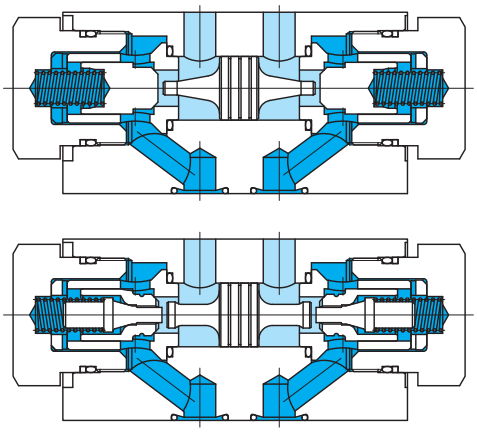
Pilot operated check valves
TGMPC-3, 51 series

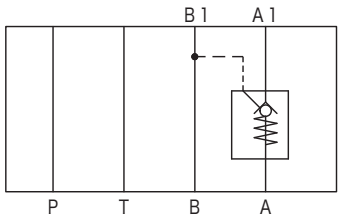
Standard Type

Decompression Type

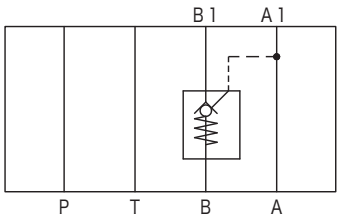


Functional Symbols

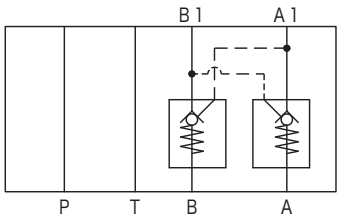
TGMPC−3−(D)AB∗



TGMPC−3−(D)BA∗



TGMPC−3−(D)AB∗−(D)BA∗



Model Code

(F3)-TGMPC-3-(D)AB*-[(D)BA*]-51

1	2	3	4	5	6	7	8	9	10

1 Hydraulic fluid
Omit: mineral oil based fluid, water-glycol based fluid
F3: phosphate ester

2 Pilot operated check valves

3 Mounting dimensions
3: ISO 4401-03

4 Decompression function
Omit: no decompression function
D: with decompression function

5 Control line
AB: control of A line check valve by B line pilot pressure
BA: control of B line check valve by A line pilot pressure

6 Cracking pressure
K: 0.1 MPa
M: 0.25 MPa
N: 0.5 MPa

7 Decompression function
See 4 (however if 'D' is specified under 4, 'D' must also be specified under 7)

8 Control line
BA: control of B line check valve by A line pilot pressure

9 Cracking pressure
See 6.

for double check valve

10 Design no.

Specifications

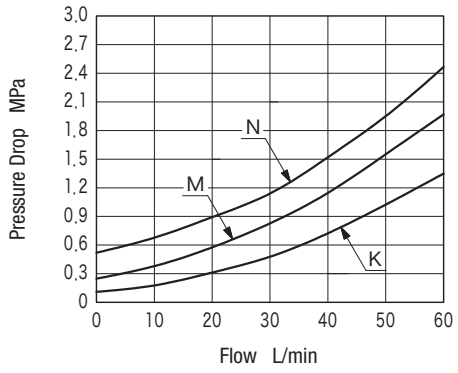
- Max. Working Pressure: 31.5 MPa
- Max. Flow: 60 L/min
- Piston: seat area ratio
  Main check valve (standard): 3:1
  Decompression poppet: 10:1
  - Decompression type is effective in reducing shock when the charged oil compression capacity by the check valve is large.
- Pilot pressure required to open the valve (P_{B1}, P_{A1})
  To open A line check valve
  P_{B1} (B1 line pressure) > $(P_A + P_C - P_{A1})/f_a + P_{A1}$

To open B line check valve
P_{A1} (A1 line pressure) > $(P_B + P_C - P_{B1})/f_a + P_{B1}$
where, P_A: A pressure
P_B: B pressure
P_{A1}: A1 pressure
P_{B1}: B1 pressure
P_C: cracking pressure
f_a: surface area ratio
(standard type f_a = 3, decompression type f_a = 10)

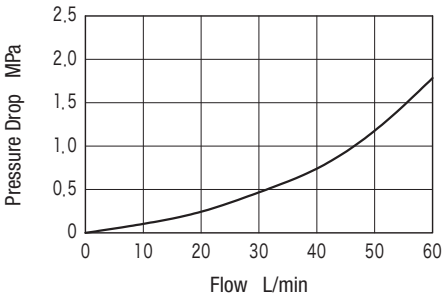
Characteristics Curve (at 20 mm²/s, 50°C) (typical examples)

■ Pressure Drop Characteristics

• In free flow direction (A1 to A, or B1 to B) but no pilot pressure.



