

Model 4560-Series 4590-Series 4620-Series

SELF-PRIMING PUMPS

FEATURES

Body:	Bronze Construction										
Impeller:	Neoprene or Nitrile										
Shaft:	Stainless Steel										
Shaft Seal:	Packing Type										
Bearings:	Plain										
Ports:	Model 4560-Series 1/2" NPT Model 4590-Series 3/4" NPT Model 4620-Series 1" NPT										
Weight:	Model 4560-Series 3-3/4 lb (1.7 kg) Model 4590-Series 5 lb (2.3 kg) Model 4620-Series 5-1/4 lb (2.4 kg)										

VARIATIONS AVAILABLE

Variation Incorporated
Neoprene Impeller
Nitrile Impeller
Neoprene Impeller
Nitrile Impeller
Neoprene Impeller
Nitrile Impeller

APPLICATIONS

MARINE: Pumping bilges, washdowns, circulating water in bait tanks, utility dockside pump, engine cooling.

INDUSTRIAL: Circulating and transferring, velocity-mixing, pumping machine tool coolants, return spill, sump drainage, chemicals, pharmaceuticals, soap, liquors, ink, dyes, alcohol, various acids, tanning liquors, glycerine, brine, etc.

FARMING: Pumping water for stock, pumping water from shallow wells and cisterns, pumping liquid ballast into tractor tires.

PLUMBING & HOME EMERGENCY USE: Pumping out flooded basements, cesspools, sumps, water heaters and water closets, drains and sinks, draining fishponds and pools.



Other JABSCO models are also available in bronze, plastic and stainless steel. JABSCO Pureflo[®] pumps are also available for sanitary applications.

OPERATING INSTRUCTIONS

- INSTALLATION Pump may be mounted in any position. Intake and discharge ports are determined by the direction of shaft rotation (refer to Dimensional Drawing). Before installing, turn the pump shaft in the direction of the operating rotation.
- 2. DRIVE Belt or Direct with flexible coupling.

Belt Drive: Overtight belt load will reduce pump bearing life. Direct Drive is recommended for operating speeds above 1750 RPM.

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.

NOTICE: If the drive pulley or coupling must be pressed on the shaft, remove the end cover and impeller and support the shaft from the impeller end during the press operation. Do not hammer a pulley or coupling on the shaft. Failure to follow the above instructions can damage the pump.

- SPEEDS 100 RPM to the maximum shown in the performance table. Consult the factory for operation at speeds above those shown. For longer pump life, operate at lowest possible speeds.
- SELF-PRIMING Primes at low or high speeds. For vertical dry suction lift of 10 feet, a minimum of 800 RPM is required. Pump will produce suction lift up to 22 feet when wetted. BE SURE SUCTION LINES ARE AIRTIGHT OR PUMP WILL NOT SELF-PRIME.

- 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.
- NOTICE If pumping light fraction petroleum derivatives, solvents, thinners, highly concentrated or organic acids, consult Jabsco Chemical Resistance Table (which is available upon request from ITT Jabsco) 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.
- PRESSURES Consult Head Capacity Table for recommended maximum for continuous operation. If pressures exceed those shown, consult the factory.
- 8. TEMPERATURE Neoprene 45°–180°F (7°–82°C) Nitrile 50°–180°F (10°–82°C).
- FREEZING WEATHER Drain unit by loosening end cover. The following anti-freeze compounds can be used without any adverse effects to the neoprene impeller: Atlas "Permaguard", DuPont "Zerex" and "Telar", Dow Chemical "Dowguard" and Olin Mathison "Pyro Permanent". Most Methyl alcohol (methanol) based antifreeze can be used.

DO NOT USE PETROLEUM BASED ANTI-FREEZE COMPOUNDS OR RUST INHIBITORS.

- GASKET Use a standard pump part. A thicker gasket will reduce priming ability. A thinner gasket will cause the impeller to bind. Std. gasket 0.010" thick.
- 11. GREASE CUPS Fill grease cups with water pump grease. Grease cup cap should be firmly tightened about every 50 hours of pump service while pump is operating. Leakage may occur through grease cups at pressures above 20 p.s.i. If this occurs, replace grease cups with ball check grease cups.
- 12. SPARE PARTS To avoid costly shut downs, keep a Jabsco Service Kit on hand.

