kim valves

by Hakohav Valves

DIAPHRAGM VALVES

valves for life

ABOUT US

QUALITY

RELIABILITY

DURABILITY

Kim Valves started up as Hakohav Valves in 1963 by two young visionary engineers who set their goal to become a leading player in the global valves industry.
What started over 50 years ago, in a small workshop has developed over the years to be a highly respected company with advanced modern manufacturing facilities and a worldwide reputation for having long lasting valves.
The combination of innovative technologies including machining, assembly lines, oven painting, special coating techniques and state of the art testing machinery, assures accuracy, durability and reliability and enables us to offer comprehensive solutions designed to withstand the most demanding applications.
Our skilled and dedicated engineers are here to find creative solutions for the most challenging applications; each one is an expert in their field and with accumulated knowledge of decades.
As a manufacturer, we are committed to the industry's most demanding standards allowing our clients to benefit from our experience and expertise.
The company's long lasting products are known for their reliability and durability and can be found in some of the biggest desalination plants in the world as well as in the chemical industry, water infrastructures and firefighting applications.
We strive for constant improvement of our products and services through great teamwork and constant market analysis.
Our success is built upon understanding our customers' needs, earning their trust and loyalty by finding innovating solutions.
As part of the growth strategy, the company relaunched its international brand, making **Kim Valves** its leading international identity as of 2015.

Since 1956 KIM diaphragm valves are worldwide known for their benefits in providing long lasting cost effective solutions for a wide range of corrosive and abrasive fluids.

Available with manual or pneumatic actuators, as Weir or Straight Through type, in variety of body materials, lining, coatings and diaphragm grades.
KIM diaphragm valves provides also a unique bonnet design with over closure protection system that helps prolong the diaphragm life cycle.

CE ISO 9001:2008 REGISTERED

QUALITY THROUGH EXPERIENCE-SINCE 1963

FEATURES

Handwheel
With comfortable grip design

Indicator
For clear indication from any angle

Stem
High Precision machined stainless steel for corrosion resistance

Diaphragm replacement
With valve in line

Coating
UV resistance for environmental protection

Overclosure Protection Bonnet
prevents diaphragm tampering and prolongs diaphragm's life

Lubrication
Lubricated for life- special design to prevent dust and dirt penetration

Diaphragm
Flexible membrane against abrasives. provides positive closure and isolates the bonnet from the fluid

Body
Smooth interior reduces pressure drop

Model	General characteristics	Applications
Straight Through	• Smooth flow minimum turbulence. • Excellent corrosion and abrasion resistance. • Suitable for dense fluids, ideal for handling slurries. • Wide selection of lining materials. • Full bore gives high flow performance. • Low head loss.	Sludge, slurries and other viscous fluids
Weir	• Self-draining, prevents residues build up and contamination. • Suitable for control and on/off services on corrosive applications • For vacuum applications. • Can be installed in any position.	Dangerous liquid or gas Food-processing applications

ST- STRAIGHT THROUGH

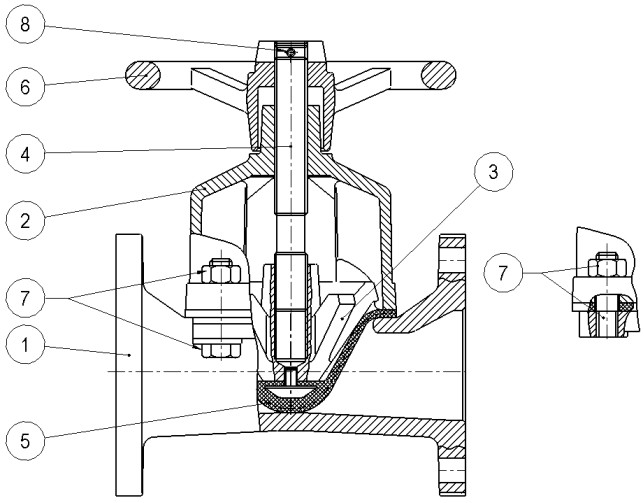
- Body construction — ST 1"-8"
- Face to face — EN 558-1 Series 7 (BS 5156)
EN 558-1 Series 1 (DIN 3202 F1)
MSS-SP88*
- Flanges — ASA 150, BS 4504 (EN 1092-1 PN 10,16), BSTD, BSTE, DIN (PN 10, 16)
- Temperature range — -40°C to 175°C according to lining and coating options
- Operation — Handwheel
Electric actuator
Pneumatic actuator
- External coating — Epoxy min 80 micron
- Diaphragm — Natural Rubber/ EPDM/ Butyl Rubber/ Nitrile Rubber/ Neoprene/ Hypalon/ Viton
- Tightness test — According to EN 12266-1:2003
- Material certificate — EN 10204.3.1
- Standard — BS EN 13397

