ASHCROFT®
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All Welded Flanged Diaphragm Seal Model 502/503

with flange according to EN 1092-1 and ASME B16.5

FEATURES

- All-welded compact design with high volumetric displacement for small flanges and low pressure ranges
- Variety of wetted parts materials
- Available with flushing port
- Suitable for pressure gauges, switches and transmitters
- Continuous duty design
- Minimized fill volume

TYPICAL USES

- Oil and gas
- Refineries (Hydrofluoric / Sulfuric Alkylation)
- Chemical and petrochemical
- Water and wastewater
- Oil and gas fracking
- NACE Compliant processes (sour gas separation)
- Biogas and biodiesel
- Corrosive processes

SPECIFICATIONS

Diaphragm Seal type:	502: Flanged 503: Flanged with 1/4 NPT flushing ports
Process Connection Size:	Flange according to EN 1092-1 DN15, DN20, DN25, DN40 Flange according to ASME B16.5 1/2", 3/4", 1", 1-1/2"
Flange Style:	EN 1092-1 Raised face B1 ASME B16.5 Raised face RF
Instrument Connection Size:	G 1/4 or G 1/2 Female 1/4 NPT or 1/2 NPT Female Welding port (8 mm) for capillary line others available on request
Flange Rating:	EN 1092-1 PN2,5 up to PN100 ASME B16.5 Class 150, 300 or 600
Flushing Port:	1/4 NPT Female
Accuracy Effect:	+ 0,5% typical
Fill Fluid:	Silicone, Halocarbon®, Syltherm® others available on request
Approvals:	NACE for Oilfields and Refineries

WETTED COMPONENTS

Diaphragm and Flange:	Stainless steel 316L (1.4404) Duplex 2205 (1.4462) Hastelloy® C-276 (2.4819) Inconel 625 (2.4856) Monel 400 (2.4360) Tantalum diaphragm on Hastelloy® C-276 flange

NON-WETTED COMPONENTS

Bolts:	Stainless steel 316L (1.4404)
Instrument Connection:	Stainless steel 316L (1.4404) Monel 400 (2.4360)

KEY BENEFITS

- **Well suited to low pressure ranges**
- **No flange through bolts required for mounting**
- **Compact design**
- **Pressure rating up to PN100 or Class 600**

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All welded flanged diaphragm seal
Model 502/503

ORDERING CODE	EXAMPLE:	75	502	S	S	51T	150	RF	CK	XC3
Process Connection Size										
EN 1092-1										
DN15	Flange size DN15									
DN20	Flange size DN20									
DN25	Flange size DN25									
DN40	Flange size DN40									
ASME B16.5										
50	Flange size 1/2"									
75	Flange size 3/4"									
10	Flange size 1"									
15	Flange size 1-1/2"									
Model										
502	Flanged diaphragm seal, all welded		502							
503	Flanged diaphragm seal, all welded with flushing port									
Diaphragm Material										
H	Hastelloy® C-276 (2.4819)									
P	Monel 400 (2.4360)									
S	Stainless steel 316L (1.4404)			S						
U	Tantalum [Flange & diaphragm support in Hastelloy® C-276 (2.4819)]									
M	Inconel 625 (2.4856)									
Z	Duplex 2205 (1.4462)									
Flange Material										
H	Hastelloy® C-276 (2.4819)									
M	Monel 400 (2.4360)									
S	Stainless steel 316L (1.4404)				S					
W	Inconel 625 (2.4856)									
Z	Duplex 2205 (1.4462)									
Instrument Connection Size										
00T	Welding port for capilary line system (8 mm)									
02T	1/4 NPT Female									
04T	1/2 NPT Female									
26T	G 1/4 Female									
51T	G 1/2 Female					51T				
Flange Rating										
EN 1092-1							150			
PN6	Flange rating PN6									
PN10	Flange rating PN10									
PN16	Flange rating PN16									
PN25	Flange rating PN25									
PN40	Flange rating PN40									
PN63	Flange rating PN63									
PN100	Flange rating PN100									
ASME B16.5							150			
150	Flange rating 150 lbs									
300	Flange rating 300 lbs									
600	Flange rating 600 lbs									
Flange Style										
EN 1092-1										
B1	Raised face Form B1									
ASME B16.5										
RF	Raised face RF							RF		

