



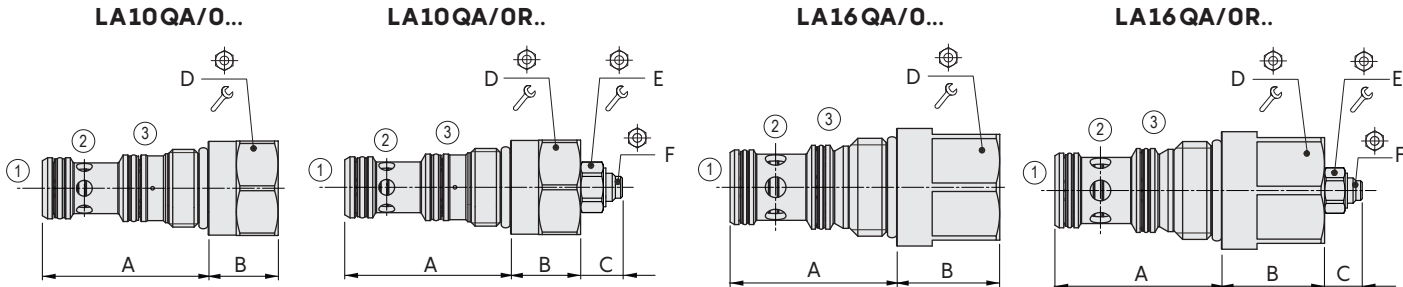
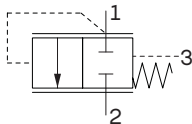
LA..QA type logic element - 3 way

- Pilot to close configuration
- Fixed or adjustable configuration with lead sealing option
- Screw type adjustable configuration with lead sealing option
- SAE10 and SAE16 cavities

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

		LA10QA	LA16QA
Nominal flow		80 l/min (21 US gpm)	190 l/min (50 US gpm)
Max. pressure		350 bar (5100 psi)	
Opening pressure		fixed setting: 1, 5, 10 bar (14.5, 72.5, 145 psi) adjustable setting: from 8 to 15 bar (116 to 218 psi)	
Oil leakage	at 210 bar (3050 psi)	80 cm³/min (4.88 in³/min)	230 cm³/min (14.03 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 10/3Q	SAE 16/3Q
Weight		0.15 kg (0.33 lb)	0.45 kg (0.99 lb)

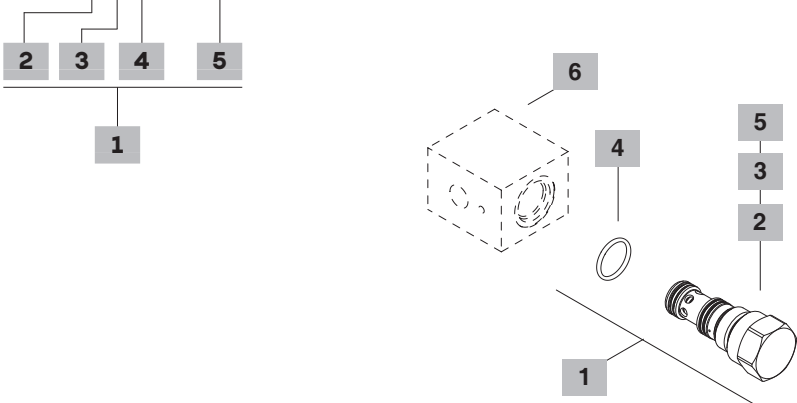
NOTE - For different conditions, please contact Walvoil Sales Dpt.



