

# PRODUCT DIRECTORY

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# PENTAIR LIMITED WARRANTY

You've always been able to count on the quality and long service life of Pentair products. We use the very best standards of workmanship, materials and manufacturing processes to deliver value and peace of mind. Please review this document for details of general warranty terms and conditions and visit [www.pentair.com/warranty](http://www.pentair.com/warranty) for information regarding the coverage duration and any possible warranty exceptions for your specific pool and spa equipment. Pentair offers:

- **LIMITED WARRANTY:** Pentair warrants its products to be free from defects in material and/or workmanship for a period of sixty (60) days (parts only) from the original date of purchase and/or installation. Customer agrees to prepay all shipping charges to Pentair.
- **EXTENDED WARRANTY:** To receive a product extended warranty (longer than 60 days from the original date of installation), customer must:
  1. Register the product;
  2. Provide a copy of the sales receipt; and
  3. Provide a copy of the installation invoice, provided by the qualified installer, within 60 days of installation (if required). Certain products do not require qualified installation but still require product registration and copy of the sales receipt to receive the extended warranty.
- **TRADEGRADE WARRANTY:** TradeGrade products must be purchased from a retail store (brick and mortar), pool builder or pool service company. If purchased online (via internet) the product will only receive a sixty (60) day limited warranty.

## GENERAL WARRANTY TERMS AND CONDITIONS

**DENIAL OF WARRANTY CLAIM:** A warranty may be denied under the following circumstances:

1. Damage caused by careless handling, improper repackaging, or shipping.
2. Damage due to misapplication, misuse, abuse or failure to operate equipment as specified in the owner's manual.
3. Damage caused by failure to install products as specified in the owner's manual.
4. Damage due to unauthorized product modifications or failure to use Pentair original replacement parts.
5. Damage caused by negligence, or failure to properly maintain products as specified in the owner's manual.
6. Damage caused by failure to maintain water chemistry in conformity with the standards of the swimming pool industry for any length of time.
7. Damage caused by water freezing inside the product.
8. Accidental damage, fire, acts of God, or other circumstances outside the control of Pentair.

### PENTAIR WARRANTY OBLIGATIONS

Should a defect in workmanship and/or material in any item covered by this warranty become evident during the term of the warranty, then upon the customer following the procedures set forth below, Pentair will, at its sole option, repair or replace such product or part of equal value, in lieu of repair.

Pentair is not, however, responsible under this warranty for any cost of shipping or transportation of the product or parts thereof to or from the Technical Service Department. Also, Pentair is not liable for any loss of time, inconvenience, incidental expenses such as telephone calls, labor or material charges incurred in connection with the removal or replacement of the equipment, or any other incidental or consequential damages.

The above mentioned warranties are void if the product is repaired or altered in any way by any persons, agents or representatives other than those authorized by Pentair. Expendables including, but not limited to refrigerant, recovery of refrigerant, or transportation for components are not covered under this limited warranty. Reasonable vehicle trip and evaluation charges may be assessed by a Pentair service representative. Some states do not allow the exclusion or limitation of incidental or consequential damages, so the above limitation or exclusion may not apply to you.

All extended warranties are applicable to the original owner only, beginning on the date of installation and are not enforceable by any third party.

### WARRANTIES BY OTHERS

Some Pentair products incorporate components manufactured by other manufacturers. Some of these manufacturers provide warranties in addition to the warranty provided by Pentair herein. In all such cases, a copy of the third party manufacturer's warranty will be provided with the product. To the extent protection provided under any such third party warranty exceeds the Limited Warranty provided herein, the Customer will have to contact the specific manufacturer for the additional protection.

### NO OTHER WARRANTIES

To the maximum extent permitted by applicable law, Pentair disclaims all other warranties, either expressed or implied, including, but not limited to, implied warranties of merchantability and fitness for a particular purpose, with regard to the product(s), part(s) and/or any accompanying written materials.

### PROCEDURE FOR OBTAINING PERFORMANCE

In order to obtain the benefits of this warranty, the consumer who made the original retail purchase must contact the Pentair Technical Service Department as soon as possible after discovery of the product related issue, but in no event later than the expiration date of the respective warranty periods provided herein. Upon receipt of this communication, Pentair will promptly notify the customer of the address to which the product may be shipped. The customer shall then ship the product, freight prepaid, to the address indicated, together with a "RETURN GOODS AUTHORIZATION" form obtained from Technical Service and a brief description of the problems encountered. Unauthorized returns will not be accepted. Freight must be prepaid by customer.

### WARRANTIES OR REPRESENTATIONS BY OTHERS

No third party has any authority to make any warranties or representation concerning Pentair or its products. Accordingly, Pentair is not responsible for any such warranties or representations.

### OTHER RIGHTS

This warranty gives you specific legal rights and you may also have other rights, which vary from state to state.

### SOLE WARRANTY

Supersedes all previous warranty publications.

[www.pentair.com/warranty](http://www.pentair.com/warranty)

# TERMS AND CONDITIONS

1620 Hawkins Ave., Sanford, NC 27330 • (919) 566-8000  
 4 Jefferson Plaza, Ste 401, Poughkeepsie, NY 12601 • (845) 463-7200  
 10951 W. Los Angeles Avenue, Moorpark, CA 93021 • (805) 553-5000

**Ordering:** To ensure prompt and proper shipment, please order by product number and description. Orders must be placed via fax (877) 606-5457, email: ordereast@pentair.com or EDI. No telephone orders will be accepted. Products and prices are subject to change without notice.

Minimum Order: \$50.00

**Terms:** All sales are cash with order until credit is established. Merchandise will be invoiced at the prices in effect at the time of shipment. Terms are: Payments 1% 15 days, net 30 days. Term discounts apply only to accounts which are current.

**Returns:** All returns are subject to our written approval and must be accompanied by "Return Goods Authorization" form or number issued by us prior to returning the material. Unauthorized returns will not be accepted. Freight must be prepaid. (On International Returns Freight must be prepaid (to the door) by the person or entity returning the goods. Customs Duties and Taxes are covered by Pentair and cleared by our appointed Customs Broker, Expeditors International). Do not request authorization to return material for credit which has been in your inventory over sixty (60) days and which is not in original resalable condition. Material authorized to be returned for credit is subject to a minimum 15% handling charge.

**Shipments:** Any order over \$20,000 (\$3,000 parts only order, excluding motors) shipped at one time to one location in the continental United States will be shipped freight prepaid.

An expedited processing fee of 5% of the total order will be charged for orders requesting Same Day Shipment.

**Shipments (Cont'd):** All shipments are Ex Works from the Pentair Shipping Site (EXW for domestic orders, FCA for international), and are subject to product availability.

The following product lines DO NOT qualify for prepaid freight under this \$20,000 prepaid freight order policy. (These items must be purchased under a separate purchase order.)

- THS Series® Filters, Manifolds and Controllers
- Commercial Heaters 500,000 BTU and above
- Aurora® Pumps, Berkeley® Pumps, PS Series™ In-Line Strainers
- Acu Drive™ XS Variable Frequency Drives
- Stark Filtration Systems
- Acu-Trol® Blue Labeled Commercial Chemical Controllers
- AquaTRAM® - Access Lifts
- Paragon Deck Equipment
- BioShield® CVP/CLP UV systems

The Pentair "Parts Express Program" will remain in place. Call Customer Service for details.

**Claims:** All claims must be made within fifteen (15) days after receipt of merchandise. See "Lost or Damaged Goods" instructions below.

## LOST OR DAMAGED GOODS

### IMPORTANT:

Our responsibility for any shipment ceases when the carrier signs the Bill of Lading. Thoroughly inspect each shipment immediately upon arrival.

If cartons, packages, or crates are received in short or damaged condition, it is important that you notify the driver and insist on a notation of the loss or damage across the face of the delivery receipt; otherwise, no claim can be enforced against the carrier.

If concealed loss or damage is discovered, you must notify the carrier at once and request an inspection. It is also important that you do not discard the shipping carton or container. A concealed damage report must be made within fifteen (15) days of delivery of the shipment. If this is not done, the carrier will not entertain any claim for the loss. The carrier agent will make an inspection and usually will grant a concealed damage notation. If you give the carrier a clear receipt for the goods that have been damaged in transit, you do so at your own risk and expense.

We are willing to assist you in every possible manner to collect claims for loss or damage, but our willingness does not make us responsible for collection of claims or replacement of material.

### FOR INFORMATION OR ASSISTANCE CONTACT:

Pentair Aquatic Systems, Customer Service Department  
 (800) 831-7133 • fax (877) 606-5457 – U.S.A.

