

KENCO ENGINEERING COMPANY

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MODEL KMVR, KMVU, KHVR, AND KHVU GAUGE VALVES INSTALLATION / OPERATION INSTRUCTIONS

GENERAL DESCRIPTION

Kenco Flat Glass Gauge Valves are simple, rugged instruments engineered and constructed throughout to give you accurate liquid level readings for the life of the vessel. We offer a complete range of valves suitable for most applications. Like any instrument, Kenco gauge valves must be installed, operated, and maintained with reasonable care and due regard for the application, and the environment.

MODEL CONFIGURATOR

K ☐ V ☐ - ☐ - ☐ ☐ - ☐ ☐

Valve Type _____

Gauge Connection Style _____

Construction _____

Gauge Connection Size _____

Gauge Connection Type _____

Vessel Connection Size _____

Vessel Connection Type _____

Valve Type		Gauge Connection Style		Valve Construction	
Type	Code	Style	Code	Construction	Code
Medium Pressure	M	Rigid	R	Carbon Steel	C
High Pressure	H	Union	U	Stainless Steel Wetted	W
				All Stainless Steel	A
				Special	X

Gauge Connection Size/Type				Vessel Connection Size/Type			
Size	Code	Type	Code	Size	Code	Type	Code
1/2"	50	NPTF	N	1/2"	50	Union (NPTM)	M
3/4"	75	Union (NPTM)	M	3/4"	75	Union (NPTF)	W
		Union (NPTF)	W	1"	1	Socketweld (Male)	T
		Socketweld (Male)	T	1-1/2"	15	150# ANSI Flange	A
		150# ANSI Flange	A	2"	2	300# ANSI Flange	B
		300# ANSI Flange	B	3"	3	600# ANSI Flange	C
		600# ANSI Flange	C	4"	4	900# ANSI Flange	D
		900# ANSI Flange	D	6"	6	1500# ANSI Flange	E
		1500# ANSI Flange	E	8"	8	2500# ANSI Flange	F
		2500# ANSI Flange	F				

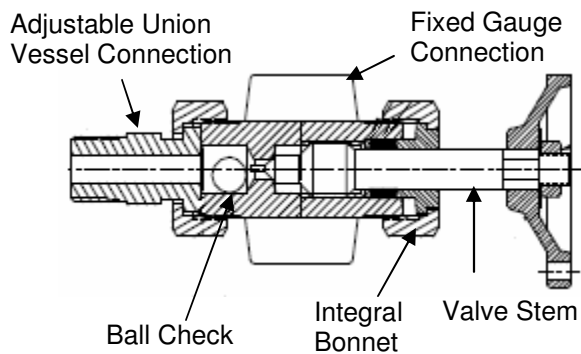
INSPECTION & DELIVERY

Upon receiving the valves, check all components carefully for damage incurred in shipping. Notify the shipping company immediately of any such damage, and request a damage inspection. Confirm that the valve model number and pressure/temperature ratings (located on the nameplate) match the application conditions. Also, confirm that the valve materials are compatible with the process media and the environmental conditions.

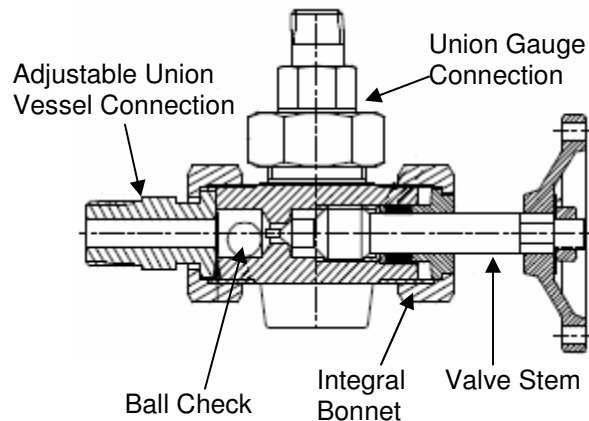
CAUTION – Kenco valves are not to be used with lethal substances as defined by ASME Section VIII.

