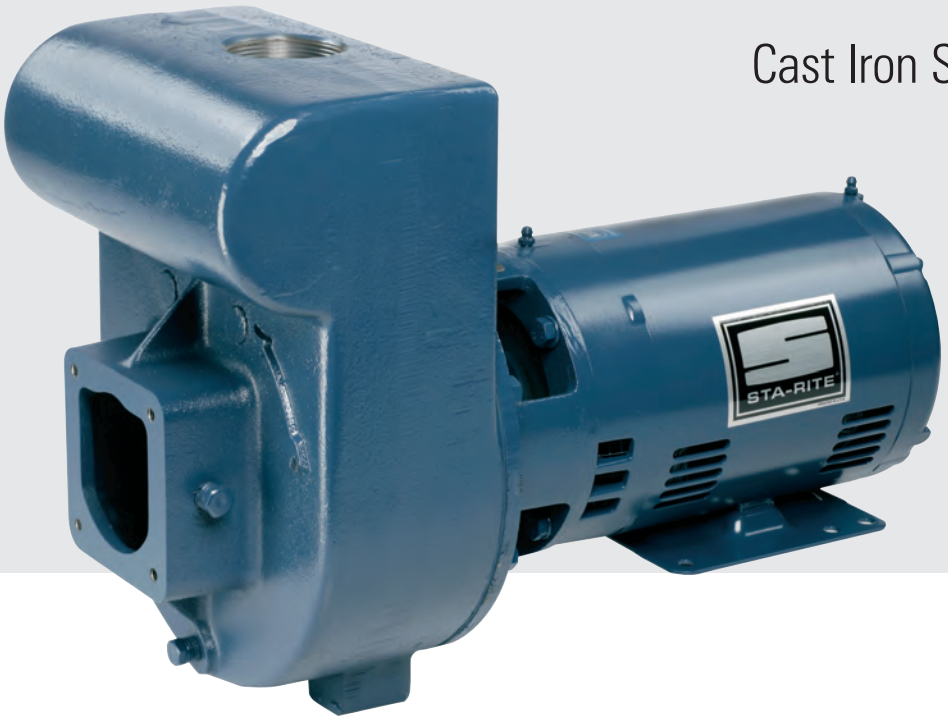
STA-RITE®

D Series™

Cast Iron Self-Priming Pump



A self-priming, high performance pump for semi-commercial and commercial swimming pools and spas.

D Series pumps are especially designed for commercial and public swimming pools and spas, aquatic facilities, water parks and fountain applications where high performance and self-priming characteristics are desired. These centrifugal pumps are available in high head and medium head models with motors from 3-5 HP to provide a complete range of performance characteristics. Motors are open drip-proof, continuous duty rated at 3450 RPM.

Standard Features

- Back pull-out design allows entire motor to be removed for servicing impeller, seal or motor without disturbing plumbing.
- Suitable for outdoor installation.
- Precision cast and machined bronze impeller is dynamically balanced for long seal life and quiet operation. Non-overloading.
- 200 Volt models available.
- 2", 2½" or 3" suction port and 1½", 2" or 2½" discharge port.

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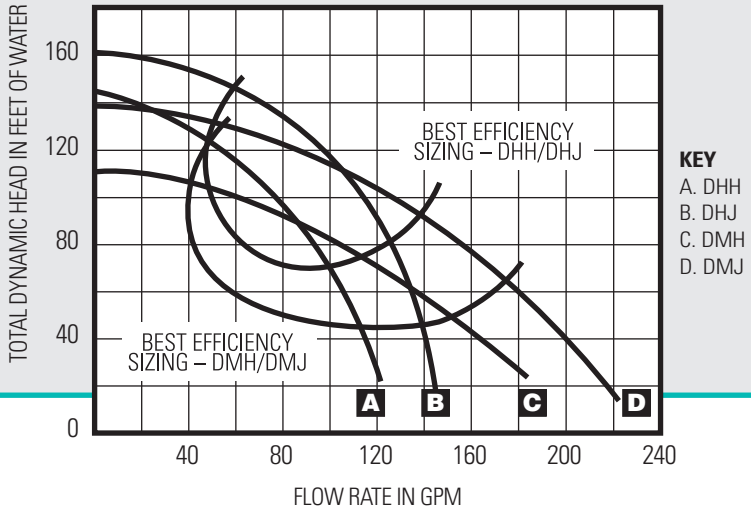
Performance Curves



KEY
A. DHH
B. DHJ
C. DMH
D. DMJ

For detailed efficiency curves for each model, please contact the factory.