SERVICE INSTRUCTIONS

DISASSEMBLY

- 1. Remove end cover screws, end cover and gasket.
- 2. Remove drive coupling or pulley and loosen packing nut.
- 3. Remove shaft and impeller assembly from body.
- 4. Slide impeller off shaft towards pump drive end.
- 5. Remove cam screw and cam, clean off Permatex.
- 6. Remove packing nut and gland.
- 7. Remove packing with pick or screwdriver.
- 8. Remove grease cup caps and clean grease cups. Use a small wire to ensure grease passage is open to shaft bore.
- 9. Inspect all parts for wear or damage and replace if necessary.

ASSEMBLY

- 1. Dip new packing in SAE 10 or 20 weight oil and install packing, packing gland and packing nut.
- 2. Apply sealant to cam screw threads and top and back end of cam and install in body with cam screw.
- 3. Install impeller key in shaft (dress if necessary) and slide the impeller on the shaft **from the pump drive end.**

Impeller can be installed in only one direction; pinned end of keyway toward drive end of pump.

- 4. Install shaft and impeller assembly in body. (Dip shaft in SAE 10 or 20 weight oil and lube impeller bore with water pump grease prior to assembly.)
- 5. Install gasket and end cover with end cover screws.
- 6. Fill grease cups full and grease cup caps 3/4 full with water pump grease. Install grease cup caps and tighten firmly.
- Hand tighten packing nut. During operation, tighten packing nut until pump stops dripping; set locking nut. NOTE: Packing and shaft life will be improved if pump is allowed to drip about 3 drops per minute. After a few minutes of operation, re-tighten grease cup caps.



PARTS LIST

			Model 4560	Model 4590	Model 4620	
Key	Description	Qty.	Series	Series	Series	
1	Screw (End Cover)	6	91002-0020	91003-0010	91003-0010	
2	End Cover	1	4565-0000	4595-0000	4595-0000	
3	Gasket*	1	7083-0000	706-0010	706-0010	
4	Grease Cup	2	91501-0010	91501-0010	91501-0010	
5	Impeller*	1				
	Neoprene		4568-0001	4598-0001	4598-0001	
	Nitrile		4568-0003	4598-0003	4598-0003	
6	Key (Impeller Drive)*	1	91402-0010	91402-0010	91402-0010	
7	Shaft	1	4567-0000	4597-0000	4597-0000	
8	Cam	1	490-0001	17612-0000	17612-0000	
9	Screw (Cam)	1	91003-0070	91004-0010	91004-0010	
10	Body	1	4564-0000	4594-0000	4624-0000	
11	Lock Nut	1	4517-0000	4517-0000	4517-0000	
12	Packing (Ring)*	1	3791-0000	3791-0000	3791-0000	
13	Packing (Gland)	1	4518-0000	4518-0000	4518-0000	
14	Packing Nut	1	4583-0000	4583-0000	4583-0000	
	Key Pump Drive (not shown)	1	9215-0000	9215-0000	9215-0000	
	Service Kit (not shown)					
	w/ Neoprene Impeller		90003-0001	90004-0001	90004-0001	
	w/ Nitrile Impeller		90003-0003	90004-0003	90004-0003	

* Parts supplied in Service Kit

DIMENSIONAL DRAWING



TABULATIONS FROM ABOVE DRAWING

Model	Α	В	С	D	E	F	G	Н	I	J	К	L	М
4560-	7-1/8″	5-1/8"	1-7/8" Min.	4″	2-1/2"	1-15/16"	3-3/4"	3″	1-1/2"	3/16″	1-3/16″	4-1/8"	1/2"NPT Int.
Series	(181)	(130,2)	(47,6)	(101,6)	(63,5)	(49,2)	(95,3)	(76,2)	(38,1)	(4,8)	(30,2)	(104,8)	(2 Places)
4590-	7-7/8"	5-9/16"	1-3/4" Min.	4-3/16"	2-1/2"	1-7/8"	3-15/16"	3-1/8"	1-9/16"	3/32"	1-1/2"	4-1/8"	3/4" NPT Int.
Series	(200)	(141,3)	(44,5)	(106,4)	(63,5)	(47,6)	(100)	(79,4)	(39,7)	(2,4)	(38,1)	(104,8)	(2 Places)
4620-	7-7/8"	5-5/8"	1-3/4" Min.	4-3/16"	2-1/2"	1-7/8"	3-15/16"	3-1/8"	1-9/16"	1/8″	1-1/2"	4-3/4"	1 " NPT Int.
Series	(200)	(142,9)	(44,5)	(106,4)	(63,5)	(47,6)	(100)	(79,4)	(39,7)	(3,2)	(38,1)	(120,7)	(2 Places)

