



HAYGOR INSTRUMENT
— & COMPANY, INC. —

Diaphragm Seal & Capillary

Selection Guide



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August 2021

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Applications & Features

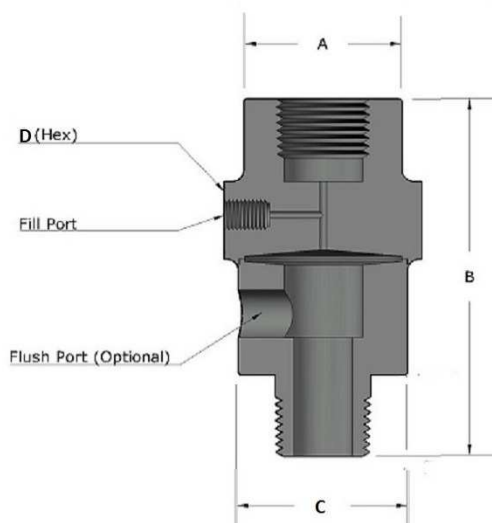
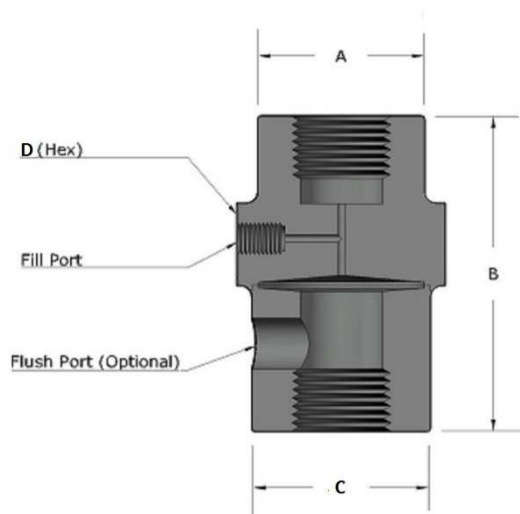
- Small threaded seal for off-line process connections
- All welded construction, No gasket, No Bolting
- Male or female NPT process connection
- Economical low cost design



Ordering Information

Base Model		
	HMT-	All Welded Threaded Mini Seal
Size		
	1	1.5" Diaphragm 2000 PSI (Standard)
	2	2.0" Diaphragm 1000 PSI (Standard)
	3	1.0" Diaphragm 5000 PSI
Inst. Connection		
	W	Weld Connection
	2	1/4" NPT
	4	1/2" NPT
Upper Material		
	S6	316 / 316LSS
	M4	(Required with Monel diaphragm/lower)
	TI	(Required with Titanium diaphragm/lower)
	Z7	(Required with Zirconium diaphragm/lower)
Process Connection Size		
	2	1/4" NPT
	4	1/2" NPT
	5	3/4" NPT (Size 2 Only)
	6	1.0" NPT (Size 2 Only)
Process Connection Type		
	F	Female
	M	Male
Lower Material		
	S6	316 / 316LSS
	C2	Alloy 20
	HC	Alloy C-276
	HB	Alloy B-3
	M4	Monel 400
	I6	Alloy 600
	DP	Alloy 2205
	NI	Nickel 200
	TI	Titanium
	Z7	Zirconium 702 (Contact Factory)
Flushing Connection		
	N	None
	A	Single 1/4" NPTF
	B	Dual 1/4" NPTF
Diaphragm Material		
	S6	316 / 316LSS
ALWAYS MATCHES	S4	304/304L
LOWER MATERIAL	C2	Alloy 20
	HC	Alloy C-276
		CONTINUED ON NEXT PAGE

		CONTINUED PREVIOUS PAGE
	HB	Alloy B-3
	M4	Monel 400
	I6	Alloy 600
	DP	Alloy 2205
	NI	Nickel 200
	T1	Titanium
	Z7	Zirconium 702
Options		
	/P1	Single 1/4" NPT plug for flush port (Material same as lower)
	/P2	Dual 1/4" NPT plugs for flush port (Material same as lower)
	/MC	Material cert with MTR's



1.5" Diaphragm 2000 PSI MWP					
Process Conn.	Flush Port	A	B	C	D
1/4" NPTF	None	1.40"	2.20"	1.50"	1.75"
	1/4"	1.40"	2.70"	1.50"	1.75"
1/2" NPTF	None	1.40"	2.20"	1.50"	1.75"
	1/4"	1.40"	2.70"	1.50"	1.75"
3/4" NPTF	None	1.40"	2.20"	1.50"	1.75"
	1/4"	1.40"	2.70"	1.50"	1.75"
1/4" NPTM	None	1.40"	2.80"	1.50"	1.75"
	1/4"	1.40"	3.30"	1.50"	1.75"
1/2" NPTM	None	1.40"	2.93"	1.50"	1.75"
	1/4"	1.40"	3.43"	1.50"	1.75"
3/4" NPTM	None	1.40"	2.95"	1.50"	1.75"
	1/4"	1.40"	3.45"	1.50"	1.75"

2.0" Diaphragm 1000 PSI MWP					
Process Conn.	Flush Port	A	B	C	D
1/4" NPTF	None	1.90"	2.20"	2.00"	2.25"
	1/4"	1.90"	2.70"	2.00"	2.25"
1/2" NPTF	None	1.90"	2.20"	2.00"	2.25"
	1/4"	1.90"	2.70"	2.00"	2.25"
3/4" NPTF	None	1.90"	2.20"	2.00"	2.25"
	1/4"	1.90"	2.70"	2.00"	2.25"
1.0" NPTF	None	1.90"	2.20"	2.00"	2.25"
	1/4"	1.90"	2.70"	2.00"	2.25"
1/4" NPTM	None	1.90"	2.80"	2.00"	2.25"
	1/4"	1.90"	3.30"	2.00"	2.25"
1/2" NPTM	None	1.90"	2.93"	2.00"	2.25"
	1/4"	1.90"	3.43"	2.00"	2.25"
3/4" NPTM	None	1.90"	2.95"	2.00"	2.25"
	1/4"	1.90"	3.45"	2.00"	2.25"
1.0" NPTM	None	1.90"	3.08"	2.00"	2.25"
	1/4"	1.90"	3.58"	2.00"	2.25"

HMT Dimensional Information

Applications & Features

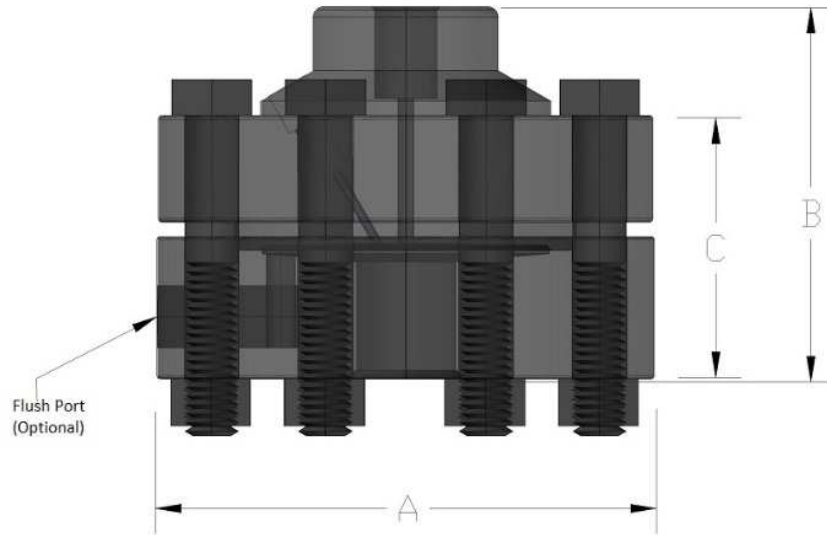
- Standard threaded Seal for off-line process connections.
- 3 Sizes to fit various applications
- Standard Pressure ratings to 1500 PSI and 2500 PSI,
- Higher pressure ratings available
- Male or female NPT process connection



Ordering Information

Base Model			
	HTH-	Threaded Seal	
Size			
	2	2.4" Diaphragm	2500 PSI (Standard)
	3	2.9" Diaphragm	2500 PSI (Standard)
	4	4.1" Diaphragm	1500 PSI (Standard)
	5	2.4" Diaphragm	5000 PSI
	6	2.9" Diaphragm	5000 PSI
	7	4.1" Diaphragm	4000 PSI
	8	2.4" Diaphragm	10000 PSI
Inst. Connection			
	W	Weld Connection (8mm)	
	2	1/4" NPT	
	4	1/2" NPT	
Upper Material			
	S6	316/316L	
	TI	Titanium	(Required with Titanium diaphragm)
	Z7	Zirconium 702	(Required with Zirconium diaphragm)
Process Connection Size			
	2	1/4" NPT	
	4	1/2" NPT	
	5	3/4" NPT	
	6	1.0" NPT	
	7	1-1/4" NPT	
	8	1-1/2" NPT	
Process Connection Type			
	F	Female	
	M	Male	
Lower Material			
	S6	316 / 316LSS	
	S4	304 / 304LSS	
	CS	Carbon Steel Nickel Plated	
	C2	Alloy 20	
	HC	Alloy C-276	
	HB	Alloy B-3	
		CONTINUED ON NEXT PAGE	

CONTINUED FROM PREVIOUS PAGE		
	M4	Alloy 400
	DP	Alloy 2205
	NI	Nickel 200
	TI	Titanium
	Z7	Zirconium 702
	TF	PTFE w/ SST support ring (200 PSI MWP)
Flushing Connection		
	N	None
	A	Single 1/4" NPTF
	B	Dual 1/4" NPTF
	C	Single 1/2" NPTF Size 3 & 4 Only
	D	Dual 1/2" NPTF Size 3 & 4 Only
Diaphragm Material		
	S6	316 / 316LSS
	S4	304 / 304LSS
	TA	Tantalum
	C2	Alloy 20
	HC	Alloy C-276
	H2	Alloy B3
	M4	Monel 400
	I6	Alloy 600
	DP	Alloy 2205
	NI	Nickel 201
	TI	Titanium
	Z7	Zirconium 702
	TF	PTFE
Gasket Material		
	K4	Klinger C4401 (Standard) 450 F Max
	GF	Grafoil 700 F Max
	GL	Gylon 3510 300F Max
	TF	PTFE (o-ring) 350 F Max
	VI	Viton (o-ring) 400 F max
	BN	Buna-N (o-ring) 250 F Max
	KZ	Kalrez (o-ring) 500 F Max
	NN	None (Use w/ PTFE Lower or Diaph.)
	TV	FEP Encapsulated Viton (o-ring)
	GY	Gylon 3500
Bolting		
	CS	Grade 8 Zinc Plated (Standard)
	S4	304SS Reduces Pressure rating 50%
	S6	316SS Reduces Pressure rating 50%
Options		
	/AU	Gold Plated Diaphragm
	/NS	PTFE Coated Diaphragm (Non-Stick Only - Not for corrosion protection)
	/P1	With single pipe plug for flush port (Material same as lower)
	/P2	With dual pipe plugs for flush port (Material same as lower)
	/MC	Material cert with MTR's



HTH Threaded Off-Line Seal Dimensions

Diaphragm Size	MWP	Flush Port Size	Bolts	Bolt Size	"A"	"B"	"C"
2.4"	2,500 psi	1/4 NPT or NO FLUSH	8	5/16-24nf	3.48"	2.68"	1.85"
		1/2 NPT	8	7/16-20nf	4.00"	3.06"	2.30"
	5,000 PSI	1/4 NPT or NO FLUSH	8	7/16-20nf	4.00"	3.39"	2.63"
		1/2 NPT	8	1/2-20nf	4.00"	3.46"	2.70"
10,000 PSI	1/4 NPT or NO FLUSH	8	1/2-20nf	4.00"	3.79"	3.03"	
	1/2 NPT	8	1/2-20nf	4.00"	3.79"	3.03"	
2.9"	2,500 psi	1/4 NPT or NO FLUSH	8	3/8-24nf	4.00"	2.61"	1.85"
		1/2 NPT	8	3/8-24nf	4.00"	2.94"	2.18"
	5,000 PSI	1/4 NPT or NO FLUSH	8	1/2-20nf	4.48"	3.06"	2.30"
		1/2 NPT	8	1/2-20nf	4.48"	3.37"	2.63"
4.1"	1,500 PSI	1/4 NPT or NO FLUSH	8	3/8-24nf	5.40"	2.52"	1.76"
		1/2 NPT	8	3/8-24nf	5.40"	2.85"	2.09"
	4,000 PSI	1/4 NPT or NO FLUSH	8	5/8-18nf	5.90"	3.16"	2.40"
		1/2 NPT	8	5/8-18nf	5.90"	3.49"	2.73"

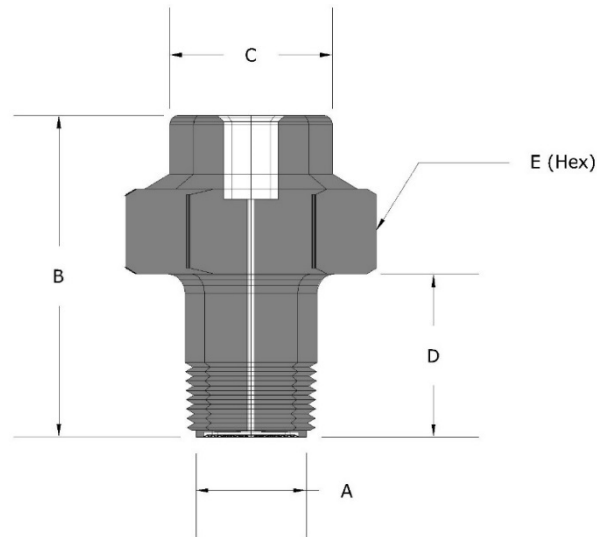
Applications & Features

- Male NPT threaded body with flush diaphragm at the end of threads
- Suitable for pressures up to 9000 PSI depending on size
- Sizes from 3/4" NPT to 2" NPT



Ordering Information

Base Model				
	HFT	Threaded Flush Diaphragm		
Size				
	A	3/4" NPT Flush Male Connection	9000 PSI MWP	316SS
	B	1" NPT Flush Male Connection	9000 PSI MWP	316SS
	C	1-1/2" NPT Flush Male Connection	6000 PSI MWP	316SS
	D	2" NPT Flush Male Connection	4000 PSI MWP	316SS
Non catalog item	E	1/2" NPT Flush Male Conn.	9000 PSI MWP	316SS
Non catalog item	F	1-1/4" NPT Flush Male Conn.	6000 PSI MWP	316SS
Non catalog item	L	1" G1B with O-Rings (Special)		
Instrument Connection				
	W	Weld Connection	(Not available with Titanium or Zirconium)	
	2	1/4" NPT		
	4	1/2" NPT		
Body & Diaphragm Material				
	S6	316 / 316LSS		
	S4	304 / 304LSS		
	C2	Alloy 20		
	HC	Alloy C-276		
	HB	Alloy B-3		
	M4	Monel 400		
	I6	Alloy 600		
	DP	Alloy 2205		
	NI	Nickel 200		
	TI	Titanium		
	Z7	Zirconium 702		
	SC	316 SS Body / C-276 Diaphragm		
Options				
	/AU	Gold Plated diaphragm		
	/NS	PTFE Coated Diaphragm	(Non-Stick Only - Not for corrosion protection)	
	/MC	Material cert with MTR's		



