

Badotherm has developed a Diaphragm Seal that can measure pressure with process temperatures up to 600°C. To enable a proper functioning of the Diaphragm Seal at these extreme process temperatures a revolutionary new design and principle is used. The novelty of the design is as such that Badotherm has a “Patent” on the High Temperature Diaphragm Seal (HTDS). Typical applications for high temperature can be found in chemical process industry, petrochemical industry, and in the thermo-solar industry with molten salt.



STANDARD EXECUTION

DIAPHRAGM AISI 316(L)	BODY AISI 321H	MOUNTING CONNECTION top (axial)	FILLING FLUID BSO-02 / BSO-42 / BSO-48	
FACING RF	FACING TYPE B1	BOLTS M10 –1.4980	MAXIMUM PROCESS TEMPERATURE 600°C	SOLUTION page 118

FLANGED PROCESS CONNECTIONS

ASME B16.5

size	rating	facing	dD
1/2"	cl. 150 – cl. 600	RF	81mm
1"	cl. 150 – cl. 600	RF	81mm
1,5"	cl. 150 – cl. 600	RF	81mm
2"	cl. 150 – cl. 600	RF	81mm
3"	cl. 150 – cl. 600	RF	81mm

EN 1092-1

Size	rating	type	dD
DN15	PN10 – PN63	B1	81mm
DN25	PN10 – PN63	B1	81mm
DN40	PN10 – PN63	B1	81mm
DN50	PN10 – PN63	B1	81mm
DN80	PN10 – PN63	B1	81mm

WORKING PRESSURE BY CLASS

body material	bolts	Max. temp.	cl.150	cl.300	cl.400	cl.600
AISI 321(H)	1.4980	600°C	1.4	20.3	27.0	40.5

Note: maximum working pressure in bar at maximum temperature; maximum temperature with cl. 150 is 538 °C

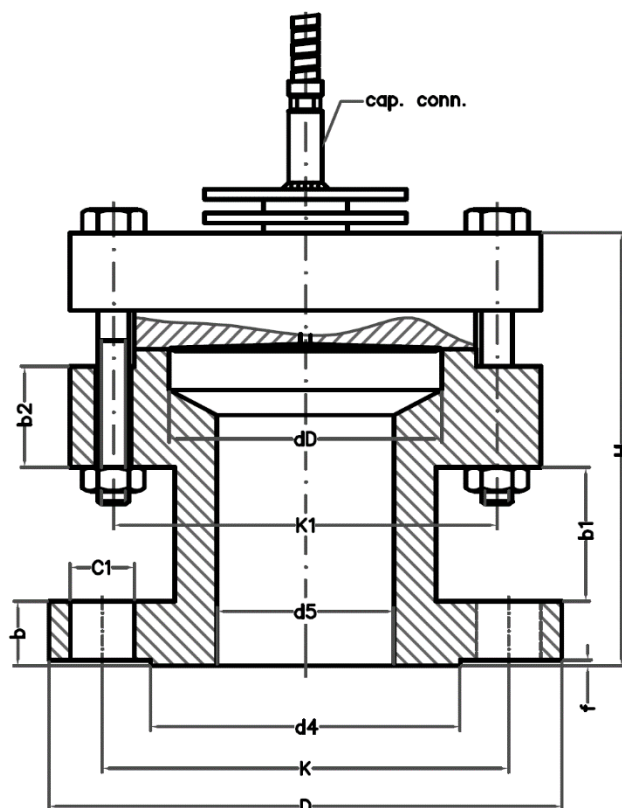
WETTED PARTS, BODY MATERIALS, AND FACING OPTIONS

diaphragm material AISI 316(L)	body material AISI 321H	facing (ASME B16.5) 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	facing type (EN 1092-1) 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
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REQUIRED CUSTOMER DATA – MANDATORY IN ORDER TO QUOTE / MANUFACTURE

Data	Uom
1. GP or dP Measurement	
2. Nominal Process temperature	°C
3. Nominal Process Pressure	bar
4. Minimal Process Pressure	mbar
5. Maximum Process Pressure	bar
6. Span	mbar
7. Capillary Length	meter

DRAWING AND DIMENSIONS STANDARD EXECUTIONS



ASME B16.5 - RF FACING

size	rating	facing	dD	D	d4	d5	f	K	K1	b	b1	b2	H	C1 / pcs
1/2"	cl. 150	RF	81	90	35	14	2	60	114	12	60	44	149	1/2" 13 UNC / 4x
1/2"	cl. 300	RF	81	95	35	14	2	67	114	15	60	44	152	1/2" 13 UNC / 4x
1/2"	cl. 400-600	RF	81	95	35	14	7	67	114	21	60	44	158	1/2" 13 UNC / 4x
1"	cl. 150	RF	81	110	51	27	2	79	114	15	60	44	152	1/2" 13 UNC / 4x
1"	cl. 300	RF	81	125	51	27	2	89	114	18	60	44	155	5/8" 11 UNC / 4x
1"	cl. 400-600	RF	81	125	51	27	7	89	114	25	60	44	162	5/8" 11 UNC / 4x
1.5"	cl. 150	RF	81	125	73	45	2	98	114	18	60	44	155	1/2" 13 UNC / 4x
1.5"	cl. 300	RF	81	155	73	45	2	114	114	21	60	44	158	3/4" 10 UNC / 4x
1.5"	cl. 400-600	RF	81	155	73	45	7	114	114	29	60	44	166	3/4" 10 UNC / 4x
2"	cl. 150	RF	81	150	92	56	2	121	114	20	60	44	157	5/8" 11 UNC / 4x
2"	cl. 300	RF	81	165	92	56	2	127	114	23	60	44	160	5/8" 11 UNC / 8x
2"	cl. 400-600	RF	81	165	92	56	7	127	114	32	60	44	169	5/8" 11 UNC / 8x
3"	cl. 150	RF	81	190	127	81	2	152	114	24	60	44	161	5/8" 11 UNC / 4x
3"	cl. 300	RF	81	210	127	81	2	168	114	29	60	44	166	3/4" 10 UNC / 8x
3"	cl. 400-600	RF	81	210	127	81	7	168	114	39	60	44	176	3/4" 10 UNC / 8x

