

**MPLHOSSS | MPLHESSS – DRUVA®PUR MANIFOLD**

MANIFOLD | PURE LINE (BRASS CHROME PLATED) | 20 m³ SERIES

HIGH PRESSURE RANGE | SEMI-AUTOMATIC CHANGE OVER | SINGLE STAGE | HIGH PRESSURE SHUT-OFF VALVE



This manifold is used in gas supply systems for pure, inert, flammable, oxidising gases and gas mixtures.  
It is not usable for corrosive and / or toxic gases and their mixtures.



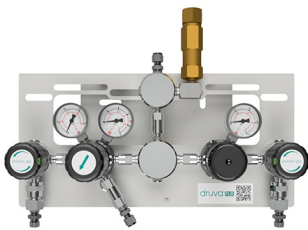
Type **MPLHOSSS00**  
S0 HP Shut-off Valve  
0 Without Specials

**TECHNICAL SPECIFICATION:**

- > Switching between two sources by manual valve actuation
  - > Regulator and Valves – Hastelloy/Elgiloy diaphragm tightening system to atmosphere
  - > Compact design
  - > Excellent pressure adjustment
  - > Valves - designed and approved in accordance with relevant sections of ISO 10297:2015 (including O<sub>2</sub> - ignition test for main valve)
  - > Regulator - designed and approved regarding ISO 7291 (including O<sub>2</sub> ignition test)
  - > Relief valve in delivery pressure side
  - > Manifold with process inlet shut-off valve
  - > Available with shut-off valve at outlet, safety valve at outlet, check valve at inlet
  - > Electrostatic chargeability test
- Fulfills requirements according to ISO 80079-36, IEC TS 60079-32-1 and German TRGS 727  
Usable in EX- areas zones 1 and 2 for gases with explosion risk group I, IIA, IIB, IIC

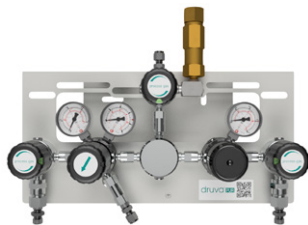
**SPECIAL FEATURES OF MANIFOLD:**

- > Splitted plates of manifold
- > Separated mounting of ground plate
- > Easy mounting of manifold to ground plate and fix with one screw only
- > Front plate cutout for in-field gauge replacement



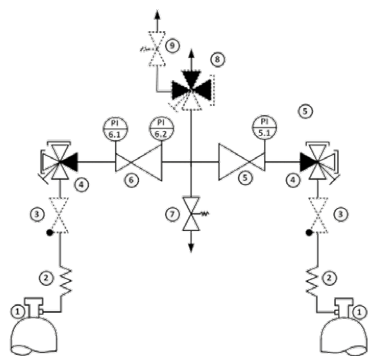
Type **MPLHOSSS0U**  
S0 HP Shut-off Valve  
U **Specials**  
Check Valve &  
Safety Valve

TECHNICAL DATA – MANIFOLD	
<b>Working temperature:</b>	-20 °C to +60 °C
<b>Inlet/ outlet ports:</b>	see technical drawing
<b>Leakage rate seat:</b>	<5x10 <sup>-6</sup> mbar l/s (Helium)
<b>Leakage rate outside:</b>	<1x10 <sup>-9</sup> mbar l/s (Helium)
<b>Weight:</b>	max 7,99 kg
<b>Flow nominal:</b>	20 m³/h (N <sub>2</sub> ) acc. to ISO 7291 at 20 bar outlet pressure and 41 bar inlet pressure
<b>Pressure rates manifold:</b>	
<b>Max. inlet pressure:</b>	300 bar
<b>Delivery pressure:</b>	10/ 14/ 28/ 50 bar



Type **MPLHOSSSU**  
SS HP Shut-off Valve &  
LP Shut-off Valve  
U **Specials**  
Check Valve &  
Safety Valve