Valve type	A		B		C (max)		D			E			F
													
	mm	in	mm	in	mm	in	Nm	lbft		Nm	lbft		
LA10QA	47.4	1.87	42	1.65	11.9	0.47	27	70	52	13	9.8	7.2	3
LA16QA	56.9	2.24	35.1	1.38	24	0.94	36	100	74	13	9.8	7.2	3

Ordering codes and description composition

LA10QA/0 C 0 B SB=12bar



1 Cartridges		
TYPE	CODE	DESCRIPTION
SAE cavity 10/3Q		
LA10QA/0B0B	OLA10Q002003	Fixed setting, 5 bar (72.5 psi)
LA10QA/0C0B	OLA10Q002001	Fixed setting, 10 bar (145 psi)
LA10QA/0R0B SB=12bar	OLA10Q002002	Adjustable setting, std setting 12 bar (174 psi)
SAE cavity 16/3Q		
LA16QA/0C0B	OLA16Q002000	Fixed setting, 10 bar (145 psi)
LA16QA/0R0B SB=12bar	OLA16Q002001	Adjustable setting, std setting 12 bar (174 psi)

2 Stand by	
Setting is referred to 1 l/min (0.26 Us gpm) flow	
TYPE	DESCRIPTION
A	Fixed setting: 1 bar (14.5 psi)
B	Fixed setting: 5 bar (72.5 psi)
C	Fixed setting: 10 bar (145 psi)
R	Adjustable setting: from 8 to 15 bar (116 to 218 psi)

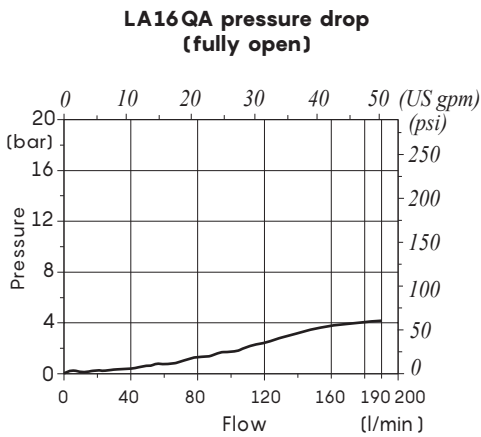
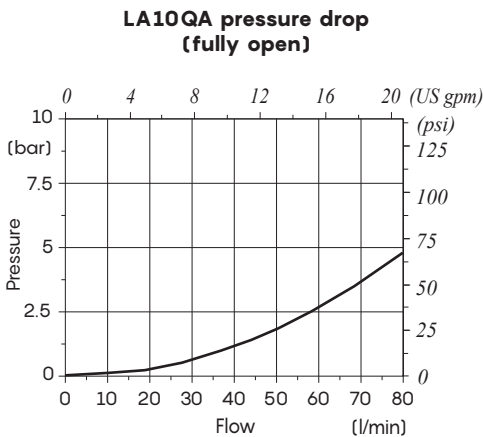
3 Load sensing	
TYPE	DESCRIPTION
0	Without sealing
X	With sealing: for valves with adjustable stand-by only

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

5 Stand-by setting	
To be specified only with adjustable stand-by valve	

6 Valve body		
TYPE	CODE	DESCRIPTION
SAE10/3Q-G 1/2	3CC1032D21	Steel body for cavity 08 valve, G 1/2 std thread
SAE16/3Q-G 3/4	3CC1632E21	Steel body for cavity 16 valve, G 3/4 std thread
For aluminium bodies or different threading see from page 210		

Rating diagrams





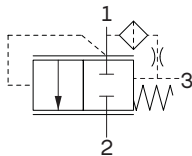
LB..QA type logic element - 3 way

- Venting to open configuration
- Fixed or adjustable stand-by
- Screw type adjustable configuration with lead sealing option
- SAE10 and SAE16 cavities

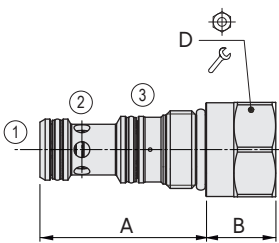
Technical specifications and diagrams are measured with mineral oil of 46 cSt viscosity at 40°C (104°F) temperature.

