

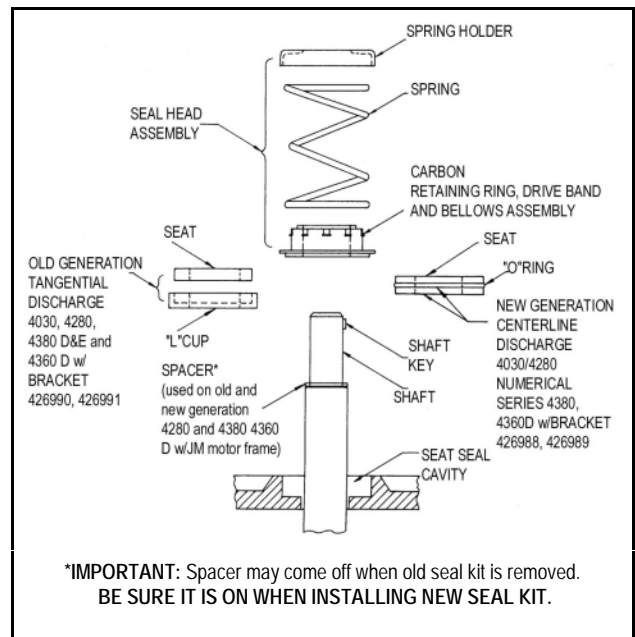
SERVICE WORK INSTRUCTIONS SERIES 4030, 4280, 4360D & 4380 MECHANICAL SEAL KITS

Refer to appropriate Service Work Instructions (SWI) file for breakdown instructions for the pump being serviced. Mechanical seal replacement instructions are included in the pump SWI. The following instructions are included for convenience.

Caution: Always disconnect power supply from motor before beginning service work.

Seal Kit Installation Instructions

1. Remove Impeller and Mechanical Seal from pump or motor shaft. The mechanical seal spring usually comes free with the impeller. The mechanical seal rotating element must be pried loose with pry bars or screwdrivers. Once loosened, the seal may be pulled free of the shaft.
2. When removing impeller and seal from a motor shaft, take care to retrieve the spacer from between the impeller and shaft sleeve. Store for later use.
3. Remove Seal Seat from Adapter. The mechanical seal seat, "O" ring or "L" cup mounted, will be Ceramic or Ni-Resist material, and must be pried loose from the recess in the adapter. If the seat cannot be removed in this manner, separate the adapter from the bearing housing or motor. A screwdriver may then be used to push the seat out of the adapter from the rear.
4. Clean the shaft sleeve surface, ensuring all the former seal elastomeric residue has been removed. Inspect for damage and replace if necessary. (See separate instructions, File No. 6042.25, for removal of the motor shaft sleeve). Inspect the water slinger and replace if damaged.
5. *Ceramic is a suitable replacement for Ni-Resist and is the seal seat of choice. Ceramic is more delicate than Ni-Resist, however, and should be treated accordingly.*
6. Install a new seal seat in the adapter cavity, being sure the lapped (polished) side of the insert is facing up. Ensure that the cavity has been thoroughly cleaned. Lubricate the outside of the seat elastomer ("O" ring, or "L" cup) with a small amount liquid soap, silicon or glycerin lubricant and press down, straight and even, into the cavity. Do not press the seat in with bare fingers, use a clean cloth or the cardboard disc typically supplied with the seal. Contamination of the polished and lapped seat face could cause leakage.



CAUTION

Do not use oil, Vaseline or other petroleum based product for seal elastomer lubrication. Otherwise elastomer swelling may occur causing seal failure.

7. If the adapter was removed, replace now, taking care that the seal seat is carefully guided over the shaft.
8. Lubricate the inside of the seal rotating assembly (The 'rubber' bellows) with a small amount of liquid soap, silicon or glycerin lubricant and slide onto the shaft sleeve with a twisting motion, carbon face first, until the carbon face is pressed firmly against the seal seat.
9. Remove the spring retainer from the seal spring and place the seal spring over the seal rotating assembly. Re-install the shaft sleeve spacer and impeller key on the shaft and place the seal spring retainer onto the impeller hub register. Slide the impeller into place on the shaft. Take care and ensure that the seal spring is kept in place on the seal rotating assembly and fits well into the retainer on the impeller hub. Secure impeller and finish reassembling pump.

Seal Kit Part Number (See Note 1)	Seal Size	Used on:	Pump Construction	4030 Frame Size	4280/4380 Motor Frame Size	Seal Construction					
						Type	Elastomer	Trim	Seat Style (See Note 3)	Seat Material	
816707-001	0.75	6 Series, 1000D	BF/AB				Buna	Brass	L-Cup	Ceramic	
975000-991 (See Note 2)	1.25	4030/4280 Centerline Discharge, 4380 Numerical and 4360D w/Bracket 426988 or 426989	BF/AB/AI	S	56C, 143-215JM	21	EPDM	St. Stl.	O-Ring	Ceramic	
810150-127						2	Viton			Ni-Resist	
810150-137						2	Buna			Tungsten	
810150-128						21	EPDM			Ceramic	
975000-993 (See Note 2)	1.625			M		254-326JM, 213-326JP	21			EPDM	Ni-Resist
810150-131							21			Viton	Tungsten
810150-138							2			Buna	
810150-132							21			EPDM	
825458-001 (See Note 2)	1.25	4030/4280 Tangential Discharge, 4380 D & E and 4360D w/Bracket 426990 or 426991		BF/AB/AI	S	56C, 143-215JM	21	Buna	St. Stl.	L-Cup	Ceramic
825458-003							21	Viton			
810150-133				BF/AI/AB			2	Buna			Tungsten
811339-000 (See Note 2)	1.625				BF/AB	M	254-326JM, 213-326JP	2	Buna		Brass
811866-000 (See Note 2)			AI		2			Buna	Steel		
819299-000			BF/AB		2			Viton	Brass		
810150-139			BF/AI/AB		2			Buna	St. Stl.		Tungsten

Notes:

1. Seal Kit consists of rotating seal head, spring holder, stationary seal seat with O-ring or L-cup. Pump casing gasket and other minor hardware components possibly required to reassemble the pump are not included. Consult Service Parts Bulletins for more detail.
2. Standard seal used for the pump construction indicated. Other seals listed are optional.
3. O-ring and L-cup style seats are NOT interchangeable between tangential and centerline discharge pumps.

Shortys HVAC Supplies
 877-821-8770
www.shortyshvac.com
www.shortypumps.com
parts@shortyshvac.com

S.A. Armstrong Limited
 23 Bertrand Avenue
 Toronto, Ontario
 Canada, M1L 2P3
 Tel: (416) 755-2291
 Fax: (416) 759-9101
 Visit us at www.armstrongpumps.com

Armstrong Pumps Limited
 Peartree Road, Stanway
 Colchester, Essex
 United Kingdom, C03 5JX
 Tel: 01206-579491
 Fax: 01206-760532



Armstrong Pumps Inc.
 93 East Avenue
 Buffalo, New York
 U.S.A. 14120-6594
 Tel: (716) 693-8813
 Fax: (716) 693-8970

Armstrong Darling Inc.
 2200 Place Transcanadienne
 Montreal, Quebec
 Canada, H9P 2X5
 Tel: (514) 421-2424
 Fax: (514) 421-2436

