



UC..A type check valves - 2 way

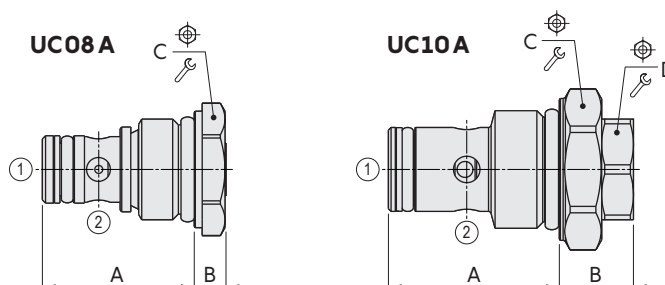
- Poppet type
- Direct acting
- Different opening pressures available
- From SAE08 to SAE16 cavities

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

		UC08A	UC10A	UC12A	UC16A
Nominal flow		up to 20 l/min (5.3 US gpm)	up to 35 l/min (9.2 US gpm)	up to 50 l/min (13 US gpm)	up to 100 l/min (26 US gpm)
Max. pressure		350 bar (5100 psi)			
Oil leakage	at 100 bar (1450 psi)	0.25 cm³/min (0.015 in³/min)	0.25 cm³/min (0.015 in³/min)	0.25 cm³/min (0.015 in³/min)	0.25 cm³/min (0.015 in³/min)
Fluid		mineral based or synthetic hydraulic fluid with lubricating properties			
Viscosity		10-200 cSt			
Max level of contamination		20/18/14 ISO4406			
Fluid temperature	with NBR seals+PTFE with FPM seals	from -25°C (-13°F) to 90°C (194°F) from -20°C (-4°F) to 110°C (230°F)			
Environmental temp. for working conditions		from -20°C (-4°F) to 60°C (140°F)			
Cavity		SAE 08/2	SAE 10/2	SAE 12/2	SAE 16/2
Weight		0.080 kg (0.18 lb)	0.090 kg (0.20 lb)	0.180 kg (0.40 lb)	0.370 kg (0.81 lb)

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

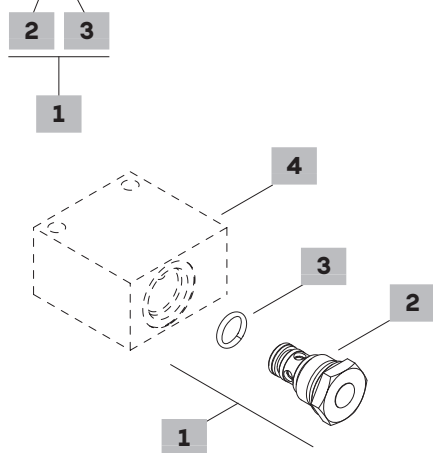
2 1



Valve type	A		B		C		D			
	mm	in	mm	in	Nm	lbft	Nm	lbft	Nm	lbft
UC08A	28.7	1.13	6	0.24	22	30	22	-	-	-
UC10A	32.3	1.27	14	0.55	27	50	37	19	30	22
UC12A	46	1.81	14	0.55	32	80	59	22	42	31
UC16A	45.2	1.78	25	0.98	41	100	73	30	65	48

Ordering codes and description composition

UC08A/001B



1 Cartridges

TYPE	CODE	DESCRIPTION
SAE cavity 08/2		
UC08A/001B	0UC08002001	Opening pressure 0.5 bar (7.3 psi)
SAE cavity 10/2		
UC10A/001B	0UC10002000	Opening pressure 0.5 bar (7.3 psi)
SAE cavity 12/2		
UC12A/001B	0UC12002000	Opening pressure 0.5 bar (7.3 psi)
SAE cavity 16/2		
UC16A/001B	0UC16002001	Opening pressure 0.5 bar (7.3 psi)

2 Opening pressure from 1 to 2

TYPE	DESCRIPTION
1	0.5 bar (7.3 psi)
2	2.5 bar (36.2 psi)
3	5 bar (72.5 psi)

