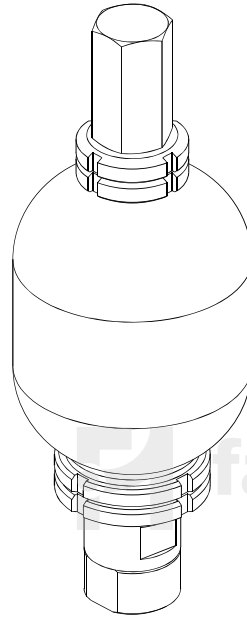
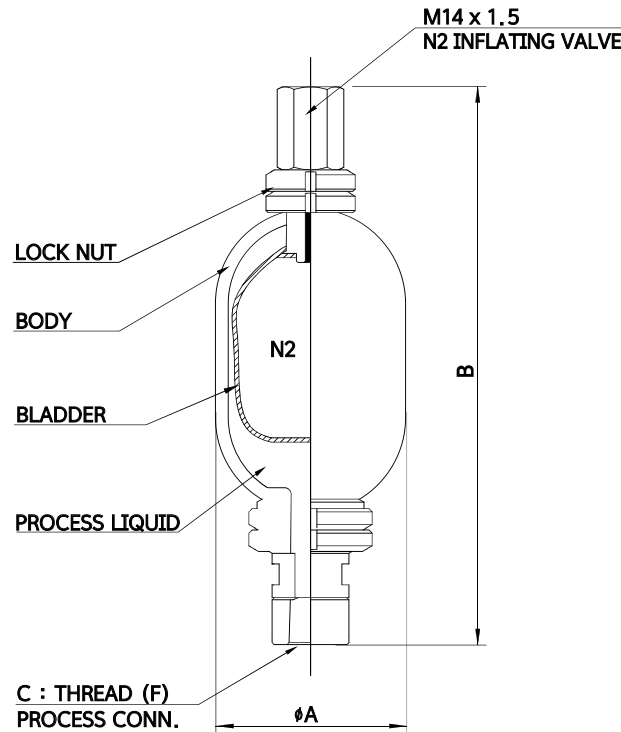


PULSATION DAMPENER BLADDER & METAL - LOW PRESSURE (FMD-BL)



Order Code

FMD - BL - ☐ - ☐☐☐☐☐ - ☐ - ☐ - ☐

A B C D E

A : Body Material

- ☐ 6 : SUS316L*
☐ D : DUPLEX
☐ A : ALLOY
☐ O : OTHER

B : Capacity

Capacity	Dimension (mm)	Connection
0040 : 0.40L	89 220	1/2" PT
0063 : 0.63L	89 275	3/4" PT
0100 : 1.00L	105 275	1" PT
0160 : 1.60L	138 335	1-1/4" PT
0250 : 2.50L	138 395	1-1/4" PT
0400 : 4.00L	138 500	1-1/2" PT
0630 : 6.30L	138 675	1-1/2" PT
1000 : 10.00L	219 515	2" PT
1600 : 16.00L	219 730	2-1/2" PT

C : Max Pressure

- ☐ 1 : 25 Bar.g @ 60°C
☐ 2 : 40 Bar.g @ 60°C

D : Bladder Material

- ☐ N : NBR
☐ E : EPDM
☐ B : BUTYL
☐ F : FKM

E : Connection

- ☐ T : Standard Thread
☐ F : Flange

Table 1. Calculation of Dampener Volume

Formula for Calculation of Volume (Liter)

$$P_0 = K \times P_1 \quad V_0 = Q \times Z / S$$

Letter & Explanation

P_1 : Pump working Pressure
 P_0 : Set-up Pressure for Pulsation dampener
 V_0 : Min. Volume for Pulsation Dampener

Z : Coefficient Acc. To the acceptable residual pulsation
 K : Coefficient for P_1 calculation
 Q : Capacity required (Liter/min)
 S : Stroking speed (SPM)

K factor (Pump Type coefficient)

Simplex : 0.6
Duplex : 0.25
Triplex : 0.12

Z factor (Residual Pulsation as per pump type)

	Simplex	Duplex	Triplex
± 5 %	12	5	2
± 2.5 %	30	13	4
± 1.5 %	60	25	6

Table 2. Bladder & Oper. Temperature

Bladder Type	Min. Temp (°C)	Max. Temp (°C)
NBR	-15	80
EPDM	-25	120
FKM	-20	180
BUTYL	-30	100

Table 3. Oper. Temperature & Oper. Pressure

Oper. Temp (°C)	Oper. Pressure
80	0.87
100	0.82
130	0.78
200	0.68

Note

1. Dimension & Specific Detail can be changed without notification as per model update.
2. Nitrogen (N2) must be used for Charging purposes.
3. The use of air, compressed air, oxygen or other gases is strictly prohibited due to the risk of explosion.
4. Nitrogen is to be filled up as per setting pressure calculation. See P_0 calculation.
5. Other specification can be discussed.

MODEL NO.
FMD - BL - ☐ - ☐☐☐☐☐ - ☐ - ☐ - ☐

TITLE
PULSATION DAMPENER DRAWING

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