

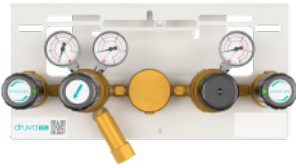
# DRUVA® TEC MANIFOLDS

MANIFOLD | TEC LINE (BRASS) | 100 m<sup>3</sup> SERIES | HIGH PRESSURE VERSION | 2 INLETS | SEMI-AUTOMATIC CHANGE OVER | SINGLE STAGE

HO VERSION – HIGH PRESSURE REGULATOR WITH FKM SEAL  
 HE VERSION – HIGH PRESSURE REGULATOR WITH EPDM SEAL

MTMHOSSS | MTMHESSS 2 Inlets diaphragm shut-off valve at Inlet  
 MTMHOSSP | MTMHESP 2 Inlets with process gas purging at inlet

Manifolds for use in supply systems for industrial, inert, flammable, oxidizing gases and gas mixtures.  
 Not suitable for corrosive and/or toxic gases and their mixtures.



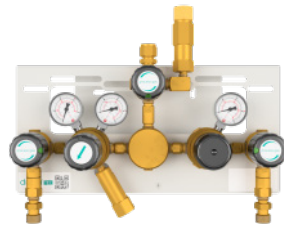
Type: MTMHOSSS00 / MTMHESSS0U

**OPTION S0**

- Shut-off valve at inlet pressure side
- No shut-off valve at outlet pressure side

**Special 0**

- No additional safety devices



Type: MTMHOSSSSU / MTMHESSSSU

**OPTION SS**

- Shut-off valve at inlet pressure side
- Shut-off valve at outlet pressure side

**Special U**

- Check valve at inlet pressure side
- Safety valve at outlet pressure side

**SPECIAL FEATURE**

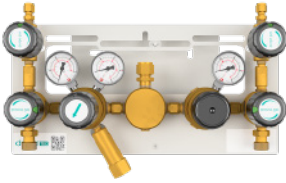
- > Metallic sealing of the shut-off valves and pressure regulators to the atmosphere by Elgiloy/Hastelloy diaphragms.
- > No increase of outlet pressure with decreasing inlet pressure due to the use of a pressure regulator with inlet pressure compensation
- > Very compact design
- > Easy installation of the manifolds by using split plates

**TECHNICAL FEATURES**

- > Shut-off valves- Design and production in accordance with ISO 10297 including oxygen ignition test for main shut-off valves
- > Pressure regulator- Design and production in accordance with ISO 7291 including oxygen ignition test
- > Additional life cycle test in accordance with CGA E-4 4.6 for the pressure regulator
- > Electrostatic chargeability test
  - Fulfills requirements according to ISO 80079-36, IEC TS 60079-32-1 and German TRGS 727
  - Usable in EX- sides zones 1 and 2 for gases with explosion risk group I, IIA, IIB, IIC

TECHNICAL DATA – MANIFOLD	
<b>Working temperature:</b>	-40 °C to +60 °C
<b>Inlet pressure:</b>	60   200   300 bar
<b>Outlet pressure:</b>	10   20   40   100 bar (preset)
<b>Nominal flow:</b>	100 m <sup>3</sup> /h (N <sub>2</sub> ) in accordance with ISO 7291 at 20 bar outlet pressure and 41 bar inlet pressure
<b>Weight of basic version:</b>	<b>MTMHOSSP   MTMHESP</b> 10.5 kg <b>MTMHOSSS   MTMHESSS</b> 9.6 kg
<b>Inlet/outlet ports:</b>	see technical drawing
<b>Leakage rate seat:</b>	less than 50 cm <sup>3</sup> /h; (23° C; 1,013 bar absolute)
<b>Leakage rate outside:</b>	less than 6 cm <sup>3</sup> /h (23° C; 1,013 bar absolute)

TECHNICAL DATA – PRESSURE REGULATOR	
<b>Filter:</b>	1x Inlet
<b>Material gas wetted parts:</b>	
<b>Regulator body:</b>	Brass
<b>Regulator diaphragm:</b>	Hastelloy
<b>Regulator seal:</b>	PVDF
<b>Regulator seat:</b>	PCTFE
<b>Relief valve seal:</b>	<b>MTMHOSS:</b> FKM <b>MTMHES:</b> EPDM
<b>Regulator poppet:</b>	Brass
<b>Pressure compensation seal:</b>	<b>MTMHOSS:</b> FKM <b>MTMHES:</b> EPDM
<b>Display pressure gauges rates at inlet (in brackets- inlet pressure rates):</b>	80 (60) 315 (200) 400 (300) bar
<b>Display pressure gauges rates at outlet (in brackets- outlet pressure rates):</b>	18 (10)   40 (20)   65 (40)   160 (100) bar
<b>Cracking pressure relief valves (in brackets – outlet pressure stage):</b>	15 (10)   30 (20)   56 (40)   140 (100) bar



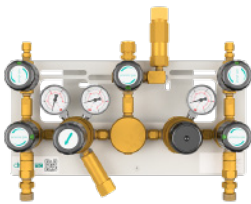
Type: MTMHOMSP0U / MTMHMSP0U

#### OPTION P0

- Process gas purging at inlet pressure side
- No shut-off valve at outlet pressure side

#### Special U

- Check valve at inlet pressure side
- Safety valve at outlet pressure side



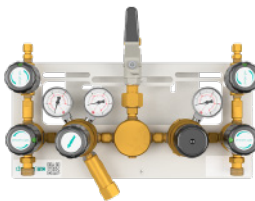
Type: MTMHOMSPSU / MTMHMSPSU

#### OPTION PS

- Process gas purging at inlet pressure side
- Shut-off valve at outlet pressure side

