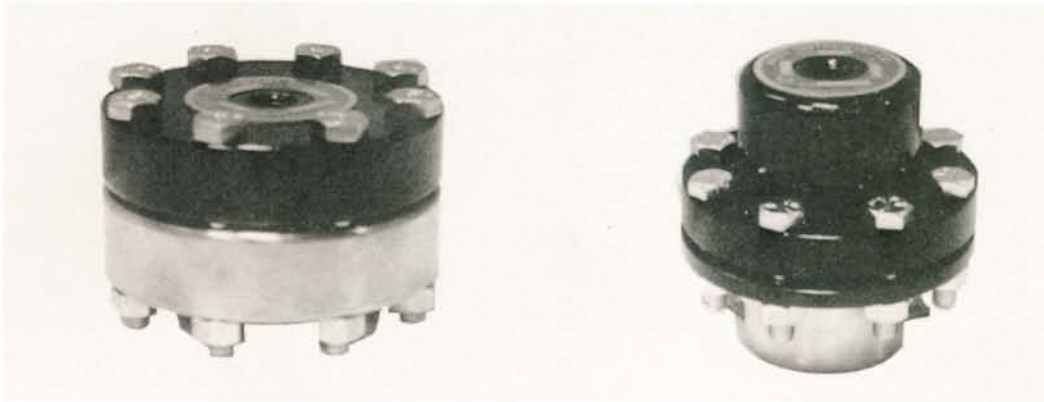


# HYETT

INSTRUMENT  
COMPANY

## DIAPHRAGM SEALS



## FOOD & BEVERAGE SEALS



## Instrumentation Plus

1019 West Mount Dr., Rocky Mount, NC 27803  
Phone: 877.241.1634 Fax: 252.443.1833  
252.443.1491

[rusty@instplus.com](mailto:rusty@instplus.com)  
<http://www.instplus.com>

# HYETT



## DIAPHRAGM SEALS

Hyett Diaphragm Seals are engineered for reliable use with bourdon tube type pressure gauges and with process transmitters or any other application where the separation of the medium and the control mechanism is necessary.

Hyett Diaphragm Seals are offered in a wide range of materials to withstand various corrosive conditions. The entire system above the diaphragm is solidly filled with a suitable liquid. When the line pressure is applied, the diaphragm displacement builds up an equal and balanced pressure on the instrument side of the diaphragm, and the gauge then measures line pressure. When properly filled, attached and calibrated it allows the attached gauge to function with its normal accuracy.

The use of a Hyett Diaphragm Seal will substantially lengthen the life of a gauge or instrument.

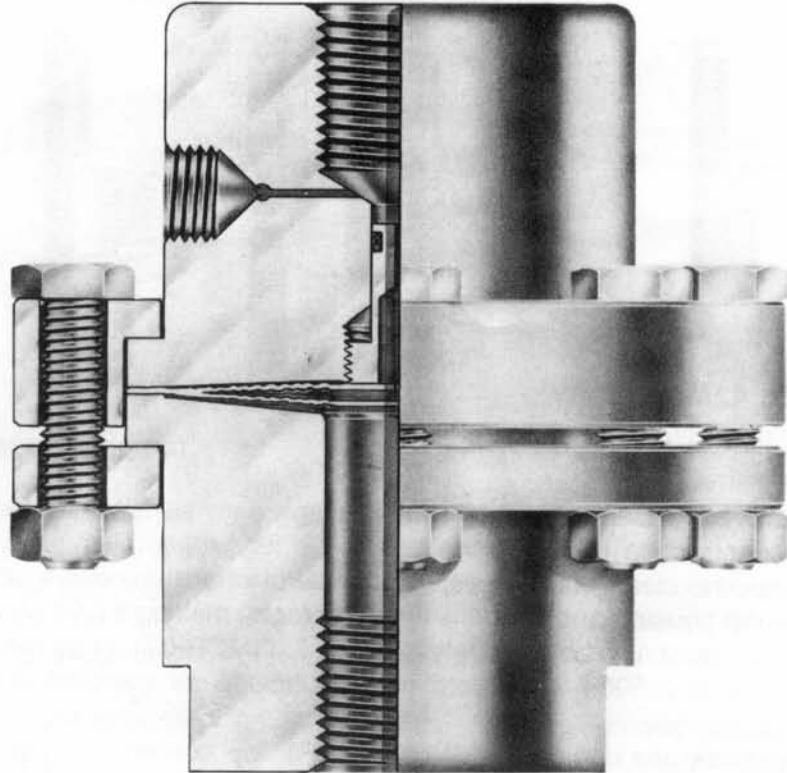
All Hyett Diaphragm Seals offer superior construction features for total dependability. These features include use of only top quality steel and other materials, precision machining of threaded connections.

Several designs are offered on the following pages for your selection.

# HYETT

## MODEL 25 CAPSULE DIAPHRAGM SEALS

*features field-replacement diaphragm, top housing assemblies and operator protection*



Hyett Model 25 Diaphragm Seals feature a unique, modular approach to facilitate maintenance. When the eight bolts are removed, the top housing and screw-in diaphragm come away as a single unit, along with the gauge which is connected. This allows prefilling and pre-calibrating of a stock of top-housing diaphragm/gauge units to meet the need for a replacement as soon as a problem occurs. All without ever needing to disconnect the lower housing from the line.