HFT Dimensions

Size	"A" Diaph. Size	"B"	"C"	"D"	"E" Hex Size
¾" NPTM	0.88"	2.50"	1.30"	1.25"	1.75"
1" NPTM	1.16"	2.50"	1.30"	1.25"	1.75"
1.5" NPTM	1.75"	2.70"	1.30"	1.25"	2.50"
2" NPTM	2.08"	2.70"	1.30"	1.25"	2.50"

Applications & Features

- Flanged Seal with recessed diaphragm for Off-line process connection
- 3 Sizes to fit various applications
- Standard flange sizes from ANSI ½” to 3”.
- Standard flange ratings from ANSI Class 150 to 600, Extended rating to ANSI class 1500
- Other flange standards available

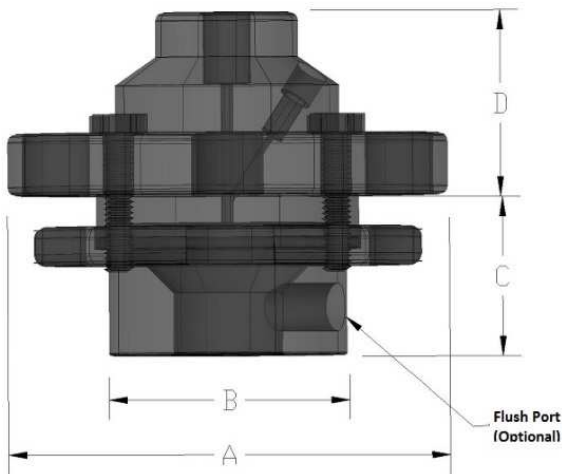


Ordering Information

Base Model			
	HFL	Flanged Off-Line	
Size			
	2	2.4" Diaphragm	ANSI Raised Face (RF)
	3	2.9" Diaphragm	ANSI Raised Face (RF)
	4	4.1" Diaphragm	ANSI Raised Face (RF)
	5	2.4" Diaphragm	RIng Type Joint (RTJ)
	6	2.9" Diaphragm	RIng Type Joint (RTJ)
	7	4.1" Diaphragm	RIng Type Joint (RTJ)
Inst. Connection			
	W	Weld Connection	(Not available with Titanium or Zirconium)
	2	1/4" NPT	
	4	1/2" NPT	
Upper Material			
	S6	316 / 316LSS	
	T1	Titanium	(Required with Titanium diaphragm)
	Z7	Zirconium 702	(Required with Zirconium diaphragm)
Process Connection Size			
	05	1/2"	
	07	3/4"	
	10	1.0"	
	15	1.5"	
	20	2.0"	
	30	3.0"	
	40	4.0"	
Process Connection Rating			
	A	150#	
	B	300#	
	C	600#	
	D	900#	
	E	1500#	

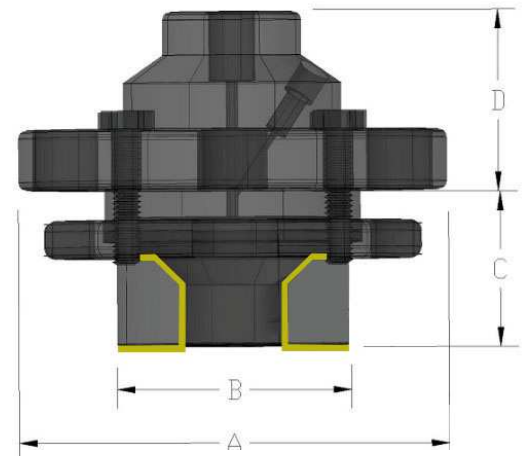
Lower Material			
	S6	316 / 316LSS	
	S4	304 / 304LSS	
	C2	Alloy 20	
	HC	Alloy C-276	
	HB	Alloy B-3	
	M4	Monel 400	
	I6	Alloy 600	
	DP	Alloy 2205	
	NI	Nickel 200	
	TI	Titanium	
	Z7	Zirconium 702	
	CS	Carbon Steel	
	TF	316SS PTFE Lined	Flush Connection Not Available
	TA	316SS Tantalum Lined	Flush Connection Not Available
Flushing Connection			
	N	None	
	A	Single 1/4" NPTF	
	B	Dual 1/4" NPTF	
	C	Single 1/2" NPTF	Size 3 & 4 Only
	D	Dual 1/2" NPTF	Size 3 & 4 Only
	E	Single 1/4" Pipe Socket Weld	
	F	Dual 1/4" Pipe Socket Weld	
	G	Single 1/2" Pipe Socket Weld	Size 3 & 4 Only
	H	Dual 1/2" Pipe Socket Weld	Size 3 & 4 Only
Diaphragm Material			
	S6	316 / 316LSS	
	S4	304 / 304LSS	
	TA	Tantalum	
	C2	Alloy 20	
	HC	Alloy C-276	
	HB	Alloy B-3	
	M4	Monel 400	
	I6	Alloy 600	
	DP	Alloy 2205	
	NI	Nickel 201 /200	
	TI	Titanium	
	Z7	Zirconium 702	
	TF	PTFE	
Gasket Material			
	K4	Klinger C4401 (Standard)	450 F Max
	GF	Grafoil	700 F Max
	GL	Gylon 3510	300F Max
	TF	PTFE (o-ring)	350 F Max
	VI	Viton (o-ring)	400 F max
	BN	Buna-N (o-ring)	250 F Max
	KZ	Kalrez (o-ring)	500 F Max
	NN	None (PTFE Lower)	
	TV	FEP Encapsulated Viton (O-ring)	
	GY	Gylon 3500	
Bolting			
	CS	Grade 8 Zinc Plated (Standard)	

	S4	304SS Reduces Pressure rating 50%
	S6	316SS Reduces Pressure rating 50%
Options		
	/AU	Gold Plated Diaphragm
	/NS	PTFE Coated Diaphragm (Non Stick Only - Not for corrosion protection)
	/P1	With single pipe plug for flush port (Material same as lower)
	/P2	With dual pipe plugs for flush port (Material same as lower)
	/MC	Material cert with MTR's

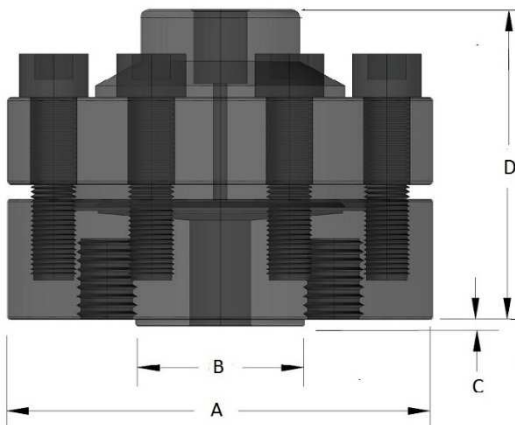


Configuration A

Through Bolt Mounting

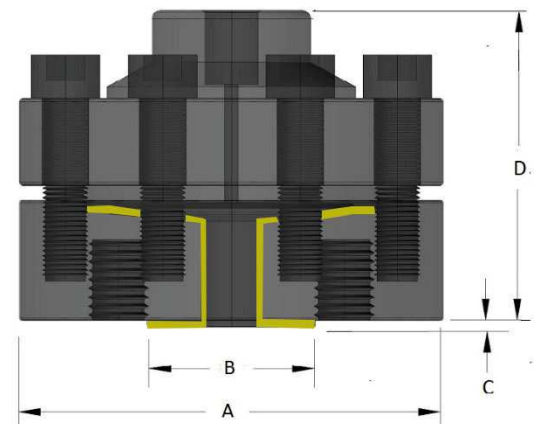


Shown with PTFE or Tantalum lining

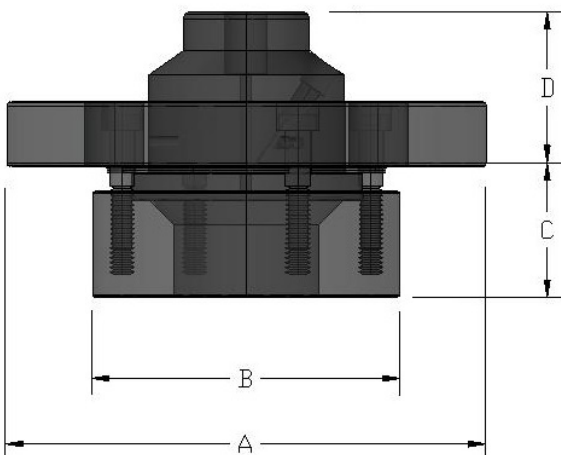


Configuration B

Stud Bolt Mounting

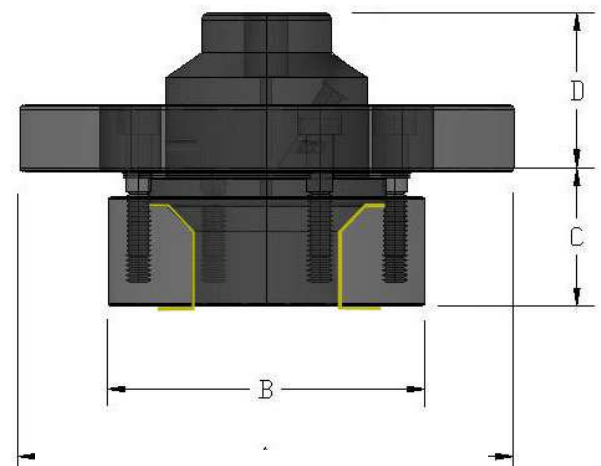


Shown with PTFE or Tantalum lining



Configuration C

Through Bolt Mounting



Shown with PTFE or Tantalum lining

HFL Dimensions 2.4" diaphragm

Seal Type	Flush Port Size	Configuration Type	A	B	C	D	Bolt Quantity, Bolt Size, Bolt Circle Ø
1/2"-150#	None or 1/4" NPT	B	3.48"	1.38"	.06	2.65"	(4X), 1/2-13nc, 2.38Øb.c.
	1/2" NPT					2.98"	
3/4"-150#	None or 1/4" NPT	B	3.92"	1.69"	.06"	2.65"	(4X), 1/2-13nc, 2.75Øb.c.
	1/2" NPT					2.98"	
1"-150#	None or 1/4" NPT	A	3.96"	2.17"	1.37"	1.66"	(4X), 1/2-13nc, 3.12Øb.c.
	1/2" NPT				1.70"		
1-1/2"-150#	None or 1/4" NPT	C	5.00"	3.20"	1.30"	1.66"	(4X), 1/2-13nc, 3.12Øb.c.
	1/2" NPT				1.63"		
2"-150#	None or 1/4" NPT	C	6.00"	3.92"	1.30"	1.66"	(4X), 5/8-11nc, 4.75Øb.c.
	1/2" NPT				1.63"		
3"-150#	None or 1/4" NPT	C	7.50"	5.15"	1.30"	1.66"	(4X), 5/8-11nc, 6.00Øb.c.
	1/2" NPT				1.63"		
4"-150#	None or 1/4" NPT	C	9.00"	6.20"	1.30"	1.66"	(8X), 5/8-11nc, 7.50Øb.c.
	1/2" NPT				1.63"		
1/2"-300#	None or 1/4" NPT	B	3.75"	1.38"	.06"	2.65"	(4X), 1/2-13nc, 2.62Øb.c.
	1/2" NPT					2.98"	
3/4"-300#	None or 1/4" NPT	B	4.62"	1.69"	.06"	2.65"	(4X), 5/8-11nc, 3.25Øb.c.
	1/2" NPT					2.98"	
1"-300#	None or 1/4" NPT	A	4.88"	2.17"	1.37"	1.66"	(4X), 5/8-11nc, 3.50Øb.c.
	1/2" NPT				1.70"		
1-1/2"-300#	None or 1/4" NPT	C	6.12"	3.20"	1.30"	1.66"	(4X), 3/4-10nc, 4.50Øb.c.
	1/2" NPT				1.63"		
2"-300#	None or 1/4" NPT	C	6.50"	3.92"	1.30"	1.66"	(8X), 5/8-11nc, 5.00Øb.c.
	1/2" NPT				1.63"		
3"-300#	None or 1/4" NPT	C	8.25"	5.15"	1.30"	1.66"	(8X), 3/4-10nc, 6.62Øb.c.
	1/2" NPT				1.63"		
4"-300#	None or 1/4" NPT	C	10.00"	6.20"	1.30"	2.66"	(8X), 3/4-10nc, 7.88Øb.c.
	1/2" NPT				1.63"		
1/2"-600#	None or 1/4" NPT	B	3.75"	1.38"	.06"	2.65"	(4X), 1/2-13nc, 2.62Øb.c.
	1/2" NPT					2.98"	
3/4"-600#	None or 1/4" NPT	B	4.62"	1.69"	.06"	2.65"	(4X), 5/8-11nc, 3.25Øb.c.
	1/2" NPT					2.98"	
1"-600#	None or 1/4" NPT	A	4.88"	2.17"	1.37"	1.66"	(4X), 5/8-11nc, 3.50Øb.c.
	1/2" NPT				1.70"		
1-1/2"-600#	None or 1/4" NPT	C	6.12"	3.20"	1.30"	1.66"	(4X), 3/4-10nc, 4.50Øb.c.
	1/2" NPT				1.63"		
2"-600#	None or 1/4" NPT	C	6.50"	3.92"	1.30"	1.66"	(8X), 5/8-11nc, 5.00Øb.c.
	1/2" NPT				1.63"		
3"-600#	None or 1/4" NPT	C	8.25"	5.15"	1.30"	2.66"	(8X), 3/4-10nc, 6.62Øb.c.
	1/2" NPT				1.63"		
4"-600#	None or 1/4" NPT	C	10.75"	6.20"	1.30"	2.66"	(8X), 3/4-10nc, 8.50Øb.c.
	1/2" NPT				1.63"		
1/2"-900/1500#	None or 1/4" NPT	B	4.75"	1.58"	.06"	3.05"	(4X), 3/4-10nc, 3.25Øb.c.
	1/2" NPT					3.38"	
3/4"-900/1500#	None or 1/4" NPT	B	5.12"	1.69"	.06"	3.05"	(4X), 3/4-10nc, 3.50Øb.c.
	1/2" NPT					3.38"	
1"-900/1500#	None or 1/4" NPT	A	5.88"	2.17"	1.37"	1.88"	(4X), 7/8-9nc, 4.00Øb.c.
	1/2" NPT				1.70"		
1-1/2"-900/1500#	None or 1/4" NPT	C	7.00"	3.20"	1.30"	2.66"	(4X), 1-8nc, 4.88Øb.c.
	1/2" NPT				1.63"		
2"-900/1500#	None or 1/4" NPT	C	8.50"	3.92"	1.70"	2.66"	(8X), 7/8-9nc, 6.50Øb.c.
	1/2" NPT				1.70"		
3"-900#	None or 1/4" NPT	C	9.50"	5.15"	1.70"	2.66"	(8X), 7/8-9nc, 7.50Øb.c.
	1/2" NPT				1.70"		
4"-900#	None or 1/4" NPT	C	11.50"	6.20"	1.95"	2.66"	(8X)1-1/8-7nc, 9.25Øb.c.
	1/2" NPT				1.95"		
3"-1500#	None or 1/4" NPT	C	10.50"	5.15"	2.08"	2.66"	(8X), 1.1/8-7nc, 8.00Øb.c.
	1/2" NPT				2.08"		
4"-1500#	None or 1/4" NPT	C	12.25"	6.20"	2.32"	3.31"	(8X), 1.1/4-7nc, 9.50Øb.c.
	1/2" NPT				2.32"		

