

Corrosion-Resistant Close-Coupled Centrifugal Pumps

Noryl[®] Series and Polypropylene Series

Description

Sheritech close-coupled non-metallic pumps produce high flow rates under moderate head conditions.

Designed for continuous medium pressure circulation and transfer of nonflammable liquids, water circulation, booster service, irrigation, spraying systems, jockey pump service, aggressive liquid applications, and other general purpose pumping compatible with pump component materials where no suction lift is required. Water seal flush port is provided for the decontamination of chemicals on the seal and seat elastomers.

- Capacities to 110 GPM, heads to 95 ft.
- 1/3 to 3 HP AC (and use 3450 rpm NEMA 56J frame motors with base).
- Discharge can be rotated in 90-degree intervals.
- All pumps have 1½" female NPT inlet and outlet ports.
- Standard pump models (at 3450 RPM) will handle specific gravities to 1.1 (at 100 SSU or less). For specific gravities to 1.4 (at 100 SSU or less), increase motor HP by one size but not to exceed standard 3 HP motor at 3450 RPM or 65 in.-lbs. of torque maximum. Higher specific gravity fluids are not recommended.
- Standard pump models (at 3450 RPM) will handle viscosity to 100 SSU (at 1.1 specific gravity or less) and up to 200 SSU (specific gravity of 1.0 or less). For viscosity up to 400 SSU (specific gravity of 1.0 or less), increase motor HP by one size but not to exceed standard 3 HP motor at 3450 RPM or 65 in.-lbs. of torque. For fluids with a viscosity greater than 400 SSU, pump speed must be reduced below 3450 RPM.
- Single-phase motors are equipped with thermal overload protection. Overload protection not supplied on three-phase units and must be provided in starter units.
- Sheritech complete Pedestal models are also available. Pedestal mount models feature a 5/8" diameter, 316 stainless steel solid shaft, a corrosion-resistant coated cast iron bearing housing and a double row of sealed ball bearings. They may be either long coupled or pulley driven with any base-mounted motor such as ODP, TEFC or wash-down motors.

NORYL SERIES – This series is designed for industrial chemical applications configured with TEFC (totally-enclosed fan-cooled) motors. The pumps are made of Noryl, which is non-metallic, chemical-resistant to most acids, alkalis, and inorganic solvents. This material is stiffer under pressure and temperature than the Polypropylene series. The Noryl series handles inlet booster pressures to 30 psi and a maximum temperature of 180° F. These pumps are equipped with a unique chemical-resistant carbon ceramic mechanical seal with Viton elastomer having the stainless steel components sealed in Noryl allowing for a complete non-metallic Noryl wet end. This unique seal guarantees reliability through simplicity and balance of design. Even the motor and pedestal drive shaft is protected by the seal design.

POLYPROPYLENE SERIES – This series is designed for light industrial or commercial water-based applications configured with ODP (open drip-proof) motors. The pumps are made of non-metallic, glass-filled polypropylene construction offering chemical resistance to most acids, alkalis, and inorganic solvents as does the Noryl series. The difference is these pumps are equipped with a carbon ceramic mechanical seal with Buna-N elastomers with the stainless steel components that are not sealed, but still protect the motor or pedestal shaft from chemical exposure. The Polypropylene series cannot handle added inlet booster pressures and is rated for a maximum temperature of 140° F. However, upgraded chemical-resistant, polypropylene-encased seals are available.

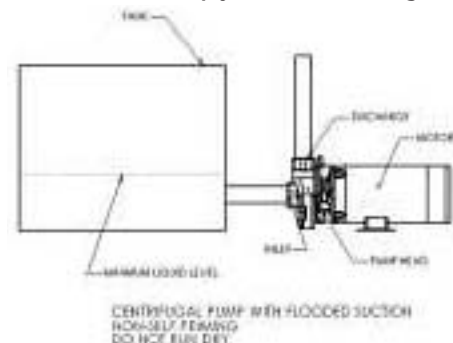
REPAIR SEALS AND OPTIONS – Standard and upgraded seals are available for both the Noryl and Polypropylene pumps. If abrasive or small, particulated fluids are being pumped, upgrading to either the encased Noryl or polypropylene silicon carbide mechanical seal with Viton elastomers is recommended. Standard and upgraded seals can be located on the repair parts list pages in this manual.

