

# Standard and Elevated Pressure Welded Diaphragm Seals



## TYPE **30, 30H** **& 30H1**

- Utilizes an all metallic diaphragm welded to the upper housing to allow field replacement of the lower housing while maintaining continuity of the measuring system
- A wide variety of instrument and process connections are available
- A flushing port is available to clean wetted areas and prevent process media build up
- Consider gauge size, pressure range, media composition, ambient and operating temperature, and maximum working pressure when selecting
- For process temperatures over 212° F a capillary or cooling element is recommended, contact factory to order
- Fill fluid must be compatible with process media; i.e. Glycerine may become volatile in conjunction with a strong oxidizing agent such as chlorine, forms of oxygen or peroxide and nitric acids

### PRODUCT SPECIFICATIONS

<b>Suitable Pressure Gauge Sizes</b>	2-1/2, 4, 4-1/2 and 6 Inch Will also operate with most transducers, transmitters and pressure switches
<b>Minimum Working Pressure</b>	<b>30:</b> 0 psig to 30 psig through -30" Hg to 2,500 psig <b>30H, 30H1:</b> 0 psig to 30 psig through 0 psig to 10,000 psig
<b>Maximum Working Pressure</b>	<b>30:</b> 2,500 psig @ 100 °F <b>30H, 30H1:</b> 5,000 psig, 10,000 psig @ 100 °F
<b>Operating Temperature</b>	Refer to fill fluid expansion factors table below

Fill Fluid Temperature Table

Fill Fluid	Temperature Range (°F)
Glycerine*	30 - 300
Silicone 200-10	-35 - 450
Silicone 704	30 - 520
Silicone 710	30 - 650
Silicone 550	-40 - 600
Silicone 510	-60 - 400
Fluorolube FS-5	-40 - 500
Silicone 200-350	0 - 300
Halocarbon Oil 6.3	-40 - 400
Ethylene Glycol	-30 - 300
Propylene Glycol	-50 - 200
Syltherm 800	-40 - 450
Mineral Oil	Note 1
Neobee M-20	-40 - 320

\*Not recommended for use on vacuum applications  
Note 1. To be advised

# TYPE 30, 30H & 30H1

## ORDERING INFORMATION DIMENSIONS

ORDERING INFORMATION						
<b>TYPE</b>	<b>30</b>	2,500 psi	<b>30H</b>	5,000 psi	<b>30H1</b>	10,000 psi
<b>INSTRUMENT CONNECTION SIZES</b>	<b>02</b>	1/4 inch NPT	<b>04</b>	1/2 inch NPT		
<b>UPPER HOUSING MATERIAL</b>	<b>C</b>	Carbon Steel	<b>P</b>	Carpenter 20	<b>U</b>	Titanium Grade 4
	<b>M</b>	Monel 400	<b>S</b>	316 Stainless Steel		
<b>DIAPHRAGM MATERIAL</b>	<b>A</b>	Tantalum	<b>M</b>	Monel 400 <sup>1</sup>	<b>P</b>	Carpenter 20 <sup>1</sup>
	<b>H</b>	Hastelloy C-276	<b>N</b>	Inconel 600	<b>S</b>	316 Stainless Steel
<b>SEAL GASKET MATERIAL</b>	<b>H</b>	Silver Plated HC (5,000 psi and above)	<b>S</b>	Silver Plated SS (5,000 psi and above)	<b>V</b>	Viton®
	<b>R</b>	Klingsil C-4401 (Rated to 1,500 psi)	<b>T</b>	Teflon®		
<b>PROCESS CONNECTION SIZES</b>	<b>02</b>	1/4 Inch NPT	<b>06</b>	3/4 Inch NPT	<b>10</b>	1-1/4 Inch NPT
	<b>04</b>	1/2 Inch NPT	<b>08</b>	1 Inch NPT	<b>12</b>	1-1/2 Inch NPT
(ASME and DIN Flanges Available Upon Request)						
<b>LOWER HOUSING MATERIAL</b>	<b>C</b>	Carbon Steel	<b>M</b>	Monel 400	<b>P</b>	Carpenter 20
	<b>H</b>	Hastelloy C-276	<b>N</b>	Inconel 600	<b>S</b>	316 Stainless Steel
<b>FLUSHING CONNECTION<sup>2</sup></b>	<b>1F</b>	1/8 Inch NPT	<b>2F</b>	1/4 Inch NPT		

