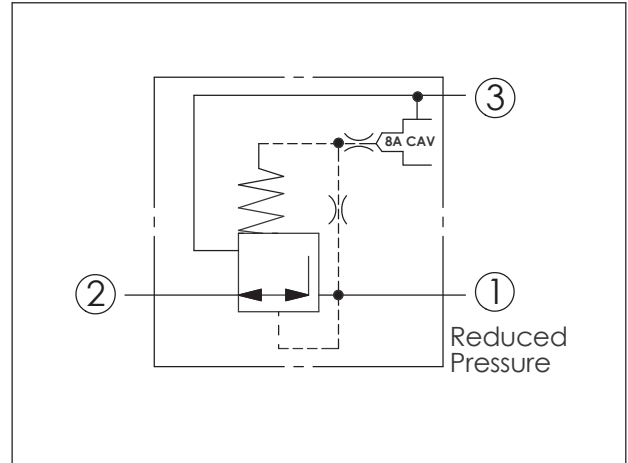
Inlet (2)

35.1

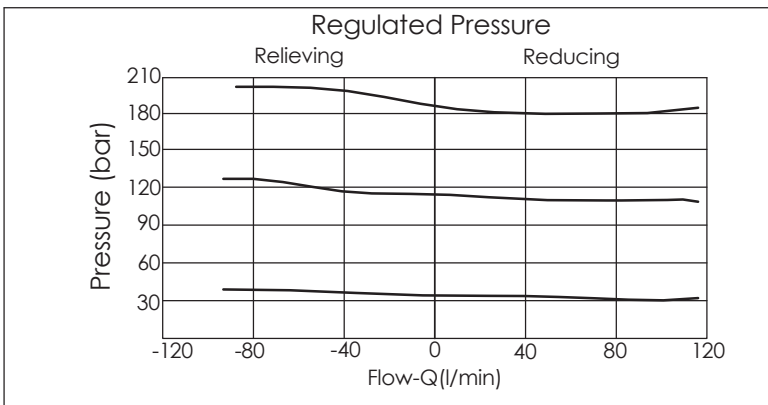
Reduced Pressure (1)

Locating Shoulder

UNIT:mm



TECHNICAL DATA		
Max.Operating pressure:	350	bar
Rated flow:	80	l/min
Cavity-Tooling:	2A-3	
Installation torque:	60-70	Nm
Weight:	0.19	kg
Control Pilot Flow (0.16-0.25 L/min.)		



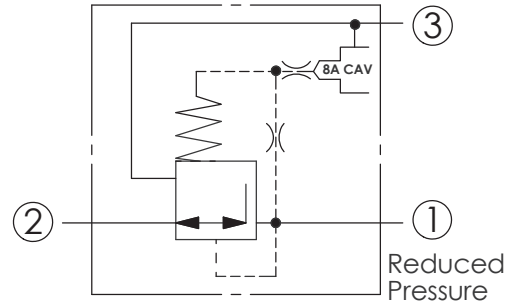
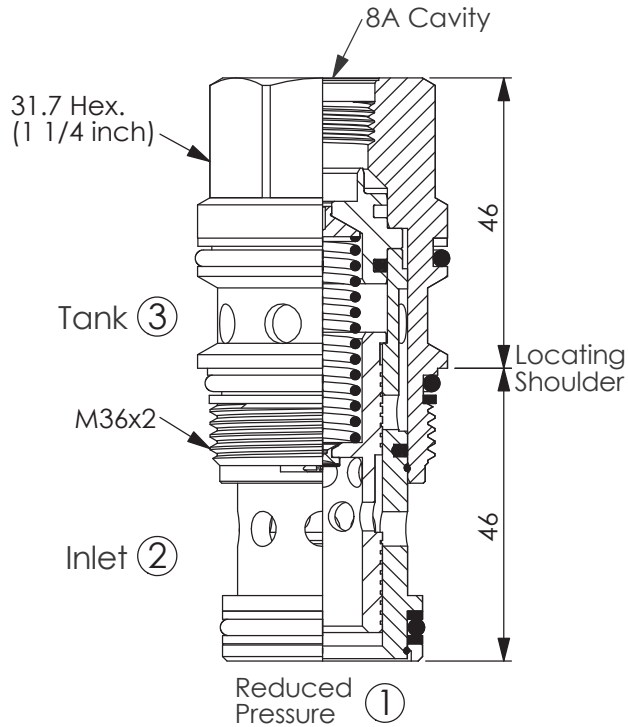
X	OPERATION	
30	Standard Type	Low Leakage
33	Option Type	Improved Dynamic Response

Y	SPRINGS	
	MINIMUM CONTROL PRESSURE	
D	1.7 bar (25 psi)	
W	7 bar (100 psi)	
	Maximum inlet pressure is determined by the bias spring. The D spring is limited to 140 bar (2000 psi) maximum differential pressure and the W spring is limited to 350 bar (5000 psi) maximum inlet pressure.	

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REDUCING/RELIEVING VALVE (Pilot operated, pressure reducing/relieving main stage with integral 8A control cavity)

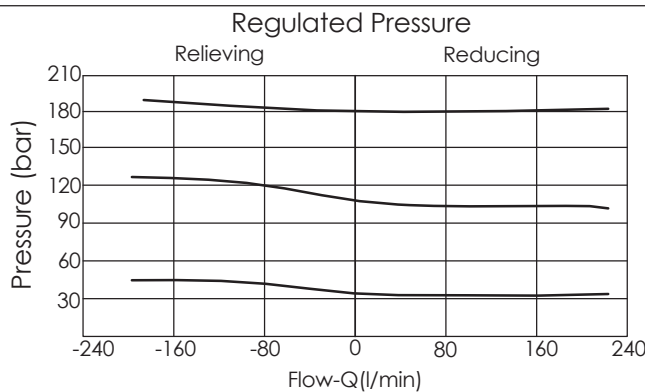
Ordering Code: **PP-17A-X-Y-8**



TECHNICAL DATA

Max. Operating pressure:	350	bar
Rated flow:	160	l/min
Cavity-Tooling:	17A-3	
Installation torque:	200-215	Nm
Weight:	0.45	kg
Control Pilot Flow (0.25-0.33 L/min.)		

UNIT:mm



X OPERATION

30	Standard Type Low Leakage
33	Option Type Improved Dynamic Response

Y

SPRINGS

MINIMUM CONTROL PRESSURE

D

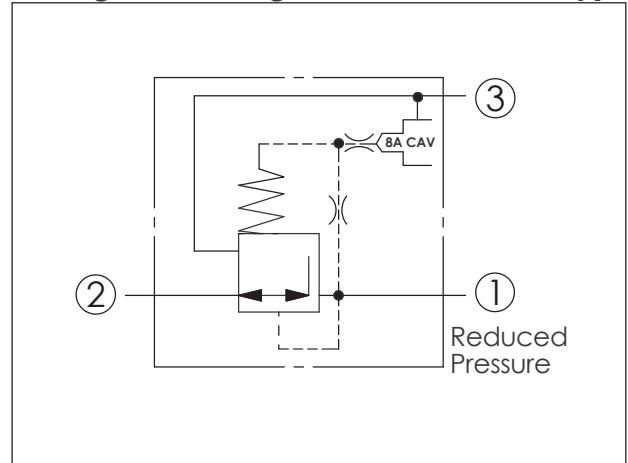
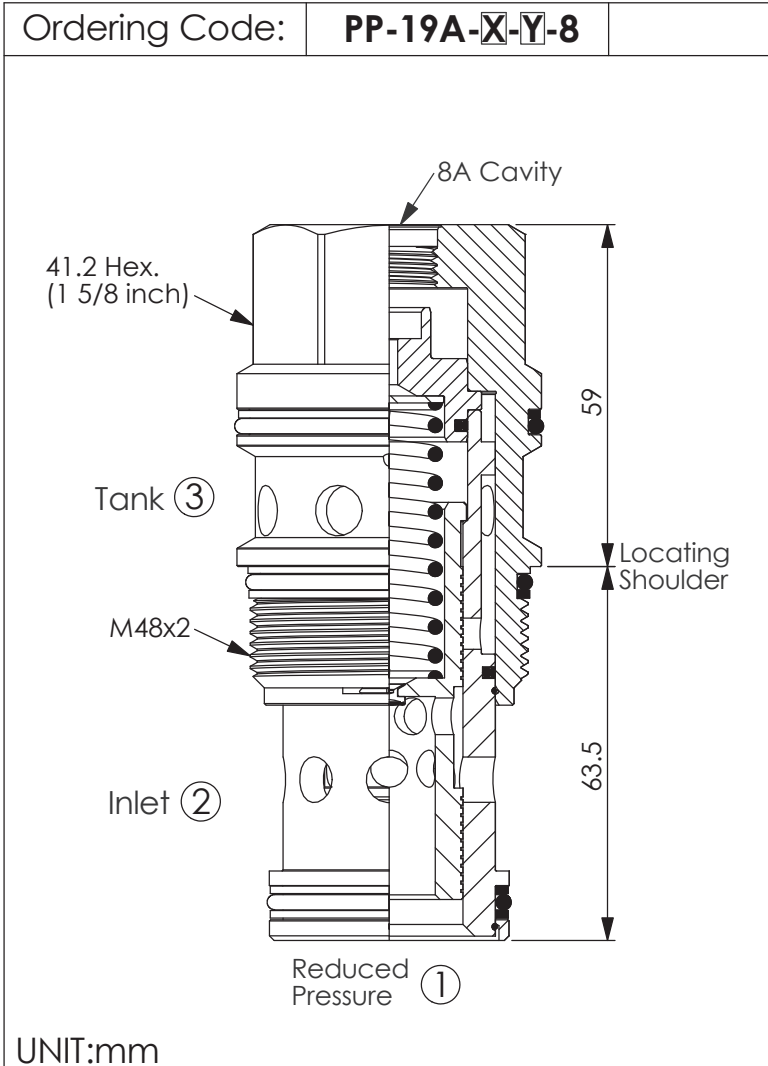
1.7 bar (25 psi)

