MPLH0MSS | MPLHEMSS – DRUVA®PUR MANIFOLD

MANIFOLD | PURE LINE (BRASS CHROME PLATED) | 20 m³ SERIES
HIGH PRESSURE RANGE | MANUAL CHANGE OVER | SINGLE STAGE | HIGH PRESSURE SHUT-OFF VALVE

This manifoldis 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 MPLH0MS**S00**
S0 HP Shut-off Valve
0 Without Specials

TECHNICAL SPECIFICATION:

- Switching between two sources by manual valve actuation
- Regulator and Valves – Hastelloy/Elgiloy diaphragm tighting system to atmosphere
- Compact design
- Excellent pressure adjustment
- Valves - designed and approved in accordance with relevant sections of ISO 10297:2015 (including O_2 - ignition test for main valve)
- Regulator - designed and approved regarding ISO 7291 (including O_2 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:

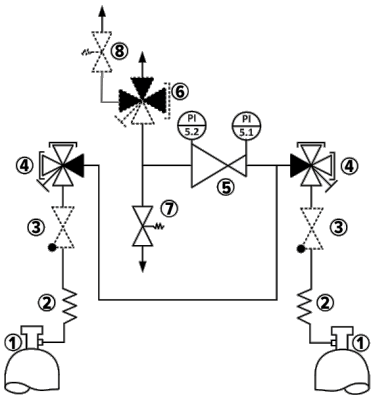
- Splitted plates of manifold
- Seperated mounting of ground plate
- Easy mounting of manifold to ground plate and fix with one screw only
- Front plate cutout for in-field gauge replacement

Type MPLH0MS**S0U**
S0 HP Shut-off Valve
U **Specials**
Check Valve &
Safety Valve

TECHNICAL DATA – MANIFOLD	
Working temperature:	-20 °C to +60 °C
Inlet/ outlet ports:	see technical drawing
Leakage rate seat:	$<5x10^{-6}$ mbar l/s (Helium)
Leakage rate outside:	$<1x10^{-9}$ mbar l/s (Helium)
Weight:	max 5,92 kg
Flow nominal:	20 m³/h (N_2) acc. to ISO 7291 at 20 bar outlet pressure and 41 bar inlet pressure
Pressure rates manifold:	
Max. inlet pressure:	300 bar
Delivery pressure:	3/ 6/ 10/ 14/ 28/ 50/ 100/ 200 bar

Type MPLH0MS**SSU**
SS HP Shut-off Valve &
LP Shut-off Valve
U **Specials**
Check Valve &
Safety Valve

TECHNICAL DATA – REGULATOR	
Filter:	1x for inlet 1x for each outlet
Material gas wetted parts:	
Regulator body:	Brass chrome plated
Regulator diaphragm:	Hastelloy
Regulator seat:	PCTFE
Relief valve seat: MPLH0MSS Version MPLHEMSS Version	 FKM EPDM
Regulator poppet:	Brass
Pressure gauges rates (pressure rates):	5 (3)/ 10 (6)/ 18 (10)/ 25 (14)/ 40 (28)/ 80 (50)/ 160 (100)/ 315 (200) bar
Contact gauges available – please contact us	
Cracking pressure relief valves:	4,6 (3)/ 9,2 (6)/ 15,4 (10)/ 21,6 (14)/ 43,1 (28)/ 65 (50)/ 154 (100)/ 308 (200) bar
Test in production:	Pressure test with Helium of each item
	Seat leakage test with Helium of each item
	Helium leak test of each regulator against atmosphere
	Test of functionality of each item



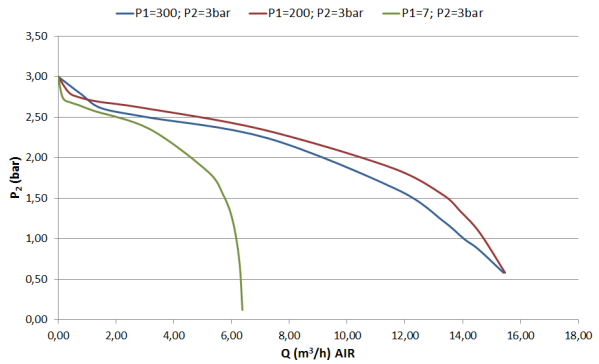
1 – Gas cylinder
2 – Coil/Hose
3 – Check valve
4 – Shut-off Valve (3xin, 1xout)
5 – Pressure regulator
6 – Shut-off valve (1xin, 3xout)
7 – Relief valve
8 – Safety valve

