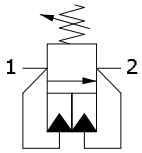
SW..A type
sequence valves - 2 ways

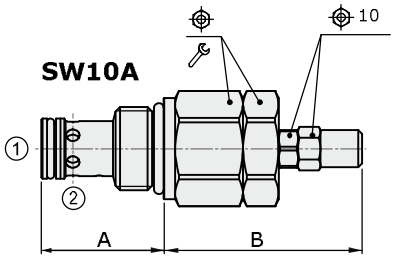
- Pressure release type
- Pilot operated
- Spool type
- From SAE10 to SAE16 cavities

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

		SW10A	SW12D	SW16A
Nominal flow		60 l/min *(16 US gpm)*	100 l/min *(26 US gpm)*	180 l/min *(48 US gpm)*
Max. pressure			350 bar *(5100 psi)*	
Oil leakage	80% of max. pressure setting	22 cm³/min *(1.34 in³/min)*	50 cm³/min *(3.05 in³/min)*	100 cm³/min *(6.1 in³/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 10/2	SAE 12/2	SAE 16/2
Weight		0.20 kg *(0.44 lb)*	0.30 kg *(0.66 lb)*	0.44 kg *(0.97 lb)*

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

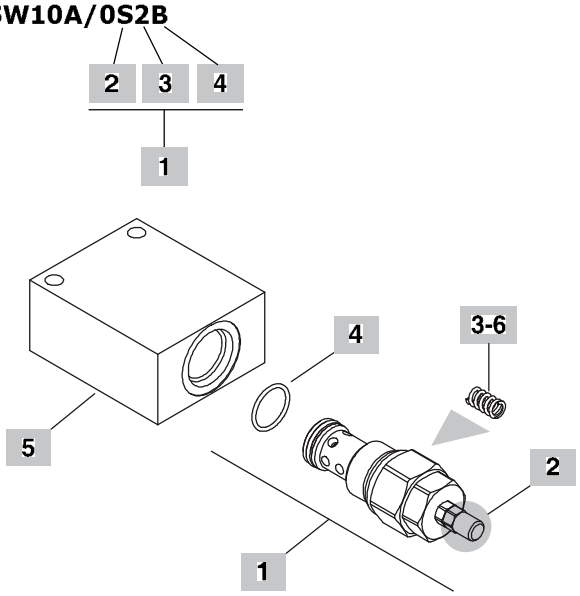




Valve type	A		B				
	mm	*in*	mm	*in*		Nm	*lbft*
SW10A	32.3	*1.27*	52.5	*2.07*	27	50	*37*
SW12D	46	*1.81*	52.5	*2.07*	32	80	*59*
SW16A	45.2	*1.78*	53	*2.09*	41	100	*74*

Ordering codes and description composition

SW10A/0S2B



1 Cartridges

TYPE	CODE	DESCRIPTION
SAE cavity 10/2		
SW10A/0S2B	0SW10002000	Pressure range **2**
SAE cavity 12/2		
SW12D/0S2B	0SW12002005	Pressure range **2**
SAE cavity 16/2		
SW16A/0S2B	0SW16002000	Pressure range **2**

2 Adjustments

TYPE	DESCRIPTION
S	Screw

3 Pressure range

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

TYPE	DESCRIPTION
1	Pressure range 10÷80 bar *(145÷1160 psi)*; Std. setting 30 bar *(435 psi)*, pressure increase by steps of 10 bar *(145 psi)* per screw turn
2	Pressure range 50÷220 bar *(725÷3200 psi)*; Std. setting 150 bar *(2200 psi)*, pressure increase by steps of 36 bar *(520 psi)* per screw turn
3	Pressure range 150÷350 bar *(2200÷5100 psi)*; Std. setting 250 bar *(3600 psi)*, pressure increase by steps of 90 bar *(1300 psi)* per screw turn