#### Special U

- Check valve at inlet pressure side
- Safety valve at outlet pressure side



Type: MTMHOSSPB0 / MTMHESP0B0

#### OPTION PB

- Process gas purging at inlet pressure side
- Ball valve at inlet pressure side

#### Special 0

- No additional safety devices

#### TECHNICAL DATA – SHUT-OFF VALVES

<b>Filter:</b>	1x per inlet   1x per outlet
<b>Seat diameter:</b>	7 mm
<b>Material gas wetted parts:</b>	
<b>Valve body</b>	Brass
<b>Valve seat</b>	PCTFE
<b>Valve poppet</b>	Brass
<b>Valve diaphragm</b>	Hastelloy / Elgiloy

#### TECHNICAL DATA – PLATES

<b>Ground plate:</b>	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
<b>Dimensions ground plate:</b> (Height x Width x Length)	190 x 30 x 230 mm
<b>Front plate:</b>	Stainless Steel (polished) Cut outs for replacement of gauges Free space for additional installer label (e.g. remark for next maintenance)
<b>Dimensions front plate:</b> (Height x Width x Length)	194 x 30 x 400 mm
<b>Marking on panel:</b>	Product range label QR-Code – link to product overview and from there to the instruction manual of the manifold

#### TECHNICAL DATA – SAFETY VALVE

	Spring loaded according to P.E.D. 2014/68/EU and AD2000 (A2)
<b>Opening pressure:</b>	15   30 bar
<b>Material:</b>	Housing and other metal parts made of Brass, pressure spring made of stainless steel
<b>Seat and seal:</b>	FKM / EPDM

#### TECHNICAL DATA – BALL VALVE

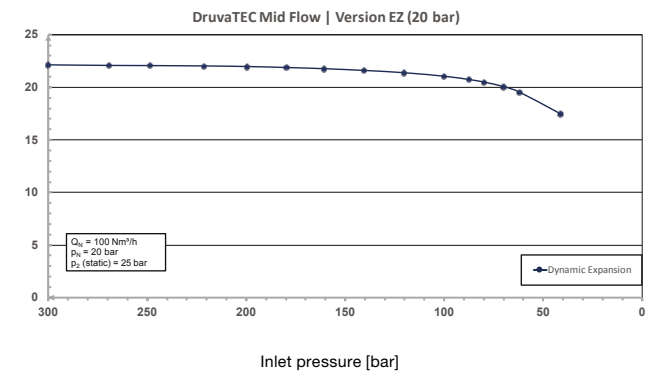
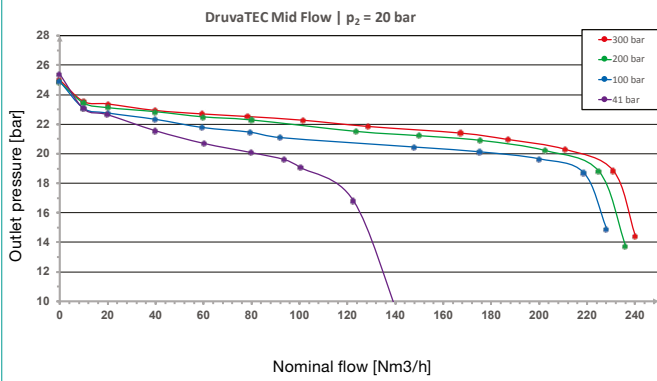
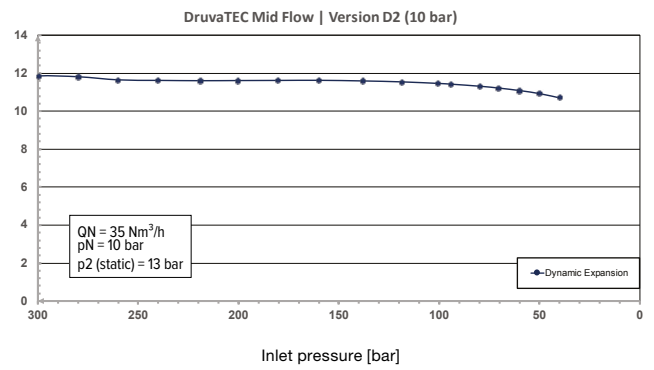
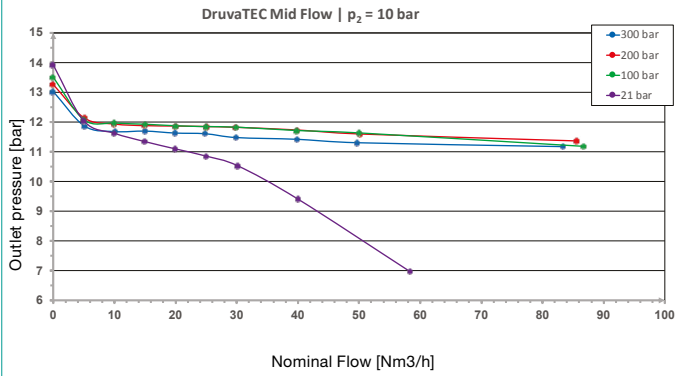
<b>Max. working pressure:</b>	20 bar
<b>Material gas wetted parts:</b>	
<b>Body</b>	Brass nickel plated
<b>Ball</b>	Brass heart chromes
<b>Ball seal</b>	PTFE
<b>Gearshaft seal</b>	FKM / EPDM
<b>Ball seal</b>	PTFE
<b>Nominal size (free passage):</b>	13 mm

