

The US FH construction is designed for those applications where the existing process connection is too small to use a flush diaphragm seal. The US FH consists of an upper and lower housing. The lower housing creates the transition from the diaphragm size to the actual small process connection. US FH is typically used in combination with (differential) pressure transmitters for applications such as level, flow and (absolute) pressure measurement; also the US FH is often combined with pressure gauges.


**STANDARD EXECUTION**

<b>DIAPHRAGM</b>	<b>BODY</b>	<b>MOUNTING CONNECTION</b>	<b>FACING</b>
AISI 316(L)	AISI 316(L)	top (axial)	RF
<b>TYPE</b>	<b>GASKET</b>	<b>BOLTS</b>	
B1	Virgin PTFE	3/8" UNF – A2-70	

**FLANGED PROCESS CONNECTIONS**
**ASME B16.5**

size	rating	dD
1/2"	cl. 150 – cl. 1500	51mm
1"	cl. 150 – cl. 1500	51mm
1.5"	cl. 150 – cl. 1500	51mm
2"	cl. 150 – cl. 1500	51mm
3"	cl. 150 – cl. 1500	51mm

**EN 1092-1**

size	rating	dD
DN15	PN10 – PN100	51mm
DN25	PN10 – PN100	51mm
DN40	PN10 – PN100	51mm
DN50	PN10 – PN100	51mm
DN80	PN10 – PN100	51mm

**UPPER AND LOWER PART ASSEMBLY**
**BOLTING**

thread	material	mwp	pcs	rating (ASME)	rating (EN)
3/8" UNF	A2-70	125 bar	4	cl. 150 - cl. 600	PN10 – PN100
3/8" UNF	A2-70	250 bar	8	cl. 900 - cl. 1500	PN160 – PN250
3/8" UNF	8.8	150 bar	4	cl. 150 - cl. 600	PN10 – PN100
3/8" UNF	8.8	300 bar	8	cl. 900 - cl. 1500	PN160 – PN250

**GASKET**

material	operating temperature
Virgin PTFE	-200 / +260°C
Garfite N	-73 / +343°C
Camprofile <sup>1</sup>	-200 / + 500°C

Note: MWP (maximum working pressure) at 20 °C with AISI 316(L) body material

<sup>1</sup> for steam applications

**WETTED PARTS. BODY MATERIALS. AND FACING OPTIONS**

diaphragm material	body material	lowerpart material
AISI 316(L)	AISI 316(L)	AISI 316(L)
AISI 304(L)		
AISI 321		
AISI 316 UG		
Hastelloy C-276		
Hastelloy C-276	AISI 316(L)	Hastelloy C-276
Monel 400	AISI 316(L)	Monel 400
Tantalum	AISI 316(L)	Tantalum <sup>1</sup>
Nickel 201	AISI 316(L)	Nickel 201
Duplex 2205	AISI 316(L)	Duplex
Inconel 600	AISI 316(L)	Inconel 600
Titanium Gr.1	Titanium Gr.2	Titanium Gr.2

<sup>1</sup> material AISI 316(L) with Tantaline treatment

**facing (ASME B16.5)**

	rating
RF	Ra 3.2-6.3 µm
RJF	Ra <1.6 µm
LMF	Ra 3.2-6.3 µm
SMF	Ra <3.2 µm
FF	Ra 3.2-6.3 µm
LTF	Ra <3.2 µm
STF	Ra <3.2 µm
LGF	Ra <3.2 µm
SGF	Ra <3.2 µm
LFF	Ra 3.2-6.3 µm
SFF	Ra <3.2 µm

**facing type (EN 1092-1)**

	rating
B1	Ra 3.2-12.5 µm
A	Ra 3.2-12.5 µm
B2	Ra 0.8-3.2 µm
C	Ra 0.8-3.2 µm
D	Ra 0.8-3.2 µm
E	Ra 3.2-12.5 µm
F	Ra 3.2-12.5 µm
G	Ra 0.8-3.2 µm
H	Ra 0.8-3.2 µm

