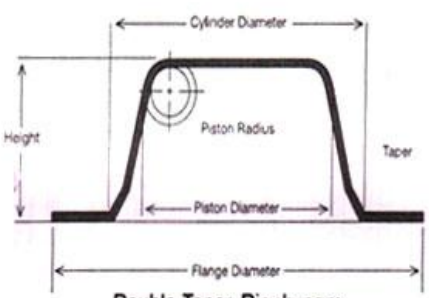
RUBBER DIAPHRAGM

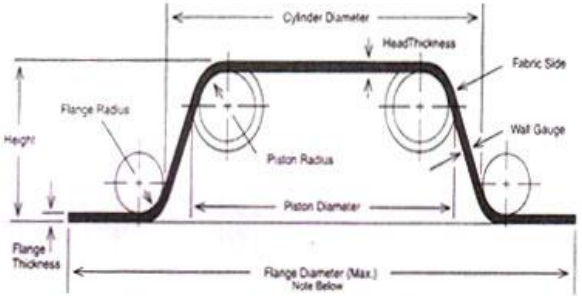
1. RUBBER TO METAL

Rubber to metal diaphragms or membranes are currently supplied with metal inserts into the gas and food industry, rubber blocks with metal support are supplied into the Subsea market. Rubber components & Rubber seals are manufactured to existing customer requirements. Component size varies from a few grams to large couplings used in drive industry weighing over 25Kg. Couplings can be manufactured utilizing bonded metal that operate with rubber in compression, or rubber in shear, with expert metal preparation, and quality control, our rubber products last through material guidance and understanding of operating conditions, Western Polyrub is able to design Rubber formulas around customer demands.

2. FABRIC RENIFORCEMENT



Double Taper Diaphragm
Figure 1



Top Hat Diaphragm

Cylinder Diameter	.025 to.99 6 to 25	1.00 to 2.50 25 to 64	2.51 to 4.00 64 to102	4.01 to 8.00 102 to 205	8.01 & up 205 & up
Height	See available sizes table.				
Cylinder Diameter Piston Diameter	Tolerances on Cylinder Diameter and piston Diameter are _+_.010" per inch of diameter but the tolerance will be no less than _+.010" or greater than _+.060"				
Head Thickness & Flange Thickness	.015_+.003 0.38 _+0.08	.017 _+ .004 0.43 _+0.10	.024 _+ .004 0.61 _+0.10	.035 _+ .005 0.89 _+0.13	.045 _+ .007 1.14 _+0.18
Wall Gauge	.015_+.003 0.38 _+0.08	.017 _+ .004 0.43 _+0.10	.024 _+ .004 0.61 _+0.10	.035 _+ .005 0.89 _+0.13	.045 _+ .007 1.14 _+0.18
Piston Radius	0.94 2.3 9	.125 3.18	.156 3.96	.250 6.35	.250 6.35
Flange Radius	.031 .79	.063 1.60	.094 2.39	.125 3.18	.125 3.18
Flange Diameter	Cyl Diam.+.750 Cyl Diam.+19.05	Cyl Diam.+1" C yl Diam.+25.40	Cyl Diam.+1.500" Cyl Diam.+38.10	Cyl Diam.+2" Cyl Diam.+50.80	Cyl Diam.+2" Cyl Diam.+50.80

WD-01

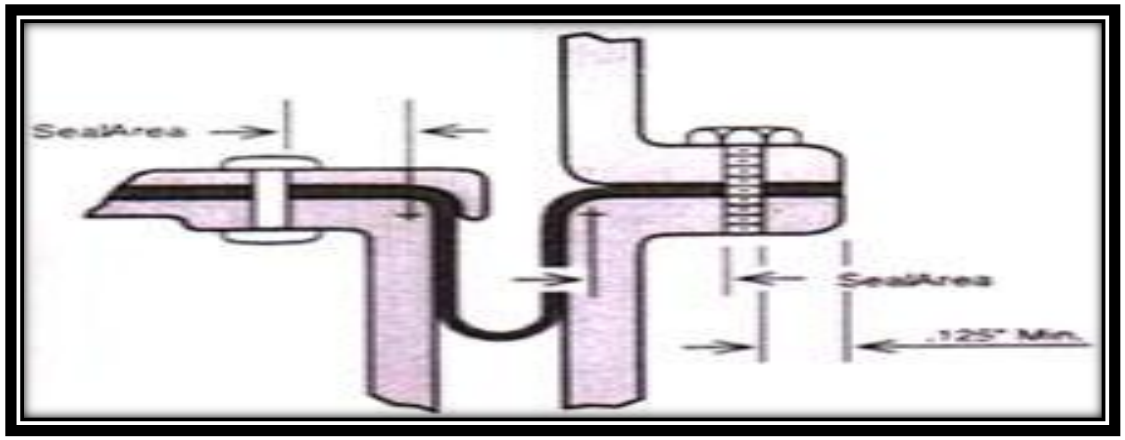
The Type WD - 01 is commonly referred to as the "top hat" diaphragms. It exhibits all of the benefits that are associated with rolling diaphragms. These diaphragms have the longest stroke-to-bore ratio, zero spring rate, no breakaway friction, constant effective pressure area, and long life. Some of the drawbacks to Type WD-01 diaphragms are additional assembly time required when inverting the top head corner radius during installation, and an inability to withstand reverse pressure. The flange of the type WD-01 diaphragm is designed to seal like a gasket between the two flat surfaces of the cylinder and bonnet. The outside edge and bolt holes can be cut into any configuration desired. An effective seal should be obtained by compressing the flange area 20-30% by thickness. To extend cycle life and reduce "four-cornering" of the diaphragm, a double taper design may be utilized (see Figure 1). This design reduces the diameter of the bottom end of the diaphragm which minimizes excess material in this area and realizes circumferential compressive stress.

