

Please read and save this Repair Parts Manual. Read this manual and the General Operating Instructions carefully before attempting to assemble, install, operate or maintain the product described. Protect yourself and others by observing all safety information. The Safety Instructions are contained in the General Operating Instructions. Failure to comply with the safety instructions accompanying this product could result in personal injury and/or property damage! Retain instructions for future reference.

Industrial Coolant Pumps

Refer to form 1808-634-00 for General Operating and Safety Instructions.

Description

These coolant/recirculating pumps are heavy-duty industrial units designed for a variety of applications involving evaporating coolers, fountains, laboratories, bilge pumping, etc. Each pump is constructed using cast iron column and base parts, stainless steel impeller, shaft and hardware. All units are manual models; no controls are supplied. For use with nonflammable liquids, compatible with pump component materials.

Specifications

Model	HP	Type	Motor		Phase	RPM
			Volts AC	Hz		
4430-95	1/3	*TEFC	115/230	60	Single	1725
4431-95	1/3	TEFC	230/460	60	Three	1725
4421-95	1/4	TEFC	115/230	60	Single	1725
4422-95	1/4	TEFC	230/460	60	Three	1725
4442-95	3/4	TEFC	115/230	60	Single	1725
4440-95	3/4	TEFC	115/230	60	Single	1725
4441-95	3/4	TEFC	230/460	60	Three	1725
4443-95	3/4	TEFC	230/460	60	Three	1725

(*) Totally enclosed fan cooled.

NOTE: Driver data is subject to change without notice, see label on driver for actual specifications.

Liquid temp. 40° to 200°F (4° to 93° C)

Max. liquid viscosity 500 SSU

Specific gravity (S.G.) maximum 1.0

Discharge outlet

4421-95 thru 4431-95 1¼" NPT

4440-95 thru 4443-95 1½" NPT

Pump construction Cast iron

Impeller material Stainless steel

Fasteners Stainless steel

Weight

4421-95 and 4422-95 36 lbs.

4430-95 and 4431-95 37 lbs.

4440-95 and 4441-95 47 lbs.

4442-95 and 4443-95 50 lbs.

Performance

Models 4430-95 and 4431-95

	GPM at Total Head in Feet					Shut-Off
	3'	6'	9'	12'	15'	
Water	48	46	42	38	32	21 ft.
500 SSU	40	38	34	30	25	21

Models 4421-95 and 4422-95

	GPM at Total Head in Feet					Shut-Off
	3'	6'	9'	12'	15'	
Water	46	43	36	30	20	17 ft.
500 SSU	26	23	19	15	8	17

Models 4442-95, 4440-95, 4441-95 and 4443-95

	GPM at Total Head in Feet								Shut-Off
	3'	6'	9'	12'	15'	18'	21'	24'	
Water	-	-	-	67	58	48	38	27	32 ft.
500 SSU	50	46	42	37	32	27	20	12	27

Industrial Coolant Pumps

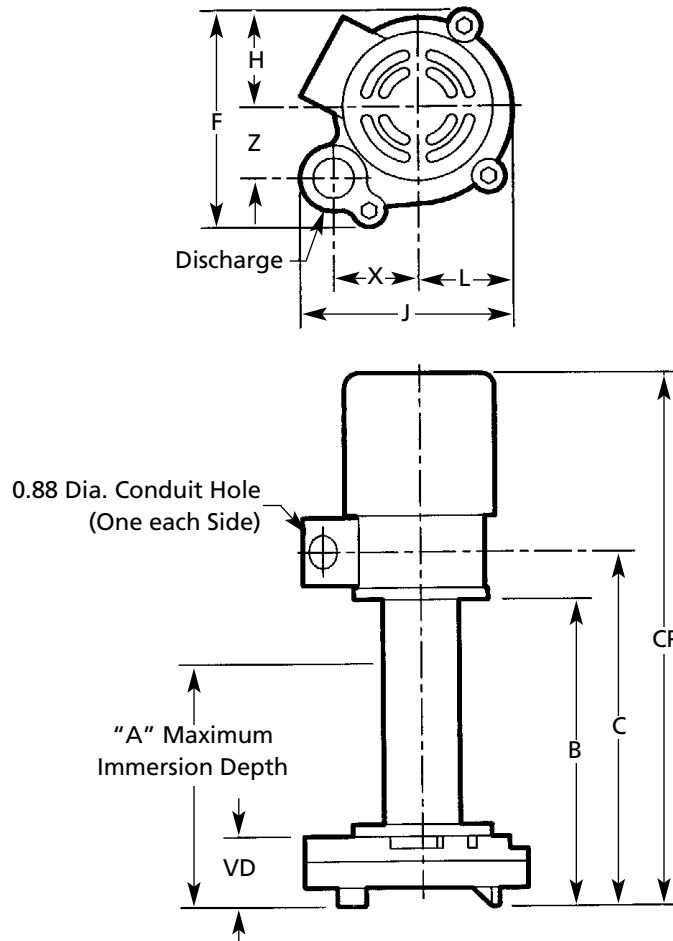


Figure 1 - Dimensions

Dimensions (Inches)