	LB10QA	LB16QA
Nominal flow	80 l/min (21 US gpm)	190 l/min (50 US gpm)
Max. pressure	350 bar (5100 psi)	
Opening pressure	fixed setting: 5, 10 bar (72.5, 145 psi) adjustable setting: from 8 to 15 bar (116 to 218 psi)	
Oil leakage	at 210 bar (3050 psi) 80 cm³/min (4.88 in³/min)	230 cm³/min (14.03 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+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 10/3Q	SAE 16/3Q
Weight	0.15 kg (0.33 lb)	0.45 kg (0.99 lb)

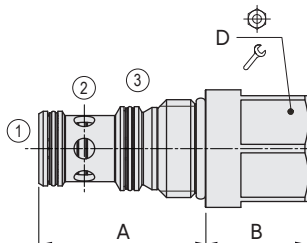
NOTE - For different conditions, please contact Walvoil Sales Dpt.



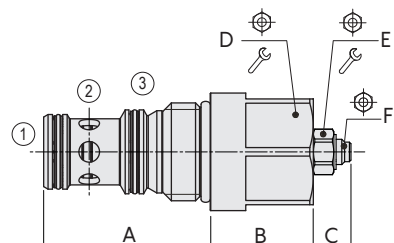
LB10QA/O...



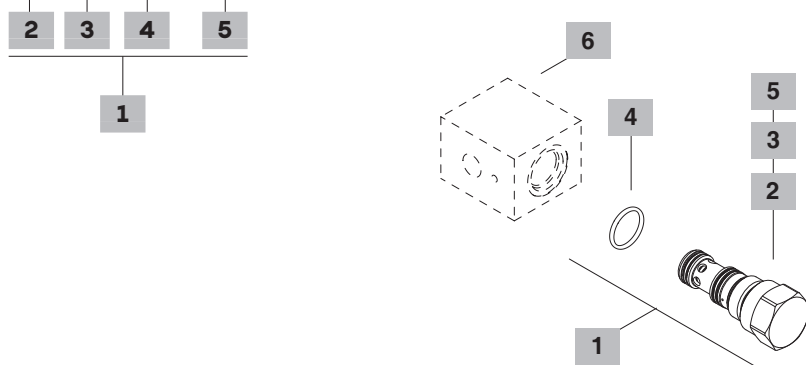
LB16QA/O...



LB16QA/OR..



Valve type	A		B		C (max)		D		E		F	
	mm	in	mm	in	mm	in	Nm	lbf·ft	Nm	lbf·ft	Nm	lbf·ft
LB10QA	47.4	1.87	20	0.79	-	-	27	70	52	-	-	-
LB16QA	56.9	2.24	35.1	1.38	24	0.94	36	100	74	13	9.8	7.2

Ordering codes and description composition
LB10QA/0 B 0 B SB=12bar

1 Cartridges

TYPE	CODE	DESCRIPTION
SAE cavity 10/3Q		
LB10QA/0B0B	0LB10Q002000	Fixed setting, 5 bar (72.5 psi)
SAE cavity 16/3Q		
LB16QA/0B0B	0LB16Q002000	Fixed setting, 5 bar (72.5 psi)
LB16QA/0R0B	0LB16Q002001	Adjustable setting, stand-by 12 bar (174 psi)

2 Stand by

Setting is referred to 1 l/min (0.26 Us gpm) flow

TYPE	DESCRIPTION
B	Fixed setting: 5 bar (72.5 psi)
C	Fixed setting: 10 bar (145 psi)
R	Adjustable setting: from 8 to 15 bar (116 to 218 psi)

3 Load sensing

TYPE	DESCRIPTION
0	Without sealing
X	With sealing: for valves with adjustable stand-by only

