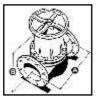
# Saunders weir type "A" diaphragm valve basic details





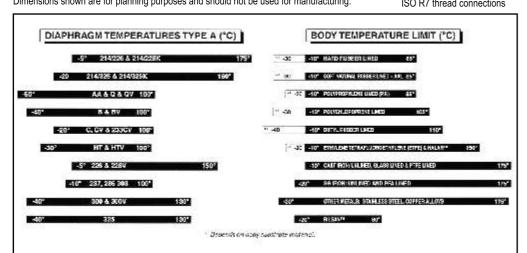


indicator DN 8 - DN80

VALVE	SCREWED ENDS				FLANGED PIPE CONNECTIONS					
Size	A(mm)		B (Max)	Nominal	A (mm)			B (max)	Nominal Mass	
(DN)	C1, SG, MI	SS,GM, ARB	All Materials	Mass kg		3\$ 5156 Lined	i Coaled	All Materials	Unlined kg	Lined kg
a 10	48	48	59	140g	-	6.73	.20	85.0	200	SS=2
10	48	48	65	4100	-	-	100 <del>4</del>	9-3		-
15	64	64	91	570g	108	114	110	100	2,2	
15 20 25 32 40	83	83	94	890g	117	123	119	:00	2,5	-
25	108	35	-15	1,4	127	133	129	110	3,6	-
32	121	114	* 52	2.3	146	152	148	*50	4.5	-
40	140	133	164	3,3	159	165	151	*60	6.2	5,5
50	185	152	:87	8.3	190	196	192	:80	9.4	10
65	203	191	224	9.4	216	222	5.9	214	13	14
80	254	241	233	15.8	254	260	255	220	20	22
100	122	30000	5502555	1 2220	305	311	307	300	35	37
12.5*	223	- 2	- 23		356	361	358	375	50	53
150		7.01	-		406	412	408	430	65	14 22 37 53 70
200	-	-			521	527	553	507	145	156
250	-				635	641	637	588	530	240
300	123	22	43		749	755	751	683	260	366
350	22.7	25			749	755	751	893	450	476

Valves sizes DN200 - 350 feature bonnet assembly design for ease of operation and low cost. At present stage of manufacture a non-rising handwheel unit is standard. Dimensions shown are for planning purposes and should not be used for manufacturing.

Standards Applicable: BS 5156 Diaphragm valves BS 4504 Flange dimensions ISO R7 thread connections







Dynamic Fluid Control (Pty) Ltd

Where every drop counts

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Saunders Type "A" diaphragm valves have been developed to handle more fluids and gasses than any other valve. A wide choice is available for materials, methods of operation and body end connections to satisfy the needs of most industrial applications. Extended life, reliability, safety and ease of use, combined with an essentially simple design, result in low maintenance for minimum running costs. Both on pressure and vacuum, Saunders Valves operate and close 100% leaktight.

# **Body End Connections -**

Screwed, flanged end connections to suit UK, European, USA specifications to avoid planning problems.

# 100% leaktight performance quarantees profitable investment

GUIDE TO BODY (LININGS	RANGE AVAILABILITY		
BODY / LINING	TYPICAL APPLICATIONS	SIZE	TEMP ℃
Cast Iron Ductile Iron (SG)	Strength, low cost non corrosives	DN15 - DN350	-20°to 175 °
A R Bronze / Gunmetal Stainless Steel	Long life in hostile, corrosive water applications Purity of service, protect protection	DN20 - DN150	-30°to 175 °
Rubbers - Soft (SRL/AAL) - Hard (Ebonite) (HRL) - Butyl (BL) - Neoprene (NL)	Economic handling of corrosive & abrasive media Abrasive duties Acid, chlorinated water, moist chlorine Mineral acids, & slurries Abrasive duties where hydrocarbons are present	DN15 - DN350	-10°to 85 ° -10°to 85 ° -10°to 110 ° -10°to 105 °
Polypropylene PP	Chemical & abrasion resistance in water treatment and effluent handling	DN20 - DN150	-10°to 85 °
Polytetrafluoroethylene PTFE	High temp mineral acids, aromatic, aliphatic and chlorinated solvents	DN125 - DN250	-10°to 175 °
Ethylene Tetrafluoroethylene ETFE	High abrasion resistance, chemically resistant to strong acids & bases	DN20 - DN150	-10°to 150 °
Perfluoroalkoxy PFA	High temperature strong acid resisting applications	DN20 - DN350	-20°to 175 °
Halar <sup>™</sup> ECTFE	Excellent resistance to mineral and oxidising acids inorganic bases, salts	DN20 - DN350	-10°to 150 °
Borosilicate Glass	Excellent for strong acids, halogens	DN20 - DN200	-10°to 175 °
Rilsan™	Potable water applications	DN20 - DN350	-20°to 80 °
Fusion Bonded Epoxy FBE	Potable water applications	DN25 - DN350	-20°to 80 °

#### Handwheel-

Comfortable, easy, to use for fast operation. Saves time and effort

## Other Methods of Operation -

Fast acting levers, pneumatic and electric actuators - versatility to match individual needs throughout the plant, without over investments. Ask for information on our Biman Pneumatic actuators.

