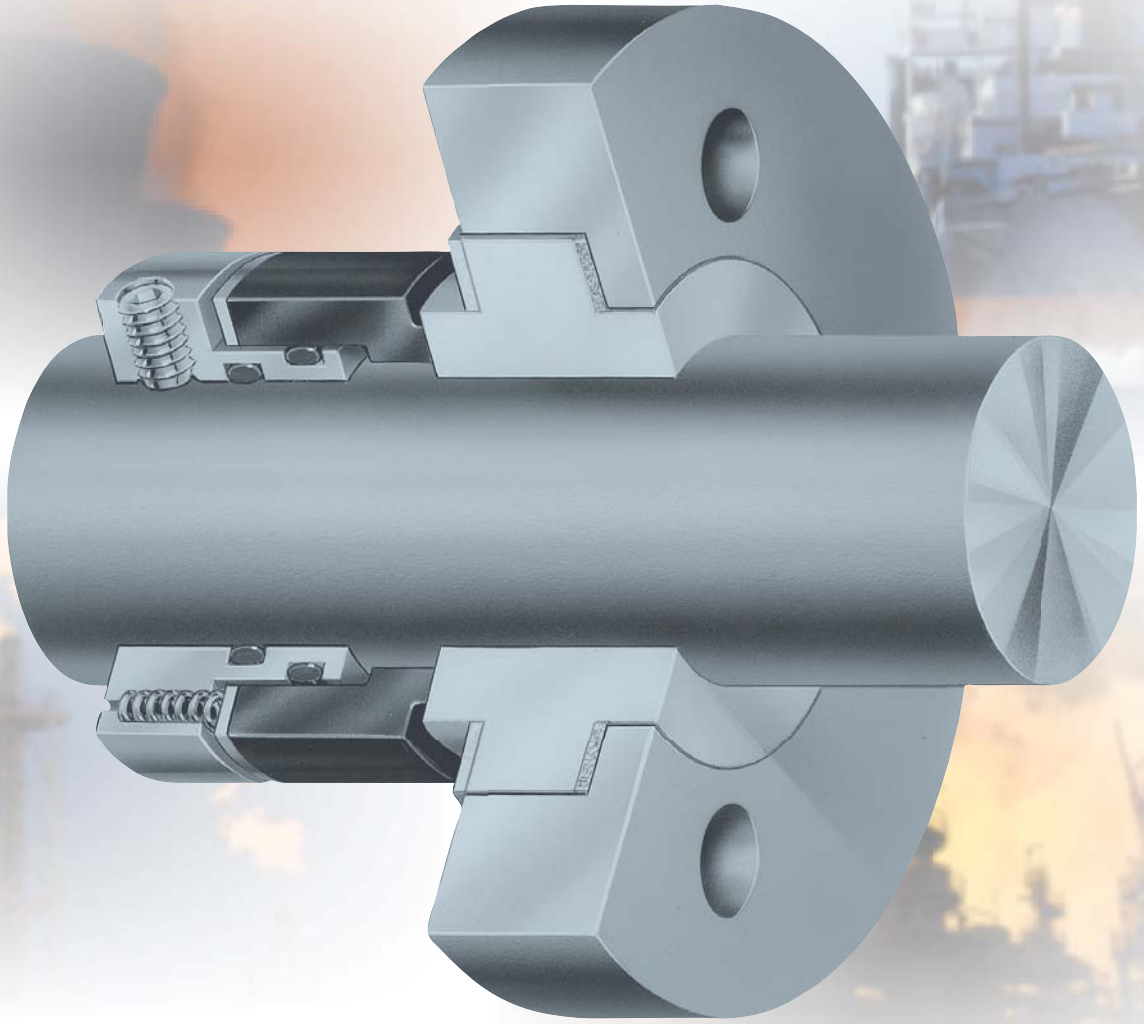
Model 500

Single Inside Mechanical Seal

Quality, Versatility and Economy



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ASI Model 500

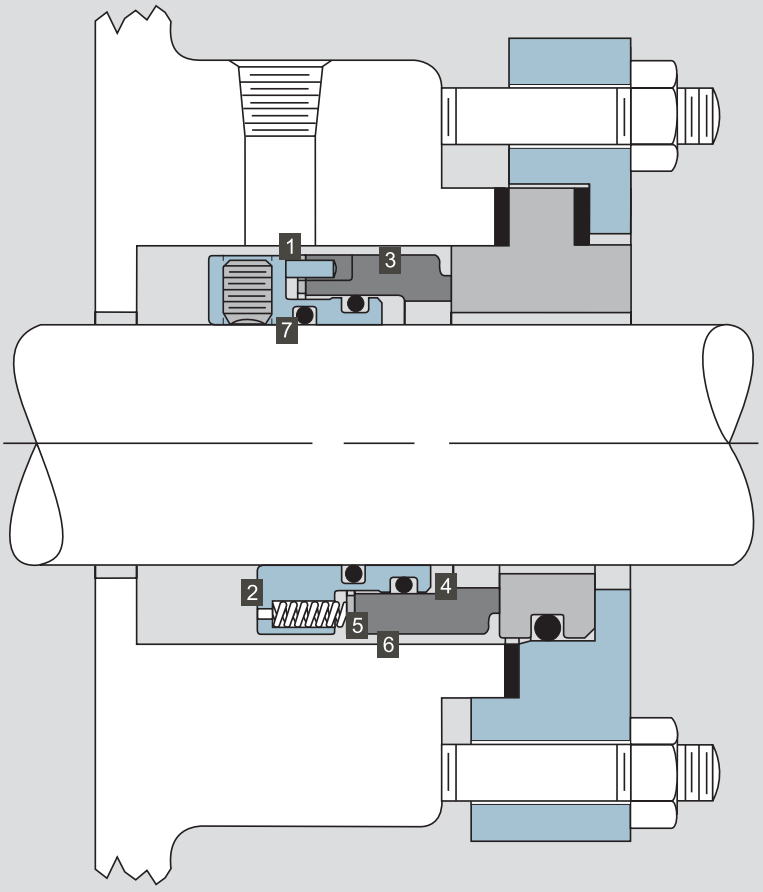
The **ASI Model 500** seal is a universal design specifically engineered to eliminate the most common causes of mechanical seal failures: shaft or sleeve fretting corrosion, spring or bellows clogging (due to vapor leakage), seal face distortion caused by thermal cycling and overheating of sealing faces.

[1]
Unitized Rotary
No loose parts to fall off or jam during seal installation.

[2]
Self-Cleaning Springs
Specially designed spring holes allow pumping action to clean springs as seal rotates.

[3]
Corrosion Resistant
Through elimination of unrequired metal parts, superior corrosion resistance is achieved without upgrading the metallurgy.

Repairability
Repair kits available. Seal is restored to new condition. All worn surfaces are replaced with factory-fresh, not salvaged, repaired or exchanged parts.



[4]
Hydraulic Balance
Balanced without the use of stepped shaft or sleeve. Makes packing conversions or seal upgrades a snap.

[5]
Multiple Springs
Multiple springs prevent uneven face wear. Heavy gauge Hastelloy® springs deliver uniform mechanical face load.

[6]
Simplicity of Design
Seal can be assembled, repaired or dismantled without special equipment or tools.

[7]
Non-Fretting
Shaft o-ring is static and cannot damage equipment.

MATERIALS OF CONSTRUCTION

METAL PARTS
Standard Metal Parts- 316ss
Standard Springs- Hastelloy® C
Standard Set Screws- 316ss
(Other Materials May Be Specified)

FACE MATERIALS
Rotary Face- High Quality Carbon Graphite
(Other Materials May Be Specified)

SECONDARY SEALS
Standard O-ring Materials- Fluorocarbon, EPDM or Aflas®
(Other Materials May Be Specified)

ADDITIONAL FEATURES:

DOUBLE SEAL INSTALLATION-
Provides lost cost, hydraulically balanced double seal configuration with a non-clogging inboard rotary unit.

COMPACT DESIGN-
Permits use in smaller ANSI pumps without equipment modification, including those with 5/16” cross section stuffing boxes.