4 Seals

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

5 Valve body

TYPE	CODE	DESCRIPTION
SAE 10/2-G 3/8	3CC1020C11	Aluminium body for cavity 10 valve, G 3/8 std thread
SAE 12/2-G 1/2	3CC1220D11	Aluminium body for cavity 12 valve, G 1/2 std thread
SAE 16/2-G 3/4	3CC1020C11	Aluminium body for cavity 16 valve, G 3/4 std thread

Note: aluminium body can stand up to 210 bar *(3050 psi)*

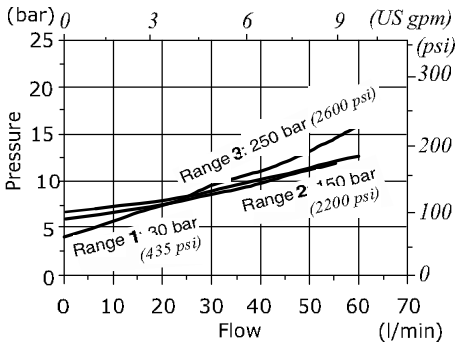
For steel bodies or different threading see from page 215

6 Springs

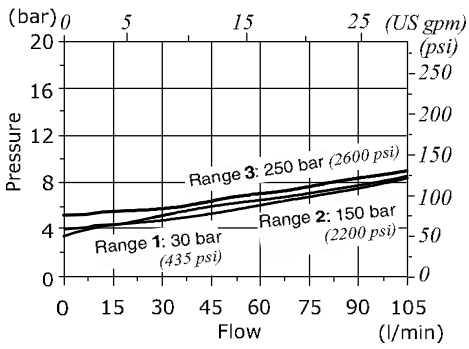
TYPE	CODE	DESCRIPTION
1	3ML1081400	Pressure range **1**
2	3ML1081401	Pressure range **2**
3	3ML1081402	Pressure range **3**

Rating diagrams

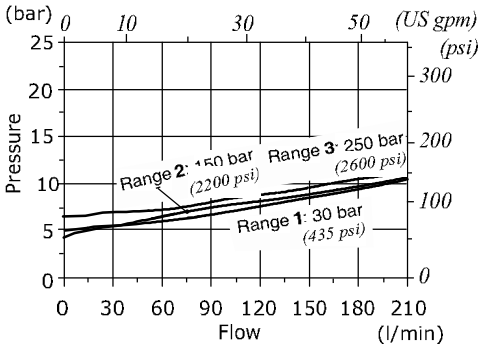
SW10A pressure vs. flow
std. setting at 5 l/min *(1.32 US gpm)*



SW12A pressure vs. flow
std. setting at 5 l/min *(1.32 US gpm)*



SW16A pressure vs. flow
std. setting at 5 l/min *(1.32 US gpm)*



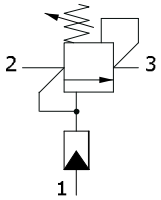
SE..A type
sequence valves - 3 ways

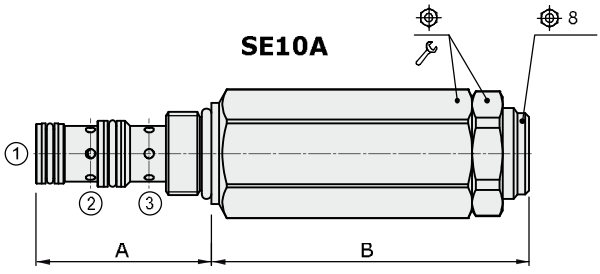
- Direct acting
- External pilot
- Poppet type
- From SAE08 to SAE10 cavities

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

		SE08A	SE10A
Nominal flow		5 l/min *(1.32 US gpm)*	20 l/min *(5.3 US gpm)*
Max. pressure		210 bar *(3050 psi)*	
Oil leakage	80% of max. pressure setting	0.25 cm³/min *(0.015 in3/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 08/3	SAE 10/3
Weight		0.28 kg *(0.62 lb)*	0.47 kg *(1.04 lb)*