HFL Dimensions 2.9" diaphragm

Seal Type	Flush Port Size	Configuration Type	A	B	C	D	Bolt Quantity, Bolt Size, Bolt Circle Ø
1/2"-150#	None or 1/4" NPT	B	4.48"	1.385"	.06"	2.65"	(4X), 1/2-13nc, 2.38Øb.c.
	1/2" NPT					2.98"	
3/4"-150#	None or 1/4" NPT	B	4.48"	1.69"	.06"	2.65"	(4X), 1/2-13nc, 2.75Øb.c.
	1/2" NPT					2.98"	
1"-150#	None or 1/4" NPT	B	4.48"	2.00"	.06"	2.65"	(4X), 1/2-13nc, 3.12Øb.c.
	1/2" NPT					2.98"	
1-1/2"-150#	None or 1/4" NPT	B	5.00"	2.88"	.06"	2.65"	(4X), 1/2-13nc, 3.12Øb.c.
	1/2" NPT					2.98"	
2"-150#	None or 1/4" NPT	C	6.00"	3.92"	1.30"	1.66"	(4X), 5/8-11nc, 4.75Øb.c.
	1/2" NPT				1.63"		
3"-150#	None or 1/4" NPT	C	7.50"	5.15"	1.30"	1.66"	(4X), 5/8-11nc, 6.00Øb.c.
	1/2" NPT				1.63"		
4"-150#	None or 1/4" NPT	C	9.00"	6.20"	1.30"	1.66"	(8X), 5/8-11nc, 7.50Øb.c.
	1/2" NPT				1.63"		
1/2"-300#	None or 1/4" NPT	B	4.48"	1.38"	.06"	2.65"	(4X), 1/2-13nc, 2.62Øb.c.
	1/2" NPT					2.98"	
3/4"-300#	None or 1/4" NPT	B	4.62"	1.69"	.06"	2.65"	(4X), 5/8-11nc, 3.25Øb.c.
	1/2" NPT					2.98"	
1"-300#	None or 1/4" NPT	B	4.88"	2.00"	.06"	2.65"	(4X), 5/8-11nc, 3.50Øb.c.
	1/2" NPT					2.98"	
1-1/2"-300#	None or 1/4" NPT	B	6.12"	2.88"	.06"	2.65"	(4X), 3/4-10nc, 4.50Øb.c.
	1/2" NPT					2.98"	
2"-300#	None or 1/4" NPT	C	6.50"	3.92"	1.30"	1.66"	(8X), 5/8-11nc, 5.00Øb.c.
	1/2" NPT				1.63"		
3"-300#	None or 1/4" NPT	C	8.25"	5.15"	1.30"	1.66"	(8X), 3/4-10nc, 6.62Øb.c.
	1/2" NPT				1.63"		
4"-300#	None or 1/4" NPT	C	10.00"	6.20"	1.30"	2.66"	(8X), 3/4-10nc, 7.88Øb.c.
	1/2" NPT				1.63"		
1/2"-600#	None or 1/4" NPT	B	4.48"	1.38"	.06"	2.65"	(4X), 1/2-13nc, 2.62Øb.c.
	1/2" NPT					2.98"	
3/4"-600#	None or 1/4" NPT	B	4.62"	1.69"	.06"	2.65"	(4X), 5/8-11nc, 3.25Øb.c.
	1/2" NPT					2.98"	
1"-600#	None or 1/4" NPT	B	4.88"	2.00"	.06"	2.65"	(4X), 5/8-11nc, 3.50Øb.c.
	1/2" NPT					2.98"	
1-1/2"-600#	None or 1/4" NPT	B	6.12"	2.88"	.06"	2.65"	(4X), 3/4-10nc, 4.50Øb.c.
	1/2" NPT					2.98"	
2"-600#	None or 1/4" NPT	C	6.50"	3.92"	1.30"	1.66"	(8X), 5/8-11nc, 5.00Øb.c.
	1/2" NPT				1.63"		
3"-600#	None or 1/4" NPT	C	8.25"	5.15"	1.30"	2.66"	(8X), 3/4-10nc, 6.62Øb.c.
	1/2" NPT				1.63"		
4"-600#	None or 1/4" NPT	C	10.75"	6.20"	1.70"	2.66"	(8X), 3/4-10nc, 8.50Øb.c.
	1/2" NPT				1.70"		
1/2"-900/1500#	None or 1/4" NPT	B	4.75"	1.38"	.06"	3.05"	(4X), 3/4-10nc, 3.25Øb.c.
	1/2" NPT					3.38"	
3/4"-900/1500#	None or 1/4" NPT	B	5.12"	1.69"	.06"	3.05"	(4X), 3/4-10nc, 3.50Øb.c.
	1/2" NPT					3.38"	
1"-900/1500#	None or 1/4" NPT	B	5.88"	2.00"	.06"	3.05"	(4X), 7/8-9nc, 4.00Øb.c.
	1/2" NPT					3.38"	
1-1/2"-900/1500#	None or 1/4" NPT	B	7.00"	2.88"	.06"	3.05"	(4X), 1-8nc, 4.88Øb.c.
	1/2" NPT					3.38"	
2"-900/1500#	None or 1/4" NPT	C	8.50"	3.92"	1.70"	2.66"	(8X), 7/8-9nc, 6.50Øb.c.
	1/2" NPT				1.70"		
3"-900#	None or 1/4" NPT	C	9.50"	5.15"	1.70"	2.66"	(8X), 7/8-9nc, 7.50Øb.c.
	1/2" NPT				1.70"		
4"-900#	None or 1/4" NPT	C	11.50"	6.20"	1.95"	2.66"	(8X)1-1/8-7nc, 9.25Øb.c.
	1/2" NPT				1.95"		
3"-1500#	None or 1/4" NPT	C	10.50"	5.15"	2.08"	2.66"	(8X), 1.1/8-7nc, 8.00Øb.c.
	1/2" NPT				2.08"		
4"-1500#	None or 1/4" NPT	C	12.25"	6.20"	2.32"	3.31"	(8X), 1.1/4-7nc, 9.50Øb.c.
	1/2" NPT				2.32"		

HFL Dimensions 4.1" diaphragm

Seal Type	Flush Port Size	Configuration Type	A	B	C	D	Bolt Quantity, Bolt Size, Bolt Circle Ø
1/2"-150#	None or 1/4" NPT	B	5.40"	1.38"	.06	2.46"	(4X), 1/2-13nc, 2.38Øb.c.
	1/2" NPT					2.79"	
3/4"-150#	None or 1/4" NPT	B	5.40"	1.69"	.06	2.46"	(4X), 1/2-13nc, 2.75Øb.c.
	1/2" NPT					2.79"	
1"-150	None or 1/4" NPT	B	5.40"	2.00"	.06	2.46"	(4X), 1/2-13nc, 3.12Øb.c.
	1/2" NPT					2.79"	
1-1/2"-150#	None or 1/4" NPT	B	5.40"	2.88"	.06	2.46"	(4X), 1/2-13nc, 3.12Øb.c.
	1/2" NPT					2.79"	
2"-150#	None or 1/4" NPT	B	5.98"	3.62"	.06	2.46"	(4X), 5/8-11nc, 4.75Øb.c.
	1/2" NPT					2.79"	
3"-150#	None or 1/4" NPT	C	7.50"	5.15"	1.30"	1.66"	(4X), 5/8-11nc, 6.00Øb.c.
	1/2" NPT				1.63"		
4"-150#	None or 1/4" NPT	C	9.00"	6.20"	1.30"	1.66"	(8X), 5/8-11nc, 7.50Øb.c.
	1/2" NPT				1.63"		
1/2"-300#	None or 1/4" NPT	B	5.40"	1.38"	.06	2.46"	(4X), 1/2-13nc, 2.62Øb.c.
	1/2" NPT					2.79"	
3/4"-300#	None or 1/4" NPT	B	5.40"	1.69"	.06	2.46"	(4X), 5/8-11nc, 3.25Øb.c.
	1/2" NPT					2.79"	
1"-300#	None or 1/4" NPT	B	5.40"	2.00"	.06	2.46"	(4X), 5/8-11nc, 3.50Øb.c.
	1/2" NPT					2.79"	
1-1/2"-300#	None or 1/4" NPT	B	6.12"	2.88"	.06	2.46"	(4X), 3/4-10nc, 4.50Øb.c.
	1/2" NPT					2.79"	
2"-300#	None or 1/4" NPT	B	6.48"	3.62"	.06	2.46"	(8X), 5/8-11nc, 5.00Øb.c.
	1/2" NPT					2.79"	
3"-300#	None or 1/4" NPT	C	8.25"	5.15"	1.30"	1.66"	(8X), 3/4-10nc, 6.62Øb.c.
	1/2" NPT				1.63"		
4"-300#	None or 1/4" NPT	C	10.00"	6.20"	1.30"	2.66"	(8X), 3/4-10nc, 7.88Øb.c.
	1/2" NPT				1.63"		
1/2"-600#	None or 1/4" NPT	B	5.40"	1.38"	.06	2.46"	(4X), 1/2-13nc, 2.62Øb.c.
	1/2" NPT					2.79"	
3/4"-600#	None or 1/4" NPT	B	5.40"	1.69"	.06	2.46"	(4X), 5/8-11nc, 3.25Øb.c.
	1/2" NPT					2.79"	
1"-600#	None or 1/4" NPT	B	5.40"	2.00"	.06	2.46"	(4X), 5/8-11nc, 3.50Øb.c.
	1/2" NPT					2.79"	
1-1/2"-600#	None or 1/4" NPT	A	6.12"	2.88"	.06	2.46"	(4X), 3/4-10nc, 4.50Øb.c.
	1/2" NPT					2.79"	
2"-600#	None or 1/4" NPT	B	6.50"	3.62"	.06	2.86"	(8X), 5/8-11nc, 5.00Øb.c.
	1/2" NPT					2.19"	
3"-600#	None or 1/4" NPT	C	8.25"	5.15"	1.30"	2.66"	(8X), 3/4-10nc, 6.62Øb.c.
	1/2" NPT				1.63"		
4"-600#	None or 1/4" NPT	C	10.75"	6.20"	1.70"	2.66"	(8X), 3/4-10nc, 8.50Øb.c.
	1/2" NPT					1.70"	
1/2"-900/1500#	None or 1/4" NPT	B	5.40"	1.38"	.06	2.66"	(4X), 3/4-10nc, 3.25Øb.c.
	1/2" NPT					2.99"	
3/4"-900/1500#	None or 1/4" NPT	B	5.40"	1.69"	.06	2.66"	(4X), 3/4-10nc, 3.50Øb.c.
	1/2" NPT					2.99"	
1"-900/1500#	None or 1/4" NPT	B	5.88"	2.00"	.06	2.66"	(4X), 7/8-9nc, 4.00Øb.c.
	1/2" NPT					2.99"	
1-1/2"-900/1500#	None or 1/4" NPT	B	7.00"	2.88"	.06	2.66"	(4X), 1-8nc, 4.88Øb.c.
	1/2" NPT					2.99"	
2"-900/1500#	None or 1/4" NPT	B	8.48"	3.62"	.06	2.96"	(8X), 7/8-9nc, 6.50Øb.c.
	1/2" NPT					2.96"	
3"-900#	None or 1/4" NPT	C	9.50"	5.15"	1.70"	2.66"	(8X), 7/8-9nc, 7.50Øb.c.
	1/2" NPT					2.66"	
4"-900#	None or 1/4" NPT	C	11.50"	6.20"	1.95"	2.66"	(8X), 1-1/8-7nc, 9.25Øb.c.
	1/2" NPT					2.66"	
3"-1500#	None or 1/4" NPT	C	10.50"	5.15"	2.08"	2.66"	(8X), 1.1/8-7nc, 8.00Øb.c.
	1/2" NPT					2.66"	
4"-1500#	None or 1/4" NPT	C	12.25"	6.20"	2.32"	3.31"	(8X), 1.1/4-7nc, 9.50Øb.c.
	1/2" NPT					3.31"	

Applications & Features

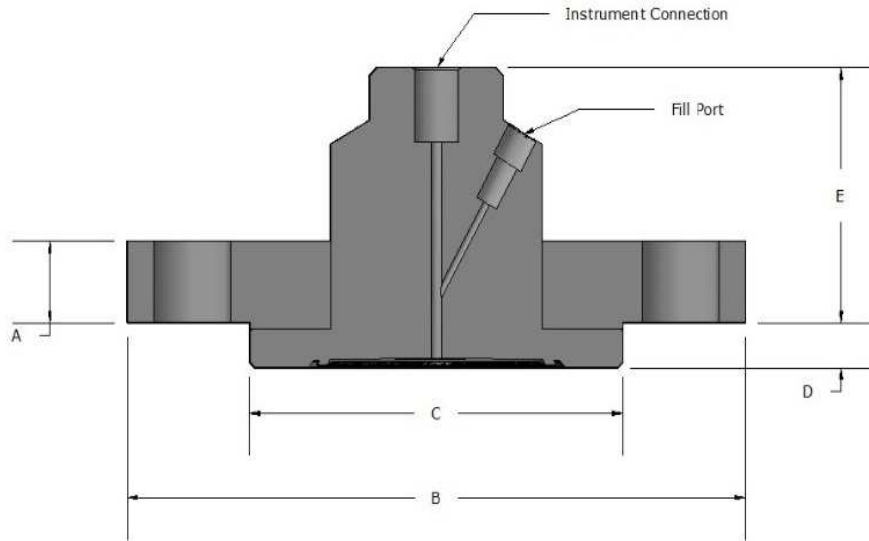
- Flanged Seal with flush diaphragm for off-line process connection
- Rotating flange design
- Standard flange sizes from ANSI 2” to 4”. Additional sizes available on request
- Standard flange ratings from ANSI Class 150 to ANSI Class 2500
- Other flange standards available



Ordering Information

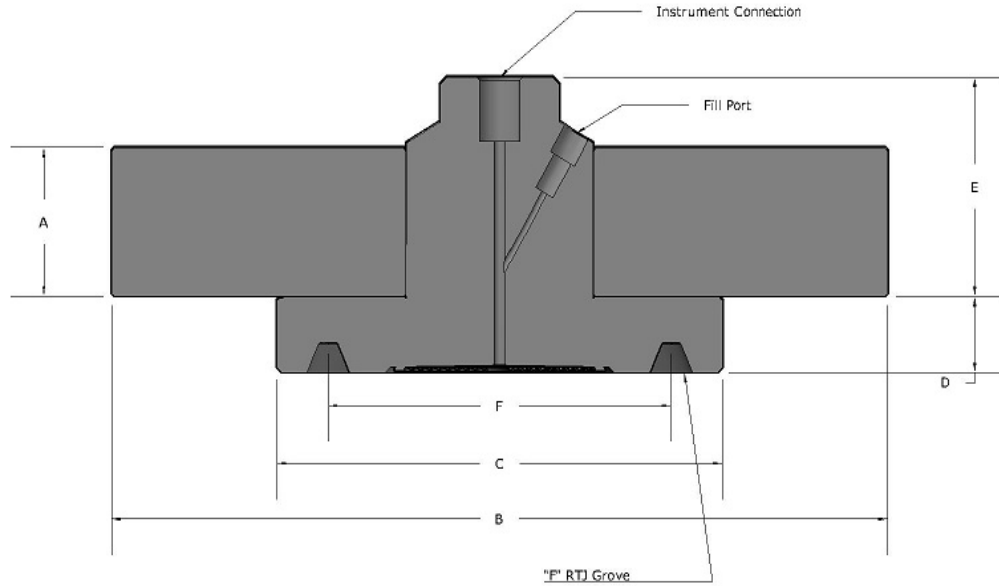
Base Model	HFF-	Flush Flanged Seal
Type		
	A	ANSI Raised Face (RF)
	R	ANSI RING Joint (RTJ)
	D	DIN (RF) EN1092-1
Inst. Connection		
	W	Weld Connection (N/A with Titanium or Zirconium)
	2	1/4" NPT
	4	1/2" NPT
Upper Insert		
	S6	316 / 316LSS
	TI	Titanium (Required with Titanium diaphragm)
	Z7	Zirconium 702 (Required with Zirconium diaphragm)
Process Connection Size		
	20	2.0"
	30	3.0"
	40	4.0"
	C0	DN50
	D0	DN80
	E0	DN100
	F0	DN125
Process Connection Rating		
	A	150#
	B	300#
	C	600#
	D	900#
	E	1500#
	F	2500#
	G	PN 10/40 DN50
	H	PN 10/16 DN80, DN100, DN125
	J	PN 25/40 DN80, DN100, DN125
CONTINUED ON THE NEXT PAGE		