Model 25 also features an overlapping collar design at the joint of the upper and lower housings, thus preventing a blowout which could spray or burn an operator.

To simplify fluid filling, all Model 25 diaphragm seals include as standard a fill/bleed port in the top housing, except non-metallic tops.

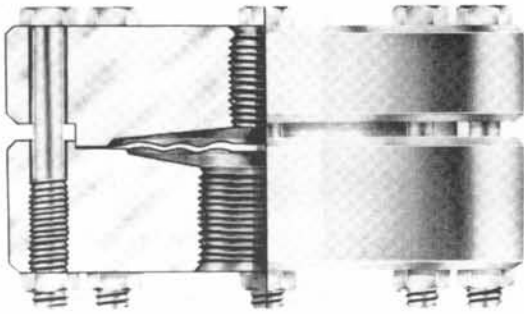
One model, the 25-01, also includes a flushing connection in the lower housing, in 1/4" N.P.T. female connection.

Model 25 diaphragm seals are available in a variety of process connections including 1/4", 1/2", 3/4", or 1" N.P.T. threaded connections, 1/2" and larger flanged connections (raised face standard, ring joint and flat face available) in a variety of flange ratings, saddle mounted models, and in-line models with welded, threaded, or flanged connections.

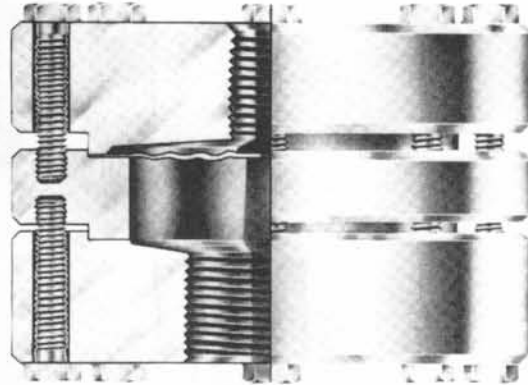
Other standard features are: choice of 1/4" or 1/2" N.P.T. top (instrument) connection; top housing is standard in carbon steel; diaphragm is standard in 316L stainless steel.



## MODEL 42M & 43MCR REMOVABLE DIAPHRAGM SEALS



**MODEL 42M & 42MW**



**MODEL 43MCR**

**MODEL 42M and 43MCR** are clamped metal design diaphragm seals. They feature an interlocking male-female housing construction inside of the bolt circle for proper alignment. Model 43MCR has an added feature of a special clean out ring, especially useful where process medium build-up occurs. The ring is bolted to the top housing and contains the diaphragm, making it field serviceable for cleaning. Flushing connections are available in both models (42M-01 & 43MCR-01). They are available in threaded connections for pressures to 2,500# PSI. Both models include as standard a fill/bleed port screw in the top housing.

Other standard features are choice of 1/4" or 1/2" NPT top connection; top housing is standard in carbon steel; diaphragm is standard in 316 stainless steel.

## MODEL 42MW & 25FW WELDED DIAPHRAGM SEALS

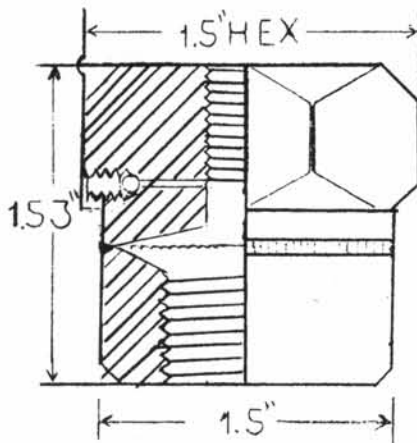
Welded diaphragm seals are designed to allow removal of upper housing with an instrument from the lower housing without losing the fill. An economical alternative to many other designs, these diaphragm seals are available in both threaded and flanged process connections.

Model 42MW has the same construction and standard features as Model 42M. Model 25FW has the same construction and standard features as Model 25F. All welded seals include as standard a fill/bleed port in the top housing.

# HYETT

## HYETT ALL WELDED SEALS

### MODEL 15AW

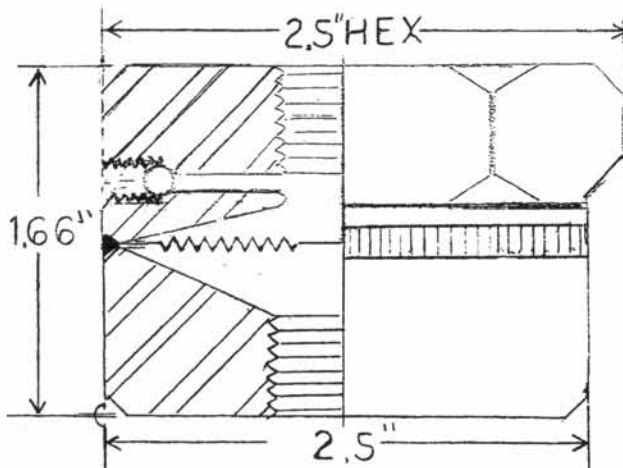


The 15AW mini-seal is designed for use on up to 3 1/2" bourdon tube gauges with a usual minimum range of 0-100 PSI.\* The maximum operating pressure is 2000 PSI at 100 degrees F.