Diaphragm Flange Diameter and Hole Trim Tolerances:

Diameter	Size	Position
0 - 1.00" .0 - 25.40	_+.010" 0.25	010 0.25
1.01 - 3.00" 25.65 - 76.20	_+.020" 0.51	.020 0.51
over 3.01" over 76.45	_+.030" 0.76	.030 0.76
Angular relationship of holes: _+ 1/2 degree.		

Hole Spacing for type WD-01

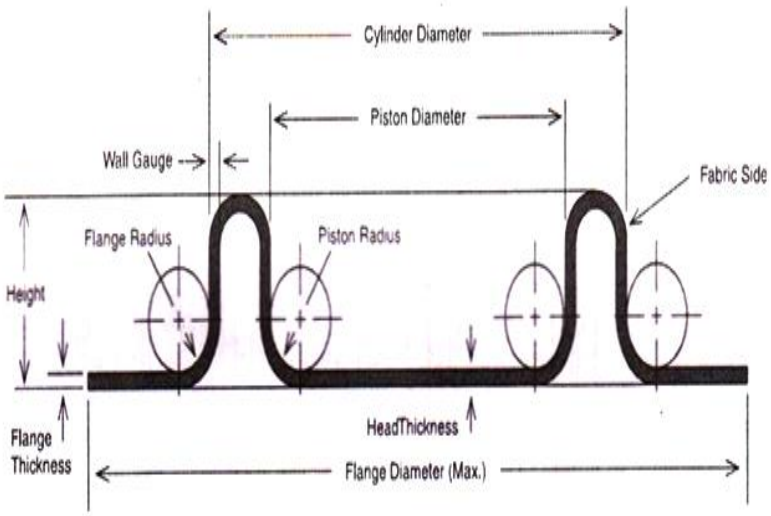
Perforations through the head or the flange should be located so that there is at least 100 inches minimum between the edges of holes. Also, holes should be located so that there is at least .125 inches between the edge of a hole and trim periphery.It is also important to arrange the hole pattern so that the radial distance from the edge of the hole to the start of the blend radius at either the piston head or cylinder clemp flange is at least as far as indicated in the chart above.



Max. Working Pressure (P.S.I)/KPA	(0 - 50) 0 - 350	(51 - 150) 357 - 1050	(151 - 300) 1057 - 2100	(301 - 500) 2107 - 3500
Seal Area Minimum (Inches)	.100 2.54	..150 3.81	.200 5.08	.250 6.35

In this style, the piston and the flange are molded on the same plane. The benefit of this style is that the handwork of forming the convolution is eliminated,which greatly reduces the assemblybtime. This would be if importance in high volume applications. The drawbacks to this type of diaphragm are;a built-in spring rate,due to the molded-in convolution, which must be considered during the design stage, and a limited stroke-to-bore ratio. To improve this ratio, an offset pre-convoluted diaphragm can be designed (see WD-01 Offset figure at bottom of page). In this shape, the piston head and flange are milded offset to each other, thereby putting all the additional stroke capabilities on one side of the convolution.This provides a longer stroking diaphragm which still maintains the assembly ease of a preconvoluted diaphragm

Cylinder Diameter	.025 to.99 6 to 25	1.00 to 2.50 25 to 64	2.51 to 4.00 64 to102	4.01 to 8.00 102 to 205	8.01 & up 205 & up
Height	See available sizes table.				
Cylinder Diameter	Tolerances on Cylinder Diameter and piston Diameter are _+_.010" per inch of diameter but the tolerance will be no less than _+.010" or greater than _+.060"				
Piston Diameter					
Head Thickness & Flange Thickness	.015_+.003 0.38 _+0.08	.017 _+.004 0.43 _+0.10	.024 _+.004 0.61 _+0.10	.035 _+.005 0.89 _+0.13	.045 _+.007 1.14 _+0.18
Wall Gauge	.015_+.003 0.38 _+0.08	.017 _+.004 0.43 _+0.10	.024 _+.004 0.61 _+0.10	.035 _+.005 0.89 _+0.13	.045 _+.007 1.14 _+0.18
Piston and Flange Radius	.031 .79	.063 1.60	.094 2.39	.125 3.18	.125 3.18
Flange Diameter	Cyl Diam.+.750 Cyl Diam.+19.05	Cyl Diam.+1" Cyl Diam.+25.40	Cyl Diam.+1.500" Cyl Diam.+38.10	Cyl Diam.+2" Cyl Diam.+50.80	Cyl Diam.+2" Cyl Diam.+50.80



Diaphragm Flange Diameter and Hole Trim Tolerances:

Diameter	Size	Position
0 - 1.00" .0 - 25.40	_+.010" .254	.010 .254
1.01 - 3.00" 25.65 - 76.20	_+.020" .508	.020 .508
over 3.01" over 76.45	_+.030" .762	.030 .762
Angular relationship of holes: _+ 1/2 degree.		