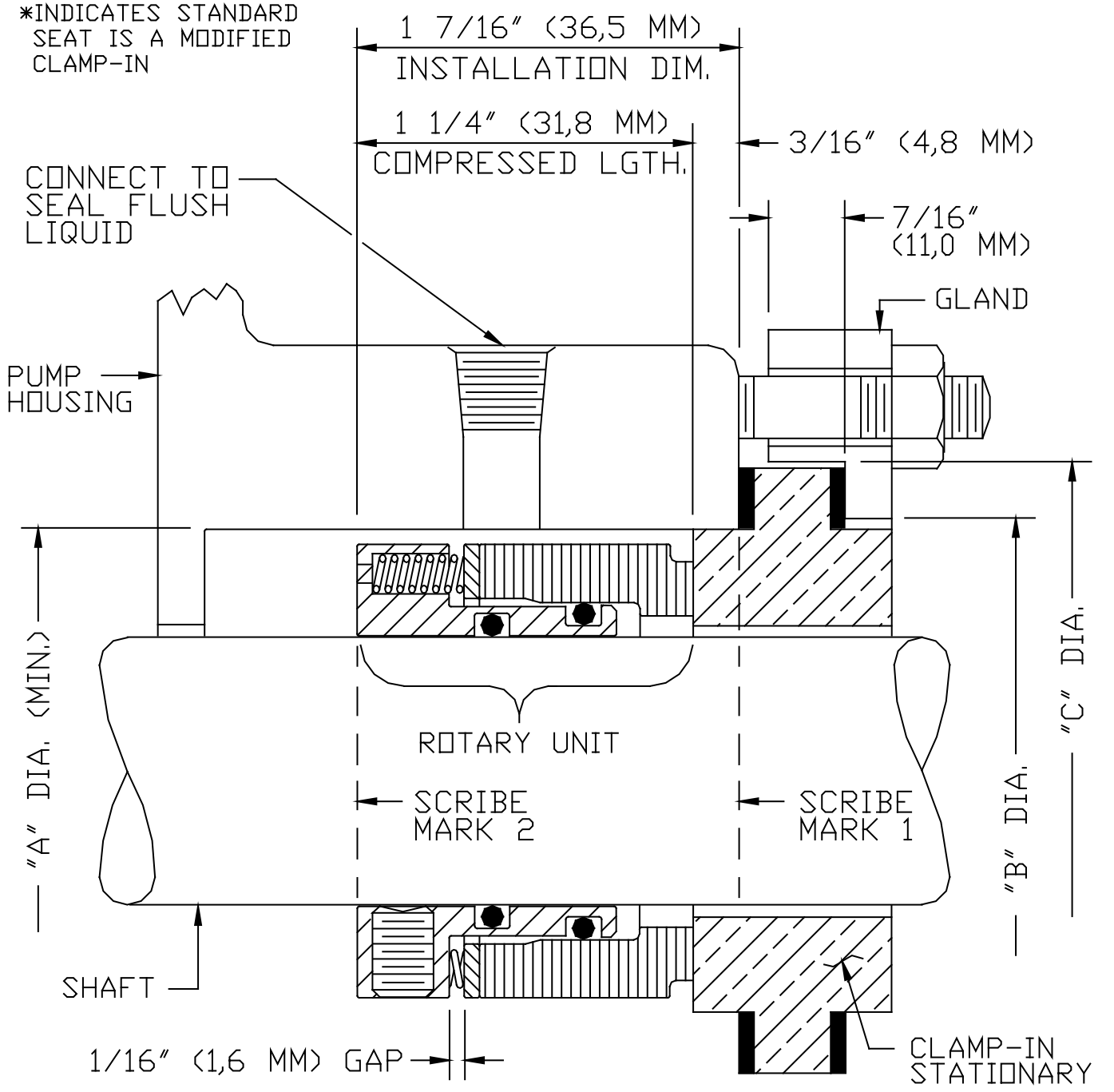
INTERCHANGEABLE-
Seal will interchange with many other designs and can, in most instances, be used with existing stationaries and gland follower flanges.