Sanford (919) 566-8000

(919) 566-8916 – International Department Fax

Poughkeepsie (845) 463-7200 • Fax (845) 463-7291

### PRODUCT DISCLAIMER:

All content in this publication is based on information available at the time of printing. Pentair Water Pool and Spa, Inc. reserves the right to make changes at any time, without prior notice, to product specifications, pricing, warranty terms, and to discontinue products or product components.

Pentair Aquatic Systems, a d/b/a of Pentair Water Pool and Spa, Inc.

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**PENTAIR**

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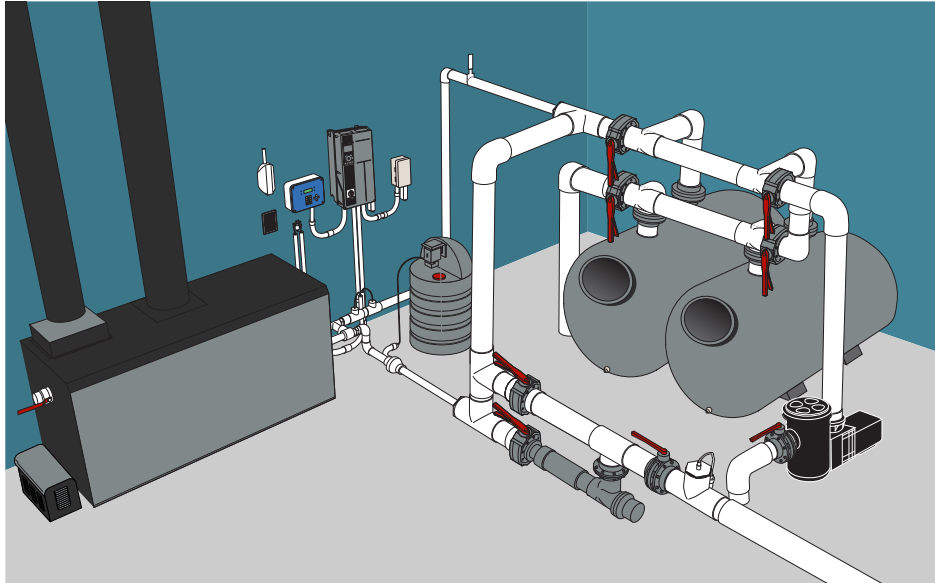
**INTEGRATION  
BY DESIGN**







# LARGE MECHANICAL ROOM COMPLETE SYSTEM SOLUTIONS



**1. EQ SERIES® PUMPS**  
Now with TEFC motors provide high performance efficiency.



**5. BIOSHIELD® UV SANITIZERS**  
Provide excellent secondary sanitizing system.



**2. THS SERIES® AND STARK FILTERS**  
Provide maximum filtration in proven technology.



**6. FILTER MANIFOLD KITS**  
Feature clear automatic diaphragm or butterfly valves.



**3. ACU DRIVE™ XS VFD**  
Optimize performance for your Commercial pumps.



**7. INTELLIBRITE® WHITE 5G LED LIGHTING**  
Creates energy savings and efficient lighting for large pools.



**4. COMMERCIAL INTELLICHEM® CHEMICAL CONTROLLER**  
Provide proper chemical management.



**8. POWERMAX® HEATERS**  
PowerMax heater provides peak efficiency in both indoor and outdoor applications to 2,000,000 BTU's.

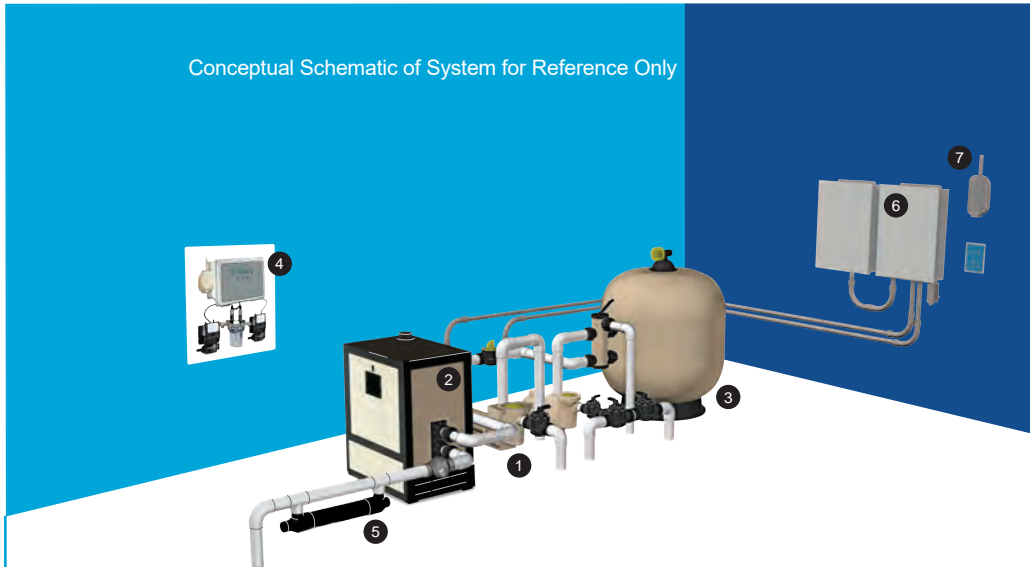
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PK20174

# SMALL MECHANICAL ROOM COMPLETE SYSTEM SOLUTIONS



Conceptual Schematic of System for Reference Only



**1. WHISPERFLOXF® VS PUMP**  
Energy savings up to 90% versus traditional pumps.\*  
WEF 5.0 THP 5.0



**6. INTELLITOUCH® & EASYTOUCH® AUTOMATION SYSTEMS**  
Superior programming and control of vital pool systems and accessories.



**2. MASTERTEMP® & ETI® 400 HEATERS**  
Best in class up to 96% Efficient.



**7. SCREENLOGIC® INTERFACE**  
Monitor and control key elements of a pool or spa directly from a mobile digital device and/or computer.



**3. TRITON® C SERIES SAND FILTER**  
High efficiency and easy maintenance in high capacity applications.



**INTELLIBRITE® 5G UNDERWATER LIGHTS**  
White LED lights create vibrant pool or spa environments with high energy efficiency. Color-changing models also available.



**4. COMMERCIAL INTELLICHEM® CHEMICAL CONTROLLER**  
24-hour control of water chemistry.



**COMMERCIAL INTELLICHLOR® & PENTAIR HIGH CAPACITY FEEDERS**  
Secondary sanitizer systems available for commercial settings where additional sanitization methods are required.



**5. BIOSHIELD® COMMERCIAL UV DISINFECTION SYSTEMS & HMAC SECONDARY WATER CONDITIONING SYSTEMS**  
Provide instant protection against cryptosporidium, giardia, chloramines while saving chlorine usage.

\* Savings based on variable speed pump compared to a single-speed pump running 12 hours per day at an average of \$0.16 per kWh in a 20,000 gallon pool. Actual savings may vary based on local utility rates, pool size, pump run time, pump horsepower, pump rpm, plumbing size and length, pump model, service factor and other hydraulic factors. All systems equipped with automated Emergency Shutoff switch (ESO).

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**AUTOMATION**







# ACU-TROL® COMMERCIAL CHEMICAL CONTROLLER



Acu-Trol Chemical Controller is the advanced choice for aquatic facilities worldwide. These efficient systems interface seamlessly to protect, monitor, and manage water chemical balance in aquatic environments and infrastructures. The Acu-Trol Chemical Controller is compatible with the commercial IntelliChlor® Salt Chlorine Generator, Pentair erosion feeder and/or liquid feed pumps.