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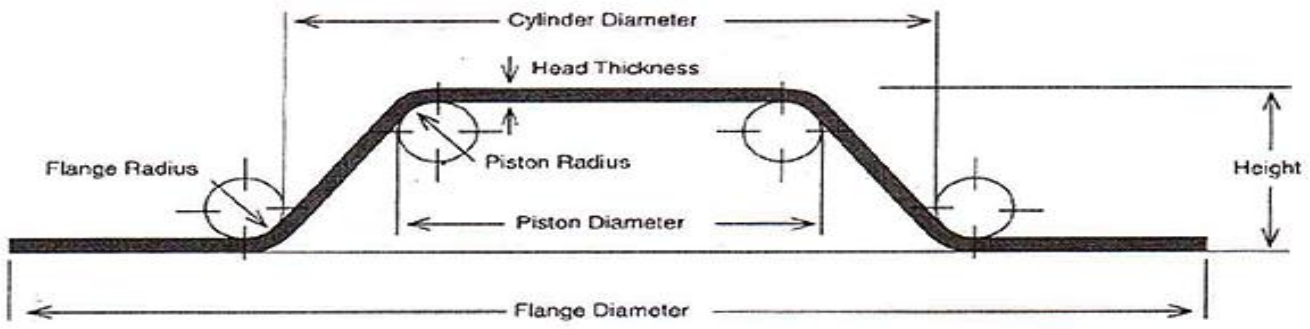
WD-03

Cylinder Diameter	1.00 - 2.50	25 -64	2.51 - 4.00	64 to 102	4.01 -8.00	102 - 205	8.01 & up	205 & up						
Height	See available sizes table.													
Cylinder Diameter / **Piston Diameter**	Tolerances on Cylinder Diameter and piston Diameter are _+_.010" per inch of diameter but the tolerance will be no less than _+.010" or greater than _+.060"													
Piston Radius	.063	1.60	.094	2.39	.125	3.18	.125	3.18						
Head & Flange Thickness	.017_+.005	0.43_+0.13	.024 _+.005	0.61_+ 0.13	.035_+ .005 _+0.13	0.89	.045_+ .007	1.14 _+ 0.18						
Wall Gauge	.017_+.005	0.43 _+0.13	024 _+.005	0.61_+ 0.13	.035_+ .005 _+0.13	0.89	.045_+ .007	1.14 _+ 0.18						
Flange Radius	.063	1.60	.094	2.39	.125	3.18	.125	3.18						
Flange Diameter	Cyl Diam.+1"	Cyl Diam. +25.40	Cyl Diam.+1.500	Cyl Diam.+38.10	Cyl Diam.+2"	Cyl Diam.+50.80	Cyl Diam.+2"	Cyl Diam..+50.80						

