

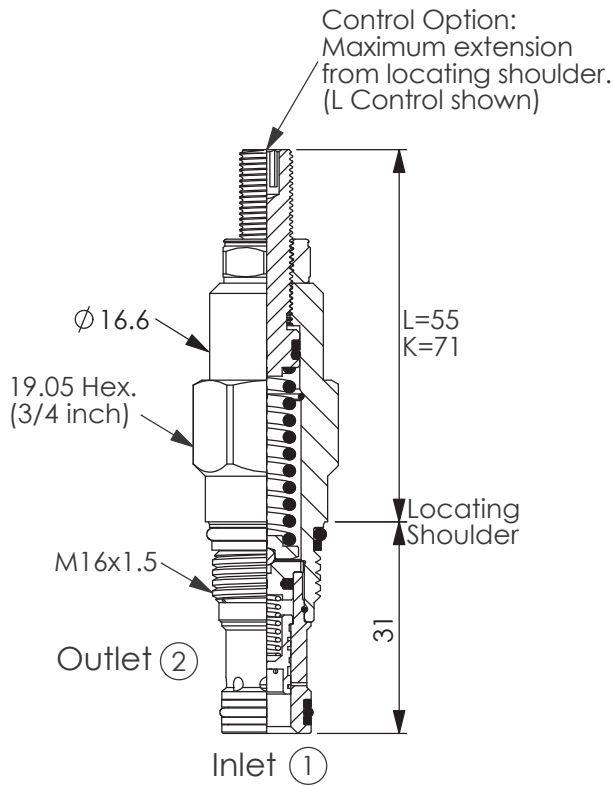


ZAWORY PRZELEWOWE 2-DROGOWE

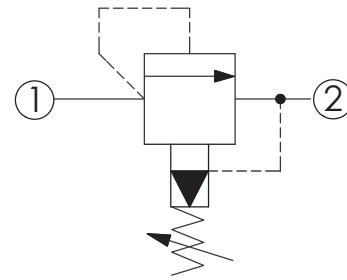
RELIEF VALVE

(Pilot Operated Balanced Piston)

Ordering Code: **RP-162A-X-Y-Z**



UNIT:mm



TECHNICAL DATA

Max.Operating pressure: 350 bar

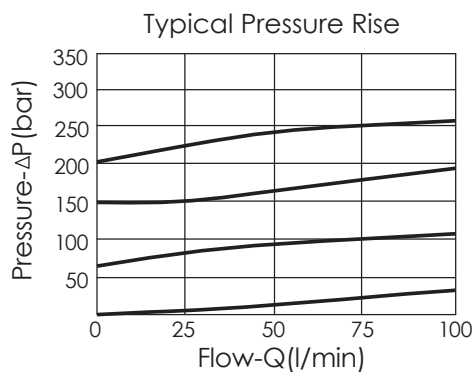
Rated flow: 45 l/min

Cavity-Tooling: 162A-2

Installation torque: 27-33 Nm

Weight: 0.10 kg

Will accept maximum pressure at port 2; suitable for use in cross port relief circuits. If used in cross port relief circuits, consider spool leakage.



X

OPERATION

20

1 to 2 (P to T)

Response Time-Typical (10 ms)
Maximum Leakage (30 cc/min./70 bar)

Y

SPRINGS

ADJUSTMENT RANGES

A 5 to 210 bar (70 bar Standard Setting)

B 5 to 105 bar (70 bar Standard Setting)

C 5 to 420 bar (70 bar Standard Setting)

N 5 to 55 bar (28 bar Standard Setting)

Q 5 to 28 bar (14 bar Standard Setting)

W 5 to 315 bar (70 bar Standard Setting)

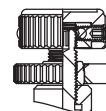
Z

OPTIONS

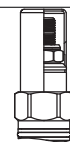
L Leakproof hex. socket screw.



K Handknob with Lock Knob.



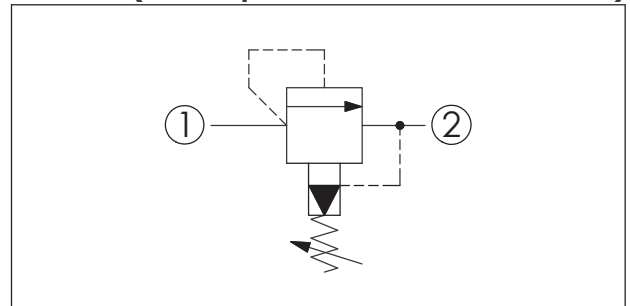
C Stainless Steel Tamper Resistant Cover.



RELIEF VALVE (Pilot Operated Balanced Piston)

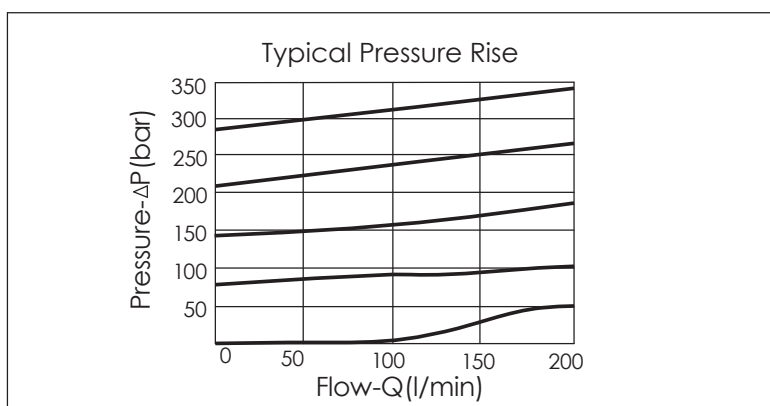
Ordering Code: **RP-10A-X-Y-Z**

UNIT:mm



TECHNICAL DATA		
Max. Setting:	420	bar
Rated flow:	95	l/min
Cavity-Tooling:	10A-2	
Installation torque:	40-50	Nm
Weight:	0.14 (Z:L,LP) 0.15 (Z:LF) 0.42 (Z:KF) 0.12 (Z:G)	kg
Will accept maximum pressure at port 2; suitable for use in cross port relief circuits. If used in cross port relief circuits, consider spool leakage.		

X	OPERATION	
20	1 to 2 (P to T)	
<ul style="list-style-type: none"> Response Time-Typical (10 ms) Maximum Leakage (33 cc/min./70 bar)(46 cSt, 40°C) 		



Z	OPTIONS	
L	Leakproof hex. socket screw.	
LP	Leakproof hex. socket screw. With stainless steel external metal components	
LF	Leakproof hex. socket screw with Panel Mount.	
K	Handknob with Lock Knob.	
KF	Handknob with Panel Mount.	
C	Stainless Steel Tamper Resistant Cover.	
G	Wrench Adjustment	

Y	SPRINGS	
	ADJUSTMENT RANGES	
A	7-210 bar	(70 bar Standard Setting)
B	3.5-105 bar	(70 bar Standard Setting)
C	10.5-420 bar	(70 bar Standard Setting)
D	1.7-55 bar	(28 bar Standard Setting)
E	1.7-28 bar	(14 bar Standard Setting)
N	4-55 bar	(28 bar Standard Setting)
Q	4-28 bar	(14 bar Standard Setting)
W	10.5-315 bar	(70 bar Standard Setting)

RELIEF VALVE (Pilot Operated Balanced Piston)

Ordering Code: **RP-3A-X-Y-Z**

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

Ø25

28.5 Hex.
(1 1/8 inch)

1.00-14UNS-2A

Outlet ②

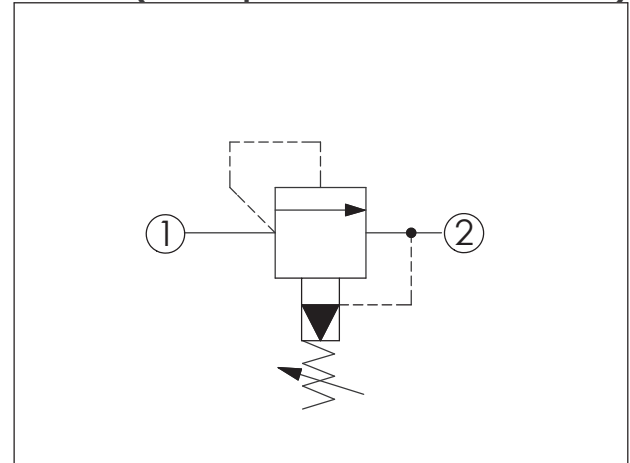
Inlet ①

L=54
K=61

Locating
Shoulder

47.8

UNIT:mm



TECHNICAL DATA

Max.Operating pressure: 350 bar

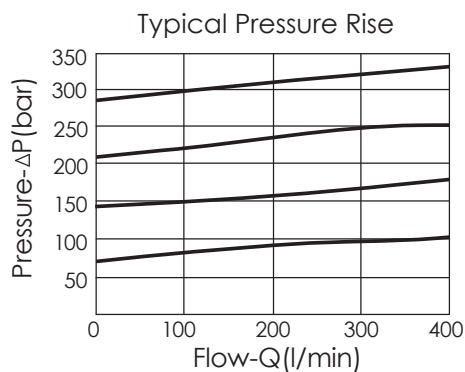
Rated flow: 200 l/min

Cavity-Tooling: 3A-2

Installation torque: 60-70 Nm

Weight: 0.25 kg

Will accept maximum pressure at port 2; suitable for use in cross port relief circuits. If used in cross port relief circuits, consider spool leakage.



X OPERATION

20 1 to 2 (P to T)

Response Time-Typical (10 ms)
Maximum Leakage (50 cc/min./70 bar)

Y SPRINGS

ADJUSTMENT RANGES

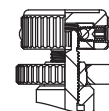
A	7 to 210 bar (70 bar Standard Setting)
B	3.5 to 105 bar (70 bar Standard Setting)
C	10.5 to 420 bar (70 bar Standard Setting)
D	1.7 to 55 bar (28 bar Standard Setting)
E	1.7 to 28 bar (14 bar Standard Setting)
N	4 to 55 bar (28 bar Standard Setting)
Q	4 to 28 bar (14 bar Standard Setting)
W	10.5 to 315 bar (70 bar Standard Setting)

Z OPTIONS

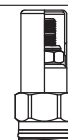
L Leakproof hex. socket screw.



K Handknob with Lock Knob.



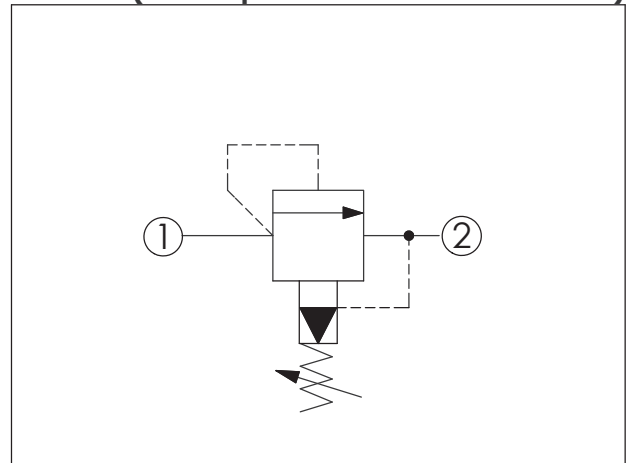
C Stainless Steel Tamper Resistant Cover.



RELIEF VALVE (Pilot Operated Balanced Piston)

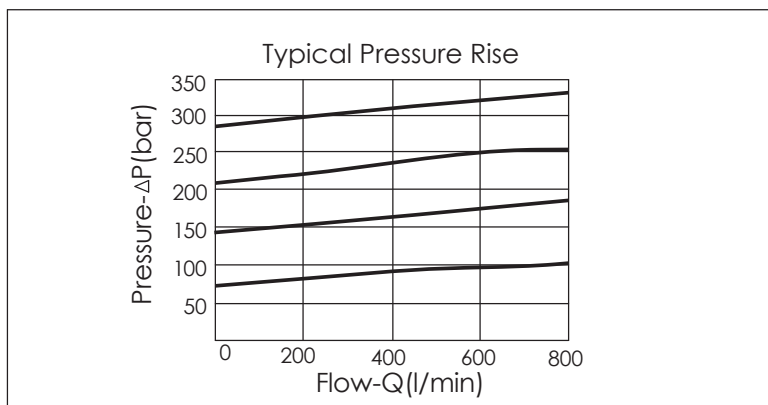
Ordering Code: **RP-16A-X-Y-Z**

UNIT:mm



TECHNICAL DATA	
Max.Operating pressure:	350 bar
Rated flow:	380 l/min
Cavity-Tooling:	16A-2
Installation torque:	200-215 Nm
Weight:	0.53 kg

Will accept maximum pressure at port 2; suitable for use in cross port relief circuits. If used in cross port relief circuits, consider spool leakage.



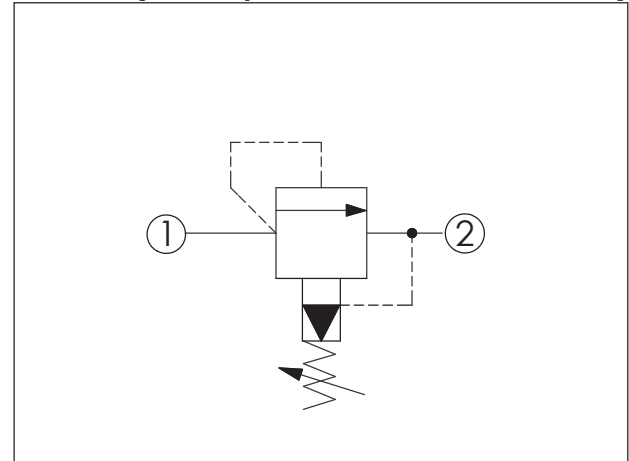
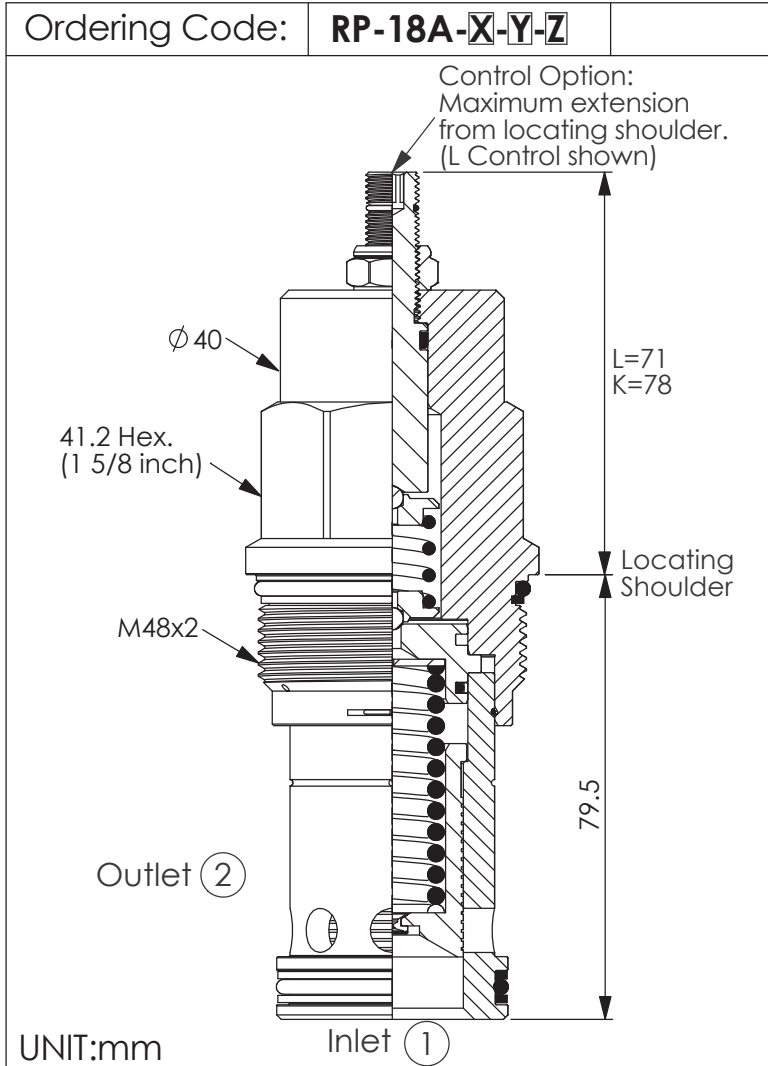
X	OPERATION
20	1 to 2 (P to T)

Response Time-Typical (10 ms)
Maximum Leakage (66 cc/min./70 bar)

Y	SPRINGS
	ADJUSTMENT RANGES
A	7 to 210 bar (70 bar Standard Setting)
B	3.5 to 105 bar (70 bar Standard Setting)
C	10.5 to 420 bar (70 bar Standard Setting)
D	1.7 to 55 bar (28 bar Standard Setting)
E	1.7 to 28 bar (14 bar Standard Setting)
N	4 to 55 bar (28 bar Standard Setting)
Q	4 to 28 bar (14 bar Standard Setting)
W	10.5 to 315 bar (70 bar Standard Setting)

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

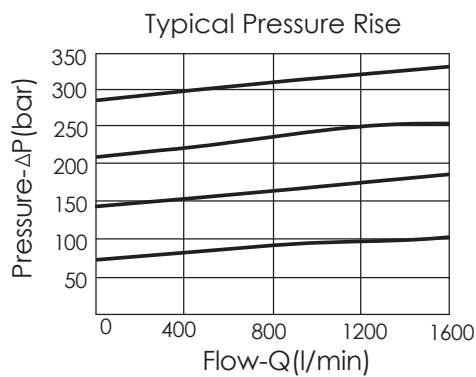
RELIEF VALVE (Pilot Operated Balanced Piston)



TECHNICAL DATA

Max.Operating pressure:	350 bar
Rated flow:	760 l/min
Cavity-Tooling:	18A-2
Installation torque:	465-500 Nm
Weight:	1.15 kg

Will accept maximum pressure at port 2; suitable for use in cross port relief circuits. If used in cross port relief circuits, consider spool leakage.



X OPERATION

20	1 to 2 (P to T)
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Response Time-Typical (10 ms)
Maximum Leakage (82 cc/min./70 bar)

Y SPRINGS

ADJUSTMENT RANGES

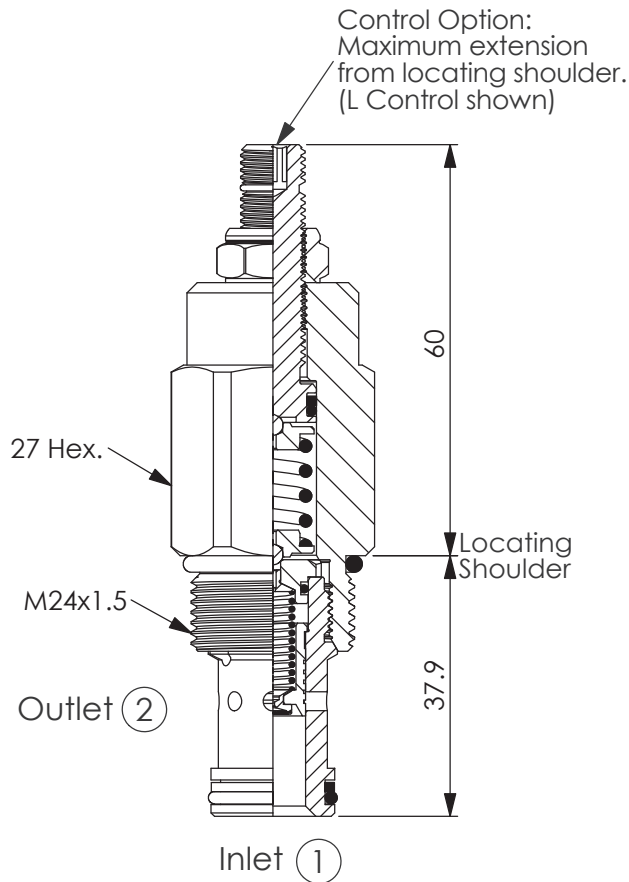
A	7 to 210 bar (70 bar Standard Setting)
B	3.5 to 105 bar (70 bar Standard Setting)
C	10.5 to 420 bar (70 bar Standard Setting)
D	1.7 to 55 bar (28 bar Standard Setting)
E	1.7 to 28 bar (14 bar Standard Setting)
N	4 to 55 bar (28 bar Standard Setting)
Q	4 to 28 bar (14 bar Standard Setting)
W	10.5 to 315 bar (70 bar Standard Setting)

Z OPTIONS

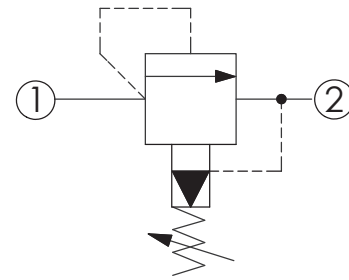
L	Leakproof hex. socket screw.	
K	Handknob with Lock Knob.	
C	Stainless Steel Tamper Resistant Cover.	

RELIEF VALVE (Pilot Operated Balanced Piston)

Ordering Code: **RP-24MA-X-Y-Z**



UNIT:mm



TECHNICAL DATA

Max.Operating pressure: 350 bar

Rated flow: 95 l/min

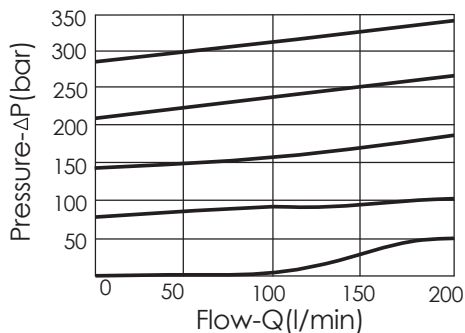
Cavity-Tooling: 24MA-2

Installation torque: 40-50 Nm

Weight: 0.24 kg

Will accept maximum pressure at port 2; suitable for use in cross port relief circuits. If used in cross port relief circuits, consider spool leakage.

Typical Pressure Rise



X OPERATION

20 1 to 2 (P to T)

Response Time-Typical (10 ms)
Maximum Leakage (33 cc/min./70 bar)

Y SPRINGS

ADJUSTMENT RANGES

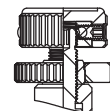
W 10 to 315 bar (70 bar Standard Setting)

Z OPTIONS

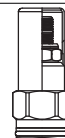
L Leakproof hex. socket screw.



K Handknob with Lock Knob.



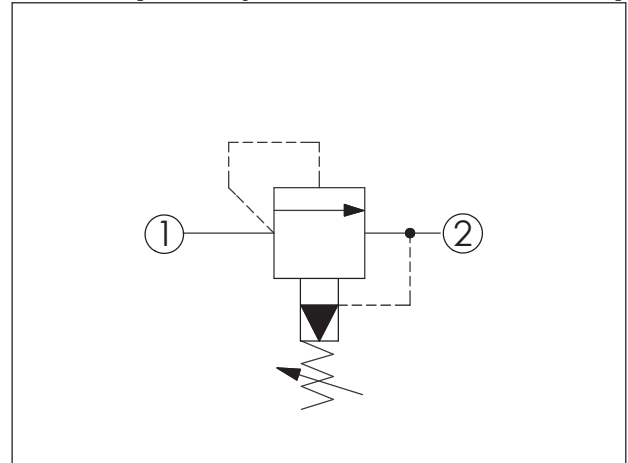
C Stainless Steel Tamper Resistant Cover.



