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DGMPC-7, SystemStak Valve, Pilot Operated Check

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DGMFN-7, SystemStak Valve, Throttle Valve with Check

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Series DGMPC-7 General Description

Features:

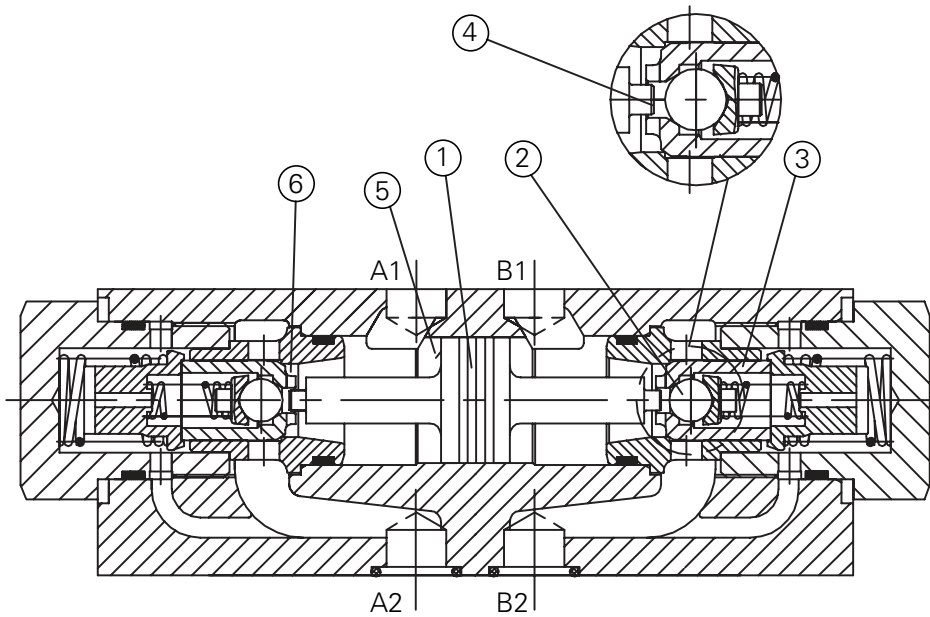
- Industry Standard Mounting, ISO 4001-7, NFPA T 3.51 M R1 and ANSI B 93.7 D07
- For use in vertical stacking assemblies
- For the leak free closure of one or both service ports

General

The DGMPC hydraulic operated check valve is of a sandwich plate design. They are used for leak-free closure of one or both service ports, even for long periods of time. Free flow occurs from A1 to A2 or B1 to B2. Flow in the

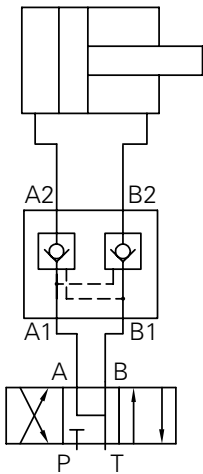
opposite direction is blocked. The fluid flows from A1 to A2, the piston (1) is pressurised and is pushed to the right, thereby opening the ball poppet (2) which then opens the main poppet (3). In order to ensure correct closing of the valve, the service ports of the directional valve must

be connected to tank in the neutral position (see typical circuit).

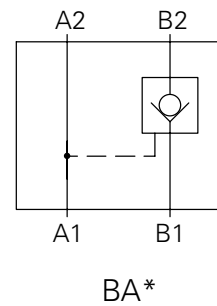
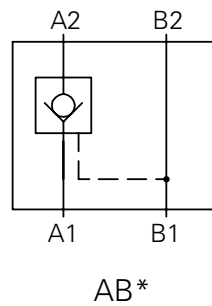
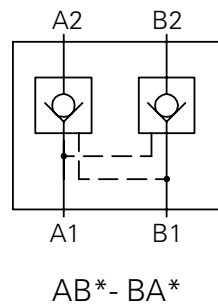