ADVANCED SEALING INTERNATIONAL • BATON ROUGE, LA • 225-272-2155 • FAX: 225-272-2163

SIZE	"A"	"B"	"C"
15/16" 24 MM	1.562 39,7	1.59 40,4	1.99 50,5
1" 25 MM	1.625 41,3	1.66 42,2	2.15 54,6
1 1/8" 28 MM	1.750 44,5	1.78 45,2	2.28 57,9
1 1/4" 32 MM	1.875 47,6	1.91 48,5	2.40 61,0
1 3/8" 35 MM	2.000 50,8	2.03 51,6	2.41 61,2
1 1/2" 38 MM	2.250 57,2	2.28 57,9	2.78 70,6
1 5/8" 40 MM	2.375 60,3	2.41 61,2	2.90 73,7
1 3/4" 45 MM	2.498 63,4	2.53 64,3	3.15 80,0
1 7/8" 48 MM	2.623 66,6	2.65 67,3	3.28 83,3
2" 50 MM	2.748 69,8	2.78 70,6	3.47 88,1
2 1/8"	2.873 73,0	2.90 73,7	3.78 96,0
2 1/4" 55 MM	2.998 76,1	3.03 77,0	3.90 99,1
2 3/8" 60 MM	3.125 79,4	3.09 78,5	3.94 100,1
2 1/2"	3.375 85,7	3.28 83,3	4.15 105,4
2 5/8" 65 MM	3.500 88,9	3.40 86,4	4.28 108,7

