

510/511 All Welded Diaphragm Seal

FEATURES

- Compact design allows seals to fit in confined areas
- Sufficient displacement to drive a wide variety of instrumentation
- Minimal fill volume
- All stainless steel construction; other materials available
- Light weight design

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

Connection Style:	510: Threaded 511: Threaded with Flushed Connection
Process Connection:	¼ NPT or ½ NPT male/female (ASME B1.20.1) G ¼ B or G ½ B male/female (EN 837) others available on request
Instrument Connection:	¼ NPT, ½ NPT, G ¼ or G ½ female
Pressure Rating (MAWP):	Standard: 160 bar/2320 psi at 40 °C (100 °F) High pressure option: 689 bar/10000 psi at 40 °C (100 °F)
Accuracy effect:	+ 0,5% typical
Fill Fluid:	Silicone, Halocarbon®, Syltherm® others available on request
Approvals:	ATEX II 2 GD c II Tx for use in potentially explosive atmospheres (File No. 35101282 at notified body 0044, TÜV NORD CERT) CRN NACE for Oilfields and Refineries

WETTED COMPONENTS

Diaphragm and bottom housing, top housing with (HP) option

Stainless steel 316L (1.4404)
Hastelloy® C-276 (2.4819)
Inconel® 625 (2.4856)
Monel® 400 (2.4360)
Duplex 2205 (1.4462)

NON-WETTED COMPONENTS

Top housing (for standard configuration MAWP 160 bar)

Stainless steel 316L (1.4404)
Monel® 400 (2.4360)



510/511
Threaded Seals



KEY BENEFITS

- Continuous duty design
- All-welded construction prevents inadvertent disassembly
- Ensures process compatibility
- Male connections eliminate adapters/fittings

BOTTOM HOUSING

	St.st. 316L (1.4404) S	Monel® 400 P	Hastelloy® C-276 H	Inconel® 625 W	Duplex 2205 Z
St.st. 316L (1.4404) S	✓				
Monel® 400 P		✓			
Hastelloy® C-276 H	✓		✓		✓
Inconel® 625 M	✓			✓	✓
Duplex 2205 Z	✓				✓

DIAPHRAGM

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ORDERING CODE		EXAMPLE:	04	510	S	S	04T	XCK
Process Connection								
02	¼ NPT male							
04	½ NPT male							
06	¾ NPT male							
08	1 NPT male							
67	1-½ NPT male							
25	¼ NPT female							
50	½ NPT female							
75	¾ NPT female							
10	1 NPT female							
13	G ¼ B male							
18	G ½ B male							
23	G ¾ B male							
16	M20x1,5 male							
Model Code								
510	All-welded threaded compact seal							
511	All-welded threaded compact seal, with flushing port							
Diaphragm Material								
S	Stainless steel 316L (1.4404)							
H	Hastelloy® C-276 (2.4819)							
M	Inconel® 625 (2.4856)							
P	Monel® 400 (2.4360)							
Z	Duplex 2205 (1.4462)							
Bottom Housing Material								
S	Stainless steel 316L (1.4404)							
H	Hastelloy® C-276 (2.4819)							
W	Inconel® 625 (2.4856)							
P	Monel® 400 (2.4360)							
Z	Duplex 2205 (1.4462)							
Instrument Connection								
00T	Welding port Ø 8 mm							
02T	¼ NPT female							
04T	½ NPT female							
13T	G ¼ female							
16T	M20x1,5 female							
51T	G ½ female							
Options (If choosing an option(s) must include a "X")								
Fill Fluid								
CC	Syltherm® XLT							
CF	Halocarbon® 4.2							
CG	Glycerine							
CK	Silicone 50 cSt (for capillary ≤ 3 m (10'))							
DJ	Silicone 10 cSt							
FJ	Distilled water							
GQ	White oil silicone free (for capillary ≤ 3 m (10'))							
HA	Syltherm® 800							
NM	Neobee® M-20							
Plugs								
PU	Pipe plug for flushing connection, same material as wetted parts (¼ NPT male and for high pressure design ½ NPT male)							
Rating								
HP	High pressure design (689 bar / 10000 psi) at 40 °C (100 °F)							
Approval								
ATEX	ATEX II 2 GD c II Tx for use in potentially explosive atmospheres							

