



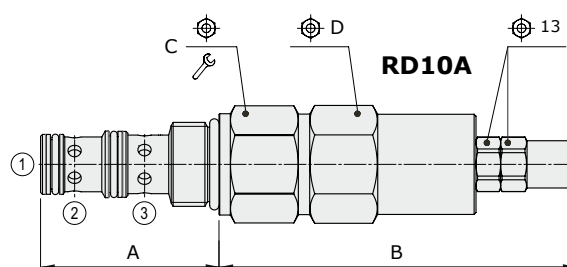
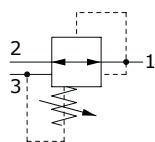
RD..A type pressure reducing valves - 3 ways

- Direct acting
- With relieving
- Spool type
- From SAE08 to SAE10 cavities

Technical specifications and diagrams are measured with mineral oil of 46 cSt viscosity at 40°C (104°F) temperature.

		RD08A	RD10A
Nominal flow		8 l/min (0.3 US gpm)	30 l/min (1.2 US gpm)
Max. pressure			line 1=150 bar (2175 psi) line 2=350 bar (5100 psi)
Oil leakage	at 100 bar (1450 psi)	10 cm ³ /min (0.61 in ³ /min)	40 cm ³ /min (2.44 in ³ /min)
Fluid		mineral based oil	
Viscosity		10-200 cSt	
Max level of contamination		20/18/14 ISO4406	
Fluid temperature	with NBR seals with FPM seals	from -20°C (-4°F) to 80°C (176°F) from -20°C (-4°F) to 100°C (212°F)	
Environmental temp. for working conditions		from -20°C (-4°F) to 50°C (122°F)	
Cavity		SAE 8/3	SAE 10/3
Weight		0.240 kg (0.53 lb)	0.360 kg (0.79 lb)

NOTE - For different conditions, please contact Walvoil Sales Dpt.

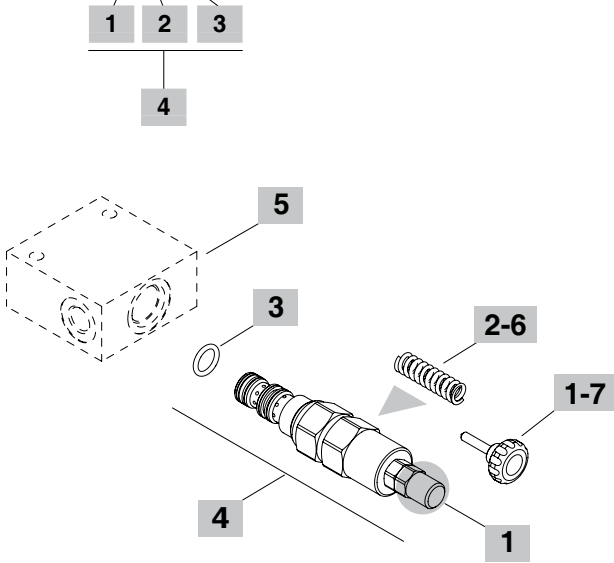


Valve type	A		B		C	D	Nm	lbf·ft
	mm	in	mm	in				
RD08A/OS	40.8	1.60	79.5	3.13	24	24	30	22
RD10A/OS	47.2	1.86	94.5	3.72	27	27	50	37

For dimensions with different type of adjustment see page 196

Ordering codes and description composition

RD08A/0S2B



1 Adjustments

TYPE	DESCRIPTION
S	Screw
V	With handwheel see point 7

2 Pressure range

Standard setting is referred to at 5 l/min (1.32 US gpm) flow

TYPE	DESCRIPTION
1	Pressure range 5÷50 bar (72.5÷725 psi); Std. setting 30 bar (435 psi)
2	Pressure range 20÷100 bar (290÷1450 psi); Std. setting 50 bar (725 psi)
3	Pressure range 50÷150 bar (725÷2175 psi); Std. setting 100 bar (1450 psi)

3 Seals

TYPE	DESCRIPTION
B	NBR (Buna) o-ring seals, std configuration
V	FPM (Viton) o-ring seals, contact Sales Dept.