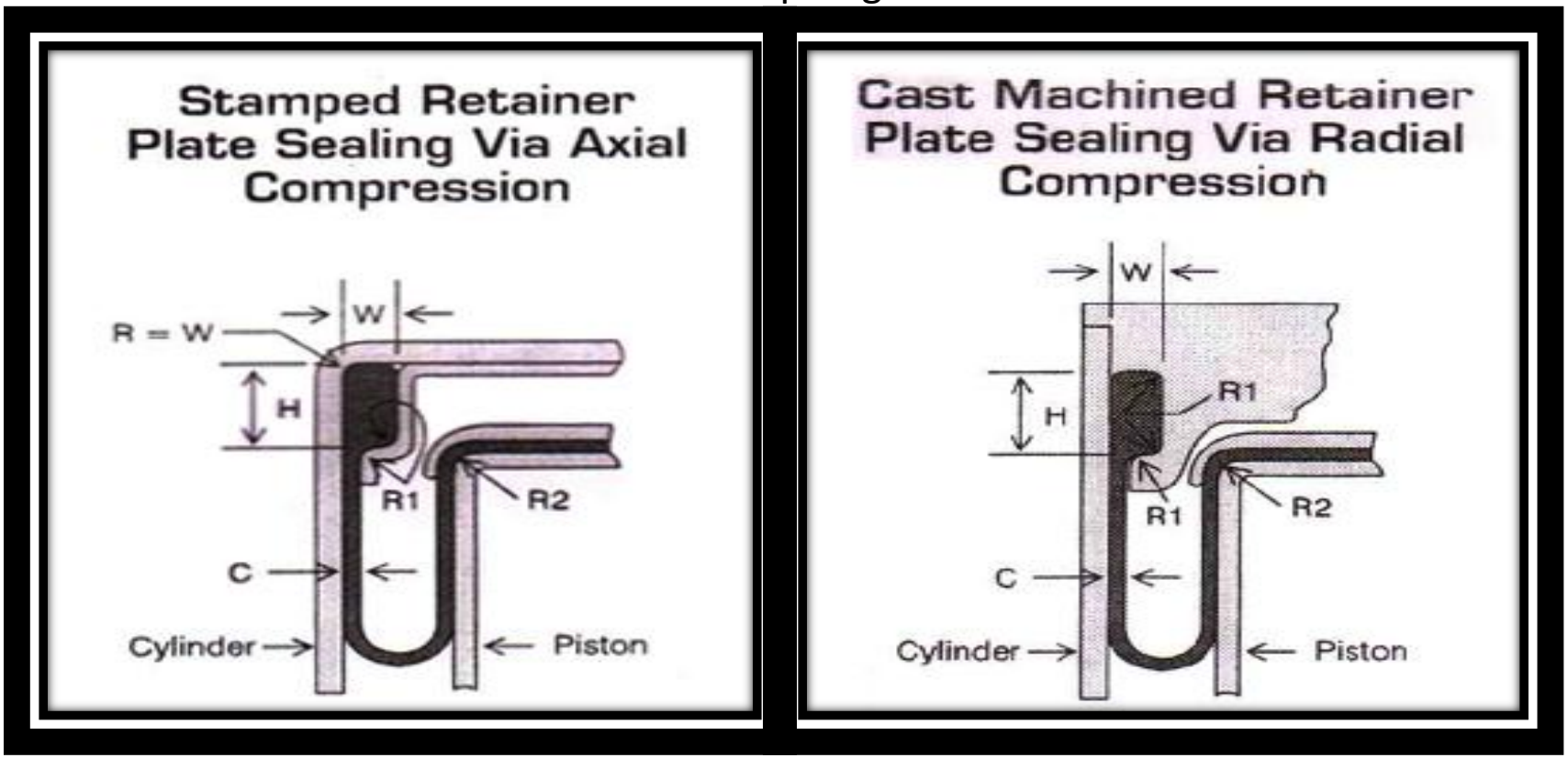


This diaphragm type, commonly referred to as dish-shaped, has a sidewall that slopes gradually from the cylinder to the piston.This diaphragm is designed to be flexed in both driections to its full height.It may be double-coated to take pressure in both directions. Due to its wide convolution and gradual sidewall slope, the total travel and abliity to withstand high pressures are limited. The effective pressure also varies through its stroke.

WD-04

Hardware Recommendations

This type of diaphragm has a rectangular bead molded inside the cylinder wall. This design requires the smallest hardware diameter of any diaphragm type. This type of diaphragm has only half the stroke capability of other diaphragm styles of the same height. Because the clamping and sealing of this style diaphragm is against the inside wall of the cylinder, the stroke is restricted to the lower half of the diaphragm



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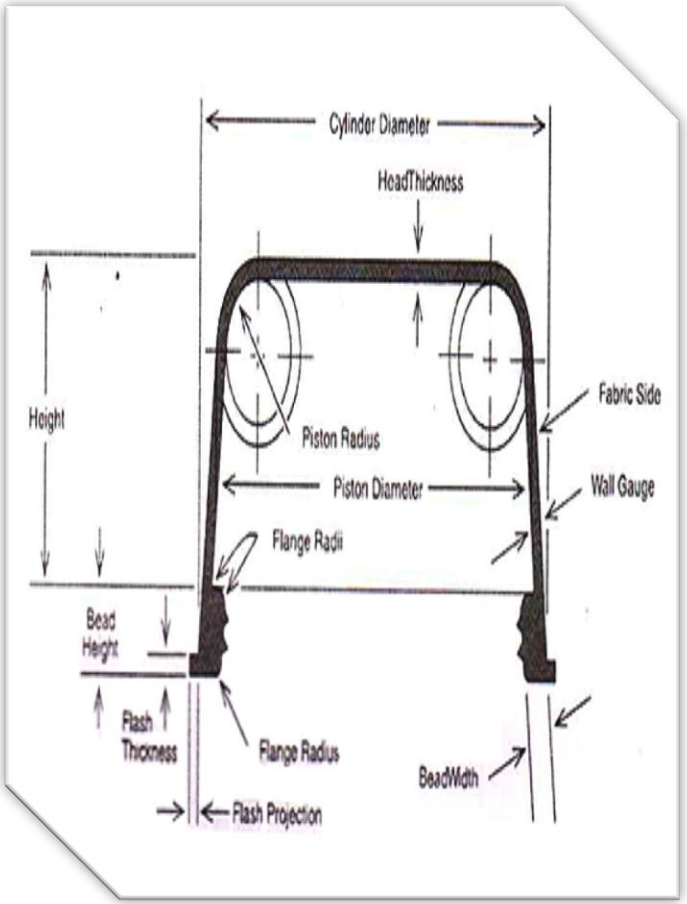

Cylinder Diameter	1.00 - 2.50 25 to 64	2.51 - 4.00 64 to 102	4.01 -8.00 102 - 205	8.01 and up 205 to up
Height	See available sizes table.			
Cylinder Diameter / **Piston Diameter**	Tolerances on Cylinder Diameter and piston Diameter are _+_.010" per inch of diameter but the tolerance will be no less than _+.010" or greater than _+.060"			
Piston Radius	.063 1.60	.094 2.39	.125 3.18	.121 3.18
Head Thickness	.017 _+ .004 0.43 _+0.10	.024 _+ .004 0.61 _+0.10	.035 _+ .005 0.89 _+0.13	.045 _+ .007 1.14 _+0.18
Wall Gauge	.017 _+ .004 0.43 _+0.10	.024 _+ .004 0.61 _+0.10	.035 _+ .005 0.89 _+0.13	.045 _+ .007 1.14 _+0.18
Flash Projection	.025 Max 0.64 Max	.035 Max 0.89 Max	.040Max 1.02 Max	.056 Max 1.42 Max
Flash Thickness	.025 Max 0.64 Max	.035 Max 0.89 Max	.040Max 1.02 Max	.056 Max 1.42 Max
Flange Radius	.031 .79	.047 1.19	.063 1.60	.063 1.60
Bead Width	.080_+ .003 2.03 _+0.08	.100 _+ .003 2.54 _+0.08	.120 _+ .003 3.05 _+0.08	.160 _+ .003 4.06 _+0.08
Bead Height	.150 _+ .005 3.81 _+0.13	.200 _+ .005 5.08_+0. 13	.260 _+ .005 6.60 _+0.13	.300 _+ .007 7.62_+0.18

Cylinder Diameter		Bead Groove Width =W		Bead Groove Height =H		Lip Radius R1		Piston Corner Radius = R2		Lip Clearence C
1.00 - 2.50	25 to 64	.080	2.03	.150	3.81	.030	0.76	.063	1.60	Sidewall Thickness +.003
2.51 - 4.00	64 to 102	.100	2.54	.200	5.08	.040	1.02	.094	2.39	
4.01 - 8.00	102 to205	.120	3.05	.260	6.60	.050	1.27	.125	3.18	
8.01 and up	205 to up	.160	4.06	.300	7.62	.060	1.52	.188	4.78	

