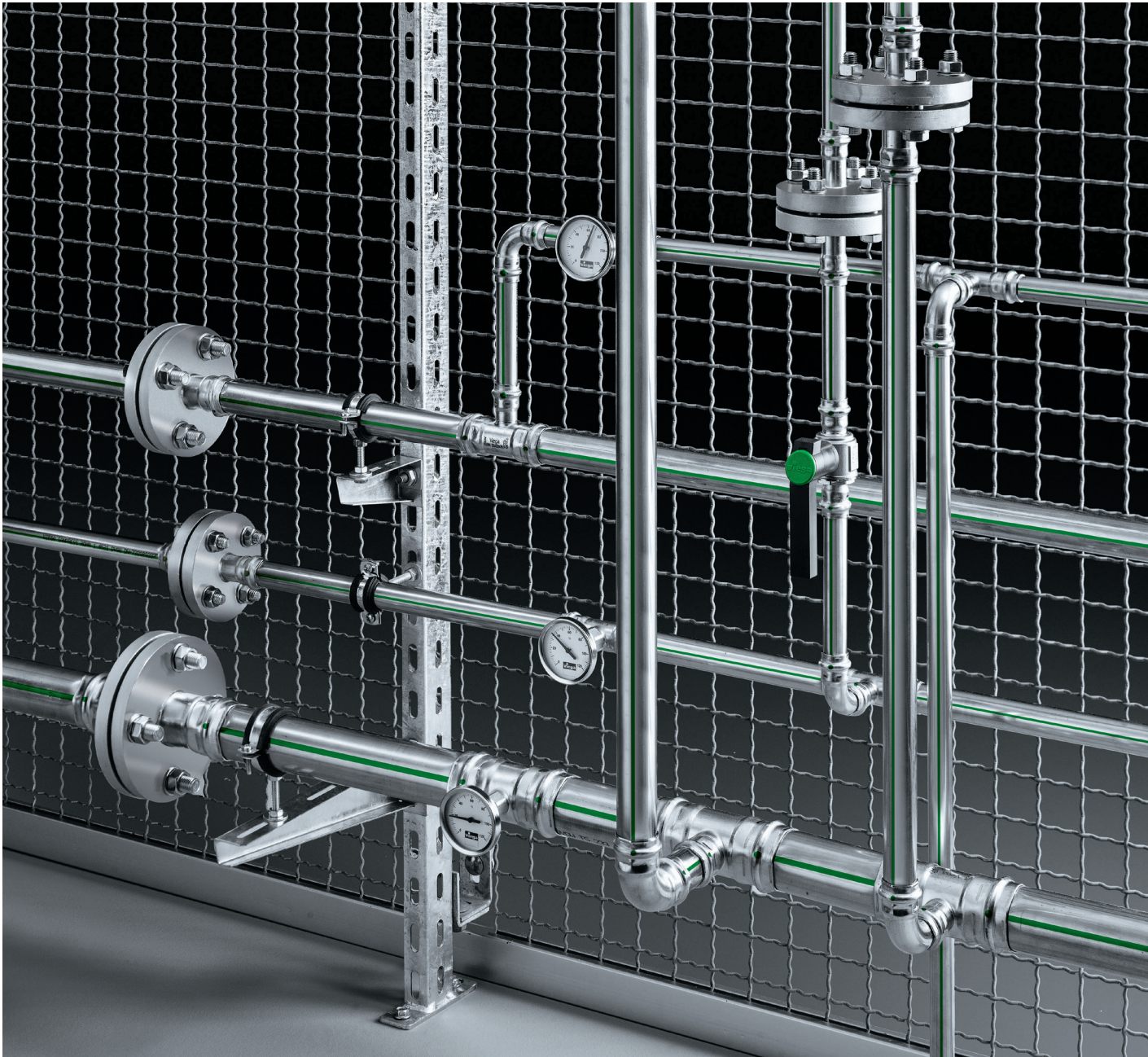


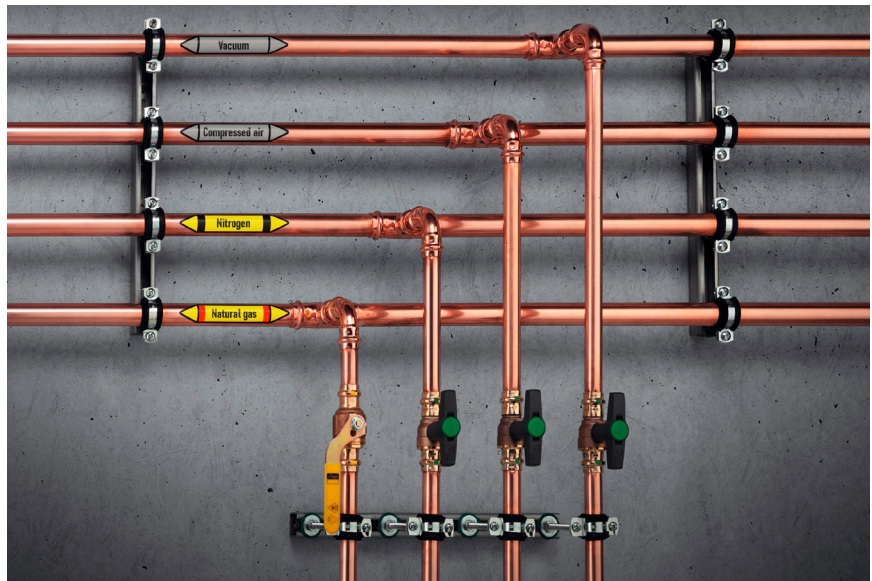
**Information for planning and execution**  
**Fields of applications**  
**for metal installation systems**