4 Cartridges

TYPE	CODE	DESCRIPTION
SAE cavity 8/3		
RD08A/0S2B	ORD08002005	Screw adjustment, pressure range 2

SAE cavity 10/3

RD10A/0S2B	ORD10002001	Screw adjustment, pressure range 2
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5 Valve body

TYPE	CODE	DESCRIPTION
SAE 08/3-G 1/4		
3CC0830B11		Aluminium body for cavity 08 valve, G 1/4 std thread
SAE 10/3-G 3/8		
3CC1030C11		Aluminium body for cavity 10 valve, G 3/8 std thread

Note: aluminium body can stand up to 210 bar (3050 psi)
For steel bodies or different threading see page 199

6 Springs

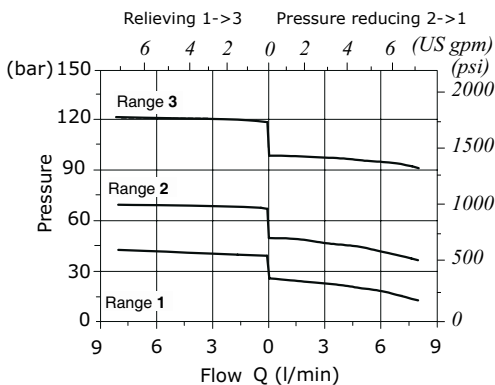
TYPE	CODE	DESCRIPTION
SAE cavity 8/3		
1	3ML1103600	Pressure range 1
2	3ML1103601	Pressure range 2
3	3ML1104000	Pressure range 3
SAE cavity 10/3		
1	3ML1144601	Pressure range 1
2	3ML1144602	Pressure range 2
3	3ML1144603	Pressure range 3

7 Accessories

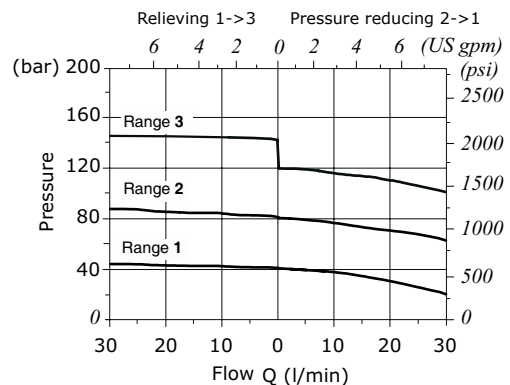
TYPE	CODE	DESCRIPTION
-	4VL2407100	handwheel

Rating diagrams

RD08A reducing/relieving pressure vs. flow



RD10A reducing/relieving pressure vs. flow





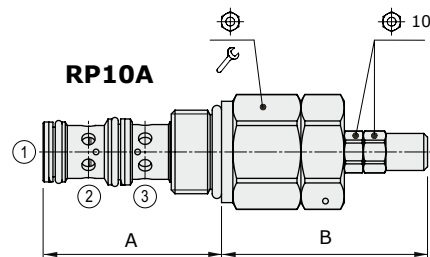
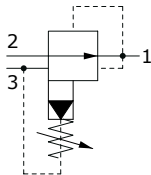
RP..A type pressure reducing valves - 3 ways

- Pilot operated
- With relieving
- Spool type
- From SAE10 to SAE16 cavities

Technical specifications and diagrams are measured with mineral oil of 46 cSt viscosity at 40°C (104°F) temperature.

	RP10A	RP12A	RP16A
Nominal flow	50 l/min (7.9 US gpm)	100 l/min (26 US gpm)	150 l/min (40 US gpm)
Max. pressure	350 bar (5100 psi)		
Oil leakage	-		
Fluid	mineral based oil		
Viscosity	10-200 cSt		
Max level of contamination	20/18/14 ISO4406		
Fluid temperature	with NBR seals with FPM seals	from -20°C (-4°F) to 80°C (176°F) from -20°C (-4°F) to 100°C (212°F)	
Environmental temp. for working conditions	from -20°C (-4°F) to 50°C (122°F)		
Cavity	SAE 10/3	SAE 12/3	SAE 16/3
Weight	0.210 kg (0.46 lb)	0.330 kg (0.72 lb)	0.420 kg (0.92 lb)

NOTE - For different conditions, please contact Walvoil Sales Dpt.