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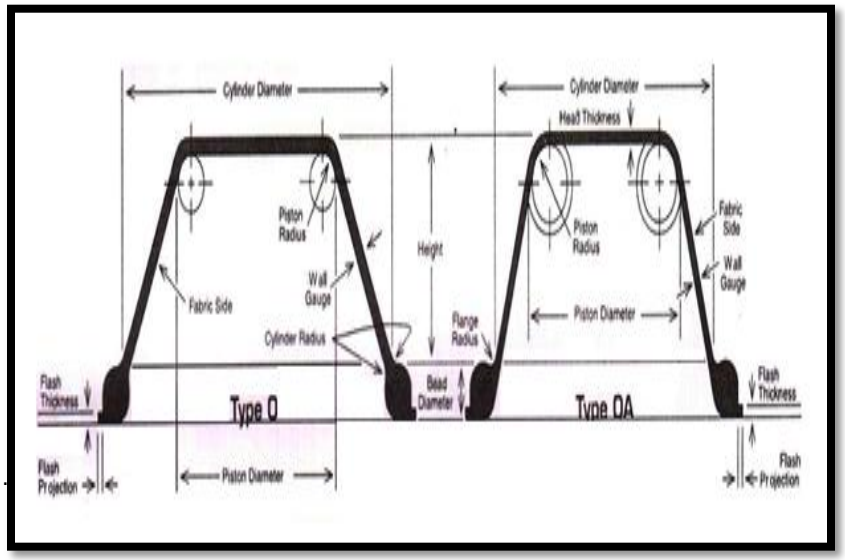
WD.05 – WD.06 & OA DIAPHRAGMS



Type O - This type of diaphragm has no flange. An O-ring is molded to the bottom of the sidewall. Unlike the other types of diaphragms, the Type O is put into convolution by folding the sidewall back onto itself. The bead is then squeezed into a groove machined into the bonnet half of the hardware. This type enable the greatest reduction in hardware diameter, while keeping a full stroke potential

Type OA - This diaphragm type is a second generation to the Type O. It fits into identical hardware. It differs from the Type O in that its sidewall attaches to the inside diameter of the O-ring and the fabric is on the outside, requiring the head corner radius to be inverted for installation. The Type OA tends to be easier to install, but basically the difference is personal preference.

Cylinder Diameter	1.00 - 2.50	25 - 64	2.51 - 4.00	64 to 102	8.01 & up	205 & up
Bead Diameter	.121	3.07	.151	3.84	.242	6.15
Convolution Width	.094	2.39	.156	3.96	.250	6.35
Flash Projection	0.020 Max	0.51 Max	.0.030 Max	0.76 Max	0.040 Max	1.02 Max
Flash Thickness	0.020 Max	0.51 Max	.0.030 Max	0.76 Max	0.040 Max	1.02 Max
Wall Gauge	.017	0.43	.024	0.61	.035	0.89
Piston Radius	.063	1.60	.094	2.39	.125	3.18
Piston Diameter	Cyl Diam. less.188"	Cyl Diam.less4.78	Cyl Diam. less.313"	Cyl Diam.less7.95	Cyl Diam. less.500"	Cyl Diam.less12.70
Flange Radius	.032	0.81	.047	1.19	.063	1.60

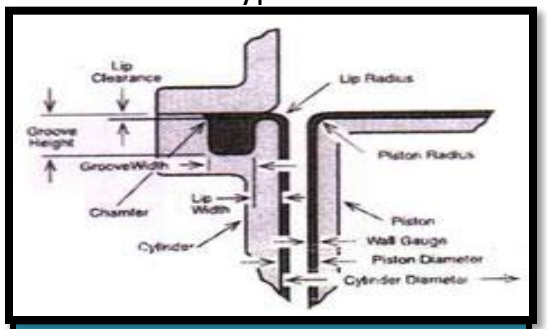
HARDWARE DESIGN

Cylinder Diameter	Bead Groove Width =W	Bead Groove Height =H	Flange & Piston Corner Radi = R1 & R2	Lip Radius R3	Lip Height L
1.00 - 2.50 25 to 64	.125 3.18	.0.96 2.43	.063 1.60	.025 0.63	.100 2.54
2.51 - 4.00 64 to 102	.156 3.96	.122 3.10	.094 2.39	.032 0.81	.130 3.30
4.01 - 8.00 102 to205	.250 6.35	.196 4.98	.125 3.18	.045 1.14	.204 5.18
8.01 and up 205 to up	.250 6.35	.196 4.98	.121 3.18	.045 1.14	.190 4.83