## Table of contents

<b>1</b>	<b>Categorisation of technical gases in accordance with EU Directive 2014/68/EU (Pressure Equipment Directive (PED))</b>	<b>6</b>
<b>2</b>	<b>Pipes and press connectors – transported media</b>	<b>7</b>
2.1	Waters, frost and corrosion protection, heat carriers	7
2.2	Oils	8
2.3	Compressed air assigned to the purity classes according to ISO 8573-1:2010-04	9
2.4	Gases	11
2.5	Special media - Examined and approved	13
<b>3</b>	<b>Valves – transported media</b>	<b>14</b>
3.1	Waters, frost and corrosion protection, heat carriers	14
3.2	Oils	15
3.3	Gases	16
3.4	Special media - Examined and approved	18
<b>4</b>	<b>Appendix – Form</b>	<b>19</b>
4.1	Inquiry regarding material durability	19



For many years, Viega press connecting technology with the Sanpress, Sanpress Inox, Prestabo and Profipress systems has proved its worth for use in drinking water and building services installations. Increasingly often, it is now used in industrial systems with special operating conditions in terms of pressure, temperature, and concentration of the transported media, requiring careful selection of the pipe and sealing materials.

This brochure intends to help with this selection. In special cases, please contact our Service Center to discuss whether your application is in compliance with the "intended use" of a system. For inquiries via fax, please use the annexed checklist.



Viega press connector systems are not approved for pharmaceutical and food installations.

The contents of this product information are not binding. We reserve the right to changes reflecting new insights and technical progress.

## Conversion Bar/Pascal

bar	mbar	Pa	kPa	hPa	MPa
1	1000	100000	100	1000	0.1
0.001	1	100	0.1	1	0.0001
0.01	10	1000	1	10	0.001
0.1	100	10000	10	100	0.01

## Sealing elements – Technical data

Sealing element - short name	Technical designation	Viega press connector system application	Colour
EPDM	Ethylene propylene diene rubber	Sanpress Inox/ Sanpress/Profipress/ Megapress	polished black
HNBR	Acrylonitrile butadiene rubber	Sanpress Inox G/ Profipress G/ Megapress G	yellow
FKM	Fluor rubber	Sanpress Inox/ Sanpress/Profipress/ Megapress S	matt black



# 1 Categorisation of technical gases in accordance with EU Directive 2014/68/EU (Pressure Equipment Directive (PED))

with the aid of (EC) Regulation No. 1272/2008 (CLP regulation (classification, labelling, packaging))

**Group 2 (fluids that cannot be categorised in Group 1)**

Gas	Type	H200 codes
Helium	Noble gas	280
Neon	Noble gas	280
Argon	Noble gas	280
Krypton	Noble gas	280
Xenon	Noble gas	280
Nitrogen	Inert gas	280
Forming gas, dry/inert gas	Inert gas	280
Carbon dioxide	Others	280
Synthetic air	Others	280
Coarse vacuum	Vacuum	n/a

**Group 1 (hazardous fluids)**

Gas	Type	Information	H200 codes
Acetylene	Fuel gas	Unstable alkyne <sup>3)</sup>	220 / 230 / 280
Hydrogen	Fuel gas	Fuel gas in its simplest form	220 / 280
Methane	Fuel gas	Alkane <sup>1)</sup>	220 / 280
Ethane	Fuel gas	Alkane	220 / 280
Propane	Fuel gas	Alkane	220 / 280
Butane	Fuel gas	Alkane	220 / 280
Ethene (ethylene)	Fuel gas	Alkene <sup>2)</sup>	220 / 280
Propene (propylene)	Fuel gas	Alkene	220 / 280
Liquid gas (LPG)	Fuel gas	Mixture of gases	220 / 280
Natural gas	Fuel gas	Mixture of gases	220 / 280
Carbon monoxide	Oxidising gas		270 / 280
Laughing gas	Oxidising gas		270 / 280
Oxygen	Oxidising gas		270 / 280
Carbogen	Oxidising gas		270 / 280

<sup>1)</sup> aliphatic saturated hydrocarbon

<sup>2)</sup> aliphatic unsaturated hydrocarbon with double bond

<sup>3)</sup> aliphatic unsaturated hydrocarbon with triple bond

H200 codes	Physical hazards
H220	Extremely flammable gas
H230 (= EUH006)	May react explosively even in the absence of air
H270	May cause or intensify fire: oxidizer
H280	Contains gas under pressure; may explode if heated