4 Seals

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

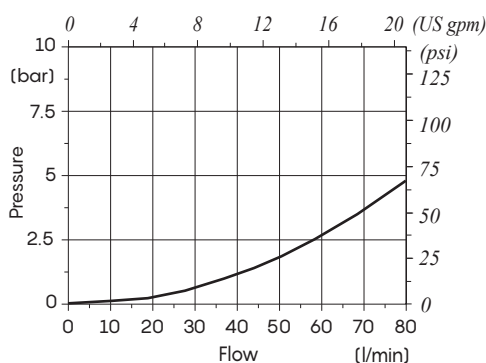
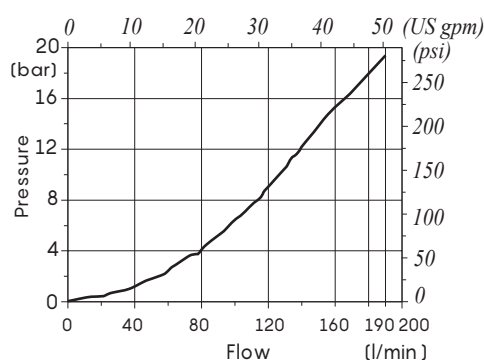
5 Stand-by setting

To be specified only with adjustable stand-by valve

6 Valve body

TYPE	CODE	DESCRIPTION
SAE10/3Q-G 1/2	3CC1032D21	Steel body for cavity 08 valve, G 1/2 std thread
SAE16/3Q-G 3/4	3CC1632E21	Steel body for cavity 16 valve, G 3/4 std thread

For aluminium bodies or different threading see from page 210

Rating diagrams
LB10QA pressure drop (fully open)

LB16QA pressure drop (fully open)




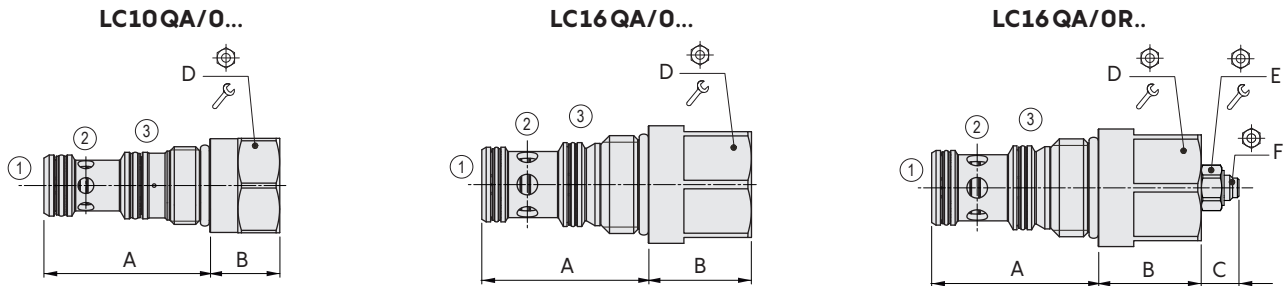
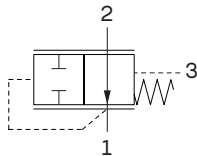
LC..QA type logic element - 3 way

- Venting to close configuration
- Fixed or adjustable stand-by
- Screw type adjustable configuration with lead sealing option
- SAE10 and SAE16 cavities

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

	LC10QA	LC16QA
Nominal flow	80 l/min (21 US gpm)	190 l/min (50 US gpm)
Max. pressure	350 bar (5100 psi)	
Opening pressure	fixed setting: 5, 10 bar (72.5, 145 psi) adjustable setting: from 8 to 15 bar (116 to 218 psi)	
Oil leakage	at 210 bar (3050 psi) 80 cm³/min (4.88 in³/min)	230 cm³/min (14.03 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+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 10/3Q	SAE 16/3Q
Weight	0.15 kg (0.33 lb)	0.45 kg (0.99 lb)

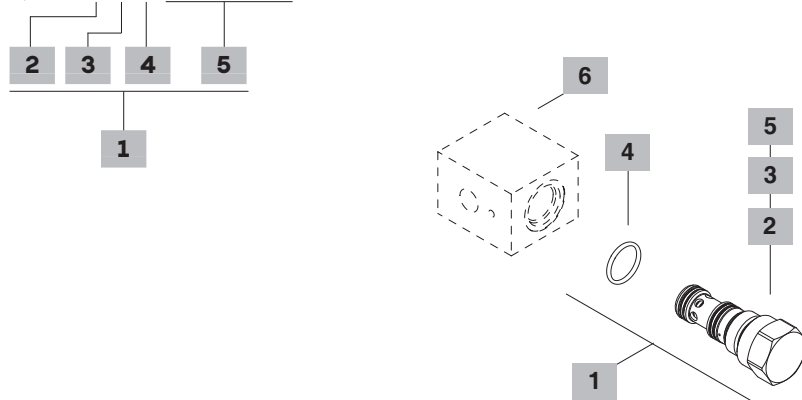
NOTE - For different conditions, please contact Walvoil Sales Dpt.



