

# C SERIES<sup>®</sup>

## HIGH PERFORMANCE COMMERCIAL BRONZE PUMPS

FOR COMMERCIAL AND HIGH-END RESIDENTIAL SWIMMING POOLS AND OTHER WATER APPLICATIONS. AVAILABLE IN FLOWS TO 740 GPM AND FROM 5–20 HP.

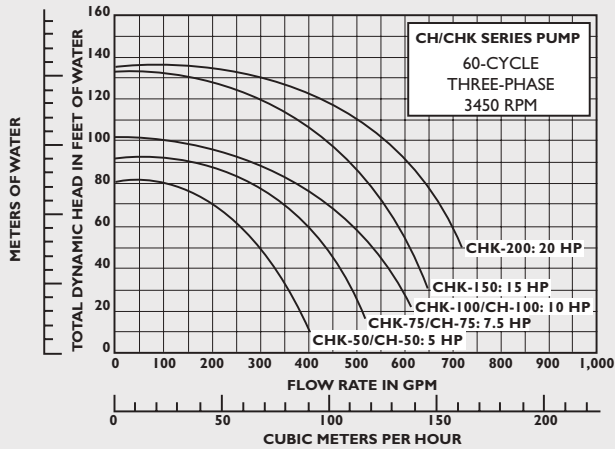
The C Series Pump is a heavy-duty pump specifically designed for large pools, fountains and water attractions that demand high flow rates and continuous operation. With bronze construction and a stainless steel strainer basket, the C Series Pump is perfect for the toughest indoor or outdoor projects. This pump's lasting efficiency, quiet operation, easy maintenance and durability have set the standard for medium- and high-head performance in the pool industry for many years. It is available with and without a hair and lint strainer.

### STANDARD FEATURES

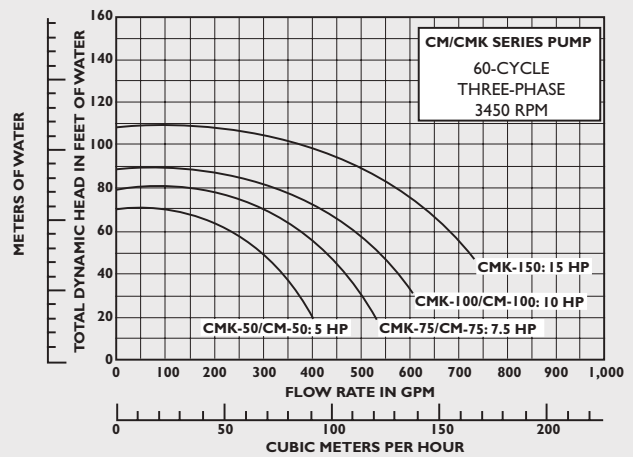
- All bronze construction for strength and durability.
- Close coupled for quiet, stable flow.
- Heavy-gauge stainless steel strainer basket, with open area five times the area of the suction port.
- 6-inch suction and 4-inch discharge for maximum efficiency with strainer.
- Closed impeller for longer motor bearing life.
- Heat-resistant seal for operation up to 150° F.
- Available in single- and three-phase 50 and 60 Hz models.
- 200/208 and 575 volt models available on request.
- One-year limited warranty. See warranty for details.



Pump Performance Curve CH/CHK Series Pump



Pump Performance Curve CM/CMK Series Pump



## MATERIALS AND DESIGN

### PUMP BODY

Volute type, back pullout design.

- **Port Size**
  - 6" - ANSI-rated 125 lb. bolted flange suction port on strainer.
  - 5" - ANSI-rated 125 lb. bolted flange suction port less strainer.
  - 4" - ANSI-rated 125 lb. bolted flange discharge port.
- **Material**
  - Volute and motor adapter.
  - Bronze CA 84400.
- **Impeller**
  - Bronze CA 83600.
- **Base**
  - Enamel-coated cast iron foot CL30.
- **Corrosion Prevention**
  - All-bronze pump with stainless steel basket for maximum corrosion prevention.