W

7 bar (100 psi)

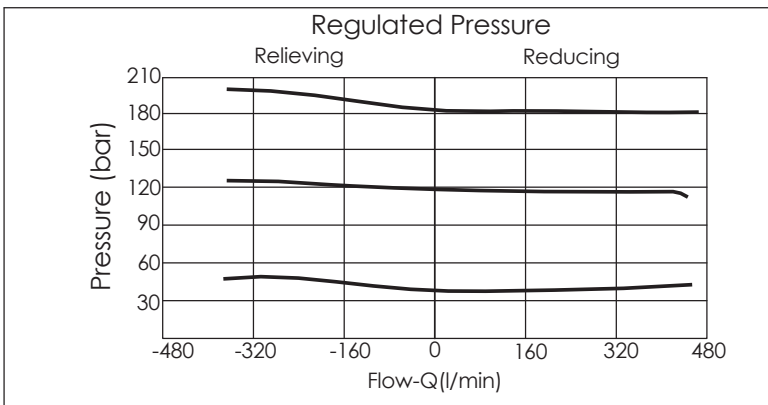
Maximum inlet pressure is determined by the bias spring. The D spring is limited to 140 bar (2000 psi) maximum differential pressure and the W spring is limited to 350 bar (5000 psi) maximum inlet pressure.

REDUCING/RELIEVING VALVE (Pilot operated, pressure reducing/relieving main stage with integral 8A control cavity)



TECHNICAL DATA

Max. Operating pressure:	350	bar
Rated flow:	320	l/min
Cavity-Tooling:	19A-3	
Installation torque:	475-500	Nm
Weight:	1.03	kg
Control Pilot Flow (0.25-0.33 L/min.)		



X	OPERATION	
30	Standard Type	Low Leakage
33	Option Type	Improved Dynamic Response

Y	SPRINGS	
	MINIMUM CONTROL PRESSURE	
D	1.7 bar (25 psi)	
W	7 bar (100 psi)	
	Maximum inlet pressure is determined by the bias spring. The D spring is limited to 140 bar (2000 psi) maximum differential pressure and the W spring is limited to 350 bar (5000 psi) maximum inlet pressure.	

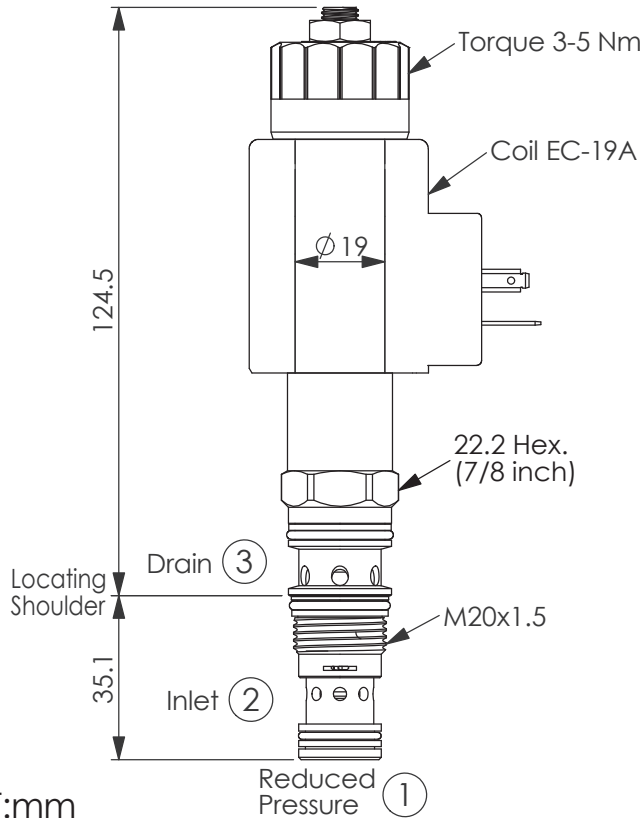
REDUCING/RELIEVING VALVE

(Electro-Proportional, Direct-Acting, Pressure Reducing/Relieving Valve, Improved Dynamic Response)

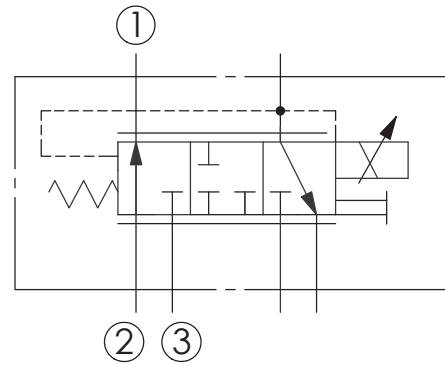
Pressure Reducing/Relieving Valve, Improved Dynamic Response

Ordering Code: **PPC-11A-X-Y-Z-74**

U.S. PATENT US9234605



UNIT:mm



TECHNICAL DATA

Max. Operating pressure: 350 bar

Rated flow: 20 l/min

Cavity-Tooling: 11A-3

Installation torque: 40-50 Nm

Linearity (with dither) <2%

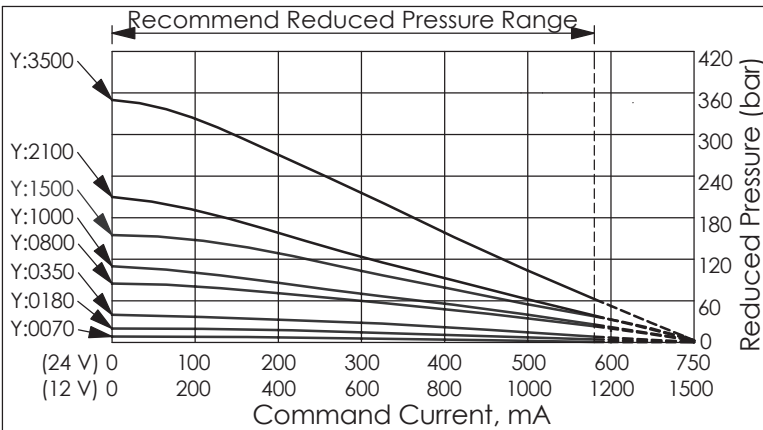
Repeatability (with dither) <2%

Hysteresis (with dither) <4%

Hysteresis with DC input <8%

Maximum valve leakage at 46 cSt = 40 cc/min. Leakage specified is out of port 3 with a supply pressure of 210 bar and the valve set at mid-range.

Weight:(with Coil) 0.54 kg
(without Coil) 0.30 kg



Y	OPERATING RANGE	
	Rated Pressure	
0070	7-1 bar	
0180	18-1 bar	
0350	35-1 bar	
0800	80-2 bar	
1000	100-10 bar	
1500	150-10 bar	
2100	210-20 bar	
3500	350-35 bar	

When inlet pressure up to 210-350 bar
Recommend : Keep "Reduced Pressure" (Port ①)
minimum 30 bar to have best control.

Rev.161101

X	OPERATION	
3D	3 Ports · 22 Watt. Coil Ø 19 mm tube	
	Recommend : The coil for proportional valve without VDR	

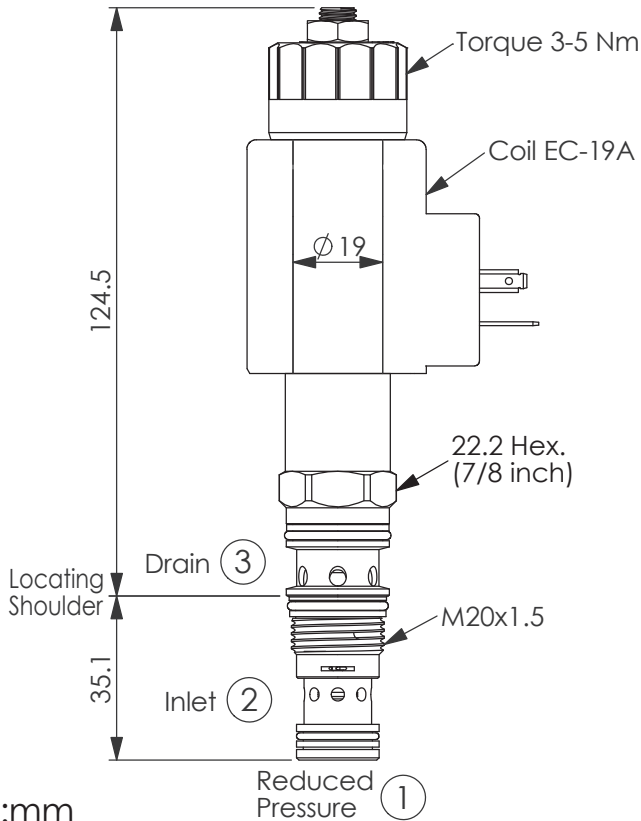
Z	OPTIONS	
L	Leakproof hex. socket screw.	