3 Seals

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

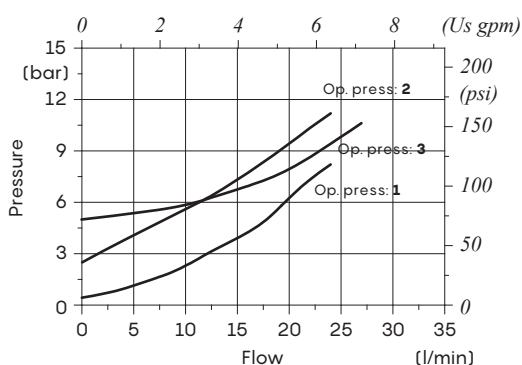
5 Valve body

TYPE	CODE	DESCRIPTION
SAE08/2-G 3/8	3CC0820C11	Aluminium body for cavity 08 valve, G 3/8 std thread
SAE10/2-G 3/8	3CC1020C11	Aluminium body for cavity 10 valve, G 3/8 std thread
SAE12/2-G 1/2	3CC1220D11	Aluminium body for cavity 12 valve, G 1/2 std thread
SAE16/2-G 3/4	3CC1620E11	Aluminium body for cavity 16 valve, G 3/4 std thread

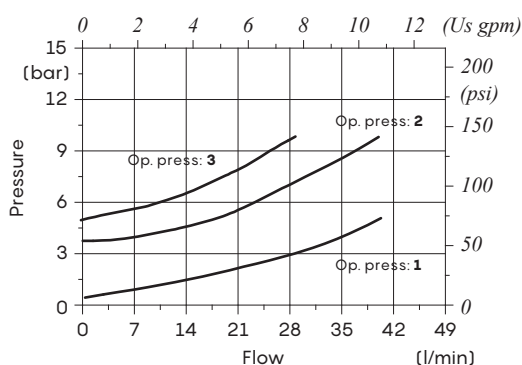
Note: aluminium body can stand up to 210 bar (3050 psi)
For steel bodies or different threading see from page 208

