



**Model 3200-0011**

## SELF-PRIMING PUMP

### FEATURES

- Body:** Bronze  
**Impeller:** Jabsco Neoprene Compound  
**Shaft:** Bronze  
**Wearplate:** Replaceable  
**Shaft Seal:** Carbon-Face Rotary Type with Replaceable Seal Seat  
**Pedestal:** Cast Iron  
**Bearings:** Sealed Ball Bearings  
**Ports:** 2" NPT  
**Weight:** 57-1/2 lb (26,1 kg)

### APPLICATION

#### MARINE

- Circulating engine raw water
- Pumping bilges, washdowns

#### INDUSTRIAL

- Circulating and transferring liquids
- Velocity-mixing
- Returning spilled liquids to process
- Transferring size and wood pulp slurries in paper mills

- Sump pumping
- Circulating water for cooling towers, heat exchangers
- Circulating and transferring viscous fluids, such as molasses, honey, beverage syrups, etc.
- Circulating mildly abrasive slurries
- Chemical manufacturers and pharmaceutical houses — to pump soap, liquors, ink, dyes, medicines, alco-

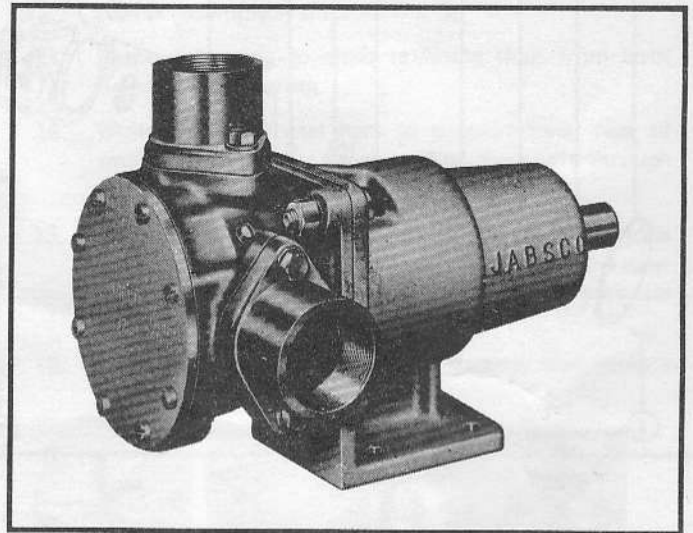
hol, various acids, tanning liquors, sugar solutions, glycerine, lotions, brine, etc.