REDUCING/RELIEVING VALVE

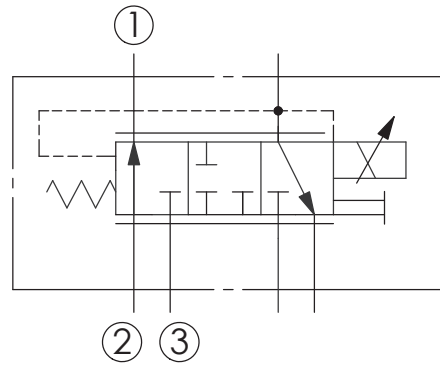
(Electro-Proportional, Direct-Acting, Low Leakage, Pressure Reducing/Relieving Valve, Improved Dynamic Response)

Ordering Code: **PPC-11A-X-Y-Z-74-1**

U.S. PATENT US9234605



UNIT:mm



TECHNICAL DATA

Max. Operating pressure: 350 bar

Rated flow: 20 l/min

Cavity-Tooling: 11A-3

Installation torque: 40-50 Nm

Linearity (with dither) <2%

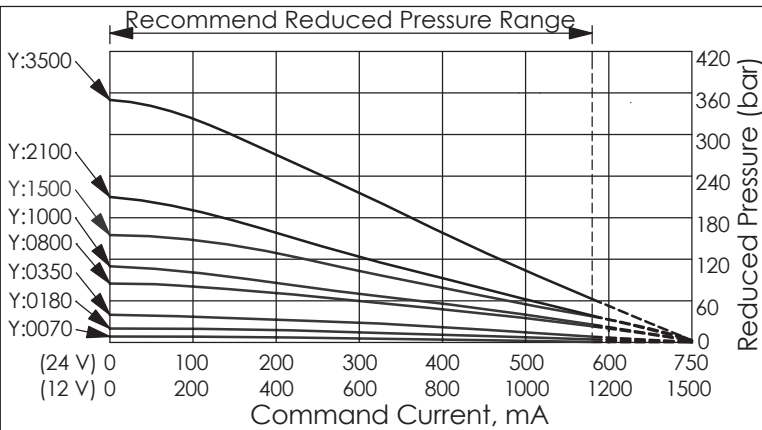
Repeatability (with dither) <2%

Hysteresis (with dither) <4%

Hysteresis with DC input <8%

Maximum valve leakage at 46 cSt = 15-20 cc/min. Leakage specified is out of port 3 with a supply pressure of 210 bar and the valve set at mid-range.

Weight:(with Coil) 0.54 kg
(without Coil) 0.30 kg



Y	OPERATING RANGE	
	Rated Pressure	
0070	7-1 bar	
0180	18-1 bar	
0350	35-1 bar	
0800	80-2 bar	
1000	100-10 bar	
1500	150-10 bar	
2100	210-20 bar	
3500	350-35 bar	

When inlet pressure up to 210-350 bar
Recommend : Keep "Reduced Pressure" (Port ①)
minimum 30 bar to have best control.

Rev.161101

X	OPERATION	
3D	3 Ports · 22 Watt. Coil Ø 19 mm tube	
	Recommend : The coil for proportional valve without VDR	

Z	OPTIONS	
L	Leakproof hex. socket screw.	

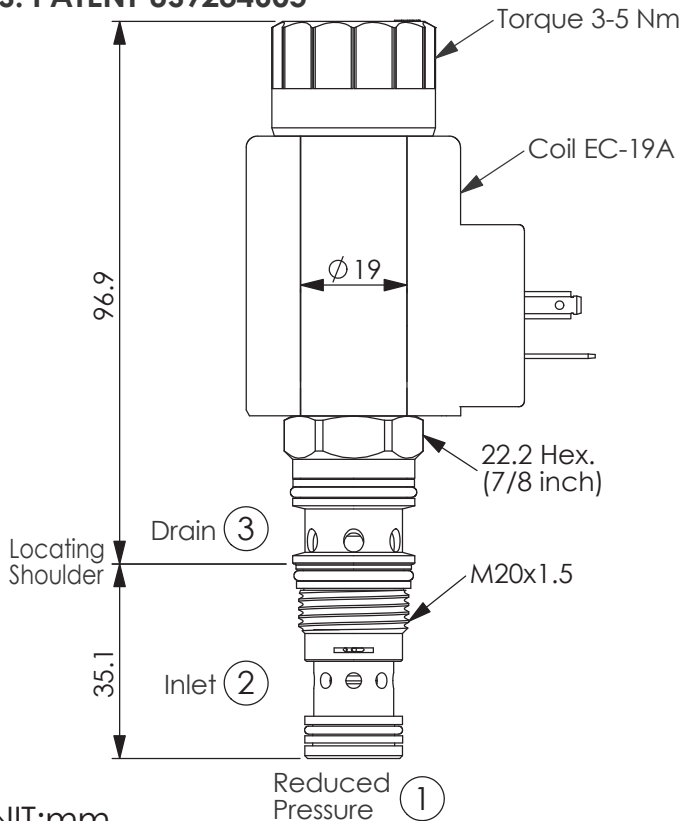
REDUCING/RELIEVING VALVE

(Electro-Proportional, Direct-Acting, Pressure Reducing/Relieving Valve, Improved Dynamic Response)

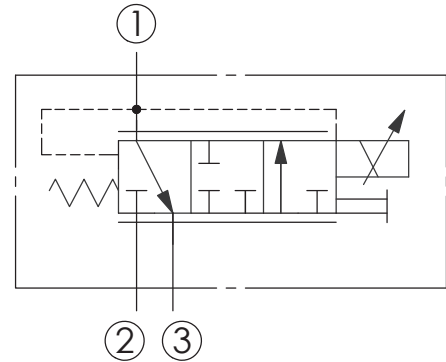
Pressure Reducing/Relieving Valve, Improved Dynamic Response

Ordering Code: **PPD-11A-X-Y-Z-74**

U.S. PATENT US9234605



UNIT:mm



TECHNICAL DATA

Max. Operating pressure: 350 bar

Rated flow: 20 l/min

Cavity-Tooling: 11A-3

Installation torque: 40-50 Nm

Linearity (with dither) <2%

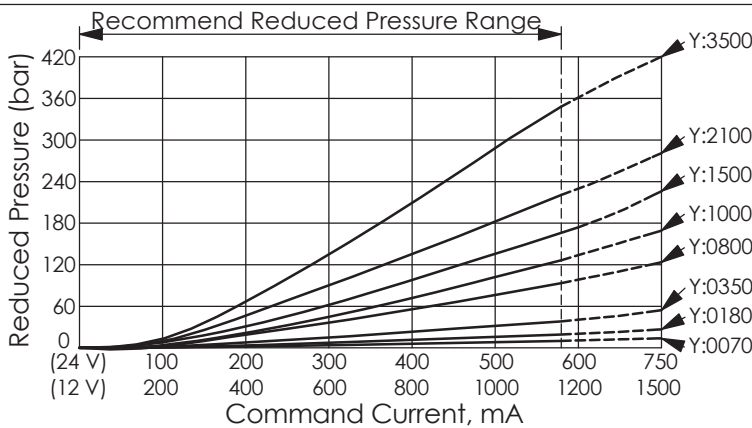
Repeatability (with dither) <2%

Hysteresis (with dither) <4%

Hysteresis with DC input <8%

Maximum valve leakage at 46 cSt = 40 cc/min. Leakage specified is out of port 3 with a supply pressure of 210 bar and the valve set at mid-range.

Weight:(with Coil) 0.49 kg
(without Coil) 0.25 kg



Y	OPERATING RANGE	
	Rated Pressure	
0070	1-7 bar	
0180	1-18 bar	
0350	1-35 bar	
0800	2-80 bar	
1000	10-100 bar	
1500	10-150 bar	
2100	20-210 bar	
3500	35-350 bar	

When inlet pressure up to 210-350 bar
Recommend : Keep "Reduced Pressure" (Port ①)
minimum 30 bar to have best control.

Rev.161101

X	OPERATION	
3D	3 Ports · 22 Watt. Coil Ø 19 mm tube	
	Recommend : The coil for proportional valve without VDR	

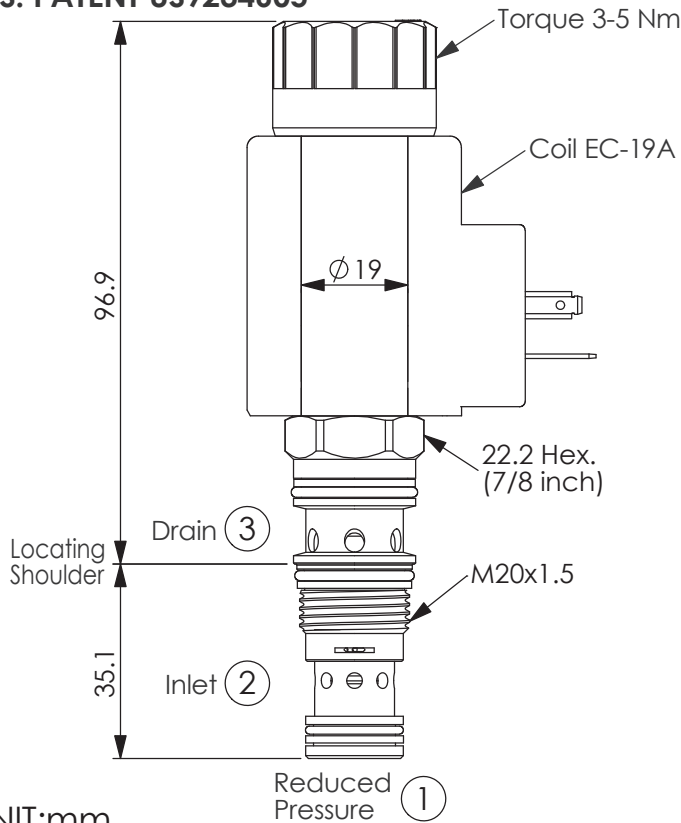
Z	OPTIONS	
N	Non-adjustable	
P	Push Style Manual Override	