- 1 Piston
- 2 Ball Poppet
- 3 Main Poppet
- 4 Area A1
- 5 Area A2
- 6 Area A3

Typical Circuit

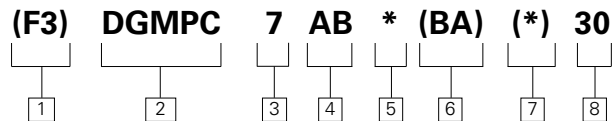


Symbols



Series DGMPC-7

Model Code



1 Seal Options

F3 – Fluorocarbon seals, for Phosphate Ester (class L-HFD)

Blank – Nitrile, for Mineral oil Anti-wear hydraulic oil (class L-HM), Invert emulsion (class L-HFB) Water glycol (class L-HFC)

2 Stack module, piloted operated check valve

3 Size

D07

4 Check Valve Line

AB - A piloted from B
BA - B piloted from A (Single line only)

5 Cracking Pressure

K – 3 Bar
L – 5 Bar
M – 7.5 Bar
N – 10 Bar

6 Check Valve Line

BA - B piloted from A (Dual line only)

7 Cracking Pressure (Dual line only)

K – 3 Bar
L – 5 Bar
M – 7.5 Bar
N – 10 Bar

8 Design Number

30

Technical Data

| | |
|---|--|
| Maximum Flow (L/min) | 300 |
| Maximum Operating Pressure (bar) | 315 |
| Cracking Pressure | See "Characteristic Curves" graph page 3 |
| Area Ratio | A1/A2 = 1/11.8; A3/A2 = 1/2.8 |
| Fluid | Mineral oils or phosphate ester |
| Fluid Temperature Range (°C) | -20 to 80 |
| Fluid Viscosity Range (mm²/S) | 2.8 to 500 |
| Fluid Cleanliness Level (ISO) | 19/17/14 |
| Weight (Kg) | 6.5 |

Characteristic Curves
(measured at
 $v = 41 \text{ mm}^2/\text{s}$ and $t = 50^\circ\text{C}$)