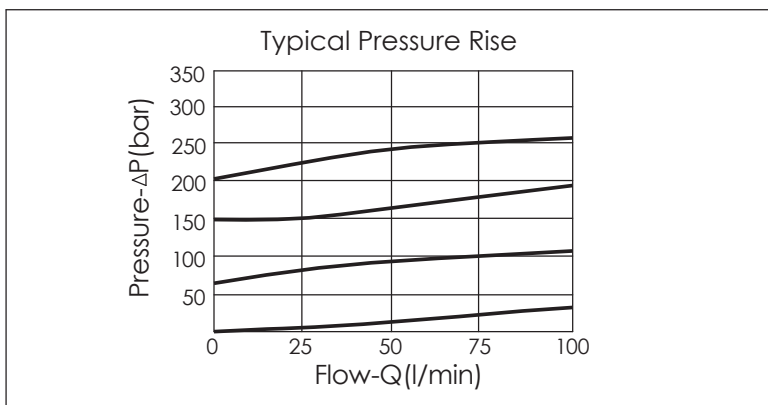
RELIEF VALVE (Pilot Operated Balanced Piston)

Ordering Code: **RP-18M-X-Y-Z**

UNIT:mm


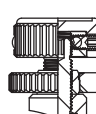
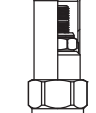


TECHNICAL DATA	
Max.Operating pressure:	350 bar
Rated flow:	45 l/min
Cavity-Tooling:	18M-2
Installation torque:	27-33 Nm
Weight:	0.11 kg
Will accept maximum pressure at port 2; suitable for use in cross port relief circuits. If used in cross port relief circuits, consider spool leakage.	



X	OPERATION
20	1 to 2 (P to T)
Response Time-Typical (10 ms) Maximum Leakage (30 cc/min./70 bar)	

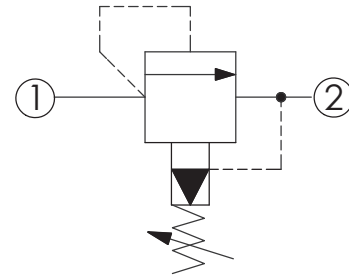
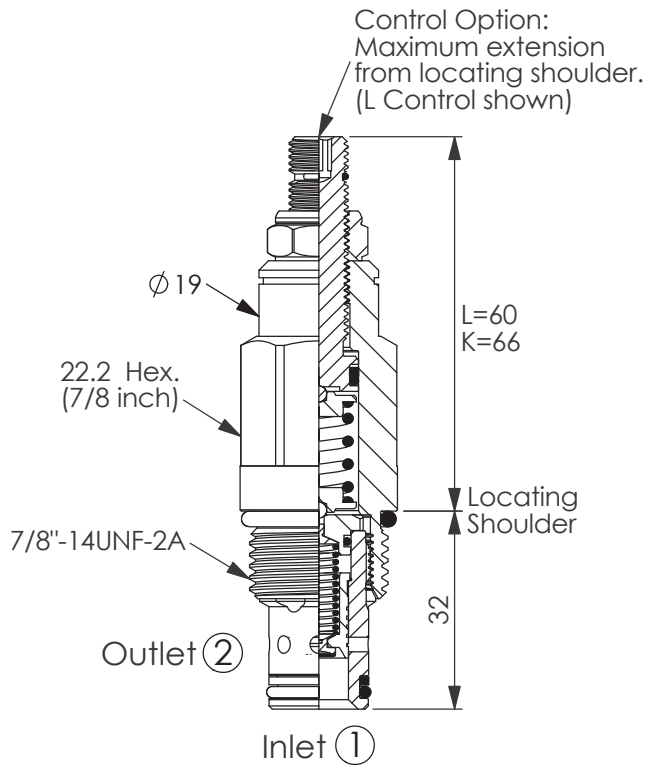
Y	SPRINGS
	ADJUSTMENT RANGES
W	10 to 315 bar (70 bar Standard Setting)

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

RELIEF VALVE

(Pilot Operated Balanced Piston)

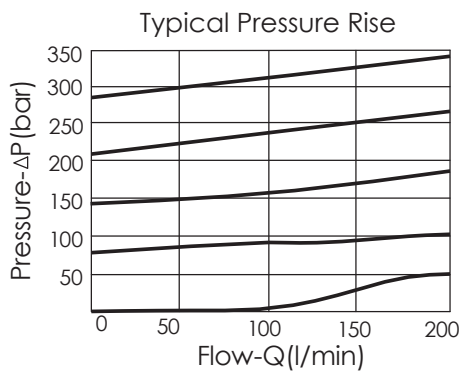
Ordering Code: **RP-10W-X-Y-Z**



TECHNICAL DATA

Max. Operating pressure:	350 bar	
Rated flow:	95	l/min
Cavity-Tooling:	10W-2	
Installation torque:	35-45	Nm
Weight:	0.16	kg

UNIT:mm



X OPERATION

20	1 to 2 (P to T)
Response Time-Typical (10 ms)	
Maximum Leakage (33 cc/min./70 bar)	

Z OPTIONS

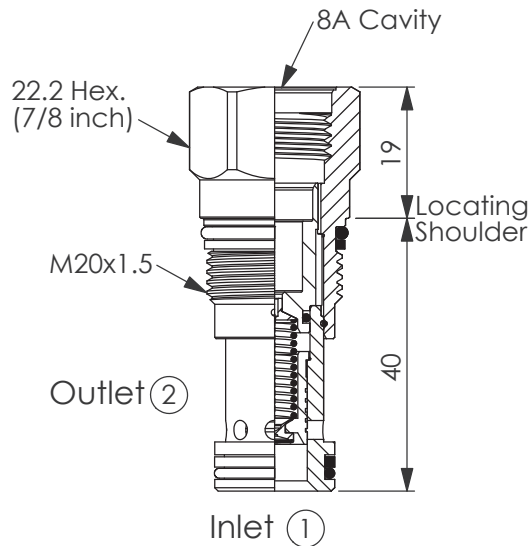
L	Leakproof hex. socket screw.	
K	Handknob with Lock Knob.	
C	Stainless Steel Tamper Resistant Cover.	
B1	Handknob and aluminum locknut.	

SPRINGS

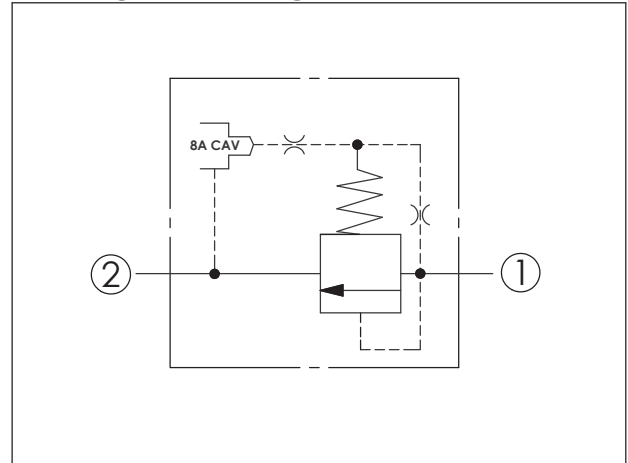
ADJUSTMENT RANGES

Y	ADJUSTMENT RANGES
A	7 to 210 bar (70 bar Standard Setting)
B	3.5 to 105 bar (70 bar Standard Setting)
C	10.5 to 420 bar (70 bar Standard Setting)
D	1.7 to 55 bar (28 bar Standard Setting)
E	1.7 to 28 bar (14 bar Standard Setting)
H	2 to 210 bar (70 bar Standard Setting)
W	10.5 to 315 bar (70 bar Standard Setting)

Ordering Code: **RP-10A-X-Y-8**



UNIT:mm



TECHNICAL DATA

Max.Operating pressure: 350 bar

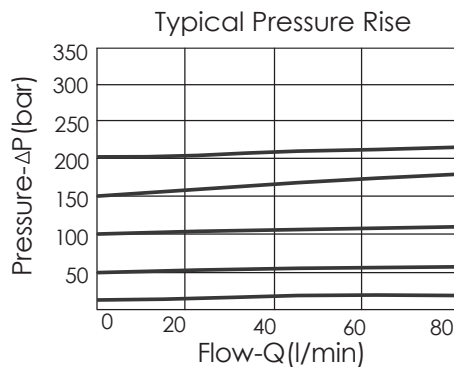
Rated flow: 95 l/min

Cavity-Tooling: 10A-2

Installation torque: 40-50 Nm

Weight: 0.09 kg

Will accept maximum pressure at port 2; suitable for use in cross port relief circuits. If used in cross port relief circuits, consider spool leakage.



X

OPERATION

20

1 to 2 (P to T)

Response Time-Typical (10 ms)
Maximum Leakage (33 cc/min./70 bar)

Y

SPRINGS

MINIMUM CONTROL PRESSURE

D

1.7 bar (25 psi)

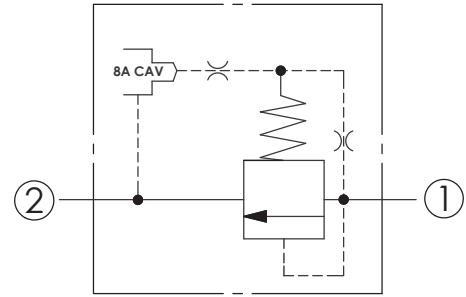
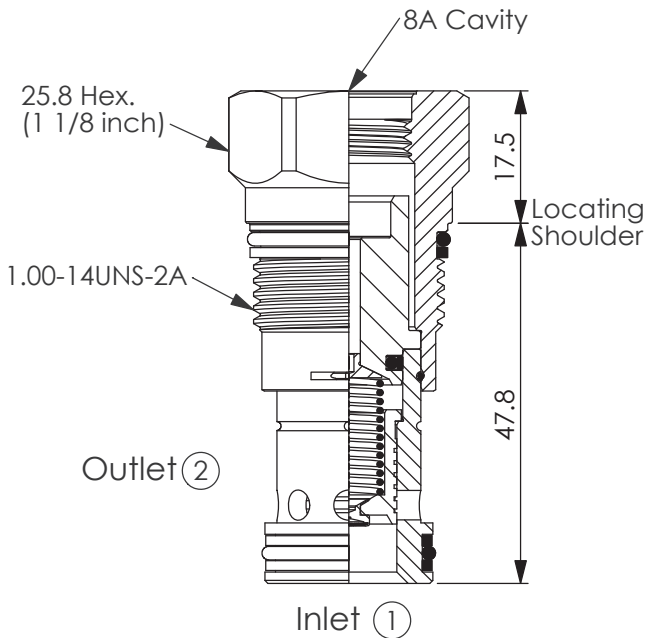
W

7 bar (100 psi)

W spring is suit for higher pressure drop application. Please consult our sales department.

(Pilot operated, balanced piston relief main stage with integral 8A control cavity)

Ordering Code: **RP-3A-X-Y-8**

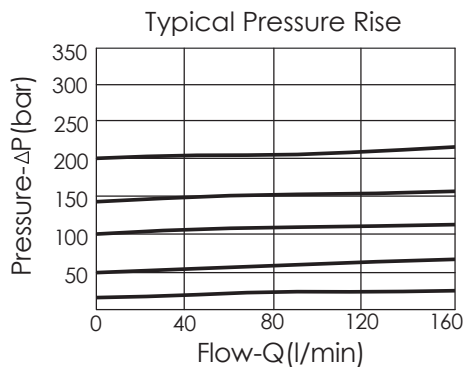


TECHNICAL DATA

Max. Operating pressure:	350 bar
Rated flow:	200 l/min
Cavity-Tooling:	3A-2
Installation torque:	60-70 Nm
Weight:	0.17 kg

Will accept maximum pressure at port 2; suitable for use in cross port relief circuits. If used in cross port relief circuits, consider spool leakage.

UNIT:mm



X OPERATION

20	1 to 2 (P to T)
Response Time-Typical (10 ms) Maximum Leakage (50 cc/min./70 bar)	

Y

SPRINGS

MINIMUM CONTROL PRESSURE

D

1.7 bar (25 psi)

W

7 bar (100 psi)

W spring is suit for higher pressure drop application. Please consult our sales department.

Ordering Code: **RP-16A-X-Y-8**

31.7 Hex. (1 1/4 inch)

8A Cavity

25

Locating Shoulder

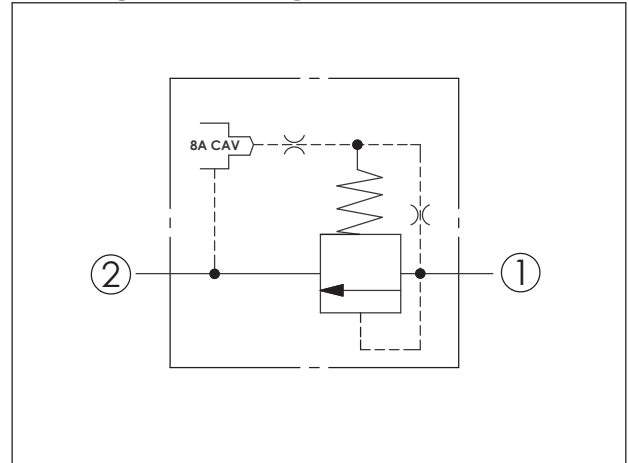
M36x2

62

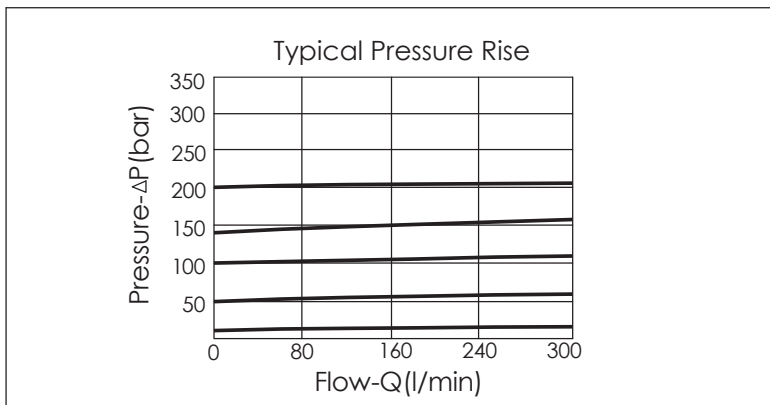
Outlet ②

Inlet ①

UNIT:mm



TECHNICAL DATA	
Max.Operating pressure:	350 bar
Rated flow:	380 l/min
Cavity-Tooling:	16A-2
Installation torque:	200-215 Nm
Weight:	0.43 kg
Will accept maximum pressure at port 2; suitable for use in cross port relief circuits. If used in cross port relief circuits, consider spool leakage.	



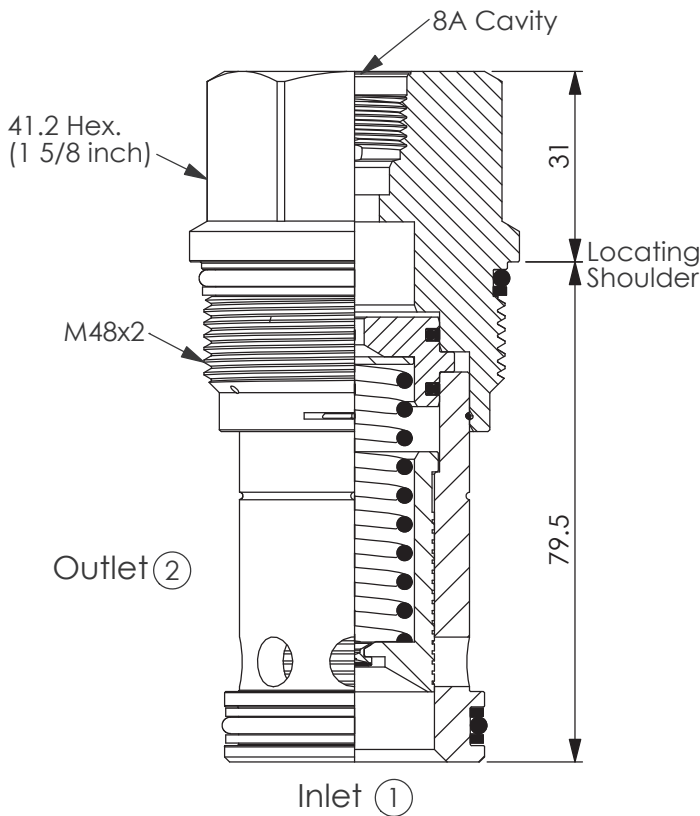
X	OPERATION
20	1 to 2 (P to T)
Response Time-Typical (10 ms)	
Maximum Leakage (66 cc/min./70 bar)	

Y	SPRINGS
D	MINIMUM CONTROL PRESSURE
D	1.7 bar (25 psi)
W	7 bar (100 psi)
W spring is suit for higher pressure drop application. Please consult our sales department.	

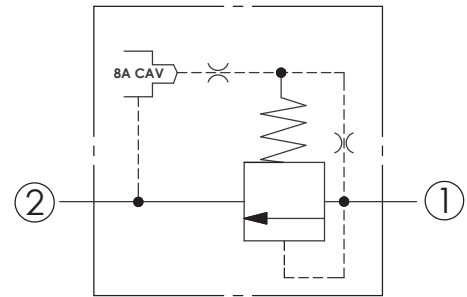
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(Pilot operated, balanced piston relief main stage with integral 8A control cavity)

Ordering Code: **RP-18A-X-Y-8**



UNIT:mm



TECHNICAL DATA

Max.Operating pressure: 350 bar

Rated flow: 760 l/min

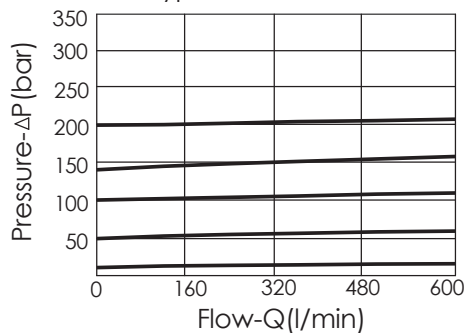
Cavity-Tooling: 18A-2

Installation torque: 465-500 Nm

Weight: 0.94 kg

Will accept maximum pressure at port 2; suitable for use in cross port relief circuits. If used in cross port relief circuits, consider spool leakage.

Typical Pressure Rise



X

OPERATION

20

1 to 2 (P to T)

Response Time-Typical (10 ms)

Maximum Leakage (82 cc/min./70 bar)

Y

SPRINGS

MINIMUM CONTROL PRESSURE

D

1.7 bar (25 psi)

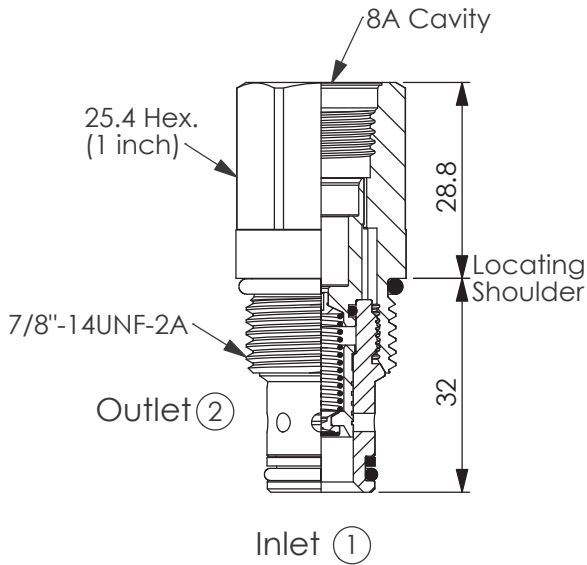
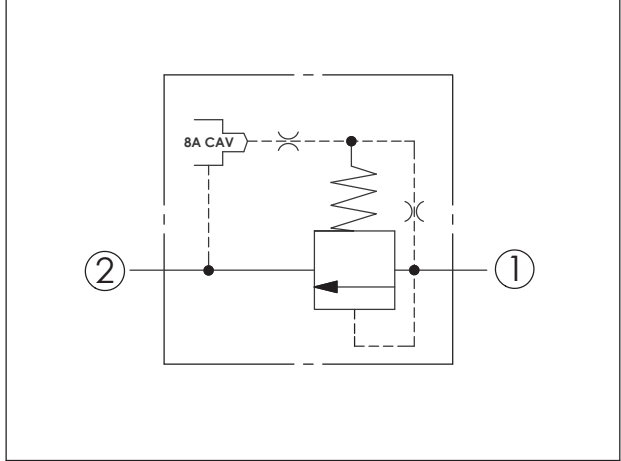
W

7 bar (100 psi)

W spring is suit for higher pressure drop application. Please consult our sales department.

(Pilot operated, balanced piston relief main stage with integral 8A control cavity)

Ordering Code: **RP-10W-X-Y-8**

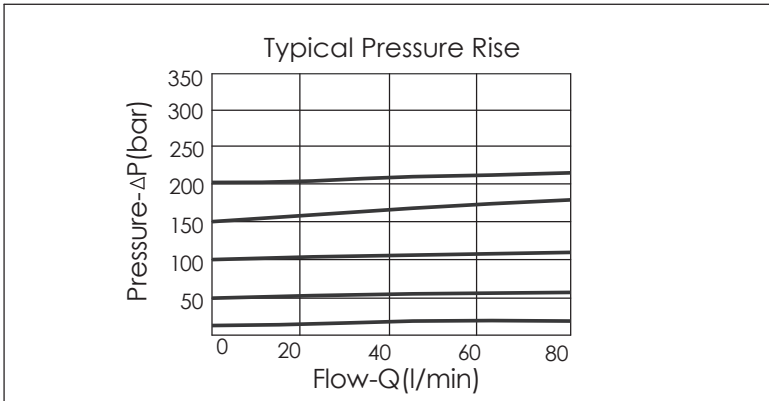


UNIT:mm

TECHNICAL DATA

Max.Operating pressure:	350 bar	
Rated flow:	95	l/min
Cavity-Tooling:	10W-2	
Installation torque:	35-45	Nm
Weight:	0.11	kg

Will accept maximum pressure at port 2; suitable for use in cross port relief circuits. If used in cross port relief circuits, consider spool leakage.



X OPERATION

20	1 to 2 (P to T)
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Response Time-Typical (10 ms)
Maximum Leakage (33 cc/min./70 bar)

Y SPRINGS

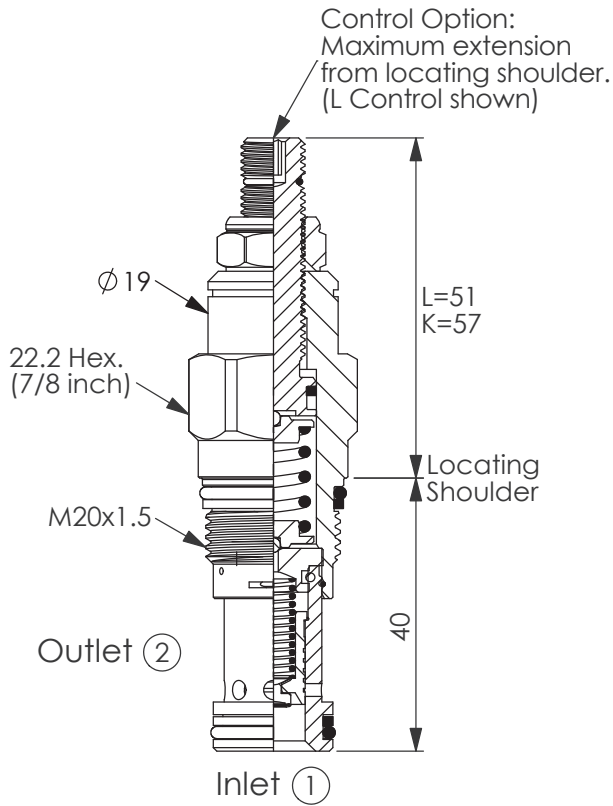
MINIMUM CONTROL PRESSURE

D	1.7 bar (25 psi)
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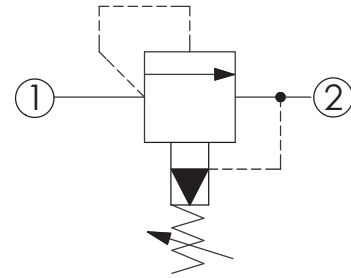
W	7 bar (100 psi)
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W spring is suit for higher pressure drop application. Please consult our sales department.