These seals are standard in 316 stainless steel. Hastelloy C lower housings and diaphragms are available with a 316ss upper. Instrument connection is 1/4" NPTF and process connections are 1/4" NPTF or 1/2" NPTF.

\* Some ranges below 100 PSI are available

### MODEL 25AW

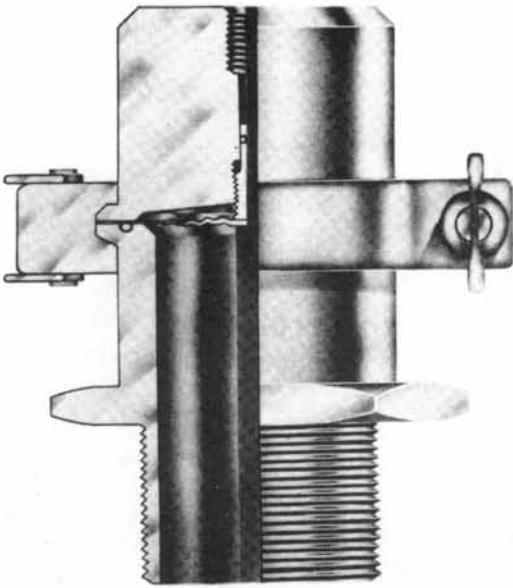


The 25AW seal is designed for use on up to 4 1/2" bourdon tube gauges, including most process gauges, with pressure ranges from vacuum to a maximum operating pressure of 1000 PSI at 100 degrees F.

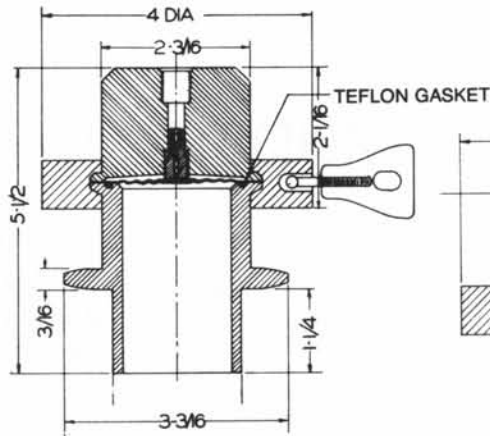
These seals come standard in 316 stainless steel. Hastelloy C lower housings and diaphragms are available with a 316ss upper. A 1/4" flushing connection is available on this seal. Instrument connections are available in 1/4" and 1/2" NPTF. Process connections are available in 1/4", 1/2", 3/4", and 1" NPTF.

# HYETT

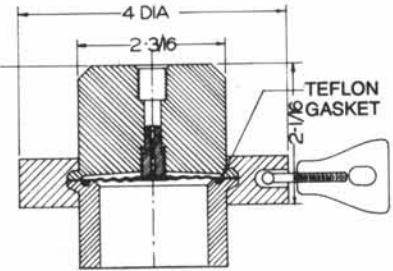
## FOOD & BEVERAGE SEALS



THREADED



THREADED



WELDED

### MODEL 1-MSS, 1-FSS & 1-WSS FOOD AND BEVERAGE SEALS

HYETT FOOD AND BEVERAGE SEALS are made with all stainless steel parts; upper housing, lower housing, diaphragm and 2" quick-disconnect clamp.

The quick-disconnect clamp allows easy and thorough flushing of the process system, a critically important factor in food and beverage manufacturing. The top housing features a screw-in diaphragm so the diaphragm/gauge liquid fill does not escape when the clamp is disconnected. This feature also simplifies the replacement of a prefilled upper housing/gauge assembly, should a problem occur.

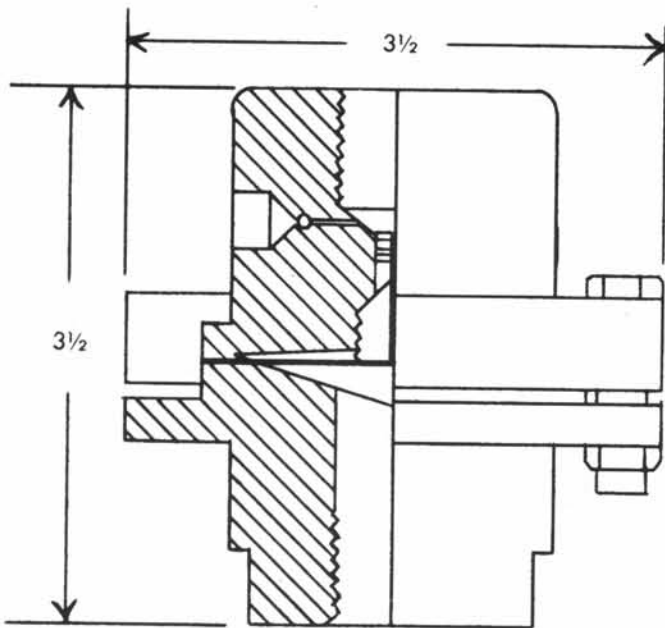
The Hyett Food and Beverage Seals are available in male and female threaded bottom in 1 1/2" and 2" N.P.T. process connection sizes, and in a 2" welded bottom design. All are available with either 1/4" or 1/2" top (instrument) connection. All are rated at 450 psi at 70°F and 250 psi at 250°F and include as standard a fill/bleed port in top housing.