#### TECHNICAL DATA – CHECK VALVE

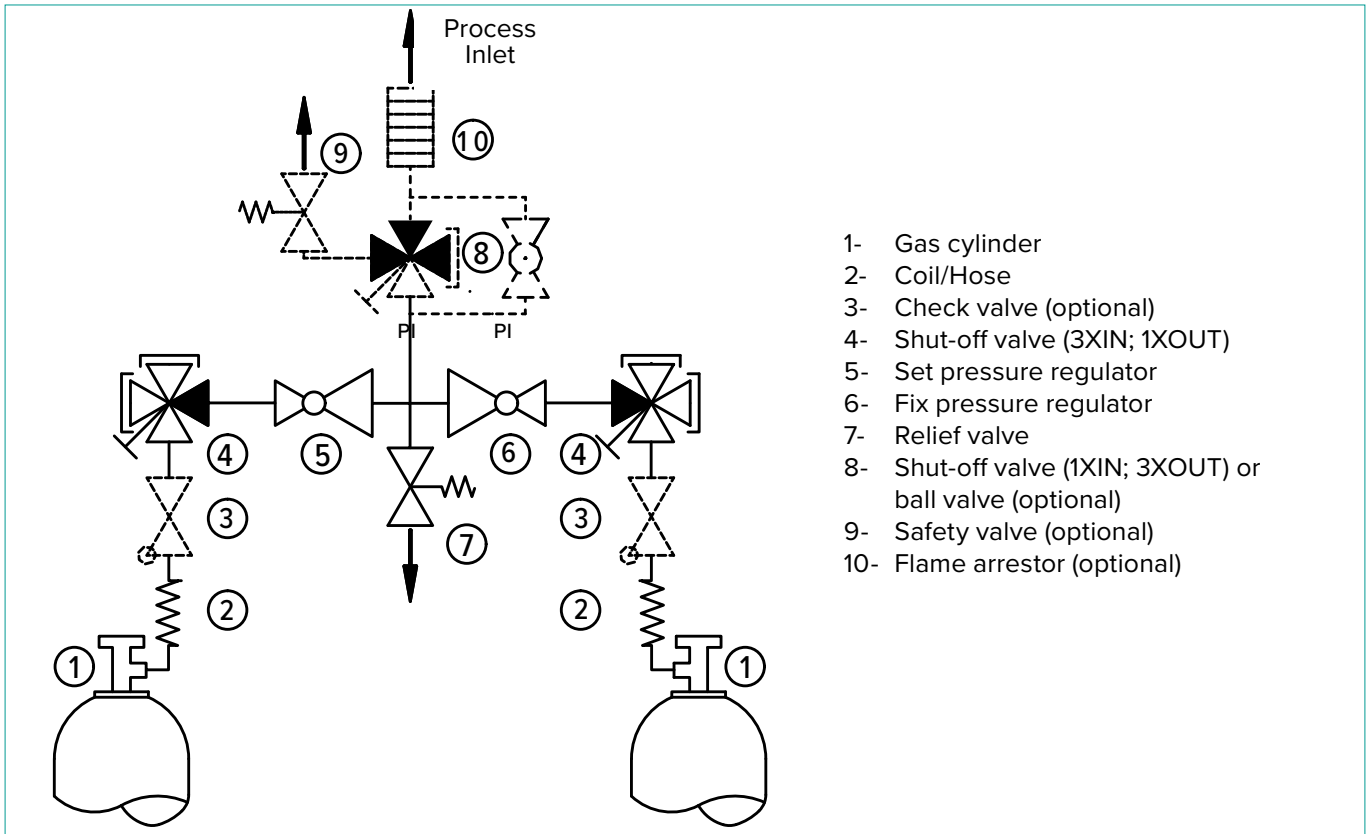
<b>Max. working pressure:</b>	300 bar
<b>Pressure drop at inlet pressure 41 bar &amp; nominal flow 100m<sup>3</sup>:</b>	3,8 bar
<b>Gas wetted parts:</b>	
<b>Valve body</b>	Brass
<b>Filter</b>	Sinter Bronze SIKA-B
<b>Valve seat</b>	Silicon nitride ceramic (Si <sub>3</sub> N <sub>4</sub> )
<b>Spring</b>	Stainless Steel 316 L