Solid Line

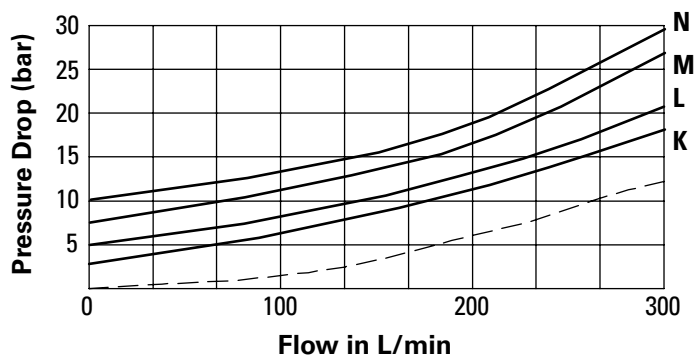
A1 - A2; B1 - B2

Dotted Line

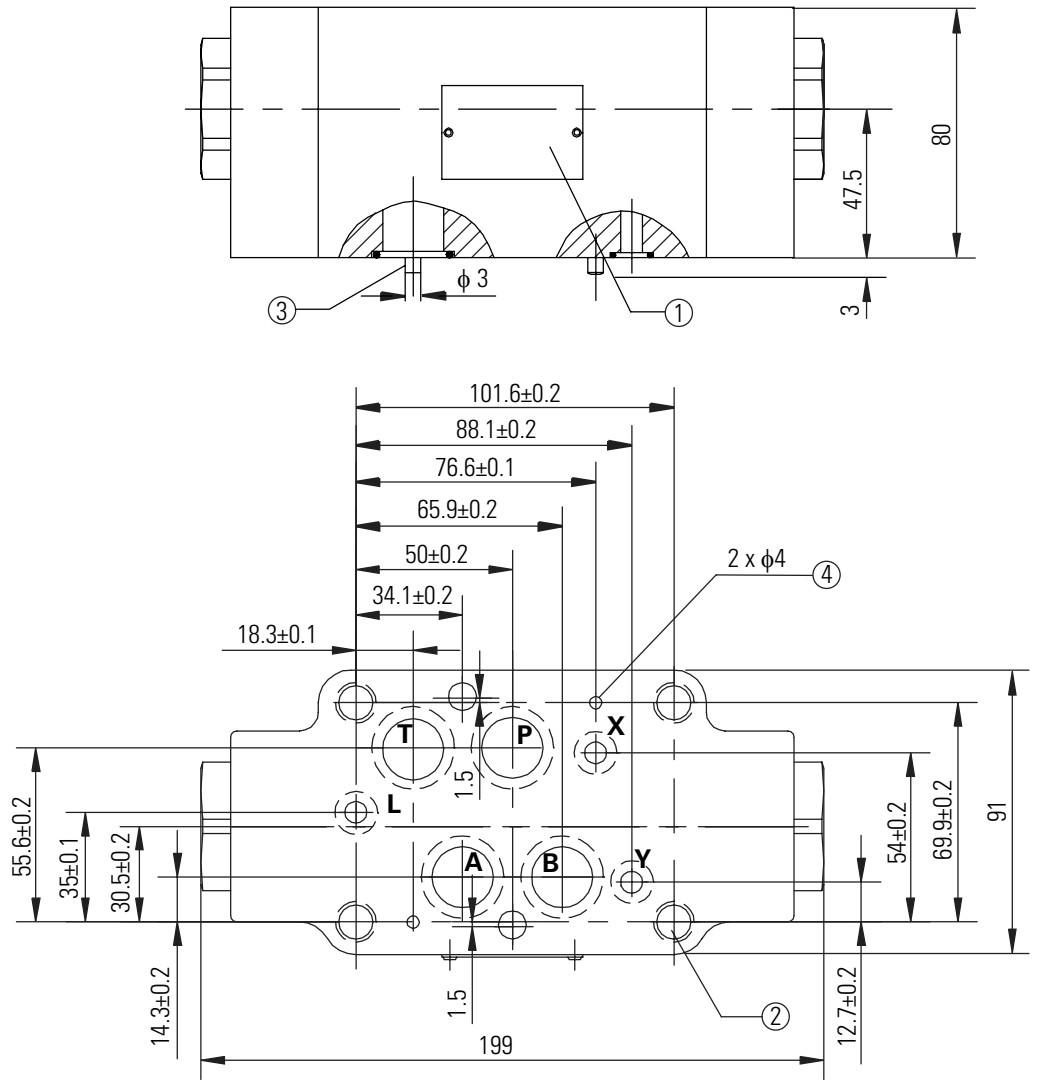
A2 - A1; B2 - B1

Cracking Pressure:

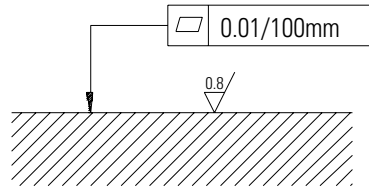
K = 3 bar
L = 5 bar
M = 7.5 bar
N = 10 bar



Series DGMPC-7
 Unit Dimensions
 (Dimensions in mm)



Required surface finish of mating face



- 1 Name plate
- 2 Valve mounting holes
- 3 Locating pins
- 4 Locating pin holes

Mounting bolts: 3/8-18 (4) & 1/4-20 (2), SAE, Grade 8; M10 (4) & M6 (2), DIN912-10.9; ISO 898, Class 12.9
 O-rings: 22mm x 2.5mm for ports A,B,P and T.
 O-rings: 10mm x 2mm for ports X,Y, and L.