"MSS-SP 88N available in 2"-3", 5"-8"

Maximum Permissible Working Pressure		
1"-4"	5"-6"	8"
PN 10 / 145 PSI	PN 6 / 87 PSI	PN 3.5 / 50 PSI

Construction and Parts

Item	Description	Material
1	Body	Cast Iron/ Ductile Iron
2	Bonnet	Cast Iron
3	Compressor	Cast Iron
4	Stem	Stainless Steel
5	Diaphragm	As specified see table page 5
6	Handwheel	Cast Iron
7	Studs/ Bolts/ Nuts	Carbon Steel
8	Handwheel pin	Spring Steel



ves 1"-3"
ves 4"-8"

Face to Face								
	1"	1.5"	2"	2.5"	3"	4"	6"	8"
EN 558-1 Series 7 BS 5156	127	159	190	216	254	305	406	521
EN 558-1 Series 1 DN 3202 F-1	160	200	230	290	310	350	480	600
MSS-SP 88			190	216	254		406	521
Length								
Threaded	108		168					

Materials Data

Unlined Options*		
Connection	Size	
Flanged	1"-8"	
Threaded	1"-2"	

Lined Options*				
Lining	Body Material	Size	Temp.	Typical Services
Soft Rubber (SR)	Ductile Iron	1"-3"	-10°c to85°c	General purpose, abrassives water, diluted mineral acids
	Cast Iron	4"-8"	-10°c to 85°c	
Hard Rubber (HR)	Ductile Iron	1"-3"	-10°c to 85°c	General purpose, good acid & alkali resistance
	Cast Iron	4"-8"	-10°c to 85°c	
Butyl Rubber (BR)	Ductile Iron	1"-3"	-10°c to 110°c	Acid & alkali resistance including sulphric acid
	Cast Iron	4"-8"	-10°c to 110°c	
Nitrile (NBR)	Ductile Iron	1"-3"	-20°c to 100°c	Weak chemicals & greases
	Cast Iron	4"-8"	-20°c to 100°c	
EPDM (EPDM)	Ductile Iron	1"-3"	-40°c to 120°c	General purpose, highlybresistantbto tempratures, most corrosive chemicals and abrasive liquids
	Cast Iron	4"-8"	-40°c to 120°c	