*INDICATES STANDARD SEAT IS A MODIFIED CLAMP-IN

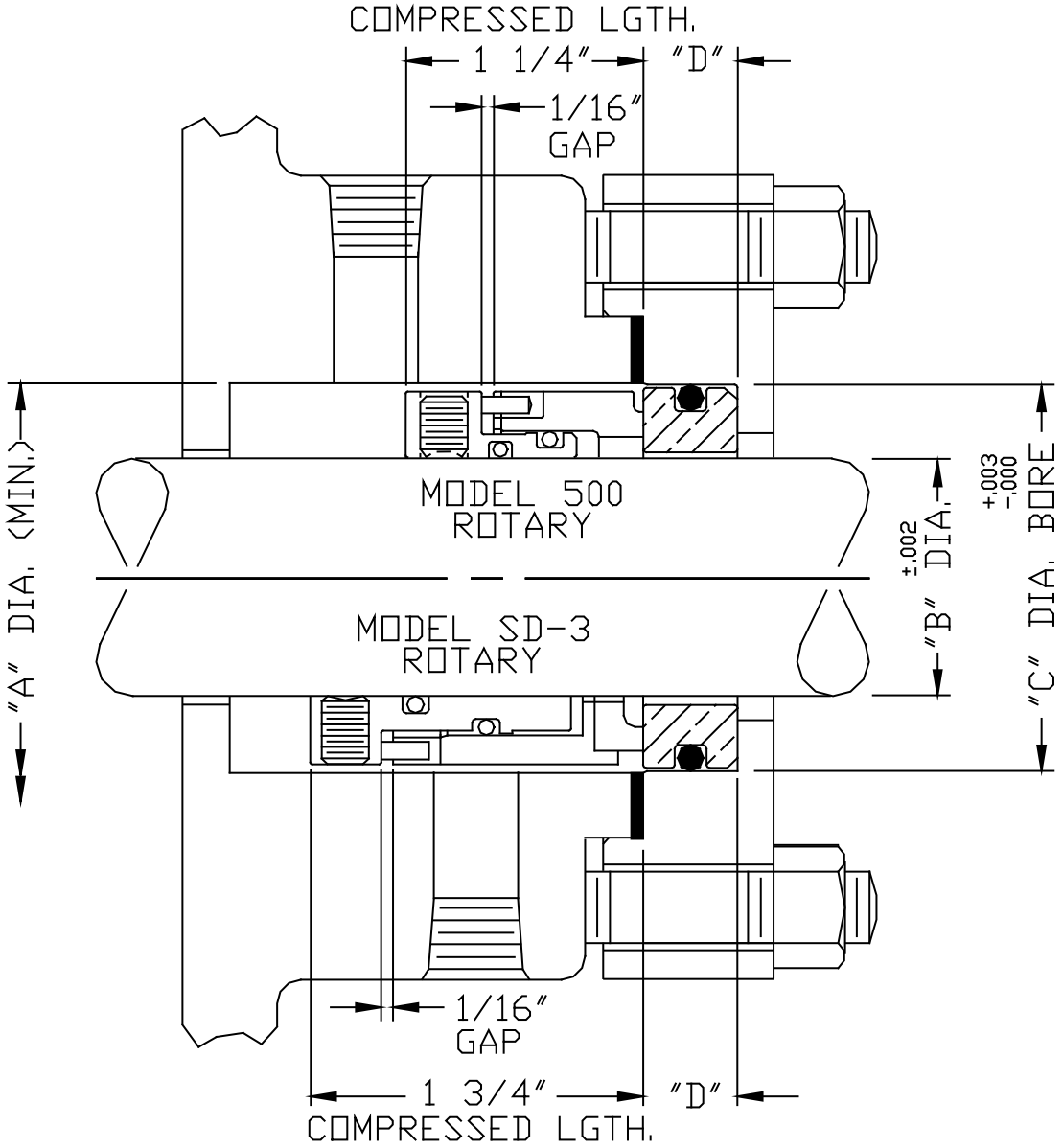
*



ADVANCED SEALING

INSTALLATION, MODEL 500 WITH CLAMP-IN STATIONARY

SIZE	"A"	"B"	"C"	"D"
15/16	1.562	.937	1.562	.375
1	1.625	1.000	1.625	.437
1 1/16	1.750	1.063	1.750	.437
1 1/8	1.750	1.125	1.750	.437
1 1/4	1.875	1.250	1.875	.437
1 3/8	2.000	1.375	2.000	.437
1 1/2	2.250	1.500	2.125	.437
1 5/8	2.375	1.625	2.375	.500
1 3/4	2.500	1.750	2.500	.500
1 7/8	2.625	1.875	2.625	.500
2	2.750	2.000	2.750	.500
2 1/8	2.875	2.125	2.875	.562
2 1/4	3.000	2.250	3.125	.562
2 3/8	3.125	2.375	3.250	.562
2 1/2	3.375	2.500	3.375	.562
2 5/8	3.500	2.625	3.500	.625



REV.	DESCRIPTION	DATE

UNLESS OTHERWISE SPECIFIED

REMOVE ALL BURRS, .01/.02 BREAK ALL EDGES
TOLERANCES : FRACT. ± .020, .XX DEC. ± .010
.XXX DEC. ± .005, ANGLES ± 1/2°
SURFACE FINISH (RMS), 63√ ALL OVER

TITLE

INSTALLATION,
MODEL 500/SD-3,
.937" - 2.625" DIA.