Model	Dis.*	A	B	C†	CP†	F†	H†	J†	L†	VD	X	Z
4430-95	1¼"	6.38	9.73	15.38	19.30	8.66	3.53	8.35	3.73	2.23	3.50	3.19
4431-95	1¼"	6.38	9.73	15.38	18.80	8.66	3.53	8.35	3.73	2.23	3.50	3.19
4421-95	1¼"	8.25	11.73	17.00	20.80	8.66	3.53	8.35	3.73	2.23	3.50	3.19
4422-95	1¼"	8.25	11.73	17.00	20.64	8.66	3.53	8.35	3.73	2.23	3.50	3.19
4442-95	1½"	12.25	15.80	22.13	26.24	10.69	4.69	9.22	5.00	2.30	2.94	3.88
4440-95	1½"	6.38	9.80	16.13	20.24	10.69	4.69	9.22	5.00	2.30	2.94	3.88
4441-95	1½"	6.38	9.80	16.13	19.71	10.69	4.69	9.22	5.00	2.30	2.94	3.88
4443-95	1½"	12.25	15.80	22.13	25.71	10.69	4.69	9.22	5.00	2.30	2.94	3.88

NOTE: All dimensions have a tolerance of $\pm 1/8"$.

(*) Standard NPT (female) pipe thread.

(†) This dimension may vary due to the motor manufacturer's specifications.

Models 4421-95 thru 4443-95

Operation

1. Liquid level should always be below opening located in top of column. Motor is NOT submersible.
2. Activate unit. No controls are supplied with this unit. Dry running will not harm pump or motor.
3. Familiarize yourself and others with all controls for this pump. Learn how to stop pump/motor quickly in an emergency.

Maintenance

⚠ WARNING *Make certain that the unit is disconnected from the power source before attempting to service or remove any component! Failure to do so could result in electrical shock.*

IMPELLER/MOTOR REPLACEMENT PROCEDURE

1. Remove pump assembly from tank or reservoir.
2. Remove volute (Ref. No. 14) by removing cap screws (Ref. No. 6), leaving volute cover (Ref. No. 9) attached to column (Ref. No. 3).
3. Place a 5/32" allen wrench through slot in top of column and into one of the socket head screws of coupling (Ref. No. 2). Rotate impeller (Ref. No. 11) so allen wrench is against side of slot preventing shaft from rotating and remove acorn nut (Ref. No. 12) and impeller. Nut and impeller both have right hand thread.
4. Remove allen wrench from slot and remove four cap screws (Ref. No. 5) holding motor to column.
5. Remove motor (Ref. No. 1) with shaft (Ref. No. 10) and coupling assembly from column.
6. Loosen socket head screws in coupling and remove coupling from motor shaft and pump shaft.
7. To reassemble, place motor in a vertical position then slide coupling onto motor shaft until end of shaft is flush with split in center of coupling. Tighten two socket head screws holding coupling to motor shaft.
8. Replace motor and coupling onto column and secure with four cap screws with split washers (Ref. No. 4).
9. Thread impeller onto shaft and tighten.
10. Replace acorn nut and tighten.
11. Turn motor and column, with volute cover attached, upside down in a vertical position.
12. Insert shaft assembly into column until there is a clearance between impeller and volute cover of 0.024/0.011 for 4430-95 thru 4422-95 and 0.159/0.146 for 4442-95 thru 4443-95 then tighten coupling.
13. Using a new gasket (Ref. No. 13), reassemble volute to volute cover.
14. Rotate impeller to make sure it does not strike volute cover or volute. If impeller strikes either volute cover or volute, go back to step 12 and adjust clearance.
15. Return pump to service.

For Repair Parts, contact dealer where pump was purchased.