FLOW CURVES

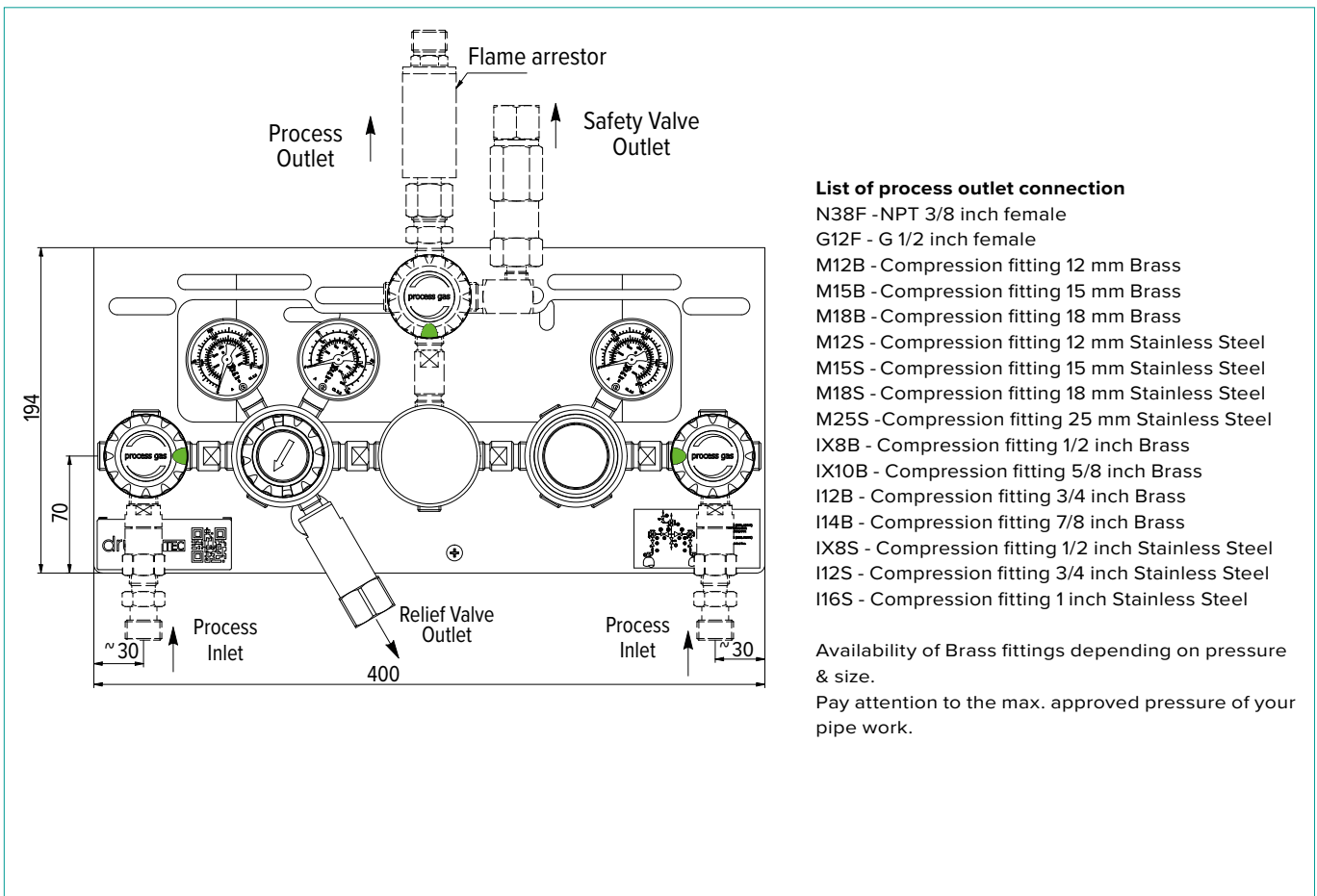
DYNAMIC EXPANSION CURVES



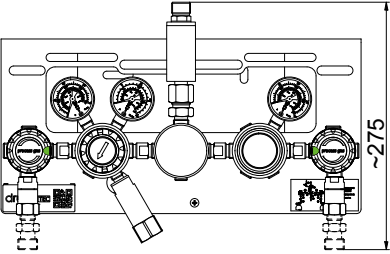
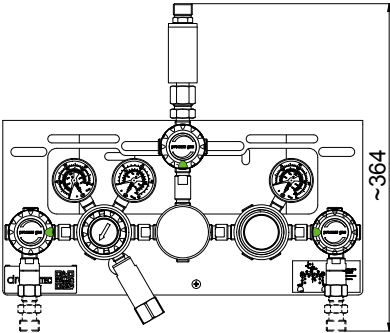
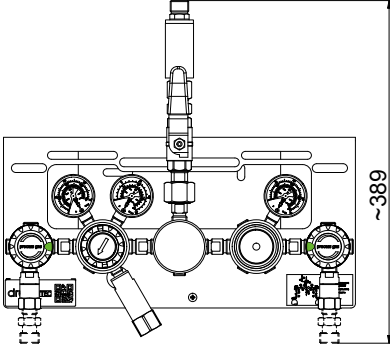
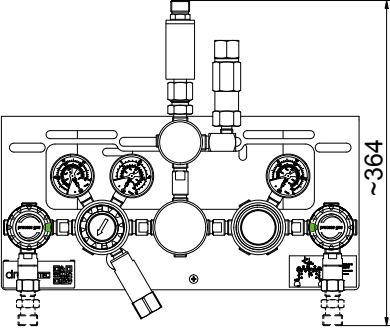
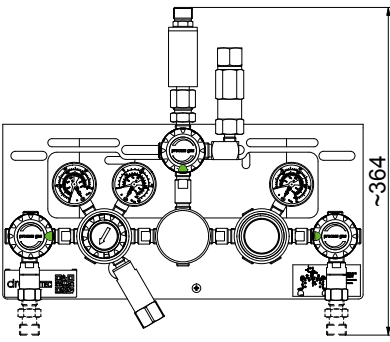
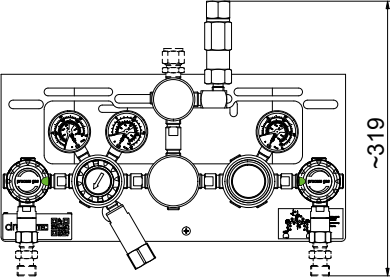
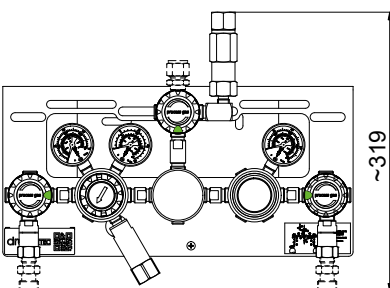
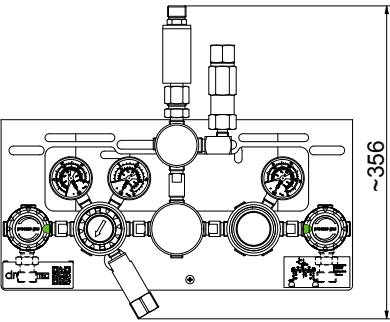
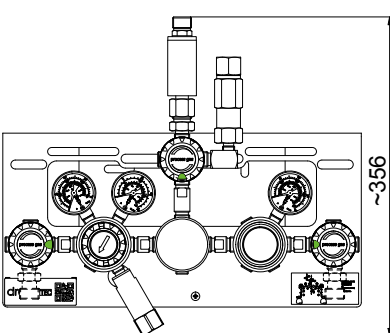
TECHNICAL DRAWING – MTMH0SSS | MTMHSSS – FLOW SCHEMATIC