#### FARMING

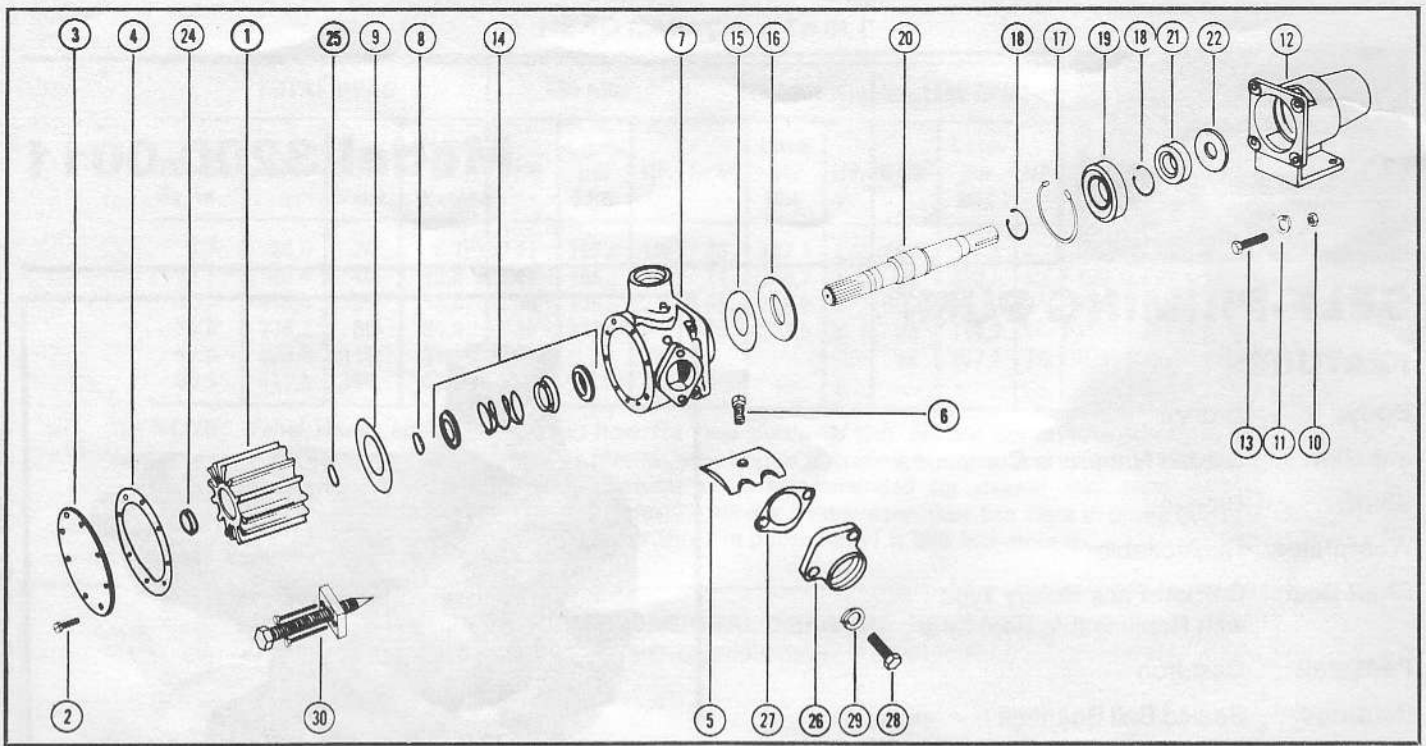
- Pumping water for stock, poultry houses, farmhouse
- Pumping water from wells and cisterns
- Booster pumping

### OPERATING INSTRUCTIONS

1. **INSTALLATION**—Pump may be mounted in any position. The rotation of the pump shaft determines the location of the pump's intake and discharge ports. (Refer to dimensional drawing.) Pump is normally assembled at factory for clockwise rotation (looking at end cover). If counter clockwise rotation is desired follow steps 1 and 2 of disassembly and step 17 of assembly instructions to change direction of impeller blade deflection under cam.
2. **DRIVE**—Belt or Direct with flexible coupling.  
**BELT DRIVE**—Overtight belt load will reduce pump bearing life.  
**DIRECT DRIVE**—Clearance should be left between drive shaft and pump shaft when installing coupling. Always mount and align pump and drive shaft before tightening the coupling set screw.
3. **SPEEDS**—100 RPM to the maximum shown in the performance table. For longer pump life, operate at lowest possible speeds.
4. **SELF-PRIMING**—Primes at low or high speeds. For vertical dry suction lift of 10 feet (3,3m), a minimum of 800 RPM is required. Pump will produce suction lift up to 22 feet (6,7m) when wetted. **BE SURE SUCTION LINES ARE AIRTIGHT OR PUMP WILL NOT SELF-PRIME.**
5. **RUNNING DRY**—Unit depends on liquid pumped for lubrication. **DO NOT RUN DRY** for more than 30 seconds. Lack of liquid will damage the impeller.
6. **NOTICE**—Do not pump light fraction petroleum derivatives, solvents, thinners, highly concentrated or organic acids. Damage to pump may result. Consult Jabsco Chemical Resistance Table (available upon request from ITT Jabsco) or factory for proper body materials and impeller compounds. If corrosive fluids are handled, pump life will be prolonged if pump is flushed with water after each use or after each work day.
7. **PRESSURES**—For continuous operation, pressure should not exceed 55 PSI (3,9 kg/sq cm)
8. **TEMPERATURES** 45 - 180° F, (8° - 82° C).
9. **FREEZING WEATHER**—Drain unit by loosening end cover.
10. **GASKET**—Use standard pump part. A thicker gasket will reduce priming ability. A thinner gasket will cause impeller to bind. Standard gasket is 0.015" thick.
11. **SPARE PARTS**—To avoid costly shut downs, keep a JABSCO Service Kit No. 90029-0001 on hand.