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ORDERING CODE	EXAMPLE:	75	502	S	S	51T	150	RF	CK	XC3

System Filling

			Max. Allowable Process Temperature:		Application:	
CC	Syltherm® XLT		-100 to 260 °C	-150 to 500 °F	Low temperature	
CF	Halocarbon® 4.2		-57 to 200 °C	-70 to 300 °F	Inert/Oxygen	
CG	Glycerine	(1)	-18 to 204 °C	0 to 400 °F	Food	
CK	Silicone 50 cSt	(2)	-40 to 260 °C	-40 to 500 °F	General purpose	
DJ	Silicone 10 cSt		-40 to 260 °C	-40 to 500 °F	Fast response time	
FJ	Distilled water	(1)	4 to 85 °C	40 to 185 °F	Food & Beverage	CK
GQ	White oil silicone free		-12 to 204 °C	10 to 400 °F	Food, Painting	
HA	Syltherm® 800		-40 to 400 °C	-40 to 750 °F	High temperature	
HO	Halocarbon® 6.3S		-57 to 200 °C	-70 to 300 °F	Inert/Oxygen	
KG	Silicone 704		0 to 300 °C	32 to 572 °F	High temperature & vacuum	
KJ	Silicone 705		20 to 215 °C	68 to 420 °F	High vacuum	
NM	Neobee® M-20		-15 to 204 °C	5 to 400 °F	Food & Pharma	

(1) Not available for compound or vacuum pressure applications
(2) Only suitable for capillary systems ≤ 3 m (10 ft)

Options (If choosing an option(s) must include a "X") X__

Flushing Port

DK	Dual flushing port 1/4 NPT Female	
PU	Plugs for flushing port	

Cleaning

6W	Cleaned for oxidizing processes other than oxygen	
6B	Cleaned for oxygen service	
YF	Cleaned silicone free (not available for silicone filling)	

Tagging

NH	Stainless steel tag, wired	

Testing/Certificates

CD2	Material test report according to EN 10204 / 2.2	C3
C3	Material report according to EN 10204 /3.1	
CD5	Certificate according to NACE for Oilfields MR0175 / ISO 15156 and Refineries MR0103 / ISO 17945	
MQ	Positive Material Identification (PMI)	

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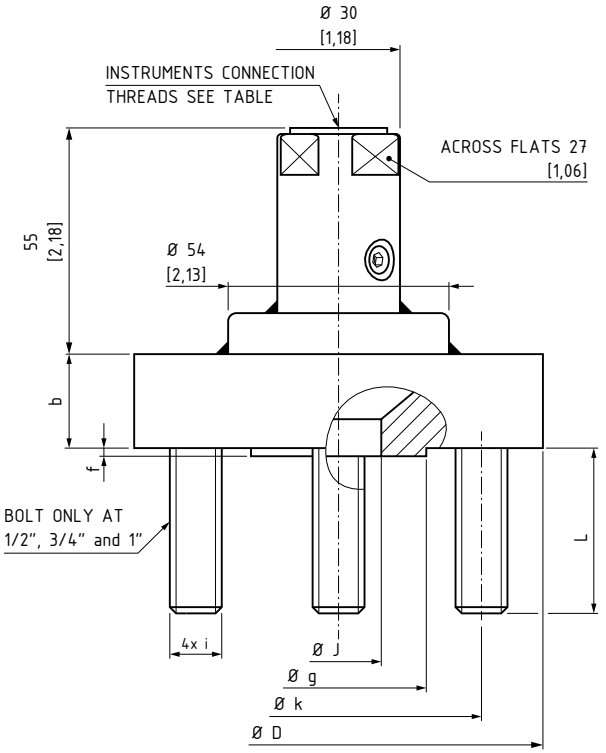
Model Model 502/503 ASME
according to ASME B16.5