REDUCING/RELIEVING VALVE

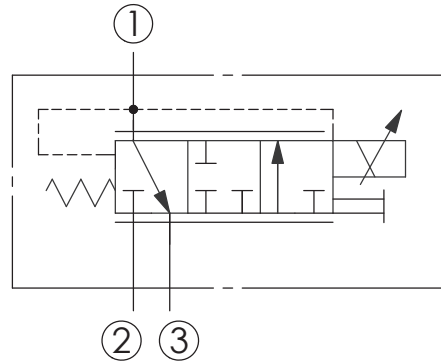
(Electro-Proportional, Direct-Acting, Low Leakage, Pressure Reducing/Relieving Valve, Improved Dynamic Response)

Ordering Code: **PPD-11A-X-Y-Z-74-1**

U.S. PATENT US9234605



UNIT:mm



TECHNICAL DATA

Max.Operating pressure: 350 bar

Rated flow: 20 l/min

Cavity-Tooling: 11A-3

Installation torque: 40-50 Nm

Linearity (with dither) <2%

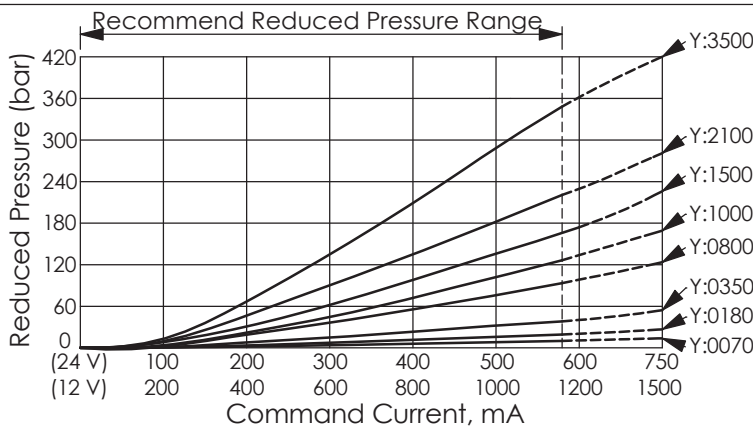
Repeatability (with dither) <2%

Hysteresis (with dither) <4%

Hysteresis with DC input <8%

Maximum valve leakage at 46 cSt = 15-20 cc/min. Leakage specified is out of port 3 with a supply pressure of 210 bar and the valve set at mid-range.

Weight:(with Coil) 0.49 kg
(without Coil) 0.25 kg



Y	OPERATING RANGE	
	Rated Pressure	
0070	1~7 bar	
0180	1~18 bar	
0350	1~35 bar	
0800	2~80 bar	
1000	10~100 bar	
1500	10~150 bar	
2100	20~210 bar	
3500	35~350 bar	

When inlet pressure up to 210~350 bar
Recommend : Keep "Reduced Pressure" (Port ①)
minimum 30 bar to have best control.

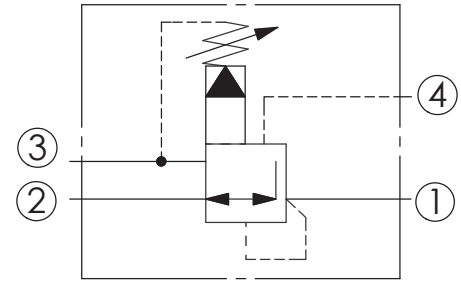
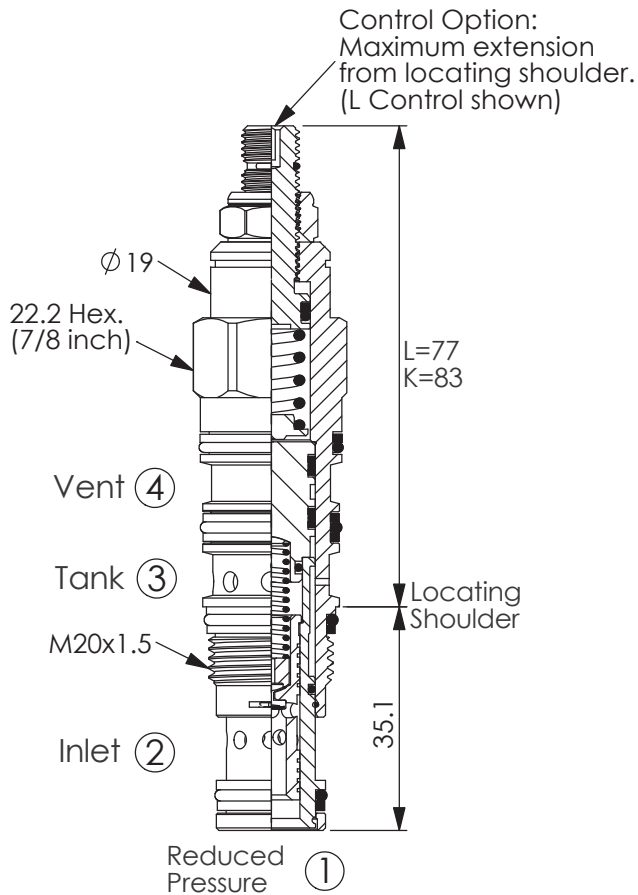
Rev.161012

X	OPERATION	
3D	3 Ports · 22 Watt. Coil Ø 19 mm tube	
	Recommend : The coil for proportional valve without VDR	

Z	OPTIONS	
N	Non-adjustable	
	Push Style Manual Override	

REDUCING/RELIEVING VALVE (Pilot Operated Reducing/Relieving, Ventable)

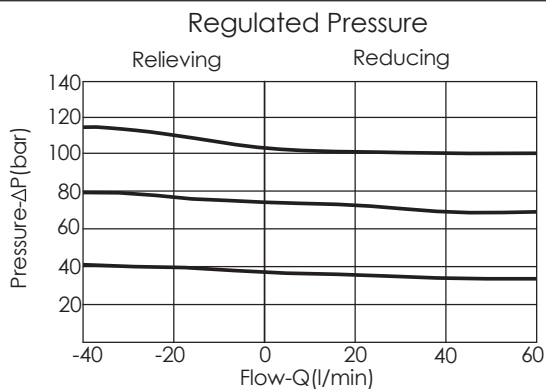
Ordering Code: **PV-21A-X-Y-Z**



TECHNICAL DATA

Max. Operating pressure:	350	bar
Rated flow:	40	l/min
Cavity-Tooling:	21A-4	
Installation torque:	45-50	Nm
Weight:	0.19	kg
Control Pilot Flow (0.11 ~0.16 L/min.)		