WD-07

Cylinder Diameter	.37 to .99 9 to 25	1.00 to 2.50 25 to 64	2.51 to4.00 64 to 102	4.01 to 8.00 102 to 205	8.01 & up 205 & up
Height	See available sizes table.				
Cylinder Diameter Piston Diameter	Tolerances on Cylinder Diameter and piston Diameter are _+_.010" per inch of diameter but the tolerance will be no less than _+.010" or greater than _+.060"				
Head Thickness &Flange Thickness	.015_+.003 _+0.08 0.38	.017 _+ .004 _+0.10 0.43	.024 _+ .004 0.61 _+0.10	.035 _+ .005 _+0.13 0.89	.045 _+ .007 _+0.18 1.14
Wall Gauge	015_+.003 _+0.08 0.38	.017 _+ .004 _+0.10 0.43	.024 _+ .004 0.61 _+0.10	.035 _+ .005 _+0.13 0.89	.045 _+ .007 _+0.18 1.14
Flash Projection	.025 Max 0.64 Max	.025 Max 0.64 Max	.035 Max 0.89 Max	.040Max 1.02 Max	.056 Max 1.42 Max
Flash Thickness	.025 Max 0.64 Max	.025 Max 0.64 Max	.035 Max 0.89 Max	.040 Max 1.02 Max	.056 Max 1.42 Max
Piston /Flange Radius	.031 .79	.063 1.60	0.94 2.39	.125 3.18	.125 3.18
Flange Diameter	Cyl Diam.+.313 Cyl Diam.+7.95	Cyl Diam.+.500 Cyl Diam.+12.70	Cyl Diam.+.750 Cyl Diam.+19.05	Cyl Diam.+1" Cyl Diam.+25.40	Cyl Diam.+1" Cyl Diam.+25.40
Bead Width	.095 _+ .004 _+0.10 2.41	.125_+ .003 3.18_+0.08	.187_+ .003 _+0.08 4.75	.250 _+ .003 _+0.08 6.35	.250 _+ .004 _+0.10 6.35
Bead Height	.095 _+ .004 _+0.10 2.41	.135 _+ .004 _+0.10 3.43	200_+ .005 _+0.13 5.08	.270 _+ .006 _+0.15 6.86	.270 _+ .008 6.86_+0.2 0

This style diaphragm is similar in function to the Type WD-02 diaphragm, while the sealing and hardware designs are the same as the Type WD-08



Diaphragm Flange Diameter and Hole Trim Tolerances:

Diameter		Size		Position	
0 - 1.00"	.0 - 25.40	_+.010"	0.25	.010	0.25
1.01 - 3.00"	25.65 - 76.20	_+.020"	0.51	.020	0.51
over 3.01"	over 76.45	_+.030"	0.76	.030	0.76

Cylinder Diameter	.025-.99	6-25	1.00-2.50	25-64	2.51 - 4.00	64-102	4.01 - 8.00	102 - 205	8.01 & up	205 & up
Groove Width _+ . 003 0.08 _+	.109	2.77	.141	3.58	.219	5.56	.281	7.14	.281	7.14
Groove Height _+ .002 0.05_+|	.076	1.93	.108	2.74	.160	4.06	.216	5.49	.216	5.49
Lip & Piston Corner Radii	.031	0.79	.063	1.60	.094	2.39	.125	3.18	.125	3.18
Lip Width _+ . 003 0.08 _+	.062	1.57	.125	3.18	.187	4.75	.250	6.35	.250	6.35
Lip Clearence _+ . 003 0.08 _+	.021	0.53	.021	0.53	.031	0.91	.036	0.91	.036	0.91

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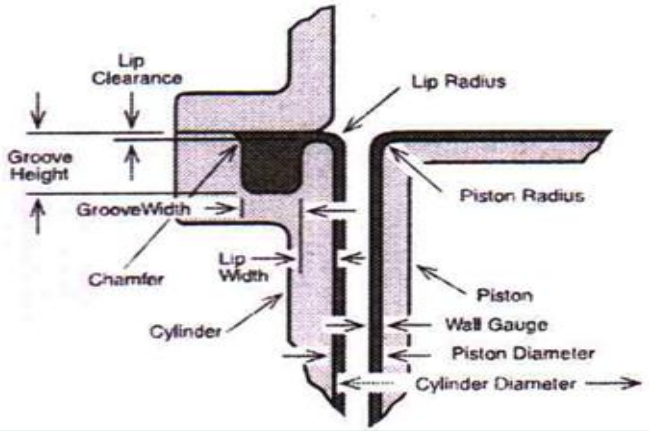
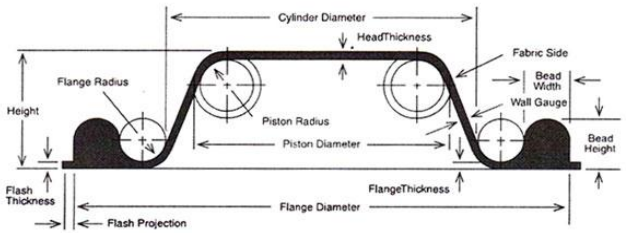
WD-08

The parts are molded with what equates to half of an O-ring on the flange rather than a large that surface.This O-Ring half its into a groove machined into the cylinder half of the hardware. Sealing is achieved by squeezing the bead into a properly sized groove (see table at bottom of page). The cylinder and bonnet can then be designed to make positive contact when assembled, eliminating the need for a closely controlled assembly torque. It also reduces the overall diameter of the diaphragm, reducing the hardware diameter.

Cylinder Diameter	025-.99 6-25	1.00-2.50 25-64	2.51 - 4.00 64-102	4.01 - 8.00 102 - 205	8.01 & up 205 & up
Groove Width _+ . 003 0.08 _+	.109 2.77	.141 3.58	.219 5.56	.281 7.14	.281 7.14
Groove Height _+ .002 0.05_+|	.076 1.93	.108 2.74	.160 4.06	.216 5.49	.216 5.49
Lip & Piston Corner Radii	.031 0.79	.063 1.60	.094 2.39	.125 3.18	
.125 3.18					
Lip Width _+ . 003 0.08 _+	.062 1.57	.125 3.18	.187 4.75	.250 6.35	.250 6.35
Lip Clearence _+ . 003 0.08 _+	.021 0.53	.021 0.53	.031 0.79	.036 0.91	.048 1.22