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

Marking/Tagging

NH Stainless steel tag, wired

Cleaning

6B Cleaned for oxygen service

6W Cleaned for oxidizing processes

YF Silicone free product

Testing/Certificates

CD2 Material test report according to EN 10204 / 2.2

C3 Material report according to EN 10204 / 3.1

CD5 Certificate according to NACE
for Oilfields MR0175 / ISO 15156 and Refineries MR0103 / ISO17945

MQ Positive Material Identification (PMI)

ML Mass spectrometer leak test

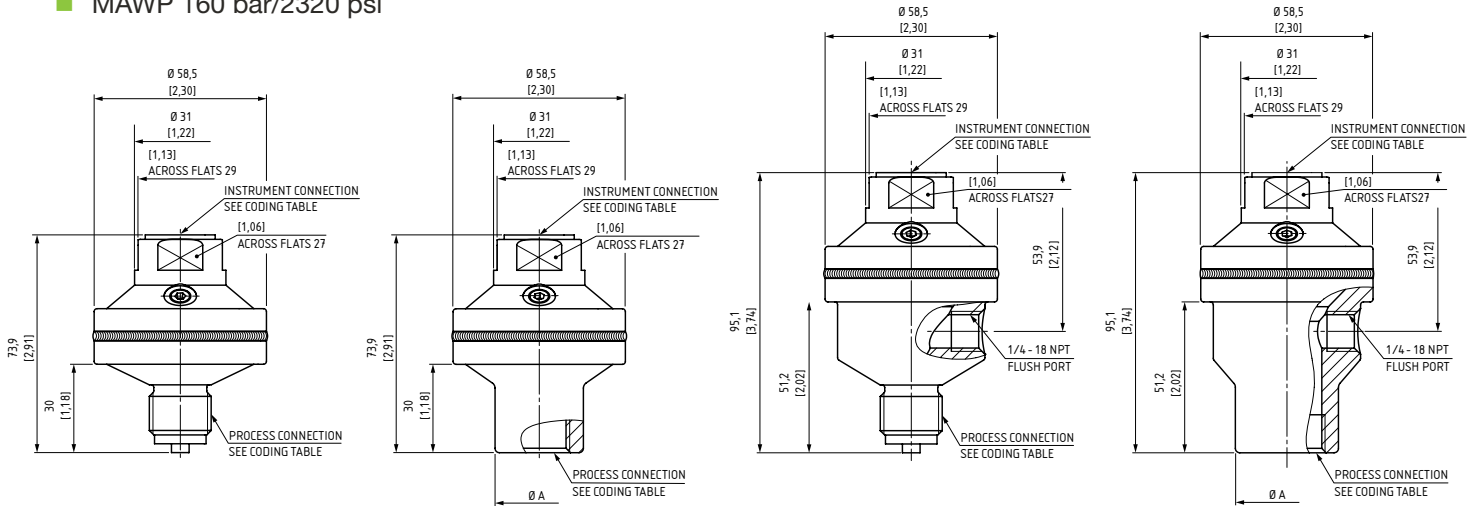


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DIMENSIONS IN MM [INCH]

For reference only, consult Ashcroft for specific dimensional drawings

■ MAWP 160 bar/2320 psi



PROCESS CONNECTION	CODE	Ø A
1/4 - 18 NPT Female	25	25 [0,98]
G 1/4 Female; EN 837	26	25 [0,98]
1/2 - 14 NPT Female	50	30 [1,18]
G1/2 Female; EN 837	51	30 [1,18]
3/4 - 14 NPT Female	75	35 [1,38]
9/16 - 18 UNF for 3/8 OD tubing	RF	25 [0,98]

■ MAWP 689 bar/10000 psi