### HAIR AND LINT STRAINER

- **Material**
  - Strainer pot—bronze CA 84400.
  - Strainer—stainless steel.
- **Size**
  - 6" ANSI-rated 125 lb. bolted flange suction ports.

### PUMP MAXIMUM LIMITS

- Ambient air temperature: 104° F
- Liquid temperature: 104° F

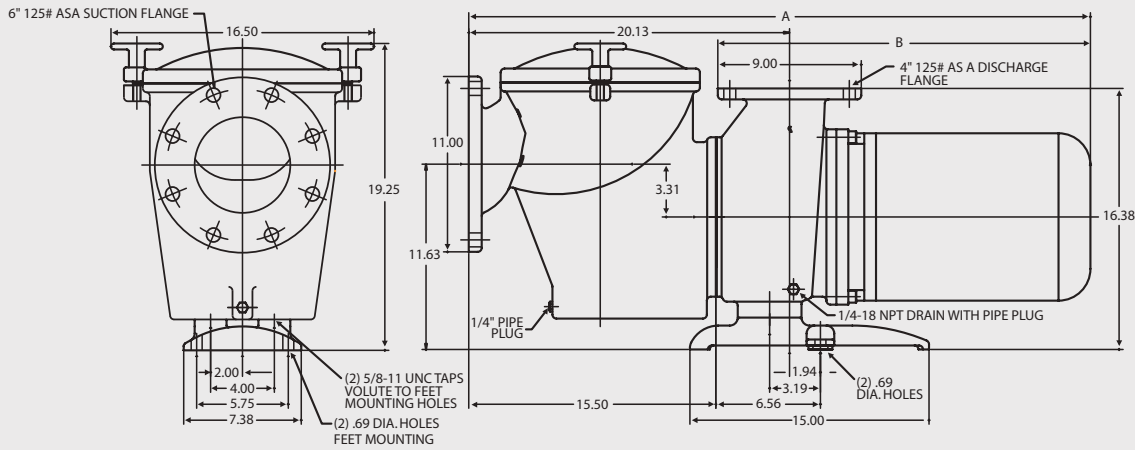
### MOTOR

TY frame motor.

- **Frame and Size**
  - NEMA-rated flange. 220/440V are open drip-proof design.
- **Shaft**
  - 303 stainless steel construction.
- **Design**
  - 5-20 HP, 3500 RPM, JM open drip-proof, continuous-duty, three-phase and single-phase (5, 7½, and 10 HP only).
- **Bearings**
  - Lubricated, double-sealed ball bearings.
- **Thermal Overload Protection**
  - All models require external thermal overload protector.

### ELECTRICAL

- **Power Supply Required**
  - Three-phase pumps are 208/220-440 and 200/208. 5 and 7½ HP single-phase pumps are available in 200-208v or 230v 60 Hz. 10 HP single-phase pumps are available in 230v 60 Hz only.



PUMP DIMENSIONS			
THREE-PHASE AMPS @ 220/440 & 380/415 V			
HP	AMPS	A	B
5	14	34.88	19.50
7.5	20	35.88	20.50
10	26	36.88	22.50
15	38	37.38	22.00
20	46	37.88	23.50

PUMP DIMENSIONS			
SINGLE-PHASE AMPS @ 230 VOLTS			
HP	AMPS	A	B
5	26	35.50	20.50
7.5	37	35.88	20.50

PUMP DIMENSIONS			
SINGLE-PHASE AMPS @ 200 VOLTS			
HP	AMPS	A	B
5	29	35.50	20.50
7.5	39.6	35.88	20.50

NOTES:  
 1. BOTH "A" AND "B" DIMENSIONS ARE APPROXIMATE AND CAN VARY BY MANUFACTURER.  
 2. ALL DIMENSIONS ARE IN INCHES AND MAY VARY ± .25.