**AK600**

### Featured Highlights

- AcuCom Software
- Multiple control for 1, 2, or 3 bodies of water
- Programmable pH, ORP and temperature set points
- Programmable proportional fee for precise chemical feed
- Programmable acid, CO<sub>2</sub> or base feed for pH control
- Relay configuration shortcuts with Acu-Trol Controller Wizards
- Auto backwash filters for up to two bodies of water
- Flow cell with built-in flow switch, shut-off valves, inlet strainer and sampling port
- 16 relays with three (3) voltage configurations

Part Number	Product Name	Description
<b>AK600 PUMP ROOM CONTROLLER</b>		
701000170	AK600PS-A1	Controller, AK600, 1 Body, pH, ORP, Temp, FC
701000180	AK600PS-A2	Controller, AK600, 2 Body, pH, ORP, Temp, FC
701000190	AK600PS-A3	Controller, AK600, 3 Body, pH, ORP, Temp, FC
701000230	AK600PS-D1	Controller, AK600, 1 Body, pH, ORP, Color, Temp, FC
701000240	AK600PS-D2	Controller, AK600, 2 Body, pH, ORP, Color, Temp, FC
701000250	AK600PS-D3	Controller, AK600, 3 Body, pH, ORP, Color, Temp, FC
711000040	AK600PS-W	Controller base only (no Flow Cel, sensor card or sensors)
701000740	AK600PS-Dual	Controller, AK600, 2 Body, Dual AKColor, pH, ORP, Temp, FC
<b>AK600 PUMP ROOM CONTROLLER WITH CONDUCTIVITY SENSORS</b>		
701000510	AK600PS-C2	Controller, AK600, 2 Body, pH, ORP, Conductivity, Temp, FC
701000710	AK600PS-E1	Controller, AK600, 1 Body, pH, ORP, Color, Conductivity, Temp, FC
701000720	AK600PS-E2	Controller, AK600, 2 Body, pH, ORP, Color, Conductivity, Temp, FC
701000730	AK600PS-E3	Controller, AK600, 3 Body, pH, ORP, Color, Conductivity, Temp, FC
<b>AK CO<sub>2</sub> SYSTEM</b>		
751000030		CO2 Low System 30 SCFH
751000040		CO2 System High Output 100SCFH CO2 High
751000050		CO2 System 30 SCFH NO REG AKCO2 NR Low
751002690	45MP525F30	Pump, 45MP, Fixed #5, 25PSI w/ Tank 30 Gal, UV Grey

For proper controller selection, application assistance, technical support, and pricing, please contact your local Pentair Representative or contact the factory at 800-831-7133.

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## ACU-TROL® (CONT'D) COMMERCIAL CHEMICAL CONTROLLER

Part Number	Product Name	Description
<b>TESTING EQUIPMENT</b>		
755000240	Duo Check	Test meter, pH/ORP input output
<b>SENSORS</b>		
744000260	AKpH-FB	Sensor, pH, Blue, BNC, Sensor Only
744000330	AKORP-FB	Sensor, ORP, Red, BNC, Sensor Only
744000390	AKORG-FB	Sensor, ORP, Gold Tip, BNC, Sensor Only
<b>STENNER PUMP AND TANK COMBINATION UNITS</b>		
751002600	ST15G	Storage Tank, Chem, 15 gal, UV Grey
751002610	ST30G	Storage Tank, Chem, 30 gal, UV Grey
751002670	45MP525F15	Pump, 45MP, Fixed #5, 25PSI w/ Tank, 15 Gal, UV Grey
751002690	45MP525F30	Pump, 45MP, Fixed #5, 25PSI w/ Tank 30 Gal, UV Grey

## PALINTEST POOLTEST 3 PHOTOMETER WATER TESTER

### Featured Highlights

- Tests for chlorine, pH and cyanuric acid
- Robust, waterproof, IP 67 rating
- Easy to use (4 intuitive buttons)
- Ideal for routine pool monitoring
- Narrow band wavelength filters
- Language free, universal symbol set
- Large backlit graphics display screen
- Longer cell pathlength; excellent resolution at low concentrations

Regular testing of pool water is essential for effective disinfection and pH control. The Palintest Pooltest 3 offers the ideal answer - a 3 parameter instrument which is quick, accurate and reliable.



Palintest  
Pooltest 3

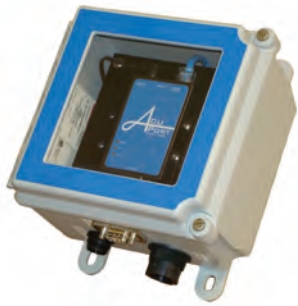
### Ordering Information

Product	Model	Description
<b>PALINTEST POOLTEST 3</b>		
522504	Palintest Pooltest 3	3 Instrument Cl, pH, CYA

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## ACUPORT™ WIRELESS COMMUNICATION COMMERCIAL CHEMICAL CONTROLLER



AcuPort Wireless Communication

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### Featured Highlights

- Ethernet, WiFi, or RS-422/485 connectivity options
- Interfaces with the AK110 and AK600
- Easy Windows based installation and configuration
- Dedicated communication with a single controller
- 120VAC power adapter
- Ready-to-use RS-232 serial cable
- Waterproof and corrosion-resistant, easy-to-install enclosures and connectors
- Bidirectional communication and control

### Ordering Information

Part Number	Product Name	Description
<b>ACUPORT CHEMICAL CONTROLLER</b>		
731000010	AP1000	AcuPort 1000 RS232 to Ethernet
731000020	AP1100	AcuPort 1100 RS232 to wireless or Ethernet

## AKCOLOR™ COLORIMETRIC CHEMICAL FEEDER COMMERCIAL CHEMICAL CONTROLLER



AKColor Colorimetric Chemical Feeder

### Featured Highlights

- Available in Single (compatible with AK110™ and AK600™) or Dual, compatible with AK600 multi-pool water chemistry sensor
- Measures free total and combined chlorine
- DPD colorimetric measurement technology
- Selectable sample rates
- Compatible with salt chlorine generators
- Interfaces with the AK110 and AK600
- Upgrades available

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### Ordering Information

Part Number	Product Name	Description
<b>AKCOLOR CHEMICAL FEEDER</b>		
741000000	AKCF *	AKColor Complete Free (Needs 615 Sensor Card)
741000010	AKCT *	AKColor, Total, Complete Free (Needs 615 Sensor Card)
741000030	AKDF *	AKColor, Dual Free (Needs 615 and 616 Sensor Card)

\* No Sensor Card

# COMMERCIAL INTELLICHEM® CHEMICAL CONTROLLER

## Featured Highlights

- Dual sanitizer support
- Programmable chemical feed cycle and mix times for precise water balance
- Assures safe water conditions by preventing excess chemical addition in a 24 hour period
- Built-in Langelier Saturation Index calculator lets you know when your water chemistry is perfectly in or out of balance
- Flow sensor ensures chemicals won't feed without system flow
- Password-protected access prevents tampering or accidental program change
- Use of ScreenLogic2® Interface on PC offers the ability to keep track of pH and ORP levels and make adjustments locally or remotely
- Compatible with IntelliChlor® Salt Chlorine Generators, external dosing pumps, and CO<sub>2</sub> systems
- Comes with #2 tube rated at 10gpd (larger tube sizes can be used)
- ScreenLogic® Interface for Commercial IntelliChem iOS® device is available on Apple® App Store®



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## Ordering Information

Product	Description	Application
<b>COMMERCIAL INTELLICHEM CHEMICAL CONTROLLER</b>		
522577	IntelliChem Commercial System - 1 pump <sup>1,2</sup>	Dual sanitization support w/standalone ScreenLogic remote PC connectivity. Pre-mounted and pre-wired on 2'x2' plastic backboard. Containers ordered separately. The 522577 Controller is ETL Listed to NSF 50 Standard
522578	IntelliChem Commercial System - 2 pumps <sup>1,2</sup>	Dual sanitization support w/standalone ScreenLogic remote PC connectivity. Pre-mounted and pre-wired on 2'x2' plastic backboard. Containers ordered separately. The 522578 Controller is ETL Listed to NSF 50 Standard
<b>INTELLICHEM CHEMICAL CONTROLLER ACCESSORIES</b>		
75100610	Stenner 10GPD External Pump <sup>1,2</sup>	10GPD Stenner pump for feeding liquid acid or chlorine
522650	Stenner 10GPD Pump Tube - 2 pk. <sup>1,2</sup>	10GPD Stenner pump tubes for every 6-month replacement
522651	Stenner 10GPD Pump Tube - 5 pk. <sup>1,2</sup>	10GPD Stenner pump tube for every 6-month replacement
523493	Stenner 50GPD Pump Tube #5 - 2 pk. <sup>1,2</sup>	50GPD Stenner pump tube for every 6-month replacement
523494	Stenner 50 GPD Pump Tube #5 - 2 pk. <sup>1,2</sup>	50GPD Stenner pump tube for every 6-month replacement

<sup>1</sup> Pentair always recommends 1:1 dilution when using full strength muriatic acid. When mixing, remember to always add acid to water.

<sup>2</sup> Pentair recommends replacing peristaltic pump tubes every 6 months.  
Note: Always try to position container off the equipment pad (if possible).

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# LX80 & LX820 SYSTEMS

## COMMERCIAL POOL/SPA CONTROL SYSTEMS

### TRADEGRADE



**LX802**

Designed for a commercial pool and spa application. Provides Remote Spa Jets switch (suitable for outdoor locations) with electronic countdown timer (15/30 minutes).