UNIT:mm



X OPERATION

40	Standard Type
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Y

SPRINGS

ADJUSTMENT RANGES

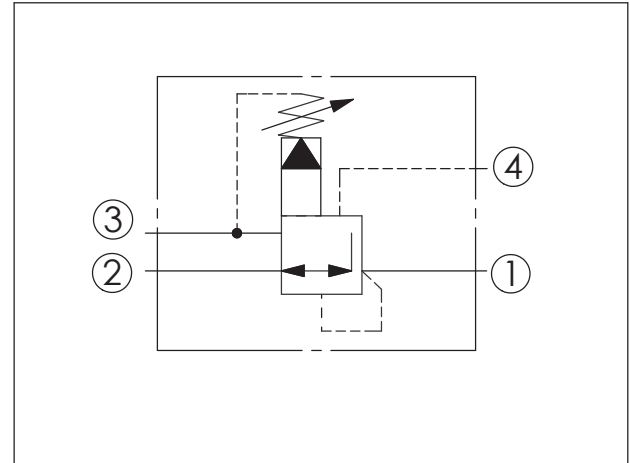
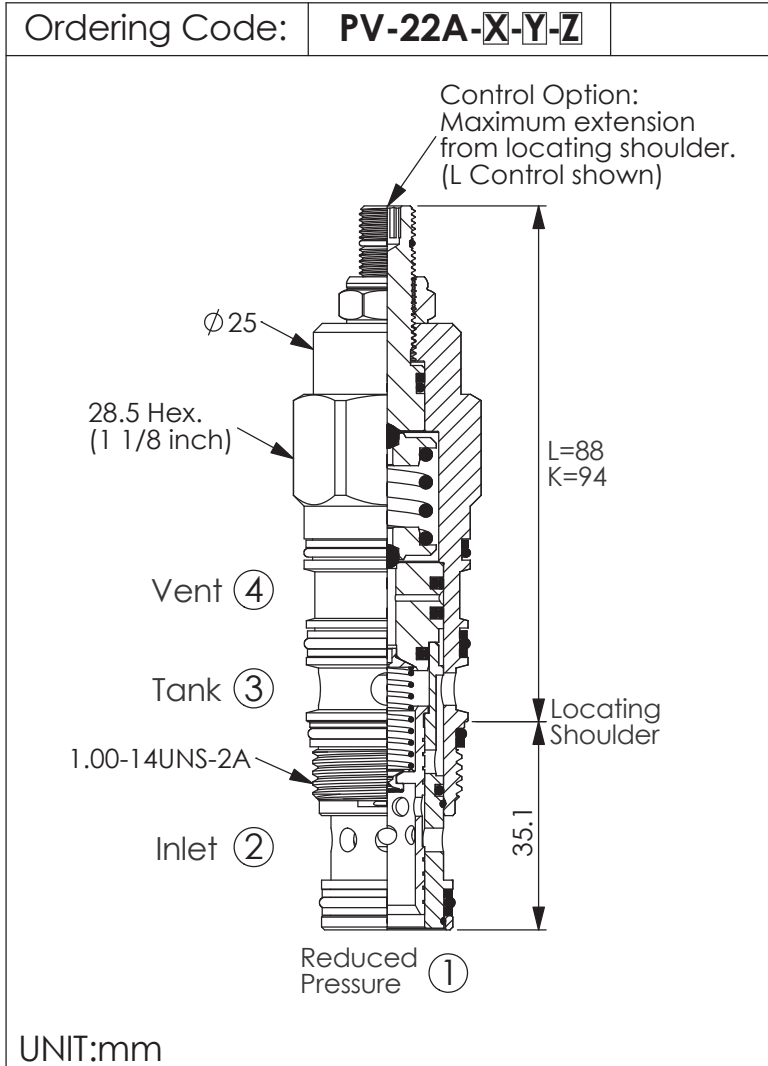
A	7 to 210 bar (14 bar Standard Setting) Maximum Differential=210 bar
B	3.5 to 105 bar (14 bar Standard Setting) Maximum Differential=210 bar
D	1.7 to 55 bar (14 bar Standard Setting) Maximum Differential=140 bar
E	1.7 to 28 bar (14 bar Standard Setting) Maximum Differential=140 bar
W	10.5 to 315 bar (14 bar Standard Setting) 350 bar inlet pressure

Z

OPTIONS

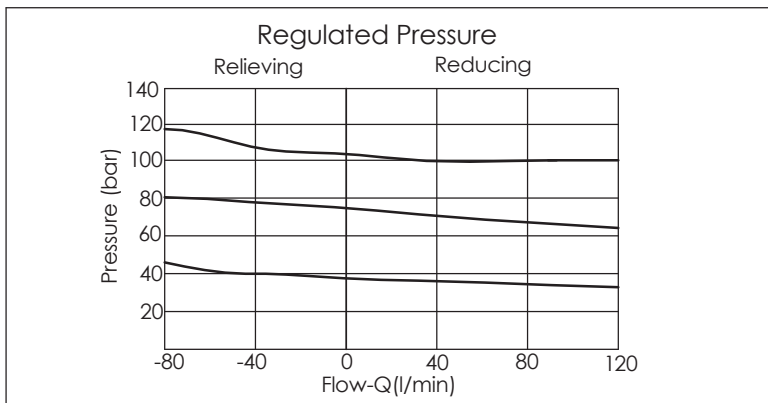
L	Leakproof hex. socket screw.	
K	Handknob with Lock Knob.	
C	Stainless Steel Tamper Resistant Cover.	

REDUCING/RELIEVING VALVE (Pilot Operated Reducing/Relieving, Ventable)



TECHNICAL DATA

Max. Operating pressure:	350	bar
Rated flow:	80	l/min
Cavity-Tooling:	22A-4	
Installation torque:	60-70	Nm
Weight:	0.33 (Z:L)	kg
Control Pilot Flow (0.16-0.25 L/min.)		

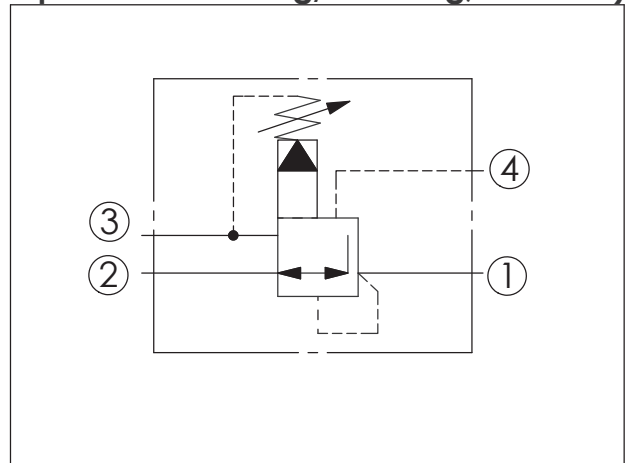
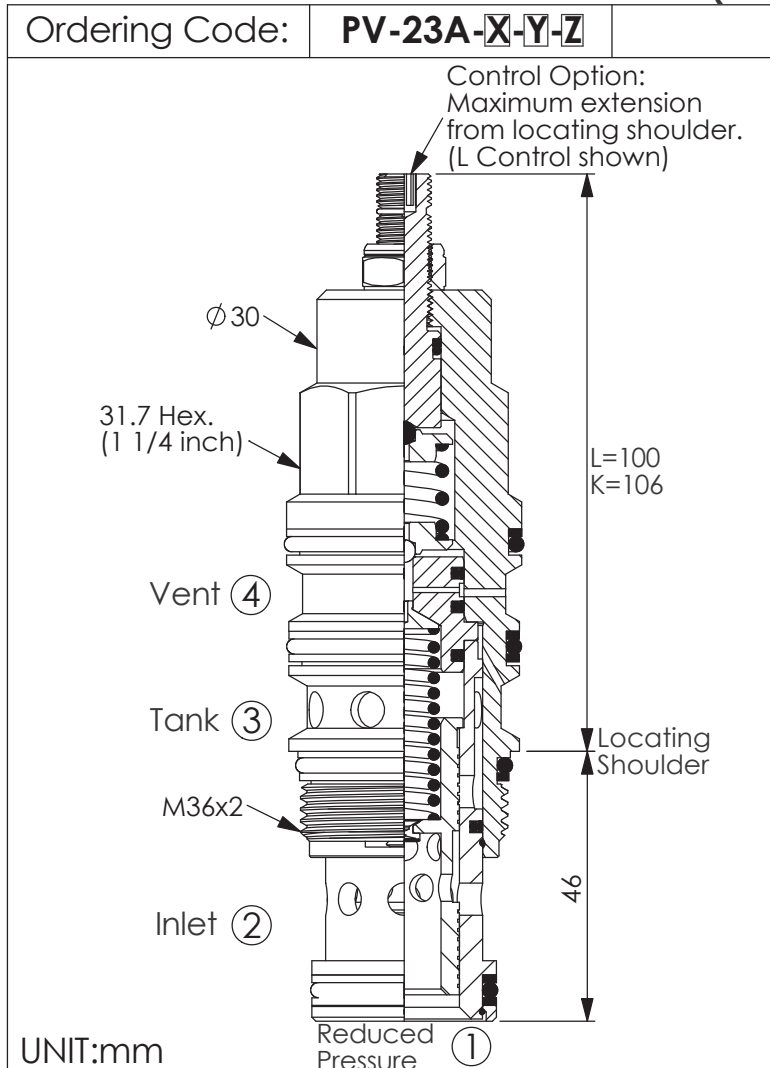


X	OPERATION	
40	Standard Type	
43	Option Type Improved Dynamic Response	

Y	SPRINGS	
ADJUSTMENT RANGES		
A	7-210 bar (14 bar Standard Setting) Maximum Differential=210 bar	
B	3.5-105 bar (14 bar Standard Setting) Maximum Differential=210 bar	
D	1.7-55 bar (14 bar Standard Setting) Maximum Differential=140 bar	
N	4-55 bar (14 bar Standard Setting) Maximum Differential=140 bar	
Q	4-28 bar (14 bar Standard Setting) Maximum Differential=140 bar	
W	10.5-315 bar (14 bar Standard Setting) 350 bar inlet pressure	

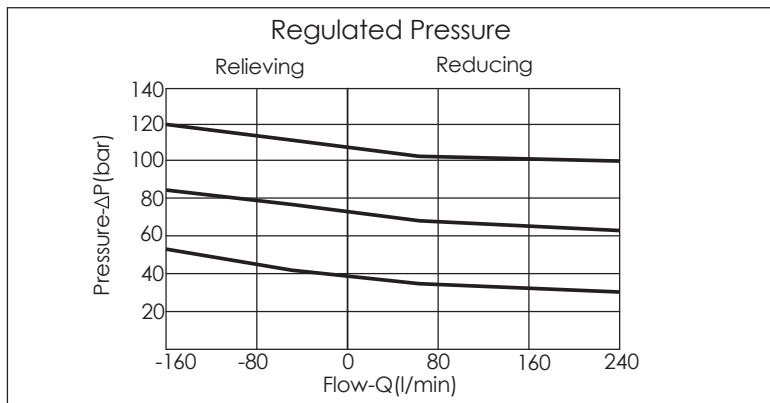
Z	OPTIONS	
L	Leakproof hex. socket screw.	
K	Handknob with Lock Knob.	
C	Stainless Steel Tamper Resistant Cover.	

