

# Dome loaded back pressure B057

Classification according Article 4.3 of PED n° 2014/68/EU from 19/07/2016

Main material	Brass (L) – Stainless steel (I)
Threaded ports	1" BSPP
Swivelling flanges	ISO DN25 PN16 / PN40
Internal diameter	Ø 11 mm - Ø 15 mm
Valve insert material	Nitrile (N) – EPR (E) ** Viton (V) – Silicone (S)
Seat material	Brass (L) – Stainless steel (I)
Max inlet pressure	15 bar (C) - 100 bar (G)

\*\* EPR : Ethylene propylene

Outlet pressures ranges	Code
0,3 to 5 bar - Diaphragm Ø 76 mm (Max inlet pressure 15 bar)	17
0,5 to 100 bar - Diaphragm Ø 76 mm (Max inlet pressure 100 bar)	43

## Main options :

Code	Option 1	Option 2	Option 3
1500	Forged dome – 1/8" BSPP inlet pressure port	New standard version	
1504	Forged dome – 1/8" BSPP inlet pressure port	Modified valve assembly – Internal Ø 15 mm	Hydraulic version
1505	Forged dome – 1/8" BSPP inlet pressure port		

The options define the additional particularities in the basic specification.  
Do not hesitate to consult us to know the best configuration for your need.

Internal leak tight : **Min 10-3 mbar.l/s in Helium**  
(valve / seat)

External leak tight : **Min 10-4 mbar.l/s in Helium**

Air flow **by bar gauge** of set pressure  
(connection in shunt of the process) and  
internal Ø 9 mm:  
**- Ports 1" : 18 Nm3/h**

For a connection on-line and/or other internal  
diameter, please contact us.

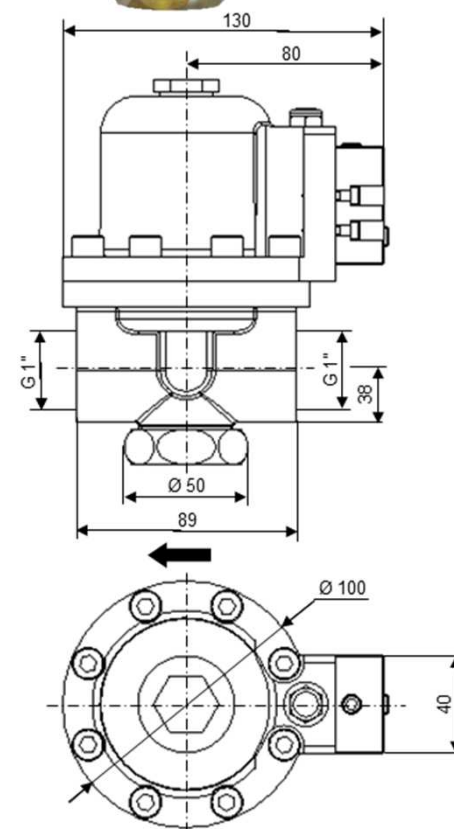
Flow correction in Nm3/h report to Air value :

$$Q_{\text{gaz}} = Q_{\text{air}} \sqrt{\frac{\rho_{\text{air}}}{\rho_{\text{gaz}}}} \quad (\rho = \text{Volume mass})$$

Advised filter: **F545L Option 1006**  
Advised fittings: **T1552 G1"**

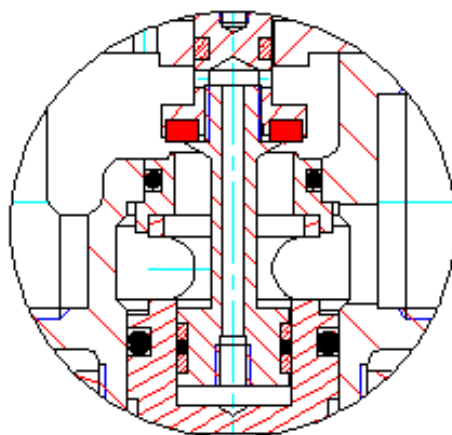
Weight : 3.4 kg

\*\*\* For any set pressure < 2 absolute bar, it is advisable  
to divide by 2 the indicated flow values.