HEAD CAPACITY TABLE

Model 4560-0001

Total I	I Head 500 RPM		1160 RPM 1750 RPM		РМ	2100 RPM 2450 F		2450 R	2450 RPM		3000 RPM		PM		
p.s.i. (kg/sq cm)	ft. of water (metres)	GPM (L/min)	hp	GPM (L/min)	hp	GPM (L/min)	hp	GPM (L/min)	hp	GPM (L/min)	hp	GPM (L/min)	hp	GPM (L/min)	hp
4.3 (0,3)	10 (3,0)	3.0 (11,3)	1/6	7.6 (28,8)	1/4	11.0 (41,6)	1/2	13.0 (49,2)	1/2	15.2 (57,5)	1/2	18.0 (68,1)	3/4	19.6 (74,2)	3/4
8.7 (0,6)	20 (6,1)	1.8 (6,8)	1/6	6.4 (24,2)	1/4	10.0 (37,9)	1/2	11.5 (43,5)	1/2	13.7 (51,9)	1/2	17.0 (64,3)	3/4	18.8 71,2)	3/4
13 (0,9)	30 (9,1)	—	—	4.8 (18,2)	1/3	8.5 (32,2)	1/2	10.0 (37,9)	1/2	12.0 (45,4)	1/2	15.3 (57,9)	3/4	17.5 (66,2)	3/4
21.6 (1,5)	50 (15,2)	_	_	_	_	5.0 (18,9)	1/2	6.7 (25,4)	3/4	8.5 (32,2)	3/4	11.8 (44,7)	3/4	14.5 (54,9)	1

HEAD CAPACITY TABLE

Models 4590-0001, 4620-0001

Total I	Total Head		PM	1160 F	RPM	1750 R	PM	2100 R	PM	2450 R	PM	3000 F	RPM
p.s.i. (kg/sq cm)	ft. of water (metres)	GPM (L/min)	hp	GPM (L/min)	hp	GPM (L/min)	hp	GPM (L/min)	hp	GPM (L/min)	hp	GPM (L/min)	hp
4.3 (0,3)	10 (3,0)	7.0 (26,5)	1/4	16.5 (62,5)	1/3	25.0 (94,6)	3/4	29.0 (109,8)	3/4	31.0 (117,3)	1	33.0 (124,9)	1-1/2
8.7 (0,6)	20 (6,1)	6.5 (24,6)	1/4	16.0 (60,6)	1/3	24.5 (92,7)	3/4	28.5 (107,9)	3/4	30.5 (115,4)	1	32.5 (123,0)	1-1/2
13 (0,9)	30 (9,1)	6.0 (22,7)	1/4	15.0 (56,8)	1/3	23.0 (87,1)	3/4	27.0 102,2)	1	29.0 109,8)	1	32.0 (121,1)	1-1/2
21.6 (1,5)	50 (15,2)	_	—	11.5 (43,5)	1/2	19.0 (71,9)	3/4	22.5 (85,2)	1	25.0 (94,6)	1-1/2	30.5 115,4)	2

NOTE: Progressively longer life may be expected as operating pressures and speeds are reduced. Factory Application Engineering assistance suggested for operation in light shaded areas and recommended for heavy shaded areas. Capacitor type motor required. Table shows approximate Head-Flow for new pump in U.S. gallons per minute and litres per minute, for neoprene compound impeller.

Jabsco



U.S.A. Jabsco 1485 Dale Way, P.O. Box 2158 Costa Mesa, CA 92628-2158 Tel: 714.545.8251 Fax: 714.957.0609

UNITED KINGDOM Jabsco Bingley Road, Hoddesdon Hertfordsire EN11 OBU Tel: +44 (0) 1992 450145 Fax: +44 (0) 1992 467132

CANADA Fluid Products Canada 55 Royal Road Guelph, Ontario N1H 1T1 Tel: (519) 821.1900 Fax: (519) 821.2569

JAPAN NHK Jabsco Company Ltd. 3-21-10, Shin-Yokohama Kohoku-Ku, Yokohama, 222 Tel: 045.475.8906 Fax: 045.475.8908

GERMANY Jabsco GmbH Oststrasse 28 22840 Norderstedt Tel: +49-40-53 43 73 -0 Fax: +49-40-53 53 73 -11

© Copyright 2000, ITT Industries

Printed in U.S.A.

All Rights Reserved

Form: 43000-0065

THE PRODUCTS DESCRIBED HEREIN ARE SUBJECT TO THE JABSCO ONE YEAR LIMITED WARRANTY. WHICH IS

AVAILABLE FOR YOUR INSPECTION UPON REQUEST.

Rev. 8/2000