Rating diagrams

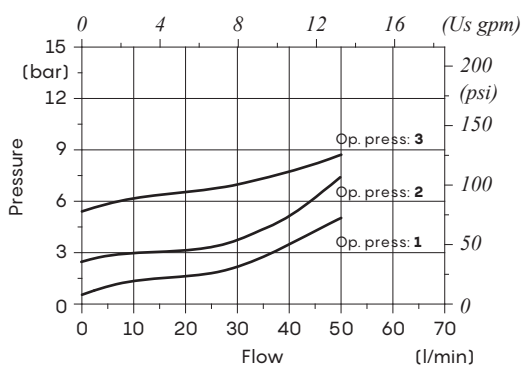
UC08A pressure drop vs. flow



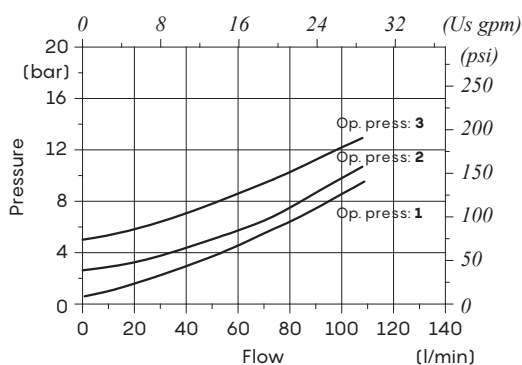
UC10A pressure drop vs. flow



UC12A pressure drop vs. flow



UC16A pressure drop vs. flow





UM08M type check valves - 2 way

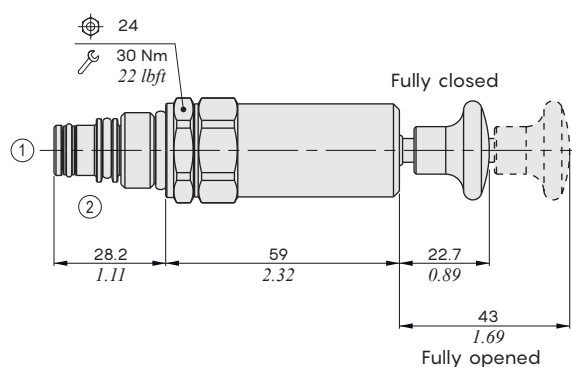
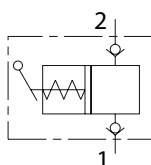
- Direct operation by knob
- Configuration with valve return in delivery position is available
- External zinc-plated and corrosion-proof components

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

UM08M

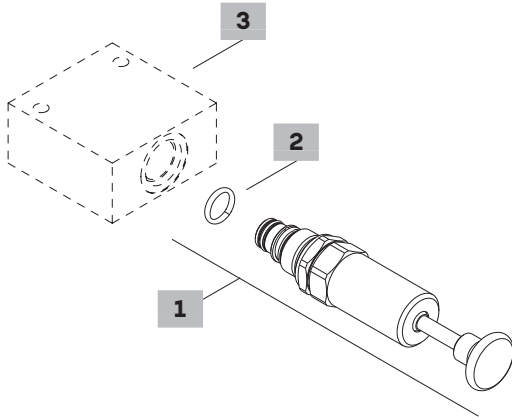
Displacement	1 in ³ /stroke	
Max. pressure	Port 1 = 50 bar (750 psi) Port 2 = 210 bar (3050 psi)	
Oil leakage	at 200 bar (2900 psi)	0.25 cm ³ /min (0.015 in ³ /min)
Fluid	mineral based or synthetic hydraulic fluid with lubricating properties	
Viscosity	12-200 cSt	
Max level of contamination	20/18/14 ISO4406	
Fluid temperature	with NBR seals+Polyurethane with FPM seals	from -25°C (-13°F) to 90°C (194°F) from -20°C (-4°F) to 110°C (230°F)
Environmental temp. for working conditions	from -20°C (-4°F) to 60°C (140°F)	
Cavity	SAE 08/2	
Weight	0.212 kg (0.47 lb)	

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



Ordering codes and description composition

UM08M/1A1B



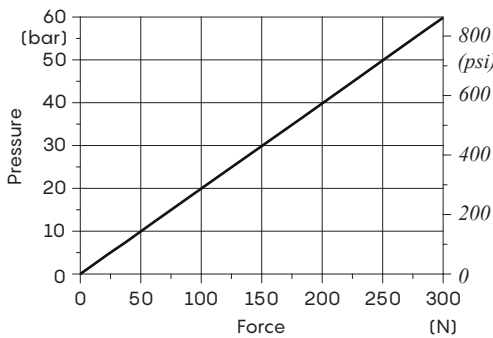
1 Cartridges		
TYPE	CODE	DESCRIPTION
SAE cavity 08/2		
UM08M/1A1B	0UM08002002	Valve assembly

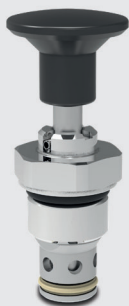
2 Seals	
TYPE	DESCRIPTION
B	NBR (Buna)+Polyurethane o-ring seals, std configuration
V	FPM (Viton) o-ring seals, contact Sales Dept

3 Valve body		
TYPE	CODE	DESCRIPTION
SAE08/2-G 1/4	3CC0820B11	Aluminium body for cavity 08 valve, G 1/4 std thread
Note: aluminium body can stand up to 210 bar (3050 psi) For steel bodies or different threading see from page 208		

Rating diagrams

Output Pressure vs. Input force





UV10M type check valves - 2 way

- Poppet type
- Direct operation by knob
- Available mechanical detent
- External zinc-plated and corrosion-proof components

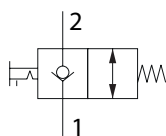
Technical specifications and diagrams are measured with mineral oil of 46 cSt viscosity at 40°C (104°F) temperature.