For very high-pressure applications, special clamps are available to increase pressure rating to 1,000 psi.

A Teflon gasket between the diaphragm and lower housing assures a tight seal.

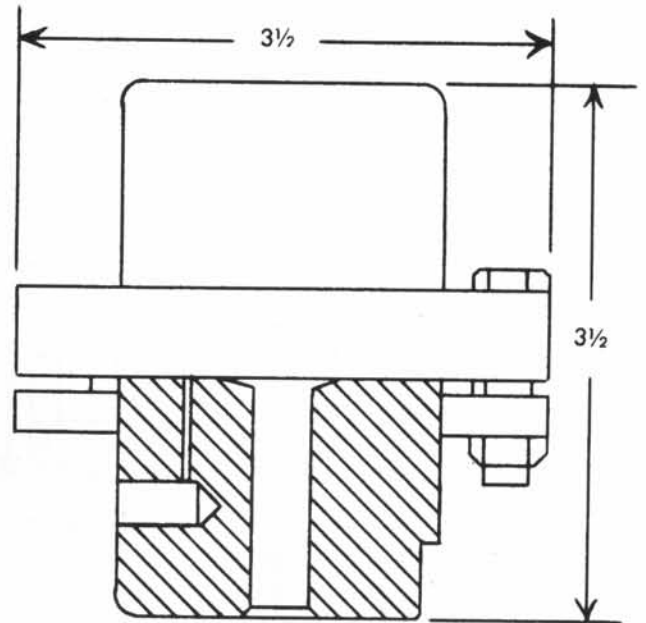
# DIMENSIONAL DRAWINGS

**25**



**25 - 01**

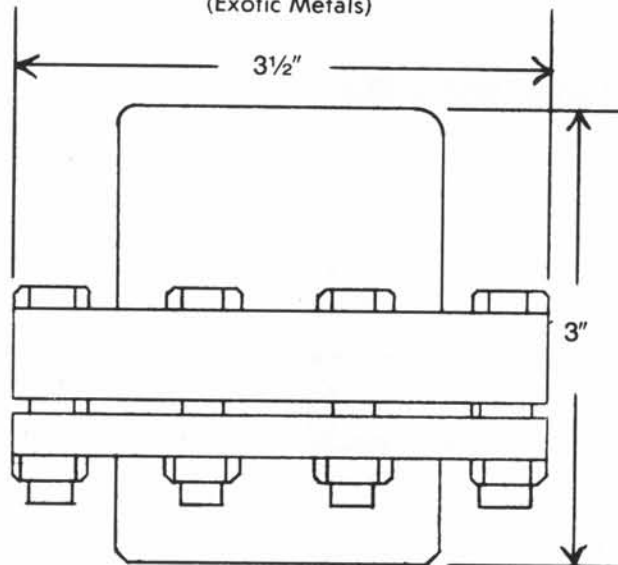
(1/4" Flushing Connection)



**MODEL 25 and MODEL 25-01** are continuous duty type seals in threaded models and are rated to 2,500#psi.

**25**

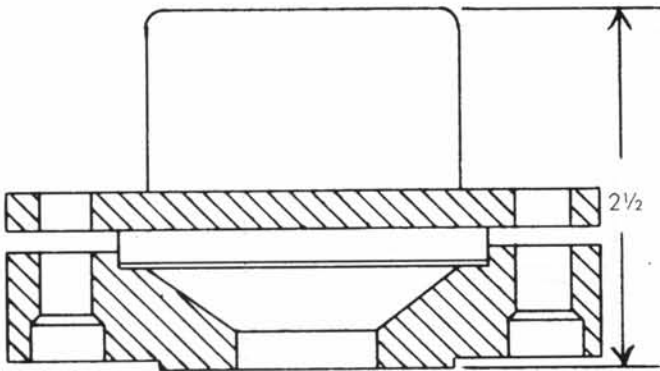
(Exotic Metals)



**MODEL 25**, in exotic metals, lower housing is 1 1/4" instead of the standard 1 3/4" except when flushing connection is required. (Hastelloy, Monel, Titanium, etc.)