Valve type	A		B		C (max)		D		E		F	
	mm	in	mm	in	mm	in	Nm	lbf·ft	Nm	lbf·ft	Nm	lbf·ft
LC10QA	47.4	1.87	20	0.79	-	-	27	70	52	-	-	-
LC16QA	56.9	2.24	35.1	1.38	24	0.94	36	100	74	13	9.8	7.2

Ordering codes and description composition

LC10QA/0 B 0 B SB=12bar



1 Cartridges

TYPE	CODE	DESCRIPTION
SAE cavity 10/3Q		
LC10QA/0B0B	OLC10Q002001	Fixed setting, 5 bar (72.5 psi)
LC10QA/0C0B	OLC10Q002002	Fixed setting, 10 bar (145 psi)
SAE cavity 16/3Q		
LC16QA/0B0B	OLC16Q002001	Fixed setting, 5 bar (72.5 psi)
LC16QA/0R0B	OLC16Q002003	Adjustable setting, 12 bar (174 psi)

2 Stand by

Setting is referred to 1 l/min (0.26 US gpm) flow

TYPE	DESCRIPTION
B	Fixed setting: 5 bar (72.5 psi)
C	Fixed setting: 10 bar (145 psi)
R	Adjustable setting: from 8 to 15 bar (116 to 218 psi)

3 Load sensing

TYPE	DESCRIPTION
0	Without sealing
X	With sealing: for valves with adjustable stand-by only

4 Seals

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

5 Stand-by setting

To be specified only with adjustable stand-by valve

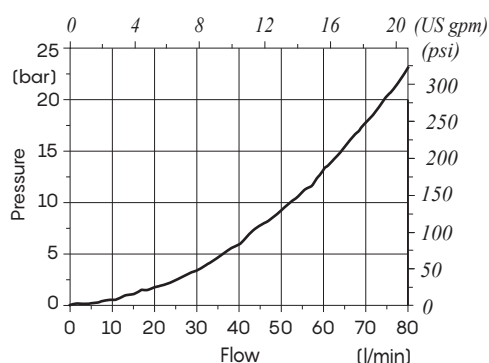
6 Valve body

TYPE	CODE	DESCRIPTION
SAE10/3Q-G 1/2	3CC1032D21	Steel body for cavity 08 valve, G 1/2 std thread
SAE16/3Q-G 3/4	3CC1632E21	Steel body for cavity 16 valve, G 3/4 std thread

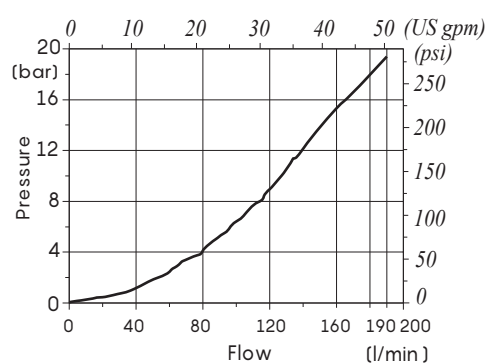
For aluminium bodies or different threading see from page 210

Rating diagrams

LC10QA pressure drop
(fully open)



LC16QA pressure drop
(fully open)





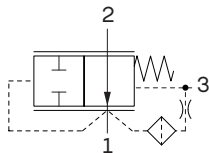
LD..QA type logic element - 3 way

- Pilot to open configuration
- Fixed or adjustable stand-by
- Screw type adjustable configuration with lead sealing option
- SAE10 and SAE16 cavities

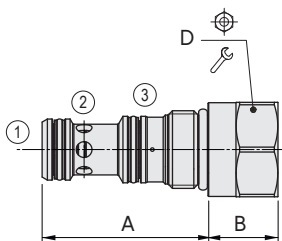
Technical specifications and diagrams are measured with mineral oil of 46 cSt viscosity at 40°C (104°F) temperature.