UV10M

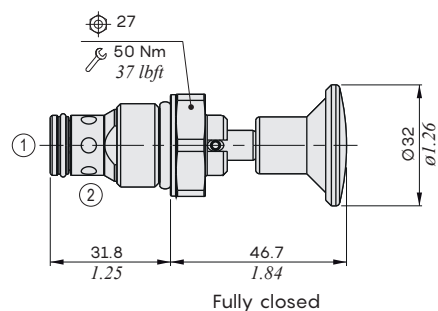
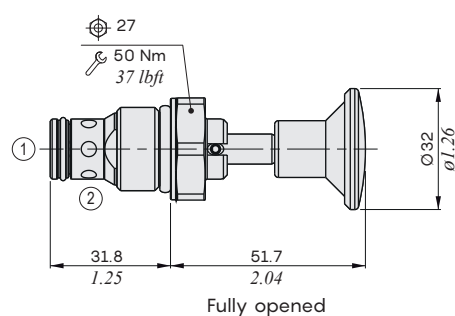
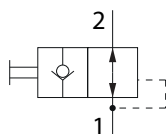
Nominal flow	60 l/min (16 US gpm)
Max. pressure	320 bar (4650 psi)
Oil leakage	at 210 bar (3050 psi) 0.25 cm³/min (0.015 in³/min)
Fluid	mineral based or synthetic hydraulic fluid with lubricating properties
Viscosity	20-200 cSt
Max level of contamination	18/16/13 ISO4406
Fluid temperature	with NBR seals+Polyurethane with FPM seals
Environmental temp. for working conditions	from -25°C (-13°F) to 90°C (194°F) from -20°C (-4°F) to 110°C (230°F)
Cavity	SAE 10/2
Weight	0.164 kg (0.36 lb)

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

Normally closed configuration

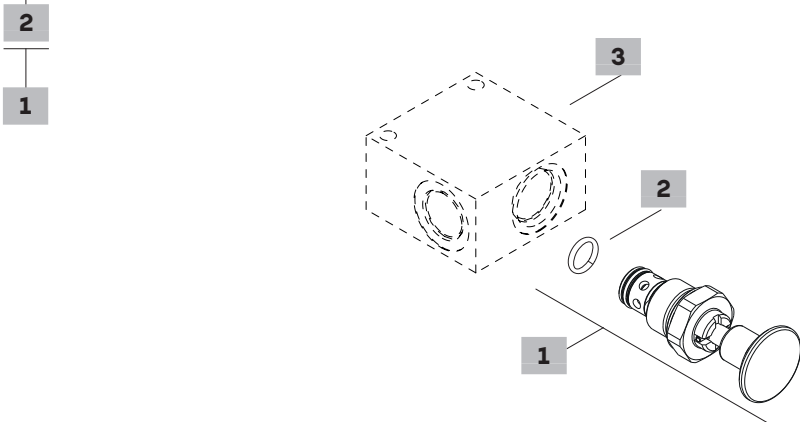


Normally open configuration



Ordering codes and description composition

UV10M/2A0B



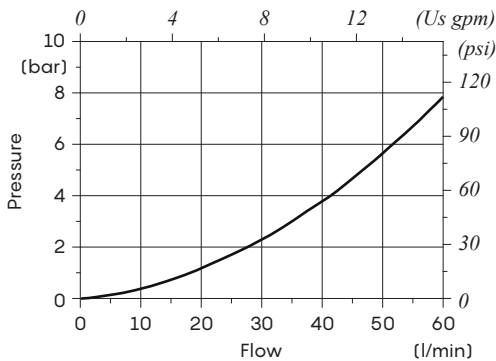
1 Cartridges		
TYPE	CODE	DESCRIPTION
SAE cavity 10/2		
UV10M/2A0B	0UV10002000	Normally closed (N.C.) with detent, pull to operate; spring return
UV10M/2E0B	0UV10002002	Normally closed (N.C.) without detent