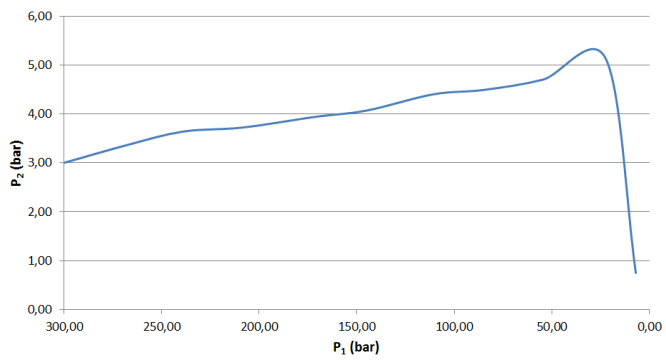
Options & specials are shown as dotted line

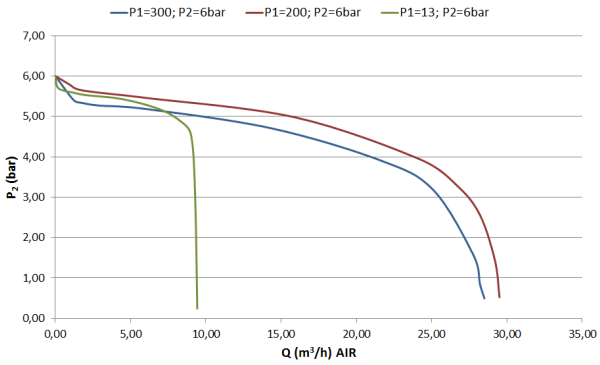
Approvals during development:	Type test in accordance with ISO 7291
	O_2 ignition test in accordance with ISO 7291
	Additional life cycle test
	Electrostatic chargeability test • Fulfill requirements according ISO 80079-36, IEC TS 60079-32-1 and German TRGS 727 • Usable in EX-areas zones 1 and 2 for 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:	$<5x10^{-6}$ mbar l/s (Helium)
Leakage rate outside:	$<1x10^{-9}$ 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_2 ignition test regarding EN 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 250 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:	4,5/ 9/ 15/ 21/ 42 bar
Leakage rate:	$< 5 \times 10^{-6}$ 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

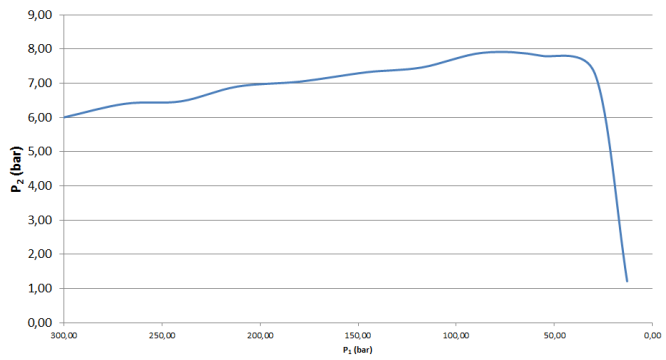
FLOW CURVES:

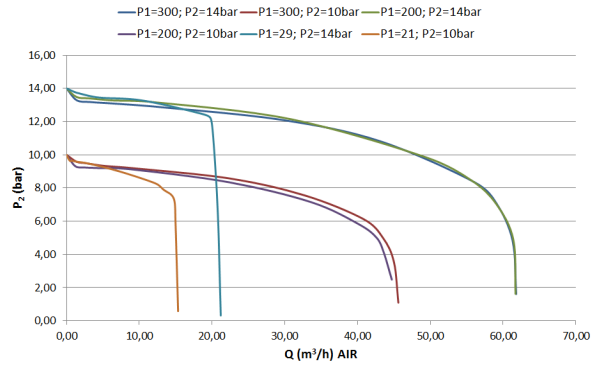
DYNAMIC EXPANSION CURVES:

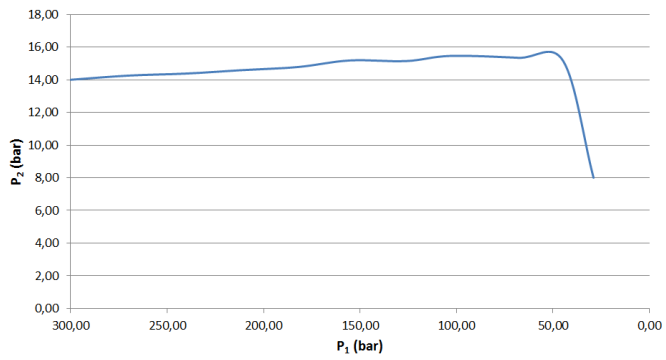


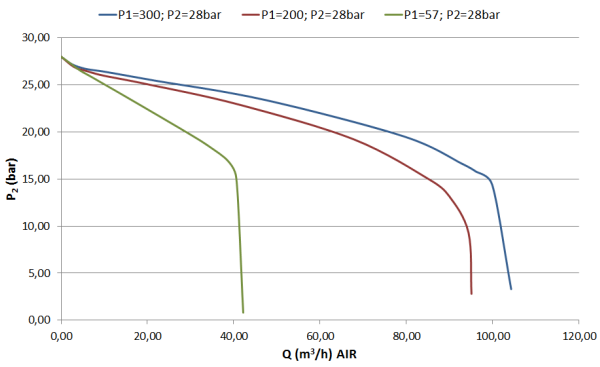


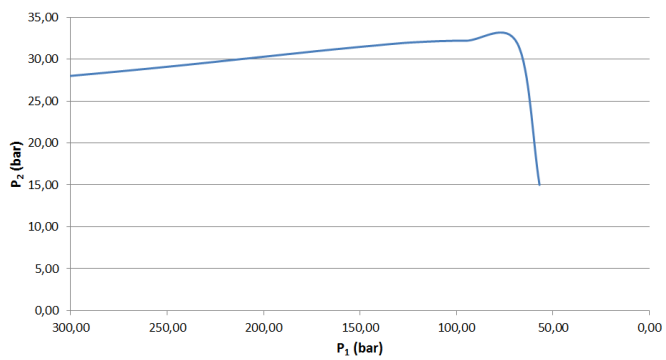


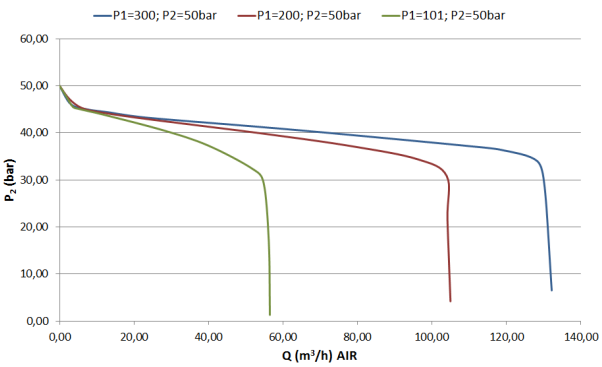


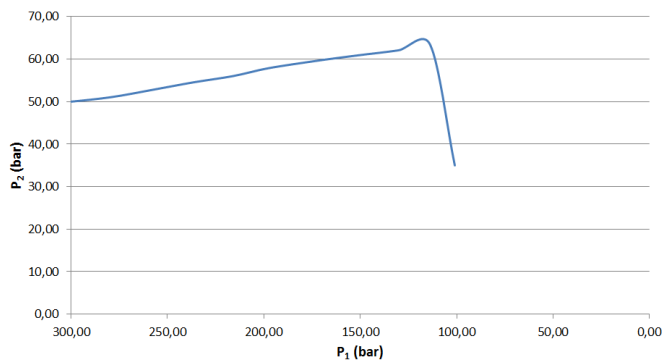