TECHNICAL DRAWING – MTMH0SSS | MTMHSSS – DIMENSIONS



TECHNICAL DRAWING – MTMH0SSS | MTMHSSS – VARIANTS

<p>Option - S0 / Special G or P</p>  <p>~275</p>	<p>Option - SS / Special G or P</p>  <p>~364</p>	<p>Option - SB / Special G or P</p>  <p>~389</p>
<p>Option - S0 / Special H or Q</p>  <p>~364</p>	<p>Option - SS / Special H or Q</p>  <p>~364</p>	<p>Option - SB / Special H or Q</p> <p><i>Option Ball valve at outlet is not available with special Special H or Q</i></p>
<p>Option - S0 / Special U</p>  <p>~319</p>	<p>Option - SS / Special U</p>  <p>~319</p>	<p>Option - SB / Special U</p> <p><i>Option Ball valve at outlet is not available with special Special U</i></p>
<p>Option - S0 / Special Y or Z</p>  <p>~356</p>	<p>Option - SS / Special Y or Z</p>  <p>~356</p>	<p>Option - SB / Special Y or Z</p> <p><i>Option Ball valve at outlet is not available with special Special Y or Z</i></p>

ORDERING INFORMATION – MTMHOSSS | MTMHESSS

Example for a manifold | TEC Line | Brass | Mid Flow (100m<sup>3</sup>) Series | Semi-automatic changeover | Single stage | Diaphragm shut-off valve at inlet

MTMHOS	S	SS	C	FX	D2	BT	BT	N38F	N38F (3/8" NPT female)	0001 none plugged
MTMHES	Stages	Options	Specials	Inlet pressure (bar)	Outlet pressure (bar)	Inlet pressure gauge	Outlet pressure gauge	Process inlet connection	Process outlet connection	Purge connection
	S Single stage	SO HP * Shut-off valve	0 without	F4 60	D2 10	BT Bourdon Tube gauge	BT Bourdon Tube gauge	N38F 3/8" NPT female	further connection see technical drawing on page 4	no purge connection  this port is plugged
		SS HP * Shut-off valve LP ** Shut-off valve	C Check valve	FX 200	EZ 20	I1 Inductive contact gauge I1	I2 Inductive contact gauge I2	E2MR G3/8" male EN560 right		
		SB HP * Shut-off valve LP ** Ball valve	F Flame arrestor flammable gases	GX 300	E1 40	R5 Reed contact gauge R5	R2 Reed contact gauge R2	W2ML Whitworth 21.8x1/4 male left		
			G Check valve & Flame arrestor flammable gases		F2 100		I1 Inductive contact gauge I1	W2MR Whitworth 21.8x1/4 male right		
			H Check valve & Safety valve & Flame arrestor flammable gases ***				R5 Reed contact gauge R5			
			N Flame arrestor oxidizing gases							
			P Check valve & Flame arrestor oxidizing gases							
			Q Check valve & Safety valve & Flame arrestor oxidizing gases ***							
			S Safety valve							
			U Check valve & Safety valve ***							
			Y Flame arrestor flammable gases & Safety valve ***							
			Z Flame arrestor oxidizing gases & Safety valve ***							