**150#, 300#, 600# Flange (RF)  
25F & 25FW – 1", 1 1/2" RF150# Shown**

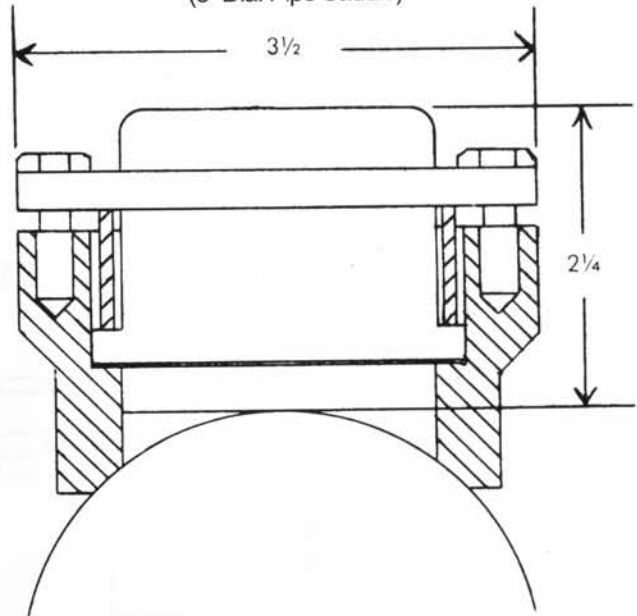
(Flange Mounted)



**Model 25F** is an ASA flange mounted model and is available in various flange sizes. Holding ring on models up to 1 1/2" are as above. On larger flanges, they are as shown below. Pressures are limited to the flange rating. Also available in other type flanges (flat face, ring joint, etc.) priced on application.

**25S & 25SW**

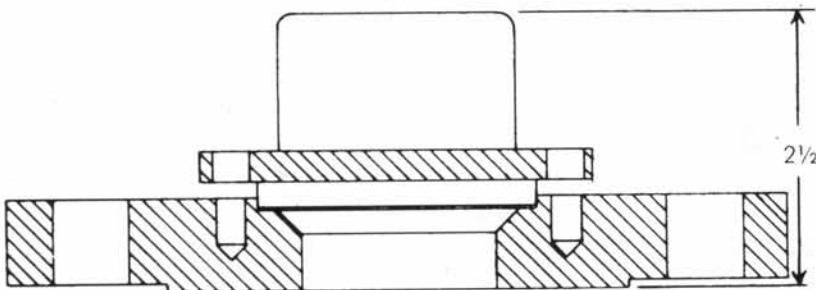
(3" Dia. Pipe Saddle)



**MODEL 25S** (saddle mount) is designed to be welded onto the user pipe and is available in the 3" pipe size shown above or for 4" and larger pipe sizes as shown below. The saddle is rated to 2,500#psi.

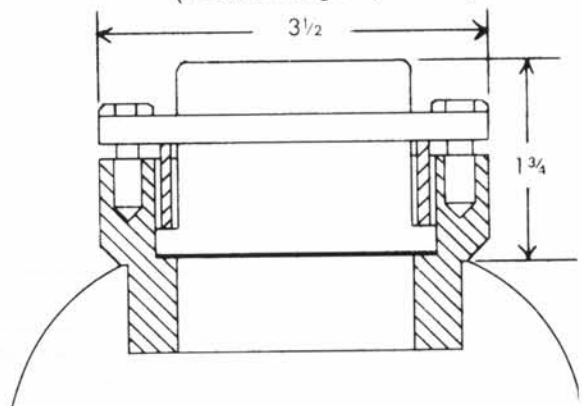
**25F & 25FW – 2" & 3" RF 150# Shown**

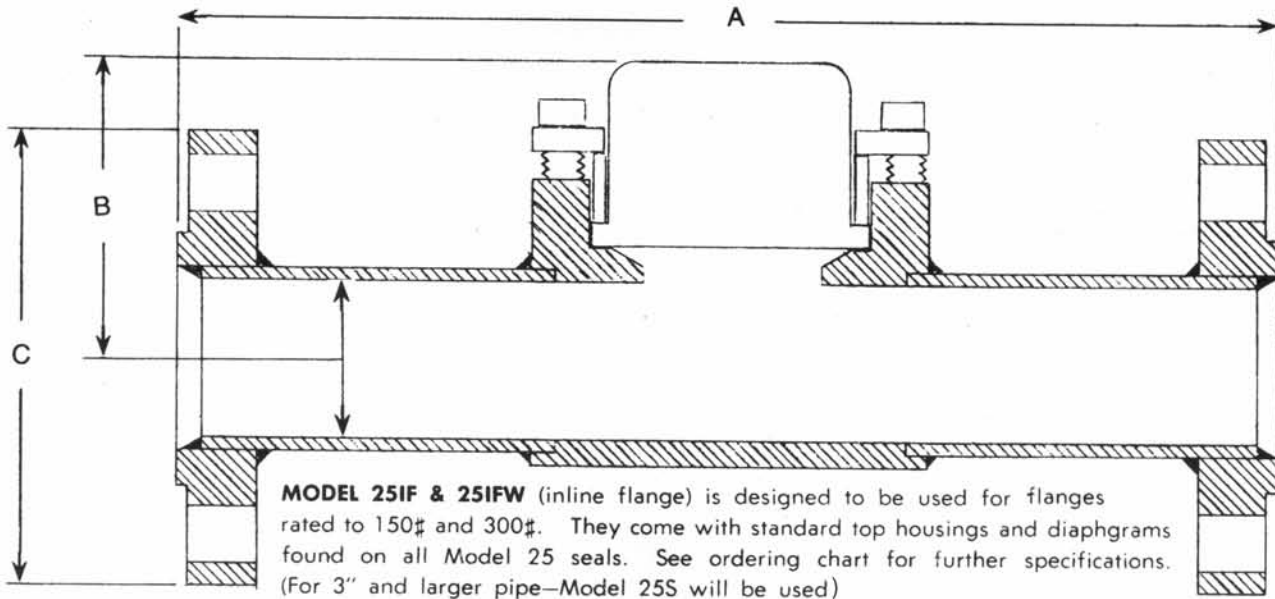
(Flange Mounted)