TECHNICAL DATA – REGULATOR	
<b>Filter:</b>	1x for inlet 1x for each outlet
<b>Material gas wetted parts:</b>	
<b>Regulator body:</b>	Brass chrome plated
<b>Regulator diaphragm:</b>	Hastelloy
<b>Regulator seat:</b>	PCTFE
<b>Relief valve seat:</b>	MPLHOSSS Version: FKM MPLHESSS Version: EPDM
<b>Regulator poppet:</b>	Brass
<b>Pressure gauges rates (pressure rates):</b>	18 (10)/ 25 (14)/ 40 (28)/ 80 (50) bar
<b>Contact gauges available – please contact us</b>	
<b>Cracking pressure relief valves:</b>	15,4 (10)/ 21,6 (14)/ 43,1 (28)/ 65 (50) bar Pressure test with Helium of each item
<b>Test in production:</b>	Seat leakage test with Helium of each item
	Helium leak test of each regulator against atmosphere
	Test of functionality of each item



- 1 – GAS CYLINDER  
 2 – COIL/HOSE  
 3 – CHECK VALVE  
 4 – SHUT-OFF VALVE (3XIN, 1XOUT)  
 5 – FIX PRESSURE REGULATOR  
 6 – SET PRESSURE REGULATOR  
 7 – RELIEF VALVE  
 8 – SHUT-OFF VALVE (1XIN, 3XOUT)  
 9 – SAFETY VALVE

Options & specials are shown as dotted line

#### Approvals during development:

Type test in accordance with ISO 7291

O<sub>2</sub> ignition test in accordance with ISO 7291

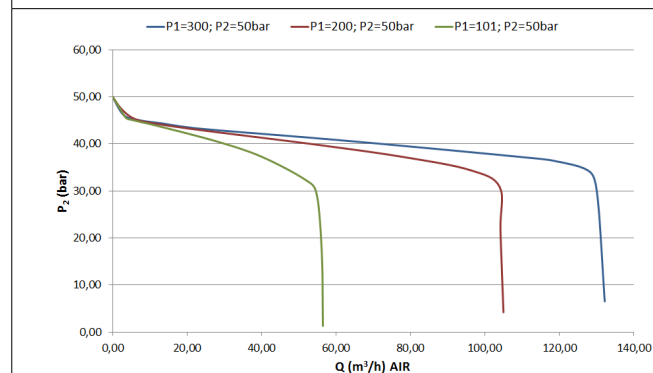
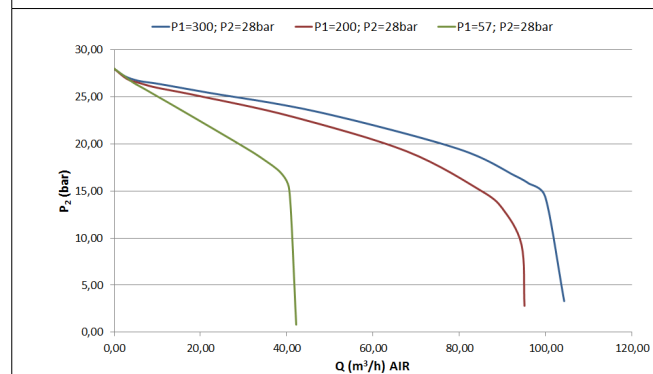
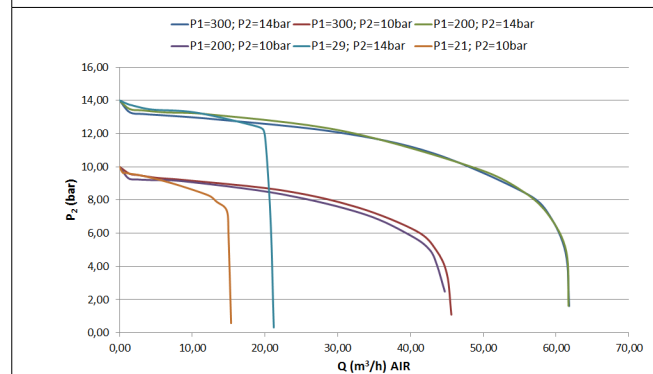
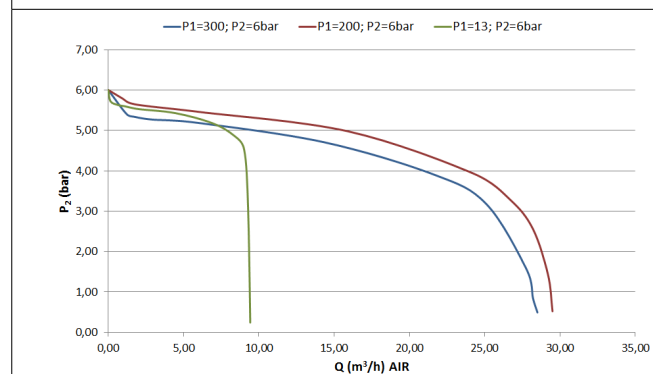
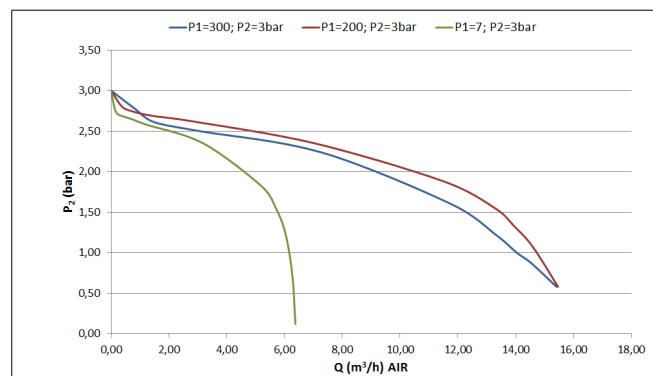
Additional life cycle test