#### Featured Highlights

##### LX802 Commercial Pool/Spa Control System

- Emergency Shut-off Switch (disables all pumps)
- Audio Alarm
- Power Center available (with or without circuit breaker sub-panel) at the equipment site, features: mechanical time clocks for the Pool and Spa Filter Pumps, power relays (3) for Pool and Spa Filter Pumps and Spa jet Pump, electronic cool-down cycle for pool and spa heaters and equipment service switches

##### LX8202 Emergency Shut-off System

- Emergency Shut-off Switch
- Audio Alarm
- Power Center at the equipment site with equipment status lights and power relays (2) for Spa Filter Pump and Jet Booster Pump

### Ordering Information

Product	Circuits	Power Relays Std/Max	Circuit Breaker Capacity	Compatible Heaters	Voltage	Relay Amp Inductive
<b>LX80 &amp; LX820 COMMERCIAL POOL/SPA CONTROL SYSTEMS</b>						
LX802*	Pool Filter, Spa Filter, Jet1, Jet2	3 / 8	N/A	Gas/Elec/Solar/Heat Pump	115V/230V	20
LX8202	*Spa Filter, Jet1, Jet2	2 / 3	N/A	N/A	115V/230V	20

\* LX80 and LX820 systems standard relays included are 20 amp 2HP. Part number RLYLX3HP can be ordered if installing a 3HP pump.



**LX8202**

Designed for retrofitting commercial spas where an emergency shut-off switch is required.

Product	Description
<b>ACCESSORIES FOR LX80 COMMERCIAL POOL/SPA CONTROL SYSTEM</b>	
263045	Valve Actuator
RCS1	Additional Spa Jets Switch (for multiple jet pumps)
ES03	Emergency Shut-Off Switch w/Audible Alarm
RLYLX	Additional Power Relay (for auxiliary equipment)
RLYLX3HP	Additional 25 Amp, 3 HP Power Relay (for auxiliary equipment)
RYALX	Harness to operate 2 Power Relays from one control circuit
TS5L	Solar Temperature Sensor
<b>ACCESSORIES FOR LX8202 COMMERCIAL POOL/SPA CONTROL SYSTEM</b>	
RLYSC	Additional Power Relay (for second jet pump or filter pump)
RLYSC3HP	Additional 25 Amp, 3 HP Power Relay (for auxiliary equipment)

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# INTELLIVALVE® VALVE ACTUATOR

## TRADEGRADE

### Featured Highlights

- Thirteen (13) LEDs give precise, easy-to-read indication of valve position
- Built-in interface allows quick and simple set-up of water flow
- Sealed, maintenance-free design is weatherproofed for maximum reliability and extended service life
- Suitable for 1.5", 2", 2.5" and 3" valve sizes.
- 24-volt operation for use with standard automation systems, 750 mA max amp draw
- Adjustable 3.75-degree increments within the maximum 180-degree swing



**IntelliValve  
Valve Actuator**

The revolutionary IntelliValve Valve Actuator lets you set just the right flow for water features. Its intuitive controls and LED position indicator lights make operation fast and push-button easy. Thirteen (13) bright LEDs provide a clear visual indication of the valve position from fully open to fully closed and everywhere in between. Simply use the left/right and Save buttons to set the perfect flow rate in just seconds.

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### Ordering Information

Product	Description
<b>INTELLIVALVE VALVE ACTUATOR</b>	
521485	For any Pentair Automation System Compatible with control systems that use standard actuators

# VALVE ACTUATOR VALVE CONTROL SYSTEMS

### Featured Highlights

#### CVA24 Valve Actuator

- Helps Prevent dead-heading of pumps
- Corrosion-proof enclosure
- Service switch (for flow direction)
- ETL recognized
- UL listed for use with IntelliTouch® Automation
- Operates Compool, Ortega® or Jandy® Valves
- Compatible with all 24VAC Control Systems



**Valve Actuator**

Designed for use with 2-port and 3-port valves. Features maximum torque, 24VAC bi-directional motor.

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### Ordering Information

Product	Model	Voltage	Cable	Rotation	Compatibility	Motor
<b>VALVE ACTUATORS</b>						
263043	CVA24L	24 VAC	3-wire	90 deg.	2-port Compool/Ortega/Jandy Valves	Bi-directional
263044	CVA24Y	24 VAC	3-wire	120 deg.	3-port Compool PTV2Y Valve	Bi-directional
263045	CVA24T	24 VAC	3-wire	180 deg.	3-port Compool/Ortega/Jandy Valves	Bi-directional

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## SCREENLOGIC2® INTERFACE FOR INTELLITOUCH® AND EASYTOUCH® AUTOMATION SYSTEMS



Add ScreenLogic2 Interface to Pentair automation systems and gain pool access from practically anywhere at anytime using your smartphone, computer, mobile digital device, Apple Watch wrist wearable device, and Amazon Echo

### Featured Highlights

ScreenLogic2 Interface allows you to control the key functions of your pool and spa using the IntelliTouch and EasyTouch control systems, using controllers such as mobile devices, smart phones computers, Apple Watch® Wearable Device and now on the Amazon Echo®. The ScreenLogic Bundle (PN 522104) conveniently includes the Interface Kit for mobile devices, smart phones, computers and Apple Watch Wearable Device and the ScreenLogic Wireless Connection Kit.

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## INTELLITOUCH® AUTOMATION SYSTEMS ADVANCED AUTOMATION SYSTEMS FOR POOL AND SPA

### TRADEGRADE



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 Amazon Echo® is a registered trademark of Amazon Technologies, Inc., in the United States and/or other countries.

### Featured Highlights

IntelliTouch Automation offers superior control systems from small to the most ambitious pool and spa designs including water features and spectacular lighting effects. IntelliTouch Automation Systems offer innovative technology and a wide range of wireless and wired control panels that are easy to program with simple menus to enable pool owners to create and change programs without complication. Users can choose from mobile devices, smart phones computers, wearable devices or the MobileTouch® Wireless (900MHz) Control Panel to complete their pool and spa automation system.

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## EASYTOUCH® CONTROL SYSTEMS

### POOL/SPA CONTROL SYSTEMS

## TRADEGRADE

#### Featured Highlights

The EasyTouch Control System family offers a new level of control for homeowner's looking for an affordable, easy to use pool/spa control system. EasyTouch allows full control of all pool/spa features including advanced features such as colored lighting and IntelliChlor® Salt Chlorine Generator support. Every EasyTouch system includes an easy to use control panel that is built into the outdoor enclosure. This control panel allows for full system setup, programmability, and everyday operation. In addition, there are several other available remote interface choices. The EasyTouch systems come in a variety of configurations: Pool only or Spa only, Pool/Spa with shared equipment, and also integrated with Pentair IntelliChlor salt chlorine generator.



EasyTouch System



Mobile devices, smart phones, computers, Apple Watch® Wearable Device, and Amazon Echo®

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## EASYTOUCH® PL4/PSL4 CONTROL SYSTEMS

### POOL/SPA CONTROL SYSTEMS

## TRADEGRADE

#### Featured Highlights

The EasyTouch PL4/PSL4 Control Systems offers a new level of control for homeowner's looking for an affordable, easy to use pool/spa control system. EasyTouch PL4/PSL4 allows control pools with a smaller number of features including pumps, filters, lighting, water features, spa control, heaters and heat pumps, chemical control and sanitizing. The EasyTouch PL4 control system is a 4-circuit system, designed for a single body of water. The EasyTouch PLS4 is designed to control a pool/spa combination. Both options are available bundled with our ScreenLogic Interface Kit that allows for remote operation on mobile devices, smart phones computers and wearable devices; or right at the Power Center on the equipment pad. For more advanced features and up to 8 feature circuits, please see previous page for the EasyTouch Control System options.



EasyTouch PL4/PSL4 System



Note: EasyTouch PL4/PSL4 Systems use the power center enclosure that does not contain a breaker base.