PUMP HEADS AND PEDESTAL MOUNT BASE – Complete pump heads and pedestal base can be ordered. Pump head and pedestal base model numbers are called out in the repair parts list pages in this manual.



Do not use to pump flammable or explosive fluids such as gasoline, fuel oil, kerosene, etc. Do not use in flammable and/or explosive atmospheres. When pumping hazardous or dangerous materials, use only in room or area designated for that purpose. For your protection, always wear proper clothing, eye protection, etc. in case of any malfunction. For proper handling techniques and cautions, contact your chemical supplier, insurance company and local agencies (fire dept., etc.). Failure to comply with this warning could result in personal injury and/or property damage.

CAUTION Pumps are not self-priming and cannot suction lift, flooded inlet is required. If inlet is not flooded when the pump is running, seal failure will result and is not covered under the manufacturer's warranty.



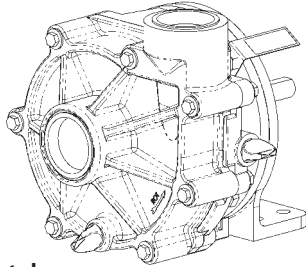
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Source: Owner's Manual L-4072 (11/07)

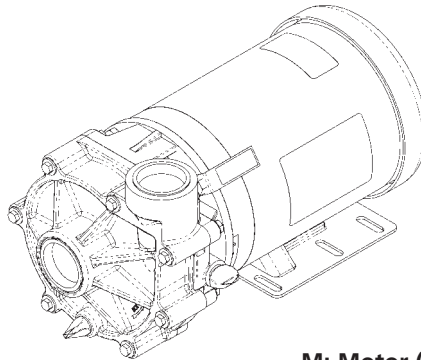
Corrosion-Resistant Close-Coupled Centrifugal Pumps

Noryl® Series and Polypropylene Series

Model Ordering Codes and Options



P: Pedestal

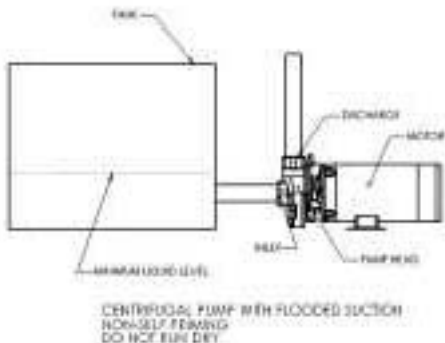


M: Motor (with base)

Example Model: CHMPB44 (1 HP ODP motor with >1.15 Service Factor*)
or **CHMPB45T** (1.5 HP TEFC motor with 1.0 Service Factor*)

(1) CH (2) M (3) P (4) B (5) 4 (6) 5 (7) T (8)

1st	2nd	3rd	4th	5th	6th	7th	8th
Series	Mounting	Material	Seal** (Mech)	Impeller Sz. (NPT Ports)	Motor-Mounted Only		Impeller Type
					HP	AC Type	
CH: Centrifugal High Head Closed Impellers (Open Impellers Optional)	M: Motor (with base) P: Pedestal	N: Noryl P: Polypropylene	A: Viton (Noryl Encased) B: Buna-N (Stainless Steel Case) C: Viton (Polypropylene Case) (Silicon Carbide Seal / Seat Faces) N: Neoprene (Polypropylene Case) (Ni-Resist Seat) P: Viton (Polypropylene Case) V: Viton (Stainless Steel Case) X: Viton (Noryl Case) (Silicon Carbide Seal / Seat Faces)	1 (1½" - 1½") 2 (1½" - 1½") 3 (1½" - 1½") 4 (1½" - 1½") 5 (1½" - 1½") 6 (1½" - 1½") <i>To identify your impeller size, see chart in owner's manual.</i>	1: 1/3 2: 1/2 3: 3/4 4: 1 5: 1½ 6: 2 7: 3 X: 56J Frame Motor "wet-end kit" Example: CHMNP1X	Blank: no code single phase ODP motor 3: 3 phase ODP motor T: 1 phase TEFC 3T: 3 phase TEFC	Blank: Closed O: Open Impellers (Polypropylene only)



NOTE: Not all order code combinations (configurations) are standard models available from the manufacturer. Custom model configurations may require ordering standard components and/or optional parts that will need to be assembled by the customer.