1) When selecting a Monel 400, Carpenter 20 or Titanium Grade 4 Diaphragm, the upper housing must be the same material

2) Not available on 10,000 psi model.

**NOTE:** For process temperatures over 212°F, a capillary or cooling element is recommended. Contact NOSHOK factory to order.

### EXAMPLE

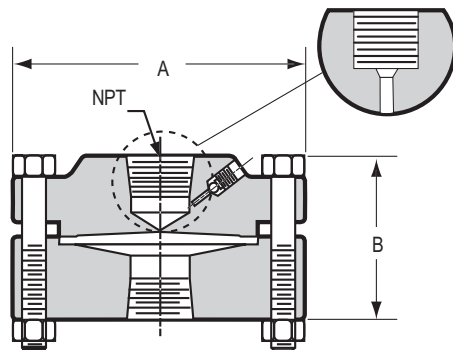
**Model Selection**  
**Instrument Connection Size**  
**Upper Housing Material**  
**Diaphragm Material**  
**Seal Gasket Material**  
**Process Connection Size**  
**Lower Housing Material**  
**Flushing Connection (Optional)**

**30 - 04 S - S - R - 04 S - 1F**

Type 30  
 1/2 Inch NPT  
 316 Stainless Steel  
 316 Stainless Steel  
 Klingsil C-4401  
 1/2 Inch NPT  
 316 Stainless Steel  
 1/8 Inch NPT

### OUTLINE DIMENSIONS

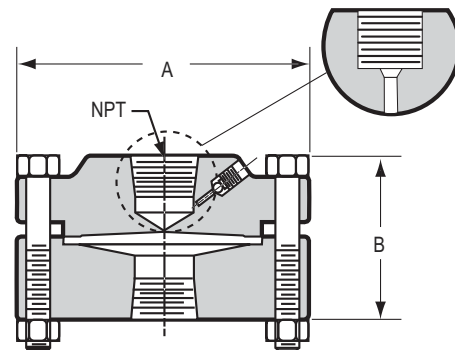
**Type 30 Standard Pressure Diaphragm Seal**



**Dimensional Data**  
**Process Connection Size**

	1/8 - 1/4	3/8 - 1-1/2
<b>A</b>	3.5	3.5
<b>B</b>	1.56	2.00

**Type 30H Elevated Pressure Diaphragm Seal**



**Dimensional Data**  
**Process Connection Size**

Pressure Rating	1/8 - 1/4		3/8 - 1-1/2	
	A	B	A	B
<b>5000</b>	4.0	2.25	4.0	2.25
<b>10000</b>	4.0	2.31	4.0	2.31

# Reduced Pressure Welded Diaphragm Seals



## TYPE 30L

- Designed for lower pressure applications
- Utilizes an all metallic diaphragm welded to the upper housing to allow replacement of the non-metallic lower housing while maintaining continuity of the measuring system
- Maximum pressure rating is 200 psi
- A flushing port is available to clean wetted areas and prevent process media build up
- Consider gauge size, pressure range, media composition, ambient and operating temperature, and maximum working pressure when selecting
- Maximum temperature rating is 140° F
- Fill fluid must be compatible with process media; i.e. Glycerine may become volatile in conjunction with a strong oxidizing agent such as chlorine, forms of oxygen or peroxide and nitric acids

### PRODUCT SPECIFICATIONS

<b>Suitable Pressure Gauge Sizes</b>	2-1/2, 4, 4-1/2 and 6 Inch Will also operate with most transducers, transmitters and pressure switches
<b>Minimum Working Pressure</b>	0 psig to 30 psig through -30 Hg to 200 psig
<b>Maximum Working Pressure</b>	200 psig @ 140 °F
<b>Operating Temperature</b>	140°F MAX