Ordering Code: **RP-10A-X-Y-Z**



UNIT:mm

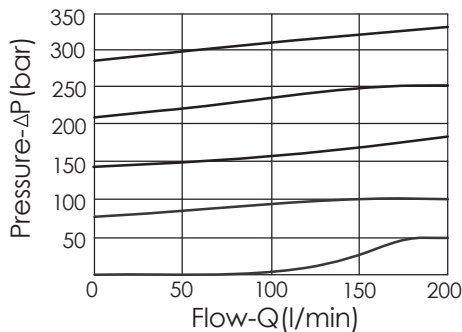


TECHNICAL DATA

Max. Setting:	420	bar
Rated flow:	95	l/min
Cavity-Tooling:	10A-2	
Installation torque:	40-50	Nm
Weight:	0.14 (Z:L)	kg

Will accept maximum pressure at port 2; suitable for use in cross port relief circuits. If used in cross port relief circuits, consider spool leakage.

Typical Pressure Rise



X OPERATION

22 Pilot Operated 1 to 2 (P to T)

- Response Time-Typical (2 ms)
- Maximum Leakage (30 cc/min./70 bar) (46 cSt, 40°C)

Y

SPRINGS

ADJUSTMENT RANGES

A	7-210 bar (70 bar Standard Setting)
B	3.5-105 bar (70 bar Standard Setting)
C	10.5-420 bar (70 bar Standard Setting)
D	1.7-55 bar (28 bar Standard Setting)
E	1.7-28 bar (14 bar Standard Setting)
N	4-55 bar (28 bar Standard Setting)
Q	4-28 bar (14 bar Standard Setting)
W	10.5-315 bar (70 bar Standard Setting)

Z

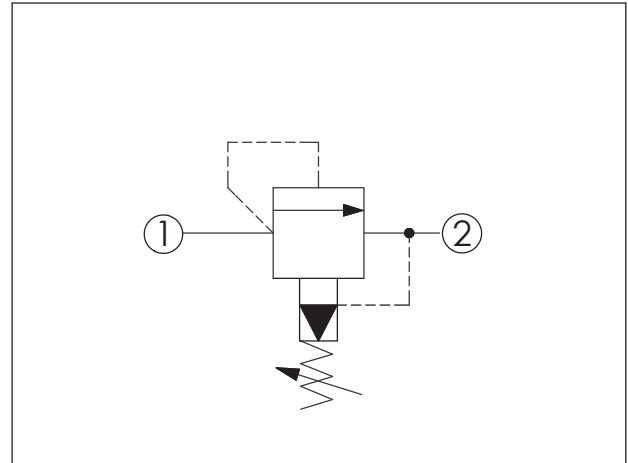
OPTIONS

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

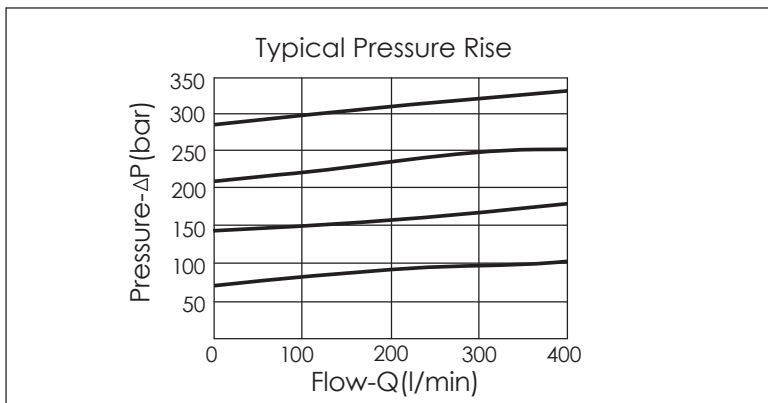
RELIEF VALVE (Pilot Operated Balanced Piston, Fast Acting)

Ordering Code: **RP-3A-X-Y-Z**

UNIT:mm

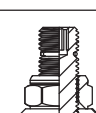
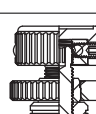
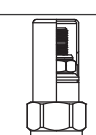


TECHNICAL DATA	
Max.Operating pressure:	350 bar
Rated flow:	200 l/min
Cavity-Tooling:	3A-2
Installation torque:	60-70 Nm
Weight:	0.25 kg
Will accept maximum pressure at port 2; suitable for use in cross port relief circuits. If used in cross port relief circuits, consider pool leakage.	



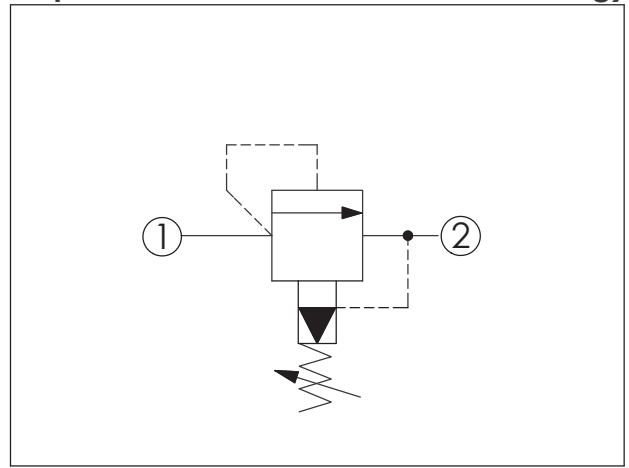
X	OPERATION
22	Pilot Operated 1 to 2 (P to T)
Response Time-Typical (2 ms) Maximum Leakage (50 cc/min./70 bar)	

Y	SPRINGS
ADJUSTMENT RANGES	
A	7 to 210 bar (70 bar Standard Setting)
B	3.5 to 105 bar (70 bar Standard Setting)
C	10.5 to 420 bar (70 bar Standard Setting)
D	1.7 to 55 bar (28 bar Standard Setting)
E	1.7 to 28 bar (14 bar Standard Setting)
N	4 to 55 bar (28 bar Standard Setting)
Q	4 to 28 bar (14 bar Standard Setting)
W	10.5 to 315 bar (70 bar Standard Setting)

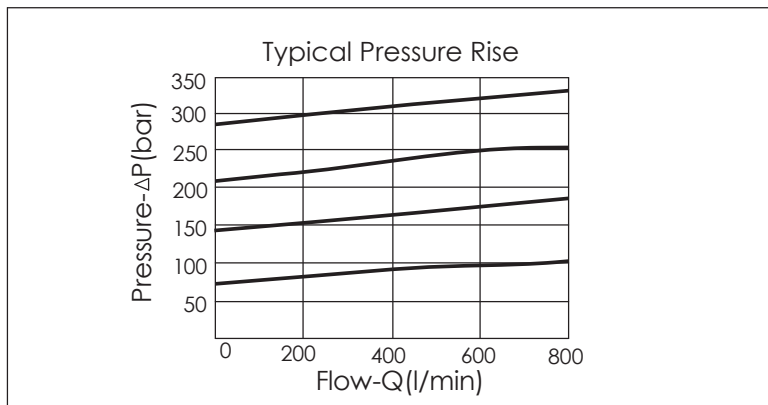
Z	OPTIONS
L	Leakproof hex. socket screw. 
K	Handknob with Lock Konb. 
C	Stainless Steel Tamper Resistant Cover. 

Ordering Code: **RP-16A-X-Y-Z**

UNIT:mm

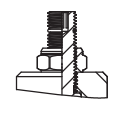
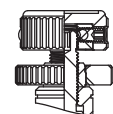
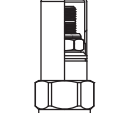


TECHNICAL DATA	
Max.Operating pressure:	350 bar
Rated flow:	380 l/min
Cavity-Tooling:	16A-2
Installation torque:	200-215 Nm
Weight:	0.53 kg
Will accept maximum pressure at port 2; suitable for use in cross port relief circuits. If used in cross port relief circuits, consider spool leakage.	

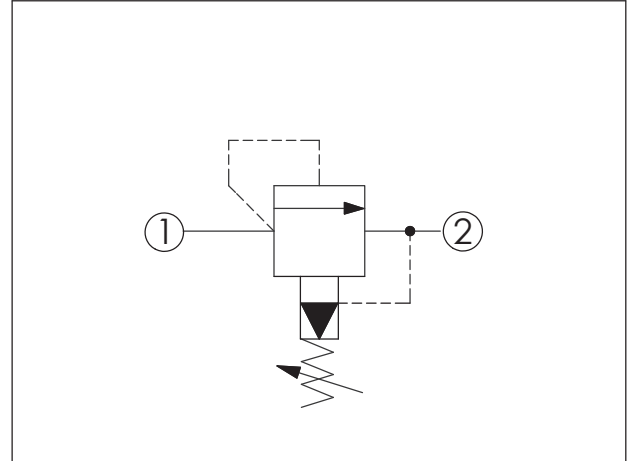
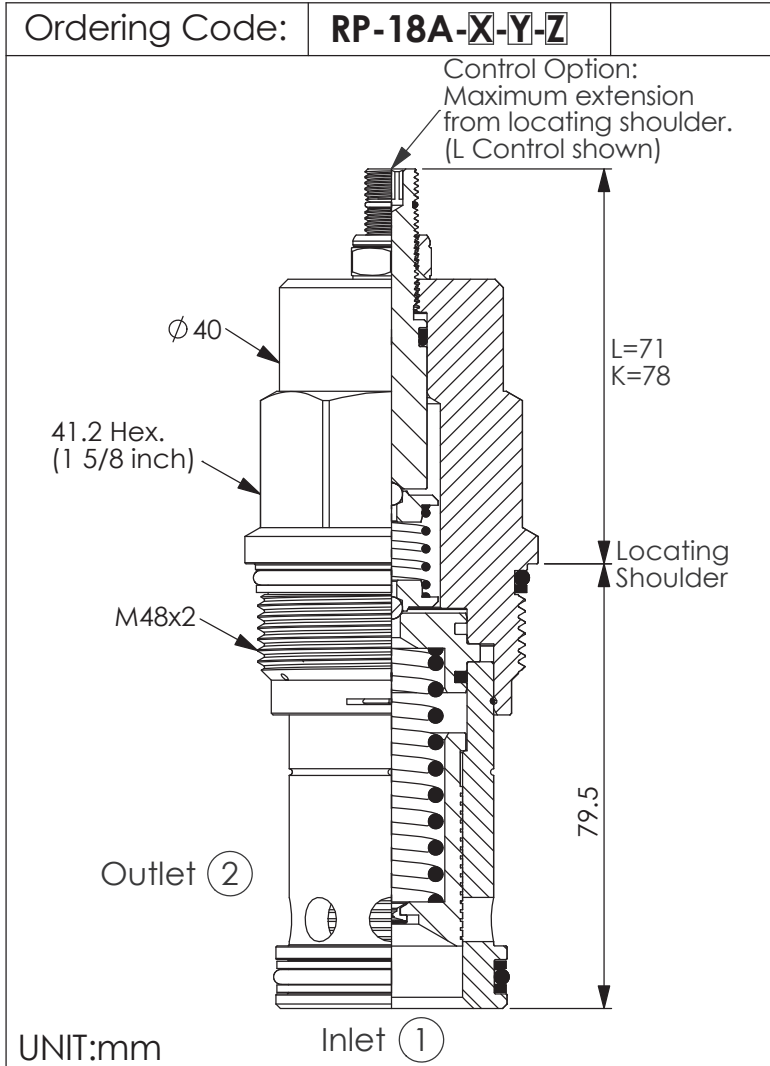


X	OPERATION
22	Pilot Operated 1 to 2 (P to T)
Response Time-Typical (2 ms) Maximum Leakage (66 cc/min./70 bar)	

Y	SPRINGS
ADJUSTMENT RANGES	
A	7 to 210 bar (70 bar Standard Setting)
B	3.5 to 105 bar (70 bar Standard Setting)
C	10.5 to 420 bar (70 bar Standard Setting)
D	1.7 to 55 bar (28 bar Standard Setting)
E	1.7 to 28 bar (14 bar Standard Setting)
N	4 to 55 bar (28 bar Standard Setting)
Q	4 to 28 bar (14 bar Standard Setting)
W	10.5 to 315 bar (70 bar Standard Setting)

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

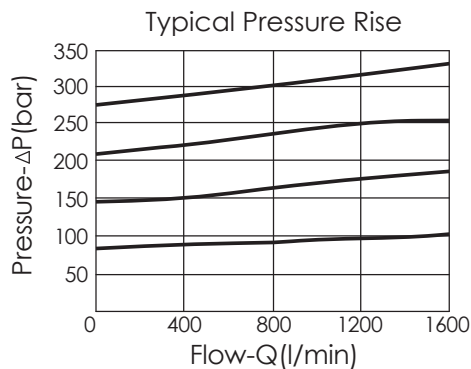
RELIEF VALVE (Pilot Operated Balanced Piston, Fast Acting)



TECHNICAL DATA

Max. Setting:	420	bar
Rated flow:	760	l/min
Cavity-Tooling:	18A-2	
Installation torque:	465-500	Nm
Weight:	1.16 (Z:L)	kg

Will accept maximum pressure at port 2; suitable for use in cross port relief circuits. If used in cross port relief circuits, consider spool leakage.



X

OPERATION

22 Pilot Operated 1 to 2 (P to T)

- Response Time-Typical (2 ms)
- Maximum Leakage (82 cc/min./70 bar) (46 cSt, 40°C)

Y

SPRINGS

ADJUSTMENT RANGES

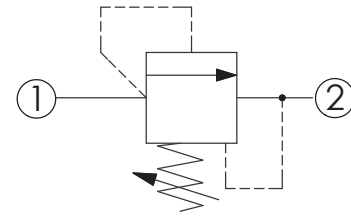
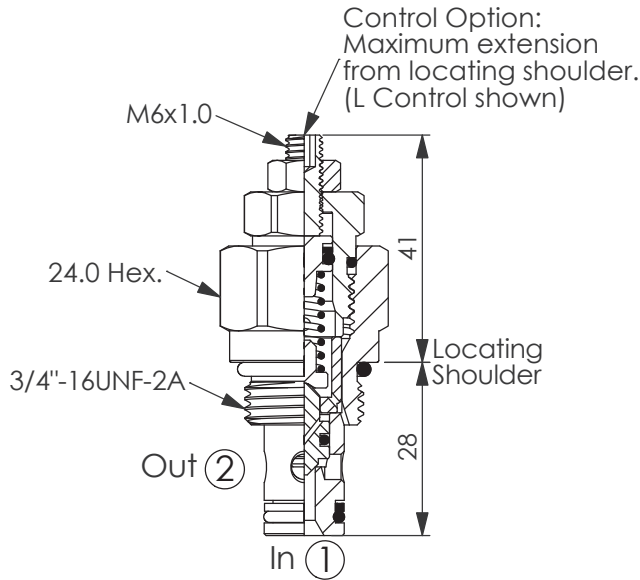
A	7-210 bar (70 bar Standard Setting)
B	3.5-105 bar (70 bar Standard Setting)
C	10.5-420 bar (70 bar Standard Setting)
D	1.7-55 bar (28 bar Standard Setting)
E	1.7-28 bar (14 bar Standard Setting)
N	4-55 bar (28 bar Standard Setting)
Q	4-28 bar (14 bar Standard Setting)
W	10.5-315 bar (70 bar Standard Setting)

Z

OPTIONS

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

Ordering Code: **RD-08W-X-Y-Z**

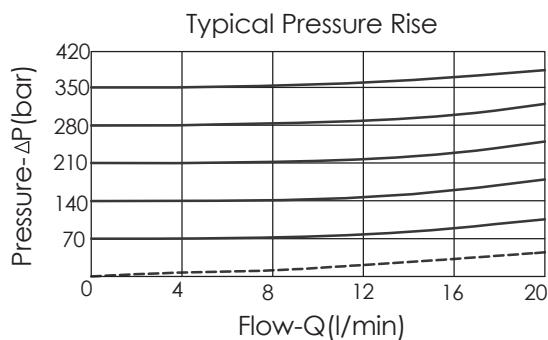


TECHNICAL DATA

Max. pressure:	350	bar
Rated flow:	20	l/min
Cavity-Tooling:	08W-2	
Installation torque:	25-35	Nm
Weight:	0.11 (Z:L)	kg

Will accept maximum pressure at port 2; suitable for use in cross port relief circuits.

UNIT:mm



X OPERATION

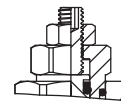
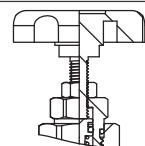
20 1 to 2 (P to T)

- Response Time-Typical (2 ms)
- Maximum Leakage (0.2 cc/min.) (46 cSt, 40°C)
- Dirt tolerant
- This valve cannot limit max. pressure adjustment
- If you would like to assemble with other knob (for example, Z option: K, T), please kindly choose RD08W20-Y-Z-A

Y PRESSURE SETTING

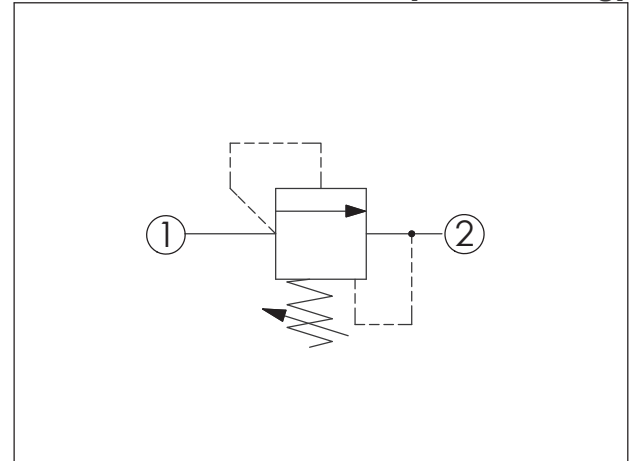
A	80-210 bar
D	30-55 bar
E	10-28 bar
K	40-155 bar
W	150-350 bar

Z OPTIONS

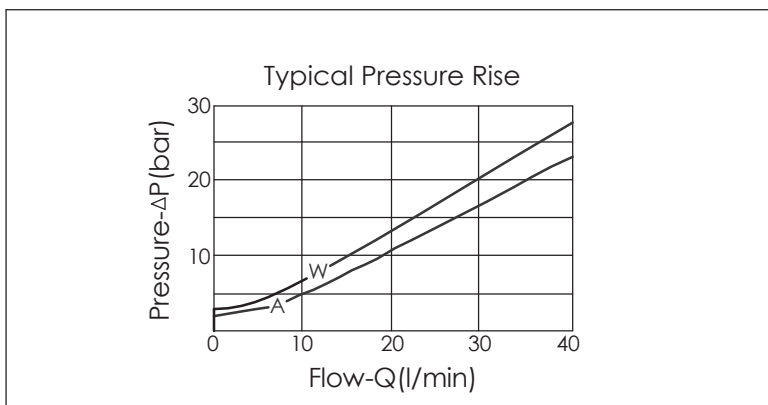
L	Leakproof hex. socket screw.	
F	Handknob and locknut.	

Ordering Code: **RD-10W-X-Y-Z**

UNIT:mm



TECHNICAL DATA		
Max. pressure:	250	bar
Rated flow:	40	l/min
Cavity-Tooling:	10W-2	
Installation torque:	35-45	Nm
Weight:	0.23	kg
Will accept maximum pressure at port 2; suitable for use in cross port relief circuits.		

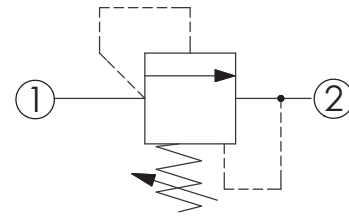
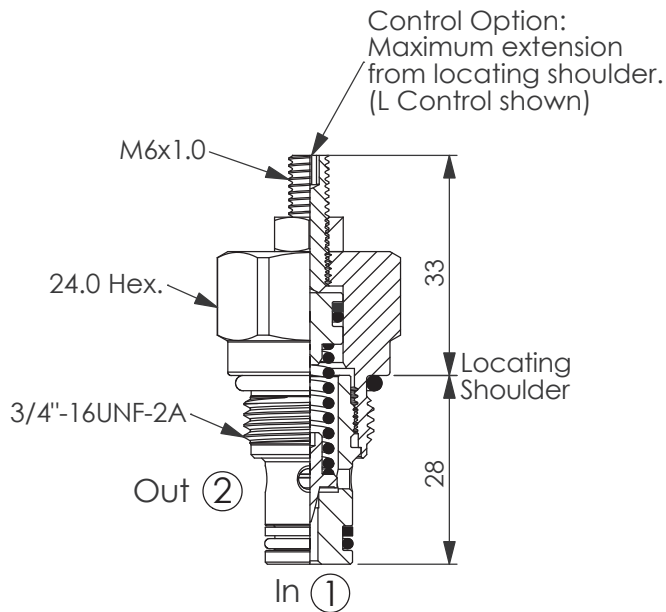


X	OPERATION	
20	1	to 2 (P to T)
Response Time-Typical (2 ms) Maximum Leakage (0.2 cc/min.) Dirt tolerant		

Y	PRESSURE SETTING	
A	17 -210 bar	(70 bar Standard Setting)
W	17 -250 bar	(70 bar Standard Setting)

Z	OPTIONS	
L	Leakproof hex. socket screw.	
C	Stainless Steel Tamper Resistant Cover.	
T	Three-winged Handknob Kit.	

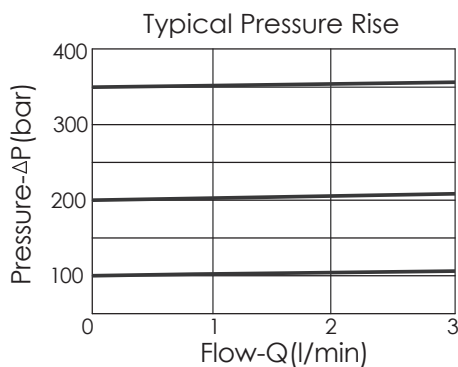
Ordering Code: **RD-08W-X-Y-Z**



TECHNICAL DATA

Max. Setting:	420	bar
Rated flow:	3	l/min
Cavity-Tooling:	08W-2	
Installation torque:	25-35	Nm
Weight:	0.11 (Z:L)	kg

UNIT:mm



X OPERATION

23 Direct Acting 1 to 2 (P to T)

- Response Time-Typical (2 ms)
- Maximum Leakage (0.2 cc/min.) (46 cSt, 40°C)
- Dirt tolerant
- If you would like to assemble with other knob (for example, Z option: K, T), please kindly choose RD08W23-Y-Z-A

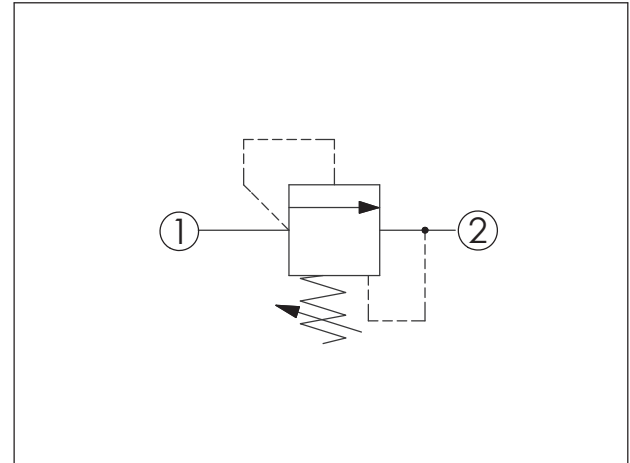
Z OPTIONS

L	Leakproof hex. socket screw.	
LP	Leakproof hex. socket screw. With stainless steel external metal components	
F	Handknob and locknut.	