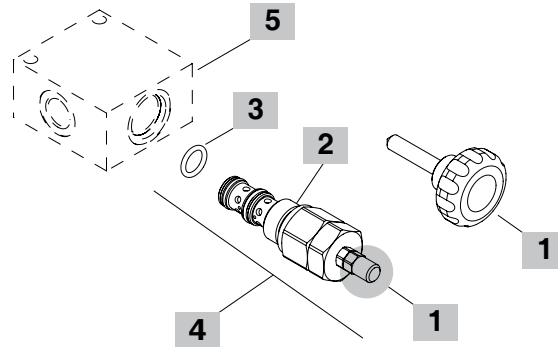
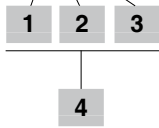


Valve type	A		B		⌀	Key	Nm	lbft
	mm	in	mm	in				
RP10A/1S	47.2	1.86	54.5	2.15	27	50	37	
RP12A/0S	73.5	2.89	51.5	2.03	32	80	59	
RP16A/0S	75	2.95	50.5	1.99	41	100	74	

For dimensions with different type of adjustment see page 196

Ordering codes and description composition

RP10A/1S1B



1 Adjustments

TYPE	DESCRIPTION
S	Screw with cap
V	With handwheel

2 Pressure range

Standard setting is referred to at 5 l/min (1.32 US gpm) flow

TYPE	DESCRIPTION
1	Pressure range 5÷80 bar (72.5÷1160 psi); Std. setting 50 bar (725 psi) at 5 l/min (1.32 US gpm)
2	Pressure range 50÷220 bar (725÷3190 psi); Std. setting 150 bar (2175 psi) at 5 l/min (1.32 US gpm)
3	For SAE cavity 10/3: pressure range 100÷350 bar (1450÷5075 psi); Std. setting 250 bar (3625 psi) For SAE cavity 12/3 and 16/3: pressure range 180÷350 bar (2610÷5075 psi); Std. setting 250 bar (3625 psi)

3 Seals

TYPE	DESCRIPTION
B	NBR (Buna) o-ring seals, std configuration
V	FPM (Viton) o-ring seals, contact Sales Dept.

4 Cartridges

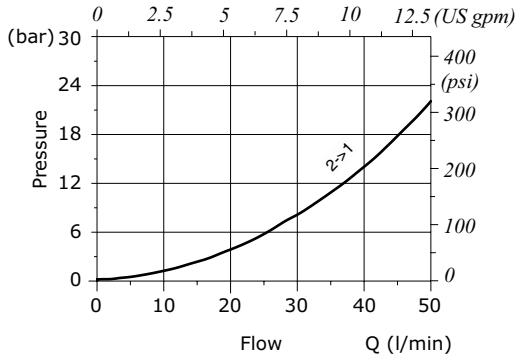
TYPE	CODE	DESCRIPTION
SAE cavity 10/3		
RP10A/1S1B	ORP10002016	Pressure range 1
RP10A/1S2B	ORP10002017	Pressure range 2
RP10A/1S3B	ORP10002018	Pressure range 3
SAE cavity 12/3		
RP12A/0S1B	ORP12002002	Pressure range 1
RP12A/0S2B	ORP12002003	Pressure range 2
RP12A/0S3B	ORP12002000	Pressure range 3
SAE cavity 16/3		
RP16A/0S1B	ORP16002006	Pressure range 1
RP16A/0S2B	ORP16002000	Pressure range 2
RP16A/0S3B	ORP16002011	Pressure range 3