Fill Fluid Temperature Table

Fill Fluid	Temperature Range (°F)
Glycerine*	30 - 300
Silicone 200-10	-35 - 450
Silicone 704	30 - 520
Silicone 710	30 - 650
Silicone 550	-40 - 600
Silicone 510	-60 - 400
Fluorolube FS-5	-40 - 500
Silicone 200-350	0 - 300
Halocarbon Oil 6.3	-40 - 400
Ethylene Glycol	-30 - 300
Propylene Glycol	-50 - 200
Syltherm 800	-40 - 450
Mineral Oil	Note 1
Neobee M-20	-40 - 320

\*Not recommended for use on vacuum applications

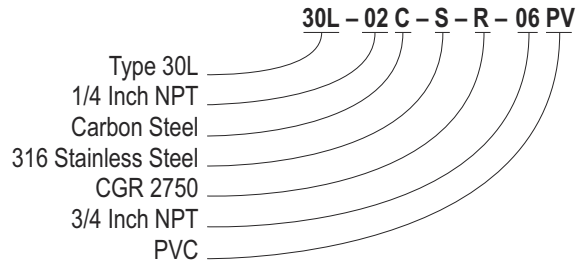
Note 1. To be advised

ORDERING INFORMATION						
TYPE	30L	200 psi				
INSTRUMENT CONNECTION SIZES	02	1/4 inch NPT				
	04	1/2 inch NPT				
UPPER HOUSING MATERIAL	C	Carbon Steel	P	Carpenter 20	U	Titanium Grade 4
	M	Monel 400	S	316 Stainless Steel		
DIAPHRAGM MATERIAL	A	Tantalum	M	Monel 400 <sup>1</sup>	P	Carpenter 20 <sup>1</sup>
	H	Hastelloy C-276	N	Inconel 600	S	316 Stainless Steel
SEAL GASKET MATERIAL	R	CGR 2750	T	Teflon <sup>®</sup>	V	Viton <sup>®</sup>
PROCESS CONNECTION SIZES	02	1/4 Inch NPT		06	3/4 Inch NPT	
	04	1/2 Inch NPT		08	1 Inch NPT (ASME and DIN Flanges Available Upon Request)	
LOWER HOUSING MATERIAL	KN	Kynar	PV	PVC	TG	Teflon <sup>®</sup> (Glass Filled)
	PP	Polypropylene	TC	Teflon <sup>®</sup> (Carbon Filled)		

1) When selecting a Monel 400, Carpenter 20 or Titanium Grade 4 Diaphragm, the upper housing must be the same material

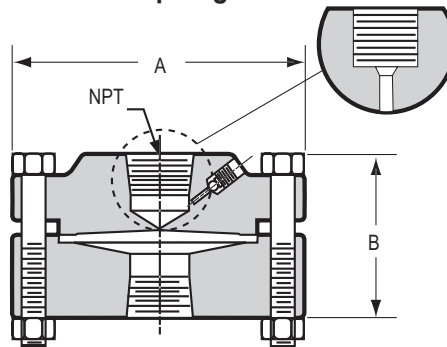
**EXAMPLE**

Model Selection  
Instrument Connection Size  
Upper Housing Material  
Diaphragm Material  
Seal Gasket Material  
Process Connection Size  
Lower Housing Material



**OUTLINE DIMENSIONS**

**Type 30L Reduced Pressure Diaphragm Seal**



**Dimensional Data  
Process Connection Size**

PVC-Kynar-Polypropylene			
	1/8 - 1/4	3/8 - 1	1-1/4 - 1-1/2
A	4.0	4.0	4.0
B	2.00	2.00	2.00
Teflon-Glass/Carbon			
A	4.0	4.0	4.0
B	2.12	2.12	2.12