**25S & 25SW**

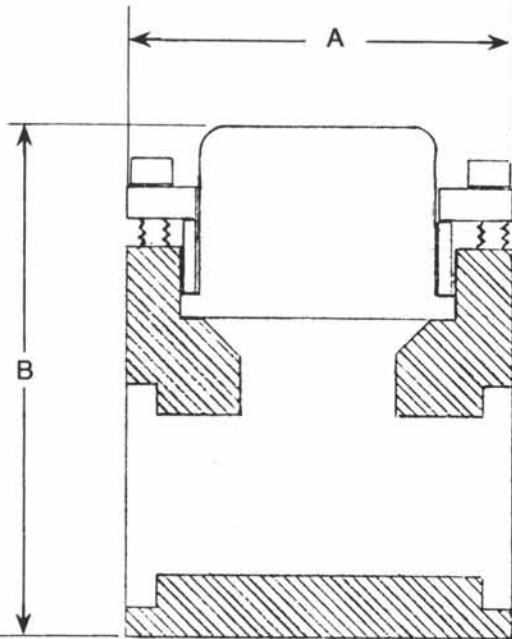
(4" Dia. and Larger Pipe Saddle)





**25IF & 25IFW** (Inline Flange) 1" - 1½" - 2"

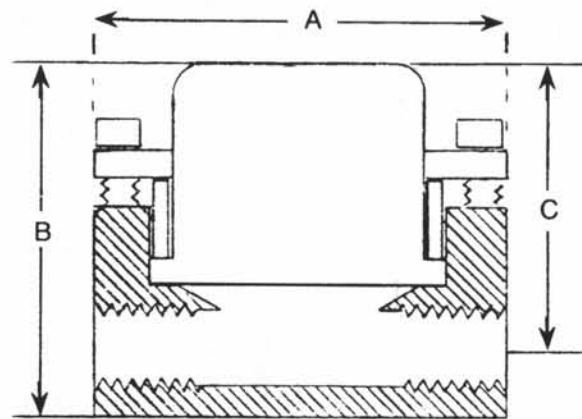
FLANGES		A	B	C
SIZE	RATING			
1"	150#	7	2½"	4
	300#	8	2½"	4.88
1½"	150#	8	2⅞"	5
	300#	9	2⅞"	6.12
2"	150#	9	3⅞"	6
	300#	10	3⅞"	6½



**MODEL 25IW & 25IWW**, (inline weld) is available in ¾", 1", 1½" and 2" lower housings, with socket weld connections.

**25IW & 25IWW** (Inline Weld)

NOMINAL PIPE SIZE	A	B
¾"	3½"	3⅞"
1"	3½"	3¼"
1½"	3½"	4¼"
2"	3½"	4½"

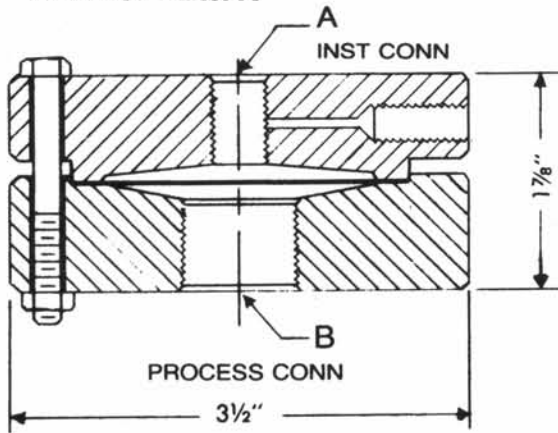


**MODEL 25IT & 25ITW** (inline threaded) is available in ¼", and ½" lower connections, and is a continuous duty flow-through type seal, for pressures to 2,500#psi service.

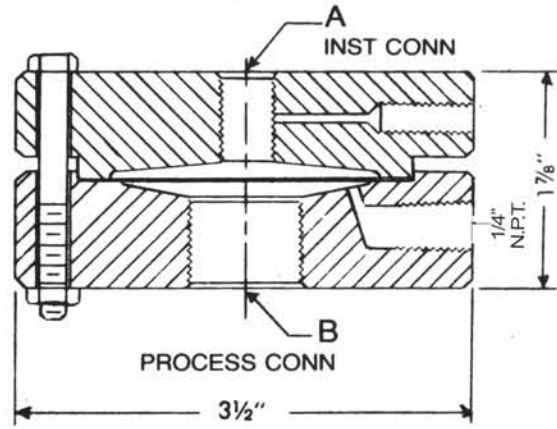
**25IT & 25ITW** (Inline Threaded) ¼" - ½" NPT

PROCESS CONNECTION	A	B	C
¼" NPT	3½	2½"	2⅞"
½" NPT		2⅞"	2¼"