REDUCING/RELIEVING VALVE (Pilot Operated Reducing/Relieving, Ventable)



TECHNICAL DATA

Max. Operating pressure:	350	bar
Rated flow:	160	l/min
Cavity-Tooling:	23A-4	
Installation torque:	200-215	Nm
Weight:	0.70	kg
Control Pilot Flow (0.25 ~0.33 L/min.)		

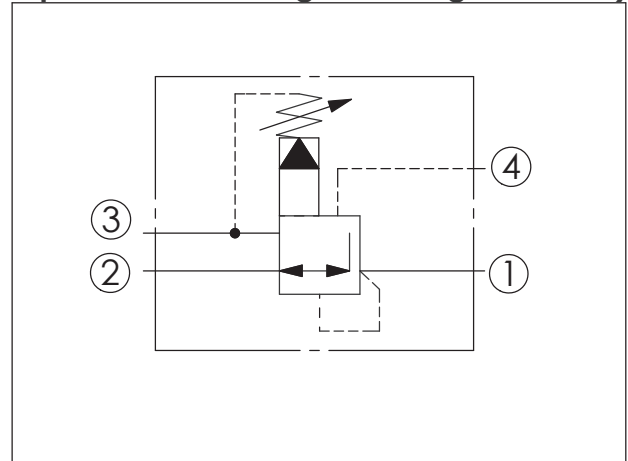
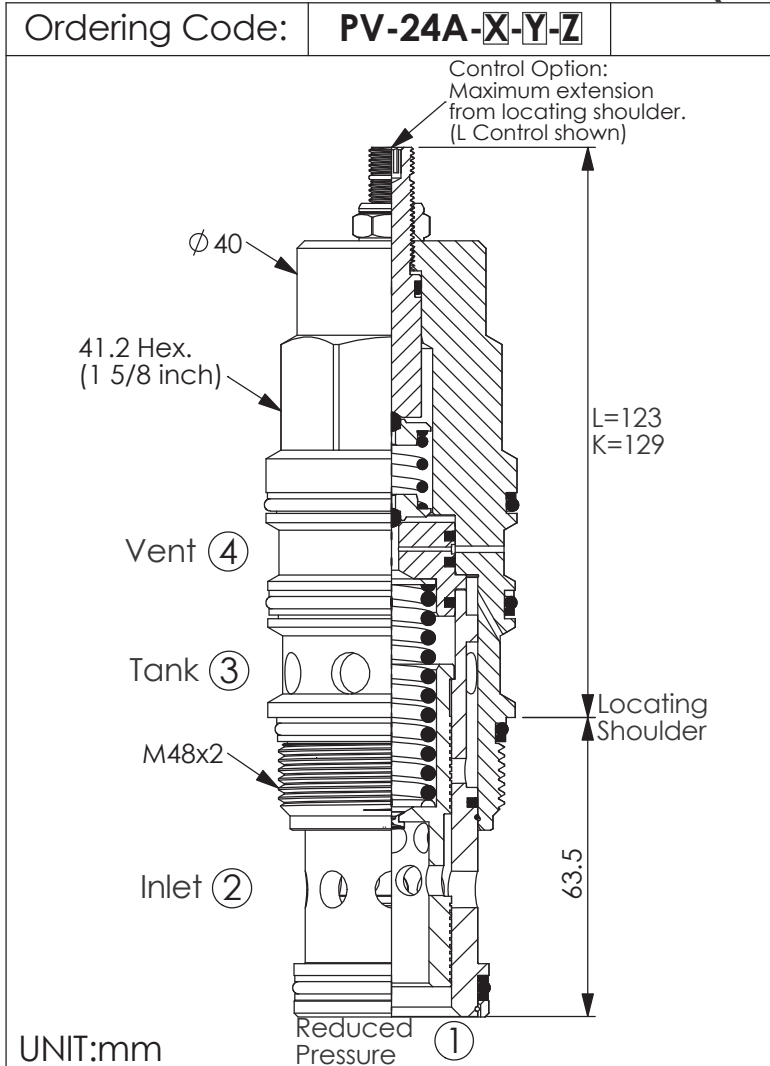


X	OPERATION	
40	Standard Type	

Y	SPRINGS	
ADJUSTMENT RANGES		
A	7 to 210 bar (14 bar Standard Setting) Maximum Differential=210 bar	
B	3.5 to 105 bar (14 bar Standard Setting) Maximum Differential=210 bar	
N	4 to 55 bar (14 bar Standard Setting) Maximum Differential=140 bar	
Q	4 to 28 bar (14 bar Standard Setting) Maximum Differential=140 bar	
W	10.5 to 315 bar (14 bar Standard Setting) 350 bar inlet pressure	

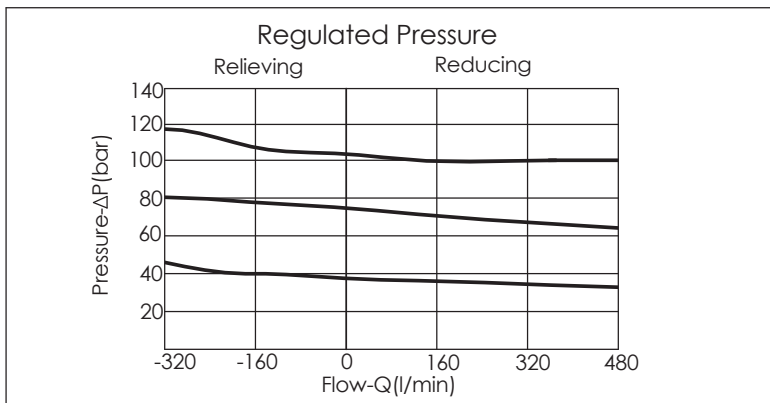
Z	OPTIONS	
L	Leakproof hex. socket screw.	
K	Handknob with Lock Knob.	
C	Stainless Steel Tamper Resistant Cover.	

REDUCING/RELIEVING VALVE (Pilot Operated Reducing/Relieving, Ventable)



TECHNICAL DATA

Max. Operating pressure:	350	bar
Rated flow:	320	l/min
Cavity-Tooling:	24A-4	
Installation torque:	465-500	Nm
Weight:	1.60	kg
Control Pilot Flow (0.25 ~0.33 L/min.)		



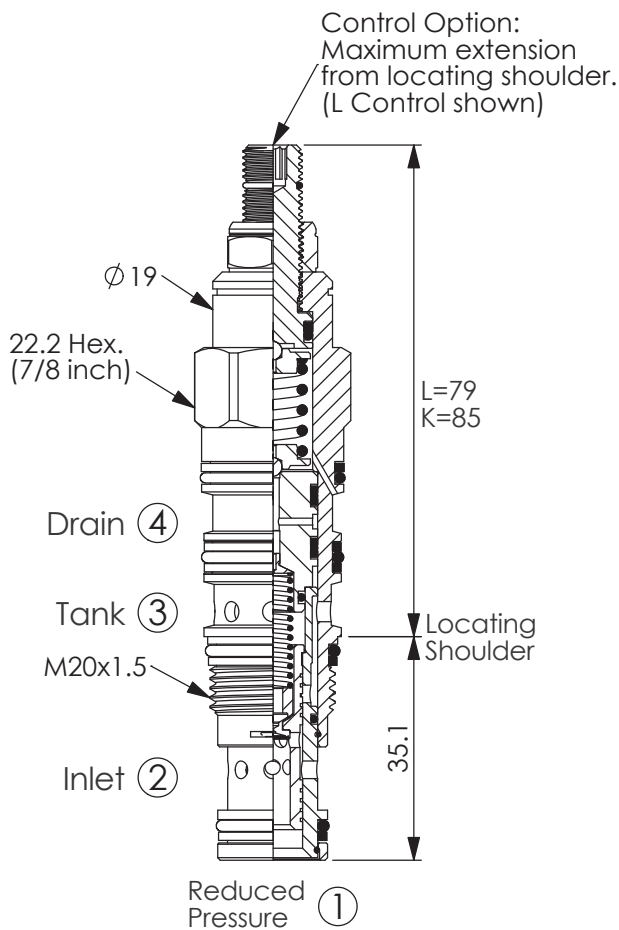
X	OPERATION	
40	Standard Type	
43	Option Type Improved Dynamic Response	

Y	SPRINGS	
ADJUSTMENT RANGES		
A	7 to 210 bar (14 bar Standard Setting)	Maximum Differential=210 bar
B	3.5 to 105 bar (14 bar Standard Setting)	Maximum Differential=210 bar
N	4 to 55 bar (14 bar Standard Setting)	Maximum Differential=140 bar
Q	4 to 28 bar (14 bar Standard Setting)	Maximum Differential=140 bar
W	10.5 to 315 bar (14 bar Standard Setting)	350 bar inlet pressure

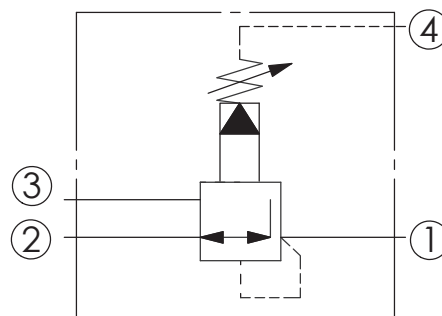
Z	OPTIONS	
L	Leakproof hex. socket screw.	
K	Handknob with Lock Knob.	
C	Stainless Steel Tamper Resistant Cover.	