Electrostatic chargeability test

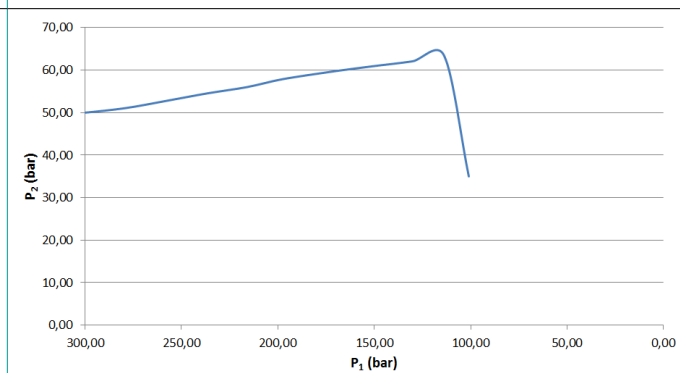
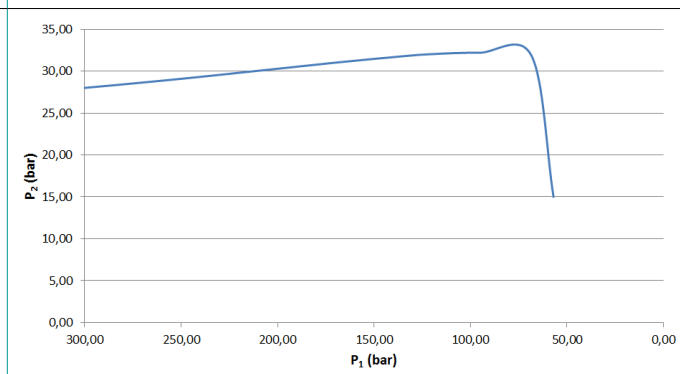
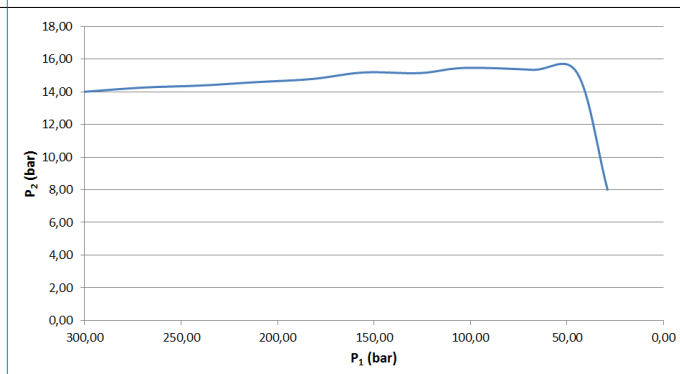
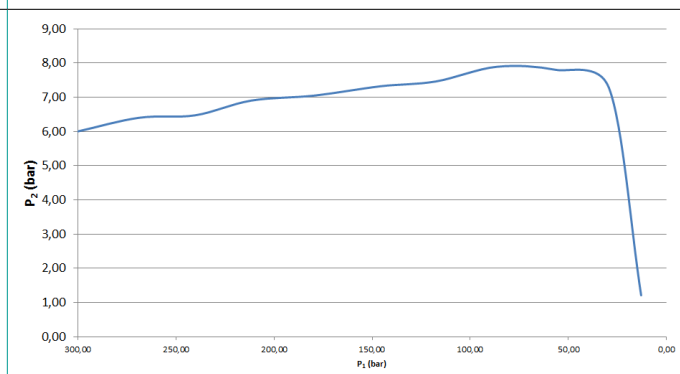
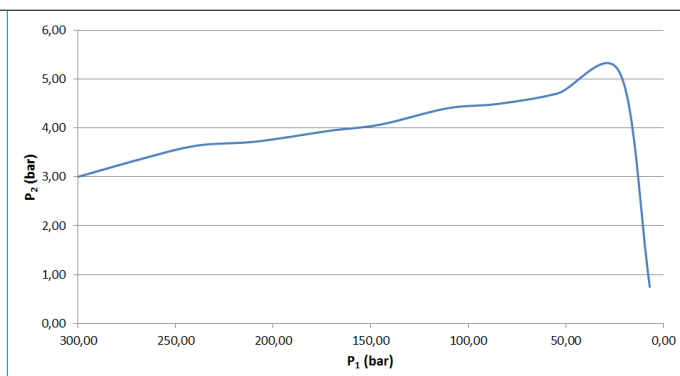
- Fulfill requirements according ISO 80079-36, IEC TS 60079-32-1 and German TRGS 727
- Usable in EX-areas zones 1 and 2 for gases with explosion risk group I, IIA, IIB, IIC