H sets	Types of hazard
H200	Physical hazards
H300	Health hazards
H400	Environmental hazards

## 2 Pipes and press connectors – transported media

### 2.1 Waters, frost and corrosion protection, heat carriers

System name		Profipress S		Sanpress		Tempo-nox		Prestabo		Mega-press		Mega-press S		Seapress	
System name	Pipe material	Profipress S	Profipress S	Sanpress	Sanpress	Tempo-nox	Tempo-nox	Prestabo	Prestabo	Mega-press	Mega-press S	Mega-press S	Mega-press S	Seapress	Seapress
Medium	Comment	P <sub>max</sub> [MPa]	T <sub>max</sub> [°C]	1.4521	1.4401	1.4521	1.4401	galvanised	steel	steel	thick-walled	steel	thick-walled	CuNiFe	CuNiFe
Drinking water	According to DIN 1988-200 and EN 806-2 material selection according to DIN EN 12502-1 <sup>18)</sup>	1.0	80	1.4521	1.4401	1.4521	1.4401	galvanised	steel	✓	✓ <sup>9)</sup>	EPDM	EPDM	✓	✓
Treated water (no drinking water)	Fully desalinated, deionised, demineralised, distilled (open system)	1.6	80	1.4521	1.4401	1.4521	1.4401	galvanised	steel	✓ <sup>17)</sup>	✓ <sup>17)</sup>	EPDM	EPDM	✓	✓
Cooling water, closed circuit	Open systems available on request	≥ -25	80	1.4521	1.4401	1.4521	1.4401	galvanised	steel	✓ <sup>11)</sup>	✓ <sup>10)</sup>	EPDM	EPDM	✓	✓
Vapour	Low pressure steam units	≤ 0.1	120	1.4521	1.4401	1.4521	1.4401	galvanised	steel	✓ <sup>1)</sup>	✓ <sup>1)</sup>	EPDM	EPDM	✓ <sup>1)</sup>	✓ <sup>1)</sup>
Well water	Requirements in acc. with DWO	1.6	80	1.4521	1.4401	1.4521	1.4401	galvanised	steel	✓ <sup>2)</sup>	✓ <sup>2)</sup>	EPDM	EPDM	✓ <sup>2)</sup>	✓ <sup>2)</sup>
Pump hot water heating systems	Requirements in acc. with DWO	1.6	105	1.4521	1.4401	1.4521	1.4401	galvanised	steel	✓ <sup>10)</sup>	✓ <sup>10)</sup>	EPDM	EPDM	✓ <sup>10)</sup>	✓ <sup>10)</sup>
<b>Anti-freeze / corrosion protection / cold and heat carrier</b>															
Anti-freeze, cooling brines concentration of 50%		1.6	-25 to 105	1.4521	1.4401	1.4521	1.4401	galvanised	steel	✓ <sup>11)</sup>	✓ <sup>11)</sup>	EPDM	EPDM	✓ <sup>11)</sup>	✓ <sup>11)</sup>
Potassium Acetate/-formiat brine		1.6	-25 to 105	1.4521	1.4401	1.4521	1.4401	galvanised	steel	✓ <sup>11)</sup>	✓ <sup>11)</sup>	EPDM	EPDM	✓ <sup>11)</sup>	✓ <sup>11)</sup>

<sup>1)</sup> sealing elements replaced for FKM  
<sup>2)</sup> without additives  
<sup>3)</sup> corrosion protection acc. to AGI Q151  
<sup>7)</sup> corrosion protection for the pipes acc. to AGI Q151; thanks to their zinc-nickel coating, the Megapress connectors do not require any corrosion protection  
<sup>11)</sup> The use of Sanpress and Sanpress Inox press connectors is recommended. When using Profipress press connectors made of copper the connection points between pipe and press connector have to be protected with a corrosion prevention agent.  
<sup>17)</sup> Resistance < 1 MΩ · cm (at 25 °C)  
<sup>8)</sup> following coordination with the Attendorn factory  
<sup>9)</sup> only applicable for Megapress silicon bronze adapter, model 4213.2  
<sup>10)</sup> for operating temperatures of -5 °C to +140 °C  
<sup>18)</sup> Temperature up to max. 95 °C over a period of max. 60 min