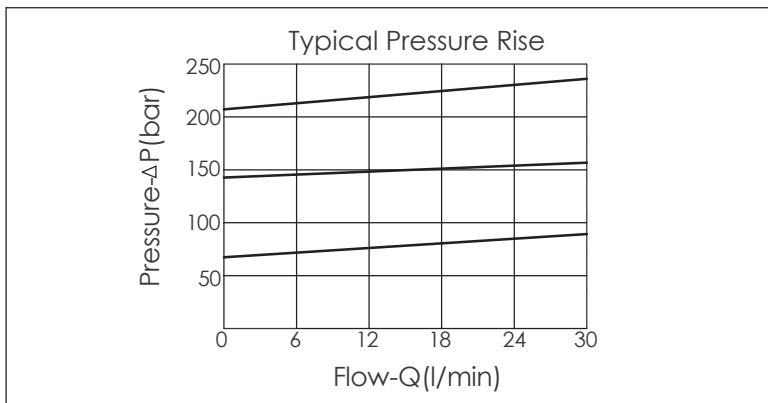
Y	PRESSURE SETTING
A	35-210 bar
B	22-105 bar
C	70-420 bar
D	10-55 bar
W	50-315 bar

Ordering Code: **RD-08W-X-Y-Z**

UNIT:mm



TECHNICAL DATA		
Max. pressure:	350	bar
Rated flow:	22	l/min
Cavity-Tooling:	08W-2	
Installation torque:	25-35	Nm
Weight:	0.22 (Z:L)	kg
Will accept maximum pressure at port 2; suitable for use in cross port relief circuits.		

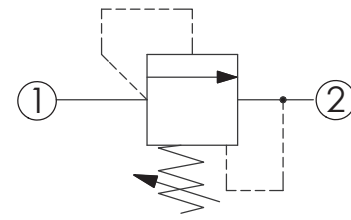
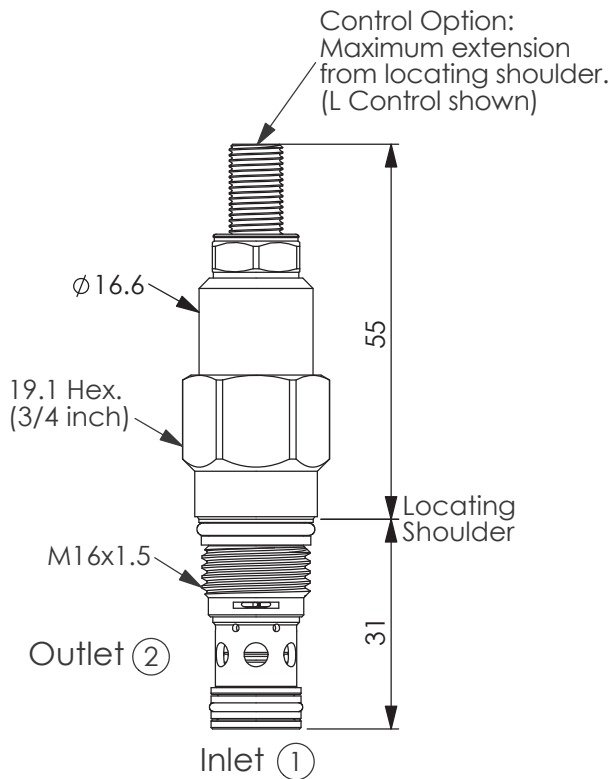


X	OPERATION	
24	1 to 2 (P to T)	
<ul style="list-style-type: none"> Response Time-Typical (2 ms) Maximum Leakage (0.3 cc/min.) (46 cSt, 40°C) Dirt tolerant 		

Y	PRESSURE SETTING	
A	7-210 bar	(70 bar Standard Setting)
D	2-55 bar	(40 bar Standard Setting)
E	1.7-28 bar	(14 bar Standard Setting)
K	3.5-155 bar	(70 bar Standard Setting)
W	10.5-315 bar	(70 bar Standard Setting)

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

Ordering Code: **RD-162A-X-Y-Z**

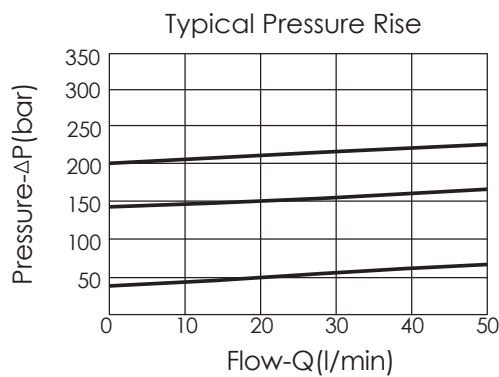


TECHNICAL DATA

Max. Setting:	420	bar
Rated flow:	45	l/min
Cavity-Tooling:	162A-2	
Installation torque:	27-33	Nm
Weight:	0.10	kg

Will accept maximum pressure at port 2; suitable for use in cross port relief circuits.

UNIT:mm



X OPERATION

25 Direct Acting
1 to 2 (P to T)

Response Time-Typical (2 ms)
Maximum Leakage (0.7 cc/min.)
Dirt tolerant

Y PRESSURE SETTING

A	35-210 bar (70 bar Standard Setting)
B	20-105 bar (70 bar Standard Setting)
C	70-420 bar (70 bar Standard Setting)
D	14-55 bar (28 bar Standard Setting)
E	10-28 bar (14 bar Standard Setting)
S	3.5-14 bar (7 bar Standard Setting)
W	55-315 bar (70 bar Standard Setting)

Z OPTIONS

L	Leakproof hex. socket screw.	
LP	Leakproof hex. socket screw. With stainless steel external metal components	

Ordering Code: **RD-10A-X-Y-Z**

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

Ø19

22.2 Hex.
(7/8 inch)

57

Locating
Shoulder

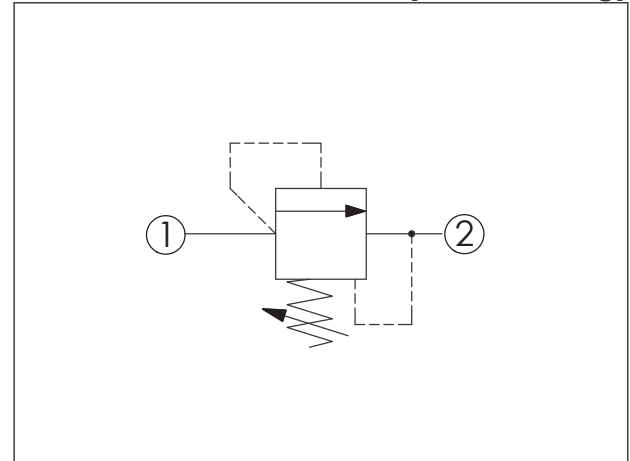
M20x1.5

39

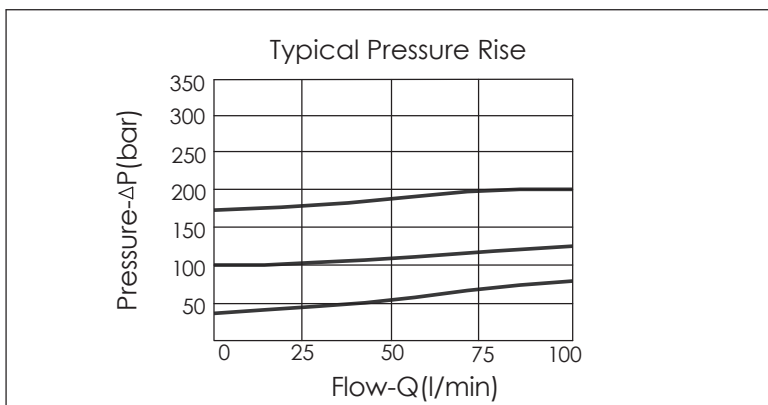
Outlet ②

Inlet ①

UNIT:mm



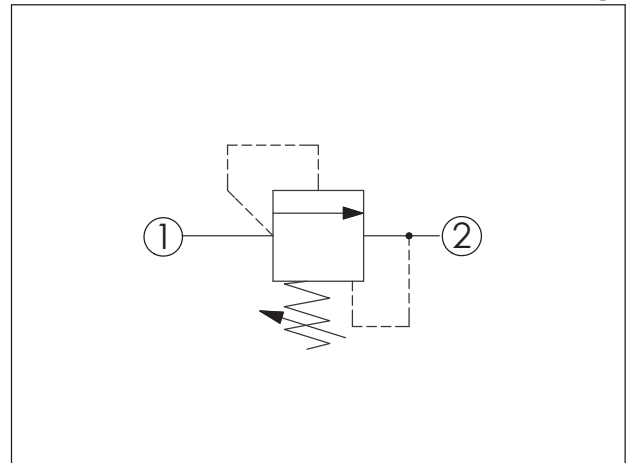
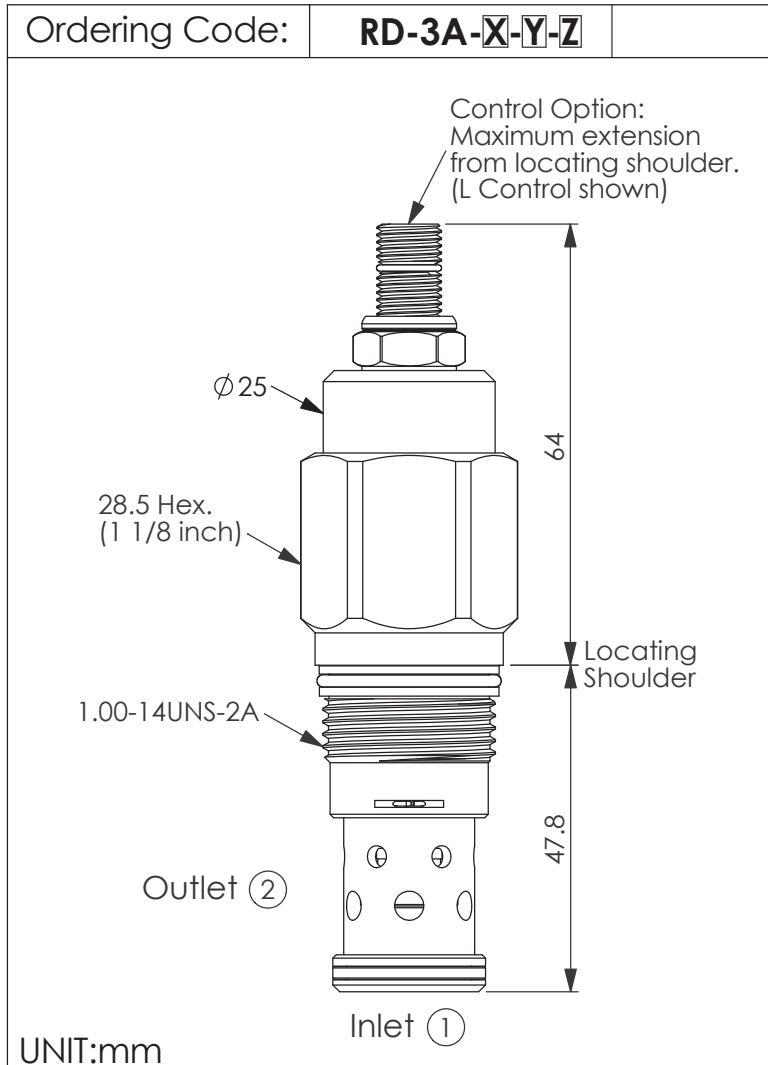
TECHNICAL DATA		
Max. Setting:	420	bar
Rated flow:	95	l/min
Cavity-Tooling:	10A-2	
Installation torque:	40-50	Nm
Weight:	0.17	kg
Will accept maximum pressure at port 2; suitable for use in cross port relief circuits.		



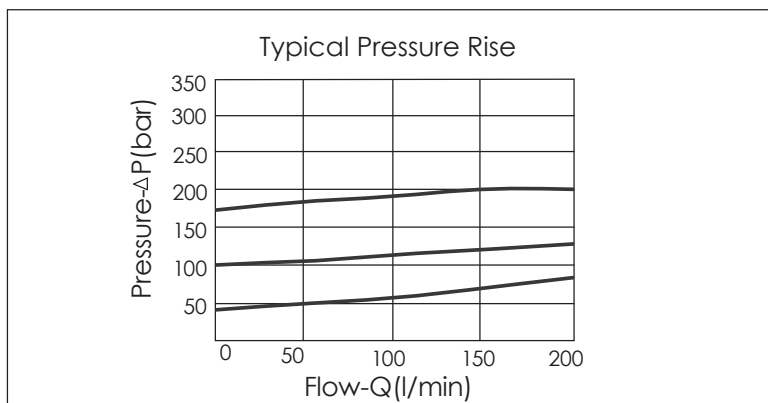
Y PRESSURE SETTING		
A	35-210 bar (70 bar Standard Setting)	
B	20-105 bar (70 bar Standard Setting)	
C	70-420 bar (70 bar Standard Setting)	
D	14-55 bar (28 bar Standard Setting)	
E	10-28 bar (14 bar Standard Setting)	
S	3.5-14 bar (7 bar Standard Setting)	
W	55-315 bar (70 bar Standard Setting)	

X	OPERATION	
25	Direct Acting 1 to 2 (P to T)	
Response Time-Typical (2 ms) Maximum Leakage (0.7 cc/min.) Dirt tolerant		

Z	OPTION	
L	Leakproof hex. socket screw.	
LP	Leakproof hex. socket screw. With stainless steel external metal components	



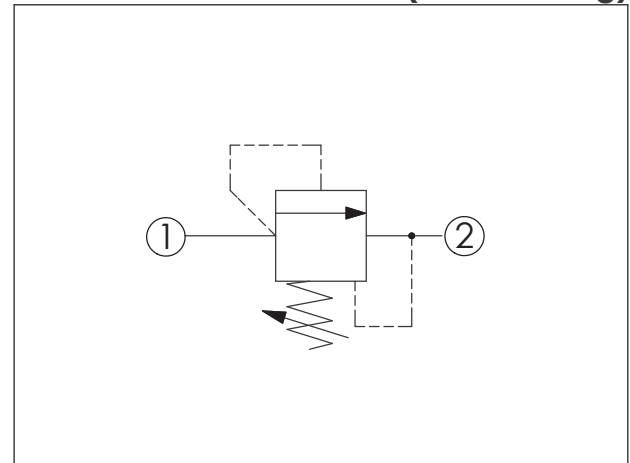
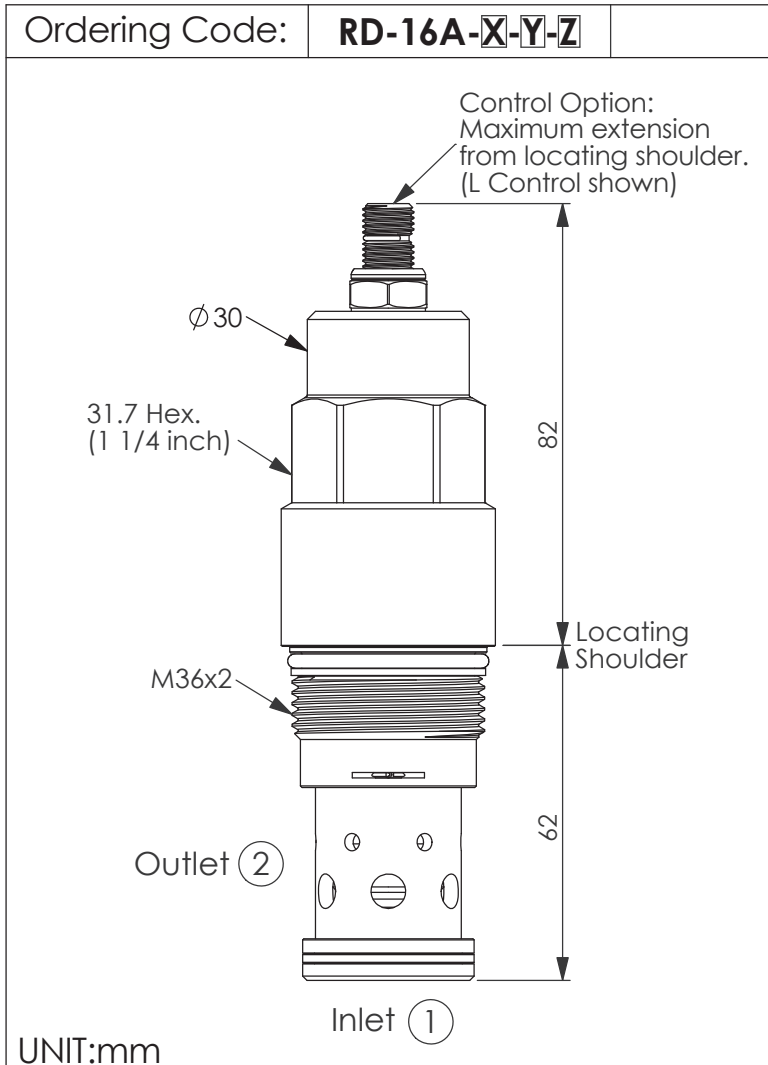
TECHNICAL DATA		
Max. Setting:	420	bar
Rated flow:	200	l/min
Cavity-Tooling:	3A-2	
Installation torque:	60-70	Nm
Weight:	0.30 (Z:L,LP)	kg
Will accept maximum pressure at port 2; suitable for use in cross port relief circuits.		



X	OPERATION	
25	Direct Acting 1 to 2 (P to T)	
<ul style="list-style-type: none"> Response Time-Typical (2 ms) Maximum Leakage (0.7 cc/min.)(46 cSt, 40°C) Dirt tolerant 		

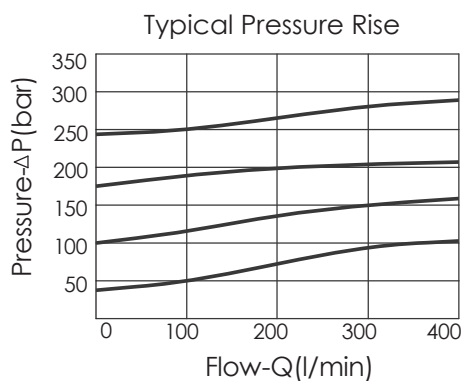
Y	PRESSURE SETTING	
A	35-210 bar	(70 bar Standard Setting)
B	20-105 bar	(70 bar Standard Setting)
C	70-420 bar	(70 bar Standard Setting)
D	14-55 bar	(28 bar Standard Setting)
E	10-28 bar	(14 bar Standard Setting)
S	3.5-14 bar	(7 bar Standard Setting)
W	55-315 bar	(70 bar Standard Setting)

Z	OPTION	
L	Leakproof hex. socket screw.	
LP	Leakproof hex. socket screw. With stainless steel external metal components (Buna-N Seal)	
C	Stainless Steel Tamper Resistant Cover.	



TECHNICAL DATA

Max. Setting:	420	bar
Rated flow:	380	l/min
Cavity-Tooling:	16A-2	
Installation torque:	200-215	Nm
Weight:	0.68	kg
Will accept maximum pressure at port 2; suitable for use in cross port relief circuits.		



X

OPERATION

25 Direct Acting
1 to 2 (P to T)

Response Time-Typical (2 ms)
Maximum Leakage (0.7 cc/min.)
Dirt tolerant

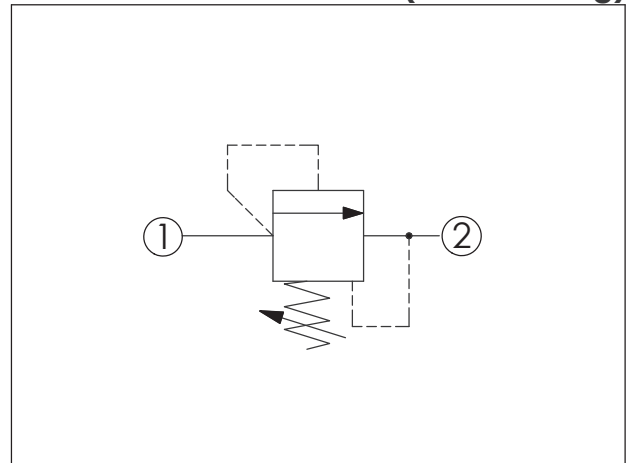
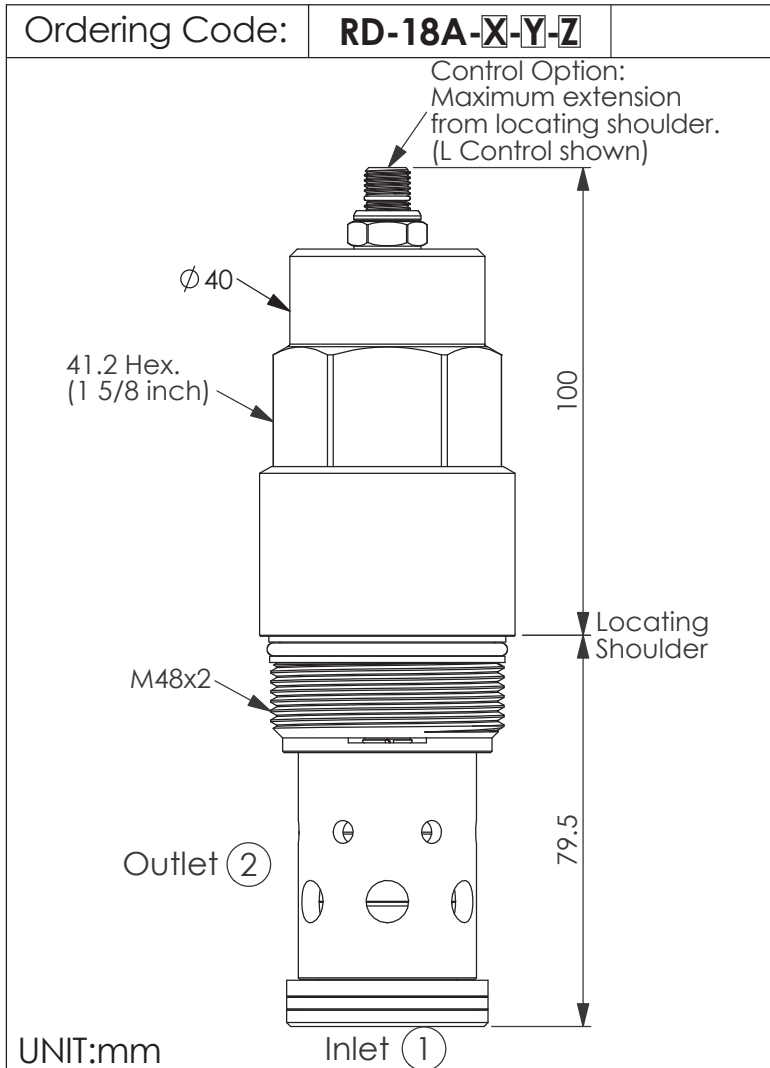
Y PRESSURE SETTING

A	35-210 bar (70 bar Standard Setting)
B	20-105 bar (70 bar Standard Setting)
C	70-420 bar (70 bar Standard Setting)
D	14-55 bar (28 bar Standard Setting)
E	10-28 bar (14 bar Standard Setting)
S	3.5-14 bar (7 bar Standard Setting)
W	55-315 bar (70 bar Standard Setting)

Z

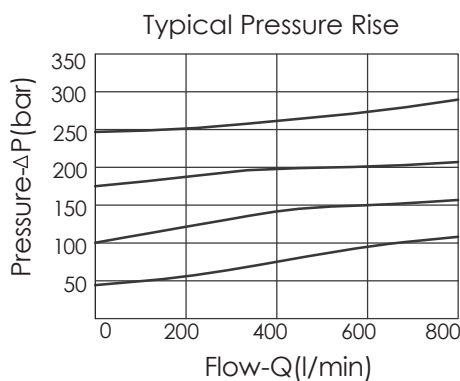
OPTION

L	Leakproof hex. socket screw.	
LP	Leakproof hex. socket screw. With stainless steel external metal components	



TECHNICAL DATA

Max. Setting:	420	bar
Rated flow:	760	l/min
Cavity-Tooling:	18A-2	
Installation torque:	465-500	Nm
Weight:	1.46	kg
Will accept maximum pressure at port 2; suitable for use in cross port relief circuits.		