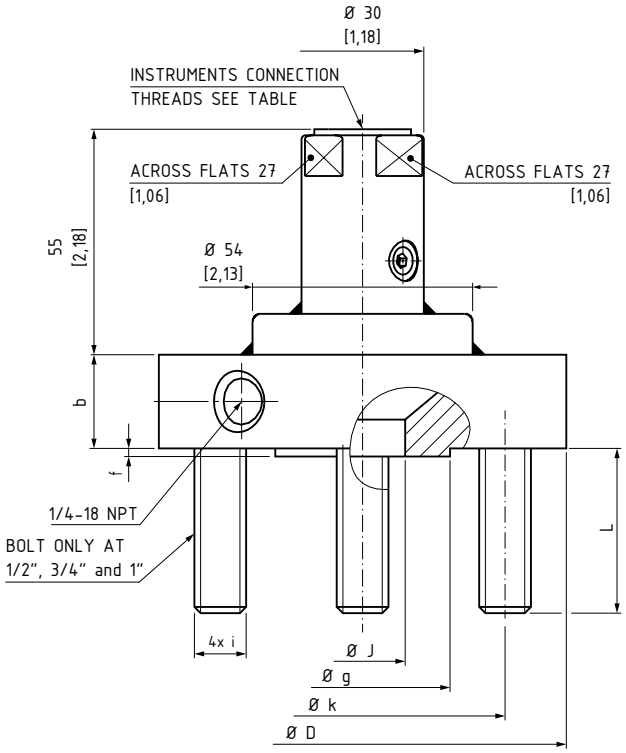
DIMENSIONS IN MM [INCH]

For reference only, consult Ashcroft for specific dimensional drawings

DIAPHRAGM SEAL 502



DIAPHRAGM SEAL 503 WITH FLUSHING PORT



SIZE DN	PRESSURE CLASSES	Ø D	b	Ø g	Ø J	Ø k	i	L	L
1/2"	150	90 [3,54]	26 [1,02]	34,9 [1,37]	15,8 [0,62]	2 [0,08]	60,3 [2,37]	1/2-13 UNC-2B	~40 [1,57]
	300	95 [3,74]					66,7 [2,63]		
	400/600					7 [0,28]			
3/4"	150	100 [3,94]	23 [0,91]	42,9 [1,69]	20,9 [0,82]	2 [0,08]	69,9 [2,75]	1/2-13 UNC-2B	~40 [1,57]
	300	115 [4,53]	26 [1,02]				82,6 [3,25]	5/8-11 UNC-2B	~57 [2,24]
	400/600					7 [0,28]			
1"	150	110 [4,33]	23 [0,91]	50,8 [2]	26,6 [1,05]	2 [0,08]	79,4 [3,13]	1/2-13 UNC-2B	~40 [1,57]
	300	125 [4,92]	26 [1,02]				88,9 [3,5]	5/8-11 UNC-2B	~57 [2,24]
	400/600					7 [0,28]			
1 1/2"	150	125 [4,92]	20 [0,79]	73 [2,87]	40,9 [1,61]	2 [0,08]	98,4 [3,87]	15,9 [0,63]	THROUGH BORE
	300	155 [6,1]					114,3 [4,5]	22,2 [0,87]	
	400/600		22,3 [0,88]			7 [0,28]			

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Model 502 / 503 EN
according to EN 1092-1

DIMENSIONS IN MM [INCH]