CONTINUED FROM THE PREVIOUS PAGE		
	L	PN 63 DN50, DN80, DN100, DN125
	M	PN 100 DN50, DN80, DN100, DN125
	P	PN 160 DN50, DN80, DN100, DN125
	R	PN 250 DN50, DN80, DN100, DN125
Flange Material		
	S6	316 / 316LSS
	CS	Carbon Steel
Diaphragm Material		
	S6	316 / 316LSS
	S4	304 / 304LSS
	TA	Tantalum
	C2	Alloy 20
	HC	Alloy C-276
	HB	Alloy B-3
	M4	Monel 400
	I6	Alloy 600
	DP	Alloy 2205
	NI	Nickel 201 /200
	TI	Titanium
	Z7	Zirconium 702
Calibration / Flushing Ring		
	NN	None
	S6	316 / 316LSS
	S4	304 / 304LSS
	C2	Alloy 20
	HC	Alloy C-276
	HB	Alloy B-3
	M4	Monel 400
	I6	Alloy 600
	DP	Alloy 2205
	NI	Nickel 201 /200
	TI	Titanium
	Z7	Zirconium 702
	TF	PTFE
Flushing Connections		
	N	No Flush
	1	Single 1/4" NPTF
	2	Dual 1/4"NPTF
	3	Single 1/2" NPTF
	4	Dual 1/2" NPTF
	5	Single 1/4" Pipe Socket Weld
	6	Dual 1/4" Pipe Socket Weld
	7	Single 1/2" Pipe Socket Weld
	8	Dual 1/2" Pipe Socket Weld
Options		
	/AU	Gold Plated Diaphragm
	/NS	PTFE Coated Diaphragm (Non Stick Only - Not for corrosion protection)
	/P1	With single pipe plug for flush port (Material same as lower)
	/P2	With dual pipe plugs for flush port (Material same as lower)
	/MC	Material cert with MTR's



HFF – ANSI Raised Face Dimensions

Diaphragm Diameter	Flange	Bolt Quantity, Bolt Hole Bolt Circle Ø	"A"	"B"	"C"	"D"	"E"
2.4"	2"-150#	(4X), 0.75Ø, 4.75Øb.c.	0.68"	6.00"	3.62"	0.33"	2.23"
3.5"	3"-150#	(4X), 0.75Ø, 6.00Øb.c.	0.87"	7.50"	5.00"	0.33"	2.23"
3.5"	4"-150#	(8X), 0.75Ø, 7.50Øb.c.	0.87"	9.00"	6.19"	0.33"	2.23"
2.4"	2"-300#	(8X), 0.75Ø, 5.00Øb.c.	0.81"	6.50"	3.62"	0.33"	2.23"
3.5"	3"-300#	(8X), 0.88Ø, 6.62Øb.c.	1.06"	8.25"	5.00"	0.33"	2.23"
3.5"	4"-300#	(8X), 0.88Ø, 7.88Øb.c.	1.18"	10.00"	6.00"	0.33"	2.23"
2.4"	2"-600#	(8X), 0.75Ø, 5.00Øb.c.	1.00"	6.50"	3.62"	0.33"	2.23"
3.5"	3"-600#	(8X), 0.88Ø, 6.62Øb.c.	1.25"	8.25"	5.00"	0.33"	2.23"
3.5"	4"-600#	(8X), 1.00Ø, 8.50Øb.c.	1.50"	10.75"	6.00"	0.33"	2.23"
2.4"	2"-900/1500#	(8X), 1.00Ø, 6.50Øb.c.	1.50"	8.50"	3.62"	0.33"	2.23"
3.5"	3"-900#	(8X), 1.00Ø, 7.50Øb.c.	1.50"	9.50"	5.00"	0.33"	2.23"
3.5"	4"-900#	(8X), 1.25Ø, 9.25Øb.c.	1.75"	11.50"	6.00"	0.33"	2.66"
3.5"	3"-1500#	(8X), 1.25Ø, 8.00Øb.c.	1.88"	10.50"	5.00"	0.33"	2.66"
3.5"	4"-1500#	(8X), 1.38Ø, 9.50Øb.c.	2.12"	12.25"	6.00"	0.33"	3.31"
2.4"	2"-2500#	(8X), 1.12Ø, 6.75Øb.c.	2.00"	9.25"	3.62"	0.33"	2.66"
3.5"	3"-2500#	(8X), 1.38Ø, 9.00Øb.c.	2.62"	12.00"	5.00"	0.33"	3.31"



HFF – ANSI RTJ Dimensions

Diaph. Diameter	Flange	Bolt Quantity, Bolt Hole ϕ , Bolt Circle ϕ	"A"	"B"	"C"	"D"	"E"	"F"	RTJ Grv. #
2.4"	2"-150#	(4X), 0.75 ϕ , 4.75 ϕ b.c.	0.68"	6.00"	4.00"	.75"	2.23"	3.25"	R22
3.5"	3"-150#	(4X), 0.75 ϕ , 6.00 ϕ b.c.	0.87"	7.50"	5.25"	.75"	2.23"	4.50"	R29
3.5"	4"-150#	(8X), 0.75 ϕ , 7.50 ϕ b.c.	0.87"	9.00"	6.75"	.75"	2.23"	5.88"	R36
2.4"	2"-300#	(8X), 0.75 ϕ , 5.00 ϕ b.c.	0.81"	6.50"	4.25"	.75"	2.23"	3.25"	R23
3.5"	3"-300#	(8X), 0.88 ϕ , 6.62 ϕ b.c.	1.06"	8.25"	5.75"	.75"	2.23"	4.88"	R31
3.5"	4"-300#	(8X), 0.88 ϕ , 7.88 ϕ b.c.	1.18"	10.00"	6.88"	.75"	2.23"	5.88"	R37
2.4"	2"-600#	(8X), 0.75 ϕ , 5.00 ϕ b.c.	1.00"	6.50"	4.25"	.75"	2.23"	3.25"	R23
3.5"	3"-600#	(8X), 0.88 ϕ , 6.62 ϕ b.c.	1.25"	8.25"	5.75"	.75"	2.23"	4.88"	R31
3.5"	4"-600#	(8X), 1.00 ϕ , 8.50 ϕ b.c.	1.50"	10.75"	6.88"	.75"	2.23"	5.88"	R37
2.9"	2"-900/1500#	(8X), 1.00 ϕ , 6.50 ϕ b.c.	1.50"	8.50"	4.88"	.75"	2.23"	3.75"	R24
3.5"	3"-900#	(8X), 1.00 ϕ , 7.50 ϕ b.c.	1.50"	9.50"	6.00"	.75"	2.23"	4.88"	R31
3.5"	4"-900#	(8X), 1.25 ϕ , 9.25 ϕ b.c.	1.75"	11.50"	7.00"	.75"	2.66"	5.88"	R37
3.5"	3"-1500#	(8X), 1.25 ϕ , 8.00 ϕ b.c.	1.88"	10.50"	6.62"	.75"	2.66"	5.38"	R35
3.5"	4"-1500#	(8X), 1.38 ϕ , 9.50 ϕ b.c.	2.12"	12.25"	7.62"	.75"	3.31"	6.38"	R39
3.5"	2"-2500#	(8X), 1.12 ϕ , 6.75 ϕ b.c.	2.00"	9.25"	5.25"	.75"	2.66"	4.00"	R26
3.5"	3"-2500#	(8X), 1.38 ϕ , 9.00 ϕ b.c.	2.62"	12.00"	6.50"	.75"	3.31"	5.00"	R32

Applications & Features

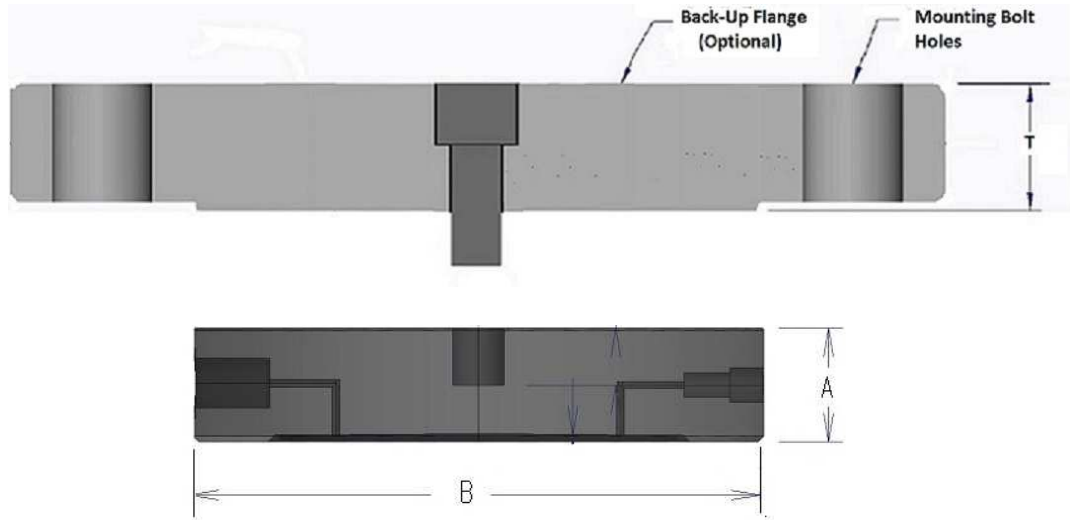
- Flanged Wafer/Pancake Seal with flush diaphragm for off-line process connection
- Standard flange sizes from ANSI 2" to 4". Additional sizes available on request
- Standard flange ratings from ANSI Class 150 to ANSI Class 2500
- Sold with or without the flange
- Other flange standards available



Ordering Information

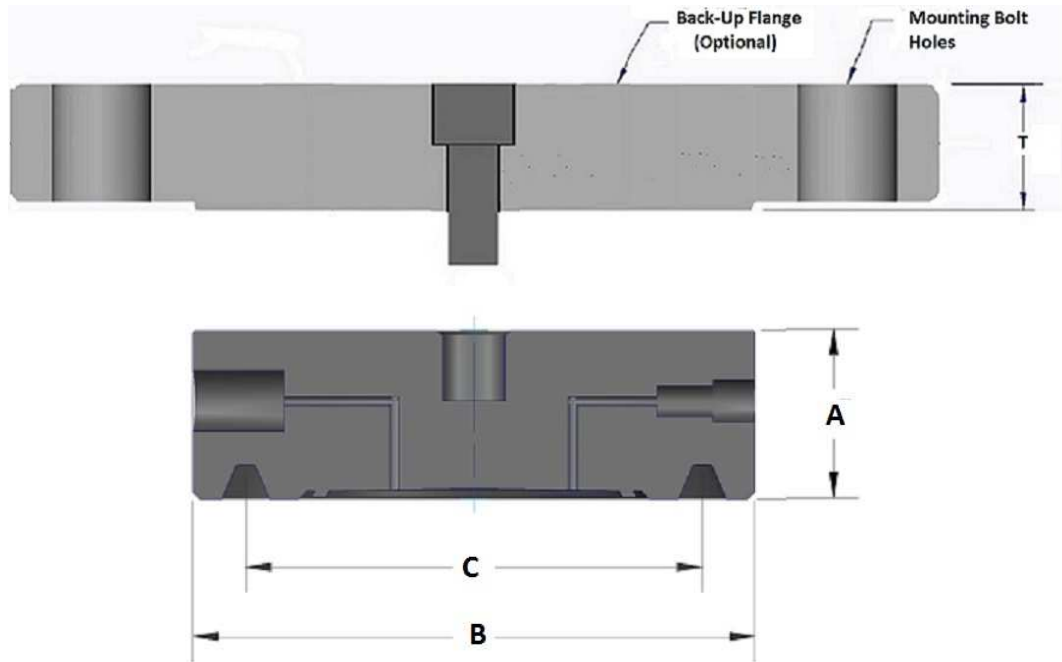
Base Model			
	HFP-	Flanged Pancake Seal	
Type			
	A	ANSI Raised Face (RF)	
	R	ANSI RING Joint (RTJ)	
	D	DIN (RF) EN1092-1	
Inst. Connection			
	W	Weld Connection (Not available with Titanium or Zirconium)	
	2	1/4" NPT	
Process Connection Size			
	20	2.0"	
	30	3.0"	
	40	4.0"	
	C0	DN50	
	D0	DN80	
	E0	DN100	
	F0	DN125	
Process Connection Rating			
	N	Backup flange not required	
	A	150#	
	B	300#	
	C	600#	
	D	900#	
	E	1500#	
	F	2500#	
	G	PN 10/40	DN50
	H	PN 10/16	DN80, DN100, DN125
	J	PN 25/40	DN80, DN100, DN125
	L	PN 63	DN50, DN80, DN100, DN125
	M	PN 100	DN50, DN80, DN100, DN125
	P	PN 160	DN50, DN80, DN100, DN125
	R	PN 250	DN50, DN80, DN100, DN125
Body Material			
	S6	316 / 316LSS	(Standard)
	TI	Titanium	(required for Titanium diaphragm)
	Z7	Zirconium 702	(required for Zirconium 702 diaphragm)

Diaphragm / Wetted Material		
	S6	316 / 316LSS
	S4	304 / 304LSS
	TA	Tantalum
..	C2	Alloy 20
	HC	Alloy C-276
	HB	Alloy B-3
	M4	Monel 400
	I6	Alloy 600
	DP	Alloy 2205
	NI	Nickel 200/201
	T1	Titanium (Titanium body required)
	Z7	Zirconium 702 (Zirconium body required)
	Z2	Zirconium 702
Backup Flange Material		
	NN	Backup flange not required
	S6	316 / 316LSS
	CS	Carbon Steel
Calibration / Flushing Ring		
	NN	None
	S6	316 / 316LSS
	S4	304 / 304LSS
	C2	Alloy 20
	HC	Alloy C-276
	HB	Alloy B-3
	M4	Monel 400
	I6	Alloy 600
	DP	Alloy 2205
	NI	Nickel 201 /200
	T1	Titanium
	Z7	Zirconium 702
	TF	PTFE
Flushing Connections		
	N	No Flush
	1	Single 1/4" NPTF
	2	Dual 1/4"NPTF
	3	Single 1/2"NPTF
	4	Dual 1/2" NPTF
	5	Single 1/4" Pipe Socket Weld
	6	Dual 1/4" Pipe Socket Weld
	7	Single 1/2" Pipe Socket Weld
	8	Dual 1/2" Pipe Socket Weld
Options		
	/AU	Gold Plated Diaphragm
	/NS	PTFE Coated Diaphragm (Non-Stick Only - Not for corrosion protection)
	/P1	With single pipe plug for flush port
	/P2	With dual pipe plugs for flush port
	/MC	Material cert with MTR's