Model 3200-0011



### PARTS LIST

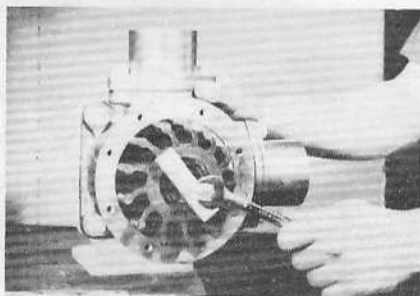
KEY	PART NUMBER	DESCRIPTION	QTY. REQ.	KEY	PART NUMBER	DESCRIPTION	QTY. REQ.
1	†2999-0001*	Impeller	1	17	18727-0000	Retaining Ring (Inner Brg. to Pedestal)	1
2	91006-0050	Screws (End Cover)	8	18	18709-0000	Retaining Ring (Brg.-to-Shaft)	2
3	12069-0000	End Cover	1	19	92600-0160	Ball Bearing (Inner)	1
4	3209-0000*	Gasket	1	20	3207-0000	Shaft	1
5	3210-0000	Cam	1	21	92600-0150	Ball Bearing (Outer)	1
6	91006-0030	Screw (Cam)	1	22	3213-0000	Bearing Seal	1
7	3204-0000	Body	1	23	9214-0000	Key	1
8	18708-0000*	Retaining Ring (Seal)	1	24	†4239-0000	Spline Seal	1
9	3211-0000	Wearplate	1	25	†92000-0540*	O - Ring	1
10		Hex Nut 1/2 - 13 C.P. St.	4			Port Flange Assembly Consists of:	
11		Lock Washer 1/2 C.P. St.	4	26	3218-0010	Port Flange (2" NPT)	2
12	3206-0000	Bearing Housing (Pedestal)	1	27	3219-0000	Gasket	2
13		Hex Head Bolt (Pedestal to Body) 1/4 - 20 x 1-1/8 C.P. St.	4	28		Hex Head Bolt 7/16 - 14 x 1-1/4 Br.	4
14	3222-0000*	Seal Assembly	1	29		Lock Washer 7/16 C.P. St.	4
15	3212-0000	Slinger	1	30	1019-0000	Impeller Puller	1
16	3214-0000	Bearing Seal (Inner)	1		90029-0001	Service Kit (Not Shown)	

\* Parts Contained in Service Kit    † Parts included with Impeller

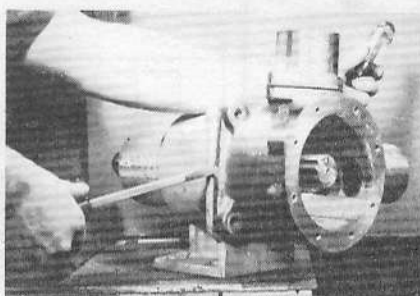
## SERVICE INSTRUCTIONS

### DISASSEMBLY

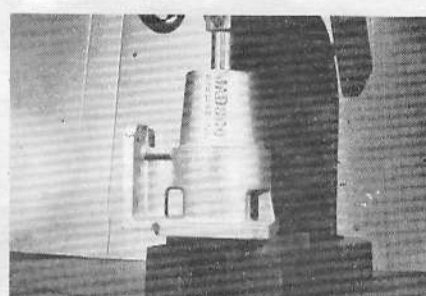
1. Remove end cover screws, gasket and end cover.
2. Using 1019-0000 impeller puller, supplied with pump, remove impeller. (Picture No. 1)
3. Remove O-ring spline seal from shaft with pick or hooked wire.
4. Remove retaining ring and seal, using caution as seal is spring loaded.
5. Loosen cam screw, remove cam and wearplate.
6. Loosen nuts securing body to pedestal and remove body. (Picture No. 2)
7. Remove seal seat from body.
8. Remove slinger.
9. Insert screwdriver between inner bearing seal and body bore, and pry out the seal.
10. Insert screwdriver between outer bearing seal and body bore, and pry out the seal.
1. Remove body to bearing retaining ring.
12. Pressing on shaft drive end, remove bearing and shaft assembly. (Heating outside of bearing housing will ease disassembly.) (Picture No. 3)
13. Remove bearing-to-shaft retaining rings from both sides of large bearing.
14. While using 2 metal bars to support inner race of small bearing, press drive end of the shaft through bearing.
15. While supporting inner race of large bearing, press drive end of shaft through bearing. To prevent scoring of bearing seal area of shaft, do not press on splined end.
16. Inspect all parts for wear or damage and replace where necessary.