Series DGMFN-7

General Description

Features:

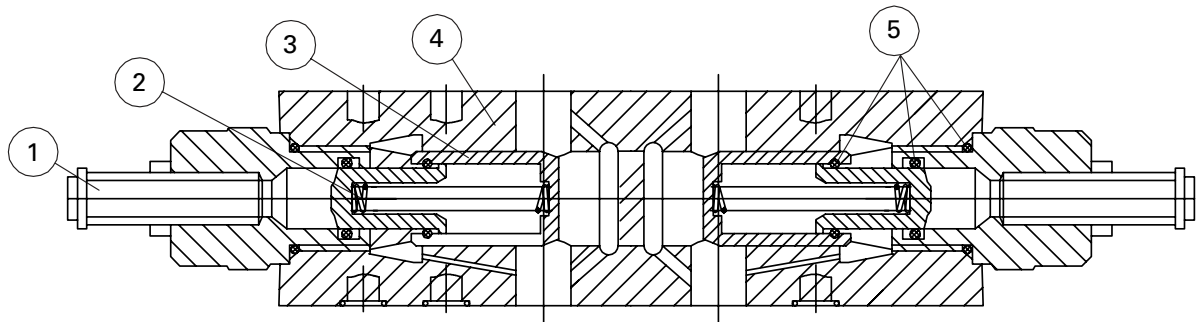
- Industry standard mounting, ISO 4401-7, NFPNA-T3 .5.1-M-R-I, ANSI B 93.7 D07
- Sandwich plate design
- Limiting of main flow of two actuator ports
- Meter-in or meter-out control

General

DGMFN valves have double throttle/check valves in a sandwich plate design. They are used to limit main flow at one or two actuator ports. Two symmetrically arranged throttle/check valves limit flow (by means of adjustable throttle spools) in one direction and permit free return flow in the other direction.

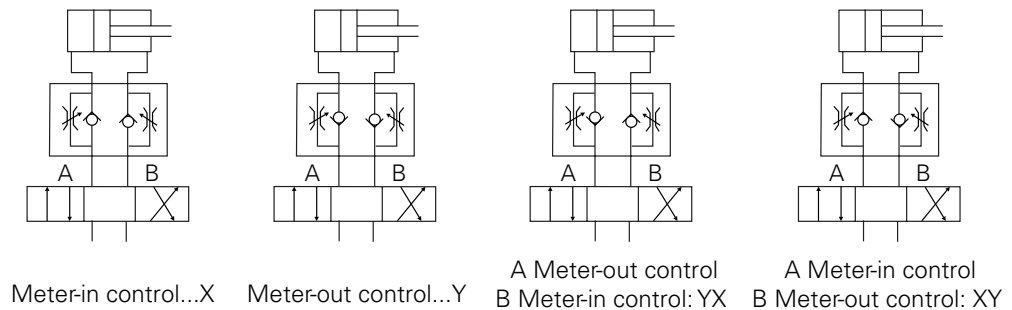
Main flow limiting

The double throttle/check valve is fitted between the directional valve and the subplate to change the speed of an actuator (main flow limiting)



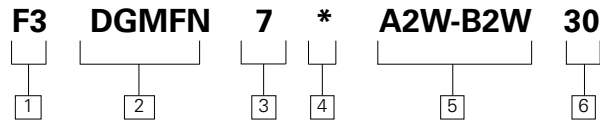
- 1 Throttle Adjustment Screw
- 2 Spring
- 3 Spool
- 4 Valve Body
- 5 O-Ring

Symbols



Series DGMFN-7

Model Code



1 Seal Options

F3 – Fluorocarbon seals, for Phosphate Ester (class L-HFD)

Blank – Nitrile, for Mineral oil Anti-wear hydraulic oil (class L-HM), Invert emulsion (class L-HFB) Water glycol (class L-HFC)

2 Stack module, throttle valve with check

3 Size

D07

4 Direction of flow control

Y – Meter out
X – Meter in
YX – Meter out A, meter in B
XY – Meter in A, meter out B

