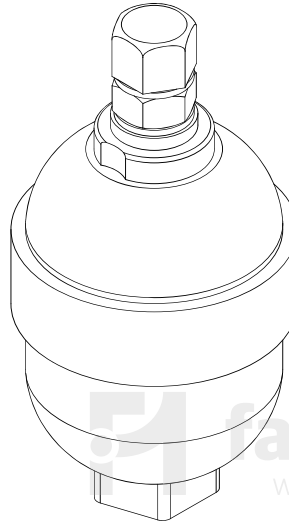
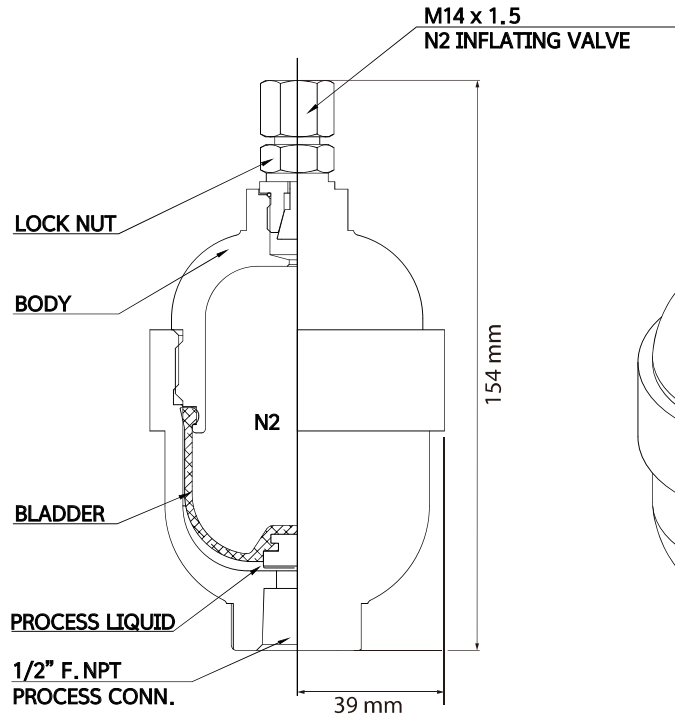


PULSATION DAMPENER BLADDER & METAL - 0.15L HIGH PRESSURE (FMD-BS)



Order Code

FMD - BS - - - - - -

A B C D E

A : Material	B : Capacity	C : Max Pressure
☐ 6 : SUS316L*	☐ 0015 : 0.15L	☐ 2 : 250 Bar.g @ 60°C
☐ D : DUPLEX		☐ 3 : 315 Bar.g @ 60°C
☐ A : ALLOY		
☐ O : OTHER		

D : Bladder	E : Connection	(* Stock)
☐ N : NBR	☐ T : F.NPT Thread (Nil)*	
☐ E : EPDM	☐ F : Flanged	
☐ B : BUTYL		
☐ F : FKM		

Table 1. Calculation of Dampener Volume

Fomular for Calculation of Volume (Liter)																	
$P_0 = K \times P_1$	$V_0 = Q \times Z / S$																
<u>Letter & Explanation</u>																	
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)																
<u>K factor (Pump Type coefficient)</u>	<u>Z factor (Residual Pulsation as per pump type)</u>																
Simplex : 0.6 Duplex : 0.25 Triplex : 0.12	<table><tr><td></td><td>Simplex</td><td>Duplex</td><td>Triplex</td></tr><tr><td>± 5 %</td><td>12</td><td>5</td><td>2</td></tr><tr><td>± 2.5 %</td><td>30</td><td>13</td><td>4</td></tr><tr><td>± 1.5 %</td><td>60</td><td>25</td><td>6</td></tr></table>		Simplex	Duplex	Triplex	± 5 %	12	5	2	± 2.5 %	30	13	4	± 1.5 %	60	25	6
	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 - BS - - - - -		
TITLE PULSATION DAMPENER DRAWING		
DOCUMENT CLASS	DWG NO.: DWG-FMD-BS-001	REV. 
SCALE NONE	REV. DATE : 30.Jan.2025	
	APPROVED BY :	