REDUCING/RELIEVING VALVE (Pilot Operated Reducing/Relieving, Externally Drained)

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

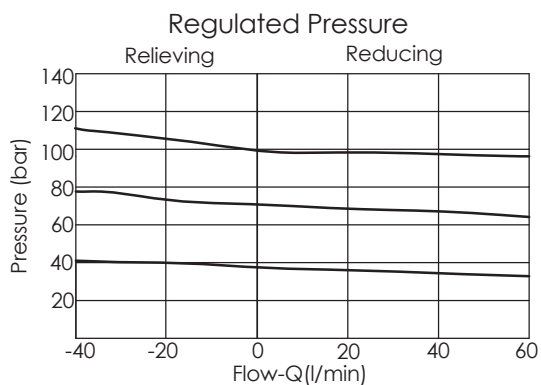


UNIT:mm



TECHNICAL DATA

Max. Operating pressure:	350	bar
Rated flow:	40	l/min
Cavity-Tooling:	21A-4	
Installation torque:	45-50	Nm
Weight:	0.19 (Z:L)	kg
Control Pilot Flow (0.11-0.16 L/min.)		



X OPERATION

40	Standard Type
43	Option Type Improved Dynamic Response

Y

SPRINGS

ADJUSTMENT RANGES

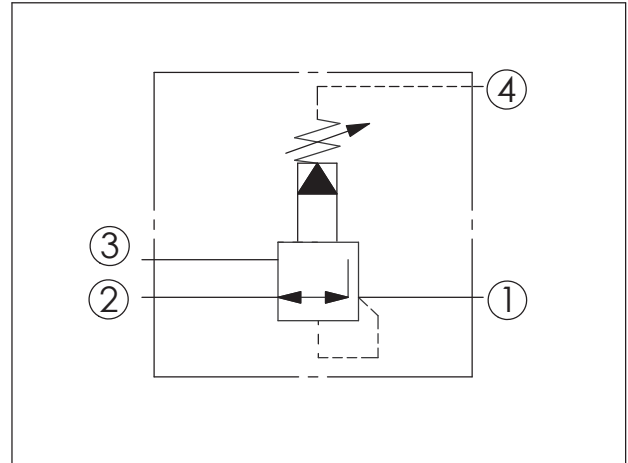
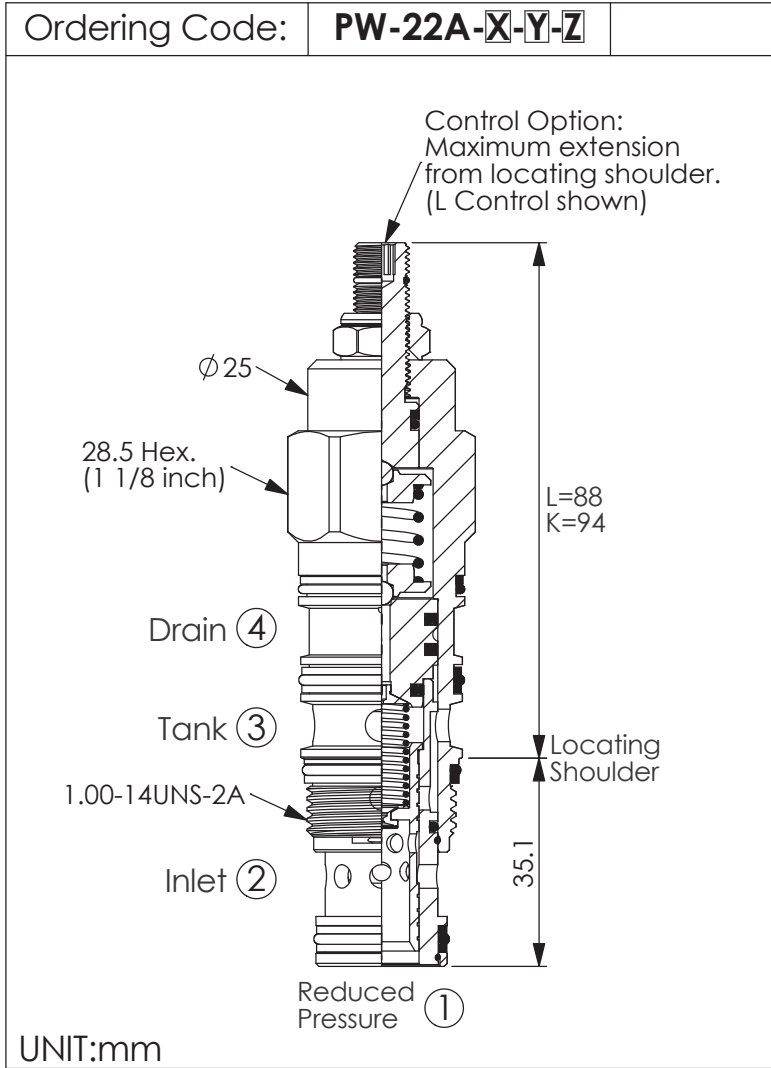
A	7-210 bar (14 bar Standard Setting)
B	3.5-105 bar (14 bar Standard Setting)
D	1.7-55 bar (14 bar Standard Setting)
E	1.7-28 bar (14 bar Standard Setting)
W	10.5-315 bar (14 bar Standard Setting)
N	4-55 bar (14 bar Standard Setting)

Z

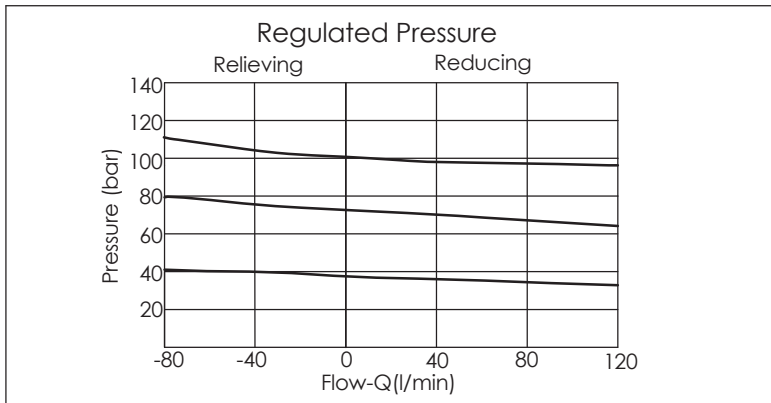
OPTIONS

L	Leakproof hex. socket screw.	
K	Handknob with Lock Knob.	
C	Stainless Steel Tamper Resistant Cover.	

REDUCING/RELIEVING VALVE (Pilot Operated Reducing/Relieving, Externally Drained)


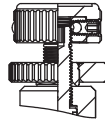
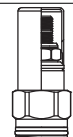


TECHNICAL DATA	
Max. Operating pressure:	350 bar
Rated flow:	80 l/min
Cavity-Tooling:	22A-4
Installation torque:	60-70 Nm
Weight:	0.34 (Z:L) kg
Control Pilot Flow (0.16-0.25 L/min.)	



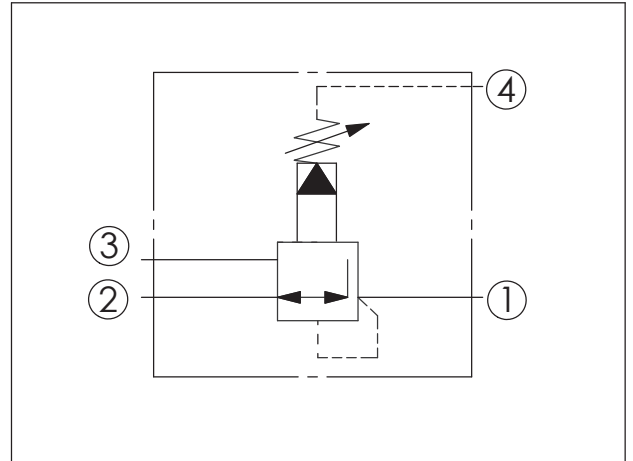
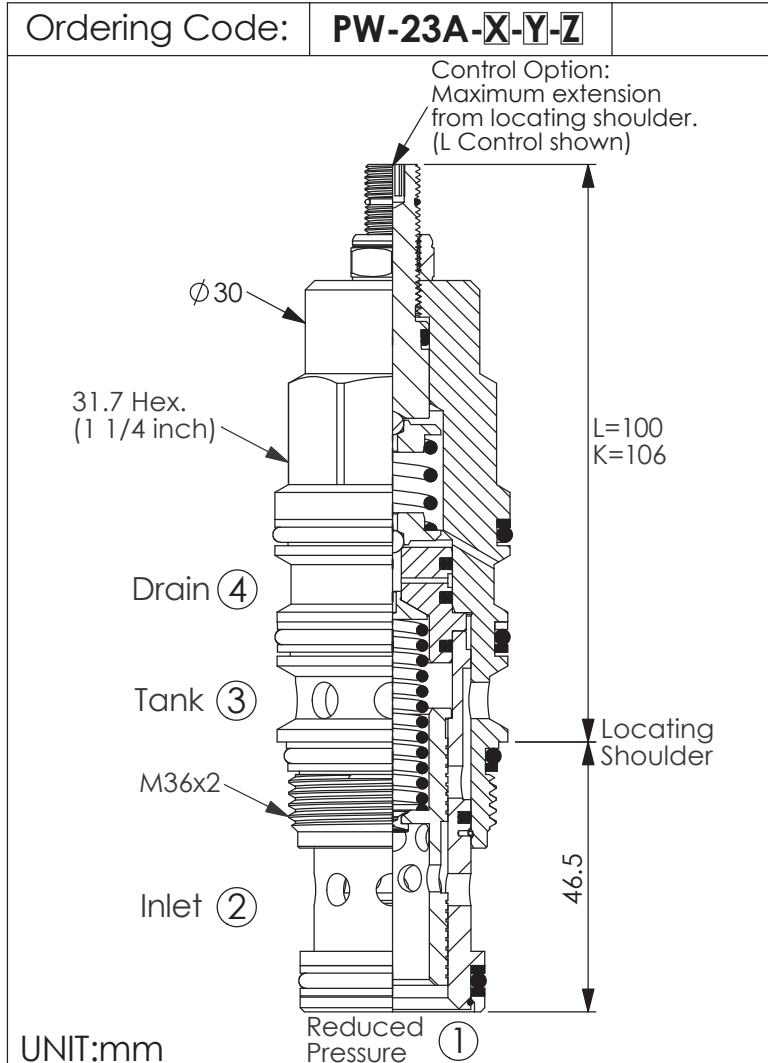
X	OPERATION
40	Standard Type
43	Option Type Improved Dynamic Response