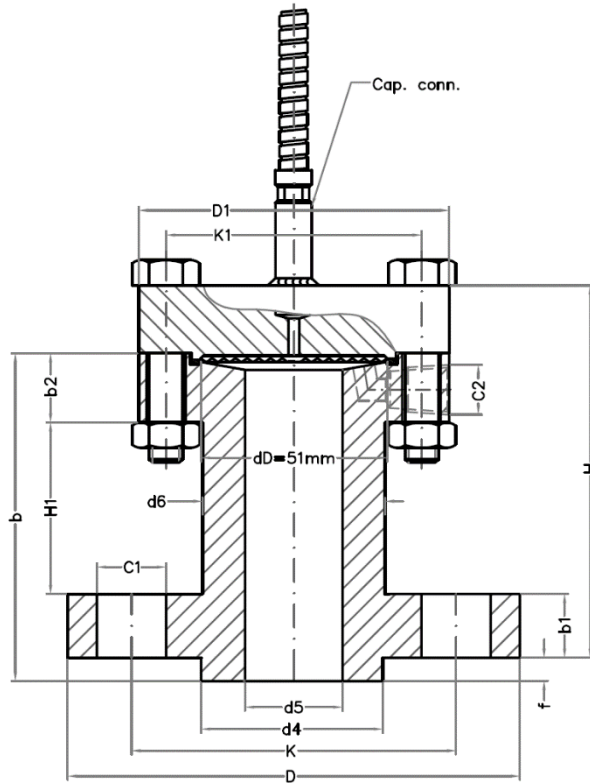
**COATING AND OTHER OPTIONS**
**COATINGS**

- gold: 25 µm/40 µm chemical resistance and/or hydrogen permeation protection (facing and/or diaphragm – page 120)
- PTFE / ECTFE for anti stick purpose only (upper part)
- FEP/ PFA (upper part)
- Tantaline lower part
- PTFE lining (lower part)

**OTHER OPTIONS**

- heavy duty capillary tube page 113/123
- TR - temperature reducer page 114
- PTFE sheet for anti-stick purpose only (no vacuum)
- flushing ports in lower part (not in combination with lining)
- degreasing of wetted parts