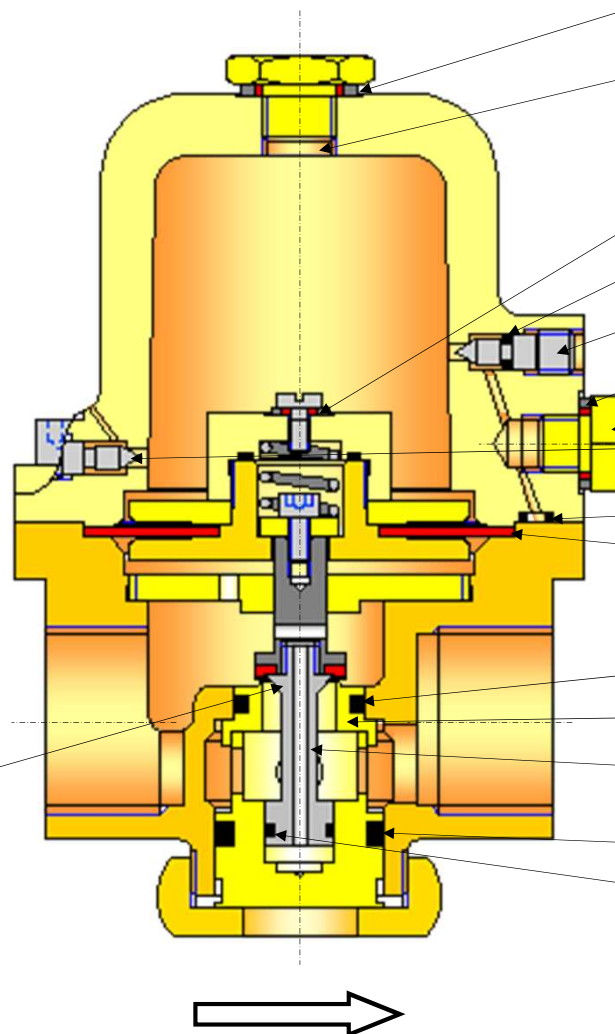


Flow and KV values are given as a rough guide.  
IMF reserves the right to modify its manufacturing without advance notice.

# Dome loaded back pressure B057



Hydraulic version  
Internal diameter Ø 15 mm



- 36 BS seal \*\*\*
- 1/4" BSPP pilot port
- 33 O-ring \*\*\*
- 13 O-ring \*\*\*
- Loading needle
- 19 BS seal \*\*\*
- 1/8" BSPP loading dome
- Relief needle
- 13 O-ring \*\*\*
- 24 Diaphragm \*\*\*
- 02 O-ring \*\*\*
- 21 Seat \*\*\*
- 22 Valve \*\*\*
- 07 O-ring \*\*\*
- 05 O-ring \*\*\*

\*\*\* Repair kit spare parts and  
POS of the bill of material

## Codification IMF components

- (1) The **main material** means the material of the envelope (external parts) of the component (the body)  
Generally for a component made of stainless steel, all parts in contact with the media are made of stainless steel and others are made of Nickel plated brass.
- (2) The **function** defined the number of ports, the number of positions and the position of the valve (opened or closed) when the valve is not energized.
- (3) O-ring and diaphragms materials, and cleaning operating procedures are defined  
into the page [O-ring and diaphragms materials](#).
- (4) The options define the complementary characteristics:  
- **the "X" digits definition which are not mentioned in the table.**  
- **complementary definition of previous digits of the code.**

The option 1000 called "**STANDARD VERSION**" defines the basic version of **IMF** components (without any particularity).

### Example of codification:

	B	057	L	G	43	N	N	L	1500
<b>B =</b>	Back Pressure								
<b>057 =</b>	Type or family								
<b>L =</b>	Brass construction								
<b>G =</b>	Max inlet pressure (MWP) 100 b								
<b>43 =</b>	Opening range 0 to 100 bar								
<b>N =</b>	Nitrile O-ring / Cleaning procedure P902								
<b>N =</b>	Nitrile valve insert								
<b>L =</b>	Brass seat								
<b>1500 =</b>	See the table of the main options								

# O-ring and diaphragms material Cleaning operating procedures

Cleaning operating procedures define the degreasing in components and lubrication of the moving parts.

**Neutral gases** are mainly **Air, Nitrogen, Argon and Helium**.

All specifications in the here under table are suitable for temperature of use - 20°C to + 50 °C.

For other working conditions, please let us know "**both of max temperature and max working pressure**".

Code	O-ring material	Cleaning operating procedure	Compatibility with main gases
0	Without O-ring	Cleaning P902	All gases except Oxygen
1	Without O-ring	Cleaning P903 suitable Oxygen	Industrial and breathable Oxygen
2	Without O-ring	Cleaning P904 Pure gas (without grease)	Pure gas process
3	Without O-ring	Cleaning P906 Pure gas (with Silicone grease)	Pure gas process suitable with Silicone grease
4	Without O-ring	Cleaning P908 Food	All food processes
A	Nitrile O-ring	Cleaning P908 Food	Neutral gases – Food lubrication
B	EPR O-ring ***	Cleaning P903 suitable Oxygen	Industrial and breathable Oxygen– Tested by Air Liquide CTE
E	EPR O-ring ***	Cleaning P902	CO2, Chemically "basal" gases – Industrial lubrication
F	Nitrile O-ring low temperature	Cleaning P902	Neutral gases low temperature until – 45 °C – Industrial lubrication
H	Silicone 50D8 O-ring	Cleaning P903 suitable Oxygen	Multi-gas: Neutral, CO2, Oxygen – Oxygen lubrication
M	Nitrile O-ring	Cleaning P906 Pure gas (with Silicone grease)	Neutral gases – Pure gas ubrication
N	Nitrile O-ring	Cleaning P902	Neutral gases– Industrial lubrication
O	Viton O-ring	Cleaning P903 suitable Oxygen	Industrial Oxygen – Oxygen lubrication
Q	Nitrile O-ring	Cleaning P902	Leak tightness by Composite seal for Hydrogen and Helium service
R	Nitrile O-ring	Cleaning P903 Breathable	Breathable gases - Oxygen lubrication
V	Viton O-ring	Cleaning P902	Chemically "acid" gases - Industrial lubrication
Y	Kalrez O-ring	Cleaning P902	Upon request

\*\*\* EPR = Ethylène propylène