X OPERATION

25 Direct Acting
1 to 2 (P to T)

Response Time-Typical (2 ms)
Maximum Leakage (0.7 cc/min.)
Dirt tolerant

Y PRESSURE SETTING

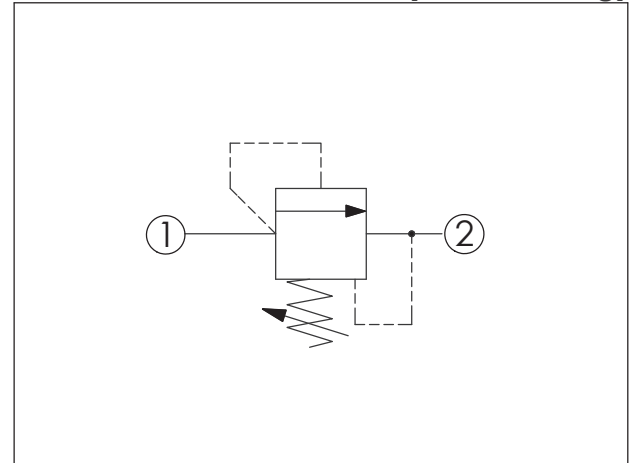
A	35-210 bar (70 bar Standard Setting)	
B	20-105 bar (70 bar Standard Setting)	
C	70-420 bar (70 bar Standard Setting)	
D	14-55 bar (28 bar Standard Setting)	
E	10-28 bar (14 bar Standard Setting)	
W	55-315 bar (70 bar Standard Setting)	

Z OPTIONS

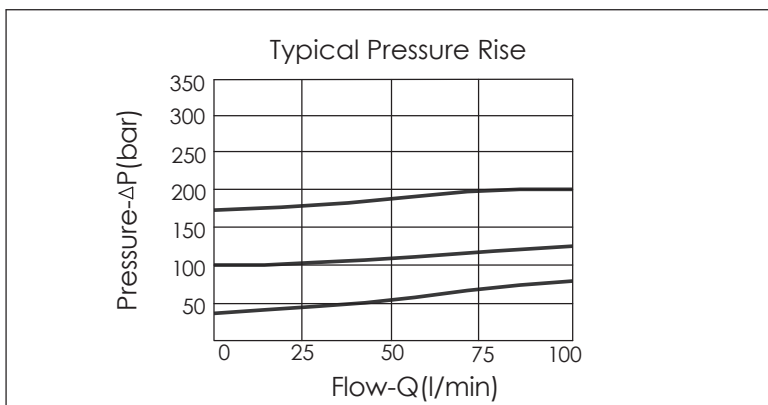
L	Leakproof hex. socket screw.		
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Ordering Code: **RD-13A-X-Y-Z**

UNIT:mm



TECHNICAL DATA		
Max. Setting:	420	bar
Rated flow:	95	l/min
Cavity-Tooling:	13A-2	
Installation torque:	40-50	Nm
Weight:	0.13	kg
Will accept maximum pressure at port 2; suitable for use in cross port relief circuits.		



Y	PRESSURE SETTING	
A	35-210 bar	(70 bar Standard Setting)
B	20-105 bar	(70 bar Standard Setting)
C	70-420 bar	(70 bar Standard Setting)
D	14-55 bar	(28 bar Standard Setting)
E	10-28 bar	(14 bar Standard Setting)
S	3.5-14 bar	(7 bar Standard Setting)
W	55-315 bar	(70 bar Standard Setting)

X	OPERATION	
25	Direct Acting 1 to 2 (P to T)	
Response Time-Typical (2 ms) Maximum Leakage (0.7 cc/min.) Dirt tolerant		

Z	OPTION	
L	Leakproof hex. socket screw.	
LP	Leakproof hex. socket screw. With stainless steel external metal components	

Ordering Code: **RD-3A-X-Y-Z**

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

$\phi 25$

28.57 Hex.
(1 1/8 inch)

1.00-14UNS-2A

Outlet (2)

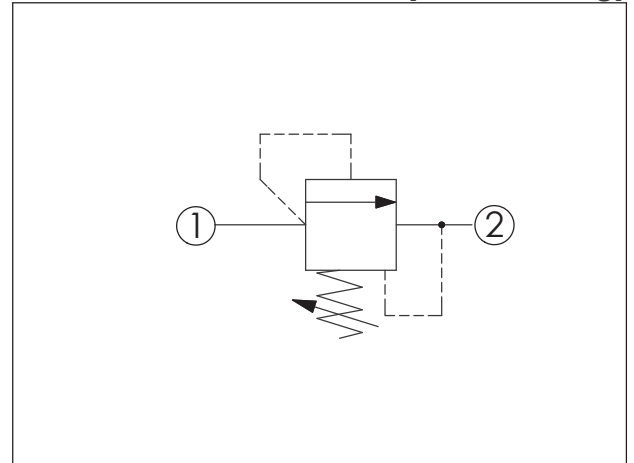
Inlet (1)

Locating Shoulder

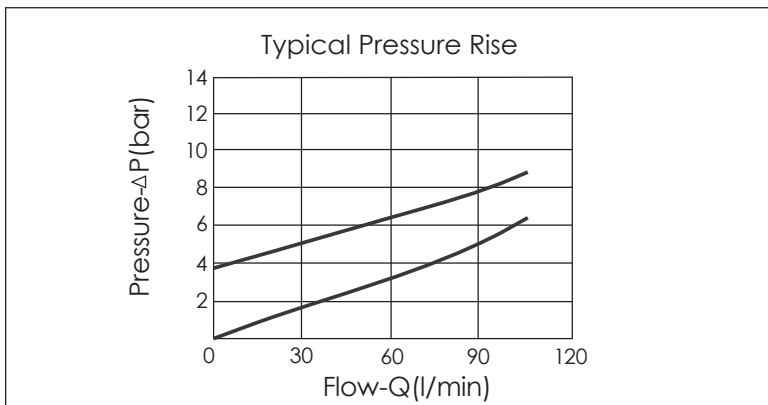
L=54
B1=57

47.8

UNIT:mm



TECHNICAL DATA		
Max. pressure:	350	bar
Rated flow:	60	l/min
Cavity-Tooling:	3A-2	
Installation torque:	60-70	Nm
Weight:	0.25	kg



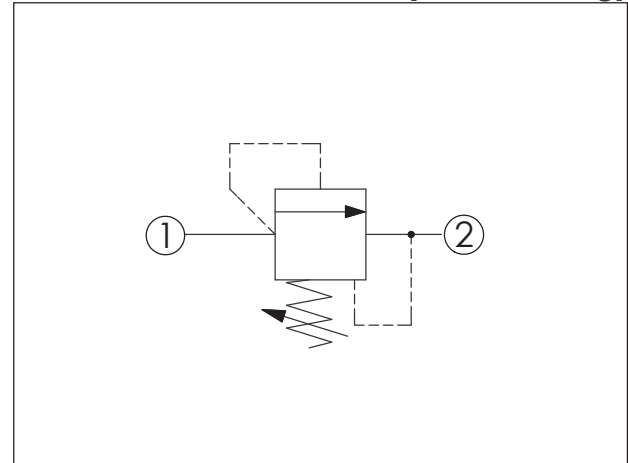
X	OPERATION	
27	Direct Acting 1 to 2 (P to T)	
Response Time-Typical (2 ms) Maximum Leakage (50 cc/min.)		

Y	PRESSURE SETTING	
35	0 to 3.5 bar (1 bar Standard Setting)	

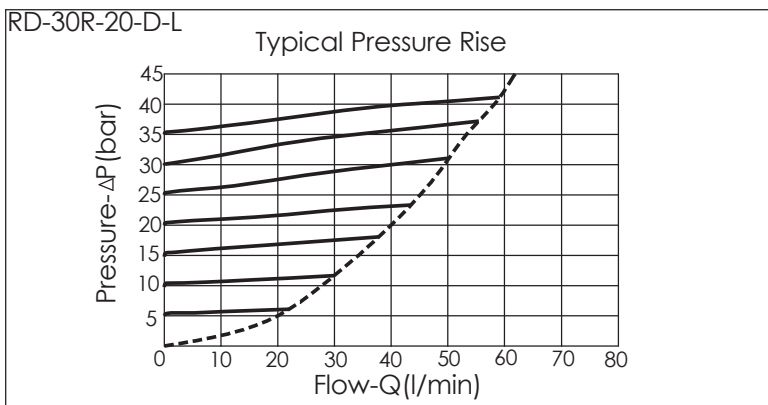
Z	OPTION	
L	Leakproof hex. socket screw.	
B1	Handknob and aluminum locknut.	

Ordering Code: **RD-30R-X-Y-Z**

UNIT:mm



TECHNICAL DATA		
Max. pressure:	350	bar
Rated flow:	120	l/min
Cavity-Tooling:	30R-2	
Installation torque:	60-70	Nm
Weight:	0.3	kg

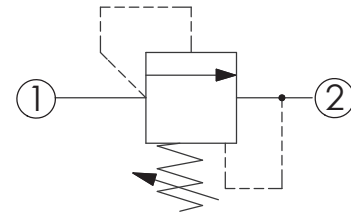
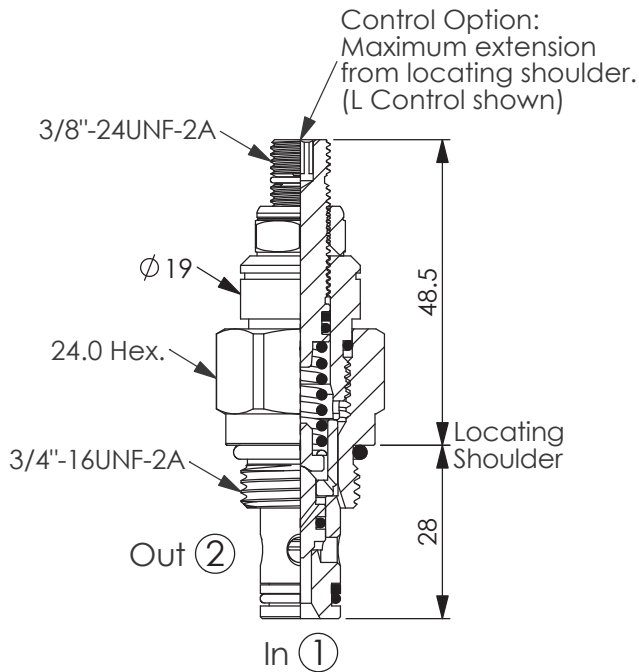


X	OPERATION	
20	1 to 2 (P to T)	

Y	PRESSURE SETTING	
D	15-55 bar	
E	5-28 bar	
W	55-315 bar	

Z	OPTIONS	
L	Leakproof hex. socket screw.	
D	Plastic Cover.	

Ordering Code: **RD-08W-X-Y-Z-A**

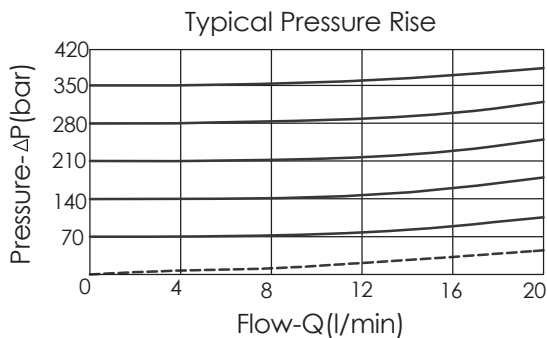


TECHNICAL DATA

Max. pressure:	350	bar
Rated flow:	20	l/min
Cavity-Tooling:	08W-2	
Installation torque:	25-35	Nm
Weight:	0.12 (Z:L)	kg

Will accept maximum pressure at port 2; suitable for use in cross port relief circuits.

UNIT:mm



X OPERATION

20 1 to 2 (P to T)

Response Time-Typical (2 ms)
Maximum Leakage (0.2 cc/min.)
(46 cSt, 40°C)
Dirt tolerant

Y PRESSURE SETTING

A	7-210 bar (140 bar Standard Setting)
D	2-55 bar (40 bar Standard Setting)
E	1.7-28 bar (14 bar Standard Setting)
K	3.5-155 bar (70 bar Standard Setting)
W	10.5-350 bar (210 bar Standard Setting)

Z OPTIONS

L	Leakproof hex. socket screw.	
K	Handknob with Lock Knob.	
T	Three-winged Handknob Kit.	

RELIEF VALVE (Direct Acting)

Ordering Code: **RD-08W-X-Y-Z-A**

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

3/8"-24UNF-2A

24.0 Hex.

3/4"-16UNF-2A

Out ②

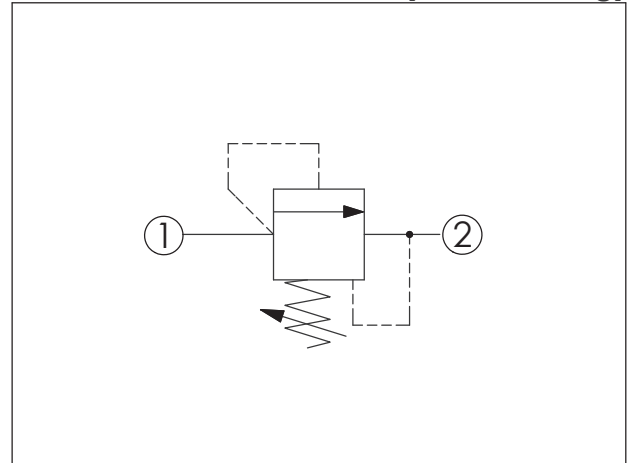
In ①

Locating Shoulder

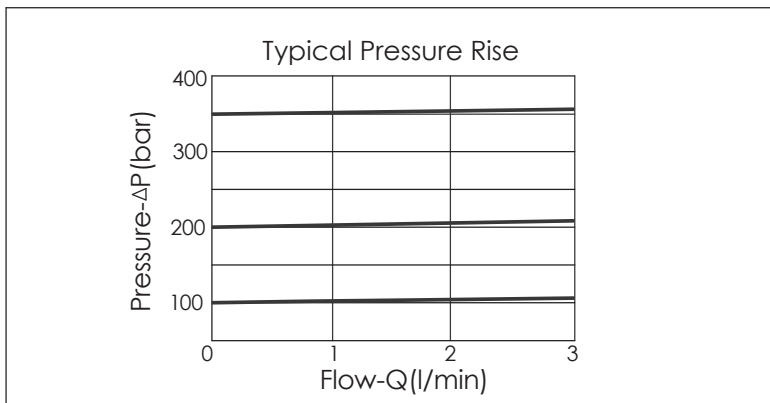
37

28

UNIT:mm



TECHNICAL DATA		
Max. Setting:	420	bar
Rated flow:	3	l/min
Cavity-Tooling:	08W-2	
Installation torque:	25-35	Nm
Weight:	0.11 (Z:L)	kg



X	OPERATION	
23	Direct Acting 1 to 2 (P to T)	
Response Time-Typical (2 ms) Maximum Leakage (0.2 cc/min.) (46 cSt, 40°C) Dirt tolerant		

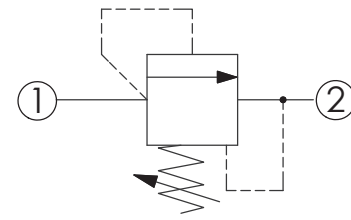
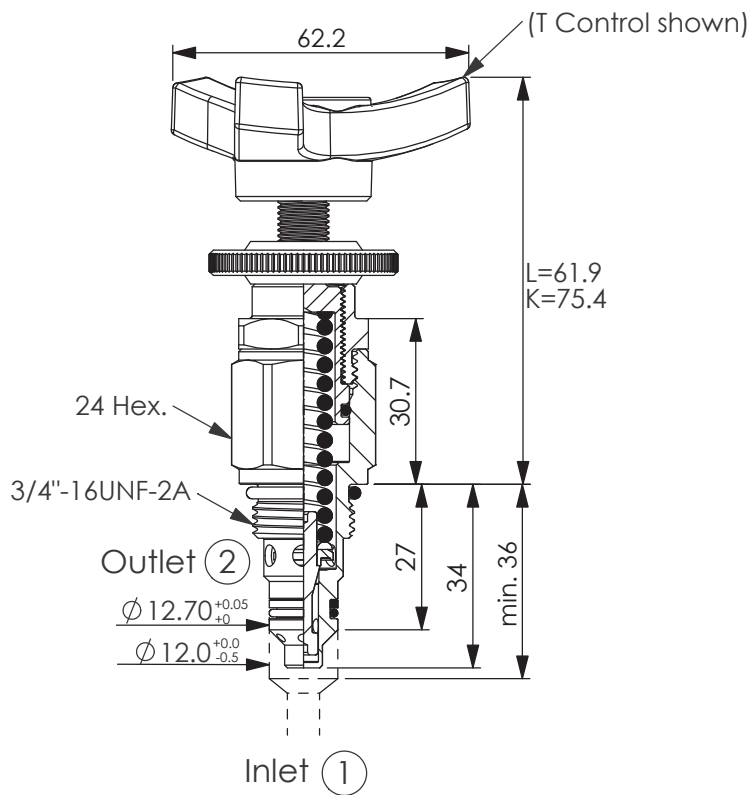
Y	PRESSURE SETTING	
A	7-210 bar	(70 bar Standard Setting)
B	3.5-105 bar	(70 bar Standard Setting)
C	10.5-420 bar	(70 bar Standard Setting)
D	2-55 bar	(28 bar Standard Setting)
E	1.7-28 bar	(14 bar Standard Setting)
W	10.5-315 bar	(70 bar Standard Setting)

Z	OPTIONS	
L	Leakproof hex. socket screw.	
K	Handknob with Lock Knob.	
T	Three-winged Handknob Kit.	

RELIEF VALVE

(Direct Acting, Guided Poppet Type)

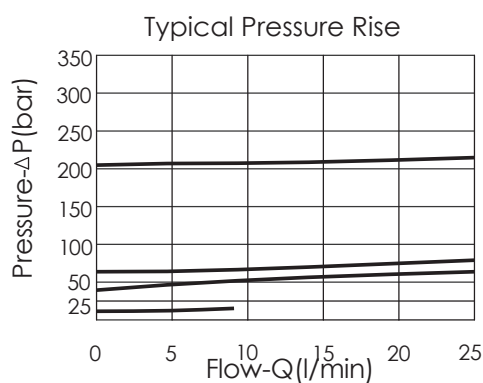
Ordering Code: **RD-08W-X-Y-Z**



TECHNICAL DATA

Max. pressure:	350	bar
Rated flow:	25	l/min
Cavity-Tooling: 08W-2	ϕ 12.0 mm	min. 36 mm
Installation torque:	25-35	Nm
Weight:	0.15	kg

UNIT:mm



X OPERATION

22 Direct Acting Guided Poppet Type

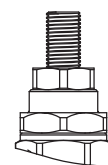
Y SPRINGS

A 80-210 bar

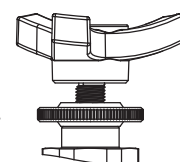
W 40-280 bar

Z OPTIONS

L Leakproof hex. socket screw.



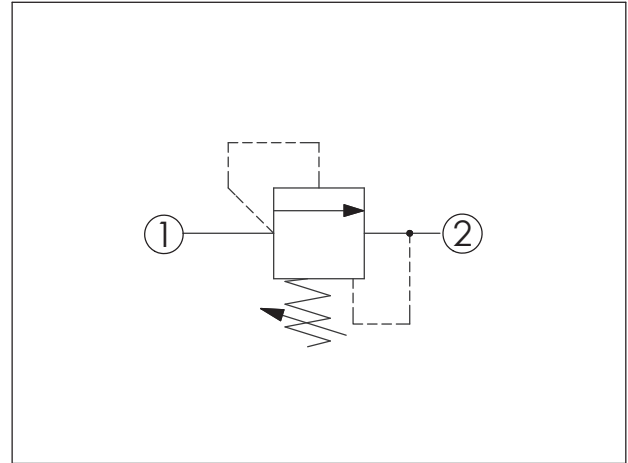
T Three-winged Handknob Kit.



RELIEF VALVE (Direct Acting, Guided Poppet Type)

Ordering Code: **RD-28M-X-Y-Z**

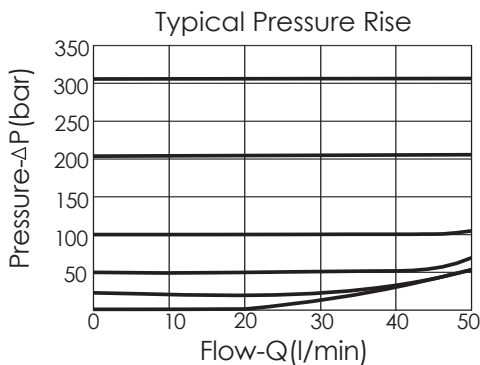
UNIT:mm



TECHNICAL DATA

Max. pressure:	350	bar
(Refer To Performance Chart)		
Rated flow:	35	l/min
(Refer To Performance Chart)		
Max. flow:	50 l/min	($\Delta P > 100$ bar)
(Refer To Performance Chart)		
Cavity-Tooling:	28M-2	
Installation torque:	45-55	Nm
Weight:	0.37 (Z:L)	kg

Performance Chart



X	OPERATION	
22	Direct Acting Guided Poppet Type	

Y	SPRINGS	
A	Pressure setting up to 210 bar	
B	Pressure setting up to 105 bar	
D	Pressure setting up to 55 bar	
W	Pressure setting up to 315 bar	

Z	OPTIONS	
L	Leakproof hex. socket screw.	
T	Three-winged Handknob Kit.	
C2	Plastic Tamper Resistant Cover	

RELIEF VALVE (Direct Acting, Guided Poppet Type)

Ordering Code: **RD-35M-X-Y-Z**

(T Control shown)

62.2

36.0 Hex.

M35x1.5

Outlet (2)

Locating Shoulder

27

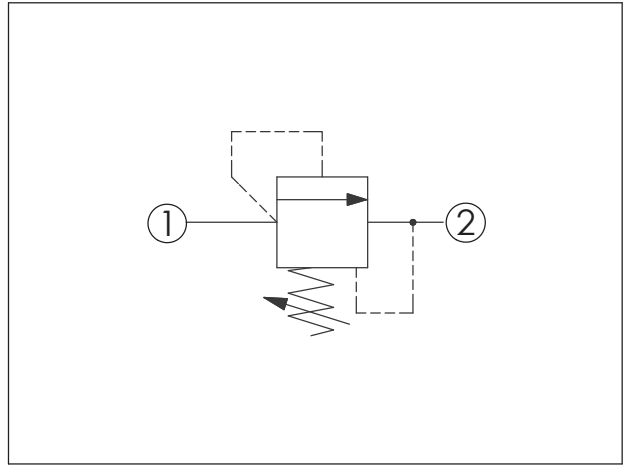
56.4

26.4

Inlet (1)

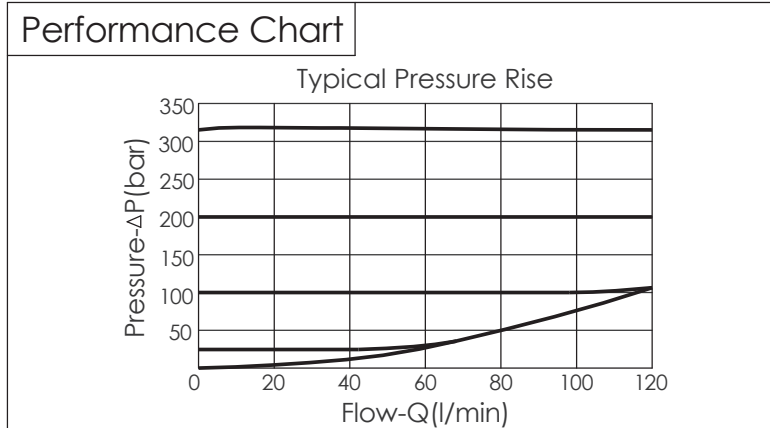
L=60.1
K=76.7

UNIT:mm



TECHNICAL DATA

Max. pressure:	350	bar
(Refer To Performance Chart)		
Rated flow:	70	l/min
(Refer To Performance Chart)		
Max. flow:	120 l/min ($\Delta P > 100$ bar)	
(Refer To Performance Chart)		
Cavity-Tooling:	35M-2	
Installation torque:	140-160	Nm
Weight:	0.50 (Z:L)	kg