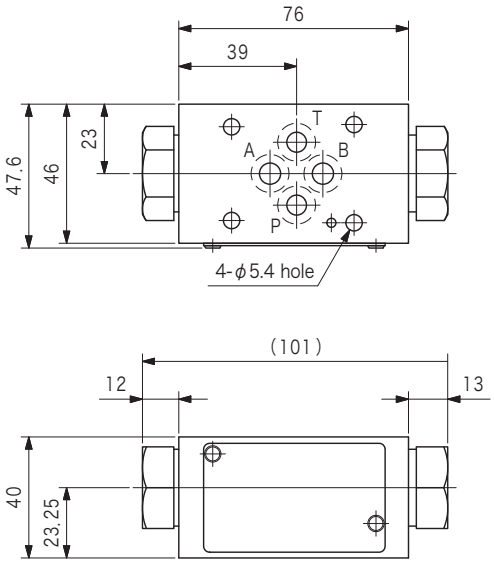
• In reverse free flow direction (A to A1, or B to B1) but with check valve open due to pilot pressure.



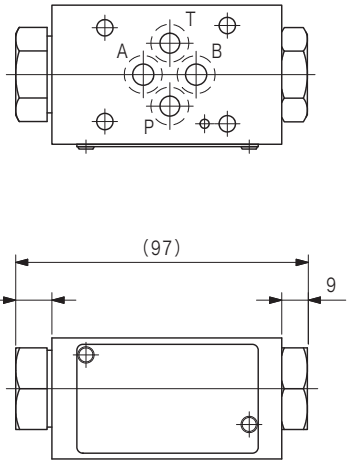
Dimensions

Weight: 0.8 kg (All Models)

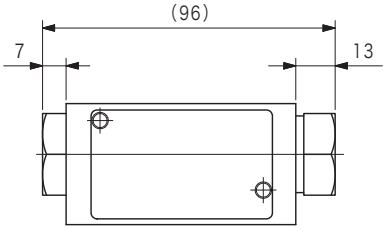
TGMPC−3−(D)AB∗−(D)BA∗−51
(double type pilot operated check valve)



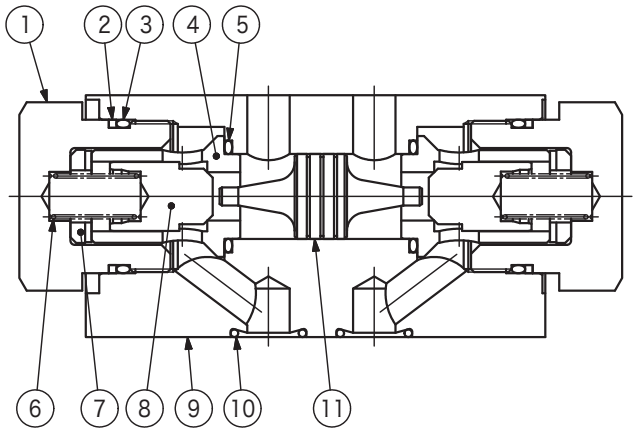
TGMPC−3−(D)AB∗−51
(single type pilot operated check valve)

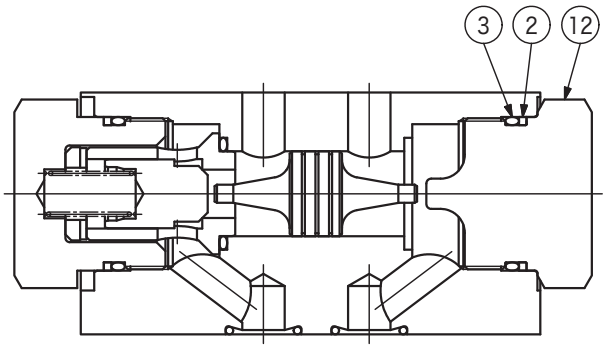


TGMPC−3−(D)BA∗−51
(single type pilot operated check valve)



Construction





No.	Name	Part No.	Standard	Qty	
				Single Type	Double Type
2	Backup ring	40025055	———————	2	2
3	O-ring	007902017	AS568–020 (NBR, Hs70)	2	2
5	O-ring	007901517	AS568–015 (NBR, Hs70)	1	2
10	O-ring	007901219	AS568–012 (NBR, Hs90)	4	4

⑥ Spring

Code	Part No.
K	40027413
M	40027441
N	40027442