5 Valve body

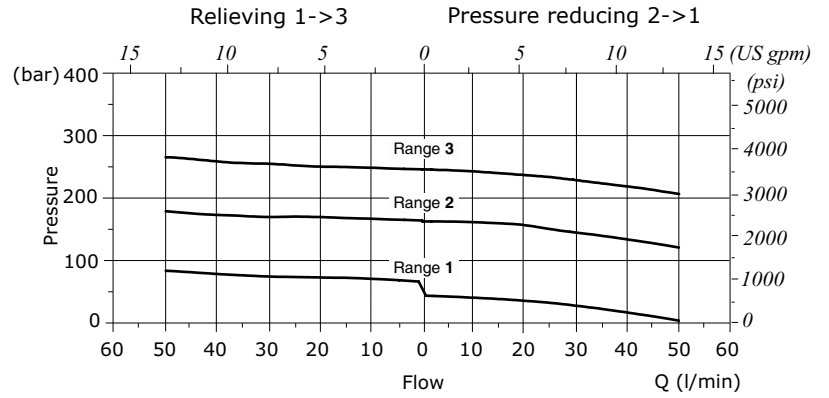
TYPE	CODE	DESCRIPTION
SAE 10/3-G 3/8	3CC1030C11	Aluminium body for cavity 10 valve, G 3/8 std thread
SAE 12/3-G 1/2	3CC1230D11	Aluminium body for cavity 12 valve, G 1/2 std thread
SAE 16/3-G 3/4	3CC1630E11	Aluminium body for cavity 16 valve, G 3/4 std thread

Note: aluminium body can stand up to 210 bar (3050 psi)
For steel bodies or different threading see from page 199

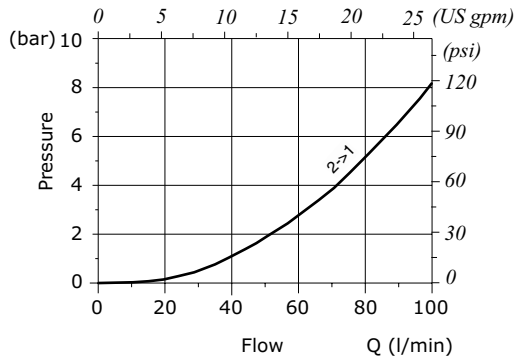
RP10A pressure drop vs. flow



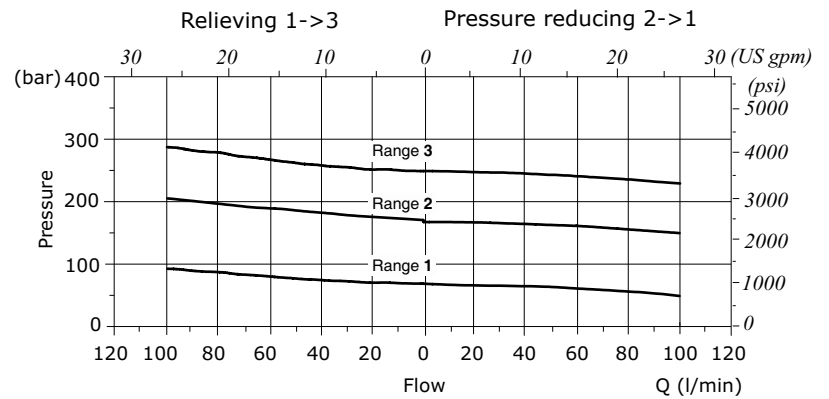
RP10A reducing/relieving pressure vs. flow