X	OPERATION	
22	Direct Acting Guided Poppet Type	

Y	SPRINGS	
A	Pressure setting up to 210 bar	
B	Pressure setting up to 105 bar	
D	Pressure setting up to 55 bar	
W	Pressure setting up to 315 bar	

Z	OPTIONS	
L	Leakproof hex. socket screw.	
T	Three-winged Handknob Kit.	
C2	Plastic Tamper Resistant Cover	

RELIEF VALVE (Direct Acting, Pilot Stage)

Ordering Code: **RD-10A-X-Y-Z**

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

Ø19

22.2 Hex.
(7/8 inch)

M20x1.5

Outlet ②

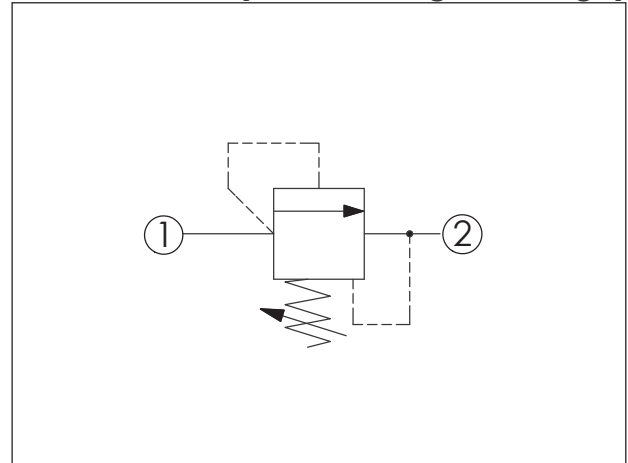
Inlet ①

Locating Shoulder

51

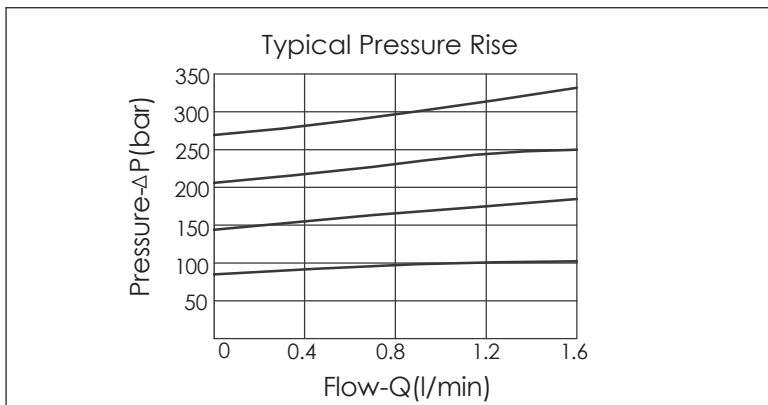
40

UNIT:mm



TECHNICAL DATA		
Max. Setting:	420	bar
Rated flow:	1	l/min
Cavity-Tooling:	10A-2	
Installation torque:	45-50	Nm
Weight:	0.14	kg

X	OPERATION	
21	Direct Acting Pilot Stage	1 to 2 (P to T)
Response Time-Typical (2 ms) Maximum Leakage (0.3 cc/min.) Dirt tolerant Standard Orifice: $\phi 0.7$ (If the diameter of orifice needs to be enlarge, please contact us)		

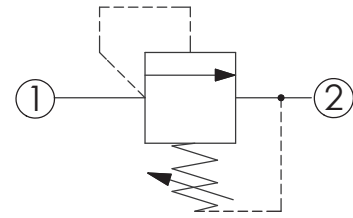
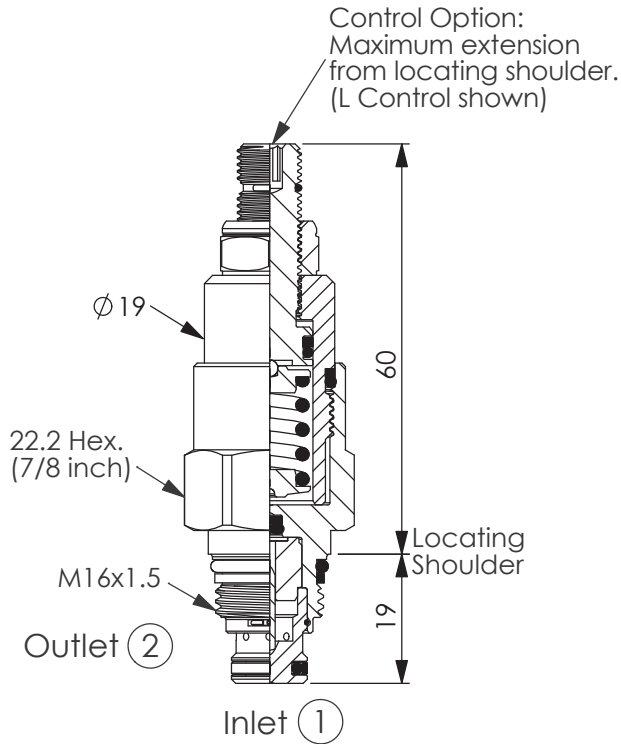


Y	PRESSURE SETTING	
A	1.7-210 bar	(70 bar Standard Setting)
B	1.7-105 bar	(70 bar Standard Setting)
C	1.7-420 bar	(70 bar Standard Setting)
D	1.7-55 bar	(25 bar Standard Setting)
E	1.7-28 bar	(14 bar Standard Setting)
W	1.7-315 bar	(70 bar Standard Setting)

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

RELIEF VALVE (Direct Acting, Pilot Stage)

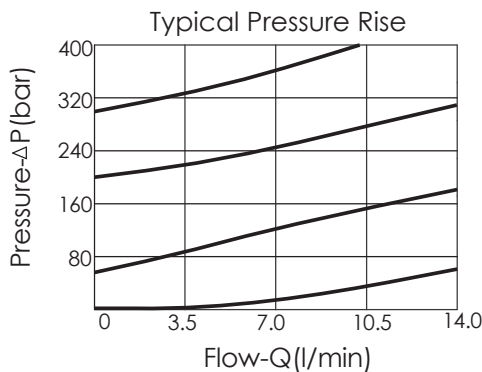
Ordering Code: **RB-8A-X-Y-Z**



TECHNICAL DATA

Max. pressure:	350	bar
Rated flow:	10	l/min
Cavity-Tooling:	8A-2	
Installation torque:	9-10	Nm
Weight:	0.13	kg

UNIT:mm



X OPERATION

20 1 to 2 (P to T)

Response Time-Typical (2 ms)
Maximum Leakage (1 cc/min.)

Y PRESSURE SETTING

A 1.7-210 bar (70 bar Standard Setting)

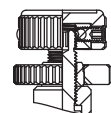
C 1.7-420 bar (70 bar Standard Setting)

Z OPTIONS

L Leakproof hex.
socket screw.



K Handknob with
Lock Knob.



RELIEF VALVE (Differential Area Poppet)

Ordering Code: **RD-08W-X-Y-Z**

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

Ø25

25.4 Hex.
(1.0 inch)

3/4"-16UNF-2A

In ②

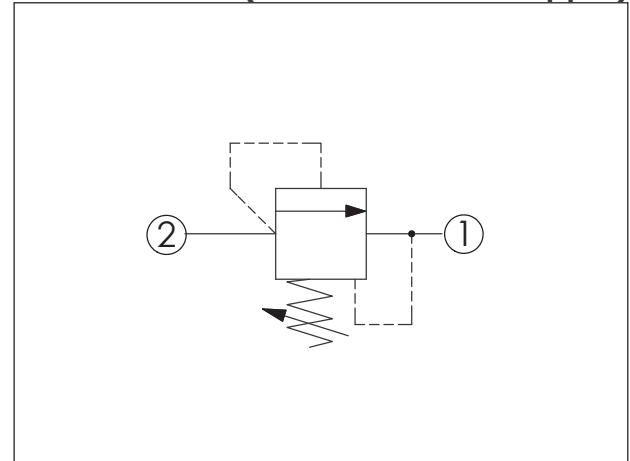
Out ①

77.3

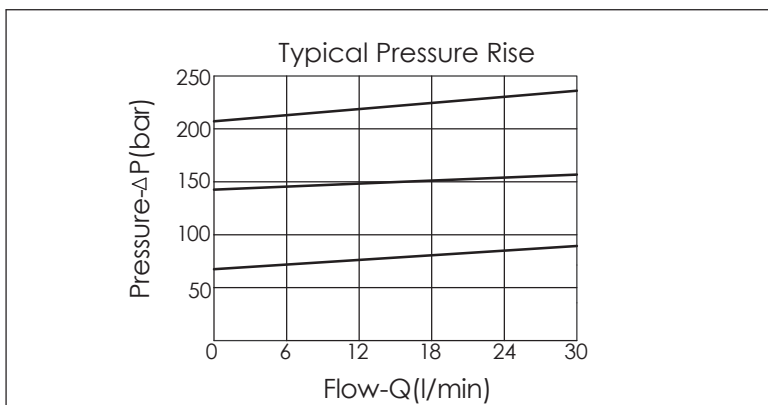
28

Locating
Shoulder

UNIT:mm

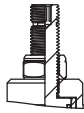


TECHNICAL DATA		
Max. pressure:	240	bar
Rated flow:	30	l/min
Cavity-Tooling:	08W-2	
Installation torque:	25-35	Nm
Weight:	0.22	kg
Will accept maximum pressure at port 1; suitable for use in cross port relief circuits.		



X	OPERATION	
2A	2 to 1 (P to T)	
Response Time-Typical (2 ms) Maximum Leakage (0.3 cc/min.) Dirt tolerant		

Y	PRESSURE SETTING	
A	17-210 bar	
B	6.9-105 bar	

Z	OPTIONS	
L	Leakproof hex. socket screw.	

RELIEF VALVE (Differential Area Poppet)

Ordering Code: **RD-10W-X-Y-Z**

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

Ø 25

77.7

25.4 Hex.
(1.0 inch)

7/8"-14UNF-2A

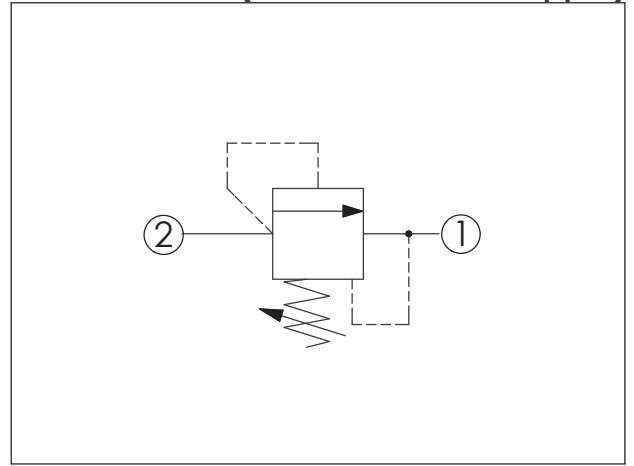
In ②

Out ①

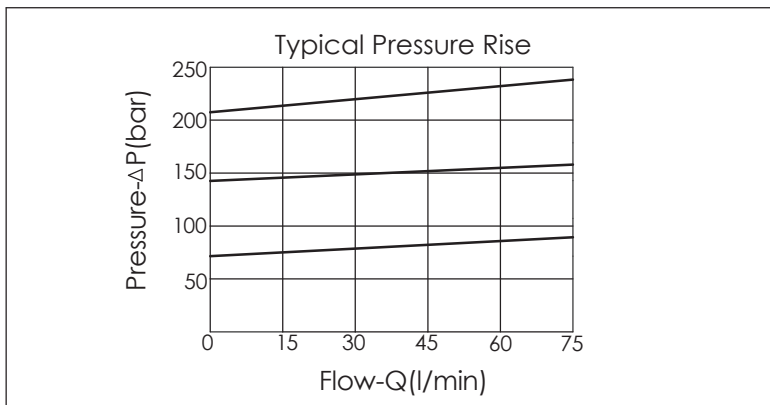
Locating
Shoulder

32

UNIT:mm



TECHNICAL DATA		
Max. pressure:	350	bar
Rated flow:	75	l/min
Cavity-Tooling:	10W-2	
Installation torque:	35-45	Nm
Weight:	0.23	kg
Will accept maximum pressure at port 1; suitable for use in cross port relief circuits.		



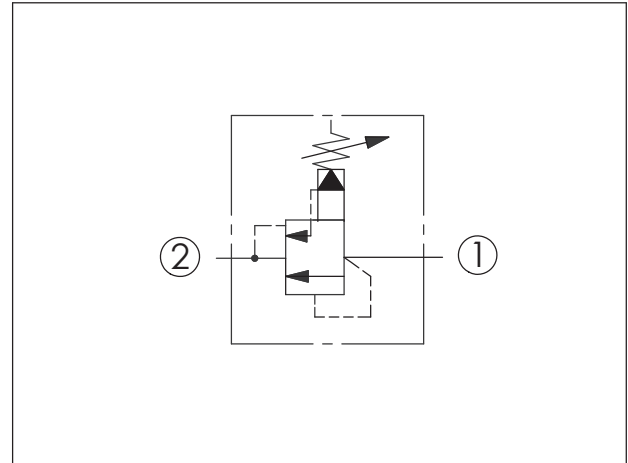
X	OPERATION	
2A	2 to 1 (P to T)	
Response Time-Typical (2 ms) Maximum Leakage (0.3 cc/min.) Dirt tolerant		

Y	PRESSURE SETTING	
D	10-55 bar	
W	17-250 bar	

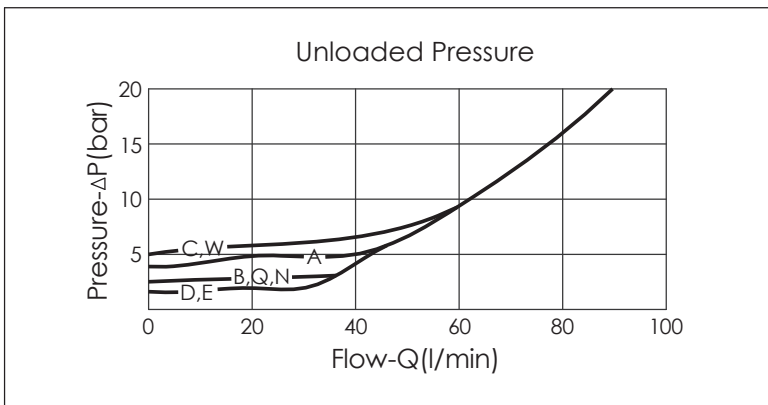
Z	OPTIONS	
L	Leakproof hex. socket screw.	
C	Stainless Steel Tamper Resistant Cover.	
T	Three-winged Handknob Kit.	

Ordering Code: **RQ-10A-X-Y-Z**

UNIT:mm



TECHNICAL DATA		
Max. Setting:	420	bar
Rated flow:	95	l/min
Cavity-Tooling:	10A-2	
Installation torque:	40-50	Nm
Weight:	0.14 (Z:L) 0.12 (Z:G)	kg



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

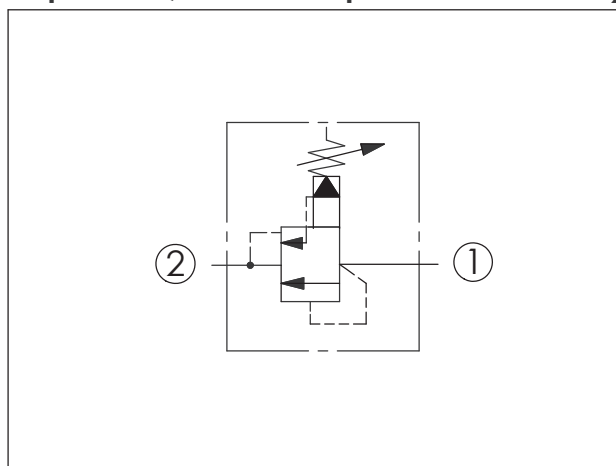
Y	SPRINGS	
	ADJUSTMENT RANGES	
A	7-210 bar	(70 bar Standard Setting)
B	3.5-105 bar	(70 bar Standard Setting)
C	10.5-420 bar	(70 bar Standard Setting)
D	1.7-55 bar	(28 bar Standard Setting)
E	1.7-28 bar	(14 bar Standard Setting)
N	4-55 bar	(28 bar Standard Setting)
Q	4-28 bar	(14 bar Standard Setting)
W	10.5-315 bar	(70 bar Standard Setting)

Z	OPTIONS	
L	Leakproof hex. socket screw.	
K	Handknob with Lock Konb.	
C	Stainless Steel Tamper Resistant Cover.	
G	Wrench Adjustment	

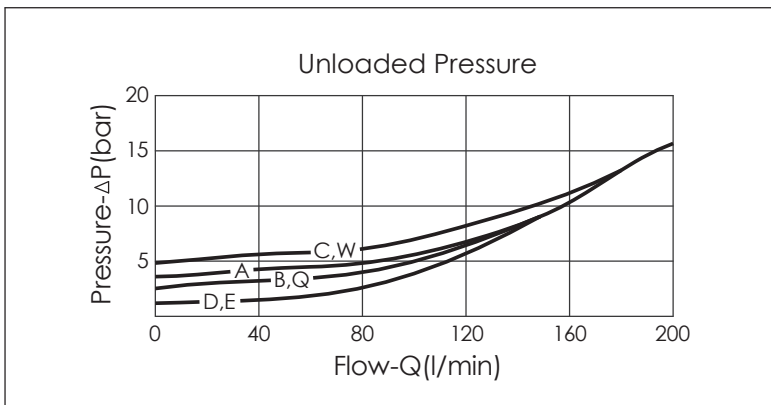
RELIEF VALVE (Kick-down, pilot operated, balanced piston relief valve)

Ordering Code: **RQ-3A-X-Y-Z**

UNIT:mm



TECHNICAL DATA		
Max. Setting:	420	bar
Rated flow:	200	l/min
Cavity-Tooling:	3A-2	
Installation torque:	60-70	Nm
Weight:	0.26 (Z:L)	kg



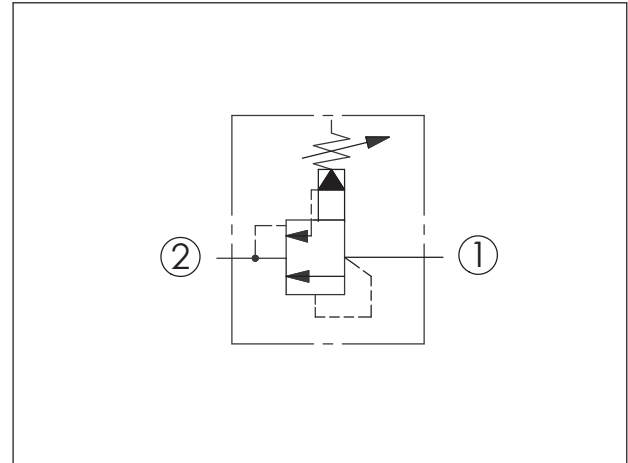
X	OPERATION	
20	Standard Type	
<ul style="list-style-type: none"> Maximum Leakage (50 cc/min./70 bar) (46 cSt, 40°C) 		

Y	SPRINGS	
	ADJUSTMENT RANGES	
A	7-210 bar	(70 bar Standard Setting)
B	3.5-105 bar	(70 bar Standard Setting)
C	10.5-420 bar	(70 bar Standard Setting)
D	1.7-55 bar	(28 bar Standard Setting)
E	1.7-28 bar	(14 bar Standard Setting)
N	4-55 bar	(28 bar Standard Setting)
Q	4-28 bar	(14 bar Standard Setting)
W	10.5-315 bar	(70 bar Standard Setting)

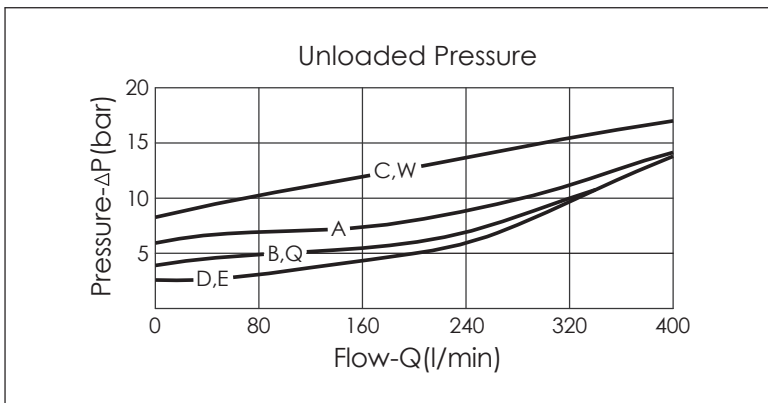
Z	OPTIONS	
L	Leakproof hex. socket screw.	
K	Handknob with Lock Konb.	
C	Stainless Steel Tamper Resistant Cover.	