VALVE CONSTRUCTION

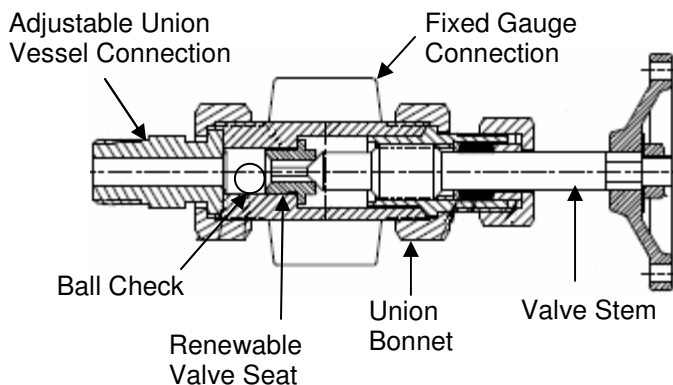
Model KMVR Valve



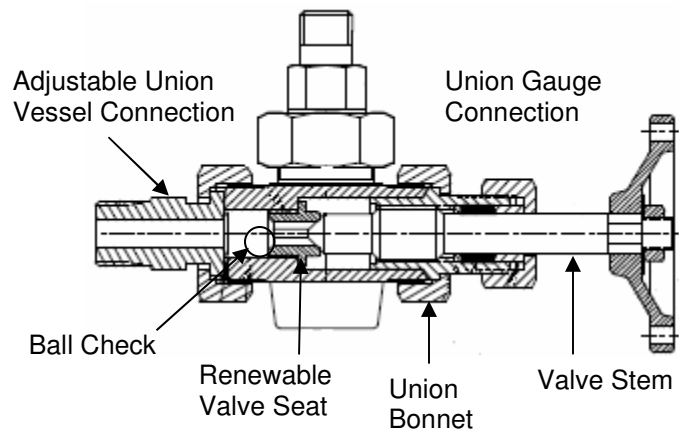
Model KMVU Valve



Model KHVR Valve



Model KHVU Valve



BEFORE YOU INSTALL THE GAUGE VALVES

Consider the following:

- To avoid imposing piping strains on the valves, connect and mount the valves so that they do not support the piping.
- Support brackets should be considered for gauges over four feet in length or over 100 pounds in weight, especially when the gauge is exposed to vibration. These support brackets will prevent overloading the connecting valves and piping and prevent damage to the gauge from excessive vibration.
- Always provide shutoff valves between the gauge and vessel. Kenco automatic ball check valves are recommended to provide protection against physical injury and loss of product if glass breakage should occur. These valves also provide a means to isolate the gauge for maintenance.

OPERATION

CAUTION – Rapid opening of connecting valves can cause glass breakage and / or possible injury to personnel. Gauges should be brought into service slowly.

For protection during shipping, the packing gland is loosened and the stem is in the open position. Adjust the stem and packing after installation. Do not tighten the packing any more than is needed to stop leakage. Slowly open the valves carefully, and wait until the gauge is fully warmed up before completely opening the valves. Kenco

CAUTION – While the valves are in operation they must be in their fully open position. A partially open valve will prevent the automatic ball checks from seating, which could result in physical injury to personnel and loss of product.

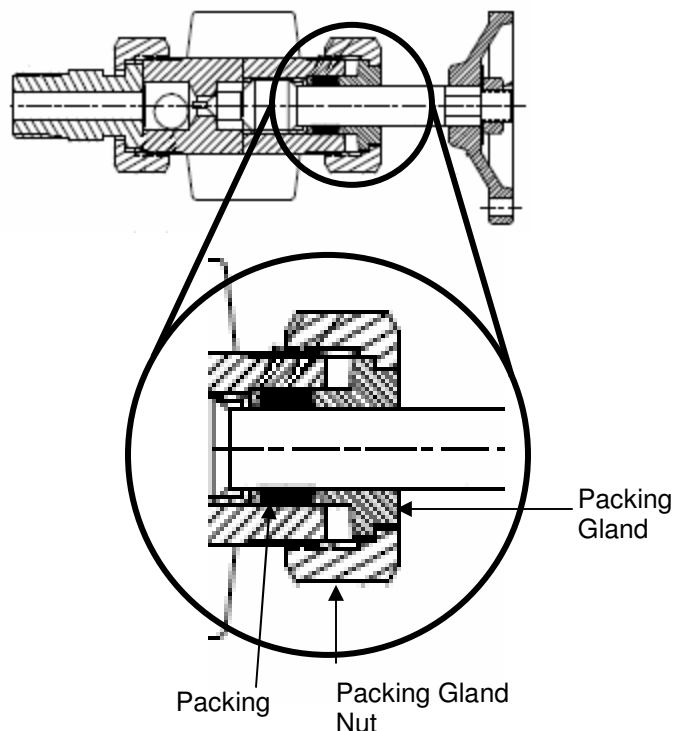
MAINTENANCE

CAUTION – Prior to any disassembly of valves, first be sure that the valves are relieved of all internal pressure, and that the temperature is ambient, and has been drained and/or purged of any fluids. Failure to do this may result in a sudden release of pressure and/or physical injury to personnel.

CAUTION – When the gauge glass fails causing the ball checks to seat, closing the valve will allow fluid to flow from the vessel during that period when the stem pin pushes the ball check off its seat and before the stem has contacted the seat. Personnel can be injured if they don't realize what is happening. Fires could result if hazardous liquids are involved.

A. Replace Stem Packing

Close valves and drain fluid. Disengage packing gland nut and pull the packing gland out of stuffing box. Remove and discard old packing and insert new packing. Put the packing gland and packing gland nut into position, and tighten the nut. The packing gland nut should be tightened enough to stop leakage around the stem without causing excessive binding of the stem during operation.



B. Replace Valve Seat (KHVR & KHVU Valves Only)

Close valves and drain fluid. Disengage the sleeve nut from the valve body and remove the stem, sleeve, sleeve nut, packing gland, and packing gland nut as a unit from the valve (see page #4 for details). Use a standard 5/8" socket wrench to remove the seat. Before replacing the seat, apply lubricant (Molykote "G" or equivalent) to the threads to prevent seizure of the seat to the valve body. Tighten the seat well, to prevent leakage. Replace the stem unit in the valve body and tighten the sleeve nut.

WARNING –During system shutdown, it is best to leave shutoff valves open. The equipment then cools and depressurizes along with the rest of the system. Keeping valves closed during shutdown can trap high pressure liquid in the valves.