## Indication - (Std to Dn150) (Optional > D200)

Positive identification of valve position to save time and money.

Designed to reduce friction for low operating torque

# Sealing -

Operating mechanism (stem and compressor) isolated from service and atmosphere, avoids the need for exotic metals. Fully sealed option available for corrosive applications

### Diaphragm -

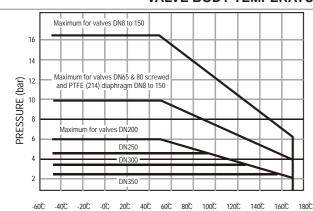
Strong and resilient, giving positive shutoff. Designed to assist flow and completely isolate working parts from line fluids.

# Diaphragm Materials-

Natural and synthetic rubbers, nitrile, butyl, viton, hypalon and ptfe faced. All give maximum processing security and, where required, food industry standards of hygiene. Special diaphragms are produced for fire fighting, tank cleaning and washdeck services to comply with international standards

Weir design reduces diaphragm travel for extended service and fine control

# **VALVE BODY TEMPERATURE / PRESSURE RELATIONSHIP**



**TEMPERATURE** 

Graph applies to whole valve performance (manual bonnets). For actuated valves refer to appropriat performance graphs. Temperature bands for diaphragms are shown as a guide only. Many aspects of service conditions will de termine the highest working temprature. For example 325 diaphragms have given exellent performance under certain conditions up to 150°C.

Rilsan<sup>™</sup> is the registered trademark of ATO Chemical Products UK. Halar™is the registered trademark of Ausimont UK Limited



Pocketless design for contamination free performance and smooth . flow characteristics



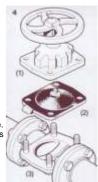
# 2. Valve usable in any position

For greater planning, flexibility and ease of access. In the horican be drilled to suit) the valve is self-draining.



#### 3. Lubrication

Bonnet assembly lubricated for long life The indicator lip seal stops the ingress of dust, dirt and atmosphere.



Three part design (bonnet (1), diaphragm (2), body(3) means the diaphragm is replaced with the body in the pipeline, no gasket costs or pipeline disturbance problems are involved



### 5. Bonnet options -

Padlocking to prevent expensive interference. Microswitch model for valve position indication systems. Sealed to handle toxic or corrosive fluids with even greater safety.

GLASS.



# **Body Linings and Coatings**

Base materials cast Grey and SG iron

### Polypropylene:

Combines strength and abrasion resistance for long service on chemical processing, water treatment and effluents.

### Rubbers

(Hard, soft, butyl, neoprene): Corrosives and abrasives handled with low initial outlay. Popularity of rubber



High abrasion resistance for tough services especially in fine chemicals, pharmaceuticals

## **Halar Coating:**

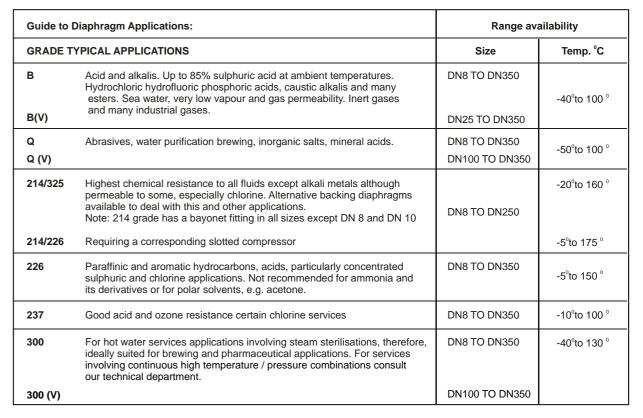
Resists many industrial chemicals and additionally protects the exposed parts of value bodies to cut out painting

# Borosilicate Glass Coating:

Purity, smooth flow (especially on viscous fluids) with great strength and resistance to chemical attack



Cast iron and SG iron for strength and low cost on non-corrosive duties. Acid resisting bronze and gunmetal long life in hostile, corrosive water applications. Stainless steel-purity for services where profits depend on product protection Solid hard rubber and polypropylene minimum weight combined with strength



In larger sizes than 80mm weir type diaphragms are specially reinforced for vacuum duties and are identified by a suffix (V) e.g. Q (V). All (V) diaphragms have ferrous studs and are specified for applications requiring all iron and steel construction e.g. Ammonia, acetylene. B (V) diaphragms are available in sizes Dn 25 and larger to complete a full range of diaphragms with ferrous studs.

B - Butv Q - Natural Rubber

214/226 - PTFE / Fluororubber

214/325 - PTFE/EP Rubber 226 - Fluorubber

300 - Butvl 237 - Hypalon