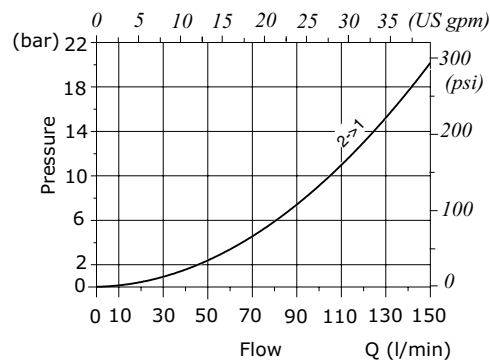
RP12A pressure drop vs. flow



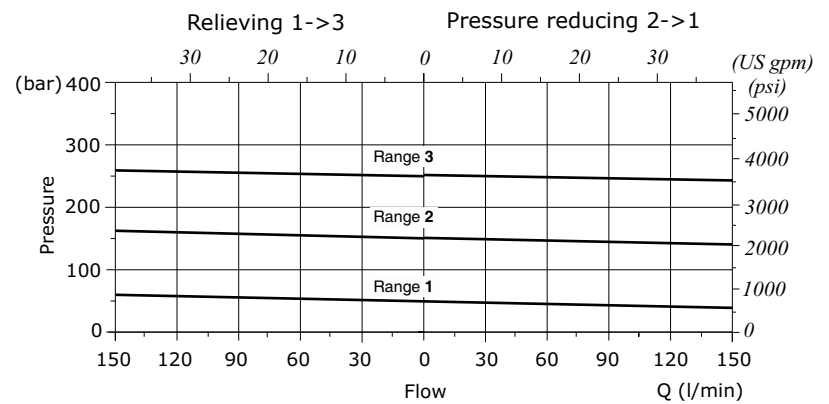
RP12A reducing/relieving pressure vs. flow



RP16A pressure drop vs. flow



RP16A reducing/relieving pressure vs. flow





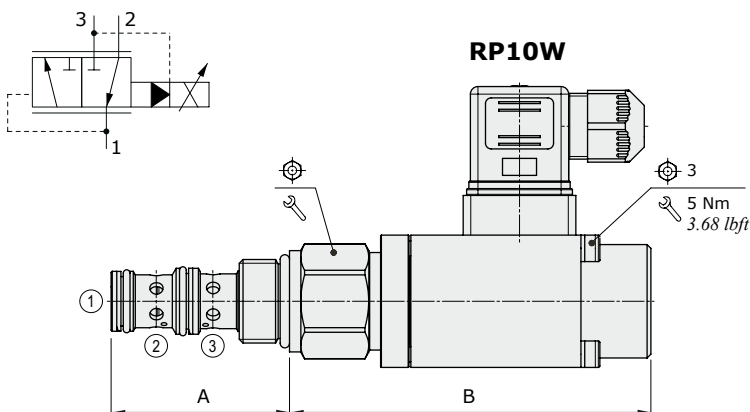
RP..W type pressure reducing valves - 3 ways

- Solenoid proportional type, pilot operated
- With relieving
- Spool type
- From SAE10 to SAE16 cavities

Technical specifications and diagrams are measured with mineral oil of 46 cSt viscosity at 40°C (104°F) temperature.

	RP10W	RP12W	RP16W
Nominal flow	50 l/min (13 US gpm)	100 l/min (26 US gpm)	150 l/min (40 US gpm)
Max. pressure	350 bar (5100 psi) - in 3=210 bar (3045 psi)		
Oil leakage	-		
Fluid	mineral based oil		
Viscosity	10-200 cSt		
Max level of contamination	18/16/13 ISO4406		
Fluid temperature	with NBR seals with FPM seals	from -20°C (-4°F) to 80°C (176°F) from -20°C (-4°F) to 100°C (212°F)	
Environmental temp. for working conditions	from -20°C (-4°F) to 50°C (122°F)		
Cavity	SAE 10/3	SAE 12/3	SAE 16/3
Coil type*	MP35		
Nominal voltages	12 VDC - 24 VDC		
Power rating	11.2 W (12 VDC) - 11.4 W (24 VDC)		
Max control current	12 V -> 1.25 A - 24 V -> 0.68 A		
Dither frequency	150 Hz		
Hysteresis	≤4%		
Weight	0.680 kg (1.50 lb)	0.820 kg (1.81 lb)	0.930 kg (2.05 lb)