HFP ANSI Raised Face Dimensions

Diaphragm Diameter	Flange Size	Bolt Quantity, Bolt Hole ϕ , Bolt Circle ϕ	"T"	Flange Diameter	"A"	"B"
2.4"	2"-150#	(4X), 0.75 ϕ , 4.75 ϕ b.c.	0.75"	6.00"	1.08"	3.62"
2.4"	2"-300#	(8X), 0.75 ϕ , 5.00 ϕ b.c.	0.88"	6.50"	1.08"	3.62"
2.4"	2"-600#	(8X), 0.75 ϕ , 5.00 ϕ b.c.	1.25"	6.50"	1.08"	3.62"
2.4"	2"-900#	(8X), 1.00 ϕ , 6.50 ϕ b.c.	1.75"	8.50"	1.08"	3.62"
2.4"	2"-1500#	(8X), 1.00 ϕ , 6.50 ϕ b.c.	1.75"	8.50"	1.08"	3.62"
2.4"	2"-2500#	(8X), 1.12 ϕ , 6.75 ϕ b.c.	2.25"	9.25"	1.08"	3.62"
3.5"	3"-150#	(4X), 0.75 ϕ , 6.00 ϕ b.c.	0.94"	7.50"	1.08"	5.00"
3.5"	3"-300#	(8X), 0.88 ϕ , 6.62 ϕ b.c.	1.12"	8.25"	1.08"	5.00"
3.5"	3"-600#	(8X), 0.88 ϕ , 6.62 ϕ b.c.	1.50"	8.25"	1.08"	5.00"
3.5"	3"-900#	(8X), 1.00 ϕ , 7.50 ϕ b.c.	1.75"	9.50"	1.08"	5.00"
3.5"	3"-1500#	(8X), 1.25 ϕ , 8.00 ϕ b.c.	2.13"	10.50"	1.08"	5.00"
3.5"	3"-2500#	(8X), 1.38 ϕ , 9.00 ϕ b.c.	2.87"	12.00"	1.08"	5.00"
3.5"	4"-150#	(8X), 0.75 ϕ , 7.50 ϕ b.c.	0.94"	9.00"	1.08"	6.00"
3.5"	4"-300#	(8X), 0.88 ϕ , 7.88 ϕ b.c.	1.25"	10.00"	1.08"	6.00"
3.5"	4"-600#	(8X), 1.00 ϕ , 8.50 ϕ b.c.	1.75"	10.75"	1.08"	6.00"
3.5"	4"-900#	(8X), 1.25 ϕ , 9.25 ϕ b.c.	2.00"	11.50"	1.08"	6.00"



HFP ANSI RTJ Dimensions

Flange Size	Diaphragm Diameter	Bolt Quantity, Bolt Hole ϕ , Bolt Circle ϕ	"T"	Flange Diameter	"A"	"B"	"C"	RTJ Groove #
2"-150#	2.4"	(4X), 0.75 ϕ , 4.75 ϕ b.c.	0.75"	6.00"	1.20"	4.00"	3.25"	R22
3"-150#	3.5"	(4X), 0.75 ϕ , 6.00 ϕ b.c.	0.94"	7.50"	1.20"	5.25"	4.50"	R29
4"-150#	3.5"	(8X), 0.75 ϕ , 7.50 ϕ b.c.	0.94"	9.00"	1.20"	6.75"	5.88"	R36
2"-300#	2.4"	(8X), 0.75 ϕ , 5.00 ϕ b.c.	0.88"	6.50"	1.20"	4.25"	3.25"	R23
3"-300#	3.5"	(8X), 0.88 ϕ , 6.62 ϕ b.c.	1.12"	8.25"	1.26"	5.75"	4.88"	R31
4"-300#	3.5"	(8X), 0.88 ϕ , 7.88 ϕ b.c.	1.25"	10.00"	1.20"	6.88"	5.88"	R37
2"-600#	2.4"	(8X), 0.75 ϕ , 5.00 ϕ b.c.	1.25"	6.50"	1.26"	4.25"	3.25"	R23
3"-600#	3.5"	(8X), 0.88 ϕ , 6.62 ϕ b.c.	1.50"	8.25"	1.26"	5.75"	4.88"	R31
4"-600#	3.5"	(8X), 1.00 ϕ , 8.50 ϕ b.c.	1.75"	10.75"	1.26"	6.88"	5.88"	R57
2"-900#	2.4"	(8X), 1.00 ϕ , 6.50 ϕ b.c.	1.75"	8.50"	1.20"	4.88"	3.75"	R24
3"-900#	3.5"	(8X), 1.00 ϕ , 7.50 ϕ b.c.	1.75"	9.50"	1.26"	6.00"	4.88"	R31
4"-900#	3.5"	(8X), 1.25 ϕ , 9.25 ϕ b.c.	2.00"	11.50"	1.26"	7.00"	5.88"	R37
2"-1500#	2.4"	(8X), 1.00 ϕ , 6.50 ϕ b.c.	1.75"	8.50"	1.20"	4.88"	3.75"	R24
3"-1500#	3.5"	(8X), 1.25 ϕ , 8.00 ϕ b.c.	2.13"	10.50"	1.26"	6.62"	5.38"	R35
4"-1500#	3.5"	(8X), 1.38 ϕ , 9.50 ϕ b.c.	2.38"	12.25"	1.26"	7.62"	6.38"	R39
2"-2500#	2.4"	(8X), 1.12 ϕ , 6.75 ϕ b.c.	2.25"	9.25"	1.20"	5.25"	4.00"	R26
3"-2500#	3.5"	(8X), 1.38 ϕ , 9.00 ϕ b.c.	2.87"	12.00"	1.33"	6.50"	5.00"	R32

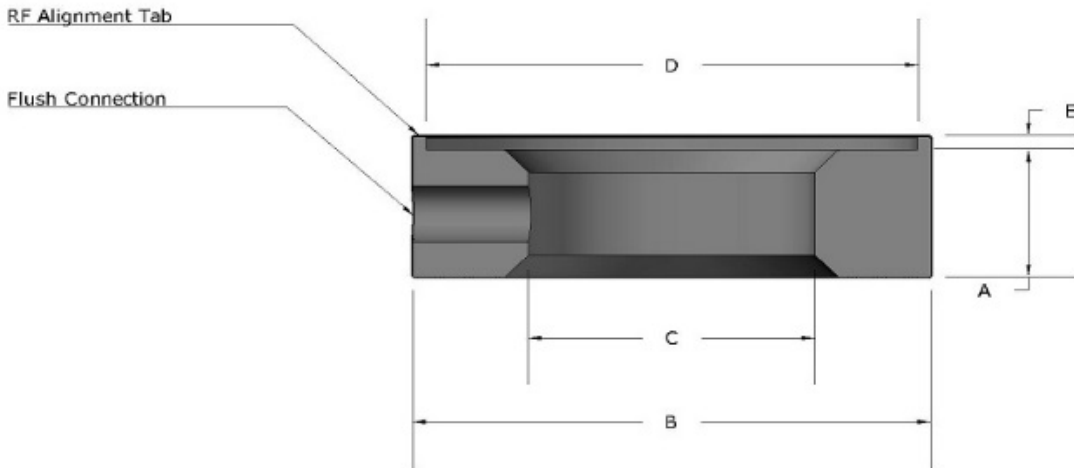
Applications & Features

- Calibration / Flushing Ring Intended for use with model HFF and HFP
- Standard flange sizes from ANSI 2" to 4". Additional sizes available on request
- Pressure ratings to ANSI class 2500.
- Other flange standards available



Ordering Information

Base Model		
	HFR-	Calibration / Flushing Ring
Process Size		
	20	2" ANSI Flange
	30	3" ANSI Flange
	40	4" ANSI Flange
	C0	DN50
	D0	DN80
	E0	DN100
	XX	Other as specified
Process Connection Type		
	A	Raised Face
	R	Ring Joint (RTJ)
Flushing Connections		
	1	Single 1/4"NPTF
	2	Dual 1/4" NPTF
	3	Single 1/2" NPTF
	4	Dual 1/2" NPTF
	5	Single 1/4" Pipe Socket Weld
	6	Dual 1/4" Pipe Socket Weld
	7	Single 1/2" Pipe Socket Weld
	8	Dual 1/2" Pipe Socket Weld
Body Material		
	S6	316 / 316LSS
	S4	304 / 304LSS
	C2	Alloy 20
	HC	Alloy C-276
	HB	Alloy B-3
	M4	Monel 400
	I6	Alloy 600
	DP	Alloy 2205
	NI	Nickel 201 /200
	TI	Titanium
	Z7	Zirconium 702
	TF	PTFE
Options		
	/P1	With single pipe plug for flush port
	/P2	With dual pipe plugs for flush port
	/NT	Without alignment tab (RF only) (For use with Non Haygor Seals)
	/MC	Material cert w/ MTR's



Note: The alignment tab is included when used with model HFF and HFP.

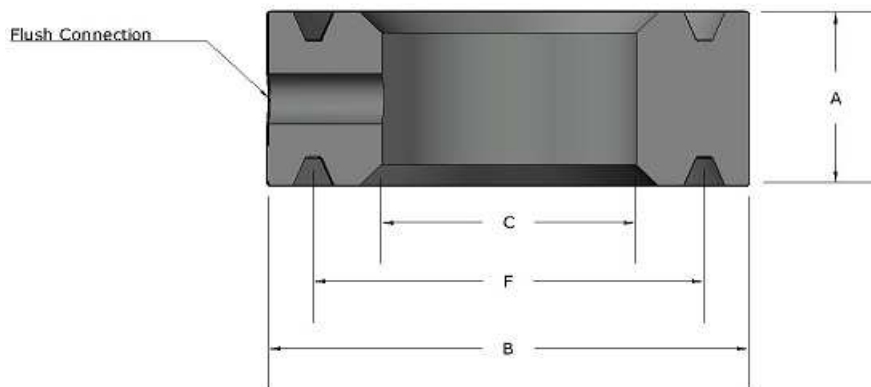
For others reduce the thickness dimension by "E" shown above

ANSI RF Flange Flush Ring Dimensions

Flange Size	"B"	"C"	"D"	"E"	"A" ¼"NPT	"A" ½"NPT
2.0"	3.84"	2.12"	3.64	.10"	1.00"	1.33"
3.0"	5.23"	3.60"	5.02	.10"	1.00"	1.33"
4.0"	6.41"	3.60"	6.21	.10"	1.00"	1.33"
Other Sizes Available on Request – Consult Factory						

DIN RF Flange Flush Ring Dimensions

Flange Size	"B"	"C"	"D"	"E"	"A" ¼"NPT	"A" ½"NPT
DN 50	4.22	2.40	4.02	.10"	1.00"	1.33"
DN 80	4.65	3.60	5.45	.10"	1.00"	1.33"
DN 100	6.44	3.60	6.24	.10"	1.00"	1.33"
Other Sizes Available on Request – Consult Factory						



ANSI RTJ Flange Flush Ring Dimensions

Flange Size	"A" ¼" NPT	"A" ½" NPT	"B"	"C"	"F"	Grv.#
2"-150#	1.50"	1.70"	4.00"	2.12"	3.25"	R22
3"-150#	1.50"	1.70"	5.25"	3.60"	4.50"	R29
4"-150#	1.50"	1.70"	6.75"	3.60"	5.88"	R36
2"-300#	1.63"	1.83"	4.25"	2.12"	3.25"	R23
3"-300#	1.63"	1.83"	5.75"	3.60"	4.88"	R31
4"-300#	1.63"	1.83"	6.88"	3.60"	5.88"	R37
2"-600#	1.63"	1.83"	4.25"	2.12"	3.25"	R23
3"-600#	1.63"	1.83"	5.75"	3.60"	4.88"	R31
4"-600#	1.63"	1.83"	6.88"	3.60"	5.88"	R37
2"-900#	1.63"	1.83"	4.88"	2.12"	3.75"	R24
3"-900#	1.63"	1.83"	6.12"	3.60"	4.88"	R31
4"-900#	1.63"	1.83"	7.12"	3.60"	5.88"	R37
2"-1500#	1.63"	1.83"	4.88"	2.12"	3.75"	R24
3"-1500#	1.63"	1.83"	6.62"	3.60"	5.38"	R35
4"-1500#	1.63"	1.83"	7.62"	3.60"	6.38"	R39
2"-2500#	1.63"	1.83"	5.25"	2.12"	4.00"	R26
3"-2500#	1.75"	1.95"	6.62"	3.60"	5.00"	R32
4"-2500#	1.88"	2.08"	7.99"	3.60"	6.18"	R38
Other Sizes Available on Request – Consult Factory						

Applications & Features

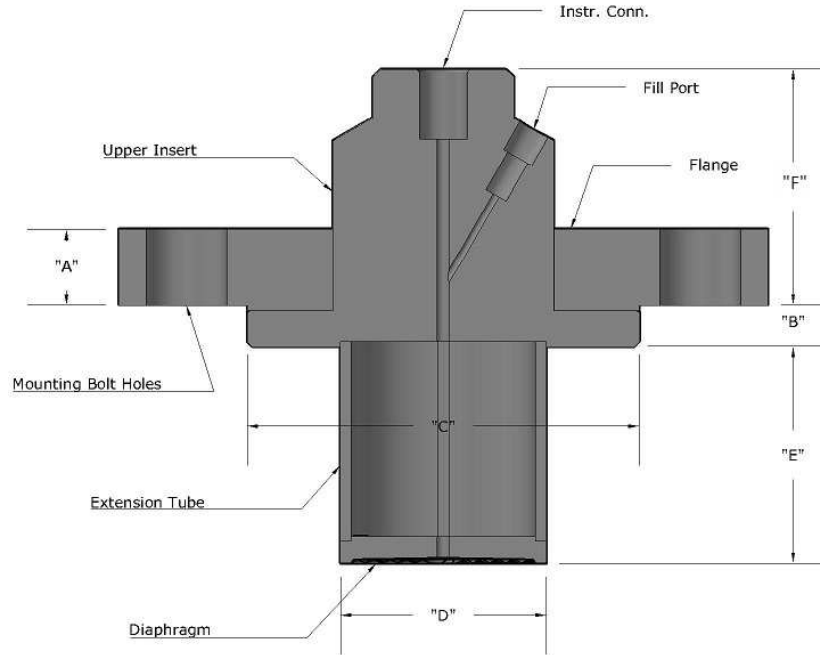
- Flanged Seal with extended diaphragm for Off-line process connection
- Enable flush installation on pipe or heavily insulated tanks.
- Standard flange sizes from ANSI 2" to 4".
- Additional sizes available on request
- Standard flange ratings from ANSI Class 150 to ANSI Class 2500
- Custom extension lengths and diameters are available
- Other flange standards available



