



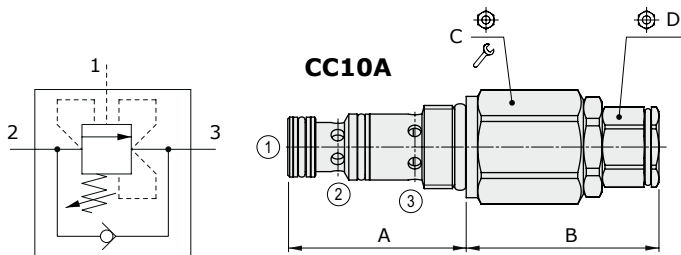
CC..A type counterbalance valves - 3 way

- For closed center
- Line mounting
- Non affected by back pressure
- From SAE10 to SAE20 cavities

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

| | CC10A | CC12A | CC16A | CC20A |
|--|-----------------------------------|---|---|---|
| Nominal flow | 30 l/min (7.9 US gpm) | 60 l/min (16 US gpm) | 90 l/min (24 US gpm) | 150 l/min (39.6 US gpm) |
| Max. pressure | 350 bar (5100 psi) | | | |
| Oil leakage | 80% of max. pressure setting | 0.25 cm ³ /min (0.015 in ³ /min) | 0.25 cm ³ /min (0.015 in ³ /min) | 0.25 cm ³ /min (0.015 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 10/3 | SAE 12/3 | SAE 16/3 | SAE 20/3 |
| Weight | 0.280 kg (0.62 lb) | 0.380 kg (0.84 lb) | 0.720 kg (1.59 lb) | 1.200 kg (2.64 lb) |

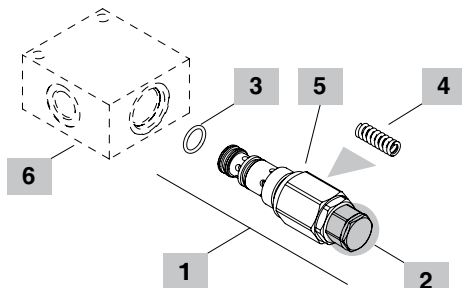
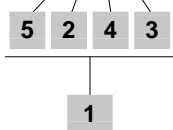
NOTE - For different conditions, please contact Walvoil Sales Dpt.



| Valve type | A | | B | | C | | D | | |
|------------|----|------|------|------|------|------|-----|----|----|
| | mm | in | mm | in | Nm | lbft | | | |
| CC10A/ | 4S | 47.2 | 1.86 | 51 | 2.01 | 27 | 50 | 37 | 19 |
| | W | 47.2 | 1.86 | 51 | 2.01 | 27 | 50 | 37 | 19 |
| CC12A/ | 4S | 73.5 | 2.89 | 60 | 2.36 | 32 | 80 | 59 | 24 |
| | 4W | 73.5 | 2.89 | 60 | 2.36 | 32 | 80 | 59 | 24 |
| CC16A/ | 4S | 75 | 2.95 | 69 | 2.72 | 41 | 100 | 74 | 27 |
| | 4W | 75 | 2.95 | 69 | 2.72 | 41 | 100 | 74 | 27 |
| CC20A/ | 4S | 99.5 | 3.92 | 83.5 | 3.29 | 46 | 100 | 74 | 36 |
| | 4W | 99.5 | 3.92 | 83.5 | 3.29 | 46 | 100 | 74 | 36 |

Ordering codes and description composition

CC10A/4S2B



1 Cartridges

| TYPE | CODE | DESCRIPTION |
|------------------------|-------------|--|
| SAE cavity 10/3 | | |
| CC10A/4S2B | OCC10002001 | Screw type adjustment, pilo ratio 1:4 pressure range 2 |
| SAE cavity 12/3 | | |
| CC12A/4S2B | OCC12002000 | Screw type adjustment, pilo ratio 1:4 pressure range 2 |
| SAE cavity 16/3 | | |
| CC16A/4S2B | OCC16002001 | Screw type adjustment, pilo ratio 1:4 pressure range 2 |
| SAE cavity 20/3 | | |
| CC20A/4S0B | OCC20002001 | Screw type adjustment. Setting range 20-85 bar (290-1230 psi) and standard setting 50 bar (725) at 5 l/min (1.3 US gpm) |
| CC20A/4S1B | OCC20002000 | Screw type adjustment. Pilot ratio 1:4 Setting range 50-220 bar (725-3200 psi) and standard setting 150 bar (2170) at 5 l/min (1.3 US gpm) |
| CC20A/4S2B | OCC20002002 | Screw type adjustment. Pilot ratio 1:4 Setting range 100-300 bar (1450-4350 psi) and std. setting 150 bar (2170) at 5 l/min (1.3 US gpm) |