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

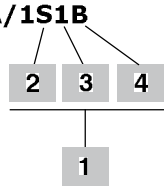


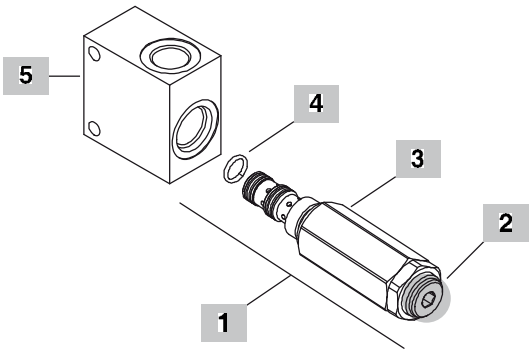


Valve type	A		B				
	mm	*in*	mm	*in*		Nm	*lbft*
SE08A	41	*1.61*	69	*2.72*	27	30	*22*
SE10A	47	*1.85*	95	*3.74*	30	50	*37*

Ordering codes and description composition

SE08A/1S1B





1 Cartridges

TYPE	CODE	DESCRIPTION
SAE cavity 08/3		
SE08A/1S1B	0SE08002003	With pressure range **1**
SE08A/1S2B	0SE08002002	With pressure range **2**
SE08A/1S3B	0SE08002001	With pressure range **3**
SE08A/1S4B	0SE08002000	With pressure range **4**
SAE cavity 10/3		
SE10A/1S1B	0SE10002001	With pressure range **1**
SE10A/1S2B	0SE10002002	With pressure range **2**
SE10A/1S3B	0SE10002000	With pressure range **3**
SE10A/1S4B	0SE10002003	With pressure range **4**

2 Adjustments

TYPE	DESCRIPTION
S	Screw

3 Pressure settings

Standard setting is referred to at 1 l/min *(0.26 US gpm)* flow

TYPE	DESCRIPTION
1	Range 5÷50 bar *(72.5÷725 psi)*; Std. setting 30 bar *(435 psi)*
2	Range 20÷100 bar *(290÷1450 psi)*; Std. setting 50 bar *(725 psi)*
3	Range 50÷150 bar *(725÷2175 psi)*; Std. setting 100 bar *(1450 psi)*
4	Range 100÷250 bar *(1450÷3600 psi)*; Std. setting 180 bar *(2600 psi)*

4 Seals

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

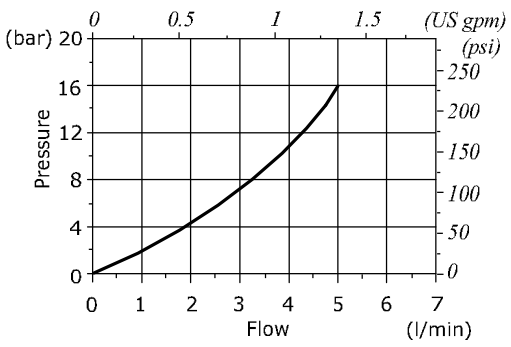
5 Valve body

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

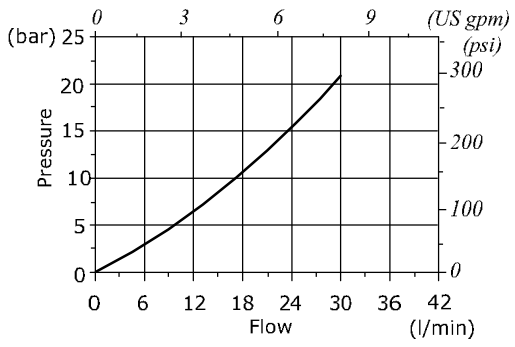
For steel bodies or different threading see from page 215

Rating diagrams

SE08A pressure drop vs. flow 2->3



SE10A pressure drop vs. flow 2->3



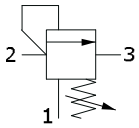
SP10A type
sequence valve - 3 ways

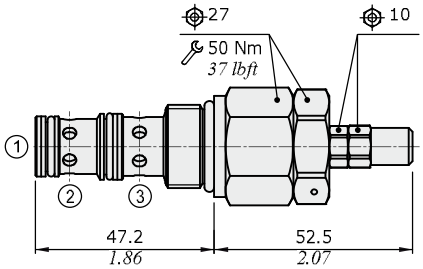
- Pilot operated
- Spool type
- Not affected by back pressure