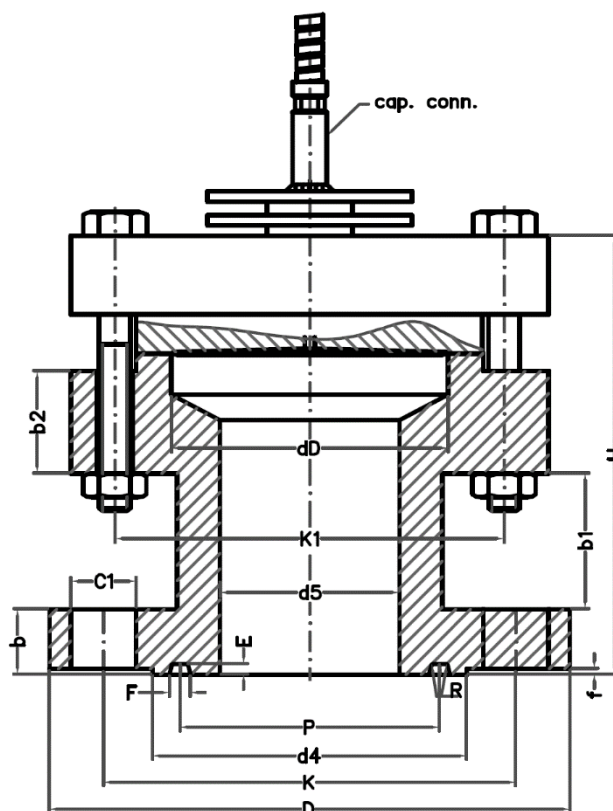
All dimensions in mm

EN 1092-1 - TYPE B1

size	rating	facing	dD	D	d4	d5	f	K	K1	b	b1	b2	H	C1 / pcs
DN15	PN10-40	B1	81	95	45	23	2	65	114	14	60	44	151	M12 / 4x
DN25	PN10-40	B1	81	115	68	35	2	85	114	16	60	44	153	M12 / 4x
DN40	PN10-40	B1	81	150	88	50	3	110	114	18	60	44	155	M16 / 4x
DN50	PN10-40	B1	81	165	102	61	3	125	114	20	60	44	157	M16 / 4x
DN80	PN10-40	B1	81	200	138	81	3	160	114	24	60	44	161	M16 / 4x

All dimensions in mm

DRAWING AND DIMENSIONS RJF FACING



ASME B16.5 - RJF FACING

size	rating	facing	dD	D	d4	d5	f	K	K1	b	b1	b2	H	P	F	E	C1 / pcs	R
1/2"	cl. 300	RJF	81	95	51	14	6	67	114	18	60	44	155	34	7	6	1/2" 13 UNC / 4x	0.8
1/2"	cl. 400-600	RJF	81	95	51	14	6	67	114	20	60	44	157	34	7	6	1/2" 13 UNC / 4x	0.8
1"	cl. 150	RJF	81	110	64	27	6	79	114	19	60	44	156	48	9	6	1/2" 13 UNC / 4x	0.8
1"	cl. 300	RJF	81	125	70	27	6	89	114	22	60	44	159	51	9	6	5/8" 11 UNC / 4x	0.8
1"	cl. 400-600	RJF	81	125	70	27	6	89	114	24	60	44	161	51	9	6	5/8" 11 UNC / 4x	0.8
1.5"	cl. 150	RJF	81	125	83	45	6	98	114	22	60	44	159	65	9	6	1/2" 13 UNC / 4x	0.8
1.5"	cl. 300	RJF	81	155	91	45	6	114	114	25	60	44	162	68	9	6	3/4" 10 UNC / 4x	0.8
1.5"	cl. 400-600	RJF	81	155	91	45	6	114	114	29	60	44	166	68	9	6	3/4" 10 UNC / 4x	0.8
2"	cl. 150	RJF	81	150	102	56	6	121	114	24	60	44	161	83	9	6	5/8" 11 UNC / 4x	0.8
2"	cl. 300	RJF	81	165	108	56	8	127	114	29	60	44	166	83	12	8	5/8" 11 UNC / 8x	0.8
2"	cl. 400-600	RJF	81	165	108	56	8	127	114	33	60	44	170	83	12	8	5/8" 11 UNC / 8x	0.8
3"	cl. 150	RJF	81	190	133	81	6	152	114	29	60	44	166	114	9	6	5/8" 11 UNC / 4x	0.8
3"	cl. 300	RJF	81	210	146	81	8	168	114	35	60	44	172	124	12	8	3/4" 10 UNC / 8x	0.8
3"	cl. 400-600	RJF	81	210	146	81	8	168	114	40	60	44	177	124	12	8	3/4" 10 UNC / 8x	0.8

All dimensions in mm



Holland – United Kingdom – Romania – India – Thailand – Dubai – USA

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