Manufacturer reserves the right to change model order codes, standard models, specifications and performance without notification.

(*) ODP motors have > 1.15 service factors. Due to service factor, it is recommended TEFC motors are oversized by one HP increment.
Pedestal Pumps are not supplied with a motor.

(**) Unless otherwise noted, seal faces are carbon on ceramic.

Source: Owner's Manual L-4072 (11/07)

Corrosion-Resistant Close-Coupled Centrifugal Pumps

Noryl® Series and Polypropylene Series

Performance – Standard Models (Water at 70°)

Model	HP**	3450 RPM Pump Driven Speed							Max. Head	
		GPM of water at Total Head in Feet*								
		10	20	30	40	50	60	70	80	
Noryl Models										
CHMNA1X	1/2	33	28	22	16	9	-	-	-	58
CHMNA2X	3/4	37	33	29	24	18	10	2	-	72
CHMNA3X	1	55	53	48	44	38	28	14	-	79
CHMNA4X	1½	85	78	73	66	59	50	41	21	89
CHMNA5X	2	96	89	83	77	68	58	47	31	91
CHMNA6X	3	123	115	106	97	86	76	63	48	95
Polypropylene Models										
CHMPB1X	1/3	33	28	22	16	9	-	-	-	58
CHMPB2X	1/2	37	33	29	24	18	10	2	-	72
CHMPB3X	3/4	55	53	48	44	38	28	14	-	79
CHMPB4X	1	85	78	73	66	59	50	41	21	89
CHMPB5X	1½	96	89	83	77	68	58	47	31	91
CHMPB6X	2	123	115	106	97	86	76	63	48	95

(*) Test data taken with water at 70°F for pumps with 60 hertz motors at 3450 RPM (to convert data to PSI, divide feet of head by 2.31). Pump performance when pump is new. As pump wears, the performance will decrease.

(**) AC HP required at specified RPM is HP rated to handle up to 100 SSU at full flow, with a maximum specific gravity of 1.1, or up to 200 SSU at 1.0 specific gravity or less.

NOTES: Max. Viscosity = For viscosity up to 400 SSU (at 1.0 specific gravity or less), increase motor HP by one size but not to exceed standard 3 HP motor at 3450 RPM or 65 in.lbs of torque. For fluids with a viscosity greater than 400 SSU, pump speed must be reduced below 3450 RPM.

Max. Casing PSI = 100 Max. RPM = 3450

Max. Specific Gravity = up to 1.1 for standard models (at 100 SSU or less); HP must be increased by one size for specific gravities up to 1.4.

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

Manufacturer reserves the right to change performance without notification.

Price List and Specifications (Pump heads only)

List Price	SUGGESTED DRIVER (Motor Not Included)					PUMP CONSTRUCTION (Wet End)				Ship Wt. (lbs.)	
	Model Number	HP	NEMA Frame	RPM	Shaft	Port Size NPT Female (Inlet and Outlet)	Housing & Body Adapter	Impeller	Seals*		
\$	Noryl Models										
	CHMNA1X	3/4	56J	3450	NA	1½"	Noryl	Noryl	Noryl/Viton**	4	
	CHMNA2X	3/4	56J	3450	NA	1½"	Noryl	Noryl	Noryl/Viton**	4	
	CHMNA3X	1	56J	3450	NA	1½"	Noryl	Noryl	Noryl/Viton**	4	
	CHMNA4X	1½	56J	3450	NA	1½"	Noryl	Noryl	Noryl/Viton**	4	
	CHMNA5X	2	56J	3450	NA	1½"	Noryl	Noryl	Noryl/Viton**	4	
	CHMNA6X	3	56J	3450	NA	1½"	Noryl	Noryl	Noryl/Viton**	4	
\$	Polypropylene Models										
	CHMPB1X	1/3	56J	3450	NA	1½"	PP	PP	Buna-N***	4	
	CHMPB2X	1/2	56J	3450	NA	1½"	PP	PP	Buna-N***	4	
	CHMPB3X	3/4	56J	3450	NA	1½"	PP	PP	Buna-N***	4	
	CHMPB4X	1	56J	3450	NA	1½"	PP	PP	Buna-N***	4	
	CHMPB5X	1½	56J	3450	NA	1½"	PP	PP	Buna-N***	4	
	CHMPB6X	2	56J	3450	NA	1½"	PP	PP	Buna-N***	4	