Mobile devices, smart phones, computers, Apple Watch® Wrist-Wearable Device, and Amazon Echo®

For more information on Pentair Automation systems visit [www.pentairpool.com](http://www.pentairpool.com)



# GFCI CIRCUIT BREAKERS

## Featured Highlights

- Personnel Protection GFCI
- Meets 2008 to current NEC Standards for Pool Pumps
- Compatible with IntelliTouch and EasyTouch® Control Systems
- Works in any breaker base approved for use with Siemens® QPF style breakers
- Designed to protect personnel exposed to ground faults in AC, DC, and mixed AC/DC systems where levels exceed 6 milliamps



GFCI Circuit Breakers

## Ordering Information

Product	Description	Carton Qty.	Carton Wt (Lbs.)
<b>GFCI CIRCUIT BREAKERS</b>			
PA215GF	2-pole 15 amp GFC	10	11.50
PA220GF	2-pole 20 amp GFC	10	11.50

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**PENTAIR**

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**FILTERS**







# STARK™ SS SERIES FILTERS

## HORIZONTAL SAND FILTRATION SYSTEMS



6" Backwash Valve

### Featured Highlights

- All vessel models are NSF 50 listed
- End-manways provide easy access for service and maintenance
- Schedule 80 Face Piping is fully assembled in our factory for ease of installation
- Clear backwash valve (most models) provides for intuitive operation and troubleshooting
- Stark valves and several control options make backwashing simple
- Unparalleled tank construction and exterior all-weather coating

The Stark SS Series Filter Systems are designed with ease of installation, maintenance and minimal floor space in mind. Vessels are side-by-side, with manway access on the ends and all piping above the vessel(s). All piping ships fully solvent-welded and pre-assembled to ensure fit. 100 psi vessel pressure rating.

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### Ordering Information

CAPACITY INFORMATION												
# Tanks	*System Number	Tank Size	Filtration Area (Sq. Ft.)	Flow (GPM)		Backwash Valve Size/Type	'W'	'L'	'Hs'	Total Media (cu ft)	Operating Weight (lbs.)	Shipping Weight (lbs.)
				12 gpm/sf	15 gpm/sf							
1	RS1-60-04	36" x 60"	13.5	162	203	4" Gray	38"	63"	68"	15.5	4,600	845
	RS1-72-04	36" x 72"	17.2	206	258	4" Gray	38"	75"	68"	19.0	5,500	915
	SS1-48-04	42" x 48"	12.8	154	192	4" Gray	44"	51"	74"	16.5	4,900	805
	SS1-72-06	42" x 72"	20.0	240	300	6" Clear	44"	75"	86"	26.0	7,500	1,105
	SS1-96-06	42" x 96"	27.0	324	405	6" Clear	44"	99"	86"	36.0	9,800	1,240
2	RS2-60-06	36" x 60"	27.0	324	405	4" Gray	77"	63"	70"	31.0	9,400	1,650
	RS2-72-06	36" x 72"	34.4	413	516	4" Gray	77"	75"	70"	38.0	11,000	1,830
	SS2-48-06	42" x 48"	25.6	307	384	4" Gray	90"	51"	76"	33.0	10,000	1,650
	SS2-72-06	42" x 72"	40.0	480	600	6" Clear	90"	75"	87"	52.0	14,800	2,060
	SS2-96-06	42" x 96"	54.0	648	810	6" Clear	90"	99"	87"	72.0	19,400	2,380
3	RS3-60-06	36" x 60"	40.5	486	608	4" Gray	116"	63"	70"	46.5	14,200	2,420
	RS3-72-06	36" x 72"	51.6	619	774	4" Gray	116"	75"	70"	57.0	16,800	2,670
	SS3-48-06	42" x 48"	38.4	648	576	4" Gray	136"	51"	76"	49.5	14,900	2,420
	SS3-72-08	42" x 72"	60.0	720	900	6" Clear	136"	75"	88"	78.0	22,400	3,140
	SS3-96-08	42" x 96"	81.0	972	1215	6" Clear	136"	99"	88"	108.0	29,400	3,620
4	RS4-60-06	36" x 60"	54.0	648	810	4" Gray	155"	63"	70"	62.0	18,900	3,200
	RS4-72-08	36" x 72"	68.8	826	1032	4" Gray	155"	75"	76"	76.0	22,300	3,560
	SS4-48-06	42" x 48"	51.2	614	768	4" Gray	182"	51"	76"	66.0	19,900	3,200
	SS4-72-08	42" x 72"	80.0	960	1200	6" Clear	182"	75"	88"	104.0	30,200	4,470
	SS4-96-10	42" x 96"	108.0	1296	1620	6" Clear	182"	99"	88"	144.0	39,900	5,145
5	SS5-72-10	42" x 72"	100.0	1200	1500	6" Clear	229"	75"	88"	130.0	38,400	5,650
	SS5-96-10	42" x 96"	135.0	1620	2025	6" Clear	229"	99"	88"	180.0	49,900	6,450
6	SS6-72-10	42" x 72"	120.0	1440	1800	6" Clear	275"	75"	88"	156.0	46,000	6,800
	SS6-96-12	42" x 96"	162.0	1944	2430	6" Clear	275"	99"	97"	216.0	60,800	7,900

# STARK™ SS SERIES FILTERS (CONT'D)

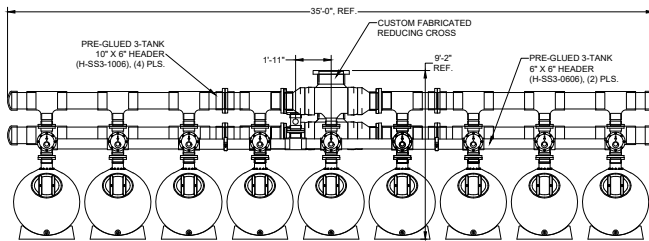
## HORIZONTAL SAND FILTRATION SYSTEMS

### Dimensions and Performance



Shell & Winding: Robust Dual-Wall Construction for piece of mind and long service life. Entire vessel including domes is wound on a computer-controlled, multi-axis machine.

Custom Systems Available for your Application.



#### SS Series Systems Include:

- Manway viewport standard on all Stark tanks
- Stark backwash valves (1 per tank)
- Pre-glued piping utilizing grooved couplings
- Stark diaphragm-style priority valve (on dual-tank systems)

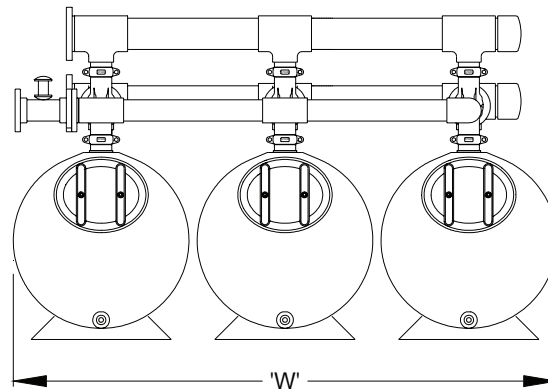
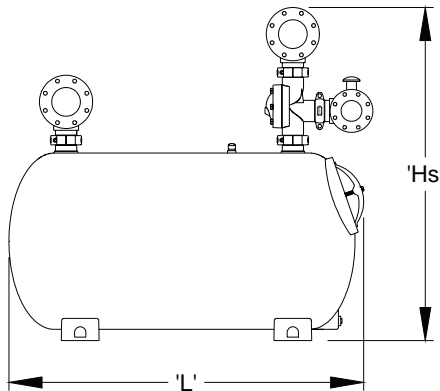
#### With Fully Automatic (CA100) Control Option

- Effluent Flow Sensor/Saddle
- Temperature Probe

#### Additional Adders

- Pressure Booster System (PBS01)
- Manual or Motorized Butterfly backwash
- Throttling valve for 3+ tank systems
- Advanced backwash controls

**Certified to  
NSF/ANSI Standard 50**



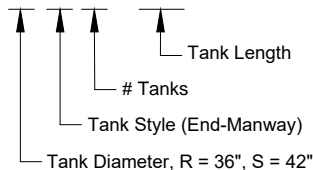
#### SS Series System Numbering

36" and 42" Dia. Vessels

Influent / Effluent Connection Size

Backwash Control: A = Auto (CA100),  
M = Manual (CM200), S = Semi (CS400)

**SS3-72A-06**



#### Notes:

1. Standard header sizing shown is based on 10 fps max. at 15 gpm per sq. ft.
2. For more dimensional detail, consult the appropriate Cut Sheet in our Design Manual.
3. For special requirements including non-standard header sizes / locations and systems consisting of more vessels than shown, please contact our Applications Engineering at PoolApplicationRFQ@pentair.com.

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# STARK™ S SERIES FILTERS

## HORIZONTAL SAND FILTRATION SYSTEMS



SB2-144M-08ST



SA2-144M-08

### Featured Highlights

- All vessel models are NSF listed
- Solid composite construction - does not employ a bladder
- Vessels can be stacked to minimize footprint. Designed for Seismic Zone 4 loading with additional supports or braces
- Vessels feature proprietary PARACOTE® All-Weather Exterior Coasting with UV Inhibitors
- Several backwash control options available
- Multiple influent and effluent pipe locations available - A, B and C style

**S Series Systems include:** Manway with Viewport standard on all Stark Tanks; Stark backwash valves (1 per tanks); Stark diaphragm-style priority valve (on dual-tank systems).