No. 1



No. 2



No. 3

### ASSEMBLY

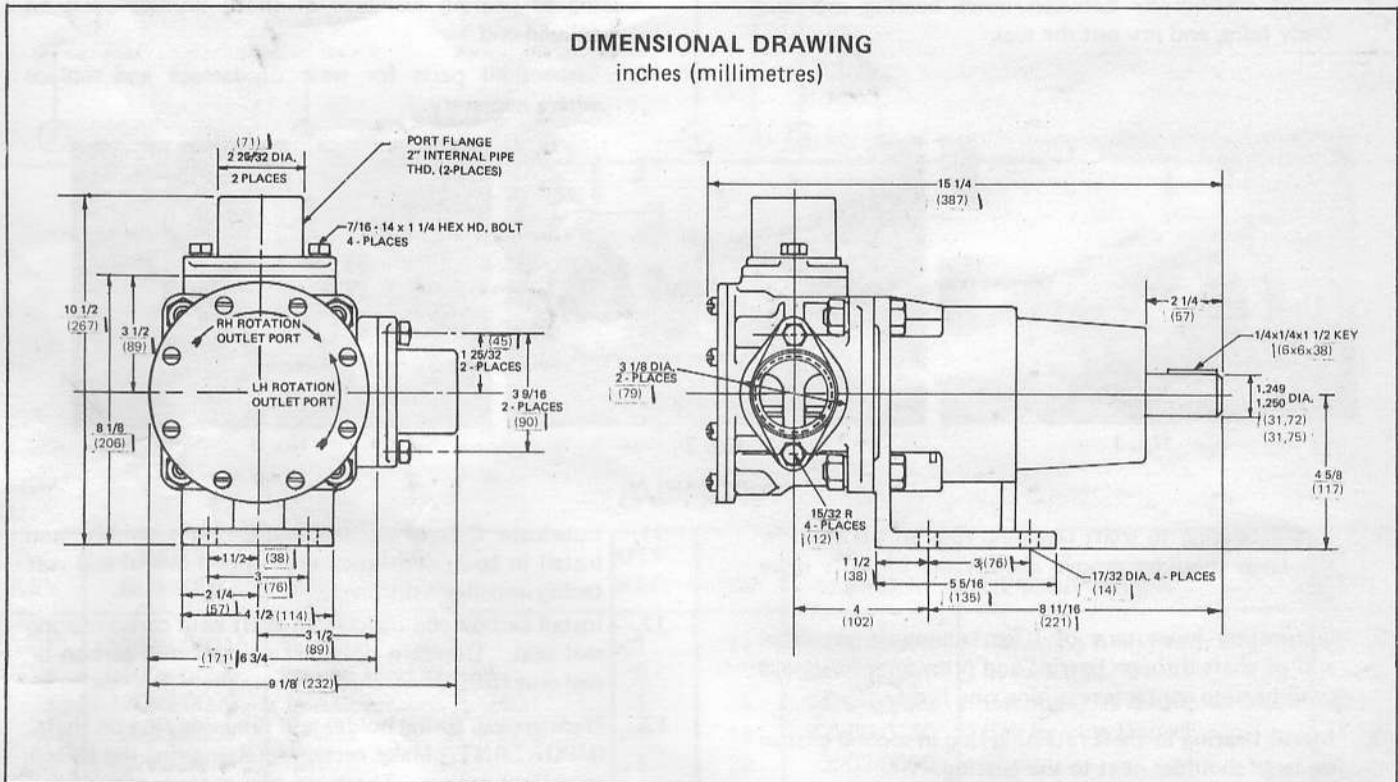
1. Install bearing to shaft retaining ring on the shaft in the large shoulder groove nearest the impeller drive end.
2. Supporting inner race of large bearing, insert drive end of shaft through bearing and press on splined end until bearing contacts retaining ring firmly.
3. Install bearing-to-shaft retaining ring in second groove on large shoulder next to the bearing.
4. Support inner race of small bearing, insert drive end of shaft through bearing and press on splined end until shaft shoulder contacts small bearing inner race firmly.
5. Install shaft and bearing assembly, drive end of shaft first, into large diameter of the bearing pedestal. Press against outer race of large bearing until large bearing bottoms on shoulder in pedestal.
6. Install large body to bearing retaining ring in groove next to large bearing.
7. Lubricate bearing seals with grease and press in each end of pedestal, with lips facing away from bearings.
8. Install slinger on shaft approximately 1/8" from shoulder.
9. Apply thin coat of sealant to screw threads and top side of cam and install in body.
10. Secure body to bearing housing with bolts, lock washers and nuts.
11. Lubricate O.D. of seal seat and O-ring assembly and install in body seal bore, with lapped side of seal seat facing impeller, seat firmly.
12. Install carbon and bellows on shaft with carbon facing seal seat. Use care not to scratch or mar carbon or seal seat face.
13. Place spring, spring holder and retaining ring on shaft. **IMPORTANT** - Make certain retaining ring has seated in correct groove. There are two grooves around the splines. The retaining ring fits in the narrower of the two, farthest away from the end of the shaft.
14. Drop wearplate in body.
15. Lubricate O-ring spline seal with grease and install in wide groove in shaft.
16. Wipe a thin film of water pump grease around impeller bore surfaces.
17. Using a rotary motion in the direction in which impeller will rotate, deflect the impeller blade under the cam while pushing impeller into bore. When impeller splines contact shaft splines, push impeller onto shaft. Use a mallet to drive impeller completely into body bore.
18. Install neoprene impeller plug in impeller insert.
19. Install gasket, end cover and secure with end cover screws.