	LD10QA	LD16QA
Nominal flow	80 l/min (21 US gpm)	190 l/min (50 US gpm)
Max. pressure	350 bar (5100 psi)	
Opening pressure	fixed setting: 1, 5, 10 bar (14.5, 72.5, 145 psi) adjustable setting: from 8 to 15 bar (116 to 218 psi)	
Oil leakage	at 210 bar (3050 psi) 80 cm³/min (4.88 in³/min)	230 cm³/min (14.03 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+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 10/3Q	SAE 16/3Q
Weight	0.15 kg (0.33 lb)	0.45 kg (0.99 lb)

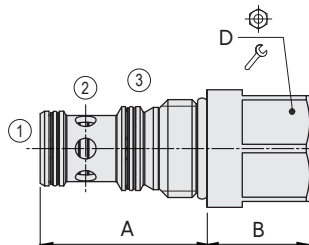
NOTE - For different conditions, please contact Walvoil Sales Dpt.



LD10QA/0...



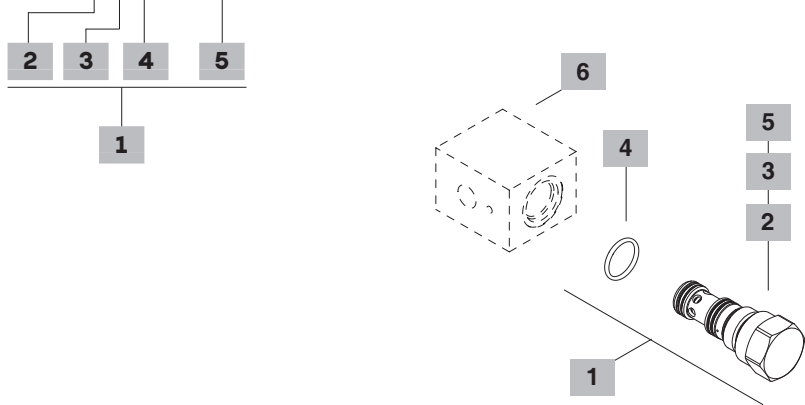
LD16QA/0...



Valve type	A		B		D		
	mm	in	mm	in	Nm lbft		
LD10QA	47.4	1.87	20	0.79	27	70	52
LD16QA	56.9	2.24	35.1	1.38	36	100	74

Ordering codes and description composition

LD10QA/0 B 0 B SB=12bar



1 Cartridges		
TYPE	CODE	DESCRIPTION
SAE cavity 10/3Q		
LD10QA/0B0B	OLD10Q002000	Fixed setting, 5 bar (72.5 psi)
SAE cavity 16/3Q		
LD16QA/0B0B	OLD16Q002000	Fixed setting, 5 bar (72.5 psi)

2 Stand by	
Setting is referred to 1 l/min (0.26 Us gpm) flow	
TYPE	DESCRIPTION
A	Fixed setting: 1 bar (14.5 psi)
B	Fixed setting: 5 bar (72.5 psi)
C	Fixed setting: 10 bar (145 psi);
R	Adjustable setting: from 8 to 15 bar (116 to 218 psi);

3 Load sensing	
TYPE	DESCRIPTION
0	Without sealing
X	With sealing: for valves with adjustable stand-by only

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

5 Stand-by setting	
To be specified only with adjustable stand-by valve	

6 Valve body		
TYPE	CODE	DESCRIPTION
SAE10/3Q-G 1/2	3CC1032D21	Steel body for cavity 08 valve, G 1/2 std thread
SAE16/3Q-G 3/4	3CC1632E21	Steel body for cavity 16 valve, G 3/4 std thread

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

Rating diagrams