SS = Stainless Steel BR = Bronze CI = Cast Iron

(*) Standard shaft seals have carbon on ceramic faces.

(**) Seals are Noryl encased with Viton elastomer. No metallic components are exposed to fluid.

(***) Seal is not encased. 18-8 stainless steel spring and casing are exposed to fluid.

NOTE: Manufacturer reserves the right to change specifications without notification.

To Order Optional Motors

For custom applications or configurations, select a pump head from above and a 56J Frame motor or pedestal mount from the motor section of this catalog.

Source: Owner's Manual L-4072 (11/07)

Corrosion-Resistant Close-Coupled Centrifugal Pumps

Noryl® Series and Polypropylene Series

Price List and Specifications – Standard Models

List Price	Model Number	AC Motor HP	NEMA Frame	DRIVER				Hz	Thermal Overload Protection	RPM	Shaft	PUMP CONSTRUCTION (Wet End)				Ship Wt. (lbs.)	
				Motor Voltage	Full Load Amps	Service Factor Amps ****	Phase					Port Size NPT Female (Inlet and Outlet)	Housing & Body Adapter	Impeller	Seals*		
Noryl Models																	
\$	CHMNA12T	1/2	TEFC	56J	115/208-230	7.00/3.80-3.50	8.00/4.00	60	1	Yes	3450	303 SS	1½"	Noryl	Noryl	Noryl / Viton **	22
\$	CHMNA123T	1/2	TEFC	56J	208-230/460	1.87-1.70/0.85	1.90/0.95	60	3	No	3450	303 SS	1½"	Noryl	Noryl	Noryl / Viton **	23
\$					190/380	1.90/0.95	****	50	3	No	2830						
\$	CHMNA23T	3/4	TEFC	56J	115/208-230	9.80/5.40-4.90	10.6/5.30	60	1	Yes	3450	303 SS	1½"	Noryl	Noryl	Noryl / Viton **	30
\$	CHMNA233T	3/4	TEFC	56J	208-230/460	2.50-2.30/1.15	2.60/1.30	60	3	No	3450	303 SS	1½"	Noryl	Noryl	Noryl / Viton **	32
\$					190/380	2.70/1.35	****	50	3	No	2830						
\$	CHMNA34T	1	TEFC	56J	115/208-230	12.20/6.75-6.10	17.0/8.50	60	1	Yes	3450	303 SS	1½"	Noryl	Noryl	Noryl / Viton **	32
\$	CHMNA343T	1	TEFC	56J	208-230/460	3.20-2.90/1.45	3.40/1.70	60	3	No	3450	303 SS	1½"	Noryl	Noryl	Noryl / Viton **	33
\$					190/380	3.40/1.70	****	50	3	No	2830						
\$	CHMNA45T	1½	TEFC	56J	115/208-230	16.60/9.00-8.30	18.94/9.47	60	1	Yes	3450	303 SS	1½"	Noryl	Noryl	Noryl / Viton **	35
\$	CHMNA453T	1½	TEFC	56J	208-230/460	4.63-4.20/2.10	4.70/2.35	60	3	No	3450	303 SS	1½"	Noryl	Noryl	Noryl / Viton **	37
\$					190/380	4.90/2.45	****	50	3	No	2830						
\$	CHMNA56T	2	TEFC	56J	115/208-230	19.40/10.70-9.70	22.16/11.08	60	1	Yes	3450	303 SS	1½"	Noryl	Noryl	Noryl / Viton **	39
\$	CHMNA563T	2	TEFC	56J	208-230/460	5.92-5.36/2.68	6.00/3.00	60	3	No	3450	303 SS	1½"	Noryl	Noryl	Noryl / Viton **	40
\$					190/380	6.30/3.15	****	50	3	No	2830						
\$	CHMNA67T	3	TEFC	56J	208-230	13.3-12.2	****	60	1	Yes	3450	303 SS	1½"	Noryl	Noryl	Noryl / Viton **	53