MATERIALS AND DESIGN

Pump Body

- **Port Size**
  Single suction port: 2", 2½" or 3" NPT on centerline
  Discharge port: 1-½", 2" or 2½" NPT on centerline
  Winterizing drain port: ¼" NPT
- **Material**
  Close-grained grey iron

Impeller

- Silicon brass material; closed, non-overloading design

Shaft Seal

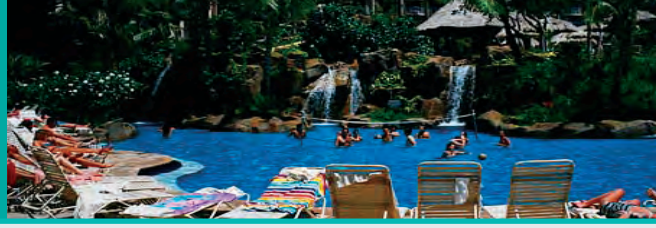
- Self-flushing, mechanical John Crane® Type 2. Ceramic and carbon seal faces. Stainless steel, brass and Buna N spring bellows.

Motor

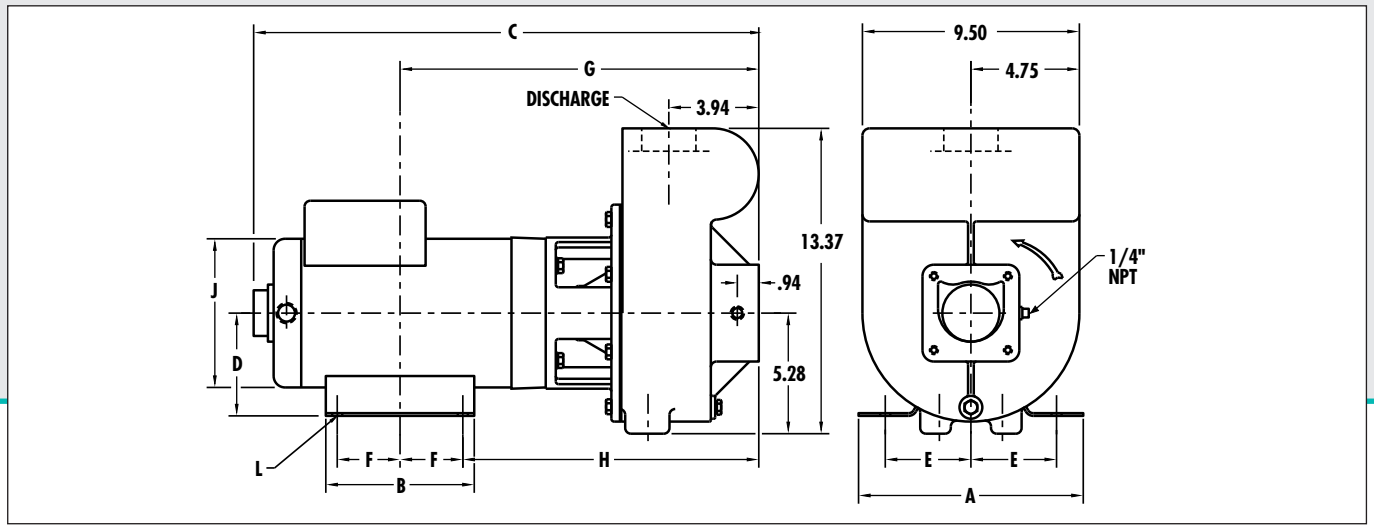
- **Frame Size**
  NEMA® Series, JM construction
- **Shaft**
  Carbon steel inside a 300 Series stainless steel sealed removable shaft sleeve
- **Design**
  3 or 5 HP, 3450 RPM, open drip-proof (unless otherwise specified), continuous duty rated. 40°C ambient maximum
- **Bearings**
  Permanently sealed ball type, pre-lubricated
- **Thermal Overload Protection**
  Single-phase motors: Automatic reset
  Three-phase motors: External thermal protection required

Maximum Limits

- Liquid temperature: 200°F
  Ambient air temperature: 104°F
  Pressure: 75 psi
  pH Range: 4.0-9.0



D Series Pumps



Outline Dimensions

Catalog Number	HP	Discharge (NPT)	A	B	C*	D	E	F	G	H	J	L
DHH	3	1½	8.75	6.50	21.37	4.50	3.75	2.25	15.21	12.96	6.51	.44 SLOT
DHH3	3	1½	6.50	6.50	19.87	3.50	2.75	2.50	14.45	12.20	6.51	.34 DIA.
DHJ	5	2	8.75	6.50	22.12	4.50	3.75	2.75	15.71	12.96	6.51	.44 SLOT
DHJ3	5	2	8.75	6.50	21.62	4.50	3.75	2.25	15.21	12.96	6.50	.44 SLOT
DMH	3	2	8.75	6.50	21.37	4.50	3.75	2.25	15.21	12.96	6.51	.44 SLOT
DMH3	3	2	6.50	6.50	19.87	3.50	2.75	2.50	14.45	12.20	6.51	.34 DIA.
DMJ	5	2½	8.75	6.50	22.12	4.50	3.75	2.75	15.71	12.96	6.51	.44 SLOT
DMJ3	5	2½	8.75	6.50	21.62	4.50	3.75	2.25	15.21	12.96	6.50	.44 SLOT

All dimensions shown in inches.