2 Adjustments

| TYPE | DESCRIPTION |
|----------|-------------------|
| S | Screw |
| W | Copped adjustment |

3 Seals

| TYPE | DESCRIPTION |
|----------|---|
| B | NBR (Buna) Std configuration without addition |
| V | For valve with FPM (Viton) o-ring seals, contact Sales Dept. |

4 Pressure setting springs

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

| TYPE | CODE | DESCRIPTION |
|------------------------|------------|--|
| For CC10A valve | | |
| 1 | 3ML1092502 | Setting range 50-220 bar (725-3200 psi) red band |
| 2 | 3ML1092300 | Setting range 180-350 bar (2600-5100 psi) red band |
| 3 | 3ML1102800 | Setting range 300-700 bar (4350-10150 psi) red band |
| For CC12A valve | | |
| 1 | 3ML1133201 | Setting range 50-220 bar (725-3200 psi) blue band |
| 2 | 3ML1133200 | Setting range 180-350 bar (2600-5100 psi) red band |
| 3 | 3ML1133500 | Setting range 300-700 bar (4350-10150 psi) yellow band |
| For CC16A valve | | |
| 1 | 3ML1164000 | Setting range 50-220 bar (725-3200 psi) blue band |
| 2 | 3ML1164001 | Setting range 180-350 bar (2600-5100 psi) red band |
| 3 | 3ML1164002 | Setting range 300-700 bar (4350-10150 psi) yellow band |

5 Pilot ratio

| TYPE | DESCRIPTION |
|----------|-------------|
| 4 | 1:4 |

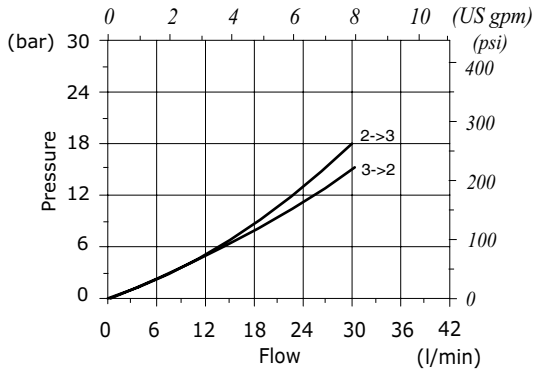
6 Valve body

| TYPE | CODE | DESCRIPTION |
|-----------------------|------------|---|
| SAE 10/3-G 3/8 | 3CC1030C11 | Aluminium body for cavity 10 valve, G3/8 std thread |
| SAE 12/3-G 1/2 | 3CC1230D11 | Aluminium body for cavity 12 valve, G1/2 std thread |
| SAE 16/3-G 3/4 | 3CC1630E11 | Aluminium body for cavity 16 valve, G3/4 std thread |
| SAE 20/3-G 1 | 3CC2030F21 | Steel body for cavity 20 valve, G1 std thread |

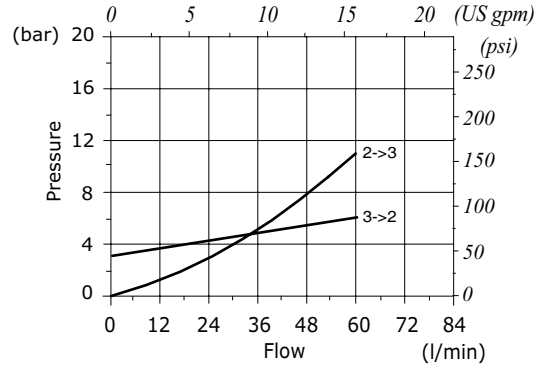
Note: aluminium body can stand up to 210 bar (3050 psi)
For steel bodies or different threading see from page 217

Rating diagrams

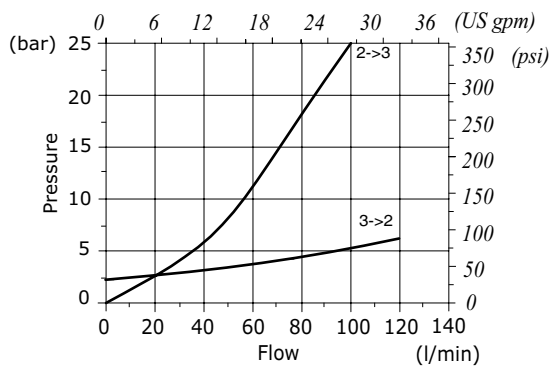
CC10A pressure drop vs flow



CC12A pressure drop vs flow



CC16A pressure drop vs flow



CC20A pressure drop vs flow