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

		SP10A
Nominal flow		50 l/min *(13 US gpm)*
Max. pressure		350 bar *(5100 psi)*
Oil leakage	at 210 bar *(3050 psi)*	25 cm³/min *(1.52 in³/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 10/3
Weight		0.21 kg *(0.46 lb)*

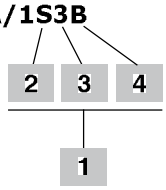
NOTE - For different conditions, please contact Walvoil Sales Dpt.

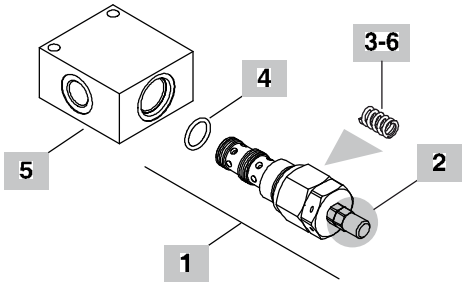




Ordering codes and description composition

SP10A/1S3B





1 Cartridges

TYPE	CODE	DESCRIPTION
SAE cavity 10/3		
SP10A/1S3B	0SP10002001	Pressure range **3**

2 Adjustments

TYPE	DESCRIPTION
S	Screw

3 Pressure range

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

TYPE	DESCRIPTION
1	Pressure range 10÷80 bar *(145÷1150 psi);* Std. setting 20 bar *(290 psi),* pressure increase by steps of 10 bar *(145 psi)* per screw turn
2	Pressure range 50÷220 bar *(725÷3200 psi);* Std. setting 150 bar *(2175 psi)*, pressure increase by steps of 46 bar *(660 psi)* per screw turn
3	Pressure range 150÷350 bar *(2200÷5100 psi);* Std. setting 250 bar *(3600 psi)*, pressure increase by steps of 110 bar *(1600 psi)* per screw turn

4 Seals

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

5 Valve body

TYPE	CODE	DESCRIPTION
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)*

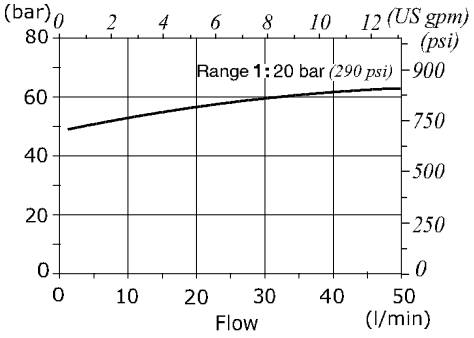
For steel bodies or different threading see from page 215

6 Springs

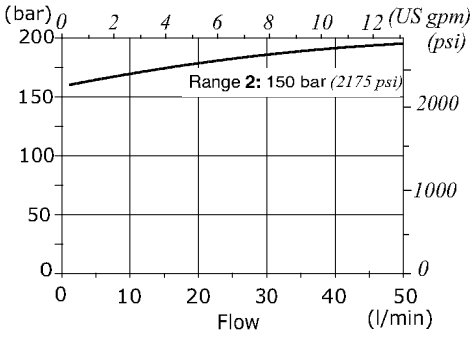
TYPE	CODE	DESCRIPTION
1	3ML1081400	Pressure range **1**
2	3ML1081401	Pressure range **2**
3	3ML1081402	Pressure range **3**

Rating diagrams

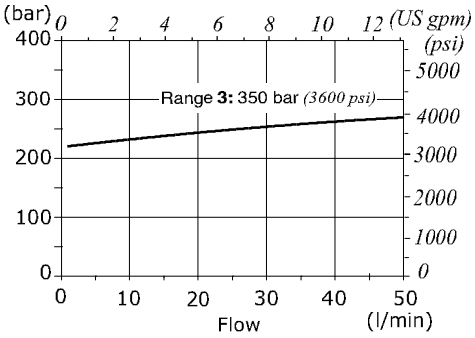
SP10A pressure vs. flow
std. setting at 5 l/min *(1.32 US gpm)*