DATE	8-11-86	SCALE	NONE
DR BY	T.G.	APPR	D.L.H.
SHEET	1	TOTAL	1

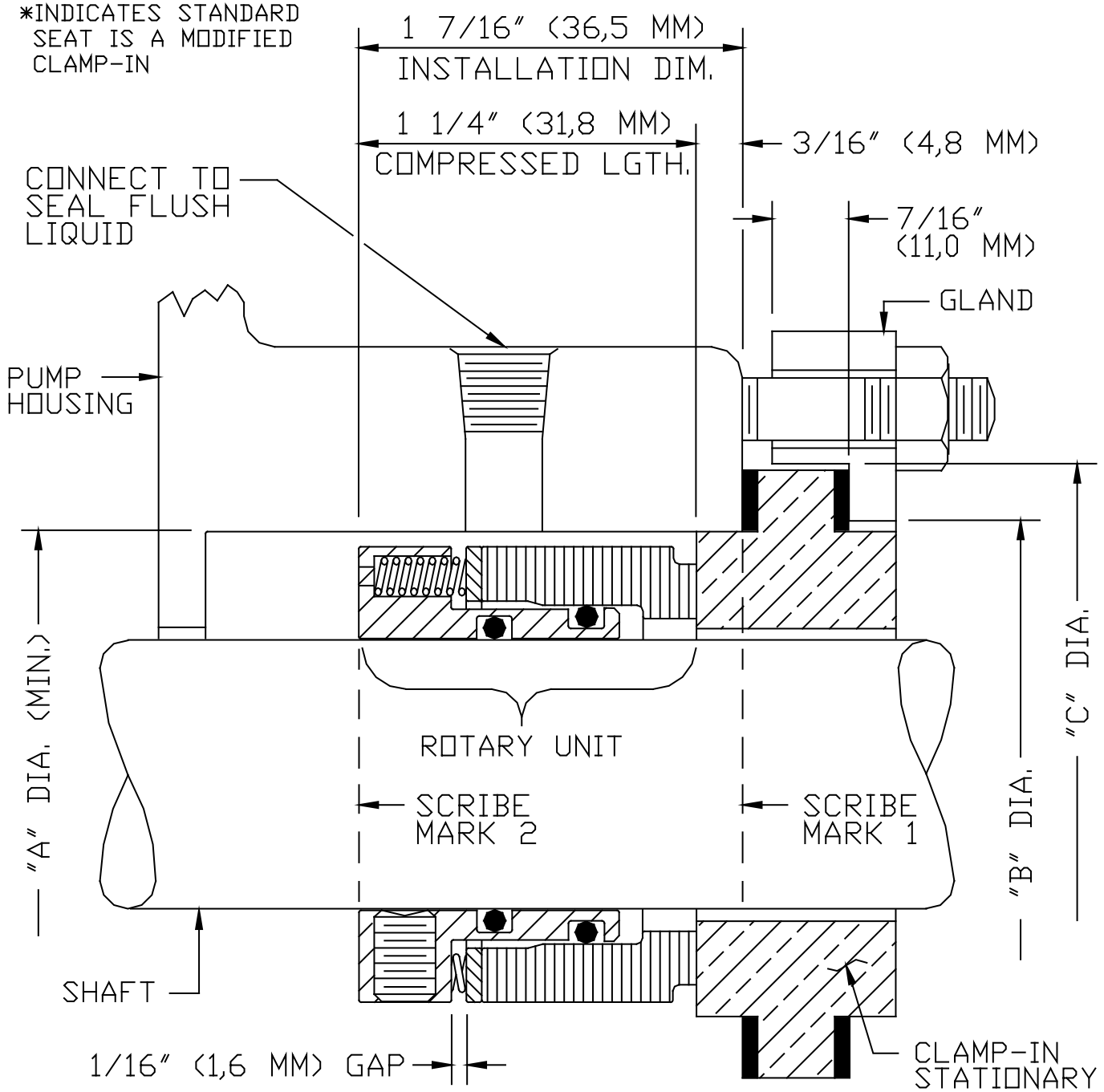
ADVANCED SEALING INTERNATIONAL

SD3500

SIZE	"A"	"B"	"C"
24 MM .945"	39,7 1.562	40,4 1.59	50,5 1.99
25 MM .984"	41,3 1.625	42,2 1.66	54,6 2.15
28 MM 1.102"	44,5 1.750	45,2 1.78	57,9 2.28
30 MM 1.181"	46,0 1.812	46,7 1.84	63,5 2.50
32 MM 1.260"	47,6 1.875	48,5 1.91	61,0 2.40
35 MM 1.378"	50,8 2.000	51,6 2.03	61,2 2.41
38 MM 1.496"	57,2 2.250	57,9 2.28	70,6 2.78
40 MM 1.575"	60,3 2.375	61,2 2.41	73,7 2.90
42 MM 1.654"	62,6 2.466	63,5 2.50	78,5 3.09
43 MM 1.693"	62,6 2.466	63,5 2.50	78,5 3.09
45 MM 1.771"	63,4 2.498	64,3 2.53	80,0 3.15
48 MM 1.890"	66,6 2.623	67,3 2.65	83,3 3.28
50 MM 1.969"	69,8 2.748	70,6 2.78	88,1 3.47
55 MM 2.165"	76,1 2.998	77,0 3.03	99,1 3.90
58 MM 2.283"	79,4 3.125	78,5 3.09	100,1 3.94
60 MM 2.362"	79,4 3.125	78,5 3.09	100,1 3.94
65 MM 2.559	88,9 3.500	86,4 3.40	108,7 4.28