3 Valve body		
TYPE	CODE	DESCRIPTION
SAE10/2-G 1/2	3CC1020D11	Aluminium body for cavity 10 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 208		

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

Rating diagrams

Pressure drop vs. flow





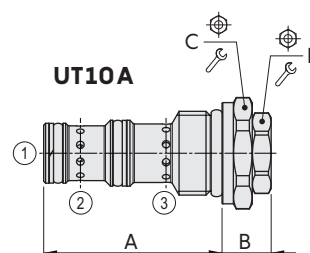
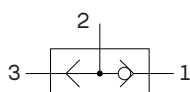
UT..A type shuttle valves – 3 way

- Shuttle valve
- Direct acting
- From SAE08 to SAE10 cavities

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

	UT08A	UT10A
Nominal flow	15 l/min (4 US gpm)	up to 20 l/min (5.3 US gpm)
Max. pressure	350 bar (5100 psi)	
Oil leakage	at 210 bar (3050 psi)	0.50 cm ³ /min (0.030 in ³ /min)
Fluid	mineral based or synthetic hydraulic fluid with lubricating properties	
Viscosity	10–200 cSt	
Max level of contamination	20/18/14 ISO4406	
Fluid temperature	with NBR seals+PTFE with FPM seals	from -25°C (-13°F) to 90°C (194°F) from -20°C (-4°F) to 110°C (230°F)
Environmental temp. for working conditions	from -20°C (-4°F) to 60°C (140°F)	
Cavity	SAE 08/3	SAE 10/3
Weight	0.80 kg (0.18 lb)	0.100 kg (0.22 lb)

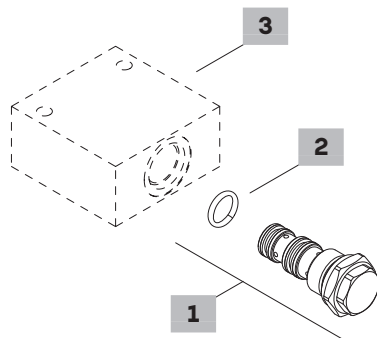
NOTE – For different conditions, please contact Walvoil Sales Dpt.



Valve type	A		B		C		D	
	mm	in	mm	in	Nm	lbf·ft	Nm	lbf·ft
UT08A	40.8	1.60	12.5	0.49	24	30	22	19
UT10A	47.2	1.86	13	0.51	27	50	37	19

Ordering codes and description composition

UT08A/000B



1 Cartridges

TYPE	CODE	DESCRIPTION
SAE cavity 08/3		
UT08A/000B	OUT08002000	Valve assembly
SAE cavity 10/3		
UT10A/000B	OUT10002000	Valve assembly

2 Seals

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

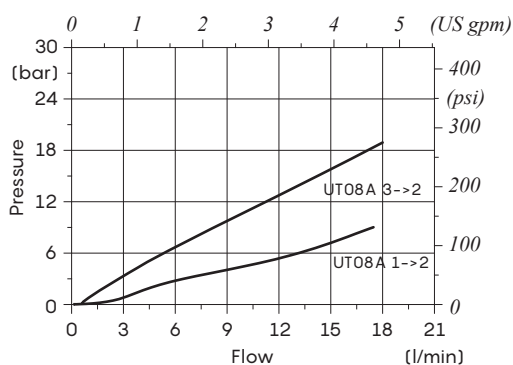
3 Valve body

TYPE	CODE	DESCRIPTION
SAE08/3-G 1/4	3CC0830B11	Aluminium body for cavity 08 valve, G 1/4 std thread
SAE10/3-G 3/8	3CC1030C11	Aluminium body for cavity 10 valve, G 3/8 std thread

