Viega Commonly Approved Applications

Metal Systems

Media[1]	System Operating Conditions			Size, Product Line, Material, and Sealing Element[2]												
				CTS						IPS						
				ProPress			ProPress Stainless			MegaPress Stainless			MegaPress		MegaPressG
				Copper			316			304	316		Carbon Steel		
	Comments	Max. Pressure (psig)	Temperature (°F)	EPDM ●	FKM[3] ○	HNBR[3] ○	EPDM ●	FKM[3] ○	HNBR[3] ○	FKM ○	EPDM ●	FKM ○	EPDM ●	FKM ○	HNBR ●
Water / Liquids															
Hot and cold potable water	Test pressure 600 psi	300 for ProPress Copper 200 for ProPress Stainless and all MegaPress	See note[4]	✓			✓				✓				
Rainwater / greywater				✓	✓		✓	✓		✓	✓	✓			
Chilled water	≤50% ethylene / propylene glycol			✓	✓		✓	✓		✓	✓	✓	✓	✓	
Hydronic heating water[8]	≤50% ethylene / propylene glycol			✓	✓		✓	✓		✓	✓	✓	✓	✓	
Reverse osmosis water	<1 MΩ		32°–250°				✓	✓		✓	✓	✓			
Treated water	Fully desalinated, deionized, demineralized, distilled (open system)						✓	✓		✓	✓	✓			
Paraffin wax		200	Max. 100°					✓		✓		✓			
Methyl ethyl ketone							✓				✓				
Isopropyl alcohol			Ambient[6]				✓	✓		✓	✓	✓	✓	✓	
Nitric acid	Concentration ≤10%						✓	✓		✓	✓	✓			
Phosphoric acid	Concentration ≤25%						✓	✓			✓	✓			
Fire sprinkler	NFPA 13, 13D, 13R	175		✓			✓	✓							
Steam	Residential	5	Max. 227°	✓[5]	✓[5]		✓[5]	✓[5]		✓[5]	✓[5]	✓[5]	✓[5]	✓[5]	
	Low pressure	15	Max. 250°		✓[5]			✓[5]		✓[5]		✓[5]		✓[5]	
Fuels / Oils / Lubricants															
Ethanol	Pure grain alcohol	200	Ambient[6]	✓			✓				✓				
Mineral oil								✓		✓		✓		✓	✓
Lube oil	Petroleum based		Max. 150°			✓		✓	✓	✓		✓		✓	✓
Diesel exhaust fluid[11]			Min. 10°[4]				✓	✓		✓	✓	✓			
Biodiesel	ASTM D6751	140	Max. 150°					✓				✓		✓	
Propane		125	-40°–180°												✓[10]
Butane															✓[10]
Natural gas	Primarily methane														✓[10]
Heating fuel oil	ASTM D396, ASTM D3699		Max. 100°			✓		✓	✓	✓		✓		✓	✓[11]
Diesel fuel	ASTM D975					✓		✓	✓	✓		✓		✓	✓[11]
Kerosene			Max. 68°					✓		✓		✓		✓	
Gear oil	Lubricant		See note[4]					✓		✓		✓		✓	✓
Automatic transmission fluid								✓		✓		✓		✓	✓
Hydraulic oil								✓		✓		✓		✓	✓[7]
Engine oil								✓		✓		✓		✓	✓[7, 11]
Engine coolant							✓	✓		✓	✓	✓	✓	✓	
Waste oil	Including used cooking oil							✓		✓		✓		✓	✓[7, 11]
Gases															
Compressed air	Oil concentration ≤25 mg/m³	200	Max. 140°	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓[5]	✓[5]	✓[5]
	Oil concentration >25 mg/m³				✓	✓			✓	✓		✓		✓[5]	✓[5]
Nitrogen – N_2	Including synthetic air			✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Carbon dioxide – CO_2	Dry			✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Carbon monoxide – CO				✓	✓	✓									
Argon – Ar				✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Ammonia	Anhydrous		Max. 120°				✓				✓				
	Ammonia environment[9]			✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Oxygen – O_2	Non-medical Keep free of oil and grease	140	Max. 140°	✓			✓	✓			✓		✓		
Hydrogen – H_2		125		✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Acetylene	Test pressure 350 psi	20	Ambient[6]				✓	✓		✓	✓	✓	✓	✓	✓
Vacuum	Minimum absolute pressure	750 µm Hg	Max. 160°	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
	Maximum differential pressure	29.2" Hg													
Special Media															
Methanol		200	75°				✓				✓				
Latex paint			32°–250°				✓	✓			✓	✓			
Urea solution	Concentration ≤40%	140	100°				✓				✓				
Caustic soda	Concentration ≤50%		140°				✓				✓				
Acetone	Liquid	70	-14°–104°	✓			✓				✓				
Hydrogen peroxide – H_2O_2	Concentration ≤50%	200	140°				✓	✓		✓	✓	✓			

Plastic Systems

Media[1]	System Operating Conditions		Product Line
	Comments	Pressure Rating by Temperature	PureFlow PEX/Tubing, Barrier PEX[12], PureFlow Press, PureFlow Crimp, ManaBloc
Potable water / rainwater / greywater		160 psig at 73°F	✓
Chilled water / hydronic heating water[12]	≤50% ethylene / propylene glycol	100 psig at 180°F	✓
		80 psi at 200°F[12]	

[1] It is recommended that all systems be clearly labeled with the media being conveyed.
[2] All Viega systems must be used with the manufacturer's recommended sealing element.
[3] For applications requiring ProPress or ProPress Stainless with FKM or HNBR sealing elements, follow proper procedures to remove the factory-installed EPDM sealing element and replace it with a Viega FKM or HNBR sealing element.
[4] System pressure and temperature ranges depend on the sealing element. Any ranges listed in the table above will be overruled by the sealing element limits as follows:
- EPDM: 0°F–250°F
- FKM: 14°F–284°F, with temperature spikes (24 hours) up to 356°F
- HNBR: -40°F–180°F

[5] System must contain adequate condensate drainage.
[6] Ambient temperatures should be taken as normal operating conditions for the applications not to exceed sealing element limitations.
[7] HNBR sealing elements are not recommended for silicone-based oils.
[8] It is a Viega engineering best practice to consider switching to an FKM sealing element for heating applications using EPDM where the media will be running continuously at 200°F or above.
[9] All copper or copper alloy components that are exposed in ammonia environments require lacquer or paint coating.
[10] Compliant with CSA 6.32 / ANSI LC-4.
[11] MegaPressG fittings with HNBR sealing elements are compliant with standard UL 180 for combustible liquid applications.
[12] Tubing with an oxygen barrier should be used for systems with ferrous components.

This document is subject to updates. For the most current Viega technical literature, please visit www.viega.us.

The use of the system for applications other than those listed or outside of these parameters must be approved by the Viega Technical Services Department: 1-866-838-8714 or techsupport@viega.us.

Viega products are designed to be installed by licensed and trained plumbing and mechanical professionals who are familiar with Viega products and their installation. **Installation by non-professionals may void Viega LLC's warranty.**

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