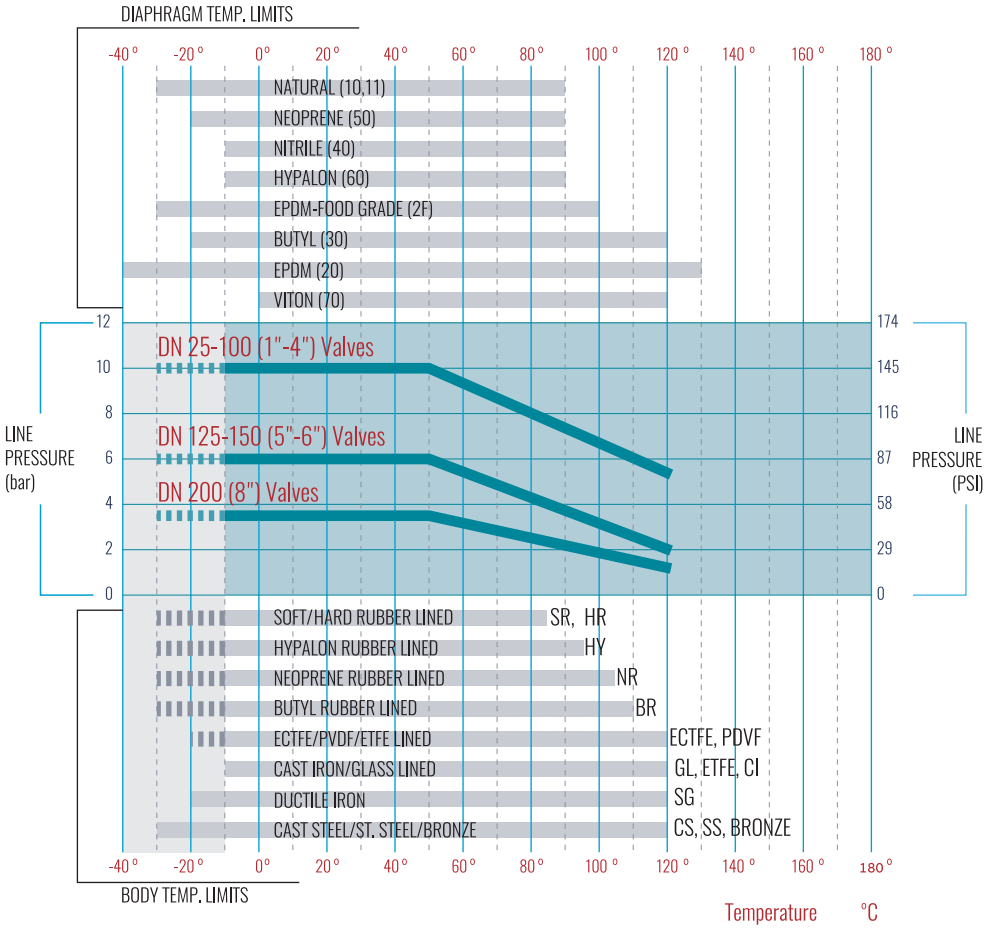
Coated Options*				
Coating	Body Material	Size	Temp.	Typical Services
Glass (GL) (flanged only)	Cast Iron	1"-8"	-10°c to 175°c	High chemical resistance, abrasion resistance, high temperature stability, suitable for food
Halar (ECTFE)	Cast Iron	1"-8"	-20°c to 80°c	High chemical resistance to minerals and oxidizing acids, alkalis, salts most solvents
Nylon11 (RILSAN)	Cast Iron	1"-8"	-20°c to 140°c	Potable water and water treatment chemicals
Epoxy painting	Cast Iron	1"-8"	-10°c to 70°c	Certain acids, chemicals, solvents and alkalies.

Diaphragm Selection				
Grade	Material	Size	Temp.	Typical Services
10	Natural Rubber	1"-8"	-40° to 100°c	General purpose, abrasives, water, diluted mineral acids
20	EPDM/ Black	1"-8"	-40° to 140°c	General purpose, for high temperature resistance , most corrosive chemicals and abrasive fluids
2F	EPDM/ Food Grade	1"-8"	-30° to 120°c	Food and pharmaceuticals
30	Butyl Rubber	1"-8"	-20° to 120°c	Acids, alkalis, hot water, low pressure steam
40	Nitrile Rubber	1"-8"	-20° to 100°c	Oils, fats, fuels
50	Neoprene	1"-8"	-30° to 105°c	Air, weak chemicals, greases
60	Hypalon	1"-8"	-20° to 100°c	Concentrated acids and alkalis, chlorine services
70	Viton	1"-8"	-20° to 150°c	Concentrated sulphuric and other acids, aromatic hydrocarbons, chlorine services

*For additional sizes and materials pls contact our sales department for MOQ information (minimum order quantity).

Note: temperature data is referring to water, for other fluids pls contact your local KIM distributor.
Diaphragm at maximum temperatures can not be used at maximum pressures.
Maximum permissible working pressure within temperature range of -10°-50°C.

Straight Through Pressure/Temperature



ST- HALAR

ST- RILSAN

ST- GLASS

ACTUATION

In cases where manual operation is not enough due to poor access or frequent operation, we offer a wide range of actuators for reliable remote control. All of KIM diaphragm valves can be automated using an electric or pneumatic actuator according to the media. Using an actuator will help minimize maintenance time.

OVER CLOSURE PROTECTED BONNET

KIM diaphragm valves' over closure protection is a standard feature on both weir and straight through valves.
The key feature of the bonnet includes an adjustable over closure protection to compensate for variation in diaphragm and lining thickness, and is tamper proof to prevent adjustment by unauthorized personnel.
A brightly colored neck indicates the exact valve position, when adjusting the over closure protection the valve position indicator also adjusts.

Bonnent

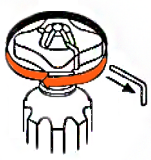
KIM diaphragm valves bonnet is specially designed to meet the markets requirements and enables dismantling without removing the valve from the pipe for easy maintenance.