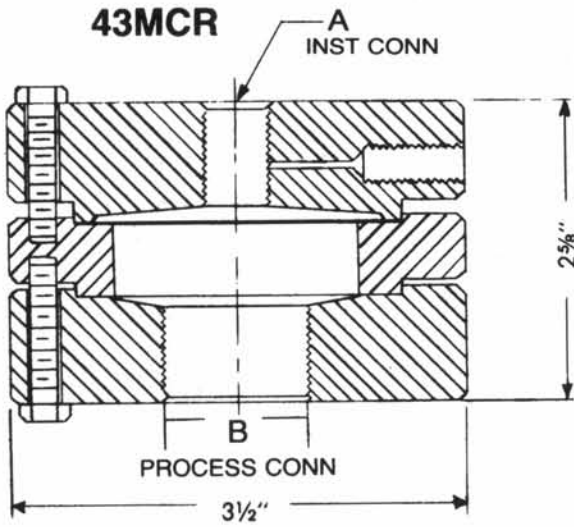
**42M & 42MW**



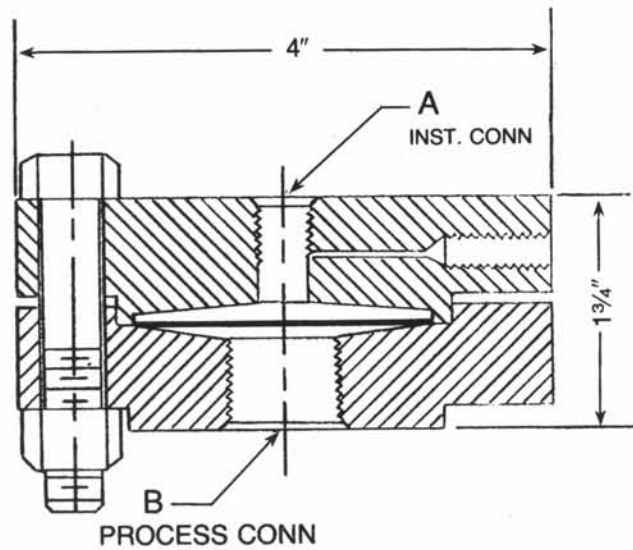
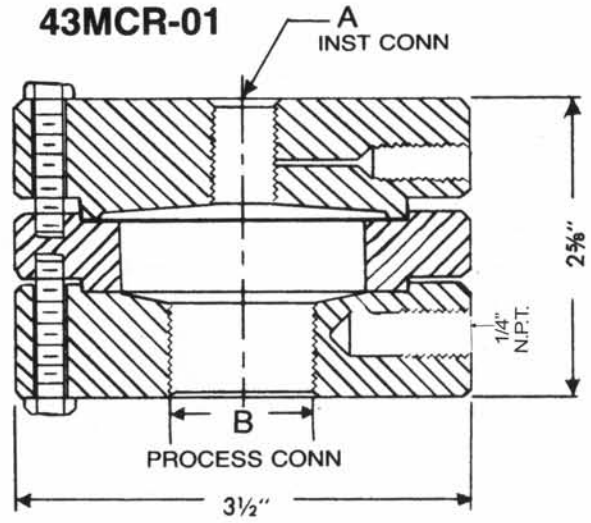
**42M-01 & 42MW-01**



**43MCR**



**43MCR-01**



**MODEL 42HP**

# TO ORDER A HYETT SEAL SPECIFY:

1. Model number.
2. Material for the diaphragm and the lower housing.
3. Instrument connection, 1/4" or 1/2" N.P.T.
4. For threaded seals, specify the process connection size. For the flange seals, specify pipe size and flange pressure class.
5. Select desired filling.
6. If capillary is to be used, specify type, and length.

## PRESSURE RATINGS:

Maximum allowable pressures are variable with each model description and must not be exceeded. Teflon, Polypropylene, PVC and other plastics are not designed to withstand pressures as do their metal equivalents and should be used only on low pressure service. All allowable pressures decrease when temperature increases.

## SPECIAL DIAPHRAGMS

The standard diaphragm is 316L stainless steel. To order a diaphragm made of another material you can select one of the materials listed below.

304 Stainless Steel	Tantalum	Carpenter 20	Teflon	Viton
Monel	Hastelloy B	Nickel	Titanium	
	Hastelloy C276			

## LOWER HOUSINGS:

All models are available in many corrosion resistant materials and optional features as listed below, selection of material and compatibility of material and process fluid is responsibility of the user.

Steel	Monel	Titanium
304 Stainless Steel	Nickel	Polypropylene
316 Stainless Steel	PVC	Kynar
Hastelloy B or C	Teflon	
Carpenter 20		

## OPTIONAL FEATURES:

316 SS top housing with SS rings, nuts and bolts.  
Pipe plugs for flushing connections.  
Flange faces - flat face or ring joint.  
5,000# PSI - type 42HP only.