Ordering Code: **RQ-16A-X-Y-Z**

UNIT:mm



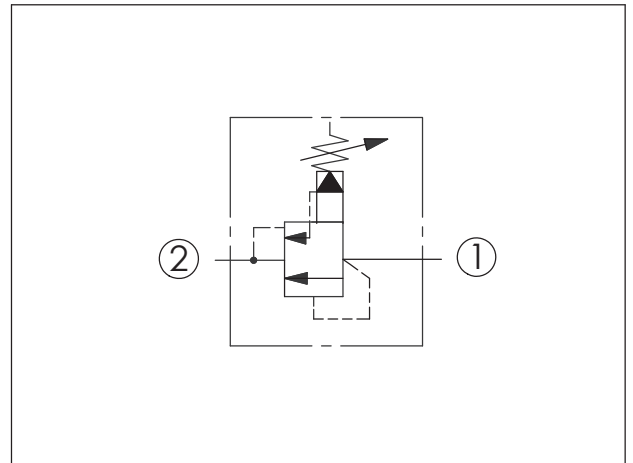
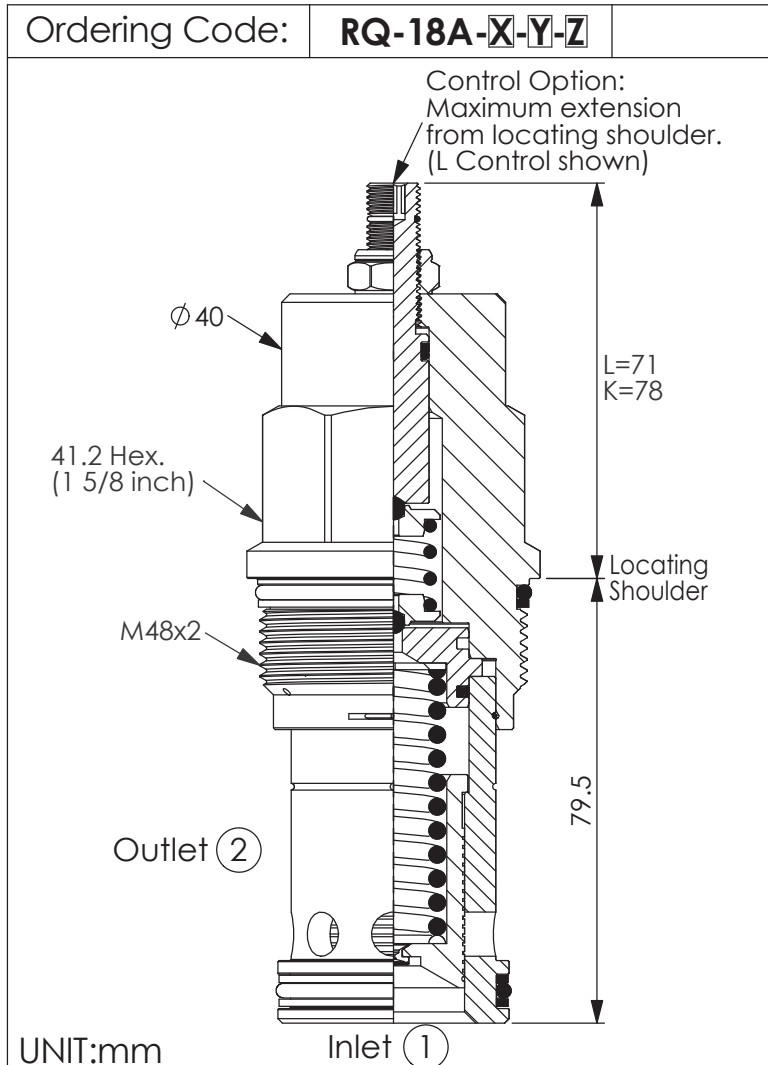
TECHNICAL DATA		
Max. Setting:	420	bar
Rated flow:	380	l/min
Cavity-Tooling:	16A-2	
Installation torque:	200-215	Nm
Weight:	0.53 (Z:L)	kg



X	OPERATION	
20	Standard Type	
• Maximum Leakage (65 cc/min./70 bar) (46 cSt, 40°C)		

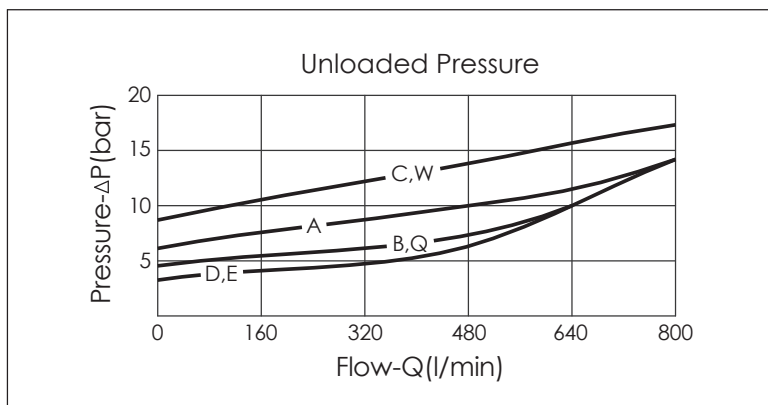
Y	SPRINGS	
	ADJUSTMENT RANGES	
A	7-210 bar	(70 bar Standard Setting)
B	3.5-105 bar	(70 bar Standard Setting)
C	10.5-420 bar	(70 bar Standard Setting)
D	1.7-55 bar	(28 bar Standard Setting)
E	1.7-28 bar	(14 bar Standard Setting)
N	4-55 bar	(28 bar Standard Setting)
Q	4-28 bar	(14 bar Standard Setting)
W	10.5-315 bar	(70 bar Standard Setting)

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



TECHNICAL DATA

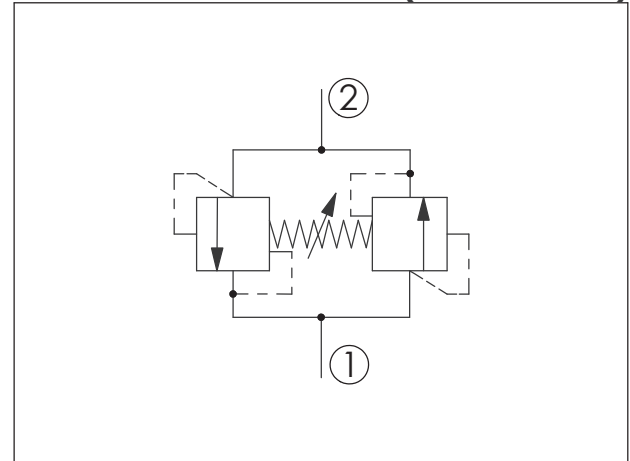
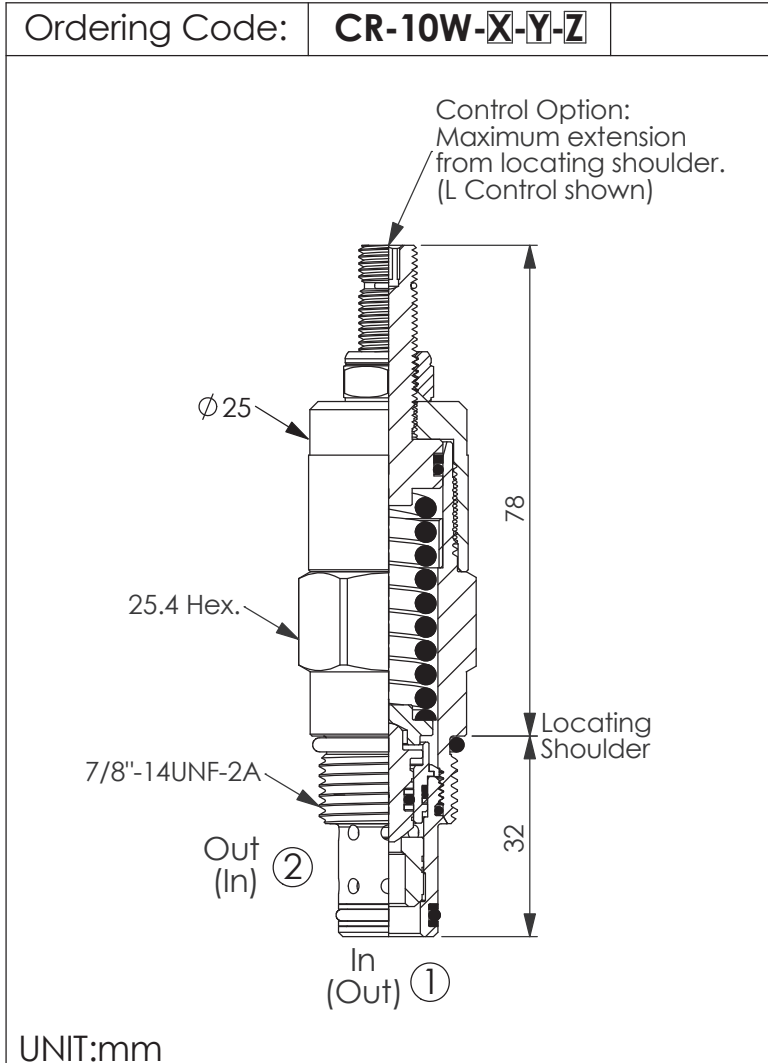
Max. Setting:	420	bar
Rated flow:	760	l/min
Cavity-Tooling:	18A-2	
Installation torque:	465-500	Nm
Weight:	1.16 (Z:L)	kg



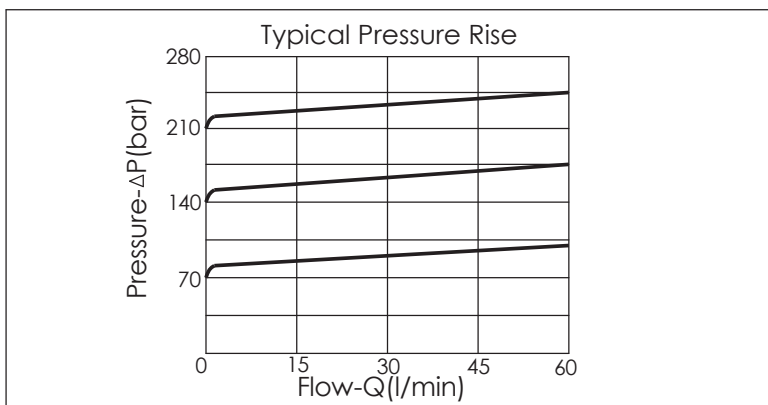
X	OPERATION	
20	Standard Type	
· Maximum Leakage (80 cc/min./70 bar) (46 cSt, 40°C)		

Y	SPRINGS	
	ADJUSTMENT RANGES	
A	7-210 bar (70 bar Standard Setting)	
B	3.5-105 bar (70 bar Standard Setting)	
C	10.5-420 bar (70 bar Standard Setting)	
D	1.7-55 bar (28 bar Standard Setting)	
E	1.7-28 bar (14 bar Standard Setting)	
N	4-55 bar (28 bar Standard Setting)	
Q	4-28 bar (14 bar Standard Setting)	
W	10.5-315 bar (70 bar Standard Setting)	

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



TECHNICAL DATA		
Max.Operating pressure:	240	bar
Rated flow:	60	l/min
Cavity-Tooling:	10W-2	
Installation torque:	35-45	Nm
Weight:	0.24	kg



X	OPERATION	
20	Standard Type	
	Response Time-Typical (2 ms) Maximum Leakage (0.7 cc/min.) Dirt tolerant	

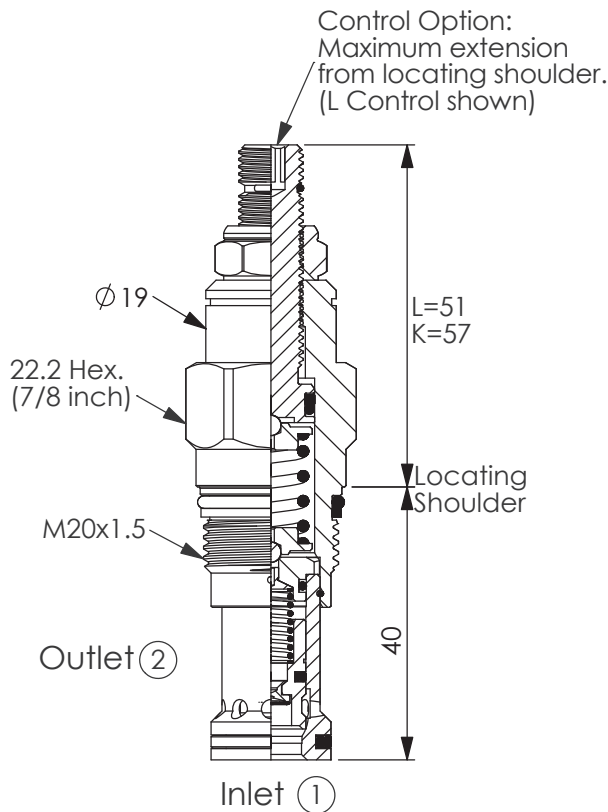
Y	SPRINGS	
	ADJUSTMENT RANGES	
A	160 to 240 bar (180 bar Standard Setting)	
K	14 to 168 bar (80 bar Standard Setting)	

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

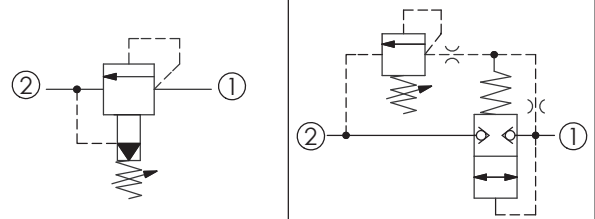
RELIEF VALVE

(Pilot Operated Balanced Poppet)

Ordering Code: **RP-10A-X-Y-Z**



UNIT:mm



TECHNICAL DATA

Max.Operating pressure: 350 bar

Rated flow: 95 l/min

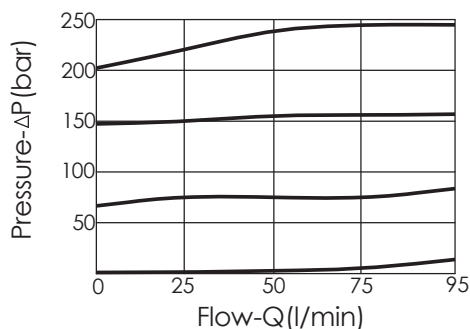
Cavity-Tooling: 10A-2

Installation torque: 40-50 Nm

Weight: 0.14 kg

Will accept maximum pressure at port 2; suitable for use in cross port relief circuits.

Typical Pressure Rise



X OPERATION

2G Balanced Poppet

Response Time-Typical (7 ms)
Maximum Leakage (0.7 cc/min)

Y SPRINGS

ADJUSTMENT RANGES

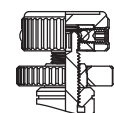
A	7 to 210 bar (70 bar Standard Setting)
B	3.5 to 105 bar (70 bar Standard Setting)
C	10.5 to 420 bar (70 bar Standard Setting)
N	4 to 55 bar (28 bar Standard Setting)
Q	4 to 28 bar (14 bar Standard Setting)
W	7 to 315 bar (70 bar Standard Setting)

Z OPTIONS

L Leakproof hex. socket screw.



K Handknob with Lock Knob.



C Stainless Steel Tamper Resistant Cover.



RELIEF VALVE (Pilot Operated Balanced Poppet)

Ordering Code: **RP-3A-X-Y-Z**

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

Ø25

28.5 Hex.
(1 1/8 inch)

1.00-14UNS-2A

Locating
Shoulder

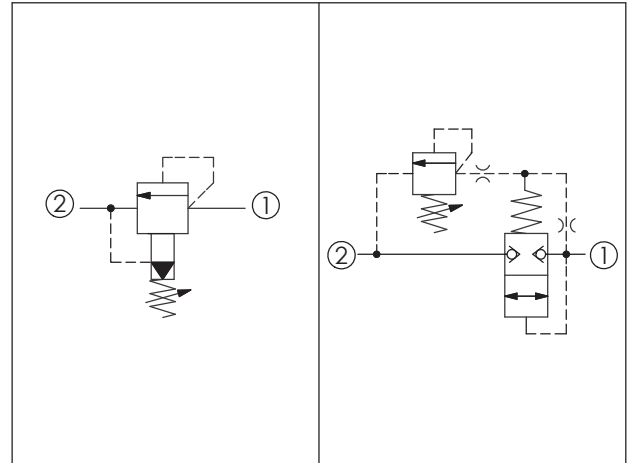
47.8

Outlet ②

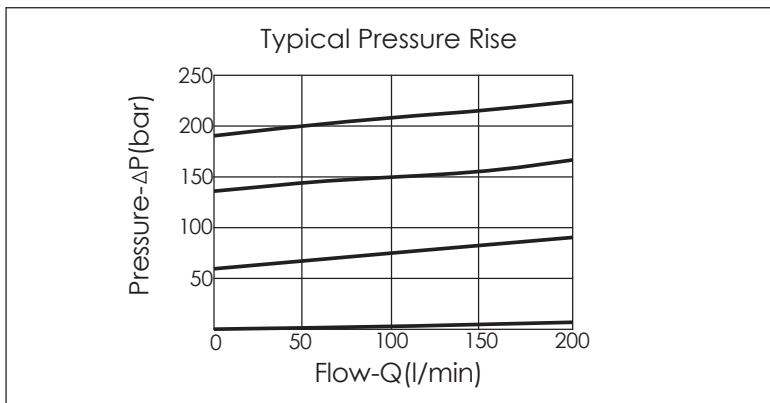
Inlet ①

L=54
K=61

UNIT:mm



TECHNICAL DATA		
Max. Setting:	420	bar
Rated flow:	200	l/min
Cavity-Tooling:	3A-2	
Installation torque:	60-70	Nm
Weight:	0.26 (Z:L)	kg
Will accept maximum pressure at port 2; suitable for use in cross port relief circuits.		



X	OPERATION	
2G	Balanced Poppet	
<ul style="list-style-type: none"> Response Time-Typical (7 ms) Maximum Leakage (0.7 cc/min) (46 cSt, 40°C) 		

Y	SPRINGS	
	ADJUSTMENT RANGES	
A	7-210 bar	(70 bar Standard Setting)
B	3.5-105 bar	(70 bar Standard Setting)
C	10.5-420 bar	(70 bar Standard Setting)
N	4-55 bar	(28 bar Standard Setting)
Q	4-28 bar	(14 bar Standard Setting)
W	7-315 bar	(70 bar Standard Setting)

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

RELIEF VALVE (Pilot Operated Balanced Poppet)

Ordering Code: **RP-16A-X-Y-Z**

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

Ø30

31.7 Hex.
(1 1/4 inch)

M36x2

Outlet ②

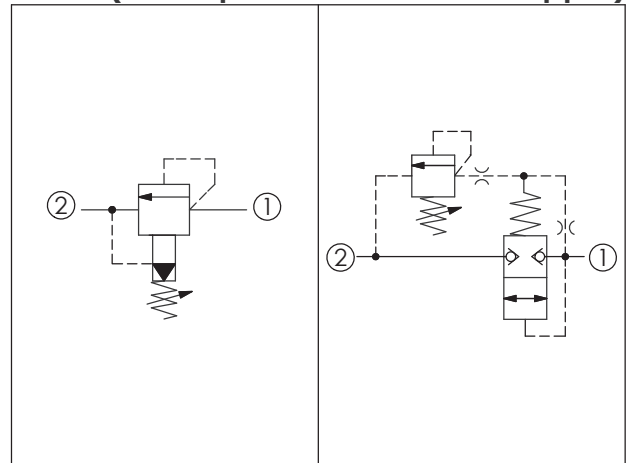
Inlet ①

L=62
K=68

Locating
Shoulder

62

UNIT:mm



TECHNICAL DATA

Max. Operating pressure: 350 bar

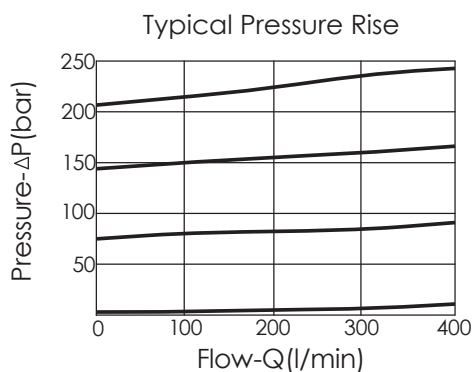
Rated flow: 380 l/min

Cavity-Tooling: 16A-2

Installation torque: 200-215 Nm

Weight: 0.55 kg

Will accept maximum pressure at port 2;
suitable for use in cross port relief circuits.



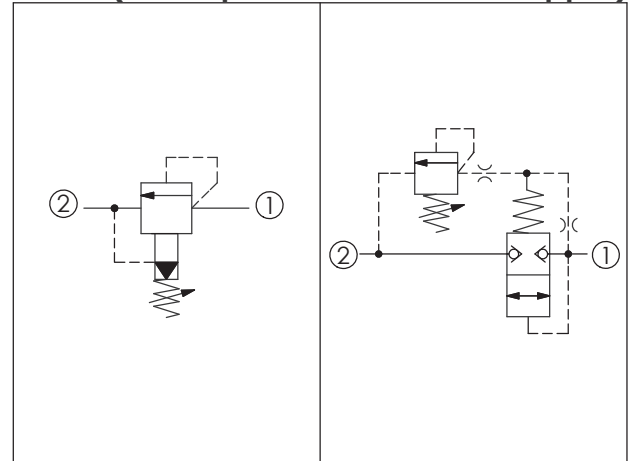
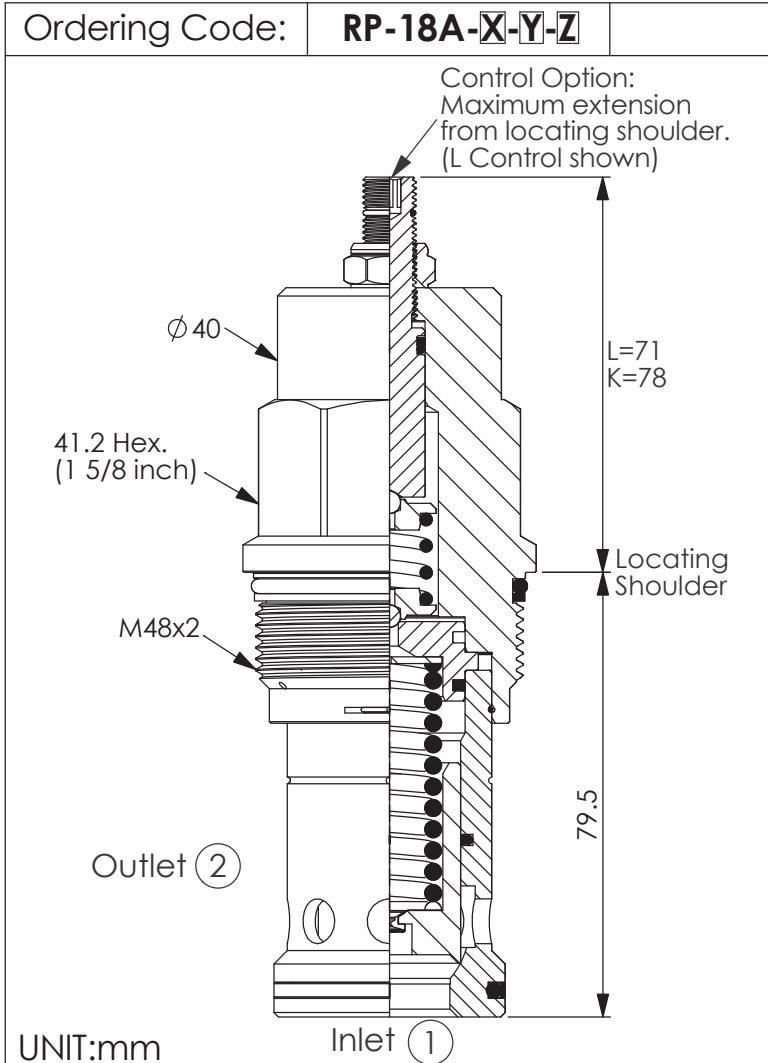
X	OPERATION	
2G	Balanced Poppet	
Response Time-Typical (7 ms)		
Maximum Leakage (0.7 cc/min)		

Y	SPRINGS	
	ADJUSTMENT RANGES	
A	7 to 210 bar	(70 bar Standard Setting)
B	3.5 to 105 bar	(70 bar Standard Setting)
C	10.5 to 420 bar	(70 bar Standard Setting)
N	4 to 55 bar	(28 bar Standard Setting)
Q	4 to 28 bar	(14 bar Standard Setting)
W	10.5 to 315 bar	(70 bar Standard Setting)

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

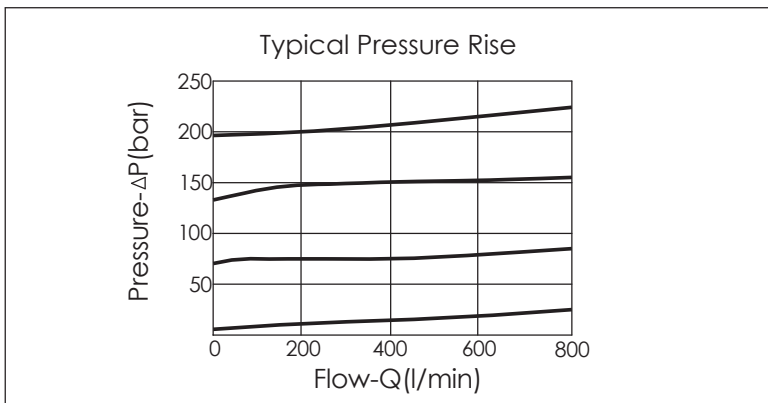
RELIEF VALVE

(Pilot Operated Balanced Poppet)



TECHNICAL DATA

Max.Operating pressure:	350 bar	
Rated flow:	760	l/min
Cavity-Tooling:	18A-2	
Installation torque:	465-500	Nm
Weight:	1.17	kg
Will accept maximum pressure at port 2; suitable for use in cross port relief circuits.		



