

# WM DIAPHRAGM VALVES



## WM DIAPHRAGM VALVES

The WM Diaphragm Valve is an outstanding product that has proven itself in the South African Mining industry for the past three decades. We now proudly boast the worlds first 25 bar rated range of Diaphragm Valves for slurry. This outstanding range of valves is our company's flagship product. We are the sole producer of the WM Diaphragm valve and the only licensed repairer of this outstanding range of slurry valves. WM Diaphragm Slurry Valves are of an advanced design (patented) which provides straight-through flow whilst restricting to a minimum the flexing stress imposed on the diaphragm. The internal contours of the body ensure smooth flow and is suitable for all types of protective lining. The greatest advantage of diaphragm valves is their extreme versatility and this is well developed in the WM S type. A wide selection of body materials coupled with a variety of highly developed rubbers and synthetics for the diaphragm enable the valve to handle the widest possible range of duties. The diaphragm is moulded in the 'open' state and has therefore no tendency to stick "closed", this increases the life span.

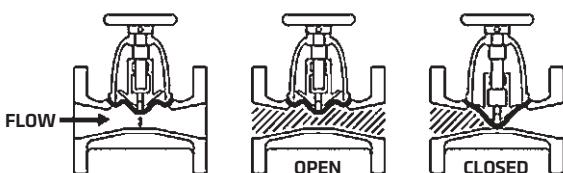
## ADVANTAGES

- A Diaphragm Valve is able to be repaired while inline by simply replacing the bonnet assembly. This greatly reduces down time, which we all know costs more than any valve ever could
- Spares are easy to replace allowing the Bonnet assembly to be repaired on site
- Valve stock is kept to a minimum as spares are kept instead of complete valves
- Valve costs are radically reduced due to the above-mentioned advantages

## MATERIALS

### CODE      APPLICATION

- 1      Natural rubber base suitable for general purpose use.  
Maximum temperature: 110 °C
- 2      Super "X" gum rubber base, outstanding performance on abrasion.  
Maximum temperature: 80 °C
- 3      Nitrile rubber base suitable for mineral and vegetable oils and some hydrocarbon solvents. Maximum temperature: 100 °C
- 4      Neoprene rubber base suitable for general purpose use but better oil and acid resistance than Code 1. Maximum temperature: 100 °C
- 5      White Neoprene food quality suitable for occasional low pressure steam sterilizations. Maximum temperature: 120 °C
- 6      Butyl rubber base suitable for acid and alkalis.  
Maximum temperature: 120 °C
- 7      PTFE faced highest chemical resistance of all diaphragms.  
Maximum temperature: 150 °C
- 8      Hypalon rubber base suitable for strong acids having greater resistance than Code 5. Maximum temperature: 120 °C
- 9      Viton - A fluoroelastomer with outstanding resistance to oils, fuels, lubricants and most mineral acids. Also resistant to many aliphatic and aromatic hydrocarbons. Maximum temperature: 150 °C



# WM DIAPHRAGM VALVES

## ADVANTAGES

Advantages Of The WM Diaphragm Valve Over The KB and A Type Diaphragm Valve.

### WM DIAPHRAGM VALVE

- **Casting Material SG42** (Ductile Iron) is far superior to Cast Iron
- **High tensile bolts and nuts** are used on bonnet assembly which ensures on-site valve repair is carried out easily and effectively
- Range features **PN 10, PN 16 and PN 25** on all sizes
- **Diaphragm is moulded in the open position**, therefore not imposing stress when working in the open position, which studies prove to be ±80% of the time and thus a longer life span is achieved
- **Interchangeable Bonnet Assemblies**: 200mm and 250mm use the same bonnet assembly. 300mm, 350mm and 400mm use the same bonnet assembly

### KB AND A TYPE DIAPHRAGM VALVE

- **Casting Material Cast Iron** which breaks easily and breaks when valves experience "water hammer"
- **Studs and nuts** are used on bonnet assembly. Studs often break when on-site repairs are carried out, causing the valve to be a safety hazard
- Range only offers **PN 10** on smaller sizes and **PN 3** on 300 - 400mm
- **Diaphragm is moulded in the closed position**, and is therefore under stress when valve is in the open position, causing a decreased life span as flow media corrodes rubber easier when placed under tension
- **All bonnet assemblies are size specific**

## DIMENSIONS

NORMAL BORE	25	50	80	100	150	200	250	300	350	400
<b>A: LENGTH OVER FLANGES (F/F) (mm)</b>	127	191	254	305	406	521	635	749	749	749
<b>C: DIAMETER OF FLANGES (mm)</b>	114	152	205	216	280	337	400	457	527	595
<b>D: THICKNESS OF FLANGES (mm)</b>	12.7	19	19	22.2	22.2	25.4	25.4	28.6	31.8	31.8
<b>E: HEIGHT FROM CENTRE (mm)</b>	89	152	172	229	286	406	406	600	600	600
<b>F: DIAMETER OF HANDWHEEL (mm)</b>	100	118	133	197	254	368	368	600	600	600
DIAMETER SG IRON FLANGED (Lbs)	8	20	33	62	118	275	334	467	540	620
DIAMETER SG IRON FLANGED (Kg)	3.6	9.0	15.0	28.1	53.5	125	125	212	245	282
WORKING PRESSURE (Bar)	16	16	16	16	16	12	12	10	10	10
MAXIMUM RECOMMENDED (KPa)	1600	1600	1600	1600	1600	1200	1200	1000	1000	1000
TOTAL VALVE WEIGHT (Kg)	7.2	12.07	19.07	32.075	56	136	161	393	415	467

## SPECIFICATIONS (MINIMUM SPEC.)

**Body:** SABS 936-SG42 (SG Iron)

**Bonnet:** SABS 936-SG42 (SG Iron)

**Handwheel:** SG Iron

**Compressor:** SG Iron