SP10A pressure vs. flow
std. setting at 5 l/min *(1.32 US gpm)*



SP10A pressure vs. flow
std. setting at 5 l/min *(1.32 US gpm)*



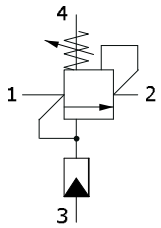
SG12A type
sequence valve - 4 ways

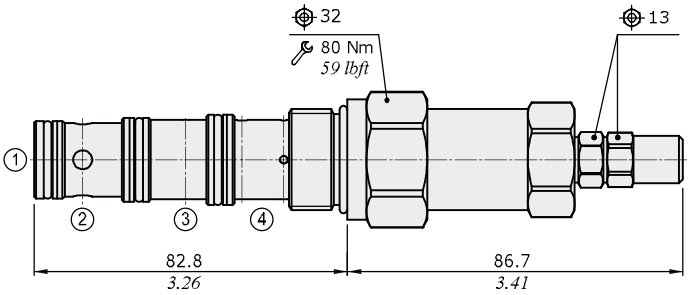
- Direct acting
- Poppet type
- External pilot and drain

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

		SG12A
Nominal flow		50 l/min *(13 US gpm)*
Max. pressure		300 bar *(4350 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 12/4
Weight		0.52 kg *(1.15 lb)*

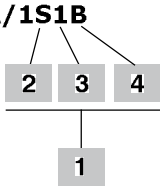
NOTE - For different conditions, please contact Walvoil Sales Dpt.

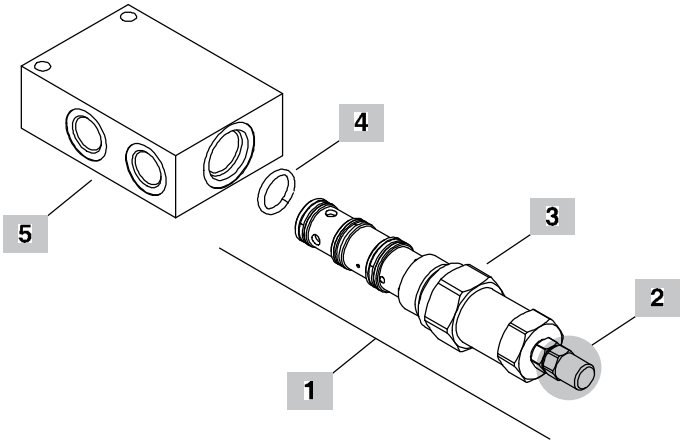




Ordering codes and description composition

SG12A/1S1B





1 Cartridges

TYPE	CODE	DESCRIPTION
SAE cavity 12/4		
SG12A/1S1B	0SG12002000	Cartridge pres. sett. **1**
SG12A/1S2B	0SG12002002	Cartridge pres. sett. **2**
SG12A/1S3B	0SG12002001	Cartridge pres. sett. **3**

2 Adjustments

TYPE	DESCRIPTION
S	Screw

3 Pressure settings

Standard setting is referred to at 1 l/min *(0.26 US gpm)* flow

TYPE	DESCRIPTION
1	Range 20÷100 bar *(290÷1450 psi)*; Std. setting 50 bar *(725 psi)*
2	Range 50÷200 bar *(725÷2900 psi)*; Std. setting 150 bar *(2200 psi)*
3	Range 100÷300 bar *(1450÷4350 psi)*; Std. setting 250 bar *(3600 psi)*

4 Seals

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

5 Valve body

TYPE	CODE	DESCRIPTION
SAE 12/4-G 1/2	3CC1240D11	Aluminium body for cavity 12 valve, G 1/2 std thread

Note: aluminium body can stand up to 210 bar *(3050 psi)*

For steel bodies or different threading see from page 215

Rating diagrams

SG12A pressure drop vs. flow 1->2