DRAWING AND DIMENSIONS STANDARD EXECUTIONS



ASME B16.5 - RF FACING

size	rating	facing	b	b1	b2	dD	D	D1	d4	d5	d6	f	H	H1	K	K1	C1	C2
1/2"	cl. 150	RF	80	10	20	51	90	85	35	15	40	2	97	48	60	70	15.9x4	1/4"
1/2"	cl. 300	RF	80	13	20	51	95	85	35	15	40	2	97	45	67	70	15.9x4	1/4"
1/2"	cl. 400 - 600	RF	90	14	20	51	95	85	35	15	40	7	102	49	67	70	15.9x4	1/4"
1/2"	cl. 900 - 1500	RF	100	22	20	51	120	85	35	15	40	7	112	51	83	70	22.3x4	1/4"
3/4"	cl. 150	RF	90	11	20	51	100	85	43	20	42	2	107	578	70	70	15.9x4	1/4"
3/4"	cl. 300	RF	90	14	20	51	115	85	43	20	42	2	107	54	83	70	19.1x4	1/4"
3/4"	cl. 400 - 600	RF	90	16	20	51	115	85	43	20	42	7	102	47	83	70	19.1x4	1/4"
3/4"	cl. 900 - 1500	RF	90	25	20	51	130	85	43	20	42	7	102	38	89	70	22.3x4	1/4"
1"	cl. 150	RF	90	13	20	51	110	85	51	25	52	2	107	55	79	70	15.9x4	1/4"
1"	cl. 300	RF	90	16	20	51	125	85	51	25	52	2	107	52	89	70	19.1x4	1/4"
1"	cl. 400 - 600	RF	90	18	20	51	125	85	51	25	52	7	102	46	89	70	19.1x4	1/4"
1"	cl. 900 - 1500	RF	100	29	20	51	150	85	51	25	52	7	112	44	102	70	25.4x4	1/4"
1.5"	cl. 150	RF	90	16	21	51	125	85	73	40	52	2	107	51	98	70	15.9x4	1/4"
1.5"	cl. 300	RF	90	19	21	51	155	85	73	40	52	2	107	48	114	70	22.3x4	1/4"
1.5"	cl. 400 - 600	RF	90	22	21	51	155	85	73	40	52	7	102	40	114	70	22.3x4	1/4"
1.5"	cl. 900 - 1500	RF	100	32	21	51	180	85	73	40	52	7	112	40	124	70	28.6x4	1/4"
2"	cl. 150	RF	100	18	20	51	150	85	92	47	52	2	117	61	121	70	19.1x4	1/4"
2"	cl. 300	RF	100	21	20	51	165	85	92	47	52	2	117	57	127	70	19.1x8	1/4"
2"	cl. 400 - 600	RF	110	25	20	51	165	85	92	47	52	7	122	58	127	70	19.1x8	1/4"
2"	cl. 900 - 1500	RF	125	38	20	51	215	85	92	47	52	7	137	60	165	70	25.4x8	1/4"
3"	cl. 150	RF	100	22	20	51	190	85	127	47	52	2	117	56	152	70	19.1x4	1/4"
3"	cl. 300	RF	100	27	20	51	210	85	127	47	52	2	117	51	168	70	22.3x8	1/4"
3"	cl. 400 - 600	RF	110	32	20	51	210	85	127	47	52	7	122	51	168	70	22.3x8	1/4"
3"	cl. 900	RF	125	38	20	51	240	85	127	47	52	7	137	60	191	70	25.4x8	1/4"
3"	cl. 1500	RF	140	48	20	51	265	85	127	47	52	7	152	65	203	70	31.8x8	1/4"

Note: All dimensions in mm

## EN 1092-1 - TYPE B1

size	rating	type	b	b1	b2	dD	D	D1	d4	d5	d6	f	H	H1	K	K1	C1	C2
DN15	PN10-40	B1	80	14	20	51	95	85	45	15	40	2	97	44	65	70	14x4	1/4"
DN15	PN63-100	B1	90	18	20	51	105	85	45	15	40	2	107	50	75	70	14x4	1/4"
DN20	PN10-40	B1	90	16	20	51	105	85	58	20	45	2	107	52	75	70	14x4	1/4"
DN20	PN63-100	B1	90	20	20	51	130	85	58	20	45	2	107	48	90	70	18x4	1/4"
DN25	PN10-40	B1	90	16	20	51	115	85	68	25	45	2	107	52	85	70	14x4	1/4"
DN25	PN63-100	B1	90	22	20	51	140	85	68	25	45	2	107	46	100	70	18x4	1/4"
DN40	PN10-40	B1	90	15	20	51	150	85	88	40	52	3	106	52	110	70	18x4	1/4"
DN40	PN63-100	B1	90	23	20	51	170	85	88	40	52	3	106	44	125	70	22x4	1/4"
DN50	PN10	B1	90	15	20	51	165	85	102	47	52	3	106	52	125	70	18x4	1/4"
DN50	PN25-40	B1	90	17	20	51	165	85	102	47	52	3	106	50	125	70	18x4	1/4"
DN50	PN63	B1	90	23	20	51	180	85	102	47	52	3	106	44	135	70	22x4	1/4"
DN50	PN100	B1	100	25	20	51	195	85	102	47	52	3	116	52	145	70	26x4	1/4"
DN80	PN10	B1	90	17	20	51	200	85	138	47	52	3	106	50	160	70	18x8	1/4"
DN80	PN25-40	B1	90	21	20	51	200	85	138	47	52	3	106	46	160	70	18x8	1/4"
DN80	PN63	B1	90	25	20	51	215	85	138	47	52	3	106	42	170	70	22x8	1/4"
DN80	PN100	B1	100	29	20	51	230	85	138	47	52	3	116	48	180	70	26x8	1/4"

Note: All dimensions in mm



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