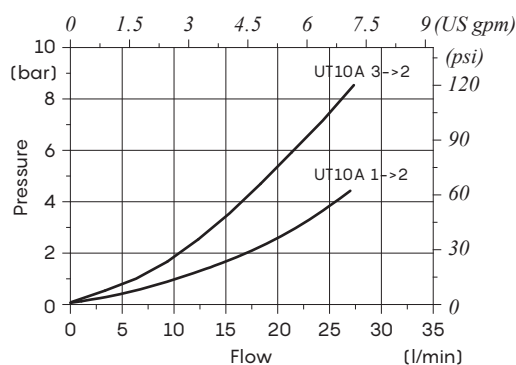
Note: aluminium body can stand up to 210 bar (3050 psi)
For steel bodies or different threading see from page 210

Rating diagrams

UT08A pressure drop vs flow



UT10A pressure drop vs flow





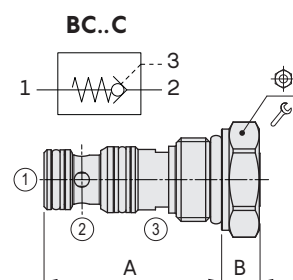
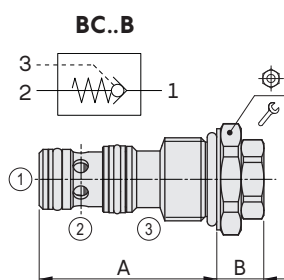
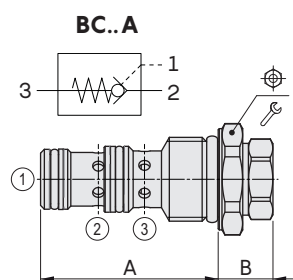
BC...type pilot operated check valves – 3 way

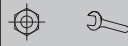
- Poppet type
- Direct acting
- From SAE08 to SAE16 cavities
- Different pilot ratio available

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

		BC08A	BC10A-B	BC10C	BC12A-B	BC16A-B
Nominal flow		15 l/min (4 US gpm)	30 l/min (8 US gpm)	60 l/min (16 US gpm)	50 l/min (13 US gpm)	100 l/min (26 US gpm)
Max. pressure		350 bar (5100 psi)				
Oil leakage	at 100 bar (1450 psi)	0.25 cm³/min (0.015 in³/min)	0.25 cm³/min (0.015 in³/min)	0.25 cm³/min (0.015 in³/min)	0.25 cm³/min (0.015 in³/min)	0.25 cm³/min (0.015 in³/min)
Fluid		mineral based or sinthetic hydraulic fluid with lubricating properties				
Viscosity		10-200 cSt				
Max level of contamination		20/18/14 ISO4406				
Fluid temperature	with NBR seals +Polyurethane with FPM seals	from -25°C (-13°F) to 90°C (194°F) from -20°C (-4°F) to 110°C (230°F)				
Environmental temp. for working conditions		from -20°C (-4°F) to 60°C (140°F)				
Cavity		SAE 08/3	SAE 10/3	SAE 10/3	SAE 12/3	SAE 16/3
Weight		0.080 kg (0.18 lb)	0.100 kg (0.22 lb)	0.111 kg (0.24 lb)	0.230 kg (0.51 lb)	0.440 kg (0.97 lb)

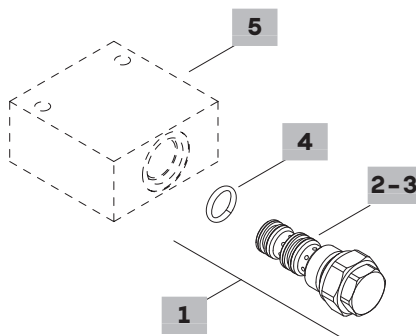
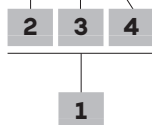
NOTE - For different conditions, please contact Walvoil Sales Dpt.