\$	CHMNA673T	3	TEFC	56J	208-230/460	8.30-7.60/3.80	8.40/4.20	60	3	No	3450	303 SS	1½"	Noryl	Noryl	Noryl / Viton **	47
\$					190/380	6.20/3.10	****	50	3	No	2830						
Polypropylene Models																	
\$	CHMPB11	1/3	ODP	56J	115/208-230	7.20/4.00-3.60	8.68/4.78-4.33	60	1	Yes	3450	303 SS	1½"	PP	PP	Buna-N ***	21
\$	CHMPB22	1/2	ODP	56J	115/208-230	11.10/6.50-5.55	12.40/6.80-6.20	60	1	Yes	3450	303 SS	1½"	PP	PP	Buna-N ***	23
\$	CHMPB223	1/2	ODP	56J	208-230/460	1.85-1.85/0.92	2.53/1.27	60	3	No	3450	303 SS	1½"	PP	PP	Buna-N ***	24
\$					190/380	2.04/1.02	****	50	3	No	2830						
\$	CHMPB33	3/4	ODP	56J	115/208-230	13.00/7.20-6.50	15.30/8.45-7.65	60	1	Yes	3450	303 SS	1½"	PP	PP	Buna-N ***	26
\$	CHMPB333	3/4	ODP	56J	208-230/460	2.45-2.39/1.20	3.59/1.80	60	3	No	3450	303 SS	1½"	PP	PP	Buna-N ***	27
\$					190/380	2.88/1.44	****	50	3	No	2830						
\$	CHMPB44	1	ODP	56J	115/208-230	12.40/6.85-6.20	15.7/8.70-7.85	60	1	Yes	3450	303 SS	1½"	PP	PP	Buna-N ***	29
\$	CHMPB443	1	ODP	56J	208-230/460	3.17-3.11/1.55	4.07/2.03	60	3	No	3450	303 SS	1½"	PP	PP	Buna-N ***	28
\$					190/380	3.70/1.83	****	50	3	No	2830						
\$	CHMPB55	1½	ODP	56J	115/208-230	17.00/9.35-8.50	21.00/10.40-10.50	60	1	Yes	3450	303 SS	1½"	PP	PP	Buna-N ***	29
\$	CHMPB553	1½	ODP	56J	208-230/460	4.50-4.26/2.13	5.55/2.77	60	3	No	3450	303 SS	1½"	PP	PP	Buna-N ***	31
\$					190/380	5.18/2.59	****	50	3	No	2830						
\$	CHMPB66	2	ODP	56J	115/230	18.2/9.1	21.6/10.8	60	1	Yes	3450	303 SS	1½"	PP	PP	Buna-N ***	40
\$	CHMPB663	2	ODP	56J	208-230/460	5.80-5.20/2.60	6.20/3.10	60	3	No	3450	303 SS	1½"	PP	PP	Buna-N ***	38
\$					190/380	6.40/3.20	****	50	3	No	2830						

SS = Stainless Steel PP = Polypropylene

(*) Standard Shaft Seals have carbon on ceramic faces.

(**) Seals are Noryl encased with Viton elastomer. No metallic components are exposed to fluid.

(***) Seal is not encased. 18-8 stainless steel spring and casing are exposed to fluid.

(****) At 208 volts or 50 hertz, the Service Factor Amps are the same as the Full Load Amps.

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

All motors include a base (the base may be removable, movable or welded). Motors are not supplied with power cords.

Manufacturer reserves the right to change specifications without notification.

Standard motors listed above are not wash-down or explosion-proof (manufacturer does not stock wash-down or explosion-proof motors).

Thermal overload protection is standard on all single-phase motors (overload protector may have automatic or manual reset); three-phase motors are not provided with thermal overload protection.

Manufacturer does not specify regulatory compliance for UL, UR, CSA or CE; however most models do comply to UL, UR, CSA and CE.