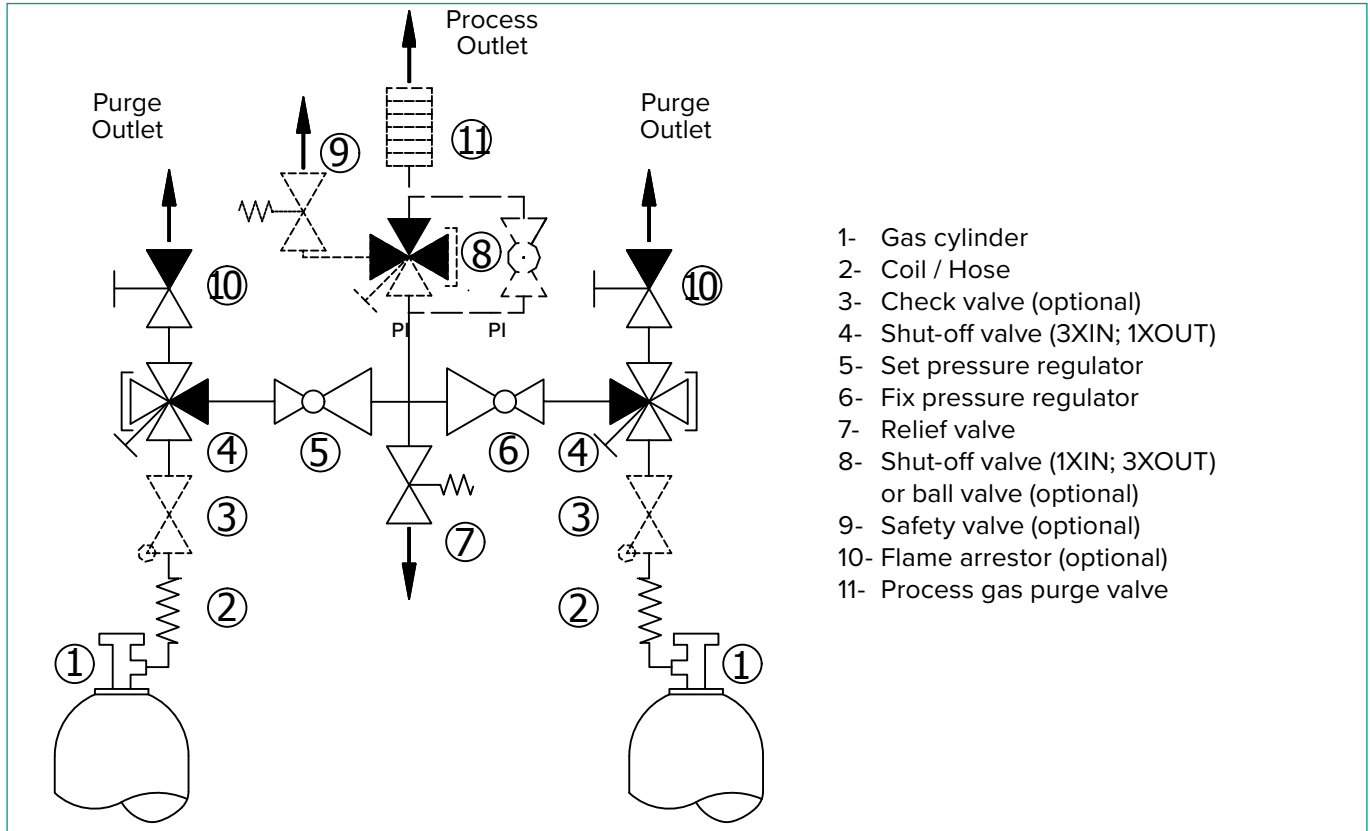
\*HP = High pressure

\*\*LP = Low pressure

\*\*\* Not available together with Option SB – Diaphragm shut-off valve at inlet & ball valve at outlet

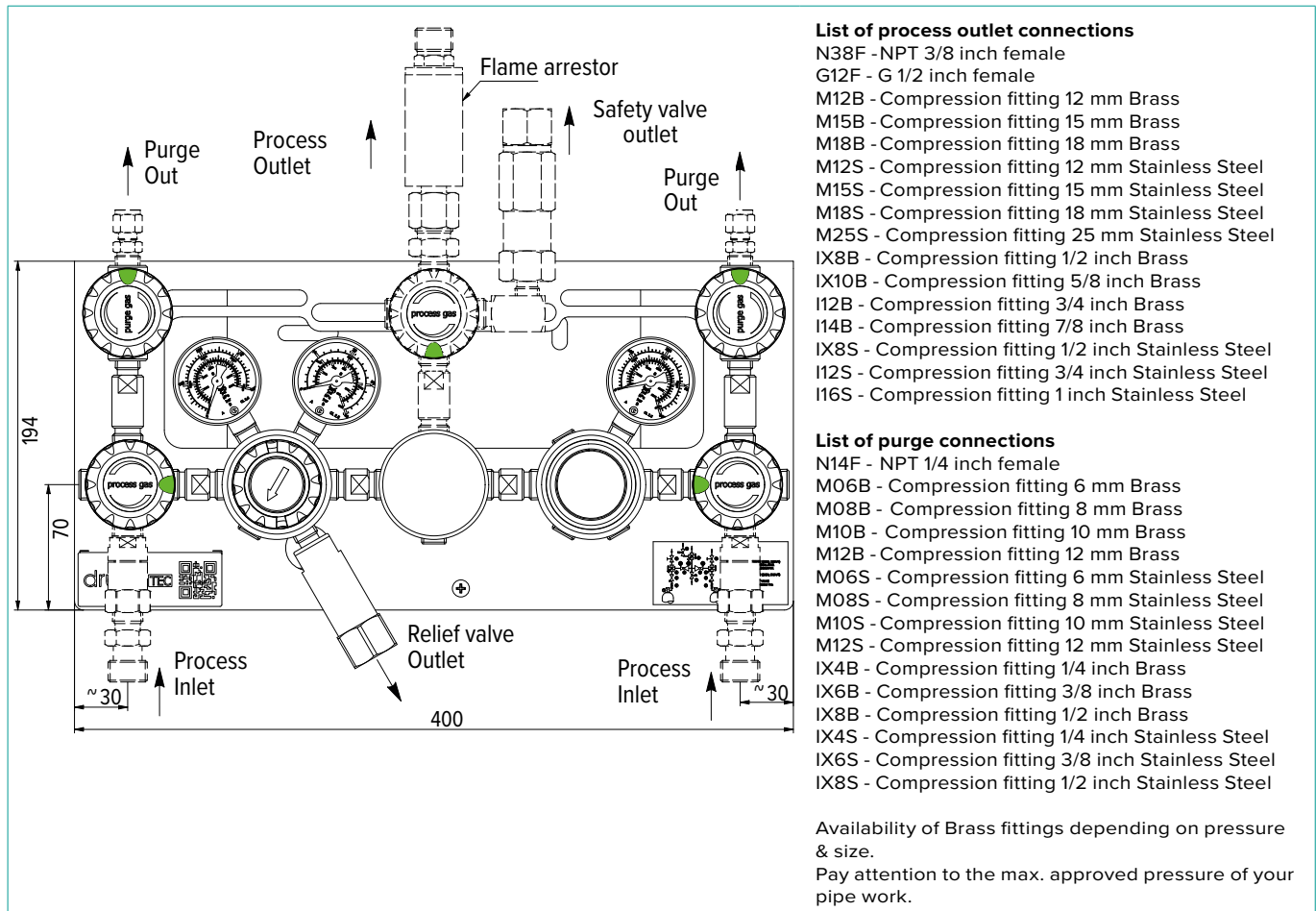
Order code (as described above) without special characters or spaces! Complete Order Code [MTMHOSSSSCFXD2BTBTN38FN38F0001](#)