Ordering Information

Base Model			
	HFE-	Flanged Extended seal	
Type			
	A	ANSI Raised Face (RF)	Rotatable Flange
	B	ANSI Raised Face (RF)	Non-Rotatable Flange
	F	ANSI Flat Face (FF)	
	R	ANSI RING Joint (RTJ)	
	D	DIN (RF) EN1092-1	
Inst. Connection			
	W	Weld Connection	(Not available with Titanium or Zirconium)
	2	1/4" NPT	
	4	1/2" NPT	
Upper Insert			
	S6	316 / 316LSS	
	TI	Titanium	(Required with Titanium wetted materials)
	Z7	Zirconium 702	(Required with Zirconium wetted materials)
Process Connection Size			
	20	2.0"	1.90" Ext, Diameter Standard
	30	3.0"	2.80" Ext, Diameter Standard
	40	4.0"	3.70" Ext. Diameter Standard
	C0	DN50	
	D0	DN80	
	E0	DN100	
	F0	DN125	
Process Connection Rating			
	A	150#	
	B	300#	
	C	600#	
	D	900#	
	E	1500#	
	F	2500#	
	G	PN 10/40	Use with DN25, DN40, DN50
	H	PN 10/16	Use with DN80, DN100, DN125
	J	PN 25/40	Use with DN80, DN100, DN125
	K	PN 63/100	Use with DN25, DN40
	L	PN 63	Use with DN50, DN80, DN100, DN125
	M	PN 100	Use with DN50, DN80, DN100, DN125
Flange Material			

	S6	316/316L
	CS	Carbon Steel
Extension / Wetted Material		
	S6	316 / 316LSS
	S4	304 / 304LSS
	C2	Alloy 20
	HC	Alloy C-276
	HB	Alloy B-3
	M4	Alloy 400
	I6	Alloy 600
	DP	Alloy 2205
	NI	Nickel 201 /200
	TI	Titanium
	Z7	Zirconium 702
Extension Length		
	020	2.00 Inch
	040	4.00 Inch
	060	6.00 Inch
	080	8.00 Inch
	XXX	Length as specified
Diaphragm Material		
	S6	316 / 316LSS
	S4	304 / 304LSS
	C2	Alloy 20
	HC	Alloy C-276
	HB	Alloy B-3
	M4	Monel 400
	I6	Alloy 600
	DP	Alloy 2205
	NI	Nickel 201 /200
	TI	Titanium (Titanium wetted part required)
	Z7	Zirconium 702 (Zirconium wetted parts required)
Options		
	/AU	Gold Plated Diaphragm
	/NS	PTFE Coated Diaphragm (Non-Stick Only - Not for corrosion protection)
	/JB	W/ Jack Bolt Holes & Flange Retaining Ring
	/SD	Special extension Diameter as specified
	/MC	Material cert w/ MTR's



HFE – Standard Seal Dimensions

ANSI Flange Size	Diaph. Diameter	Type	"A"	Flange Diameter	"B"	"C"	"D"	"E"	"F"	Bolt Qty., Hole Diameter, Bolt Circle Diameter
2"-150#	1.9"	RF	0.75"	6.00"	0.33"	3.62"	1.9"	Order Specific	2.23"	(4X), 0.75 ϕ , 4.75 ϕ b.c.
3"-150#	2.8"	RF	0.94"	7.50"	0.33"	5.00"	2.8"	Order Specific	2.23"	(4X), 0.75 ϕ , 6.00 ϕ b.c.
4"-150#	3.5"	RF	0.94"	9.00"	0.33"	6.19"	3.7"	Order Specific	2.23"	(8X), 0.75 ϕ , 7.50 ϕ b.c.
2"-300#	1.9"	RF	0.88"	6.50"	0.33"	3.62"	1.9"	Order Specific	2.23"	(8X), 0.75 ϕ , 5.00 ϕ b.c.
3"-300#	2.8"	RF	1.12"	8.25"	0.33"	5.00"	2.8"	Order Specific	2.23"	(8X), 0.88 ϕ , 6.62 ϕ b.c.
4"-300#	3.5"	RF	1.25"	10.00"	0.33"	6.19"	3.7"	Order Specific	2.23"	(8X), 0.88 ϕ , 7.88 ϕ b.c.
2"-600#	1.9"	RF	1.25"	6.50"	0.33"	3.62"	1.9"	Order Specific	2.23"	(8X), 0.75 ϕ , 5.00 ϕ b.c.
3"-600#	2.8"	RF	1.50"	8.25"	0.33"	5.00"	2.8"	Order Specific	2.23"	(8X), 0.88 ϕ , 6.62 ϕ b.c.
4"-600#	3.5"	RF	1.75"	10.75"	0.33"	6.19"	3.7" ⁴	Order Specific	2.23"	(8X), 1.00 ϕ , 8.50 ϕ b.c.
2"-900#	1.9"	RF	1.75"	8.50"	0.33"	3.62"	1.9"	Order Specific	2.23"	(8X), 1.00 ϕ , 6.50 ϕ b.c.
3"-900#	2.8"	RF	1.75"	9.50"	0.33"	5.00"	2.8"	Order Specific	2.23"	(8X), 1.00 ϕ , 7.50 ϕ b.c.
4"-900#	3.5"	RF	2.00"	11.50"	0.33"	6.19"	3.7"	Order Specific	2.66"	(8X), 1.25 ϕ , 9.25 ϕ b.c.
2"-1500#	1.9"	RF	1.75"	8.50"	0.33"	3.62"	1.9"	Order Specific	2.23"	(8X), 1.00 ϕ , 6.50 ϕ b.c.
3"-1500#	2.8"	RF	2.13"	10.50"	0.33"	5.00"	2.8"	Order Specific	2.66"	(8X), 1.25 ϕ , 8.00 ϕ b.c.
4"-1500#	3.5"	RF	2.38"	12.25"	0.33"	6.19"	3.7"	Order Specific	3.31"	(8X), 1.38 ϕ , 9.50 ϕ b.c.
2"-2500#	1.9"	RF	2.25"	9.25"	0.33"	3.62"	1.9"	Order Specific	2.66"	(8X), 1.12 ϕ , 6.75 ϕ b.c.
3"-2500#	2.8"	RF	2.87"	12.00"	0.33"	5.00"	2.8"	Order Specific	3.31"	(8X), 1.38 ϕ , 9.00 ϕ b.c.

Additional flange standards and custom extension lengths and dimensions available on request. Consult Factory

Applications & Features

- Welded saddle flange seal for on-line pipe applications
- Standard sizes for 3” pipe and 4” and larger pipe.
- Standard pressure rating to 1500 PSI
- Custom configurations available per application. Consult factory
- Replacement uppers available for other manufacturer’s saddles. Consult factory

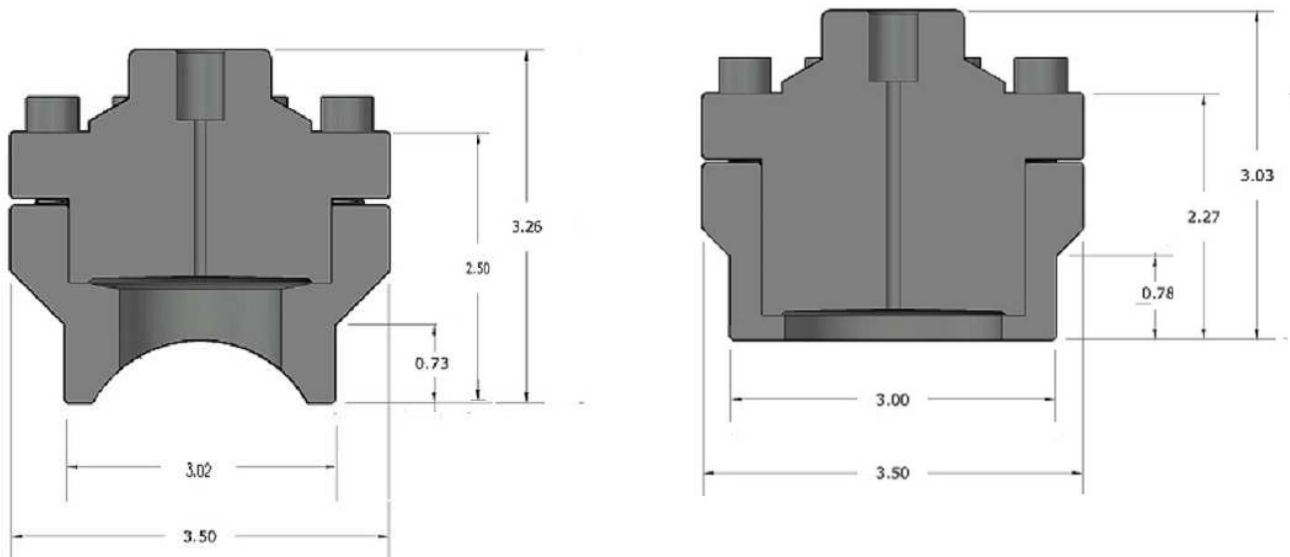


Ordering Information

Base Model	HSD-	Saddle Seal
Inst. Connection	W	Weld Connection (Not available with Titanium or Zirconium)
	2	1/4" NPT
	4	1/2" NPT
Upper Material	S6	316 / 316LSS
	TI	Titanium (Required with Titanium diaphragm)
	Z7	Zirconium 702 (Required with Zirconium diaphragm)
Process Connection Size	3	For 3 Inch Pipe (8 bolt 1500 PSI Max) Standard
	4	For 4 Inch and larger pipe (8 bolt 1500 PSI Max) Standard
	5	For 3 Inch Pipe (6 bolt option) (1000 PSI Max)
	6	For 4 Inch and larger pipe (6 bolt option) (1000 PSI Max)
	X	Other Manufacturer replacement upper as specified
	W	Wika 910.ZA/990.15 replacement upper only
	A	Upper Only Ash. 3" or less pipe Ashcroft 205,206,207,upper 3" or less pipe
	B	Upper Only Ash. 4" or less pipe Ashcroft 205,206,207,upper 4" or larger pipe
Lower Material	NN	Not Provided
	S6	316 / 316LSS
	S4	304 / 304LSS
	C2	Alloy 20
	HC	Alloy C-276
	H2	Alloy B-2
	M4	Monel 400
	I6	Alloy 600
	DP	Alloy 2205
	NI	Nickel 200
	TI	Titanium
	Z7	Zirconium 702
	CS	Carbon Steel
Diaphragm Material	S6	316 / 316LSS
	S4	304 / 304LSS
	TA	Tantalum
	C2	Alloy 20
CONTINUED ON NEXT PAGE		

CONTINUED FROM PREVIOUS PAGE		
	HC	Alloy C-276
	H2	Alloy B-2
	M4	Monel 400
	I6	Alloy 600
	DP	Alloy 2205
	NI	Nickel 201 /200
	TI	Titanium (Titanium upper required)
	Z7	Zirconium 702 (Zirconium upper required)
Gasket Mat.		
	K4	Klinger C4401 (Standard) 450 F Max
	GF	Grafoil 700 F Max
	GL	Gylon 3510 300F Max
	TF	PTFE (o-ring) 350 F Max
	VI	Viton (o-ring) 400 F max
	BN	Buna-N (o-ring) 250 F Max
	KZ	Kalrez (o-ring) 500 F Max
Bolting		
	NN	Not supplied Standard for other manufacturer replacement upper
	CS	Grade 8 Zinc Plated
	S4	304SS
	S6	316SS
Options		
	/AU	Gold Plated Diaphragm
	/NS	PTFE Coated Diaphragm (Non-Stick Only - Not for corrosion protection)
	/MC	Material cert with MTR's

HSD Saddle Seal Dimensions



HSD for 3" pipe

HSD for 4" and larger pipe

Applications & Features

- Various connection for on-line pipe applications
- Pipe sizes from 1/2" and larger pipe
- Socket Weld, Stub-End Weld and Flanged designs
- Custom configurations available per application. Consult factory
- Replacement uppers assemblies for other manufacturer's designs
- Consult factory

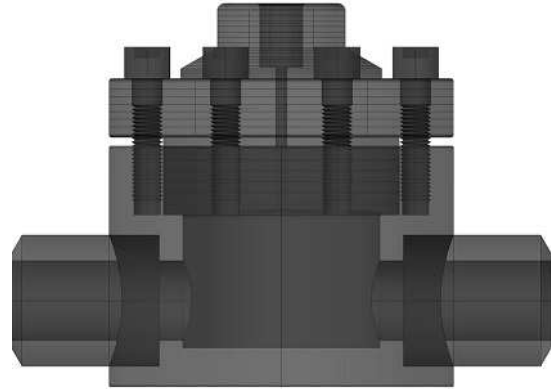
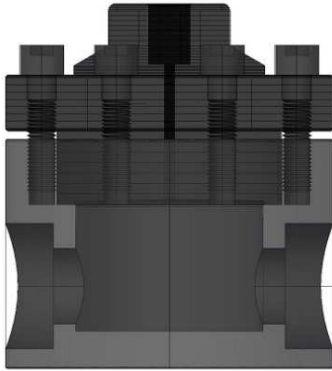


Ordering Information

Base Model		
	HFN	Flow Thru In-Line Seal
Inst. Connection		
	W	Weld Connection (Not available with Titanium or Zirconium)
	2	1/4" NPT
	4	1/2" NPT
Upper Material		
	S6	316 / 316LSS
	TI	Titanium (Required with Titanium diaphragm)
	Z7	Zirconium 702 (Required with Zirconium diaphragm)
Process Connection		
	S	Socket Weld Pipe
	B	Butt Weld Pipe
	T	Threaded Pipe
	F	Flanged
Process Connection Size		
	05	1/2" Pipe
	07	3/4" Pipe
	10	1.0" Pipe
	15	1-1/2" Pipe
	20	2.0" Pipe
	30	3.0" Pipe
	40	4.0" Pipe
Connection Rating		
	N	Use for Socket Weld, Butt Weld and Threaded Connection
	A	150# Flange
	B	300# Flange
Lower Material		
	NN	Not Provided
	S6	316 / 316LSS
	S4	304 / 304LSS
	C2	Alloy 20
	HC	Alloy C-276
	HB	Alloy B-3
	M4	Monel 400
	I6	Alloy 600
	DP	Alloy 2205
		CONTINUED ON NEXT PAGE

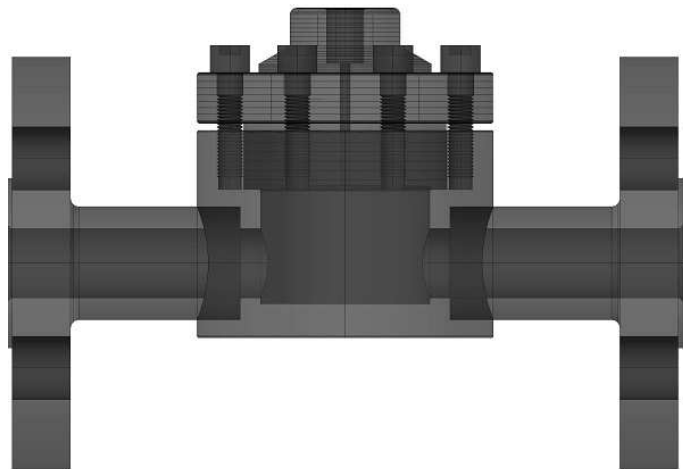
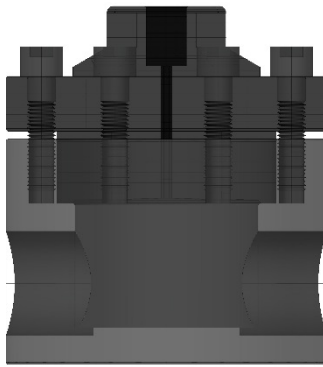
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	NI	Nickel 200
	TI	Titanium
	Z7	Zirconium 702
Diaphragm Mat.		
	S6	316 / 316LSS
	S4	304 / 304LSS
	TA	Tantalum
	C2	Alloy 20
	HC	Alloy C-276
	M4	Monel 400
	HB	Alloy B-3
	I6	Alloy 600
	DP	Alloy 2205
	NI	Nickel 201 /200
	TI	Titanium
	Z7	Zirconium 702
Gasket Mat.		
	K4	Klinger C4401 (Standard) 450 F Max
	GF	Grafoil 700 F Max
	GL	Gylon 3510 300F Max
	TF	PTFE (o-ring) 350 F Max
	VI	Viton (o-ring) 400 F max
	BN	Buna-N (o-ring) 250 F Max
	KZ	Kalrez (o-ring) 500 F Max
Bolting		
	NN	Not supplied Standard for other manufacturer's replacement upper
	CS	Grade 8 Zinc Plated
	S4	304SS
	S6	316SS
Options		
	/AU	Gold Plated Diaphragm
	/NS	PTFE Coated Diaphragm (Non-Stick Only - Not for corrosion protection)
	/MC	Material cert with MTR's

Consult factory for dimensions specific to pipe size and application



HFN Socket Weld Connection

HFN Butt Weld Connection



HFN Threaded Connection

HFN Flanged Connection

Applications & Features

-
-
-
- Custom configurations available per application. Consult factory
- Replacement uppers assemblies for other manufacturer’s designs
- Consult factory



Ordering Information

Base Model		
	HAN	Annular Flow Thru Seal
Type		
	W	Welded
	F	Flanged
	T	Sanitary Tri-Clamp
	C	Sanitary I-Line
Instrument Connection		
	W	Welded (8mm)
	2	1/4" NPT
	4	1/2" NPT
Process Connection Size		
	10	1.0"
	15	1.5"
	20	2.0"
	30	3.0"
	40	4.0"
Connection Type		
	S	Sanitary Clamp Type T or C
	N	ANSI Flange Type W
	A	150# Type F
	B	300# Type F
	C	600# Type F
	D	900# Type F
	E	1500# Type F
	F	2500# Type F
Wetted Body and Diaphragm		
	S6	316SS/316L
	S4	304SS
	C2	Alloy 20
	HC	Alloy C-276
	HB	Alloy B-3
	M4	Monel 400
	I6	Alloy 600
	DP	Alloy 2205
	NI	Nickel 201/200

Applications & Features.