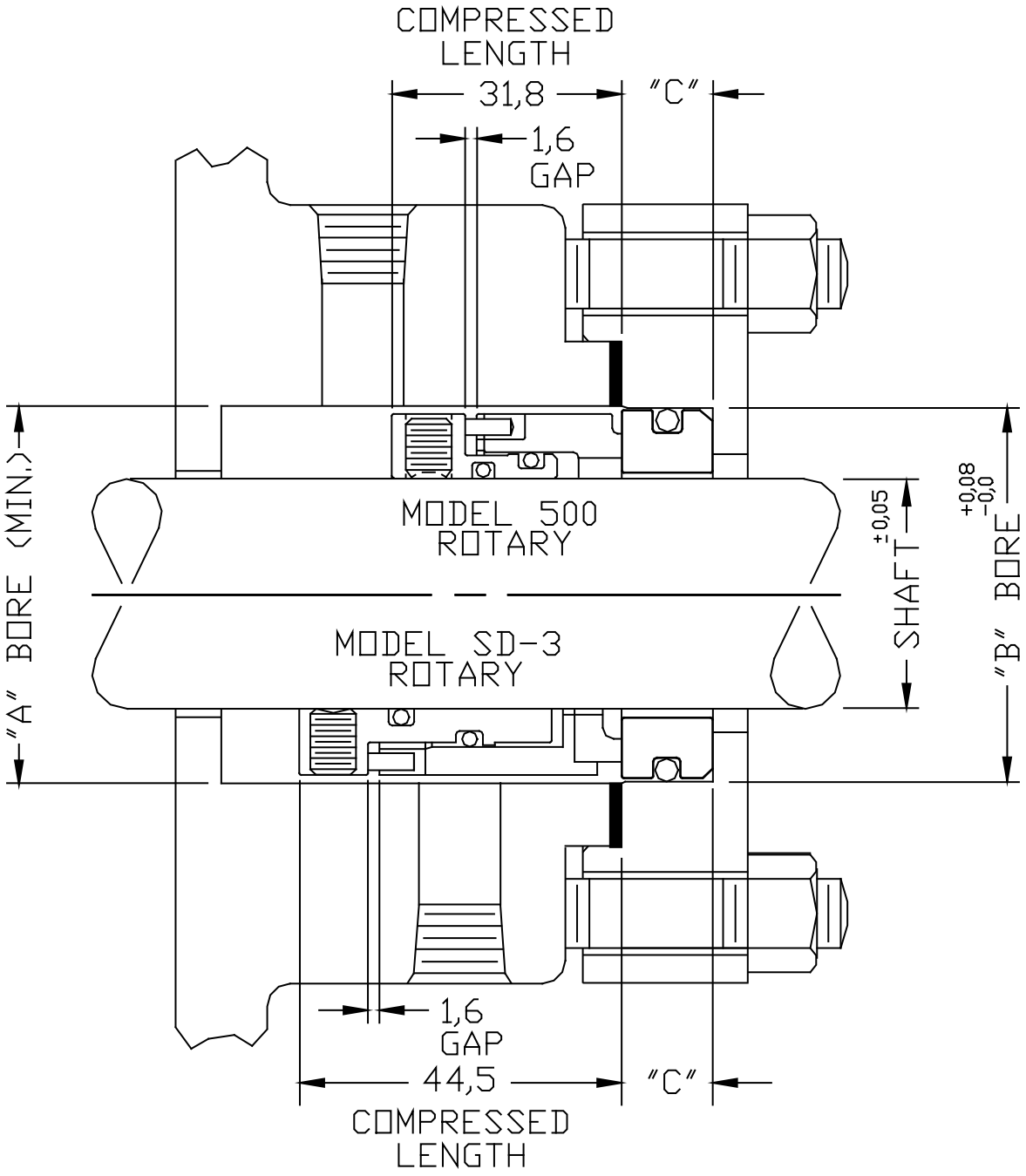
*INDICATES STANDARD SEAT IS A MODIFIED CLAMP-IN

*



ADVANCED SEALING, INC.

INSTALLATION, MODEL 500 WITH CLAMP-IN STATIONARY



SHAFT SIZE	"A" DIA.	"B" DIA.	"C" DIM.
24mm	39,67	39,67	9,53
25mm	41,28	41,28	11,10
28mm	44,45	44,45	11,10
30mm	47,63	47,63	11,10
32mm	47,63	47,63	11,10
35mm	50,80	50,80	11,10
38mm	57,20	53,97	11,10
40mm	60,33	60,33	12,70
42mm	63,50	63,50	12,70
43mm	63,50	63,50	12,70
45mm	63,50	63,50	12,70
48mm	66,68	66,68	12,70
50mm	69,85	69,85	12,70
55mm	76,20	79,38	14,27
60mm	79,38	82,55	14,27
65mm	88,90	88,90	15,88

REV.	DESCRIPTION	DATE
1	OLD DWG #AY1996A/A1996R1	3-00

UNLESS OTHERWISE SPECIFIED
REMOVE ALL BURRS, .01/.02 BREAK ALL EDGES
TOLERANCES : FRACT. ± .020, .XX DEC. ± .010
.XXX DEC. ± .005, ANGLES ± 1/2°
SURFACE FINISH (RMS), 63√ ALL OVER