Medium	Comment	P <sub>max</sub> [MPa]	T <sub>max</sub> [°C]	Profipress		Sanpress				Profi-press G	Sanpress Inox G	Tempo-nox	Prestabo	Mega-press	Mega-press S	Mega-press G	Sea-press
				Profi-press	Sanpress	1.4521	1.4520	1.4401	1.4521	1.4520	1.4401	1.4401	1.4520	stainless steel	copper	stainless steel 1.4401	stainless steel 1.4520
Pipe material				copper	stainless steel	1.4521	1.4520	1.4401	1.4521	1.4520	1.4401	stainless steel 1.4401	steel galvanised	steel thick-walled		CuNiFe	
Connector material				copper gunmetal Silicon bronze	stainless steel	gunmetal Silicon bronze						stainless steel 1.4301	steel galvanised	steel zinc-nickel plated		CuNiFe	
Sealing element				EPDM		EPDM					HNBR	EPDM	EPDM	FKM	HNBR	EPDM	
Mineral oils SAE	15–108 mm/½–4 inch	1.6	70								✓ <sup>4)</sup>		✓	✓			
Fuel oil acc. to DIN 51603-1 Diesel acc. to DIN EN 590	according to TRbF (German Technical Regulations for Flammable Liquids) 12–54 mm/½–2 inch	0.5	40							✓							
Palm oil											✓ <sup>4)</sup>			✓ <sup>8)</sup>	✓ <sup>8)</sup>		
Rapeseed oil											✓ <sup>4)</sup>			✓ <sup>8)</sup>	✓ <sup>8)</sup>		
Soy oil											✓ <sup>4)</sup>			✓ <sup>8)</sup>	✓ <sup>8)</sup>		
Sunflower oil											✓ <sup>4)</sup>			✓ <sup>8)</sup>	✓ <sup>8)</sup>		
Biodiesel	EN 14214		70									✓ <sup>1)</sup>		✓			
Palm oil heating			90									✓ <sup>1)</sup>					

<sup>1)</sup> sealing elements replaced for FKM

<sup>4)</sup> in connection with Viega stainless steel pipe 1.4521, 1.4520 and 1.4401

<sup>8)</sup> following coordination with the Attendorn factory



## 2.3 Compressed air assigned to the purity classes according to ISO 8573-1:2010-04

system name	pipe material	Sealing element <sup>12)</sup>	p <sub>max</sub> [MPa]	T <sub>max</sub> [°C]	Solid particles <sup>13)</sup>										Residual moisture content										Oil content class				
					0	1	2	3	4	5	6	7	X	0	1	2	3	4	5	6	7	8	9	X	0	1	2	3	4
Profipress	Copper pipe acc. to DIN EN 1057	EPDM			0	1	2	3	4	5	6	7	X	0	1	2	3	4	5	6	7	8	9	X	0	1	2	3	4
		FKM			0	1	2	3	4	5	6	7	X	0	1	2	3	4	5	6	7	8	9	X	0	1	2	3	4
		HNBR			0	1	2	3	4	5	6	7	X	0	1	2	3	4	5	6	7	8	9	X	0	1	2	3	4
Sanpress	1.4401 model 2203/2203XL	EPDM			0	1	2	3	4	5	6	7	X	0	1	2	3	4	5	6	7	8	9	X	0	1	2	3	4
		FKM <sup>15)</sup>			0	1	2	3	4	5	6	7	X	0	1	2	3	4	5	6	7	8	9	X	0	1	2	3	4
		EPDM			0	1	2	3	4	5	6	7	X	0	1	2	3	4	5	6	7	8	9	X	0	1	2	3	4
Sanpress	1.4521 model 2205/2205XL	EPDM			0	1	2	3	4	5	6	7	X	0	1	2	3	4	5	6	7	8	9	X	0	1	2	3	4
		FKM <sup>15)</sup>			0	1	2	3	4	5	6	7	X	0	1	2	3	4	5	6	7	8	9	X	0	1	2	3	4
		EPDM			0	1	2	3	4	5	6	7	X	0	1	2	3	4	5	6	7	8	9	X	0	1	2	3	4
Sanpress	1.4520 model 2204/2204XL	EPDM			0	1	2	3	4	5	6	7	X	0	1	2	3	4	5	6	7	8	9	X	0	1	2	3	4
		FKM <sup>15)</sup>			0	1	2	3	4	5	6	7	X	0	1	2	3	4	5	6	7	8	9	X	0	1	2	3	4
		EPDM			0	1	2	3	4	5	6	7	X	0	1	2	3	4	5	6	7	8	9	X	0	1	2	3	4
Sanpress Inox	1.4401 model 2203/2203XL	EPDM	1,6	60	0	1	2	3	4	5	6	7	X	0	1	2	3	4	5	6	7	8	9	X	0	1	2	3	4
		FKM <sup>15)</sup>			0	1	2	3	4	5	6	7	X	0	1	2	3	4	5	6	7	8	9	X	0	1	2	3	4
		EPDM			0	1	2	3	4	5	6	7	X	0	1	2	3	4	5	6	7	8	9	X	0	1	2	3	4
Sanpress Inox	1.4521 model 2205/2205XL	EPDM			0	1	2	3	4	5	6	7	X	0	1	2	3	4	5	6	7	8	9	X	0	1	2	3	4
		FKM <sup>15)</sup>			0	1	2	3	4	5	6	7	X	0	1	2	3	4	5	6	7	8	9	X	0	1	2	3	4
		EPDM			0	1	2	3	4	5	6	7	X	0	1	2	3	4	5	6	7	8	9	X	0	1	2	3	4
Sanpress Inox G	1.4401 model 2203/2203XL	EPDM			0	1	2	3	4	5	6	7	X	0	1	2	3	4	5	6	7	8	9	X	0	1	2	3	4
		FKM <sup>15)</sup>			0	1	2	3	4	5	6	7	X	0	1	2	3	4	5	6	7	8	9	X	0	1	2	3	4
		HNBR			0	1	2	3	4	5	6	7	X	0	1	2	3	4	5	6	7	8	9	X	0	1	2	3	4
Sanpress Inox LF	1.4401 model 2203/2203XL	EPDM			0	1	2	3	4	5	6	7	X	0	1	2	3	4	5	6	7	8	9	X	0	1	2	3	4
		FKM <sup>15)</sup>			0	1	2	3	4	5	6	7	X	0	1	2	3	4	5	6	7	8	9	X	0	1	2	3	4
		EPDM			0	1	2	3	4	5	6	7	X	0	1	2	3	4	5	6	7	8	9	X	0	1	2	3	4
Sanpress Inox LF	1.4521 model 2205/2205XL	EPDM			0	1	2	3	4	5	6	7	X	0	1	2	3	4	5	6	7	8	9	X	0	1	2	3	4
		FKM <sup>15)</sup>			0	1	2	3	4	5	6	7	X	0	1	2	3	4	5	6	7	8	9	X	0	1	2	3	4
		EPDM			0	1	2	3	4	5	6	7	X	0	1	2	3	4	5	6	7	8	9	X	0	1	2	3	4
Sanpress Inox LF	1.4520 model 2204/2204XL	EPDM			0	1	2	3	4	5	6	7	X	0	1	2	3	4	5	6	7	8	9	X	0	1	2	3	4
		FKM <sup>15)</sup>			0	1	2	3	4	5	6	7	X	0	1	2	3	4	5	6	7	8	9	X	0	1	2	3	4
		EPDM			0	1	2	3	4	5	6	7	X	0	1	2	3	4	5	6	7	8	9	X	0	1	2	3	4