Valve type	A		B				
	mm	in	mm	in	 Nm lbf·ft		
BC..A	SAE 08/3	40.8	1.61	17	0.67	24	30 22
	SAE 10/3	47	1.85	12.5	0.49	27	50 36
	SAE 12/3	73.5	2.89	14	0.55	32	80 59
	SAE 16/3	75	2.97	24	0.94	41	100 73
BC..B	SAE 10/3	47	1.85	12.5	0.49	27	50 36
	SAE 12/3	73.5	2.89	14	0.55	32	80 59
BC..C	SAE 16/3	75	2.95	24	0.94	41	100 73
	SAE 10/3	47	1.85	10.2	0.40	27	50 36

Ordering codes and description composition

BC08A/3 0 1 B



1 Cartridges

TYPE	CODE	DESCRIPTION
SAE cavity 08/3 BC08A/301B	OBC08002000	Pilot ratio 1:2.5 Opening press. 2 to 3=5 bar (72.5 psi)
SAE cavity 10/3 BC10A/301B	OBC10002001	Pilot ratio 1:3 Opening press. 2 to 3=5 bar (72.5 psi)
BC10B/301B	OBC10002008	Pilot ratio 1:2 Opening press. 1 to 2=5 bar (72.5 psi)
BC10C/401B	OBC10002011	Pilot ratio 1:4 Opening press. 2 to 1=5 bar (72.5 psi)
SAE cavity 12/3 BC12A/301B	OBC12002000	Pilot ratio 1:3 Opening press. 2 to 3=5 bar (72.5 psi)
BC12B/301B	OBC12002005	Pilot ratio 1:3 Opening press. 1 to 2=5 bar (72.5 psi)
SAE cavity 16/3 BC16A/301B	OBC16002000	Pilot ratio 1:2.5 Opening press. 2 to 3=5 bar (72.5 psi)
BC16B/301B	OBC16002004	Pilot ratio 1:2.5 Opening press. 1 to 2=5 bar (72.5 psi)

2 Pilot ratio

TYPE	DESCRIPTION
For BC..A	
BC08A/3	1:2.5
BC10A/3	1:3
BC12A/3	1:3
BC16A/3	1:2.5
For BC..B	
BC10B/3	1:2
BC12B/3	1:3
BC16B/3	1:2.5
For BC..C	
BC10B/3	1:4

3 Opening pressure from 2 to 3

TYPE	DESCRIPTION
For BC..A from 2 to 3	
1	5 bar (72.5 psi) with sealed piston
2	2.5 bar (36.2 psi) without sealed piston
For BC..B from 1 to 2	
1	5 bar (72.5 psi) with sealed piston
For BC..C from 2 to 1	
1	5 bar (72.5 psi) with seal

4 Seals

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

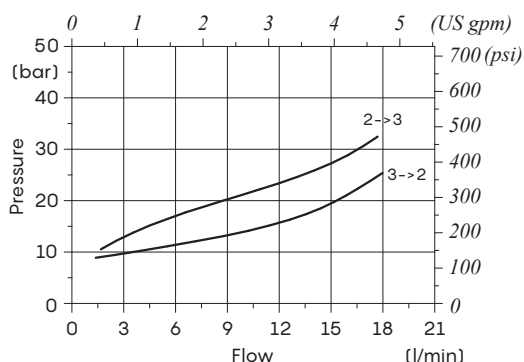
5 Valve body

TYPE	CODE	DESCRIPTION
SAE08/3-G 3/8	3CC0830C11	Aluminium body for cavity 08 valve, G 3/8 std thread
SAE10/3-G 3/8	3CC1030C11	Aluminium body for cavity 10 valve, G 3/8 std thread
SAE12/3-G 1/2	3CC1230D11	Aluminium body for cavity 12 valve, G 1/2 std thread
SAE16/3-G 3/4	3CC1630E11	Aluminium body for cavity 16 valve, G 3/4 std thread