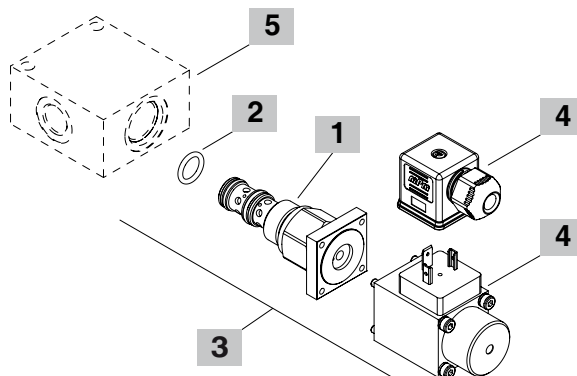
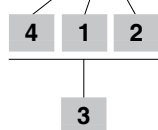
NOTE - For different conditions, please contact Walvoil Sales Dpt. - For coils further features see from page 190.



Valve type	A		B		⌀	Torque	Torque
	mm	in	mm	in			
RP10W	47.2	1.86	95.6	3.76	27	50	37
RP12W	73.5	2.89	93.5	3.68	32	70	52
RP16W	75	2.95	92	3.62	41	100	74

Ordering codes and description composition

RP10W/121B



1 Pressure range

TYPE	DESCRIPTION
1	Pressure range 5÷50 bar (72.5÷725 psi)
2	Pressure range 50÷200 bar (725÷2900 psi)
3	Pressure range 80÷350 bar (1160÷5075 psi)
4	Pressure range 20÷100 bar (290÷1450 psi) Pressure range 10÷80 bar (145÷1160 psi) only for RP12W/024B

2 Seals

TYPE	DESCRIPTION
B	NBR (Buna) o-ring seals, std configuration
V	FPM (Viton) o-ring seals, contact Sales Dept.

3 Cartridges

TYPE	CODE	DESCRIPTION
SAE cavity 10/3		
RP10W/121B	ORP10002020	Pressure range 1 , 12VDC
RP10W/122B	ORP10002021	Pressure range 2 , 12VDC
RP10W/123B	ORP10002022	Pressure range 3 , 12VDC
RP10W/124B	ORP10002023	Pressure range 4 , 12VDC
SAE cavity 12/3		
RP12W/021B	ORP12002007	Pressure range 1 , 12VDC
RP12W/022B	ORP12002009	Pressure range 2 , 12VDC
RP12W/024B	ORP12002005	Pressure range 3 , 12VDC
SAE cavity 16/3		
RP16W/021B	ORP16002004	Pressure range 1 , 12VDC
RP16W/022B	ORP16002008	Pressure range 2 , 12VDC
RP16W/023B	ORP16002009	Pressure range 3 , 12VDC
RP16W/024B	ORP16002001	Pressure range 4 , 12VDC

4 Coils and connectors

TYPE	CODE	DESCRIPTION
2) MP35 12VDC	5SL4000120	12VDC-ISO4400 coil
ISO4400	4CN1009995	Connector
4) MP35 24VDC	4SL4000240	24VDC-ISO4400 coil
ISO4400	4CN1009995	Connector

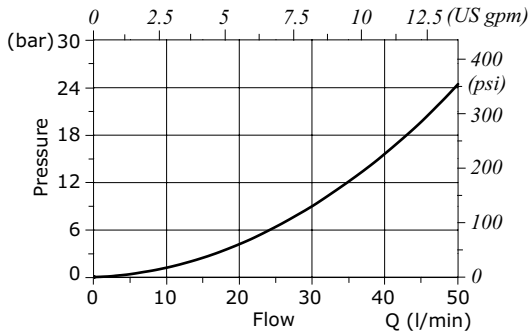
For complete coils and connectors list see from page 190