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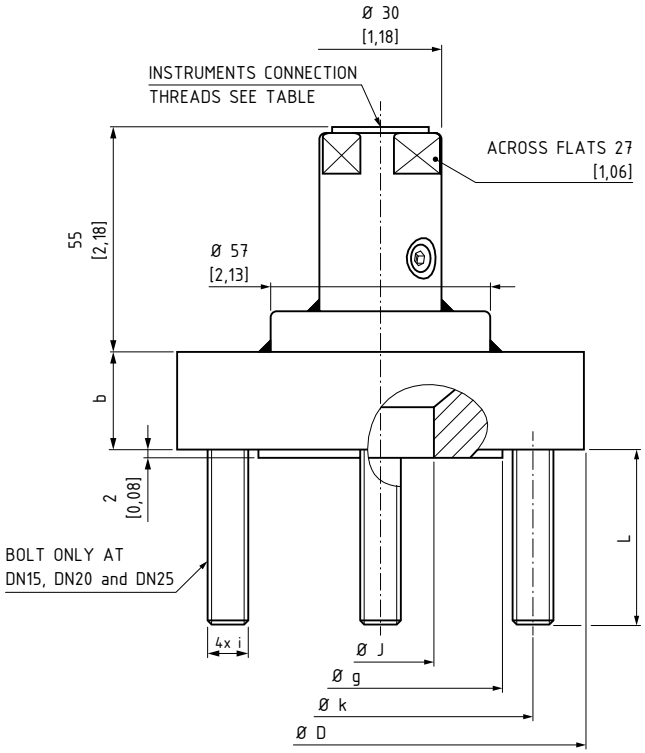
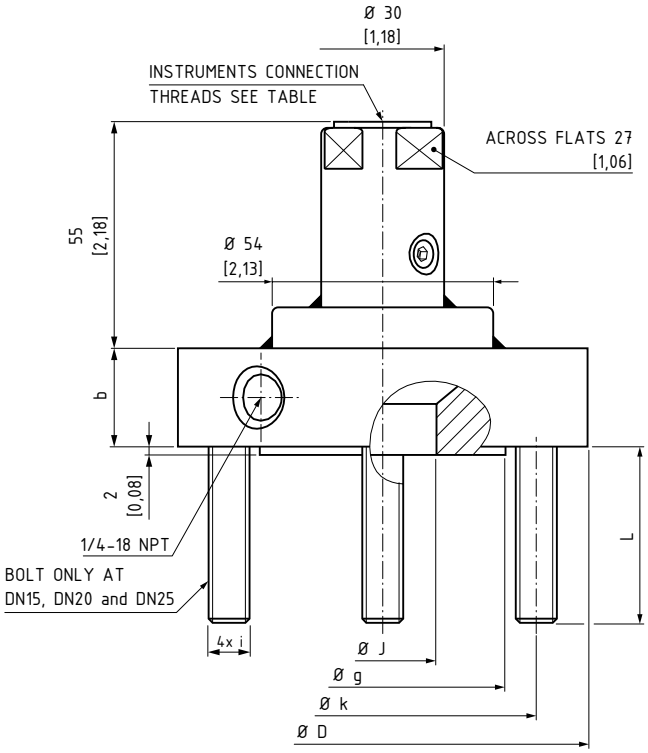
DIAPHRAGM SEAL 502



DIAPHRAGM SEAL 503 WITH FLUSHING PORT



SIZE DN	PRESSURE CLASSES	Ø D	b	Ø g	Ø J	Ø k	i	L
DN15	PN6	80 [3,15]	12 [0,47]	40 [1,57]	15,8 [0,62]	55 [2,17]	M10	~43 [1,69]
	PN10 up to PN40	95 [3,74]	16 [0,63]	45 [1,77]		65 [2,56]	M12	~45,5 [1,79]
	PN63 up to PN100	105 [4,13]	20 [0,79]			75 [2,95]		
DN20	PN6	90 [3,54]	14 [0,55]	50 [1,97]	20,9 [0,82]	65 [2,56]	M10	~43 [1,69]
	PN10 up to PN40	105 [4,13]	18 [0,71]	58 [2,28]		75 [2,95]	M12	~45,5 [1,79]
	PN63 up to PN100	130 [5,12]	22 [0,87]			90 [3,54]	M16	~55,5 [2,19]
DN25	PN6	100 [3,94]	14 [0,55]	60 [2,36]	26,6 [1,05]	75 [2,95]	M10	~43 [1,69]
	PN10 up to PN40	115 [4,53]	18 [0,71]	68 [2,68]		85 [3,35]	M12	~45,5 [1,79]
	PN63 up to PN100	140 [5,51]	24 [0,94]			100 [3,94]	M16	~55,5 [2,19]
DN40	PN6	130 [5,12]	14 [0,55]	80 [3,15]	40,9 [1,61]	100 [3,94]	14 [0,55]	THROUGH BORE
	PN10 up to PN40	150 [5,91]	18 [0,71]	88 [3,46]		110 [4,33]	18 [0,71]	
	PN63 up to PN100	170 [6,7]	26 [1,02]			125 [4,92]	22 [0,87]	

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