TITLE
INSTALLATION,
MODEL SD-3/500,
MM SIZES, W/O-RING MT

DATE	6-26-90	SCALE	NONE
DR BY	J.H.	APPR	D.L.H.
SHEET	1	TOTAL	1

ADVANCED SEALING INTERNATIONAL

SD3500M

INSTALLATION INSTRUCTIONS FOR MODEL 500

EQUIPMENT PREPARATION:

A. Do not remove seal parts from protective packaging until equipment has been inspected and repaired.

B. Disassemble and clean equipment. Radius end of shaft or sleeve to help start seal shaft o-ring. Remove any burrs or marks which may cut o-rings. If sleeve shows signs of wear, check to determine if points of wear are located in an area where either the shaft o-ring or the set screws are mounted on the sleeve. If these two areas are free from wear, the old sleeve may be used.

C. If the impeller is adjustable, check and set before installation of seal.

D. Dial indicate shaft or sleeve. Maximum allowable runout is .003" (0,08 mm) T.I.R. Allowable end play is .010" (0,25 mm). If excessive movement is observed, check for bent shaft or bad bearings and correct.

E. Chemical compatibility between the materials of construction of the mechanical seal and the product must be established. If materials of construction are not compatible, do not attempt to install seal. If compatibility cannot be established, consult factory for assistance.

INSTALLATION FOR SINGLE-ENDED PUMPS: (USING CLAMP-IN SEAT)

1. Reinstall pump stuffing box.
2. Apply bluing to shaft or sleeve at a point directly under the stuffing box.
3. Scribe sleeve or shaft to show location of stuffing box.
4. Remove stuffing box.
5. Scribe a second mark 1 7/16" (36,5 mm) back from first scribe mark.
6. Carefully remove seal from package
7. Insert stationary clamp-in seat into seal gland and slide gland, seat and gaskets onto shaft toward bearing housing.
8. Lubricate seal shaft o-ring with silicone grease provided. DO NOT USE PETROLEUM BASED LUBRICANTS.
9. Install seal rotary unit onto shaft. A slight twisting action will help compress the o-ring over the end of the shaft.
10. Slide seal rotary unit over the shaft, locating the rear of the seal over the scribe mark (see note #5) which should be located 1 7/16" (36,5 mm) back from stuffing box face.
11. Tighten set screws. Screws should be set evenly and not overtightened.
12. Reinstall stuffing box and impeller.
13. Place gland and stationary seat assembly over gland studs. Slide stationary seat up to a point where it is in contact with the rotary seal face. At this point, when seal faces are just touching, there should be 1/8" (3,2 mm) between the face of the stuffing box and the gasket on the gland.
14. Finger tighten gland nuts evenly. Then, in an opposing sequence, tighten gland nuts two to three flats (just enough to compress gasket).
15. Reinstall and open flush connections.

INSTALLATION FOR DOUBLE-ENDED PUMPS: (USING CLAMP-IN SEAT)

1. Carefully remove seal from package.
2. Lubricate seal shaft o-ring with silicone grease provided. DO NOT USE PETROLEUM BASED PRODUCTS.
3. Install seal rotary unit onto shaft. A slight twisting motion will help compress the o-ring over the end of the shaft.
4. Insert stationary clamp-in seat into seal gland and slide gland, seat and gaskets onto shaft towards stuffing box.
5. After all seal parts have been assembled loosely on rotary element, install pump bearings making any final impeller and/or bearing adjustments.
6. Set rear of rotary unit at the installation mark, 1 7/16" (36,5 mm) from the stuffing box face. Tighten set screws. At this point, when seal faces are just touching, there should be 1/8" (3,2 mm) between the face of the stuffing box and the gasket on the gland.
7. Care should be taken to make a new head gasket for the pump. The gasket should protrude over the edge of the stuffing box face by a minimum of 1/16" (1,6 mm) and should not touch rotary element.
8. Carefully reassemble pump casing, taking care not to hit the seal.
9. Cut gasket protrusions flush with stuffing box with a razor or sharp knife.
10. Pull up seal gland on studs. Finger tighten gland nuts evenly. Then, in an opposing sequence, tighten gland nuts two to three flats (just enough to compress gasket).
11. Reinstall and open all flush connections.