✓ = For use

✗ = Not for use

○ = Conditional use, consultation with the Service Center required

<sup>12)</sup> EPDM sealing element for oil concentrations < 25 mg/m<sup>3</sup>
<sup>13)</sup> Recommendation for classes 1 to 3: Flush the line before commissioning

<sup>15)</sup> The EPDM factory-fitted sealing element can be exchanged for a FKM sealing element on-site

system name	pipe material	Sealing element <sup>12)</sup>	p <sub>max</sub> [MPa]	T <sub>max</sub> [°C]	Solid particles <sup>13)</sup>										Residual moisture content class										Oil content class									
					0	1	2	3	4	5	6	7	X	0	1	2	3	4	5	6	7	8	9	X	0	1	2	3	4	X	0	1	2	3
<b>Seapress</b>	Copper nickel wrought alloy to DIN 86019 WL 2.1972.11 or WL 2.1972.22	EPDM			0	1	2	3	4	5	6	7	X	0	1	2	3	4	5	6	7	8	9	X	0	1	2	3	4	X				
		FKM <sup>15)</sup>			0	1	2	3	4	5	6	7	X	0	1	2	3	4	5	6	7	8	9	X	0	1	2	3	4	X				
<b>Temponox</b>	1.4520 model 2204/2204XL	EPDM			0	1	2	3	4	5	6	7	X	0	1	2	3	4	5	6	7	8	9	X	0	1	2	3	4	X				
		FKM <sup>15)</sup>			0	1	2	3	4	5	6	7	X	0	1	2	3	4	5	6	7	8	9	X	0	1	2	3	4	X				
<b>Prestabo</b>	Externally galvanised model 1103/1103XL	EPDM			X	X	X	X	X	X	X	X	X	0	1	2	3	4	5	6	7	8	9	X	0	1	2	3	4	X				
		FKM <sup>15)</sup>			X	X	X	X	X	X	X	X	X	0	1	2	3	4	5	6	7	8	9	X	0	1	2	3	4	X				
	EPDM			X	X	X	X	X	X	X	X	X	0	1	2	3	4	5	6	7	8	9	X	0	1	2	3	4	X					
	FKM <sup>15)</sup>			X	X	X	X	X	X	X	X	X	0	1	2	3	4	5	6	7	8	9	X	0	1	2	3	4	X					
<b>Prestabo LF</b>	Externally and internally galvanised model 1106/1106XL	EPDM		60	X	X	X	X	X	X	X	X	X	0	1	2	3	4	5	6	7	8	9	X	0	1	2	3	4	X				
		FKM <sup>15)</sup>		1,6	X	X	X	X	X	X	X	X	X	0	1	2	3	4	5	6	7	8	9	X	0	1	2	3	4	X				
<b>Prestabo LF</b>	Externally galvanised model 1103/1103XL	EPDM			X	X	X	X	X	X	X	X	X	0	1	2	3	4	5	6	7	8	9	X	0	1	2	3	4	X				
		EPDM			X	X	X	X	X	X	X	X	X	0	1	2	3	4	5	6	7	8	9	X	0	1	2	3	4	X				
<b>Megapress</b>	Steel pipes according to DIN EN 10255	EPDM			X	X	X	X	X	X	X	X	X	0	1	2	3	4	5	6	7	8	9	X	0	1	2	3	4	X				
		FKM			X	X	X	X	X	X	X	X	X	0	1	2	3	4	5	6	7	8	9	X	0	1	2	3	4	X				
<b>Megapress S</b>	DIN EN 10216-1	EPDM			X	X	X	X	X	X	X	X	X	0	1	2	3	4	5	6	7	8	9	X	0	1	2	3	4	X				
<b>Megapress G</b>	DIN EN 10217-1	HNBR			X	X	X	X	X	X	X	X	X	0	1	2	3	4	5	6	7	8	9	X	0	1	2	3	4	X				