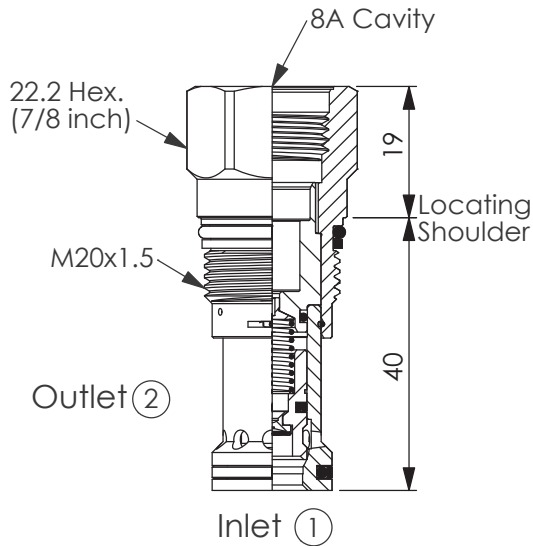
X	OPERATION	
2G	Balanced Poppet	
Response Time-Typical (7 ms) Maximum Leakage (0.7 cc/min)		

Y	SPRINGS	
	ADJUSTMENT RANGES	
A	7 to 210 bar	(70 bar Standard Setting)
B	3.5 to 105 bar	(70 bar Standard Setting)
C	10.5 to 420 bar	(70 bar Standard Setting)
N	4 to 55 bar	(28 bar Standard Setting)
Q	4 to 28 bar	(14 bar Standard Setting)
W	10.5 to 315 bar	(70 bar Standard Setting)

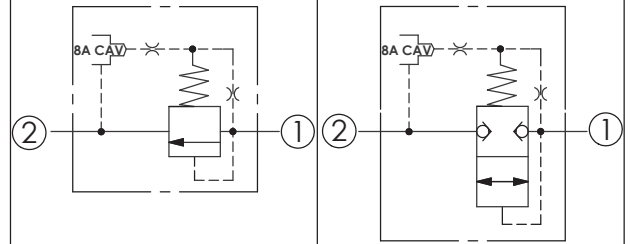
Z	OPTIONS	
L	Leakproof hex. socket screw.	
K	Handknob with Lock Knob.	
C	Stainless Steel Tamper Resistant Cover.	

(Pilot Operated, Balanced Poppet Relief Main Stage With Integral 8A Control Cavity)

Ordering Code: **RP-10A-X-Y-8**



UNIT:mm



TECHNICAL DATA

Max.Operating pressure: 350 bar

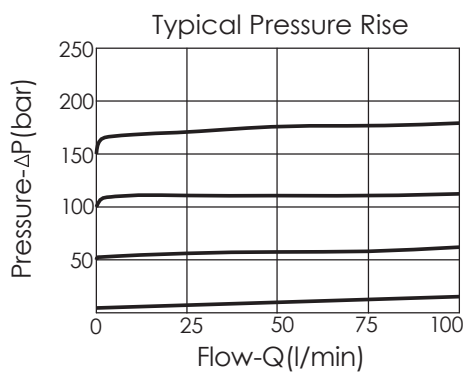
Rated flow: 95 l/min

Cavity-Tooling: 10A-2

Installation torque: 40-50 Nm

Weight: 0.09 kg

Will accept maximum pressure at port 2; suitable for use in cross port relief circuits.



X OPERATION

2G Balanced Poppet

Response Time-Typical (2 ms)
Maximum Leakage at 10% reseal 0.7cc/min

Y SPRINGS

MINIMUM CONTROL PRESSURE

D 1.7 bar (25 psi)

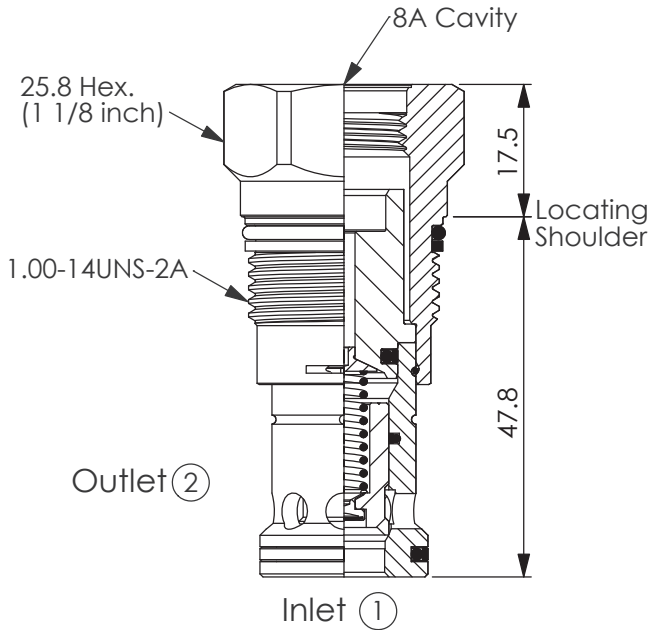
W 7 bar (100 psi)

W spring is suit for higher pressure drop application. Please consult our sales department.

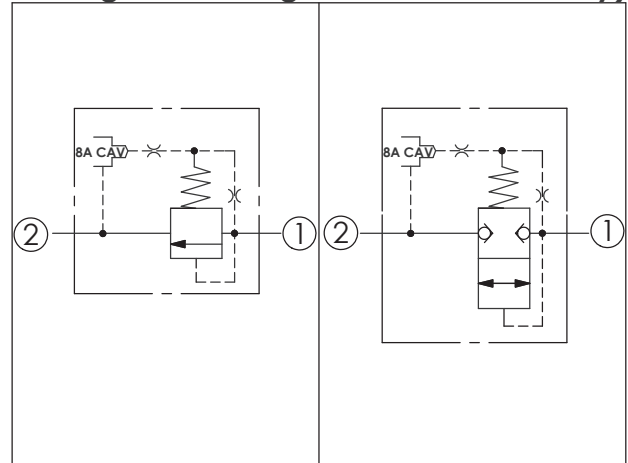
(Pilot Operated, Balanced Poppet Relief Main Stage With Integral 8A Control Cavity)

RELIEF VALVE

Ordering Code: **RP-3A-X-Y-8**



UNIT:mm



TECHNICAL DATA

Max.Operating pressure: 350 bar

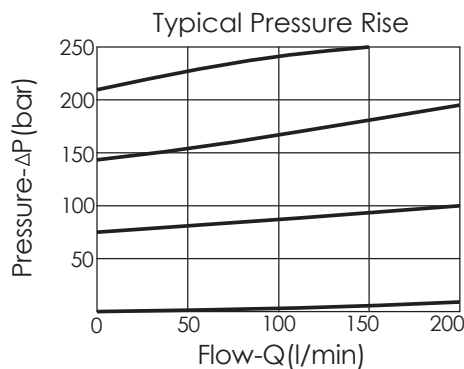
Rated flow: 200 l/min

Cavity-Tooling: 3A-2

Installation torque: 60-70 Nm

Weight: 0.18 kg

Will accept maximum pressure at port 2; suitable for use in cross port relief circuits.



X

OPERATION

2G

Balanced Poppet

Response Time-Typical (2 ms)
Maximum Leakage at 10% reseal 0.7cc/min)

Y

SPRINGS

MINIMUM CONTROL PRESSURE

B

3.5 bar (50 psi)

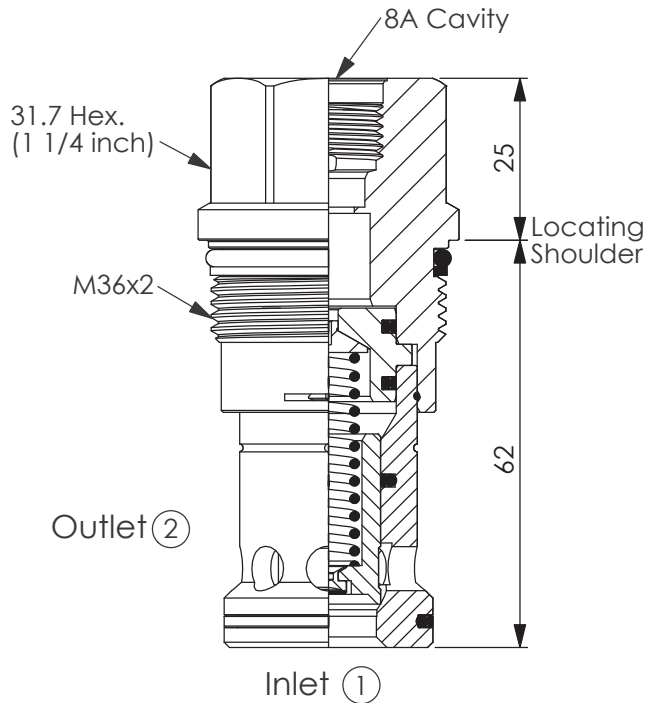
W

7 bar (100 psi)

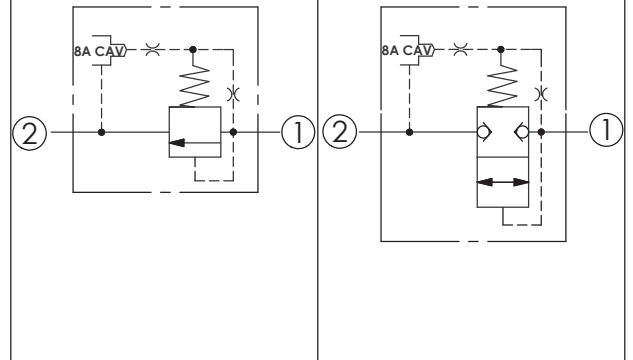
W spring is suit for higher pressure drop application. Please consult our sales department.

(Pilot Operated, Balanced Poppet Relief Main Stage With Integral 8A Control Cavity)

Ordering Code: **RP-16A-X-Y-8**



UNIT:mm



TECHNICAL DATA

Max.Operating pressure: 350 bar

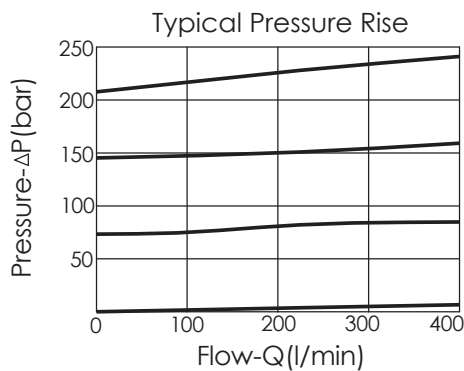
Rated flow: 380 l/min

Cavity-Tooling: 16A-2

Installation torque: 200-215 Nm

Weight: 0.44 kg

Will accept maximum pressure at port 2; suitable for use in cross port relief circuits.



X OPERATION

2G Balanced Poppet

Response Time-Typical (2 ms)
Maximum Leakage at 10% reset 0.7cc/min

Y

SPRINGS

MINIMUM CONTROL PRESSURE

B

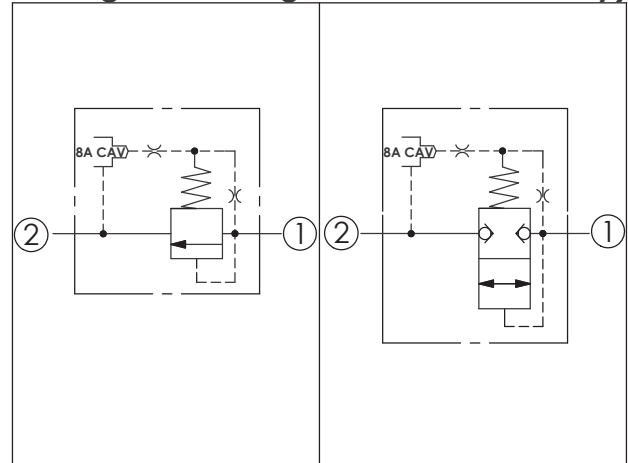
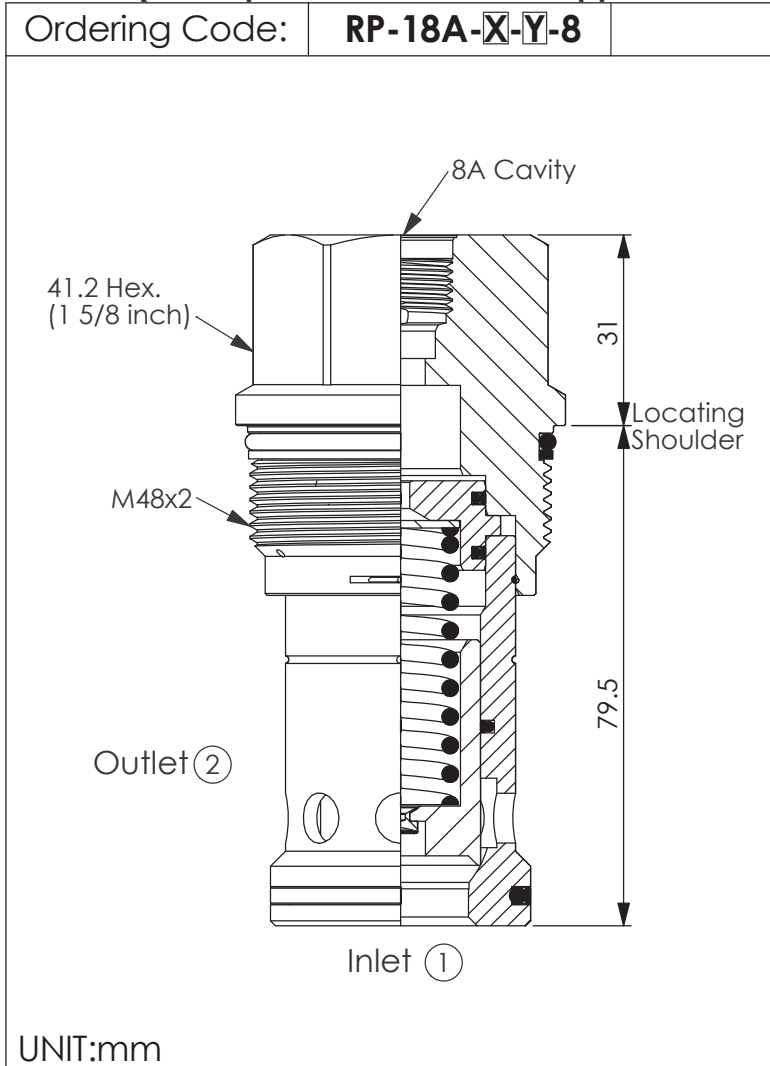
3.5 bar (50 psi)

W

7 bar (100 psi)

W spring is suit for higher pressure drop application. Please consult our sales department.

(Pilot Operated, Balanced Poppet Relief Main Stage With Integral 8A Control Cavity)



TECHNICAL DATA

Max. Operating pressure: 350 bar

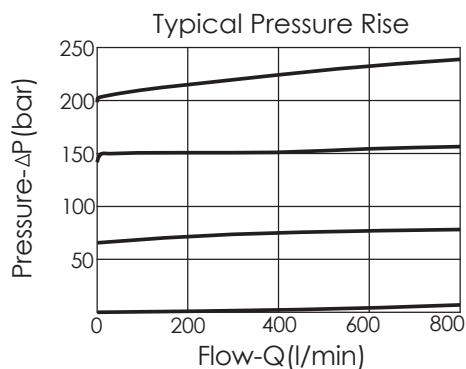
Rated flow: 760 l/min

Cavity-Tooling: 18A-2

Installation torque: 465-500 Nm

Weight: 0.93 kg

Will accept maximum pressure at port 2; suitable for use in cross port relief circuits.



X

OPERATION

2G

Balanced Poppet

Response Time-Typical (2 ms)
Maximum Leakage at 10% reseal 0.7cc/min

Y

SPRINGS

MINIMUM CONTROL PRESSURE

B

3.5 bar (50 psi)

W

7 bar (100 psi)

W spring is suit for higher pressure drop application. Please consult our sales department.

RELIEF VALVE (Pilot Operated, Balanced Poppet Relief with Reverse Flow Check)

Ordering Code: **RC-10A-X-Y-Z**

PATENT PENDING

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

Ø19

22.2 Hex.
(7/8 inch)

M20x1.5

Outlet ②

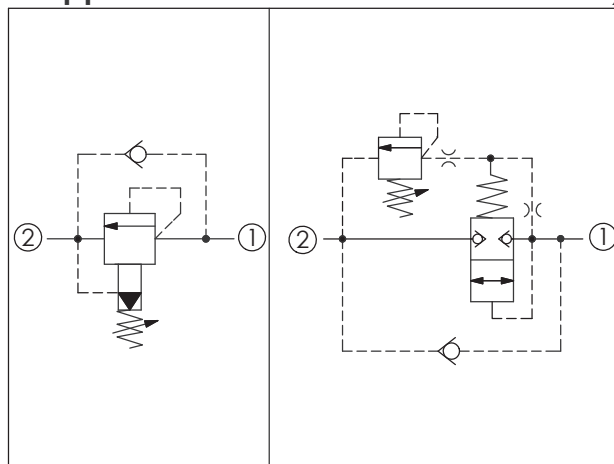
Inlet ①

L=64
K=70

Locating
Shoulder

40

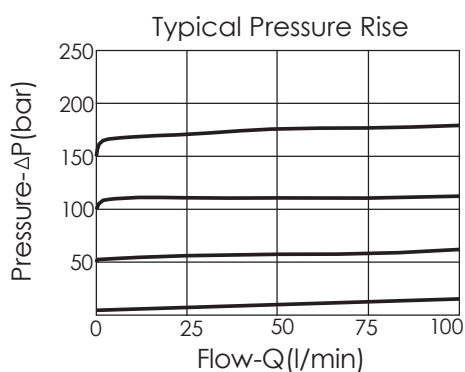
UNIT:mm



TECHNICAL DATA

Max. Setting:	420	bar
Rated flow:	95	l/min
Cavity-Tooling:	10A-2	
Installation torque:	40-50	Nm
Weight:	0.15 (Z:L)	kg

Will accept maximum pressure at port 2; suitable for use in cross port relief circuits.



Y	SPRINGS	
	ADJUSTMENT RANGES	
A	7-210 bar	(70 bar Standard Setting)
B	3.5-105 bar	(70 bar Standard Setting)
C	10.5-420 bar	(70 bar Standard Setting)
D	1.7-55 bar	(28 bar Standard Setting)
E	1.7-28 bar	(14 bar Standard Setting)

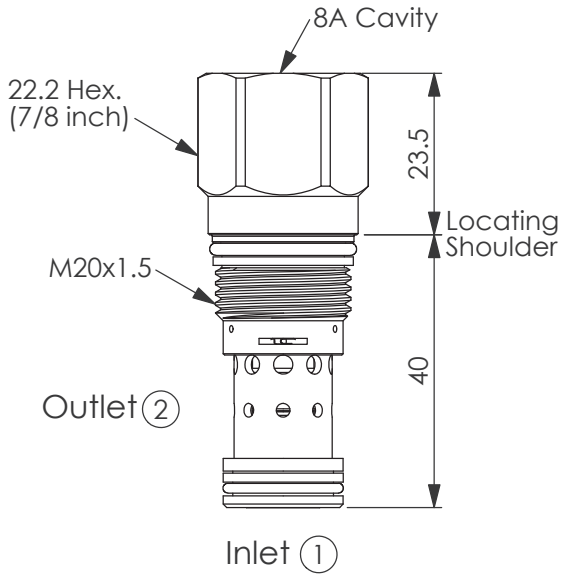
※ Port ② to Port ① Check Valve Cracking Pressure 0.3 bar

X	OPERATION	
2G	Balanced Poppet	
Maximum Leakage (15 cc/min./70 bar) (46 cSt, 40°C)		

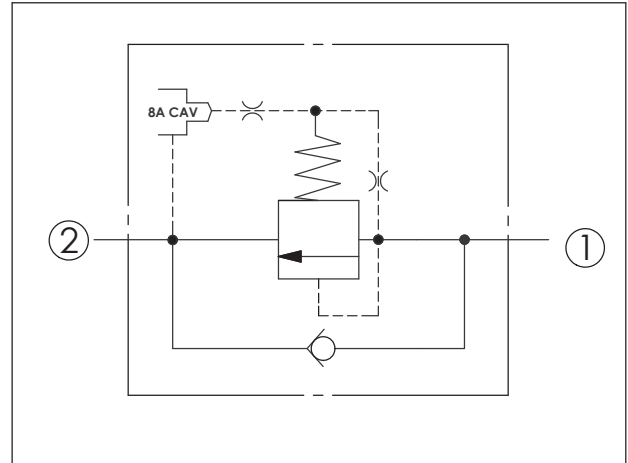
Z	OPTIONS	
L	Leakproof hex. socket screw.	
C	Stainless Steel Tamper Resistant Cover.	
K	Handknob with Lock Knob.	
T	Three-winged Handknob Kit.	

Ordering Code: **RC-10A-X-Y-8**

PATENT PENDING



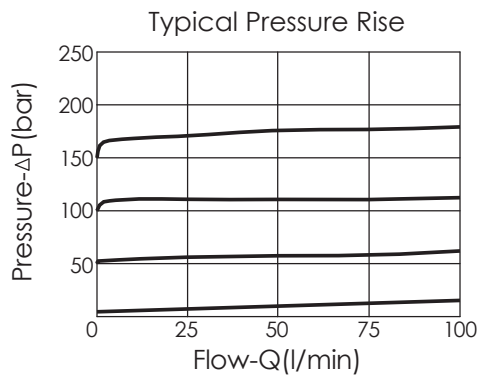
UNIT:mm



TECHNICAL DATA

Max.Operating pressure:	350	bar
Rated flow:	95	l/min
Cavity-Tooling:	10A-2	
Installation torque:	40-50	Nm
Weight:	0.10	kg

Will accept maximum pressure at port 2; suitable for use in cross port relief circuits.



X

OPERATION

2G

Balanced Poppet

Maximum Leakage (15 cc/min./70 bar)
(46 cSt, 40°C)

Y

SPRINGS

Minimum Control Pressure

Check Valve Cracking Pressure

D

1.7 bar

0.3 bar

W

7 bar

0.3 bar

W spring is suit for higher pressure drop application. Please consult our sales department.

Ordering Code: **RC-3A-X-Y-8**

PATENT PENDING

28.5 Hex. (1 1/8 inch)

8A Cavity

22.2

Locating Shoulder

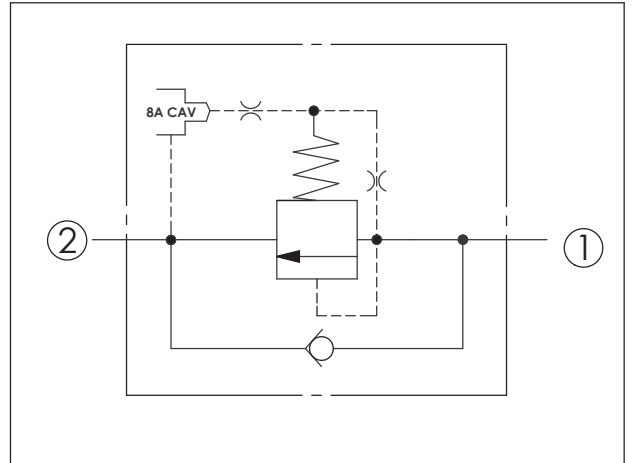
1.00-14UNS-2A

47.8

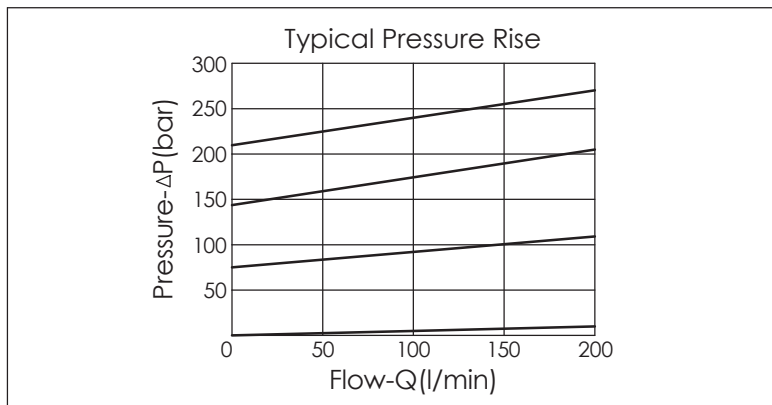
Outlet ②

Inlet ①

UNIT:mm



TECHNICAL DATA	
Max.Operating pressure:	350 bar
Rated flow:	200 l/min
Cavity-Tooling:	3A-2
Installation torque:	60-70 Nm
Weight:	0.19 kg
Will accept maximum pressure at port 2; suitable for use in cross port relief circuits.	



X	OPERATION	
2G	Balanced Poppet	
Maximum Leakage (25 cc/min./70 bar) (46 cSt, 40°C)		

Y	SPRINGS	
	Minimum Control Pressure	Check Valve Cracking Pressure
B	3.5 bar	0.3 bar
W	7 bar	0.3 bar
W spring is suit for higher pressure drop application. Please consult our sales department.		

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