Ordering Information

Catalog Number	Nominal HP	Phase	Motor Voltage	Max. Load Amps	Wire Size to 50 Ft.	Discharge Port Size	Approx. Ship. Weight (lbs.)
MEDIUM HEAD							
DMH	3	1	230	17	12	2"	135
DMH3	3	3	230/460	10.6/9.6/4.8	14	2"	135
DMJ	5	1	230	28	8	2½"	178
DMJ3	5	3	230/460	16.8/15.2/7.6	12/14	2½"	178
HIGH HEAD							
DHH	3	1	230	17	12	1½"	135
DHH3	3	3	230/460	10.6/9.6/4.8	14	1½"	135
DHJ	5	1	230	28	8	2"	178
DHJ3	5	3	230/460	16.8/15.2/7.6	12/14	2"	178

NOTE: ALL PUMP MODELS require external overload protection. 3-phase models, and 5 HP single-phase, require a magnetic starter.
Dimensions and Max Load Amps may vary per motor manufacturer. The standard motor is made by Baldor.
Maximum ambient temperature: 104°F (40°C).
200 and 575 volt models available. Consult factory.

D Series™

Cast Iron Self-Priming Pump

ENGINEERING SPECIFICATIONS

- Recirculating pump shall be Sta-Rite model no. _____ self-priming centrifugal pump, _____ phase, 60 Hz.

General Notes

- Install pump in a cool, dry, well vented location away from pool heaters and chemical storage.
- Pump should be firmly mounted with pipe supported, to prevent vibration and undue operational noise.
- Allow 12" minimum clearance behind motor for servicing.
- Motor overheating may be caused by a voltage drop or excessive voltage. Be sure that wire size and voltage input is properly regulated.

Specifications

- The recirculating pump shall be a self-priming centrifugal design with a hair and lint strainer as shown in the plans.
- The pump body and seal plate shall be constructed of close-grained gray iron and close-coupled to an electric motor by means of an adaptor of the same material. The pump body shall have a single suction port with a four-bolt flange connection to the hair and lint strainer. A centerline discharge port of _____" NPT and a winterizing drain port of 1/4" NPT shall be a part of the design.
- The pump shall be a back pull-out design to allow servicing without disturbing piping. The pump shall have a cast iron diffuser to aid in priming and it shall contain a replaceable bronze wear ring for the impeller. The impeller shall be of the closed type and cast in red brass, non-overloading at any point on the performance curve. The mechanical shaft seal shall be a John Crane® type 2 or equivalent and constructed of ceramic and carbon seal faces, with stainless steel, brass and Buna N materials in the spring bellows portion. The impeller shall be secured to the motor shaft by means of a stainless steel key and locking screw into the end of the motor shaft. There shall be a shaft slinger made of neoprene to protect motor bearings from any seal leakage. The pump shall be capable of operating at up to 75 psi, 200°F continuous water temperature and within a pH range of 4 to 9.
- The electric motor coupled to the pump shall be of the NEMA® series JM construction with carbon steel shaft inside a removable shaft sleeve of 300 series stainless steel. The motor shall be of an open drip-proof design (unless otherwise specified) with permanently sealed ball bearings. Single phase motors shall have built-in thermal overload protection of the automatic reset type. Motors shall be continuous duty rated at 40°C or better, and be suitable for outdoor installation.
- The pump motor shall be a ___ HP, ___ phase, 60 Hz, 3450 RPM for service on a ___ volt electric supply. The pump shall be rated for ___ GPM at ___ TDH. The pump shall be tested and certified by a nationally recognized testing laboratory to conform to National Sanitation Foundation Standard 50.

Hair and Lint Strainer

- The pump strainer shall consist of a _____ (red brass/cast iron) body, cover with O-ring seal, threaded locking handles, and a strainer basket of _____ (ABS/perforated electro-polished stainless steel basket) material.
- The strainer body shall have _____ NPT threaded connections and mount directly to the pump body by means of a bolt, flange, and gasket seal, or 6" ANSI® 125 bolt flanged with fusion-bonded epoxy coating of Scotchkote® on all wetted cast iron surfaces unless specified for in-line mounting ahead of the pump. The strainer body shall have a removable drain plug for winterizing.
- The strainer basket shall be securely positioned below the suction inlet of the trap, with access for inspection and cleaning through a removable trap body lid. The trap body lid shall be secured by means of threaded locking handles. The strainer basket shall have perforations which in total area is equal to 6 times the open area of the suction pipe into the trap body inlet.
- The pump strainer shall be Sta-Rite Model No. _____ .

Pentair Water
Commercial Pool and Spa™

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