TECHNICAL DRAWING – MTMH0SSP | MTMHESP – FLOW SCHEMATIC



- 1- Gas cylinder
- 2- Coil / Hose
- 3- Check valve (optional)
- 4- Shut-off valve (3XIN; 1XOUT)
- 5- Set pressure regulator
- 6- Fix pressure regulator
- 7- Relief valve
- 8- Shut-off valve (1XIN; 3XOUT) or ball valve (optional)
- 9- Safety valve (optional)
- 10- Flame arrestor (optional)
- 11- Process gas purge valve

TECHNICAL DRAWING – MTMH0SSP | MTMHESP – DIMENSIONS



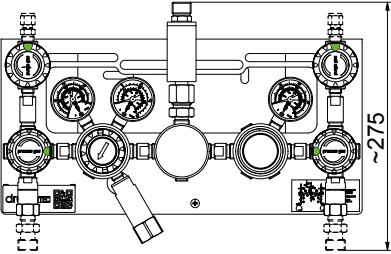
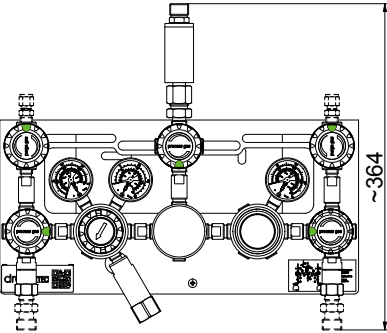
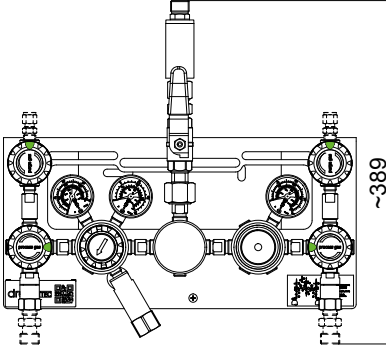
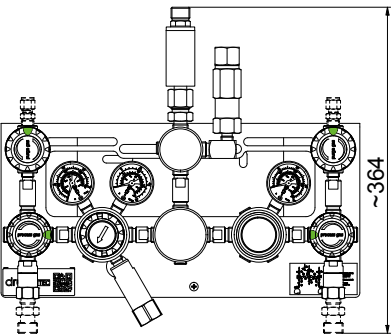
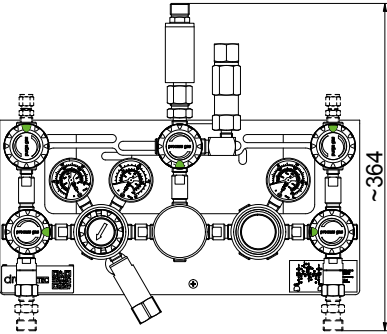
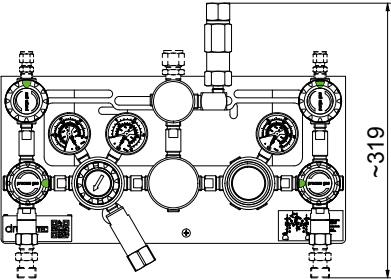
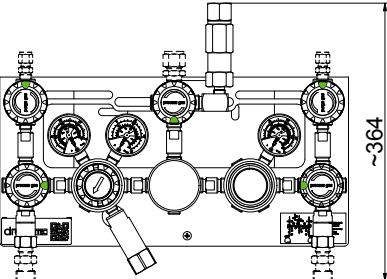
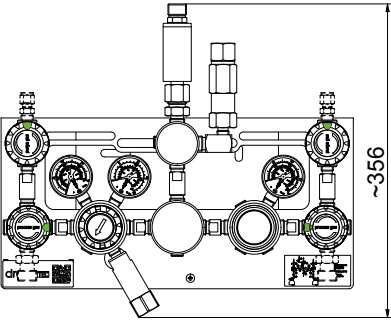
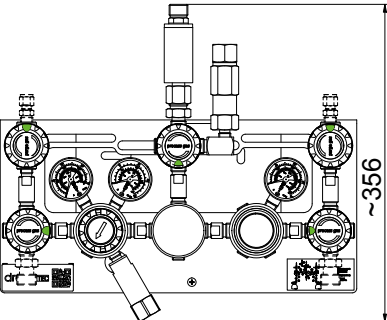
- List of process outlet connections**
- N38F - NPT 3/8 inch female
  - G12F - G 1/2 inch female
  - M12B - Compression fitting 12 mm Brass
  - M15B - Compression fitting 15 mm Brass
  - M18B - Compression fitting 18 mm Brass
  - M12S - Compression fitting 12 mm Stainless Steel
  - M15S - Compression fitting 15 mm Stainless Steel
  - M18S - Compression fitting 18 mm Stainless Steel
  - M25S - Compression fitting 25 mm Stainless Steel
  - IX8B - Compression fitting 1/2 inch Brass
  - IX10B - Compression fitting 5/8 inch Brass
  - I12B - Compression fitting 3/4 inch Brass
  - I14B - Compression fitting 7/8 inch Brass
  - IX8S - Compression fitting 1/2 inch Stainless Steel
  - I12S - Compression fitting 3/4 inch Stainless Steel
  - I16S - Compression fitting 1 inch Stainless Steel