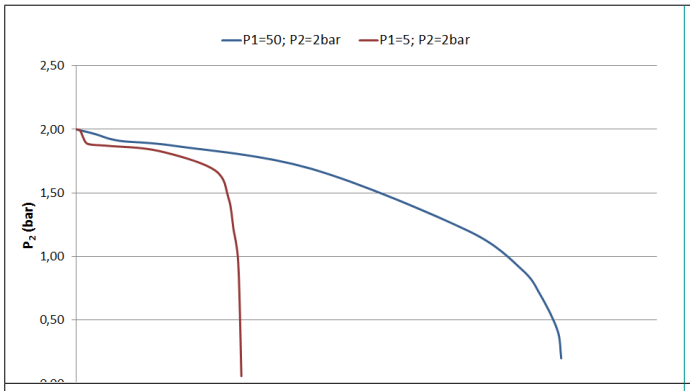


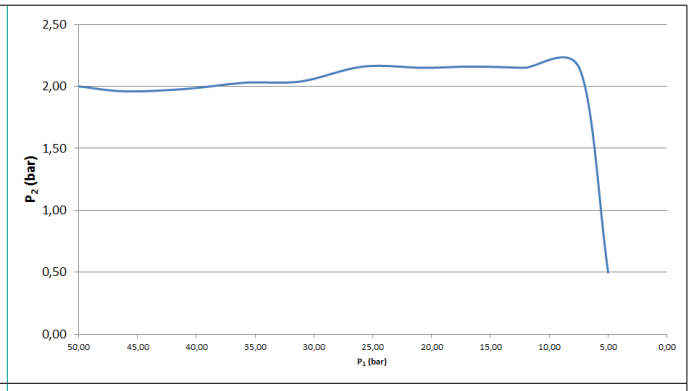


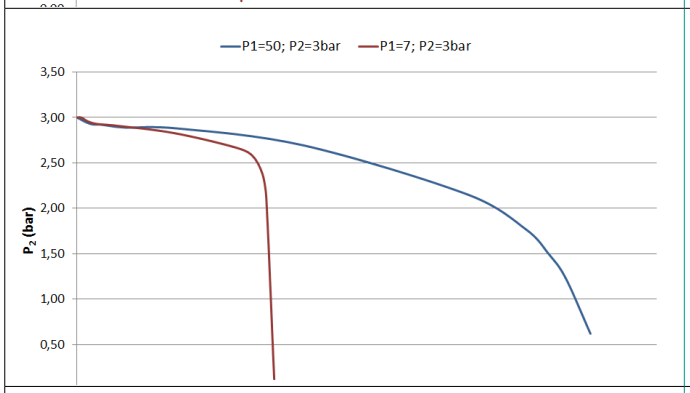


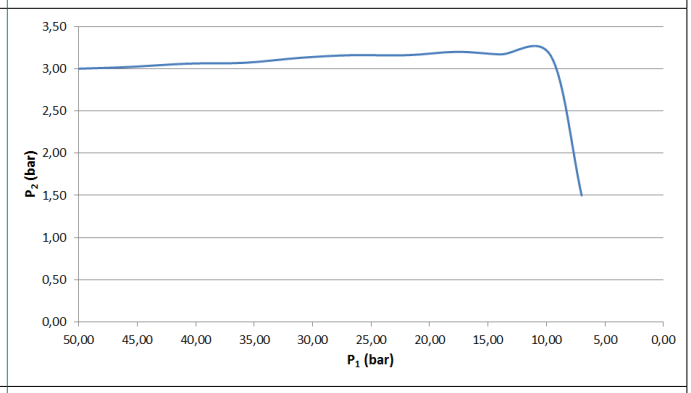
FLOW CURVES:

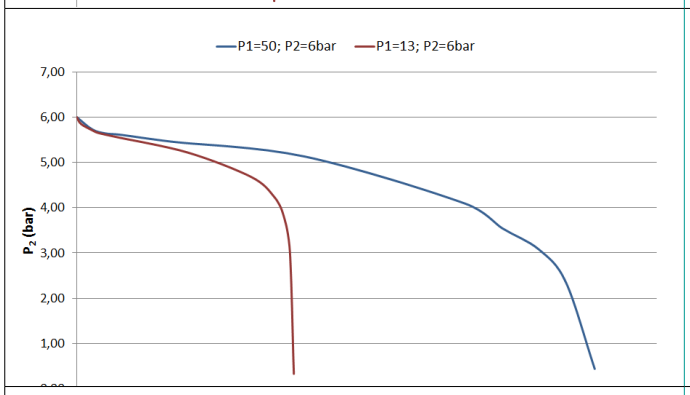
DYNAMIC EXPANSION CURVES:

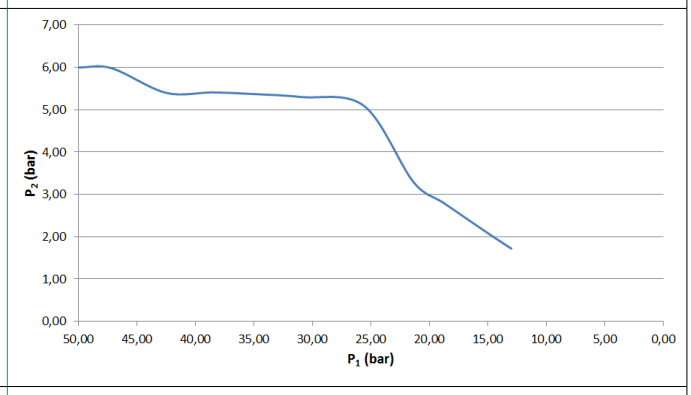


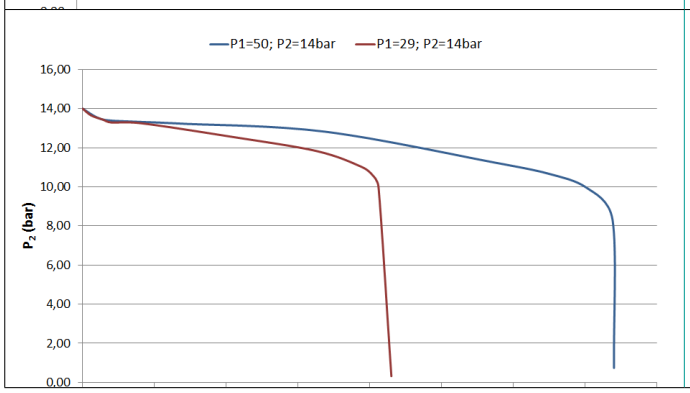


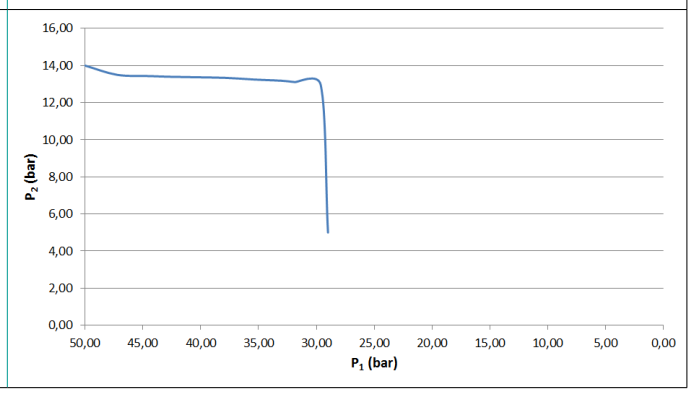




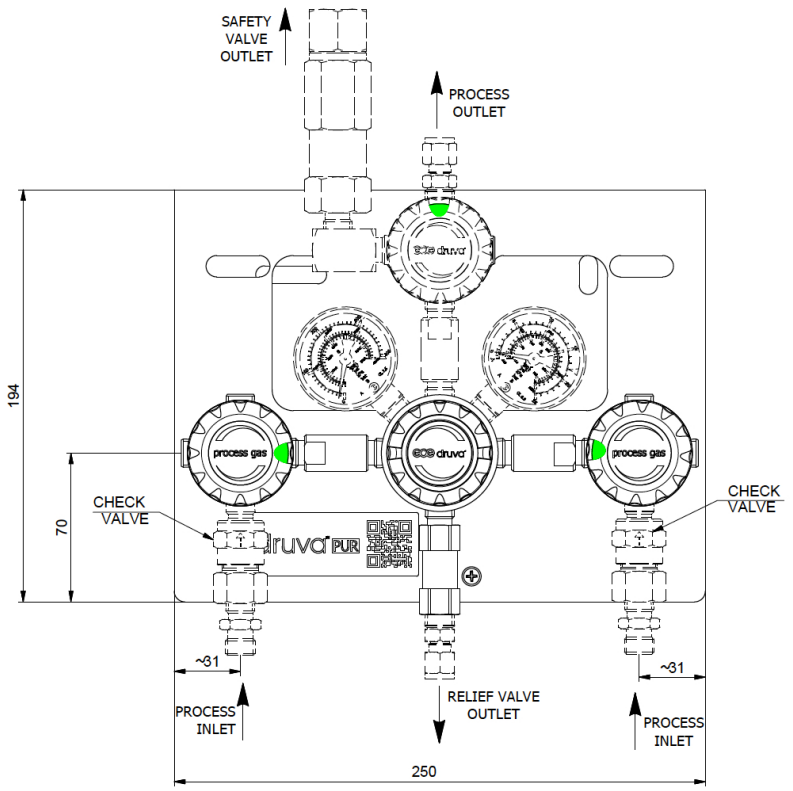








TECHNICAL DRAWING:



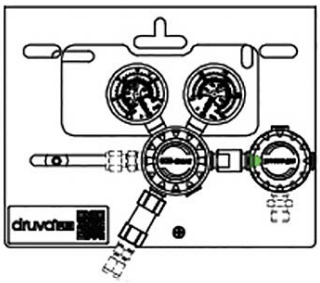
Outlet-, purge- and relief valve connections

N14F - NPT1/4´´ female
M03B - Compression Fitting ø 3 MM Brass
M06B - Compression Fitting ø 6 MM Brass
M08B - Compression Fitting ø 8 MM Brass
M10B - Compression Fitting ø 10 MM Brass
M12B - Compression Fitting ø 12 MM Brass
M03S - Compression Fitting ø 3 MM Stainless Steel
M06S - Compression Fitting ø 6 MM Stainless Steel
M08S - Compression Fitting ø 8 MM Stainless Steel
M10S - Compression Fitting ø 10 MM Stainless Steel
M12S - Compression Fitting ø 12 MM Stainless Steel
IX2B - Compression Fitting ø 1/8" Brass
IX4B - Compression Fitting ø 1/4" Brass
IX6B - Compression Fitting ø 3/8" Brass
IX8B - Compression Fitting ø 1/2" Brass
IX2S - Compression Fitting ø 1/8" Stainless Steel
IX4S - Compression Fitting ø 1/4" Stainless Steel
IX6S - Compression Fitting ø 3/8" Stainless Steel
IX8S - Compression Fitting ø 1/2" Stainless Steel

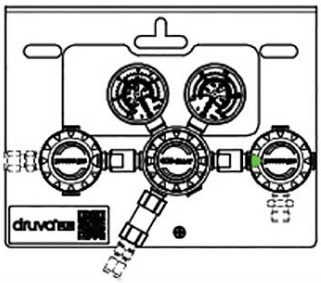
Availability of brass fittings depending on pressure & size. Pay attention to the maximum approved pressure of your pipework.

TECHNICAL DRAWING – VARIANTS:

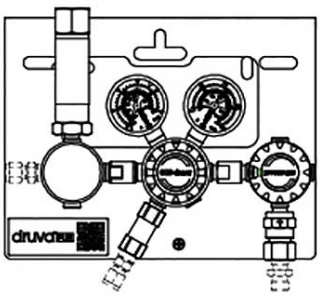
OPTION - S0 / SPECIAL - 0



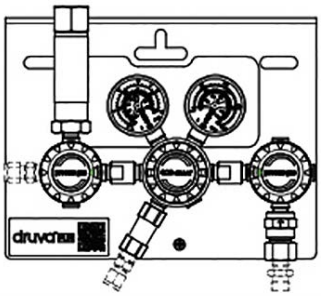
OPTION - SS / SPECIAL - 0



OPTION - S0 / SPECIAL - U



OPTION - SS / SPECIAL - U



ORDER CODE:

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

MPLH0M MPLHEM	S	S0	C	FX	F2	BT	BT	N14F	N14F (1/4" NPT female)	N14F (1/4" NPT female)
	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	S0 HP Shut-off valve	0 without	F4 60	BX 3	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	CX 6	I1 Inductiv contact gauge I1	I2 Inductiv contact gauge I2 *	M14M Metric 14x1.5 male		
			S Safety valve	GX 300	D2 10	R5 Reed contact gauge R5	R2 Reed contact gauge R2 *			
			U Check valve + safety valve		DX 14		I1 Inductiv contact gauge I1			
					EY 28					
					EX 50					
					F2 100					
					FX 200					

** Only for oulet pressure 200 bar*
Order code (as described above) without special characters or spaces! Complete Order Code MPLH0MSS0CFXF2BTBTN14FN14FN14F

Link to online product configurator