5 Valve body

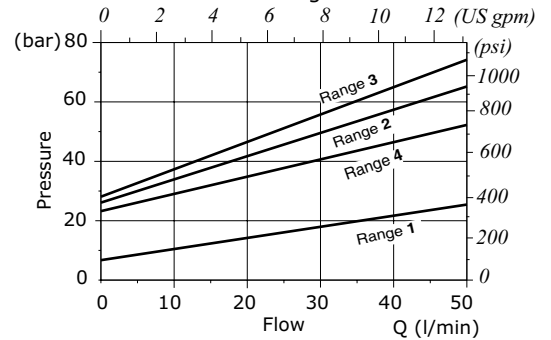
TYPE	CODE	DESCRIPTION
SAE 10/3-G 3/8	3CC1030C11	Aluminium body for cavity 10 valve, G 3/8 std thread
SAE 12/3-G 1/2	3CC1230D11	Aluminium body for cavity 12 valve, G 1/2 std thread
SAE 16/3-G 3/4	3CC1630E11	Aluminium body for cavity 16 valve, G 3/4 std thread

Note: aluminium body can stand up to 210 bar (3050 psi)
For steel bodies or different threading see from page 199

RP10W pressure drop vs. flow 2->1



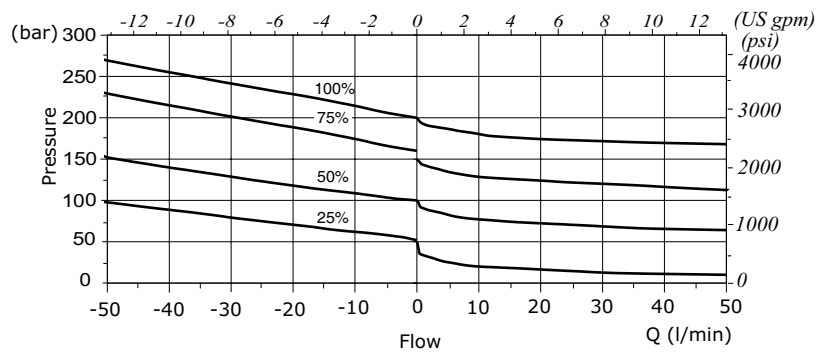
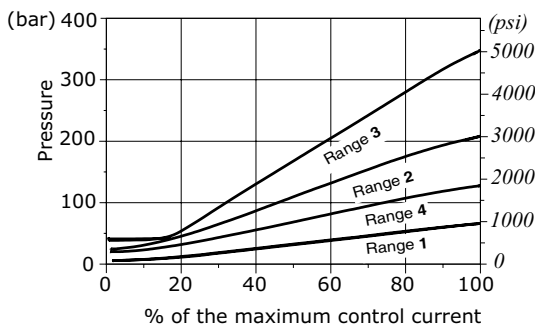
RP10W pressure drop vs. flow 1->3 with de-energized coil



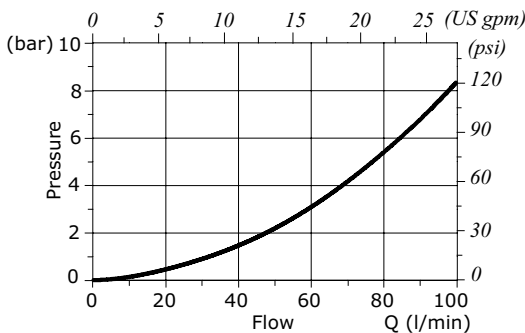
RP10W reducing/relieving pressure vs. flow for % of control current - Pressure range 2

Relieving 1->3 Pressure reducing 2->1

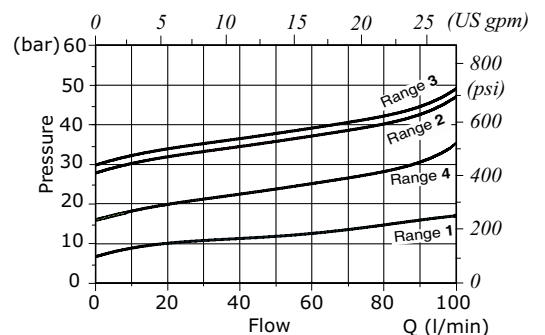
RP10W pressure reducing vs. control current