## HEAD CAPACITY TABLE

TOTAL HEAD				500 RPM			870 RPM			1160 RPM			1450 RPM		
Lbs. per Sq In.	kPa	Ft. of Water	Metres of Water	GPM	Litres per Min	HP	GPM	Litres per Min	HP	GPM	Litres per Min	HP	GPM	Litres per Min	HP
8.7	60,0	20	6,1	42	159,0	1½	76	287,7	2½	100	378,5	4	127	480,7	5
17.3	119,4	40	12,2	41	155,2	1½	71	268,7	3	95	359,6	4	125	473,1	5
26.0	179,4	60	18,3	36	136,3	2	66	249,8	3	90	340,7	5	122	461,8	7½
34.6	238,7	80	24,4	30	113,6	2	58	219,5	3	83	314,2	5	117	442,8	7½
47.8	329,8	110	33,5							68	257,4	7½	105	397,4	7½
60.5	417,5	140	42,7										80	302,8	7½

**NOTE:** Table shows approximate head-flow for new pump in U.S. gallons per minute and litres per minute. Progressively longer life may be expected as operating pressures and speeds are reduced. Factory Application Engineering assistance is recommended for shaded area. High starting torque motors are required. Pump starting torque in dry condition (no fluid in pump body) is 380 inch-pounds and in wet condition (fluid in pump body) is 300 inch-pounds.

### DIMENSIONAL DRAWING inches (millimetres)



THE PRODUCT DESCRIBED HEREIN IS SUBJECT TO THE JABSCO ONE YEAR LIMITED WARRANTY, WHICH IS AVAILABLE FOR YOUR INSPECTION UPON REQUEST.

## ITT Jabsco

ITT Fluid Technology Corporation  
1485 Dale Way, P.O. Box 2158, Costa Mesa, CA 92628-2158  
Tel: (714) 545-8251; Fax: (714) 957-0609  
Bingley Road, Hoddesdon, Hertfordshire EN11 0BU England  
Tel: 0992-467191; Tlx: 263251 G; Fax: 0992-467132