## LIQUID FILLINGS

Glycerine 0-400 F  
Silicone -40 to 600 degrees F  
Distilled Water  
Halocarbon  
Neobee M-20  
Food Grade Silicone  
Ethylene Glycol  
Other Filled Liquids on Request

## CAPILLARY LINES

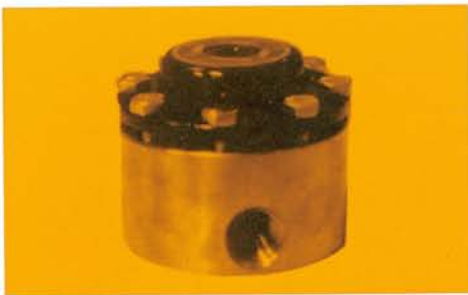
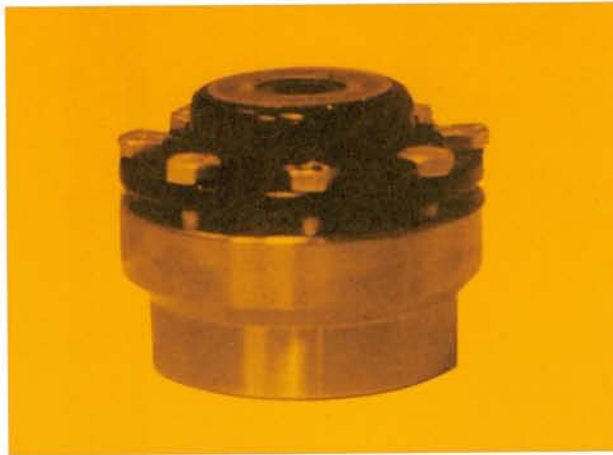
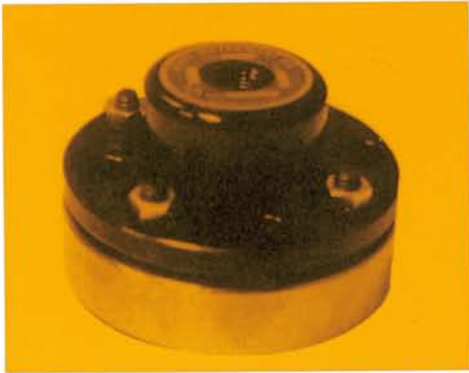
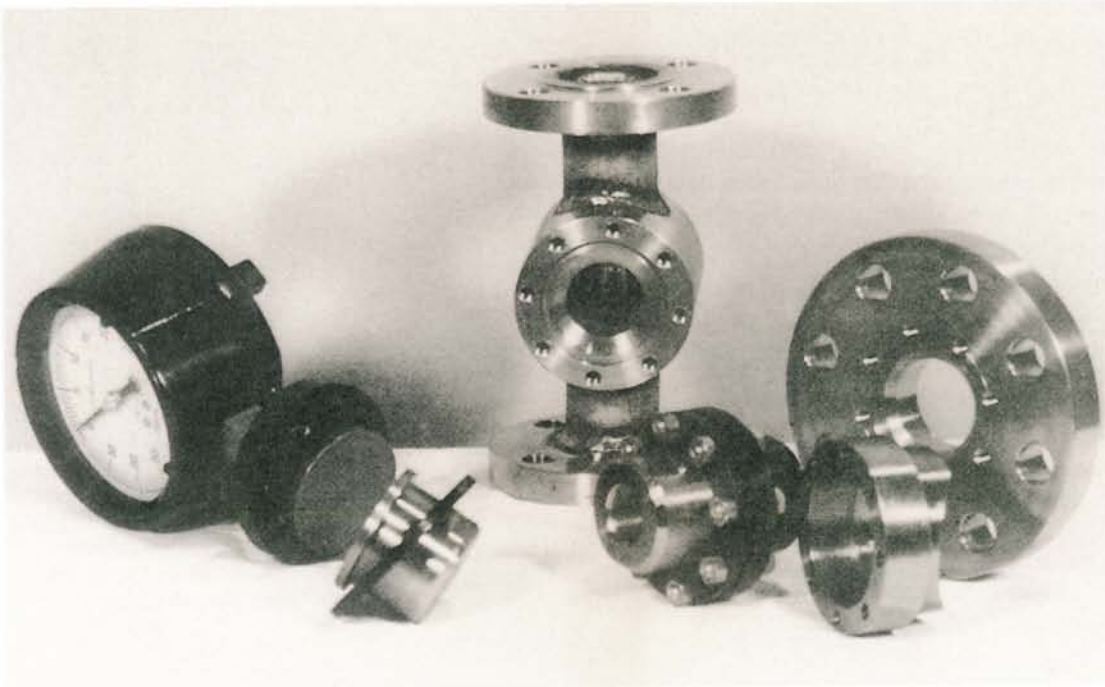
If your application requires a stainless steel capillary line, specify one of the following and the desired length when ordering.

Stainless Steel Armored 1/4" or 1/2" N.P.T. conn.  
Stainless Steel Armored PVC coated 1/4" or 1/2" N.P.T. conn.

## GUARANTEE

Hyett Manufacturing and Instrument Company, Inc., guarantees its diaphragm seals to be free from defects in material and workmanship at the time of shipment.

We assume no other responsibility and make no other guarantee.



**HYETT** INSTRUMENT  
COMPANY