5 Control line (Wrench adjustment)

Both port A and B

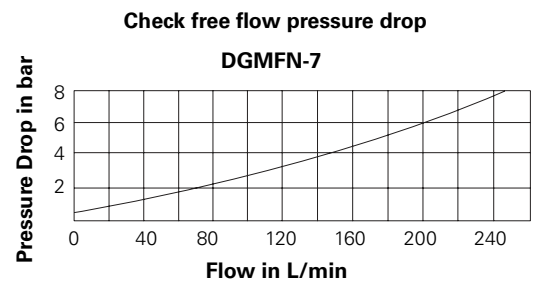
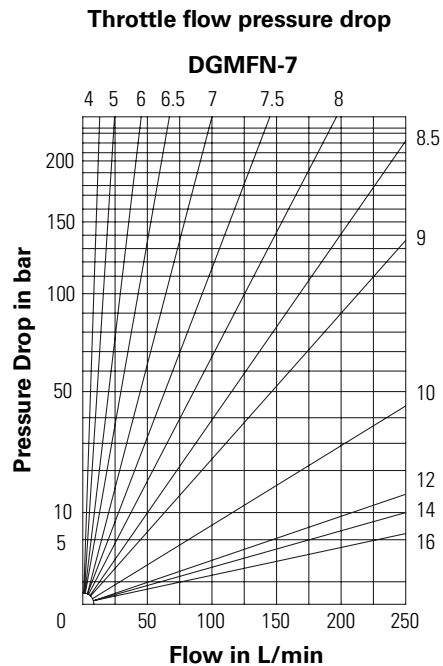
6 Design number

30

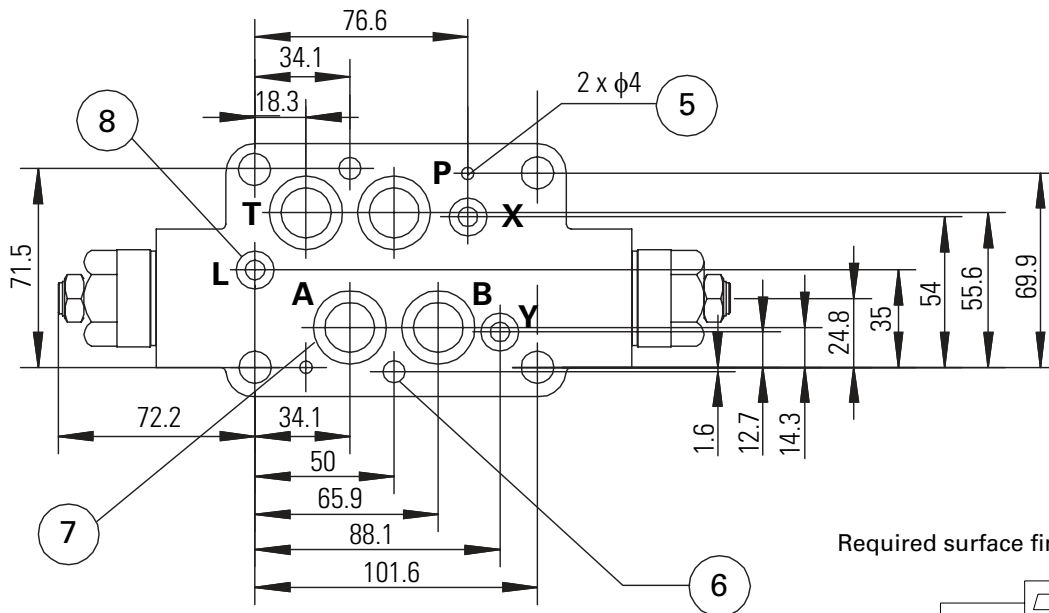
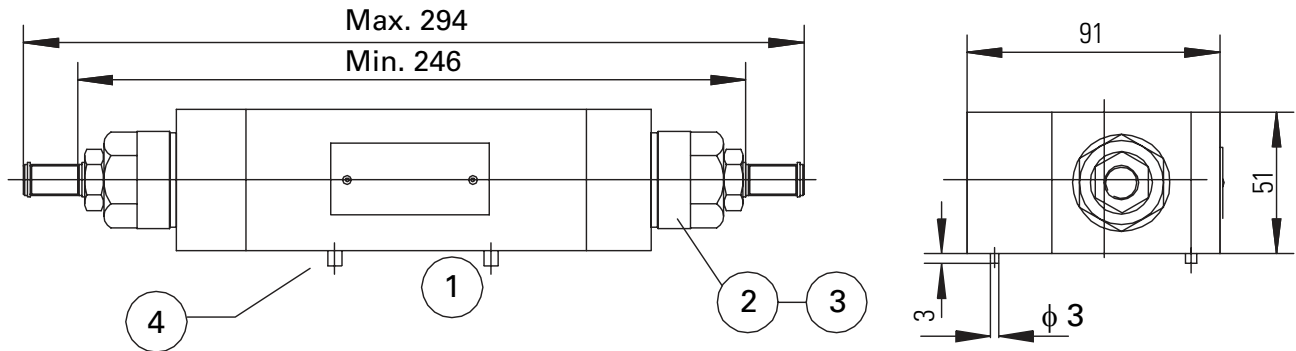
Technical Data