**Additional Adders:** Pressure Booster System (PBS01); Manual or Motorized Butterfly Backwash; Throttling Valve for 3+ tank systems; Advanced backwash controls.

**For use in commercial pool, water park, and many aquarium applications. Standard systems accommodate flows from 135 to 2,500 GPM - custom systems accommodate unlimited flows.**

All Stark S Series vessels are corrosion-proof, composite vessels. Systems are available with 100 psi rated filament-wound vessels. All vessels are 42" diameter to offer the best combination of cost and effectiveness for recreational water. Stark Diaphragm Valves and Controls are Standard; butterfly-valve options (including linked valves) are also available.

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### Ordering Information

CAPACITY INFORMATION (INDEPENDENT OF STYLE / CONFIGURATION)										DIMENSIONS - SIDE-BY-SIDE			
# Tanks	General System Number	Tank Size	Filtration Area (Sq. Ft.)	Flow (GPM) 12 gpm/sf	Flow (GPM) 15 gpm/sf	Backwash Valve Size/Type	Total Media (cu ft)	Operating Weight (lbs.)	Shipping Weight (lbs.)	Descriptive System Number	Single-Tank and Side-by-Side Systems		
											'W'	'L'	'Hs'
1	S1-48	42" x 48"	12.8	154	192	4" Gray	16.5	5,280	870	*SC1-48-04	44"	82"	47"
	S1-72	42" x 72"	20.0	240	300	6" Clear	26.0	7,920	1,110	*SA1-72-06	44"	107"	67"
	S1-96	42" x 96"	27.0	324	405	6" Clear	36.0	10,560	1,350	*SA1-96-06	44"	122"	67"
	S1-120	42" x 120"	35.0	420	525	6" Clear	45.5	13,200	1,590	SA1-120-06	44"	146"	67"
	S1-144	42" x 144"	41.0	492	615	6" Clear	55.5	15,840	1,830	SA1-144-06	44"	170"	67"
2	S2-48	42" x 48"	25.6	307	384	4" Gray	33.0	10,560	1,740	*SC2-48-06	96"	80"	56"
	S2-72	42" x 72"	40.0	480	600	6" Clear	52.0	15,840	2,220	*SA2-72-06	99"	92"	86"
	S2-96	42" x 96"	54.0	648	810	6" Clear	72.0	21,120	2,700	*SA2-96-06	99"	116"	86"
	S2-120	42" x 120"	70.0	840	1050	6" Clear	91.0	26,400	3,180	SA2-120-08	110"	144"	91"
	S2-144	42" x 144"	82.0	984	1230	6" Clear	111.0	31,680	3,660	SA2-144-08	110"	168"	91"
3	S3-48	42" x 48"	38.4	461	576	4" Gray	49.5	15,840	2,610	*SC3-48-06	152"	80"	56"
	S3-72	42" x 72"	60.0	720	900	6" Clear	78.0	23,760	3,330	*SA3-72-08	152"	94"	91"
	S3-96	42" x 96"	81.0	984	1215	6" Clear	108.0	31,680	4,050	*SA3-96-08	152"	117"	91"
	S3-120	42" x 120"	105.0	1260	1575	6" Clear	136.5	39,600	4,770	SA3-120-10	152"	138"	96"
	S3-144	42" x 144"	123.0	1476	1845	6" Clear	166.5	47,520	5,490	SA3-144-10	152"	162"	96"
4	S4-48	42" x 48"	51.2	614	768	4" Gray	66.0	21,120	3,480	*SC4-48-06	200"	80"	56"
	S4-72	42" x 72"	80.0	960	1200	6" Clear	104.0	31,680	4,440	*SA4-72-08	200"	94"	91"
	S4-96	42" x 96"	108.0	1296	1620	6" Clear	144.0	42,240	5,400	*SA4-96-10	200"	118"	96"
	S4-120	42" x 120"	140.0	1680	2100	6" Clear	182.0	52,800	6,360	SA4-120-10	200"	142"	96"
	S4-144	42" x 144"	164.0	1968	2460	6" Clear	222.0	63,360	7,320	SA4-144-12	200"	168"	100"



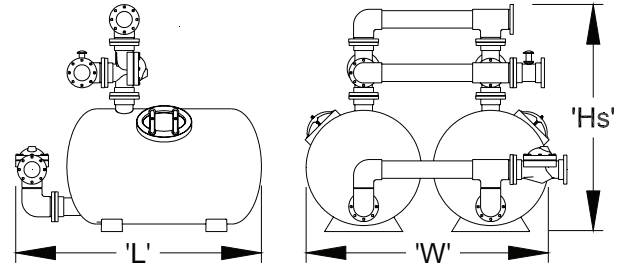
# STARK™ S SERIES FILTERS (CONT'D)

## HORIZONTAL SAND FILTRATION SYSTEMS

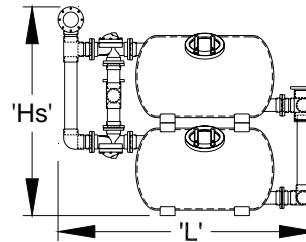
### Dimensions and Performance

**Certified to  
NSF/ANSI Standard 50**

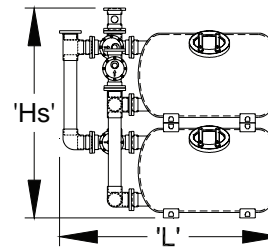
DIMENSIONS - STACKED SYSTEMS						
Style	# Tanks	Descriptive System Number	Filtration Area (Sq. Ft.)	'W'	'L'	'Hs'
Stacked Systems - B-Style	2	SB2-48-06ST	25.6	44"	98"	107"
		SB2-72-06ST	40.0	44"	135"	109"
		SB2-96-06ST	54.0	44"	159"	109"
		SB2-120-08ST	70.0	44"	191"	109"
		SB2-144-08ST	82.0	44"	215"	109"
Stacked Systems - B-Style	4	SB4-48-06ST	51.2	92"	99"	108"
		SB4-72-08ST	80.0	92"	140"	111"
		SB4-96-10ST	108.0	100"	166"	119"
		SB4-120-10ST	140.0	100"	190"	119"
		SB4-144-12ST	164.0	104"	217"	122"
Stacked Systems - C-Style	2	SC2-48-06ST	25.6	50"	80"	107"
		SC2-72-06ST	40.0	50"	114"	109"
		SC2-96-06ST	54.0	50"	138"	109"
		SC2-120-08ST	70.0	53"	165"	109"
		SC2-144-08ST	82.0	53"	189"	109"
Stacked Systems - C-Style	4	SC4-48-06ST	51.2	92"	88"	108"
		SC4-72-08ST	80.0	92"	122"	111"
		SC4-96-10ST	108.0	100"	146"	119"
		SC4-120-10ST	140.0	100"	169"	119"
		SC4-144-12ST	164.0	104"	193"	122"



A-Style Side-by-Side

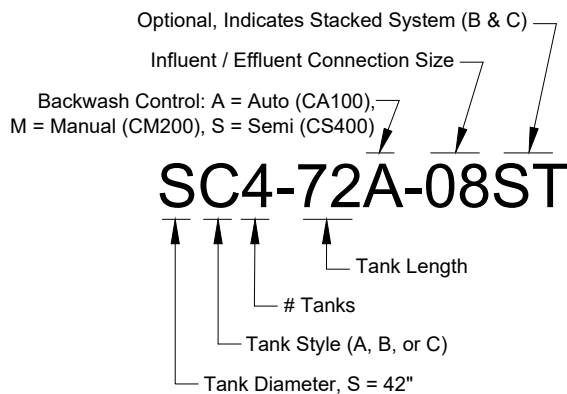


B-Style Stacked



C-Style Stacked

#### S Series System Numbering



#### Notes:

- Standard header sizing shown is based on 10 fps max. at 15 gpm per sq. ft.
- For more dimensional detail, consult the appropriate Cut Sheet in our Design Manual.
- S-48 Vessels are not available in A Style. Dimensions above represent C Style.
- For special requirements including non-standard header sizes / locations and systems consisting of more vessels than shown, please contact our Applications Engineering at PoolApplicationRFQ@pentair.com.

#### CALIFORNIA PROPOSITION 65 WARNING

⚠ **WARNING:** Cancer and Reproductive Harm.  
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 ⚠ **ADVERTENCIA:** Cáncer y Daño Reproductivo.  
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# STARK™ 5S SERIES FILTERS

## HORIZONTAL SAND FILTRATION SYSTEMS



5S4-50-12  
60" Dia. System

### Featured Highlights

- All vessel models are NSF listed
- Manway cover has integral viewport for internal filter observation
- Solid composite construction - does not employ a bladder
- Schedule 80 Face Piping is fully assembled
- Vessels feature proprietary PARACOTE® All-Weather Exterior Coasting with UV Inhibitors
- Vessels greater than 40 SF utilize an innovative 8" air-actuated backwash valve
- Several backwash control options available
- Butterfly-valve options including linked tandem valves are also available.