✓ = For use

✗ = Not for use

○ = Conditional use, consultation with the Service Center required

<sup>12)</sup>EPDM sealing element for oil concentrations < 25 mg/m<sup>3</sup>

<sup>13)</sup>Recommendation for classes 1 to 3: Flush the line before commissioning

<sup>15)</sup>The EPDM factory-fitted sealing element can be exchanged for a FKM sealing element on-site

## 2.4 Gases

Medium	Comment	P <sub>max</sub> [MPa]	T <sub>max</sub> [°C]	Profipress		Sanpress				Profipress G		Sanpress Inox G		Tempnox		Prestabo		Mega-press S		Mega-press G		
				stainless steel	copper	1.4520	1.4521	1.4401	1.4521	1.4521	1.4520	1.4520	1.4520	1.4520	1.4520	1.4520	1.4520	1.4520	1.4520	1.4520	1.4520	1.4520
Natural gas																						
Liquid gases, propane, butane, methane	according to G 260	0.5																				
Acetylene	Test pressure 2.4 MPa 15–28 mm	0.15																				
Argon	12–54 mm / 3/8–2 inch 64–108 mm / 2 1/2–4 inch	1.6 1.0																				
Carbogen	CO <sub>2</sub> + O <sub>2</sub> dry 12–54 mm / 3/8–2 inch 64–108 mm / 2 1/2–4 inch	1.6 1.0																				
Oxygen – O <sub>2</sub>	Keep free of oil and grease 12–54 mm / 3/8–2 inch	1.0	60																			
Nitrogen – N <sub>2</sub>	Downstream of the vaporiser 12–54 mm / 3/8–2 inch 64–108 mm / 2 1/2–4 inch	1.6 1.0																				
Hydrogen – H <sub>2</sub>	12–108 mm / 3/8–2 inch	0.5																				
Carbon dioxide – CO <sub>2</sub>	dry 12–54 mm 64–108 mm	1.6 1.0																				
Carbon monoxide – CO	Stainless steel parts not permitted 12–54 mm 64–108 mm	1.6 1.0																				

### Gases\*

\* Purity requirements acc. to DIN EN 437 available on request

<sup>1)</sup> sealing elements replaced for FKM

<sup>5)</sup> in case of HTR (higher thermal resistance) requirement, max. permitted operating pressure p<sub>max</sub> = 0.1 MPa

<sup>7)</sup> BAM certified

<sup>8)</sup> following coordination with the Attendorn factory

<sup>14)</sup> TÜV certified

<sup>16)</sup> ≤ DN 25 / also applies for Sanpress Inox LF (lubs-free)



## 2.5 Special media - Examined and approved

System name		Profipress	Sanpress					Profi-press G	Sanpress Inox G	Tempo-inox	Prestabo	Mega-press	Mega-press S	Mega-press G	Sea-press		
System name	pipe material	Profipress	Sanpress					Profi-press G	Sanpress Inox G	Tempo-inox	Prestabo	Mega-press	Mega-press S	Mega-press G	Sea-press		
Medium	Comment	P <sub>max</sub> [MPa]	T <sub>max</sub> [°C]	1.4520	1.4521	1.4520	1.4401	1.4521	1.4401	Stainless steel	copper	gunmetal Silicon bronze	Stainless steel 1.4401	Stainless steel 1.4520	steel galvanised	steel thick-walled	CuNiFe
Urea solution	Max. concentration 40 %	1.0	40	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Ethanol			25	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Methanol	Caution: toxic!			✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Condensate	from gas-powered calorific value devices, not from oil-powered calorific value devices!	1.6	105	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Condensate	of vapour			✓ <sup>6)</sup>	✓ <sup>6)</sup>	✓ <sup>6)</sup>	✓ <sup>6)</sup>	✓ <sup>6)</sup>	✓ <sup>6)</sup>	✓ <sup>6)</sup>	✓ <sup>6)</sup>	✓ <sup>6)</sup>	✓ <sup>6)</sup>	✓ <sup>6)</sup>	✓ <sup>6)</sup>	✓ <sup>6)</sup>	✓
Glycerine triacetate		0.1	20	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Caustic soda	30 % aqueous solution	1.0		✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Caustic soda	50 % aqueous solution		60	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Acetone	Liquid	0.5	-10 to 40	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Ammoniac	Medium free from CO <sub>2</sub> + H <sub>2</sub> O Caution: toxic!	0.2	25	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Biogas – before bio-gas treatment	45–70 % CH <sub>4</sub> / 20–45 % CO <sub>2</sub> / H <sub>2</sub> S < 30 mg/m <sup>3</sup>	0.5	70														
Biogas – after biogas treatment	according to G260 and G262																✓ <sup>5)</sup>
Fermenter heating	Substrate temperature 65 °C	1.0	105														