RP12W pressure drop vs. flow 2->1

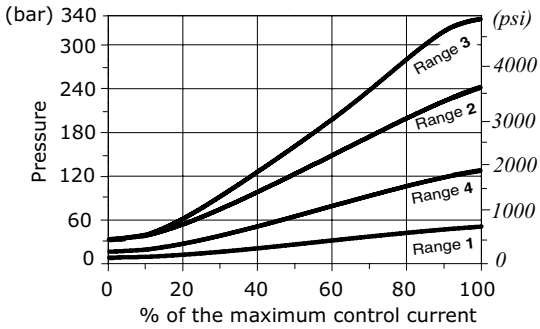


RP12W pressure drop vs. flow 1->3 with de-energized coil



Rating diagrams

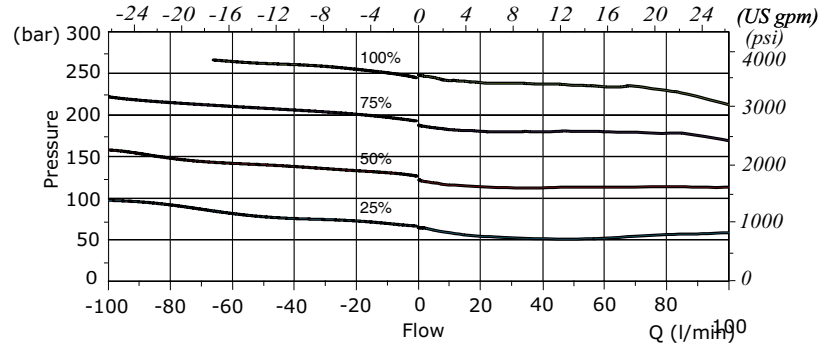
RP12W pressure reducing vs. control current



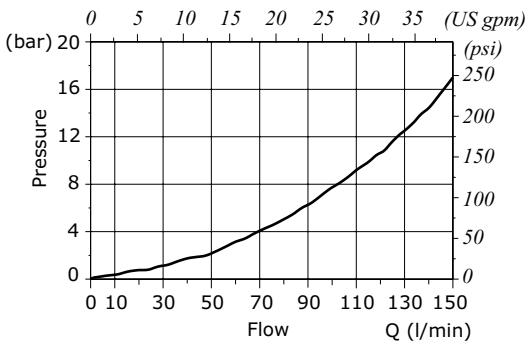
RP12W reducing/relieving pressure vs. flow

for % of control current - Pressure range 2 -

Relieving 1->3 Pressure reducing 2->1

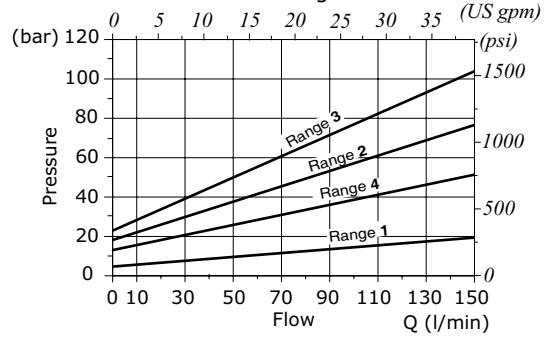


RP16W pressure drop vs. flow 2->1

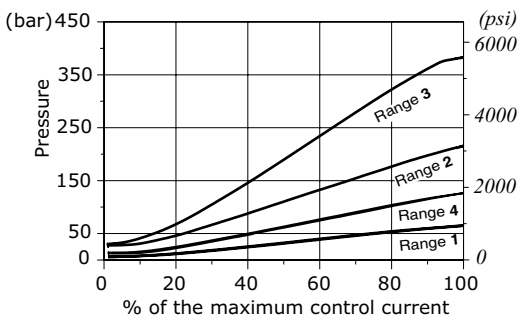


RP16W pressure drop vs. flow 1->3

with de-energized coil



RP16W pressure reducing vs. control current



RP16W reducing/relieving pressure vs. flow

for % of control current - Pressure range 2 -

Relieving 1->3 Pressure reducing 2->1