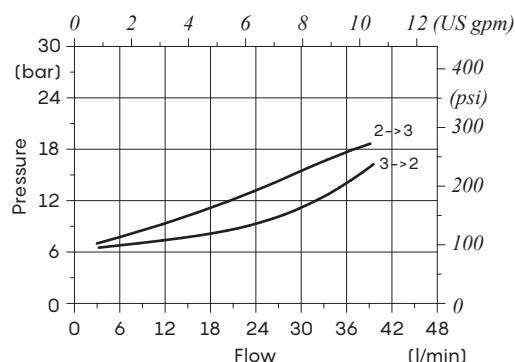
Note: aluminium body can stand up to 210 bar (3050 psi)
For steel bodies or different threading see from page 210

Rating diagrams

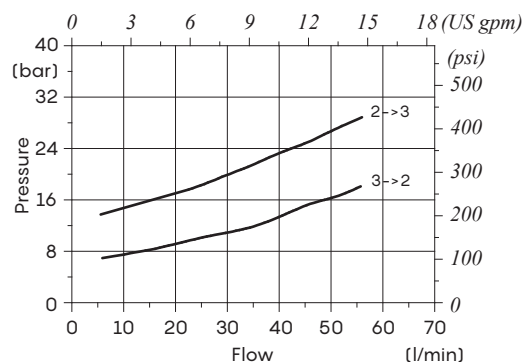
BC08A pressure drop vs flow



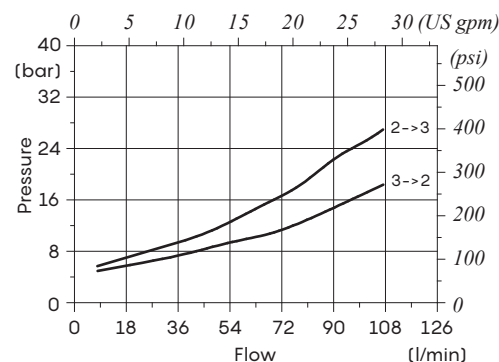
BC10A pressure drop vs flow



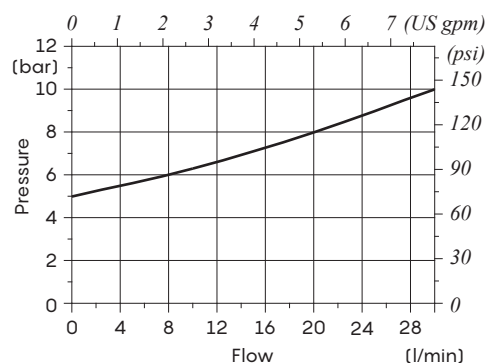
BC12A pressure drop vs flow



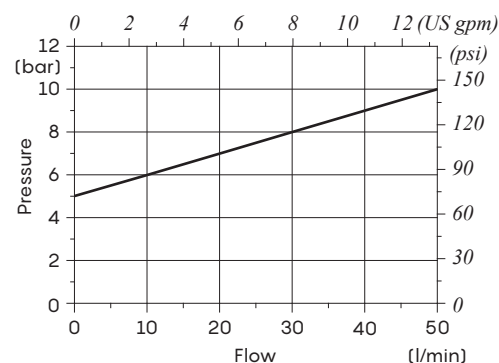
BC16A pressure drop vs flow



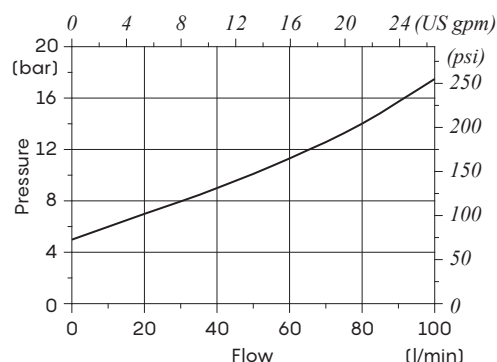
BC10B pressure drop vs flow



BC12B pressure drop vs flow



BC16B pressure drop vs flow



BC10C pressure drop vs flow