The 5S Series Filter Systems are designed as an extension to the industry-leading SS Series Filtration Systems, with many of the same features including fully-assembled Schedule 80 Face Piping, with the addition of new innovations. The 5S Series Filter Systems include the only 8" backwash valve in the industry, and air valve actuation for the smoothest, quickest valve movement.

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### Ordering Information

CAPACITY INFORMATION												
# Tanks	*System	Internal Tank	Filtration Area	Flow (GPM)	Flow (GPM)	Backwash Valve				Total Media	Operating Weight	Shipping Weight
	Number	Size	(Sq. Ft.)	12 gpm/sf	15 gpm/sf	Size/Type	'W'	'L'	'Hs'	(cu ft)	(lbs.)	(lbs.)
1	5S1-30-06	60" X 78"	30.0	360	450	6" Clear	62"	83"	106"	63.5	15,000	2,000
	5S1-35-06	60" X 90"	35.0	420	525	6" Clear	62"	95"	106"	74.3	17,000	2,300
	5S1-40-06	60" X 102"	40.0	480	600	6" Clear	62"	107"	106"	85.4	20,000	2,600
	5S1-45-08	60" X 114"	45.0	540	675	8" Gray	62"	119"	123"	96.4	23,000	2,900
	5S1-50-08	60" X 126"	50.0	600	750	8" Gray	62"	131"	123"	107.4	25,000	3,200
2	5S2-30-08	60" X 78"	60.0	720	900	6" Clear	128"	83"	111"	127.0	30,000	4,100
	5S2-35-08	60" X 90"	70.0	840	1,050	6" Clear	128"	95"	111"	148.6	35,000	4,600
	5S2-40-08	60" X 102"	80.0	960	1,200	6" Clear	128"	107"	111"	170.8	40,000	5,200
	5S2-45-08	60" X 114"	90.0	1,080	1,350	8" Gray	128"	119"	127"	192.8	45,000	5,700
	5S2-50-10	60" X 126"	100.0	1,200	1,500	8" Gray	128"	131"	133"	214.8	49,000	6,300
3	5S3-30-08	60" X 78"	90.0	1,080	1,350	6" Clear	194"	83"	111"	190.5	45,000	6,100
	5S3-35-10	60" X 90"	105.0	1,260	1,575	6" Clear	194"	95"	117"	222.9	53,000	6,900
	5S3-40-10	60" X 102"	120.0	1,200	1,800	6" Clear	194"	107"	117"	256.2	60,000	7,800
	5S3-45-10	60" X 114"	135.0	1,620	2,025	8" Gray	194"	119"	133"	289.2	68,000	8,600
	5S3-50-12	60" X 126"	150.0	1,800	2,250	8" Gray	194"	131"	135"	322.2	75,000	9,500
4	5S4-30-10	60" X 78"	120.0	1,440	1,800	6" Clear	260"	83"	117"	254.0	61,000	8,100
	5S4-35-10	60" X 90"	140.0	1,680	2,100	6" Clear	260"	95"	117"	297.2	70,000	9,200
	5S4-40-12	60" X 102"	160.0	1,920	2,400	6" Clear	260"	107"	119"	341.6	80,000	10,400
	5S4-45-12	60" X 114"	180.0	2,160	2,700	8" Gray	260"	119"	135"	385.6	92,000	11,500
	5S4-50-12	60" X 126"	200.0	2,400	3,000	8" Gray	260"	131"	135"	429.6	100,000	12,600

# STARK™ 5S SERIES FILTERS (CONT'D)

## HORIZONTAL SAND FILTRATION SYSTEMS

### Dimensions and Performance



#### 5S Series Systems Include:

- Manway viewport standard on all Stark tanks
- Stark backwash valves (1 per tank)
- Pre-glued piping utilizing grooved couplings
- Stark diaphragm-style priority valve (on dual-tank systems)

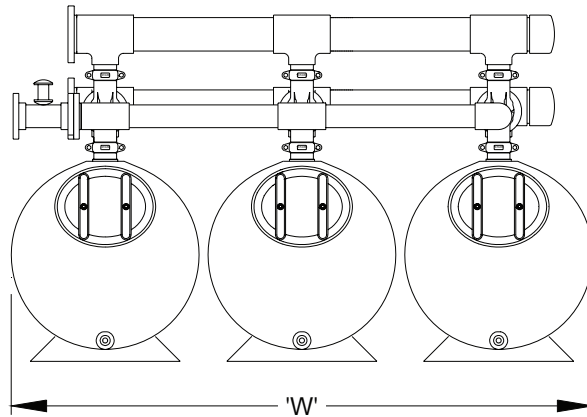
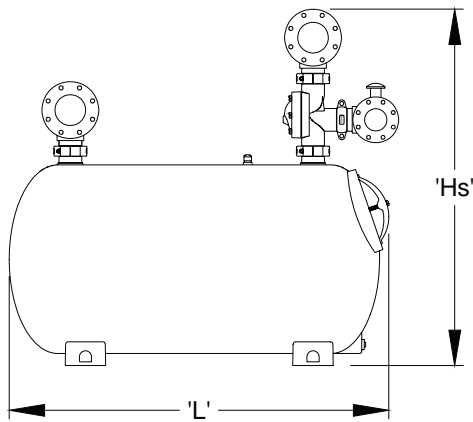
#### With Fully Automatic (CA100) Control Option

- Effluent Flow Sensor/Saddle
- Temperature Probe

#### Additional Adders

- Pressure Booster System (PBS01)
- Manual or Motorized Butterfly backwash
- Throttling valve for 3+ tank systems
- Advanced backwash controls

**Certified to  
NSF/ANSI Standard 50**



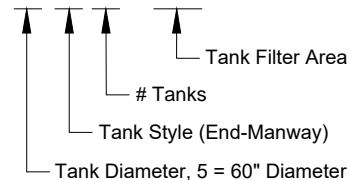
#### 5S Series System Numbering

60" Dia. Vessels

Influent / Effluent Connection Size

Backwash Control: A = Auto (CA100),  
M = Manual (CM200), S = Semi (CS400)

**5S3-50A-10**



#### Notes:

1. Standard header sizing shown is based on 10 fps max. at 15 gpm per sq. ft.
2. For more dimensional detail, consult the appropriate Cut Sheet in our Design Manual.
3. For special requirements including non-standard header sizes / locations and systems consisting of more vessels than shown, please contact our Applications Engineering at PoolApplicationRFQ@pentair.com.

#### CALIFORNIA PROPOSITION 65 WARNING

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# STARK™ FILTERS

## BACKWASH OPTIONS AND ADDITIONAL FEATURES



Multiport Gauge Panel

### CM200 Manual Backwash Controller (Backwash Option "M")

This is the simplest option. No electronics or programming required; simply turn the knob to backwash each tank in the system.



### CS 400 Semi-Auto Backwash Controller (Backwash Option "S")

This controller is programmable and controls every aspect of the backwash cycle once initiated. Backwash can be initiated three ways: by an operator with the touch of a button, by a signal from a master controller (such as the AK600), or by a signal from an optional differential pressure switch (CS400-DP). Stored backwash data and history, alarms, and calculated backwash cycle times are also features of the CS400 controller, as are relays for communication with the heater, pump and Acu Drive.

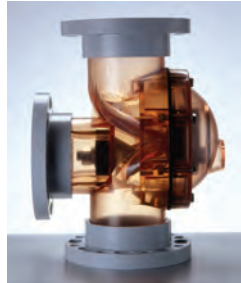


### CA 100 Automatic Backwash Controller (Backwash Option "A")

This is the most comprehensive backwash controller and can be readily reprogrammed to initiate backwash automatically based on differential pressure (integral pressure transducers are standard), time (internal seven-day clock with battery back-up is standard), flow (with optional flow sensor), or any combination of the above. The controller has real-time display of operation mode, filter flow rate, and water temperature (with optional temperature probe). Also, includes Energy Saver Mode for simple On/Off pump scheduling and various interlocks and relays to communicate with other equipment (pump, heater, Acu Drive).

### Stark Diaphragm Backwash Valves

Cost-effective backwash control both manual and automatic. 6" version (on most models) includes a transparent valve housing and cover to display position and convenient maintenance inspections.



### Manway Viewport

Standard on all Stark Filters.