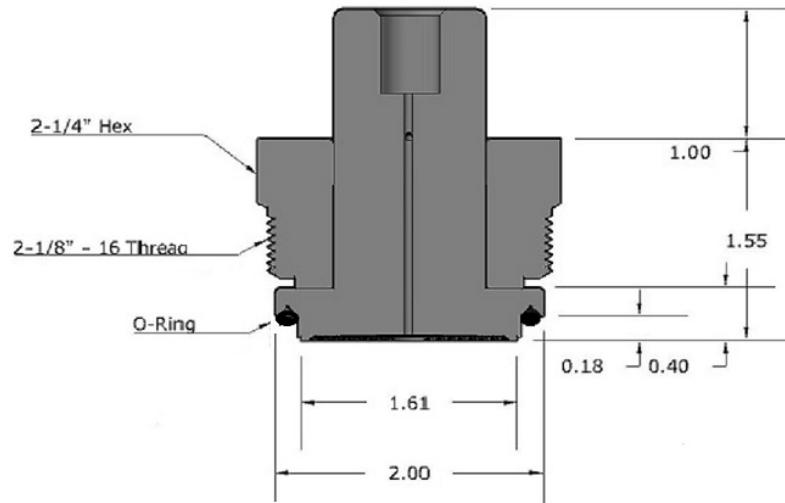
- Interchangeability with other manufacturers designs
- Other connection designs may available per application. Consult factory



Ordering Information

Base Model		
	HUC	Union Connection Seal
Type		
	A	2-1/8"-16 Male Union Nut 316LSS 2000 PSI MWP
Instrument Connection		
	W	Weld Connection
	2	1/4" NPT
	4	1/2" NPT
Body Material		
	S6	316 / 316LSS
	DP	Alloy 2205 (Duplex)
	HC	Alloy C-276
Diaphragm		
	S6	316 / 316LSS
	DP	Alloy 2205 (Duplex)
	HC	Alloy C-276
Gasket Mat.		
	TF	PTFE O-ring
Options		
	/MC	Material cert with MTR's

HUC Union Connection Seal Dimensions



Applications & Features

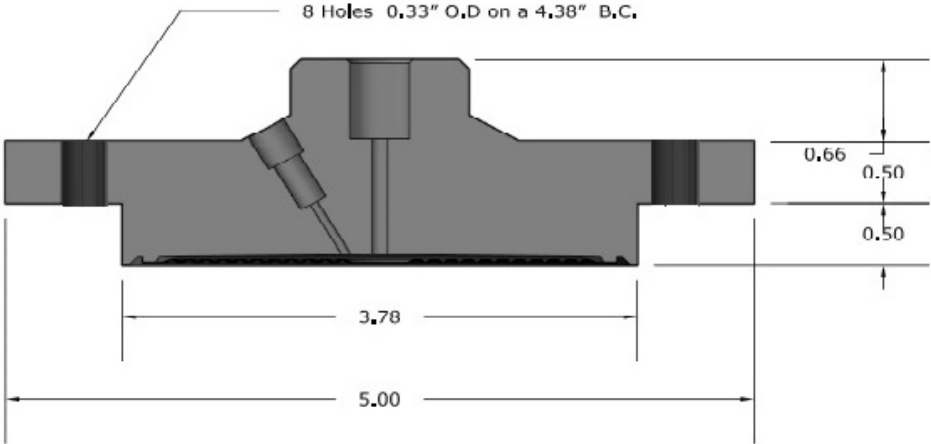
- Chemical Tee or Wedge flanged seal to fit flow wedge applications
- 300 PSI maximum working pressure
- Body material always matches the diaphragm material



Ordering Information

Base Model		
	HCT-	Chemical Tee / Wedge Seal
Inst. Connection		
	W	Weld Connection (Not available with Titanium or Zirconium)
	2	1/4" NPT
	4	1/2" NPT
Body Material		
	S6	316 / 316LSS
	S4	304 / 304LSS
	C2	Alloy 20
	HC	Alloy C-276
	H2	Alloy B-2
	M4	Monel 400
	DP	Alloy 2205
	SD	Alloy 2507
	NI	Nickel 201 /200
	TI	Titanium
	Z7	Zirconium 702
Diaphragm Material		
	S6	316 / 316LSS
	S4	304 / 304LSS
	C2	Alloy 20
	HC	Alloy C-276
	HB	Alloy B-3
	M4	Monel 400
	I6	Alloy 600
	DP	Alloy 2205
	NI	Nickel 201 /200
	TI	Titanium
	Z7	Zirconium 702
Options		
	/AU	Gold Plated Diaphragm
	/NS	PTFE Coated Diaphragm (Non-Stick Only - Not for corrosion protection)
	/MC	Material cert with MTR's

HCT Chemical Tee / Wedge Seal Dimensional Information



Applications & Features

- Pulp and paper industry standard seals for on-line applications.
- Interchangeability with many other manufacturers designs
- Other connection designs may available per application. Consult factory



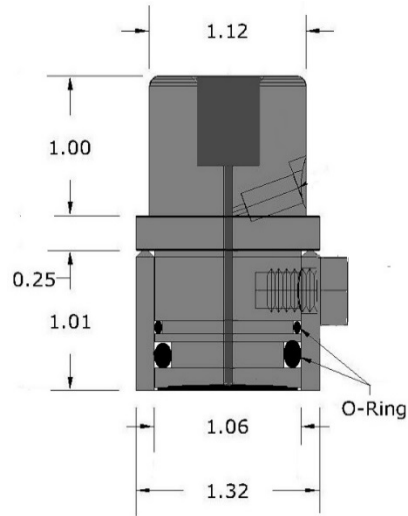
Ordering Information

Base Model		
	HPP-	Pulp and Paper Seal
Type		
	A	1" Flush Mount Sleeve Type 1 bolt Connection 300 PSI MWP
	B	1.5" Flush Sleeve Mount 2 bolt connection 300 PSI MWP
	C	1.5" Flush Mount M44 x1.25" Threaded Connection 600 PSI MWP
Instrument Connection		
	W	Weld Connection
	2	1/4" NPT
	4	1/2" NPT
	5	1/4" NPTM
	6	1/2" NPTM
	7	1/2" NPTM Weld Plug
Body Material		
	S6	316 / 316LSS
	HC	Alloy C-276
Diaphragm		
	S6	316LSS
	HC	Alloy C-276
Lower Weld Spud		
	NN	Without
	S6	316 / 316LSS
	HC	Alloy C-276
Gasket Mat.		
	VI	Viton Type A, B
	GL	Gylon 3510 Type C
Options		
	/HS	Welding Heat Sink Provided 316LSS
	/NS	PTFE Coated Diaphragm (Non-Stick Only - Not for corrosion protection)
	/MC	Material cert with MTR's

HPP Pulp & Paper Seal Dimensions

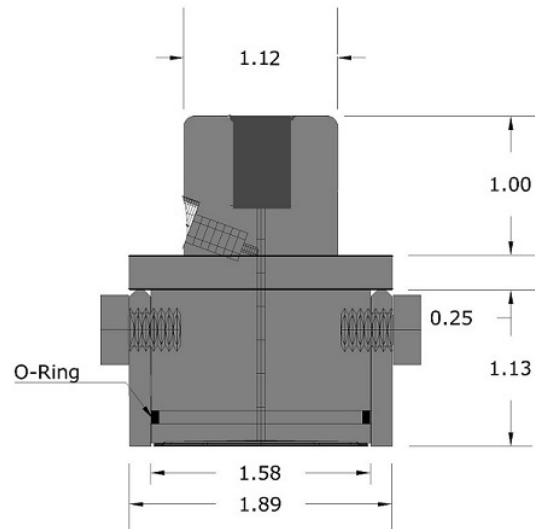
HPP-A

1.0" Flush Sleeve Connection



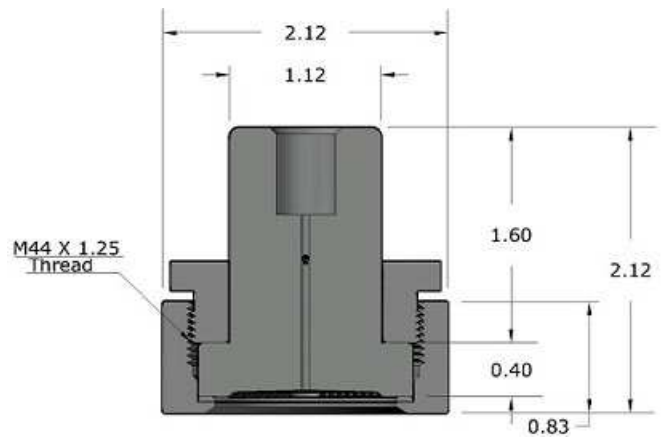
HPP-B

1.5" Flush Sleeve Connection



HPP-C

1.5" Flush M44 x1.25
Threaded Connection



Applications & Features

- Sanitary food, beverage and pharmaceutical seals
- Tri-Clamp®, and Cherry Burrell I-line ® sanitary piping systems connections
- Industry standard tank spud connections
- Other connection types available on request. Consult factory

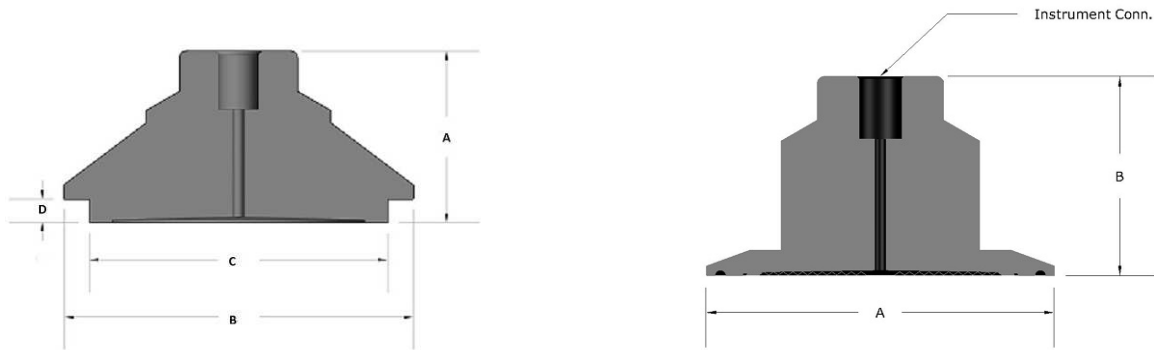


Ordering Information

Base Model		
	HSA-	Sanitary Seal
Type		
	A	Tri-Clamp
	B	Cherry Burrell "I" Line
	D	Varivent Connection
	E	DIN 11851 Threaded Conn.
	F	SMS 1145 Union Nut
	C	Tank Spud
Size		
	15	1.5" Type A,B,F
	20	2.0" Type A,B,F
	25	2.5" Type A,B
	30	3.0" Type A,B
	40	4.0" Type A,B
	V1	Type F-DN25 Varivent only
	V2	Type N-DN40 Varivent only
	D2	DN25(11851)
	D3	DN32(11851)
	D4	DN40(11851)
	D5	DN50(11851)
	60	Industry Standard Tank Spud Type C
Extension Length		
	N	Not Applicable Types A, B
	2	2 Inch Type C
	6	6 Inch Type C
Instrument Connection		
	W	Weld Connection
	2	1/4" NPT
	4	1/2" NPT
Body Material		
	S6	316 / 316LSS
	HC	Alloy C-276
Diaphragm		
	S6	316LSS
	HC	Alloy C-276
Lower Weld Spud		
	NN	Without or Not Required for Type A,B
	S6	316 / 316LSS
	HC	Alloy C-276
Gasket Mat.		
	NN	Not Provided Type A,B
	EP	Ethylene Propylene Type C Only

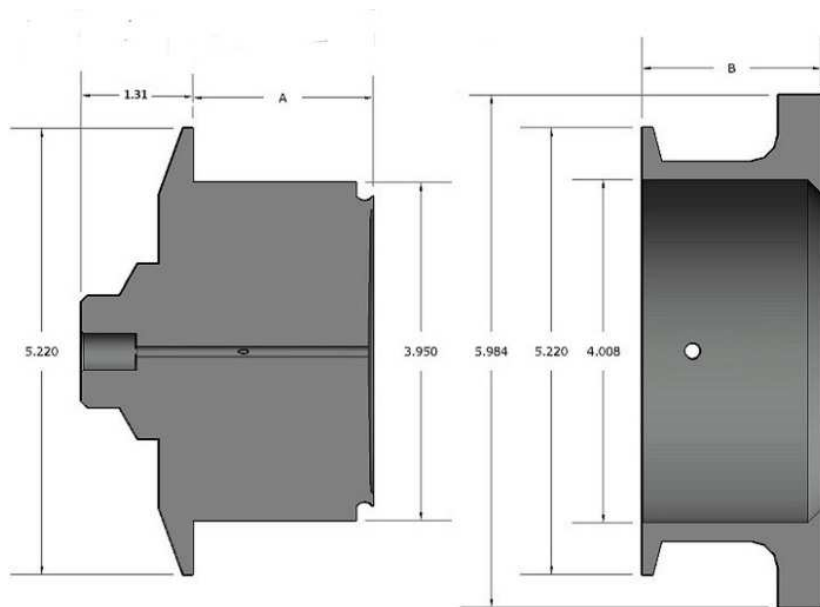
Options		
	/C	SS Clamp Type C Only
	/E	Electro-polished
	/MC	Material cert with MTR's

HAS Sanitary Seal Dimensions



HAS-B CB I-Line				
Size	"A"	"B"	"C"	"D"
1.5"	1.90"	2.00"	1.74"	.20"
2.0"	1.90"	2.64"	2.24"	.26"
3.0"	1.90"	3.88"	3.31"	.31"
4.0"	1.90"	4.88"	4.30"	.31"

HAS-A Tri-Clamp		
Size	"A"	"B"
1.5"	1.98"	2.05"
2.0"	2.51"	2.05"
3.0"	3.57"	2.05"
4.0"	4.68"	2.05"



Tank Spud Seal

Tank Spud

HAS-C Tank Spud		
Size (Length)	"A"	"B"
2"	2.10	2.10
6"	6.10	6.10

Applications & Features.