TECHNICAL DATA – VALVES	
Max. working pressure:	300 bar
Kv-value:	0,25
Seat diameter:	5 mm
Leakage rate seat:	<5x10 <sup>-6</sup> mbar l/s (Helium)
Leakage rate outside:	<1x10 <sup>-9</sup> mbar l/s (Helium)
Filter:	1x for each inlet 1x for each outlet
Material gas wetted parts:	
Valve body:	Brass chrome plated
Valve diaphragm:	4-Port: 1x Hastelloy, 1x Elgiloy 2-Port: 2x Elgiloy
Valve seat:	PCTFE
Valve poppet:	Brass
Test in production:	Pressure test with Helium of each item
	Seat leakage test with Helium of each item
	Helium leak test of each valve against atmosphere
	Test of functionality of each item
Approvals during development:	Type test in accordance with relevant sections of ISO 10297:2015
	O <sub>2</sub> ignition test regarding ISO 10297 for main shut-off valve
	Electrostatic chargeability test
	• Fulfill requirements according ISO 80079-36, IEC TS 60079-32-1 and German TRGS 727 • Usable in EX-areas zones 1 and 2 for gases with explosion risk group I, IIA, IIB, IIC
TECHNICAL DATA – PLATES	
Ground plate:	Stainless Steel (polished) Option to secure arrestor cable of hoses with hook on ground plate. Grounding bolt Cut outs on top and bottom allows installation
Dimensions ground plate: (Height x Width x Length)	194 x 30 x 250 mm
Front plate:	Stainless Steel (polished) Cut outs for replacement of gauges Free space for additional installer label (e.g. remark for next maintenance)
Dimensions front plate: (Height x Width x Length)	194 x 30 x 400 mm
Marking on panel:	Product range label QR-Code – link to online product configurator
TECHNICAL DATA – SAFETY VALVES (S)	
	Spring loaded according P.E.D. 2014/68/EU and AD2000 (A2)
Opening pressure:	15/ 21/ 42 bar
Leakage rate:	< 5 x 10 <sup>-6</sup> mbar l/s (valve seat) at nominal pressure of receiver
Material:	Housing and metal parts made of brass, pressure spring made of stainless steel
Seat and seal:	FKM
Outlet connection:	NPT ½" female

