

ULTRASEAL 780

HIGH TEMPERATURE METAL BELLOWS SEAL

INSTALLATION INSTRUCTIONS

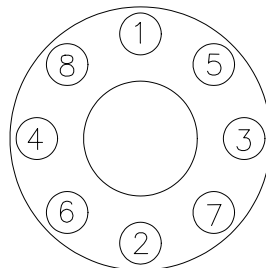
CAUTION: Never put hands on lapped seal faces or put lapped seal parts face down on the workbench. Keep the mechanical seal in its original container until ready for installation.

PREPARE PUMP

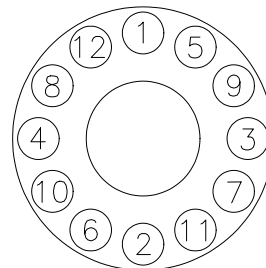
1. Clean and inspect pump parts.
2. Replace shaft or shaft sleeve and gland if worn in secondary sealing areas.
3. Check for good starting bevel and remove all burrs that would cut secondary seals or cause misalignment.
4. Check shaft run out (to be within .001" TIR per inch of shaft dia.), shaft end play (not to exceed .005"), stuffing box face alignment (must be square to shaft within .003" TIR and have good sealing surface, 125 RMS min.), and condition of bearings. Replace if necessary.

INSTALLING SEAL

1. Bolt stuffing box back plate to the pump frame and install shaft sleeve and impeller.
2. Scribe a line on the shaft sleeve at the face of the stuffing box. Disassemble the pump.
3. Install stationary face in gland with lapped face up. Next install gasket on gland or stationary face as required.
4. Place rotary unit lapped face down on the lapped stationary seal face.
5. With the rotary unit at free height measure the distance from the gasket to the top (backend) of the seal (FIG. #1, Dimension X).
6. Subtract 5/32" from the amount measured in Step 5. This will be the seal setting.
7. On impeller end of shaft sleeve, scribe a second line the exact distance from the first line as determined in Step 6.
8. Slide rotary on shaft and set the back of the rotary unit on the second scribe line, set screw rotary to shaft to 52 (70 MAX) in.-lbs. of torque.
9. Tighten the cap head screws to 5 (7 MAX) in.-lbs. of torque. See diagram below for correct bolt torque sequence. This will compress the grafoil secondary sealing member pulling the bellows back to a 1/8" running height compression.



Eight (8) Cap Screws



Twelve (12) Cap Screws

10. Reassemble pump and tighten gland studs evenly. Rotate shaft to insure that the seal is not in a bind.

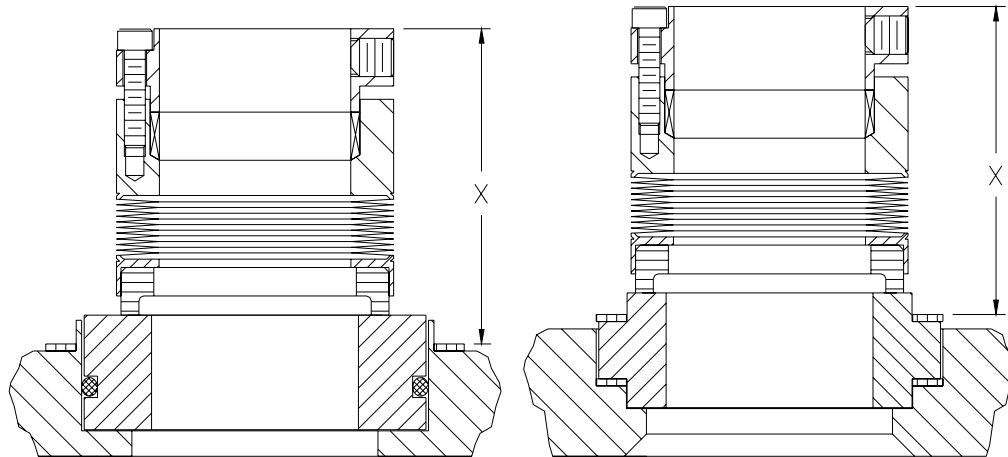
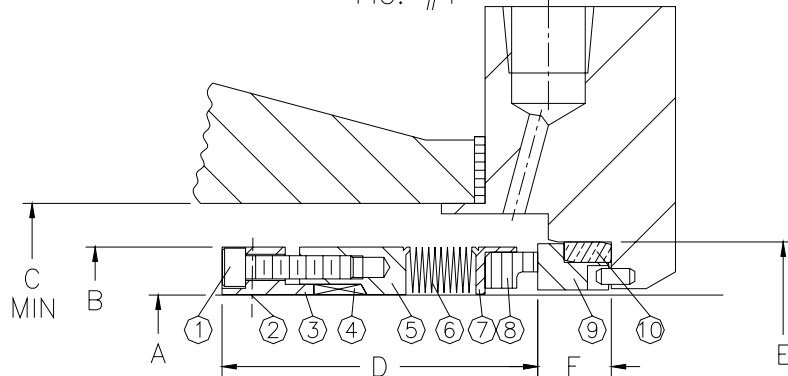


FIG. #1



ULTRASEAL 780					
A	B	C min	D	E	F
1.125	1.688	1.750	1.81	1.750	.44
1.250	1.813	1.875	1.88	1.875	.44
1.375	1.938	2.000	1.88	2.000	.44
1.500	2.063	2.188	1.88	2.125	.44
1.625	2.250	2.375	1.88	2.375	.50
1.750	2.375	2.500	1.88	2.500	.50
1.875	2.500	2.625	1.94	2.625	.50
2.000	2.625	2.750	1.94	2.750	.50
2.125	2.750	2.875	1.94	3.000	.56
2.250	2.875	3.000	2.06	3.125	.56
2.375	3.000	3.125	2.06	3.250	.56
2.500	3.250	3.375	2.06	3.375	.56
2.625	3.344	3.469	2.12	3.375	.62
2.750	3.469	3.594	2.12	3.500	.62
2.875	3.656	3.781	2.19	3.750	.62
3.000	3.781	3.906	2.19	3.875	.62
3.125	3.906	4.031	2.25	4.000	.78
3.250	4.031	4.156	2.25	4.125	.78
3.375	4.156	4.281	2.25	4.250	.78
3.500	4.281	4.406	2.38	4.375	.78
3.625	4.406	4.531	2.38	4.500	.78
3.750	4.531	4.656	2.38	4.625	.78
3.875	4.656	4.781	2.38	4.750	.78
4.000	4.781	4.906	2.38	4.875	.78

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