- Custom “Direct Mount” transmitter flanges for various transmitter brands
- Custom low volume transmitter flanges for capillary for various transmitter brands
- Capillary available in four internal diameters with SS armor or SS PVC coated armor
- Low volume SS nipple mounting and direct mounting to instruments
- Cooling Element available in 4” and custom lengths for higher temperature applications

Ordering Information

Base Model		
	HAF-	System Attachment & Fill
Type		
	A	Direct to instrument All following digits should be N except for Fill
	N	2" Low volume nipple
	D	Direct Mount DP/GP (Dual Side Transmitter), Haygor custom low volume direct mount adaptor
	G	Direct Mount GP Inline Transmitter , Transmitter w/ 1/2" Female NPT or weld conn.
	C	Capillary (Base 1 to 5 feet)
	E	Cooling Element Standard 4 Inch Length Other lengths available
Attachment Position		
	N	Not Applicable - GP unit only
	B	Both High and Low Side of DP unit
	H	High Side of DP unit
	L	Low side of DP Unit
Length		
	NN.N	None Direct / Nipple
	XX.X	Specify Length Capillary, Cooling Element
Units		
	N-	Not Applicable
	F-	Feet (Capillary)
	M-	Meters (Capillary)
	I-	Inches (Cooing Element or DP Direct mount)
Armor Type		
	N	None (Direct or Nipple)
	S	SS Armor
	P	PVC Armor (White PVC over SS)
Capillary I.D.		
	N	None (Direct or Nipple)
	3	.030" I.D.
	4	.041" I.D.
	5	.055" I.D.
	7	.075" I.D.
Instrument Connection		
	N	None (Direct or Nipple)
	1	Welded
	2	1/4" NPTM
	3	1/4" NPTF
	4	1/2" NPTM
	5	1/2" NPTF
	6	1/4" NPTM w/Fill Port
		CONTINUED ON NEXT PAGE

CONTINUED FROM PREVIOUS PAGE		
	7	1/4" NPTF w/Fill Port
	8	1/2" NPTM w/Fill Port
	9	1/2" NPTF w/Fill Port
	B	7/16" Welded .43" O.D. (Weld Plug Fits 1/4" NPT, 1/4" NPS, 7/16")
	C	1/2" NPT Weld Plug (1/2" NPTF GP Xmtr. w/ capillary up to 10')
	D	1/2" NPT Weld Plug w/ Fill Port (1/2" NPTF GP Xmtr. w/ capillary up to 10')
Seal Connection		
	N	None (Direct or Nipple)
	1	Welded (See option /HS for use with HFP pancake seal)
	2	1/4" NPTM
	3	1/4" NPTF
	4	1/2" NPTM
	5	1/2" NPTF
	6	1/4" NPTM w/Fill Port
	7	1/4" NPTF w/Fill Port
	8	1/2" NPTM w/Fill Port
	9	1/2" NPTF w/Fill Port
	B	7/16" Welded .43" O.D. (Weld plug fits 1/4" NPT, 1/4" NPS, 7/16")
Fill Fluid		
	-N	None (Dry)
	-A	Silicone 200-10 -40 to 400°F
	-B	Silicone 704 +50 to 640°F
	-C	Silicone 705 +68 to 700°F
	-D	Syltherm 800 -40 to 600°F
	-E	Syltherm XLT -150 to 500°F
	-F	Halocarbon 6.3 (Inert) -20 to 425°F
	-G	Fluorolube FS-5 (Inert) -20 to 300°F
	-H	Krytox 1506 (Inert - Vac. Service) +20 to 400°F
	-J	Neobee M20 0 to 400°F
	-L	DC 200-350 (Food Grade) 0 to 572°F
	-M	Glycerine (Direct Mount only) +60 to 462°F
	-P	Glycerine/H2O +14 to 248°F
	-R	Deionized Water 33 to 200°F
	-S	Silicone 710 45 to 700°F
	-T	PG-1 (White Mineral Oil) 50 to 600°F
	-U	IG-4 (White Mineral Oil) 65 to 600°F
	-V	Silicone 200-50 -4 to 400°F
	-W	MT-503 -40 to 500°F
	-X	Special fill as specified by customer
	*-XA	Dowtherm A 60 to 750°F Contact Factory
Options		
	/LV	Option A: Haygor Custom low volume transmitter flange (Specify Model)
	/VM	Option B: Modify existing transmitter flange to minimize volume
	/HS	Handle / Support Tube 4" (For use with HFP Pancake Seal)
	/BW	Seal Welded to Instrument

Applications & Features

- Bleeding / Venting / Calibration / Flushing Bleed Ring
- Held in place by the through bolting for easy installation
- Standard flange sizes from ANSI 2" to 4". Additional sizes available on request
- Pressure ratings to ANSI class 2500.
- Other flange standards available



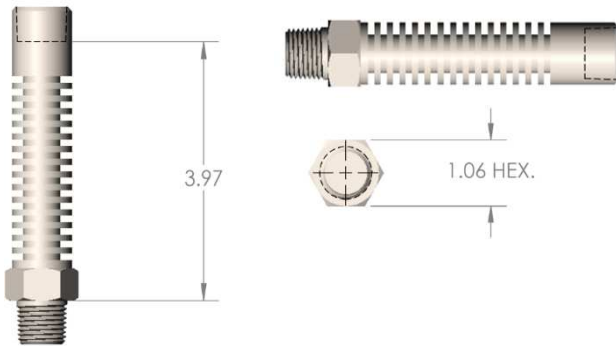
Ordering Information

Base Model		
	HBF-	Full Face Bleed Flange
Process Size		
	20	2" ANSI
	30	3" ANSI
	40	4" ANSI
	C0	DN50
	D0	DN80
	E0	DN100
	XX	Other as specified
Process Connection Rating		
	A	150#
	B	300#
	C	600#
	D	900#
	E	1500#
	F	2500#
	G	PN 10/40 DN50
	H	PN 10/16 DN80, DN100, DN125
	J	PN 25/40 DN80, DN100, DN125
	L	PN 63 DN50, DN80, DN100, DN125
	M	PN 100 DN50, DN80, DN100, DN125
	P	PN 160 DN50, DN80, DN100, DN125
	R	PN 250 DN50, DN80, DN100, DN125
Process Connection Type		
	A	ANSI Raised Face
	R	ANSI Ring Joint (RTJ)
	D	DIN Raised Face
Bleed Connections		
	A	Single ¼" NPTF
	B	Dual ¼" NPTF
	C	Single ½" NPTF
	D	Dual ½" NPTF
	E	Single ¼" Pipe Socket Weld
	F	Dual ¼" Pipe Socket Weld
	G	Single ½" Pipe Socket Weld
	H	Dual ½" Pipe Socket Weld

CONTINUED FROM PREVIOUS PAGE		
Body Material		
	S6	316 / 316LSS
	S4	304 / 304LSS
	C2	Alloy 20
	HC	Alloy C-276
	HB	Alloy B-3
	M4	Monel 400
	I6	Alloy 600
	DP	Alloy 2205
	NI	Nickel 201 /200
	TI	Titanium
	Z7	Zirconium 702
Options		
	/P1	With single pipe plug for flush port
	/P2	With dual pipe plugs for flush port

Applications & Features

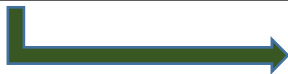
- Designed to safeguard instruments in high temperature applications
- For threaded pressure measuring instruments in high temperature applications exceeding the allowable media temperature range of the instrument
- Ideal for off-shore process applications with salt water environment
- Can be used with corrosive media that is compatible to 316 SS



Ordering Information

Ordering Example: HCE04.0S654

Description: Haygor Cooling Element with 4" inch, stainless steel extension, 1/2" NPTF instrument connection, and 1/2" NPTM process connection.



Base Model	Ordering Code	Description
	HCE-	Haygor Cooling Element
Length		
	04.0	<< Specify Length in Inches *Custom lengths available
Material		
	S6	316 SS
Instrument Conn.		
	1	Welded (8mm or Fitting as needed for Instrument type)
	2	1/4" NPTM
	3	1/4" NPTF
	4	1/2" NPTM
	5	1/2" NPTF
	C	1/2" NPT Weld Plug (For Instrument with 1/2"NPTF connection)
Process Conn.		
	1	Welded 8 mm Standard for Diaphragm Seals
	2	1/4" NPTM
	3	1/4" NPTF
	4	1/2" NPTM
	5	1/2" NPTF

Pressure / Temperature Rating ANSI B16.5 Flanges												
	Carbon Steel						316SS					
	Maximum Working Pressure (PSIG)						Maximum Working Pressure (PSIG)					
Temp °F	ANSI 150	ANSI 300	ANSI 600	ANSI 900	ANSI 1500	ANSI 2500	ANSI 150	ANSI 300	ANSI 600	ANSI 900	ANSI 1500	ANSI 2500
-20 to 100	285	740	1480	2220	3705	6170	275	720	1440	2160	3600	6000
200	260	675	1350	2025	3375	5625	240	620	1240	1860	3095	5160
300	230	655	1315	1970	3280	2470	215	560	1120	1680	2795	4660
400	200	635	1270	1900	3170	5280	195	515	1030	1540	2570	4280
500	170	600	1200	1795	2995	4990	170	480	995	1435	2390	3980
600	140	550	1095	1640	2735	4560	140	450	905	1355	2255	3760
650	125	535	1075	1610	2685	4475	125	445	890	1330	2220	3700

Pressure / Temperature Rating Threaded Seals						
	Maximum Working Pressure (PSIG)					
Temp °F	10000	5000	2500	2000	1250	1000
-20 to 100	10000	5000	2500	2000	1250	1000
200	8600	4300	2150	1930	1075	965
300	7800	3900	1950	1560	975	780
400	7200	3600	1800	1440	900	720
500	6600	3300	1650	1340	825	670
650	6000	3000	1550	1240	750	620

Gasket & O-ring Maximum Temperature		
Model Code	Material	Temp ° F
K4	Klinger C4401 (Standard)	450 F Max
GF	Grafoil®	700 F Max
GL	Gylon® 3510	300F Max
TF	PTFE (o-ring)	350 F Max
VI	Viton® (o-ring)	400 F max
BN	Buna-N (o-ring)	250 F Max
KZ	Kalrez® (o-ring)	500 F Max
OTHER MATERIALS MAY BE AVAILABLE ON REQUEST - CF		

Fill Fluid					
Model Code	Fluid	Temperature Range Limits	Specific Gravity	Viscosity	Notes
-A	Silicone 200-10	-40 to 400°F	.935 (25C)	10 cs. (25C)	General Use
-B	Silicone 704	+50 to 640°F	1.07 (25C)	39 cs. (25C)	Vacuum Service
-C	Silicone 705	+68 to 700°F	1.09 (25c)	175 cs. (25C)	Vacuum Service
-D	Syltherm 800	-40 to 750°F	.93 (25C)	9.1 cs. (25C)	
-E	Syltherm XLT	-150 to 500°F	.85 (25C)	1.4 cs. (25c)	
-F	Halocarbon 6.3 (Inert)	-20 to 425°F	1.87 (37.8c)	6.3 cs. (37.8C)	Inert
-G	Fluorolube FS-5 (Inert)	-20 to 300°F	1.85 (38c)	6 cs. (38C)	Inert
-H	Krytox 1506 (Inert - Vac. Service)	20 to 400°F	1.88 (20 C)	62 cs. (20 C)	Inert / Vacuum Service
-J	Neobee M20	0 to 400°F	.918 (25C)	9.5 cs. (25C)	Sanitary / Food Service
-L	DC 200-350 (Food Grade)	0 to 572°F	.97 (25C)	350 cs. (25C)	Sanitary / Food Service
-M	Glycerine <u>(Direct Mt. only)</u>	60 to 462°F	1.26 (20c)	1410 cs. (20C)	Sanitary / Food Service
-P	Glycerine/H2O (85%/15%)	14 to 248°F	1.22 (20C)	110 cs. (20C)	Sanitary / Food Service
-R	Deionized Water	33 to 200°F			
-S	Silicone 710	45 to 700°F			
-T	PG-1 (White Mineral Oil)	50 to 600°F			Sanitary / Food Service
-U	IG-4 (White Mineral Oil)	65 to 600°F			Sanitary / Food Service
-V	Silicone 200-50	-4 to 400°F			
-W	MT-503	-40 to 500°F			
-V	Silicone 200-50	-4 to 400°F			
-W	MT-503	-40 to 500°F			
-Y	Halocarbon 0.8	-160F to 158F			Low temp. Inert
-X	Special fill as specified by customer				
Pending	Dowtherm A	60 to 750°F		Contact Factory	Contact Factory

OTHER FILL FLUIDS MAY BE AVAILABLE ON REQUEST - C/F



SERVING THE PETRO-CHEMICAL, OIL & GAS, MEDICAL, AND CRYOGENIC INDUSTRIES FOR OVER 35 YEARS

Sales	Diaphragm Seals	Repairs
<ul style="list-style-type: none"> Process Instrumentation Electronic and Pneumatic Factory New Remanufactured New Surplus 1-2 year Warranties Diaphragm Seals Transmitters Controllers Valve Positioners/Actuators Chart Recorders Data Loggers 	<ul style="list-style-type: none"> Manufacturing Capillaries Remote Seals Flanged ANSI / Metric Threaded Sanitary Pulp and Paper Design Customer Specific Engineering Repair All Brands of Diaphragm Seals and Assemblies Tig Welded Vacuum Filling and Testing 	<ul style="list-style-type: none"> Process Instrumentation Electronic and Pneumatic Diaphragm Seal Assemblies Transmitters Controllers Gauges Valve Positioners/Actuators Electronics (On-board/Component) PLC / DCS Systems OEM Replacement Parts Cost Efficient
Cleaning / Degreasing	NIST Calibration	Machining / Welding
<ul style="list-style-type: none"> Cryogenic / Process / Medical Oxygen Service Chlorine Service Critical / High Purity Service Thermocouple Cleaning HIE 02 1.E / CGA G-4.1 ASTM G93 / ASTM A 967 Tubing/Fittings/Valves Hoses Instrumentation Instrumentation Panels/Systems Flowmeters Meter Runs / Orifice Assemblies 	<ul style="list-style-type: none"> NIST Traceable Calibration Lab Pressure Temperature High Pressure up to 40,000 Psi High Tolerance / Accuracy Transmitters Gauges Test Equipment Data Loggers Recorders Liquid Level Backflow Gauges 	<ul style="list-style-type: none"> Machine Shop Welding Shop Manual CNC Parts Design / Engineering High Tolerance Surface Finishes Specialty Parts Job Shop Valve Parts Diaphragm Seals Custom Design / Manufacturing Aftermarket



HAYGOR INSTRUMENT
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