- List of purge connections**
- N14F - NPT 1/4 inch female
  - M06B - Compression fitting 6 mm Brass
  - M08B - Compression fitting 8 mm Brass
  - M10B - Compression fitting 10 mm Brass
  - M12B - Compression fitting 12 mm Brass
  - M06S - Compression fitting 6 mm Stainless Steel
  - M08S - Compression fitting 8 mm Stainless Steel
  - M10S - Compression fitting 10 mm Stainless Steel
  - M12S - Compression fitting 12 mm Stainless Steel
  - IX4B - Compression fitting 1/4 inch Brass
  - IX6B - Compression fitting 3/8 inch Brass
  - IX8B - Compression fitting 1/2 inch Brass
  - IX4S - Compression fitting 1/4 inch Stainless Steel
  - IX6S - Compression fitting 3/8 inch Stainless Steel
  - IX8S - Compression fitting 1/2 inch Stainless Steel

Availability of Brass fittings depending on pressure & size.  
Pay attention to the max. approved pressure of your pipe work.



TECHNICAL DRAWING – MTMHÖSP | MTMHESP – VARIANTS

<p>Option - P0 / Special G or P</p>  <p>~275</p>	<p>Option - PS / Special G or P</p>  <p>~364</p>	<p>Option - PB / Special G or P</p>  <p>~389</p>
<p>Option - P0 / Special H or Q</p>  <p>~364</p>	<p>Option - PS / Special H or Q</p>  <p>~364</p>	<p>Option - PB / Special H or Q</p> <p><i>Option Ball valve at outlet is not available with special Special H or G</i></p>
<p>Option - P0 / Special U</p>  <p>~319</p>	<p>Option - PS / Special U</p>  <p>~364</p>	<p>Option - PB / Special U</p> <p><i>Option Ball valve at outlet is not available with special Special U</i></p>
<p>Option - P0 / Special Y or Z</p>  <p>~356</p>	<p>Option - PS / Special Y or Z</p>  <p>~356</p>	<p>Option - PB / Special Y or Z</p> <p><i>Option Ball valve at outlet is not available with special Special Y or Z</i></p>



ORDERING INFORMATION – MTMHOSSP | MTMHESP

Example for a manifold | TEC Line | Brass | Mid Flow (100m<sup>3</sup>) Series | Semi-automatic changeover | Single Stage | Process gas purging at inlet

MTMHOS	S	PO	C	FX	D2	BT	BT	N38F	N38F (3/8" NPT female)	N14F (1/4" NPT female)
MTMHES	Stages	Options	Specials	Inlet pressure (bar)	Outlet pressure (bar)	Inlet pressure gauge	Outlet pressure gauge	Process inlet connection	Process outlet connection	Purge connection
	S Single stage	PO HP * Process gas purging LP ** no valve	O without	F4 60	D2 10	BT Bourdon Tube gauge	BT Bourdon Tube gauge	N38F 3/8" NPT female	further connection see technical drawing on page 7	
		PS HP * Process gas purging LP ** Shut-off valve	C Check valve	FX 200	EZ 20	I1 Inductive contact gauge I1	I2 Inductive contact gauge I2	E2MR G3/8" male EN560 right		
		PB HP * Process gas purging LP ** ball valve	F Flame arrestor flammable gases	GX 300	E1 40	R5 Reed contact gauge R5	R2 Reed contact gauge R2	W2ML Whitworth 21.8x1/4 male left		
			G Check valve & Flame arrestor flammable gases		F2 100		I1 Inductive contact gauge I1	W2MR Whitworth 21.8x1/4 male right		
			H Check valve & Safety valve & Flame arrestor flammable gases ***				R5 Reed contact gauge R5			
			N Flame arrestor oxidizing gases							
			P Check valve & Flame arrestor oxidizing gases							
			Q Check valve & Safety valve & Flame arrestor oxidizing gases ***							
			S Safety valve							
			U Check valve & Safety valve ***							
			Y Flame arrestor flammable gases & Safety valve ***							
			Z Flame arrestor oxidizing gases & Safety valve ***							

\* HP = High pressure

\*\* LP = Low pressure

\*\*\* Not available together with Option PB – Process gas purging at inlet & ball valve at outlet

Order code (as described above) without special characters or spaces! Complete Order Code [MTMHOSSPOCFXD2BTBTN38FN38FN14F](#)