| | |
|---|---------------------------------|
| Maximum Flow (L/min) | 250 |
| Maximum Working Pressure (bar) | 315 |
| Fluid | Mineral oils or phosphate ester |
| Fluid Temperature Range (°C) | -20 to +80 |
| Fluid Viscosity Range (mm²/S) | 2.8 to 500 |
| Fluid Cleanliness Level (ISO) | 19/17/14 |
| Weight (Kg) | 4.7 |

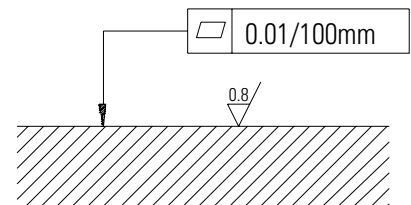
Characteristic Curves
 (measured at
 $v = 41 \text{ mm}^2/\text{s}$ and
 $t = 50^\circ\text{C}$)



Series DGMFN-7
 Unit Dimensions
 (Dimensions in mm)



Required surface finish of mating face



- 1 Name plate
- 2 Screw for flow adjustment
- 3 Turn anti-clockwise = increases flow, turn clockwise = decreases flow
- 4 Two locating pins
- 5 Two locating pin holes
- 6 Valve mounting holes
- 7 O-ring ports A,B,P,T
- 8 O-ring ports X,Y,L

Mounting bolts: ½-UNC, SAE, Grade 8; M10 (4) & M 6 (2) , DIN912-10.9; ISO 898, Class 12.9
 O-Ring: size 22mm x 2.5mm for port A,B,P and T
 O-Ring: size 10mm x 2mm for port X,Y, and L

Released Part Numbers

| Part Number | Model Code |
|--------------------|-----------------------------|
| 02-413077 | DGMFN-7-X-A2W-B2W-30 |
| 02-413078 | DGMFN-7-Y-A2W-B2W-30 |
| 02-413079 | F3-DGMFN-7-X-A2W-B2W-30 |
| 02-413080 | F3-DGMFN-7-Y-A2W-B2W-30 |
| 02-413103 | DGMPC-7-ABK-BAK-30 |
| 02-413102 | DGMPC-7-ABK-30 |
| 02-413106 | DGMPC-7-BAK-30 |
| 02-413068 | DGMPC-7-ABL-BAL-30 |
| 02-413067 | DGMPC-7-ABL-30 |
| 02-413071 | DGMPC-7-BAL-40 |
| 02-413105 | F3-DGMPC-7-ABK-BAK-30 |
| 02-413104 | F3-DGMPC-7-ABK-30 |
| 02-413107 | F3-DGMPC-7-BAK-30 |
| 02-413070 | F3-DGMPC-7-ABL-BAL-30 |
| 02-413069 | F3-DGMPC-7-ABL-30 |
| 02-413072 | F3-DGMPC-7-BAL-30 |
| 02-413808 | Seal Kit |
| 02-413829 | Seal Kit (F3) |

Note: Items in bold have better lead-times.

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