## HIGH PERFORMANCE COMMERCIAL BRONZE PUMP

C Series Models With Hair and Lint Strainer

### CHK/CMK Three-Phase 200/208V 60 Hz<sup>3</sup>

Product	Model	Voltage	Amps	HP	Carton Wt. (lbs.)
347940	CMK-50	200/208V	16.1	5	336
347941	CHK-50	200/208V	16.1	5	336
347942	CMK-75	200/208V	22.3	7.5	346
347943	CHK-75	200/208V	22.3	7.5	349
347944	CMK-100	200/208V	28.7	10	374
347945	CHK-100	200/208V	28.7	10	376
347946	CMK-150	200/208V	43.7	15	396
347947	CHK-150	200/208V	43.7	15	398
347948	CHK-200	200/208V	54	20	474

### CHK/CMK Three-Phase 220/440V 60 Hz

011657	CHK-50	220/440V	13/6.5	5	336
011652	CMK-50	220/440V	13/6.5	5	336
011658	CHK-75	220/440V	18/4.92	7.5	349
011653	CMK-75	220/440V	18/4.92	7.5	346
011659	CHK-100	220/440V	25.3/12.7	10	376
011654	CMK-100	220/440V	25.3/12.7	10	374
011660	CHK-150	220/440V	37.6/18.8	15	398
011655	CMK-150	220/440V	37.6/18.8	15	396
011661	CHK-200	220/440V	49/24.6	20	474

### CH/CM Single-Phase 200/208V Only 60 Hz

347938	CM-50	200/208V	29.0	5	352
347939	CH-50	200/208V	29.0	5	352
348001	CM-75 <sup>1</sup>	200/208V	39.6	7.5	375
348005	CH-75 <sup>1</sup>	200/208V	39.6	7.5	375

### CH/CM Single-Phase 230V Only 60 Hz<sup>2</sup>

011651	CM-50	230V Only	24.0	5	352
011656	CH-50	230V Only	24.0	5	352
347916	CH-75	230V Only	37.0	7.5	375
347917	CM-75	230V Only	37.0	7.5	375
347963	CH-100	230V Only	51.0	10	376
347964	CM-100	230V Only	51.0	10	376

<sup>1</sup>Not NSF listed.

<sup>2</sup>208V not available.

<sup>3</sup>Full load amps shown.

# C SERIES®

## HIGH PERFORMANCE COMMERCIAL BRONZE PUMPS



### ENGINEERING SPECIFICATIONS

#### C SERIES PUMP

Recirculation pump shall be Pentair® C Series Model No. \_\_\_\_\_ centrifugal pump, \_\_\_\_\_ phase, 60 Hz.

#### INSTALLATION

- 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-inch 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 recirculation pump shall be a centrifugal design with a hair and lint strainer, as shown in the plans.
- The pump body and attached hair and lint strainer shall be constructed of noncorrosive bronze materials, 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 6-inch ANSI-rated 125-lb. bolted flange to the hair and lint strainer. A centerline discharge port of 4-inch ANSI-rated 125-lb. bolted flange and a winterizing drain port of ¼-inch NPT shall be a part of the design.
- The pump shall be a back pullout design to allow servicing without disturbing piping. The impeller shall be of the closed type and bronze materials, nonoverloading at any point on the performance curve. The mechanical shaft seal shall be 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. The pump shall be capable of operating at up to 50 psi, 104° F continuous water temperature.

- The electric motor coupled to the pump shall be of the NEMA rated series JM construction with stainless 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 double-shielded, single-row, deep-groove ball bearings. Motors shall be continuous-duty-rated at 40° C (or better) ambient 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 bronze body, bronze cover with O-ring seal, threaded locking bolts and a strainer basket of stainless steel.
- The strainer body shall be 6-inch ANSI-rated 125-lb. bolted flanged suction ports.
- The strainer body shall have a removable drain plug for winterizing.
- The strainer basket shall be securely positioned below the suction inlet of the strainer, with access for inspection and cleaning through a removable strainer lid. The strainer lid shall be secured by means of two T handle nut assemblies. The strainer basket shall have a perforation, which in total open area is five times the area of the suction port.



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