Cylinder Diameter	.37 to .99 9 to 25	1.00 to 2.50 25 to 64	2.51 to4.00 64 to 102	4.01 to 8.00 102 to 205	8.01 & up 205 & up
Height	See available sizes table.				
Cylinder Diameter / **Piston Diameter**	Tolerances on Cylinder Diameter and piston Diameter are _+_.010" per inch of diameter but the tolerance will be no less than _+.010" or greater than _+.060"				
Head Thickness &Flange Thickness	.015_+.003 0.38 _+0.08	.017 _+ .004 0.43 _+0.10	.024 _+ .004 0.61 _+0.10	.035 _+ .005 0.89 _+0.13	.045 _+ .007 1.14 _+0.18
Wall Gauge	015_+.003 0.38 _+0.08	.017 _+ .004 0.43 _+0.10	.024 _+ .004 0.61 _+0.10	.035 _+ .005 0.89 _+0.13	.045 _+ .007 1.14 _+0.18
Flash Projection	.025 Max 0.64 Max	.025 Max 0.64 Max	.035 Max 0.89 Max	.040Max 1.02 Max	.056 Max 1.42 Max
Flash Thickness	.025 Max 0.64 Max	.025 Max 0.64 Max	.035 Max 0.89 Max	.040 Max 1.02 Max	.056 Max 1.42 Max
Piston Radius	0.94 2.39	.125 3.18	.156 3.96	.250 6.35	.250 6.35
Flange Radius	.031 .79	.063 1.60	.094 2.39	.125 3.18	.125 3.18
Flange Diameter	Cyl Diam.+.313 Cyl Diam.+7.95	Cyl Diam.+.500 Cyl Diam.+12.70	Cyl Diam.+.750 Cyl Diam.+19.05	Cyl Diam.+1" Cyl Diam.+25.40	Cyl Diam.+1" Cyl Diam.+25.40
Bead Width	.094 _+ .003 2.39 _+0.08	.125_+ .003 3.18_+0.08	.187_+ .003 4.75 _+0.08	.250 _+ .003 6.35 _+0.08	.250 _+ .004 6.35 _+0.10
Bead Height	.095 _+ .004 2.41 _+0.10	.135 _+ .004 3.43 _+0.10	.200_+ .005 5.08 _+0.13	.270 _+ .006 6.86 _+0.15	.270 _+ .008 6.86_+0.2 0



Diaphragm Flange Diameter and Hole Trim Tolerances:

Diameter	Size	Position	
0 - 1.00" 25.40	.0 - 5 _+.010"	0.2	.010 0.25
1.01 - 3.00" 25.65 -76.20	_+.020" 1	0.5	.020 0.51
over 3.01" 76.45	over _+.030" 6	0.7	.030 0.76

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3. FABRIC SHEETS & ROUND DIAPHRAGM

In most instances sheets have onward processing to become molded parts. Their uses are in almost all branches of industry as punched or drilled items in, for instance, the automotive industry and in engineering and aircraft construction.

1. Features :-

All current elastomeric materials can be processed. Choice follows according to the respective application.Elastomer sheets can also be manufactured with a PTFE layer as well as with fabric reinforcement. Surface quality can be influenced by grinding or shot blasting.

2. Operating Conditions :-

Media: depends on choice of material
Temperature: between -50 C and 200 C according to material.

3. Production :-

Molded sheets can be supplied in these sizes:
300*300mm,
500*500mm and in the thickness 0,5to6mm.
Special sizes on request.
Continuous production in ordering quantities>50 sheets
Sheet size: up to 490*490mm
Sheet thickness: up to5 mm
Sheets made from silicone rubber and Fluoro-rubber are produced mainly in dimensions of 300*300 mm.
With Shore hardness under 50 grinding is only possible in individual cases.
When sheets are ground or shot blasted the surface quality is heavily dependent on shore hardness and on the base material.

4. Sheets With Fabric Reinforcement For High Operating Pressure :-

The range of fabrics comprise the synthetic type with thickness berween0,12 and 0,75 mm.

Production Provisions :-

Fabric insert: for operating pressure to both side
Fabric layer: for operating pressure to one side
Sheets With Fabric Layer :-
One side pressed smooth or one side ground
Minimum sheet thickness: 0,5 mm + thickness of fabric
Sheets With Fabric Insert :-
Both side pressed smooth or one side ground
Minimum sheet thickness: 2*0,5 mm + thickness of fabric

5. Sheets With PTFE Layer

Applications:

- With low breakaway forces even after longer standstills
- If higher thermal or chemical resistance is required
- When the surface should be smooth and non-stick
- For low friction co-efficient

One side formed smooth, one side PTFE coating,
Minimum sheet thickness : 0.5 mm +PTFE layer

6. Measurement & Tolerances Sheet Items Thickness tolerances of molded sheets

Material	Sheets 300*300 mm Without fabric with fabric/PTFE coating		Sheets 500*500 mm Without fabric with fabric/PTFE coating	
NBR	-	-	-	-
SBR	-	-	-	-
CR	+/-0.10	+/-0.15	+/-0.15	+/-0.20
VMQ	-	-	-	-
FVMQ	-	-	-	-
EPDM	-	-	-	-
HNBR	+/-0.15	+/-0.20	+/-0.20	+/-0.25
FPM	-	-	-	-