\* Purity requirements acc. to DIN EN 437 available on request

<sup>5)</sup> in case of HTR (higher thermal resistance) requirement, max. permitted operating pressure p<sub>max</sub> = 0.1 MPa

<sup>6)</sup> without contamination

<sup>8)</sup> following coordination with the Attendorn factory

### 3 Valves – transported media

#### 3.1 Waters, frost and corrosion protection, heat carriers

Product name		Easytop ball valve	Free-flow valve	Easytop Inox ball valve	Profipress G gas ball valve	Gas ball valve
<b>Model no.</b>		2270, 2270.4, 2270.10, 2275, 2275.3, 2275.4	2242, 2278	2370	2670, 2670.4, 2671, 2671.3	G2101
<b>Press connector material</b>		gunmetal Silicon bronze		stainless steel	gunmetal Silicon bronze	brass
<b>Seal</b>		EPDM	EPDM	EPDM	HNBR	
<b>Medium</b>	<b>Comment</b>	<b>P<sub>max</sub> [MPa]</b>	<b>T<sub>max</sub> [°C]</b>			
Drinking water	Requirement acc. to DWO <sup>18)</sup>	1.0	80	✓	✓	✓
Treated water (no drinking water)	Fully desalinated, deionised, demineralised, distilled (open system)			✓		
Cooling water, closed circuit	Open systems available on request	1.6	≥-25	✓	✓	✓
Well water	Requirements in acc. with DWO		80	✓	✓	✓
Pump hot water heating systems	in acc. with DIN EN 12 828		105	✓	✓	✓

Product/manufacturer		Anti-freeze / corrosion protection / cold and heat carrier					
Antifrogen N / Clariant		✓	✓	✓	✓	✓	✓
Antifrogen L / Clariant		✓	✓	✓	✓	✓	✓
Antifrogen Sol (solar installations) / Clariant		✓	✓	✓	✓	✓	✓
Ethylene glycol (Ethan-1.2-dio)		✓	✓	✓	✓	✓	✓
Propylene glycol (1.2-Propandiol)		✓	✓	✓	✓	✓	✓
Tyfoxit / Tyforop-Chemie		✓	✓	✓	✓	✓	✓
Tyfofor (L) / Tyforop-Chemie		✓	✓	✓	✓	✓	✓
TEMPER <sup>®</sup> Antifrogen KF / Clariant Glysofor KF / Wittig		✓	✓	✓	✓	✓	✓

<sup>18)</sup> Temperature up to max. 95 °C over a period of max. 60 min





### 3.3 Gases

Gases*		Product name						
		Easytop ball valve	Free-flow valve	Easytop inox ball valve	Profipress G gas ball valve	Gas ball valve		
Medium	Comment	$p_{max}$ [MPa]	$T_{max}$ [°C]	Easytop ball valve	Free-flow valve	Easytop inox ball valve	Profipress G gas ball valve	Gas ball valve
Compressed air	Oil concentration $\leq 25$ mg/m <sup>3</sup> 12–54 mm	1.6		2270, 2270.4, 2270.10, 2275, 2275.3, 2275.4	2270.1, 2270.2, 2275.1, 2275.2, 2275.5, 2275.6	2370	2670, 2670.4, 2671, 2671.3	G2101
	64–108 mm			gunmetal Silicon bronze	stainless steel	gunmetal Silicon bronze	brass	
	Oil concentration $\geq 25$ mg/m <sup>3</sup> 12–54 mm			EPDM	EPDM	HNBR		
	64–108 mm							
Natural gas	according to G 260	0.5						
Liquid gases, propane, butane, methane		1.6	60					
	Argon							
Carbogen	CO <sub>2</sub> + O <sub>2</sub> dry	1.6						
		1.0						
Nitrogen – N <sub>2</sub>	Downstream of the vaporiser	1.6						
		1.0						
Hydrogen – H <sub>2</sub>		0.5						
	dry	1.6						
Carbon dioxide – CO <sub>2</sub>		1.0						
	Stainless steel parts not permitted	1.6						
Carbon monoxide – CO		1.6						
		1.0						

\* Purity requirements acc. to DIN EN 437 available on request

<sup>5)</sup> in case of HTR (higher thermal resistance) requirement, max. permitted operating pressure  $p_{max} = 0.1$  MPa