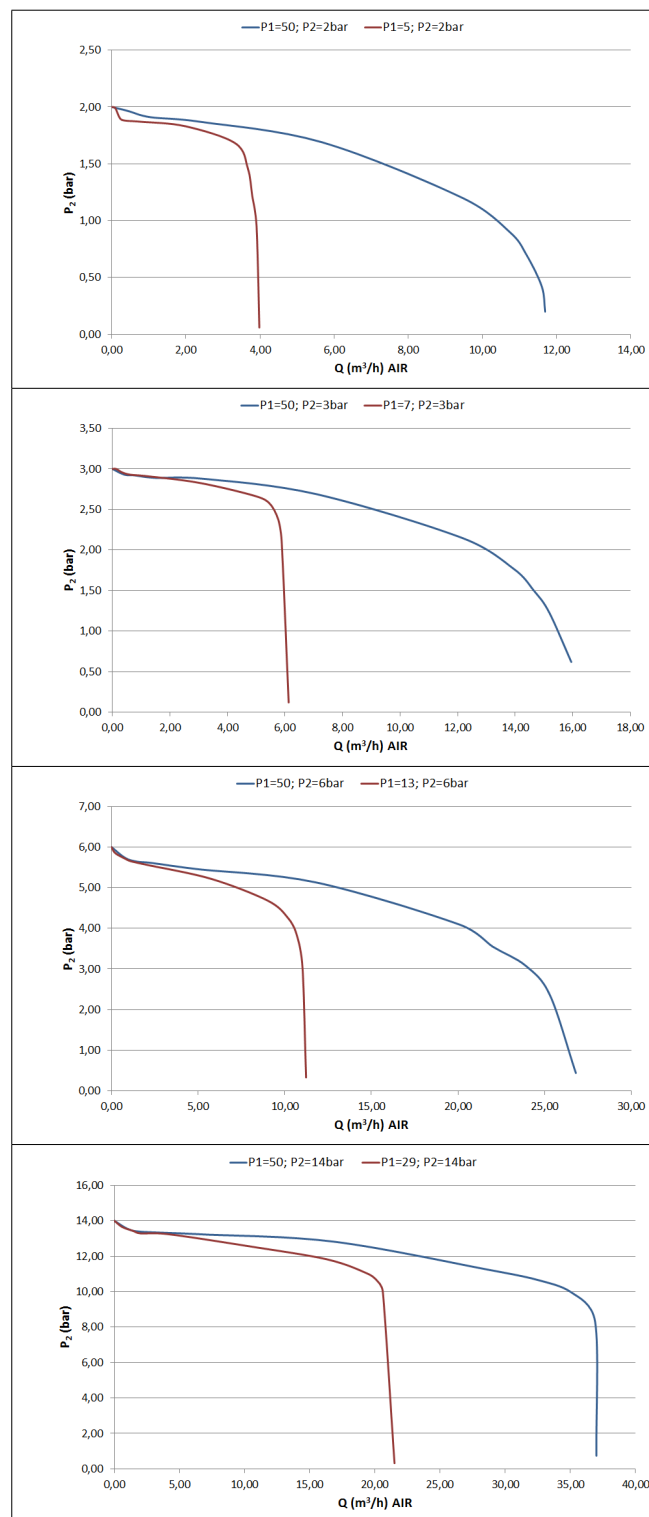
## FLOW CURVES:



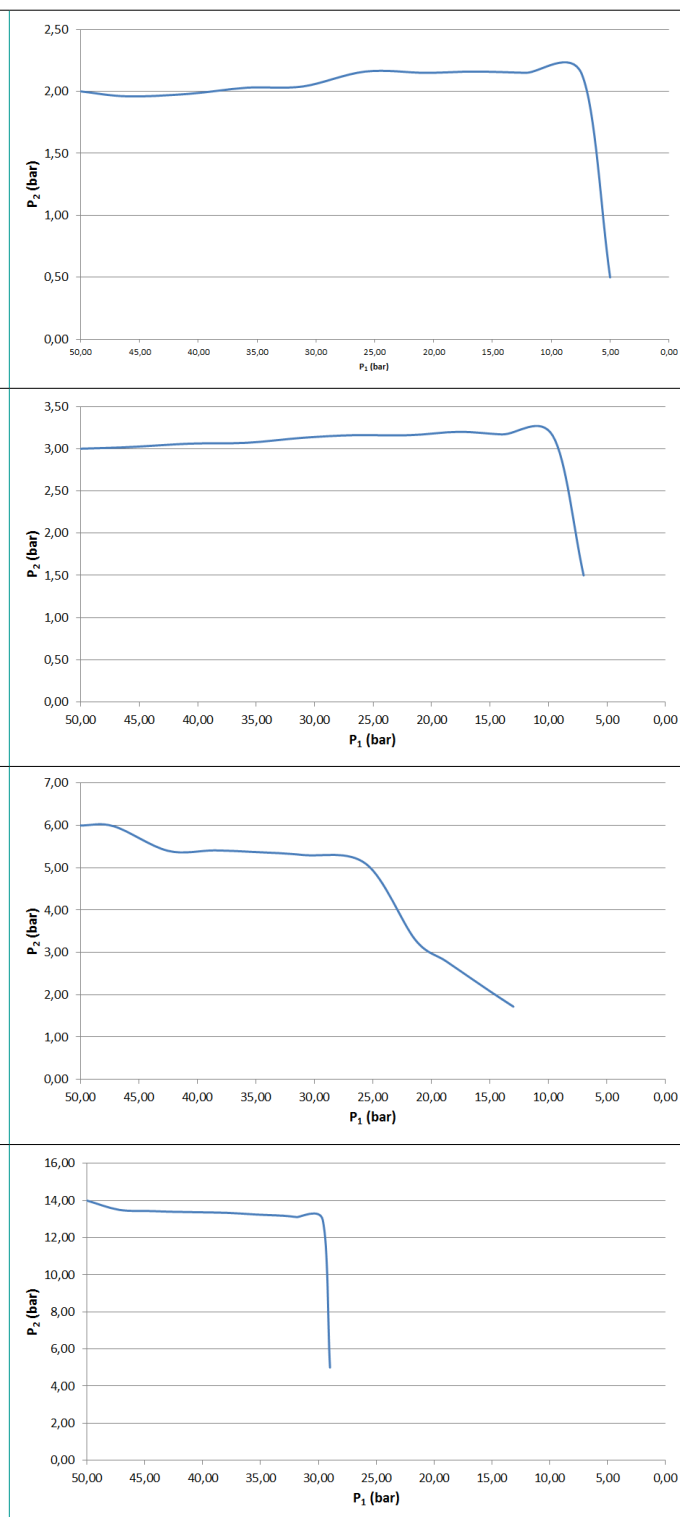
## DYNAMIC EXPANSION CURVES:



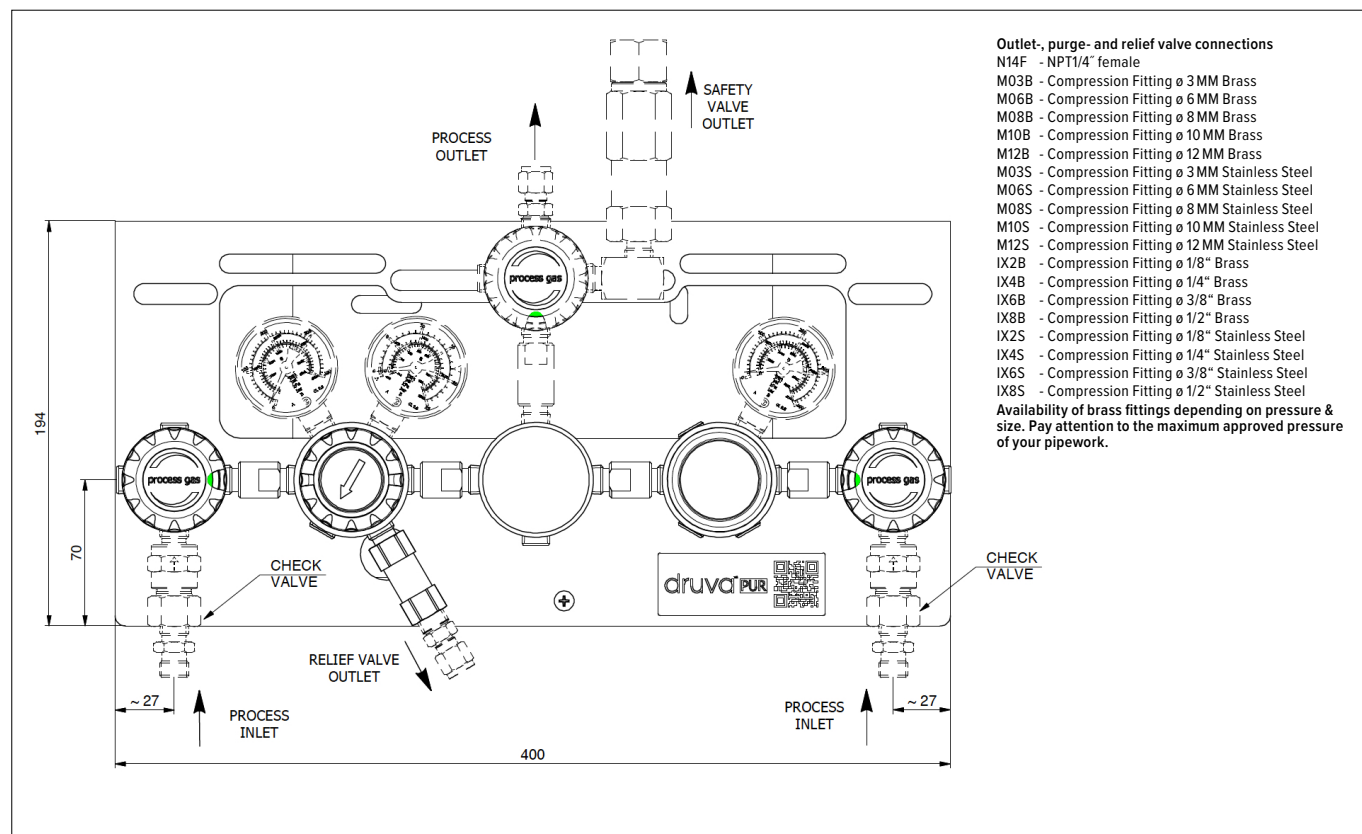
## FLOW CURVES:



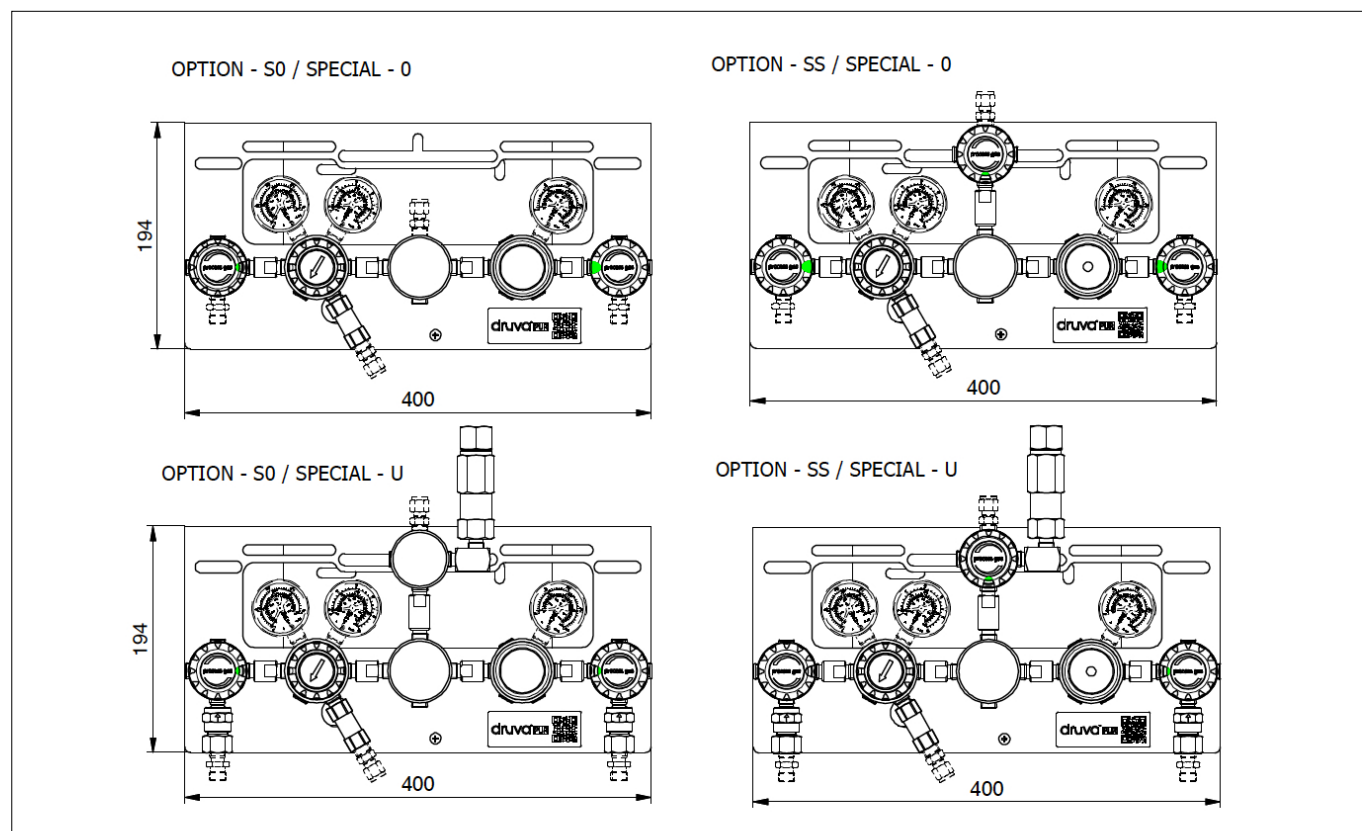
## DYNAMIC EXPANSION CURVES:



## TECHNICAL DRAWING:



## TECHNICAL DRAWING – VARIANTS:



## ORDER CODE:

Example Manifold | PUR Linie | Brass Chrome Plated | Low Flow | Semiautomatic Change Over | Single Stage | High Pressure Shut-off Valve

MPLH0S	S	SS	U	FX	DX	BT	R2	N14F	N14F (1/4" NPT female)	N14F (1/4" NPT female)
MPLHES	Stages	Options	Specials	Inlet pressure (bar)	Outlet pressure (bar)	Inlet pressure gauge	Outlet pressure gauge	Process inlet connection	Process outlet connection	Purge & relief connection
	S Single stage	SO HP * Shut-off valve	O without	F4 60	D2 10	BT Bourdon Tube gauge	BT Bourdon Tube gauge	N14F 1/4" NPT female	possible connections  see technical drawing	possible connections  see technical drawing
		SS HP * Shut-off valve LP ** Shut-off valve	C Check valve	FX 200	DX 14	I1 Inductiv contact gauge I1	I2 Inductiv contact gauge I2	M14M Metric 14x1.5 male		
			S Safety valve	GX 300	EY 28	R5 Reed contact gauge R5	R2 Reed contact gauge R2			
			U Check valve + safety valve		EX 50		I1 Inductiv contact gauge I1			

\* HP = High pressure

\*\* LP = Low pressure

Order code (as described above) without special characters or spaces! Complete Order Code **MPLH0SSSUFXDXBTR2N14FN14FN14**