7. SHEET DIMENSIONS,TYPE 300*300mm

Thickness (mm)	Type (mm)	Elastomer sheets	fabric reinforcement	Sheets with PTFE coating
0.5	Sheets 300*300	•	•	•
0.6	Sheets 300*300	•	•	•
0.7	Sheets 300*300	•	•	•
0.8	Sheets 300*300	•	•	•
0.9	Sheets 300*300	•	•	•
1	Sheets 300*300	•	•	•
1.1	Sheets 300*300	•	•	•
1.2	Sheets 300*300	•	•	•
1.3	Sheets 300*300	•	•	•
1.4	Sheets 300*300	•	•	•
1.5	Sheets 300*300	•	•	•
1.6	Sheets 300*300	•	•	•
1.7	Sheets 300*300	•	•	•
1.8	Sheets 300*300	•	•	•
1.9	Sheets 300*300	•	•	•
2	Sheets 300*300	•	•	•
2.1	Sheets 300*300	•	•	•
2.2	Sheets 300*300	•	•	•
2.3	Sheets 300*300	•	•	•
2.4	Sheets 300*300	•	•	•
2.5	Sheets 300*300	•	•	•
2.6	Sheets 300*300	•	•	•
2.7	Sheets 300*300	•	•	•
2.8	Sheets 300*300	•	•	•
2.9	Sheets 300*300	•	•	•
3	Sheets 300*300	•	•	•
3.1	Sheets 300*300	•	•	•
3.2	Sheets 300*300	•	•	•
3.3	Sheets 300*300	•	•	•
3.4	Sheets 300*300	•	•	•
3.5	Sheets 300*300	•	•	•
3.6	Sheets 300*300	•	•	•
3.7	Sheets 300*300	•	•	•
3.8	Sheets 300*300	•	•	•
3.9	Sheets 300*300	•	•	•
4	Sheets 300*300	•	•	•
4.1	Sheets 300*300	•	•	•
4.2	Sheets 300*300	•	•	•
4.3	Sheets 300*300	•	•	•
4.4	Sheets 300*300	•	•	•
4.5	Sheets 300*300	•	•	•
4.6	Sheets 300*300	•	•	•
4.7	Sheets 300*300	•	•	•
4.8	Sheets 300*300	•	•	•
4.9	Sheets 300*300	•	•	•
5	Sheets 300*300	•	•	•
5.1	Sheets 300*300	•	•	•
5.2	Sheets 300*300	•	•	•
5.3	Sheets 300*300	•	•	•
5.4	Sheets 300*300	•	•	•
5.5	Sheets 300*300	•	•	•
5.6	Sheets 300*300	•	•	•
5.7	Sheets 300*300	•	•	•
5.8	Sheets 300*300	•	•	•
5.9	Sheets 300*300	•	•	•
6	Sheets 300*300	•	•	•

4. HOT WITH FABRIC

In addition to the standard design of long- stroke rolling diaphragms of hat & cap can also be supplied with or without fabric from special tooling, as per pressure.

1. Features :-

Long-stroke rolling diaphragms are special thin-walled, sensitive diaphragms made from highly elastic materials with fabric reinforcement, and in a special configuration without fabric reinforcement which was developed especially for the requirements of pneumatically-activated measuring, display and regulating equipment.

2. Application :-

Long-stroke rolling diaphragms are used for hydraulically-and-pneumatically-activated control and regulating equipment, pressure switches and pressure translators as well as measuring and display equipment.The unreinforced design is used as separation diaphragms in pressure compensator or for fine regulation in regulators for gas-pressure.

3. Characteristic Properties :-

The low diaphragm thickness and, relative to the diameter, large height of the diaphragm offer the following advantages:-

- Low, almost constant resistance over the entire stroke
- Essentially greater stroke lengths in comparison to traditional diaphragms with the same diameter.
- Effective surface area remains the same over entrie stroke
- No additional resistance when starting up or with change of direction of movement, no rest point in working range
- Low demands on piston and cylinder in comparison to seals.

4. Material :-

Standard material: Acrylo-nitrile-butadiene rubber(NBR) with or without Polyster fabric.Rolling diaphragms made from silicone rubber, Fluoro-rubber and EPDM with fabric are produced up to a height of 12 inch. Special tool are required for Fluoro-rubber. The exact operating conditions should be known for the selection of suitable material.

5. Operating Conditions :-

The standard range made from Nitrile rubber with fabric reinforcement for use in pressurized air allows working pressure up to 10 bar and test pressure up to 15 bar. Special material are available for applications involving natural gas, petrol and brake fluids as well as high temperatures.

6. Fitting :-

Then fabric has to be on the non-pressured side. The diaphragm is inverted before fitting. Should the rolling fold being formed dome up when performing this action, the use of a fitting sleeve becomes necessary. A screwdriver is not to be used!

TAFLON PIN

Western now manufactures quality Replacement value Body Diaphragms for use in Saunders Where Style and Straightway Diaphragm Valves designed to meet or exceed the original equipment manufactures specification of fit, from and function,these diaphragms are completely interchangeable. Diaphragms are competitively priced and are in stock and available for immediate shipment.

Western also manufactures 1 piece Teflon (PTFE) faced EPDM Diaphragms that is completely interchangeable with Elastomer diaphragms in size 1”- 8”. This means you can now upgrade existing values with elastomers diaphragms to Teflon (PTFE) without purchasing a complete new bonnet assembly.

Diaphragms are available in size ½”through 12”in the following materials

3/4"

1" Teflon (PTFE) with EPDM backing

2"

3" Teflon Faced EPDM

4"

6" Teflon (PTFE) with Butyl backing

info@westpolyrub.com

www.westpolyrub.com

Western now offers quality replacement value body diaphragms for use in Saunders KB style Straightway and High flow style Straightway diaphragm valves. Designed to meet or exceed the original equipment manufactures specification of fit, form and function, these diaphragms are completely interchangeable. Diaphragm's are competitively priced and are in stock, available for immediate shipment.

3/4"

2" Chlorobutyl

3" Neoprene

4" EPDM

6" Natural Rubber

8" Chlorobutyl