Y	SPRINGS
ADJUSTMENT RANGES	
A	7-210 bar (14 bar Standard Setting)
B	3.5-105 bar (14 bar Standard Setting)
D	1.7-55 bar (14 bar Standard Setting)
E	1.7-28 bar (14 bar Standard Setting)
W	10.5-315 bar (14 bar Standard Setting)

Z	OPTIONS
L	Leakproof hex. socket screw. 
K	Handknob with Lock Knob. 
C	Stainless Steel Tamper Resistant Cover. 

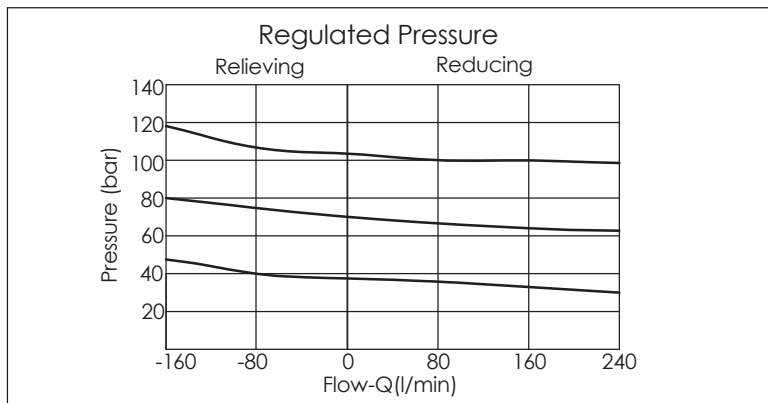
REDUCING/RELIEVING VALVE

(Pilot Operated Reducing/Relieving, Externally Drained)



TECHNICAL DATA

Max. Operating pressure:	350	bar
Rated flow:	160	l/min
Cavity-Tooling:	23A-4	
Installation torque:	200-215	Nm
Weight:	0.70 (Z:L)	kg
Control Pilot Flow (0.25-0.33 L/min.)		

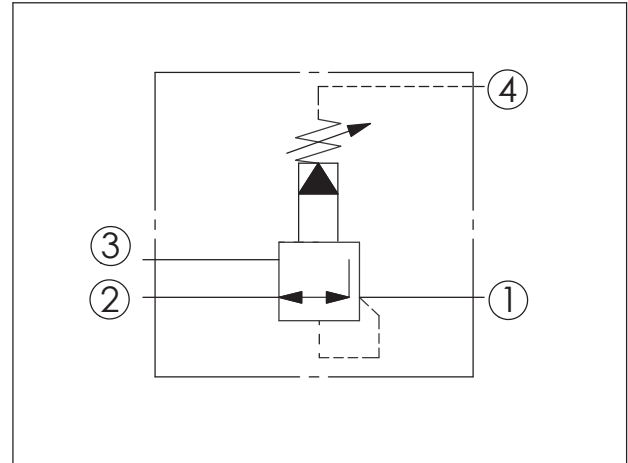
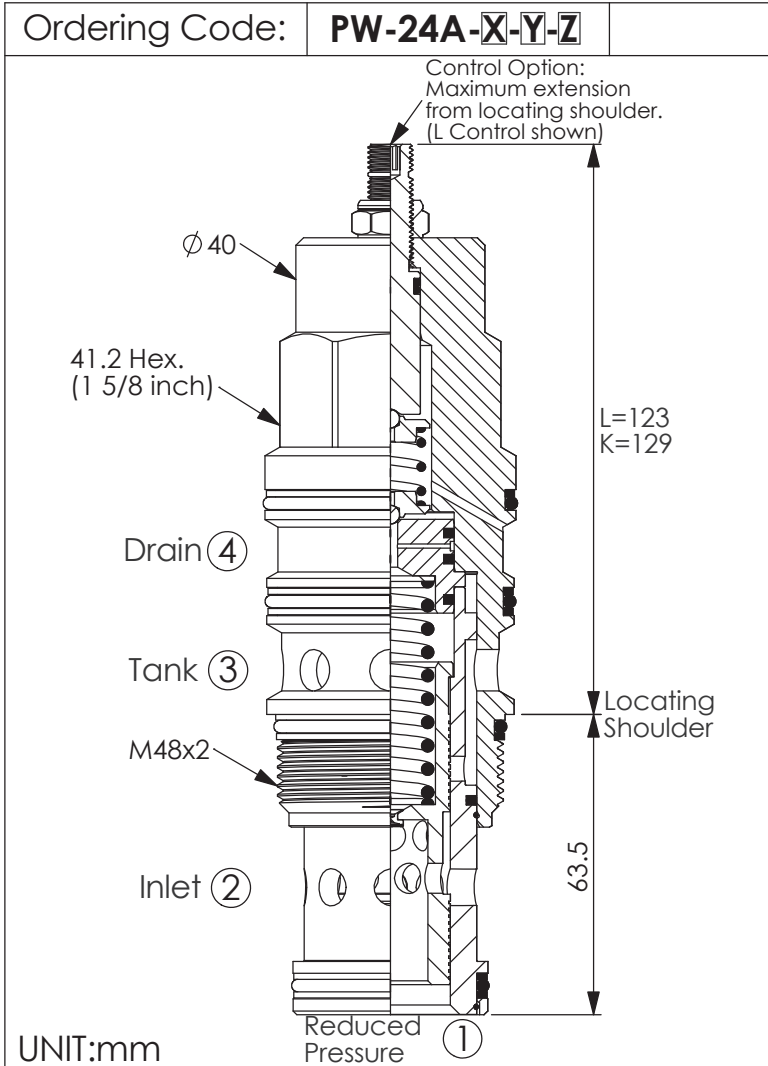


X	OPERATION	
40	Standard Type	
43	Option Type Improved Dynamic Response	

Y	SPRINGS	
	ADJUSTMENT RANGES	
A	7-210 bar	(14 bar Standard Setting)
B	3.5-105 bar	(14 bar Standard Setting)
D	1.7-55 bar	(14 bar Standard Setting)
E	1.7-28 bar	(14 bar Standard Setting)
W	10.5-315 bar	(14 bar Standard Setting)

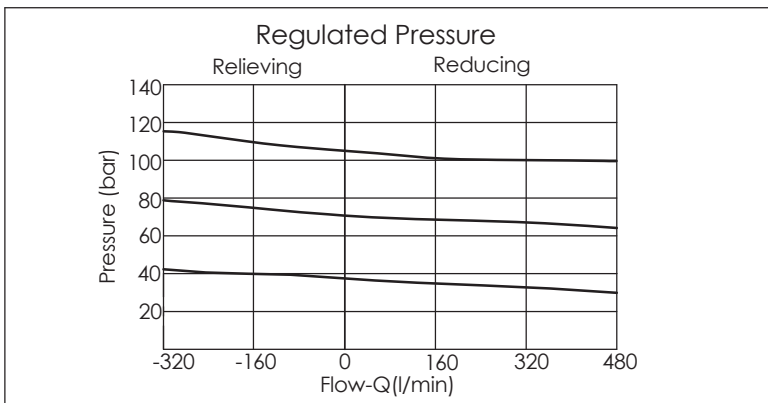
Z	OPTIONS	
L	Leakproof hex. socket screw.	
K	Handknob with Lock Knob.	
C	Stainless Steel Tamper Resistant Cover.	

REDUCING/RELIEVING VALVE (Pilot Operated Reducing/Relieving, Externally Drained)



TECHNICAL DATA

Max. Operating pressure:	350	bar
Rated flow:	320	l/min
Cavity-Tooling:	24A-4	
Installation torque:	475-500	Nm
Weight:	1.58 (Z:L)	kg
Control Pilot Flow (0.25-0.33 L/min.)		



X	OPERATION	
40	Standard Type	
43	Option Type Improved Dynamic Response	

Y	SPRINGS	
	ADJUSTMENT RANGES	
A	7-210 bar (14 bar Standard Setting)	
B	3.5-105 bar (14 bar Standard Setting)	
D	1.7-55 bar (14 bar Standard Setting)	
E	1.7-28 bar (14 bar Standard Setting)	
W	10.5-315 bar (14 bar Standard Setting)	

Z	OPTIONS	
L	Leakproof hex. socket screw.	
K	Handknob with Lock Knob.	
C	Stainless Steel Tamper Resistant Cover.	

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