Medium		Comment	P <sub>abs</sub> [MPa]	T <sub>max</sub> [°C]	Product name		Easytop ball valve		Free-flow valve	Easytop Inox ball valve	Profipress G gas ball valve	Gas ball valve
					Model no.	Press connector material	Seal	gunmetal Silicon bronze	gunmetal Silicon bronze	stainless steel	gunmetal Silicon bronze	brass
Coarse vacuum	P <sub>abs</sub> = 1hPa			70		2270, 2270.4, 2270.10, 2275, 2275.3, 2275.4	2270.1, 2270.2, 2275.1, 2275.2, 2275.5, 2275.6	2242, 2278	2370	2670, 2670.4, 2671, 2671.3	G2101	
Forming gas, dry/inert gas	Ar + CO <sub>2</sub> (e.g. argon) 15–54 mm	1.6					✓		✓	✓	✓	✓
	64–108 mm	1.0							✓			
Nitrous oxide (laughing gas)	12–54 mm	1.6							✓			
	64–108 mm	1.0										
Ethane	12–54 mm	1.6								✓		✓
	64–108 mm	1.0										
Ethene (ethylene)	12–54 mm	1.6								✓		✓
	64–108 mm	1.0										
Helium	15–54 mm	1.6		60						✓		✓
	64–108 mm	1.0										
Krypton	15–54 mm	1.6					✓		✓			
	64–108 mm	1.0										
Neon	15–54 mm	1.6					✓		✓			
	64–108 mm	1.0										
Xenon	15–54 mm	1.6					✓		✓			
	64–108 mm	1.0										
Synthetic air	12–54 mm	1.6					✓		✓			✓
	64–108 mm	1.0										

\* Purity requirements acc. to DIN EN 437 available on request

### 3.4 Special media - Examined and approved

Medium		Comment	Product name		Easytop ball valve		Free-flow valve	Easytop Inox ball valve	Profipress G gas ball valve	Gas ball valve
			P <sub>max</sub> [MPa]	T <sub>max</sub> [°C]	2270, 2270.4, 2270.10, 2275, 2275.3, 2275.4	2270.1, 2270.2, 2275.1, 2275.2, 2275.5, 2275.6				
Urea solution	Max. concentration 40 %		1.0	40			2242, 2278	2370	2670, 2670.4, 2671, 2671.3	G2101
Ethanol				25	✓	✓			gunmetal Silicon bronze	brass
Methanol	Caution: toxic!									
Condensate	from gas-powered calorific value devices, not from oil-powered calorific value devices!		1.6	110						
Condensate	of vapour				✓ <sup>6)</sup>	✓ <sup>6)</sup>				
Caustic soda	50% aqueous solution		1.0	60						
Acetone	liquid			-10 to 40	✓	✓				
Biogas – after biogas treatment	according to G260 and G262		0.5	70						✓ <sup>5)</sup>
Fermenter heating	Substrate temperature 65 °C outside of the fermenter		1.0	105	✓	✓				

\* Purity requirements acc. to DIN EN 437 available on request

<sup>5)</sup> in case of HTR (higher thermal resistance) requirement, max. permitted operating pressure p<sub>max</sub> = 0.1 MPa

<sup>6)</sup> without contamination

## 4 Appendix – Form

### 4.1 Inquiry regarding material durability

#### Inquiry regarding material durability


**Global Service & Consulting-Team Application**

Phone +49 (0) 2722 61 5666

material-request@viega.com

Customer		Building project	
Customer no.			
Customer/company*		Customer/company*	
Contact persons*		Contact persons	
Street*		Street	
Postal code/town*		Postal code/town	
Country*		Country	
Phone*		Phone	
Email*		Email	
		Potential*	

Information about the installation system	
Planned system*	
Dimension*	

Information about the medium			
Supplier/manufacturer*			
Trade name/designation*			
Application/function*			
Concentration of the medium*			
Other components			
	Time interval (Sec.)	Duration of the condition	
max. temp.*			
min. temp.*			
max. pressure*			
min. pressure*			
max. pH value			
min. pH value			

Information about the system				
Function of the complete system				
Installation site*	<input type="checkbox"/> Indoor			<input type="checkbox"/> Outdoor
Type of installation*	<input type="checkbox"/> open			<input type="checkbox"/> closed
Stagnation*	<input type="checkbox"/> yes		<input type="checkbox"/> no	
Ambient conditions*	<input type="checkbox"/> Interior spaces	<input type="checkbox"/> Country air	<input type="checkbox"/> City air	<input type="checkbox"/> Sea air
	<input type="checkbox"/> Industrial air	<input type="checkbox"/> Other:		
desired service life*	<input type="checkbox"/> < 1 year	<input type="checkbox"/> 1–5 years	<input type="checkbox"/> 5–10 years	<input type="checkbox"/> > 10 years

Free text field

\*) Mandatory fields

 **Viega GmbH & Co. KG**

Viega Platz 1  
57439 Attendorn  
GERMANY

Technical Advice  
Phone +49 2722 61-1100  
[service-technik@viega.de](mailto:service-technik@viega.de)

Planning software  
Phone +49 2722 61-1700  
[service-software@viega.de](mailto:service-software@viega.de)

[info@viega.com](mailto:info@viega.com)  
[viega.com](http://viega.com)

566263 · 2024-04 · V30 · VPN240147