Please provide following information:

- Model number
- Serial number (if any)
- Part description and number as shown in parts list

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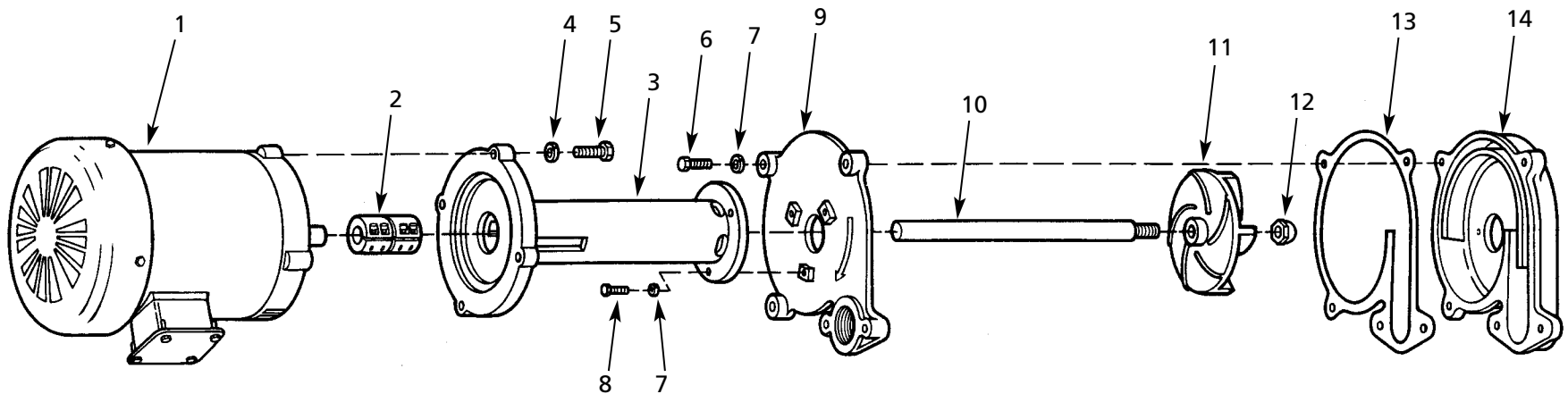


Figure 2 - Repair Parts Illustration

Repair Parts List

Ref. No.	Description	Part Number	Quantity for Models:							
			4430-95	4431-95	4421-95	4422-95	4442-95	4440-95	4441-95	4443-95
1	1/4 HP motor (1 phase)	1626-004-00	-	-	1	-	-	-	-	-
	1/4 HP motor (3 phase)	1626-020-00	-	-	-	1	-	-	-	-
	1/3 HP motor (1 phase)	1626-005-00	1	-	-	-	-	-	-	-
	1/3 HP motor (3 phase)	1626-021-00	-	1	-	-	-	-	-	-
	3/4 HP motor (1 phase)	1626-006-00	-	-	-	-	1	1	-	-
	3/4 HP motor (3 phase)	1626-022-00	-	-	-	-	-	-	1	1
2	Coupling	4430-143-00	1	1	1	1	1	1	1	1
3	Column	4430-030-09	1	1	-	-	-	1	1	-
	Column	4430-031-09	-	-	1	1	-	-	-	-
	Column	4430-032-09	-	-	-	-	1	-	-	1
4	3/8" Split lock washer S.S.	1793-009-00	4	4	4	4	4	4	4	4
5	3/8"-16 UNC x 1 1/4" Cap screw S.S.	1757-001-00	4	4	4	4	4	4	7	7
6	1/4"-20 UNC x 1" Cap screw S.S.	1718-003-00	5	5	5	5	7	7	7	7
7	1/4" Split lock washer S.S.	1788-001-00	8	8	8	8	10	10	10	10
8	1/4"-20 UNC x 1" Cap screw S.S.	1718-003-00	3	3	3	3	3	3	3	3
9	Volute cover	4430-020-09	1	1	1	1	-	-	-	-
	Volute cover	4440-020-09	-	-	-	-	1	1	1	1
10	Shaft - 6 1/8" S.S.	4430-140-00	1	1	-	-	-	1	1	-
	Shaft - 8 1/8" S.S.	4430-141-00	-	-	1	1	-	-	-	-
	Shaft - 12 1/8" S.S.	4430-142-00	-	-	-	-	1	-	-	1
11	Impeller	4421-012-01	-	-	1	1	-	-	-	-
	Impeller	4430-012-01	1	1	-	-	-	-	-	-
	Impeller	4440-012-01	-	-	-	-	1	1	1	1
12	7/16"-20 UNF Acorn nut S.S.	1784-001-00	1	1	1	1	1	1	1	1
13	Gasket	4430-300-00	1	1	1	1	-	-	-	-
	Gasket	4440-300-00	-	-	-	-	1	1	1	1
14	Volute	4430-001-09	1	1	1	1	-	-	-	-
	Volute	4440-001-09	-	-	-	-	1	1	1	1

(S.S.) Stainless Steel