1. Remove handwheel pin

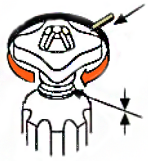
2. Turn handwheel one turn counter clockwise

3. Insert a piece of steel weir

4. Close valve tightly and remove steel weir



5. Turn handwheel clockwise until sleeve seats on bonnet rim and re-insert handwheel pin



STORAGE & INSTALLATION

STORAGE

- Valves should be stored away from direct sunlight.
- Spare diaphragms should be stored in its original bags until required. Do not place other items on diaphragms to avoid deformation.
- Glass and Halar lined bodies should be handled with extra care.

Complete valves

- W type should be stored in an open position.
- ST type should be stored in a nearly closed (i.e. without applying pressure to the diaphragm).
- Power actuated valves - release spring tension where needed.
- Please seal valve's ends with paper to prevent dirt/ moist penetration.

PRE- INSTALLATION

- Check valve's body and coating for:
  Material □ Open/ close function □ Cleanliness □ Diaphragm classification and compatibility to media □ Body / bonnet tightness.
- It is customer's responsibility to make sure that the valve and diaphragm is compatible with the requirements of the application's standard.
- Before installation the system should be cleaned in order to remove all traces of rust and foreign material, metal particles, etc., to avoid damage to the valve.
- Make sure the intended service conditions meet the recommended pressure and temperature (as specified in the catalog).

INSTALLATION

- Do not install valves at bending points or near pumps/ mixers.
- Make sure the valve and piping are properly aligned to avoid applying unnecessary force.
- Within 24 hours of operation please check bonnet's nuts for any loosening.

OPERATION

- The hand wheel is designed to operate by applying reasonable force.
- Do not use any leverage to close the hand wheel.

MAINTENANCE & SAFTEY

- When maintenance is performed you must follow the safety instructions and health regulations related to the media.
- Valves tightness has to be monitored frequently, when necessary diaphragm has to be changed.
- Diaphragm change should be executed when line is shut down or when the valve is isolated from pipeline.
- Pressure and temperature has to be released prior to valve dismantling.

DIAPHRAGM INSTALLATION

- Move compressor out of the bonnet, by rotating the hand wheel.
- Screw and center the diaphragm to the compressor.
- Align the diaphragm to the bonnet.
- Place the bonnet on the body, tighten bolts by hand.
- Close the valve fully and tighten bolts to 75% of final torque, use cross-tightening pattern.
- Open the valve to allow the diaphragm to return to its' neutral position.
- Close and tighten bolts according to recommended torque as specified in the table below:

Valves Body/ Bonnet Bolting Torques						Glass Lined Body/ Bonnet Bolting Torques			
		W/St		W		W/St		W	
Diaphragm Size		Rubber		PTFE		Rubber		PTFE	
inch	mm	Lbf.in	Nm	Lbf.in	Nm	Lbf.in	Nm	Lbf.in	Nm
0.5"	15	35	4	70	8	35	4	40	4.5
0.75"	20	35	4	70	8	35	4	60	6.5
1"	25	50	5.5	90	10	50	5.5	80	9
1.25"	32	60	6.5	100	12	60	6.5	90	10
1.5"	40	70	8	160	18	70	8	120	13.5
2"	50	120	13	285	31.5	120	13	180	20
2.5"	65	200	22	500	55.5	200	22	200	22
3"	80	320	35.5	900	100	320	35.5	360	40
4"	100	240	26.5	600	66.5	240	26.5	280	31
5"	125	280	31	750	83.5	280	31	400	44.5
6"	150	450	50	1200	133	450	50	600	66.5
8"	200	550	61	1200	133	550	61	600	66.5
10"	250	765	85	1200	133	765	85	700	77.8

Note:

- Glass lined valves are spark tested at 14KV AC/ DC, if necessary, test can be repeated and has to be performed after valve's assembly/ diaphragm change, to make sure that the lining was not damaged

Kim Valves supplies a wide range of products for water, waste water, infrastructures and industrial applications.

Our products range:

- Butterfly valves- Centric: wafer, double flanged, lug, grooved end and Double Eccentric
- Fire Protection - Fire hydrants, UL & FM butterfly valves
- Gate Valve - Resilient seated gate valves and knife gate valves
- Penstocks and Flap Valves
- Check Valves
- Strainers
- Accessories - Extension spindles, actuators and more.

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Kim Valves
PO box 2868
KIryat Gat Israel

Tel: + 972 8 6818899
Fax: + 972 8 6818801

info@hakohav.com
www.hakohav.com

GAON HOLDINGS