### Butterfly Valve Systems

Single Lever Linkage (Backwash Option "SL": Single-Tank Systems Only - tank is backwashed by the throw of a single lever); and Tandem Butterfly Valve Configurations (Backwash Option TM; Multiple Tank Systems - each Stark backwash valve is replaced by a linked pair of butterfly valves.



2" Threaded Laterals

### Superior Commercial Lateral:

2" NPT injection molded ABS with "V" groove slots and reinforcing ribs for best performance and service life. Also used on THS Series Filters.

### Optional Pressure Booster System (PBS01)

Provides consistent valve-actuation where city water pressure is unreliable.



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# STARK™ AQ SERIES™ FILTERS

## LARGE DIAMETER SYSTEMS & VESSELS

### Stark AQ Series Filters

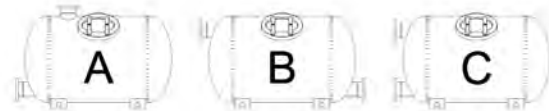
48" and 60" Diameter Stackable Horizontal Filters are available as complete filtration systems. The Stark AQ Series Filters are ideal for high-load or large flows of water such as water parks and public aquariums. NSF-50 Listed. 75 psi pressure rating.

Vessel Model Number	Available Styles*	Filtration Area (sq ft)	Internal Diameter (feet)	Internal Length (feet)	Standard Flange Size (ANSI)
AQ SERIES VESSEL SIZING AND CAPACITY INFORMATION					
4X6	A, B, C	22	4.0	6.0	6"
4X8	A, B, C	30	4.0	8.0	6"
4X10	A, B, C	38	4.0	10.0	6"
4X12	A, B, C	46	4.0	12.0	8"
4X14	A, B, C	54	4.0	14.0	8"
5X8	A, B, C	37	5.0	8.0	8"
5X10	A, B, C	47	5.0	10.0	8"
5X12	A, B, C	57	5.0	12.0	8"
5X14	A, B, C	67	5.0	14.0	8"
5X16	A, B, C	77	5.0	16.0	8"



**Certified to NSF/ANSI Standard 50**

Stark AQ Series Sand Filter



\*Styles B and C are stackable. All are available with the manway on the other side (reverse manway).

# STARK™ V SERIES™ FILTERS

## HIGH LOAD VERTICAL FILTERS

### Stark V Series Filters

Deep-Bed Filters provide "plug-flow" for extreme load applications such as sea-water intake, mammal and marine mammal exhibits. They are also frequently used as carbon (GAC) filters.

Vessel Model Number	Style	Filtration Area (sq ft)	Internal Diameter (feet)	Internal Height (feet)	Standard Flange Size (ANSI)
V SERIES VESSEL SIZING AND CAPACITY INFORMATION					
V3672	Vertical	7.1	3.0	6.0	3"
V4272	Vertical	9.6	3.5	6.0	3"
V4872	Vertical	12.6	4.0	6.0	4"
V6072	Vertical	19.6	5.0	6.0	6"
V72	Vertical	28.3	6.0	8.8	6"
V96	Vertical	50.3	8.0	9.5	6"



Stark V Series Sand Filter

### Optional Integral Insulation

Any Stark Filter can be manufactured with integral insulation between the shell and winding layers to last as long as the vessel. Used for both cold water and warm water life support applications when filters are installed where a high differential exists between water and ambient air temperature. For sizing assistance on AQ and V Series filters, contact us at [PoolApplicationRFQ@pentair.com](mailto:PoolApplicationRFQ@pentair.com)



Insulated Vessel at Start of Winding

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**Certified to NSF/ANSI Standard 50**

# THS SERIES® HORIZONTAL SAND FILTER



THS Horizontal Sand Filter

## Featured Highlights

- Five sizes to 27 sq. ft.
- Manway in front for easy access and smaller footprint
- Manway with viewport available as option
- 6 in. flanged connections, 4 in. groove connection on the THS 3461
- Optional manual, semi-automatic, and automatic backwash systems for one and two tank systems
- Three backwash controllers to choose from
- Influent manifold distribution to prevent clogging
- NSF approved from 5–20 gpm/sq. ft.

The THS Series Filter is an NSF-approved 50 psi rated tank with flow rates up to 535 gallons per minute. The filter shell is manufactured from a lasting composite laminate design that makes winding unnecessary. Paracote®, a waterbased, environmentally-friendly coating, provides remarkable surface protection.

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## Ordering Information

Product	Model	Description	Effective Filtration Area (Sq. Ft.)	Flow Rate (15 GPM/ Sq. Ft.)	6 Hour Turnover Capacity (In Gallons)	Filter Media		All Sand Required (Lbs.)	Carton Wt. (Lbs.)
						Pea Gravel Required (Lbs.)	Sand Required (Lbs.)		
<b>THS HORIZONTAL FILTER</b>									
143461*	THS3461	THS 34 in. x 61 in.	13.5	203	73,080	300	1250	1550	550
143484	THS3484	THS 34 in. x 84 in.	19.0	285	102,600	600	1350	1950	610
144272	THS4272	THS 42 in. x 72 in.	19.7	295	106,200	500	2100	2600	650
144284	THS4284	THS 42 in. x 84 in.	23.2	348	125,280	600	2400	3000	725
144296	THS4296	THS 42 in. x 96 in.	26.7	400	144,000	700	2800	3500	800

\*Requires Pentair Face Piping or Adapter Kit unless mating into existing piping with 4" grooved couplings (by others)

### CONTROLLERS (MUST USE WITH DIAPHRAGM VALVES MANIFOLD KITS)

156400	Single THS manual controller 6 in. FP	156850	Single THS CA100 autobackwash controller
156450	Dual THS manual controller 6 in. FP	CS400-01	CS400 backwash controller for single tank system
156800	Dual THS CA100 autobackwash controller	CS400-02	CS400 backwash controller for dual tank system



Multiport Gauge Panel

**CM200 Manual Backwash Controller**  
This is the simplest option. No electronics or programming required. Simply turn the knob to backwash each tank in the system.



**CS 400 Commercial Backwash Controller**  
This controller is programmable and controls every aspect of the backwash cycle once initiated. Backwash can be initiated three ways: by an operator with the touch of a button, by a signal from a master controller (such as the AK600), or by a signal from an optional differential pressure switch (CS400-DP). Stored backwash data and history, alarms, and calculated backwash cycle times are also features of the CS400 controller, as are relays for communication with the heater, pump and Acu Drive.



### CA 100 Fully Automatic Backwash Controller

This is the most comprehensive backwash controller and can be readily reprogrammed to initiate backwash automatically based on differential pressure (integral pressure transducers are standard), time (internal seven-day clock with battery back-up is standard), flow (with optional flow sensor), or any combination of the above. The controller has real-time display of operation mode, filter flow rate, and water temperature (with optional temperature probe). Also, includes Energy Saver Mode for simple On/Off pump scheduling and various interlocks and relays to communicate with other equipment (pump, heater, Acu Drive).



# THS SERIES® HORIZONTAL SAND FILTER (CONT'D)

MANIFOLD KITS	
155700	THS single tank manifold kit with butterfly valves <sup>3,7</sup>
155720	THS dual tank manifold kit with butterfly valves <sup>3,7</sup>
155701	THS single tank 6 in. FP kit with diaphragm valves <sup>6</sup>
155721	THS dual 34 x 84 in. 6 in. FP kit with diaphragm valves <sup>6</sup>
155730	THS dual 42 in. dia. 6 in FP Kit with diaphragm valves <sup>6</sup>
MANIFOLD KITS FOR THS 34 X 61 ONLY	
155702	Kit-THS3461, single tank manifold, with butterfly valve kit <sup>3</sup>
155722	Kit-THS3461, dual tank manifold, with butterfly valve kit <sup>3</sup>
155703	Kit-THS3461, single tank manifold, with diaphragm valve kit <sup>6</sup>
155723	Kit-THS3461, dual tank manifold, with diaphragm valve kit <sup>6</sup>

ACCESSORIES	
140325	Adder kit for third THS Filter <sup>2</sup>
143461ADP	THS3461 Grooved coupling adder kit
156100	Temperature probe kit <sup>4</sup>
156150	Flowmeter saddle kit 6 in. <sup>4</sup>
155800	WA-KIT wedge anchor kit <sup>1</sup>
155705	Manway with Viewport upgrade - at time of purchase
155706	Manway with Viewport Retrofit Kit - replace existing in field
CS400DP	Mounted differential pressure switch <sup>5</sup>
B4110	120v to 24v 100w transformer
B4221KIT	Gauge Panel Kit Influent/Effluent gauge

<sup>1</sup> One each per tank purchased if required.

<sup>2</sup> Adder Kit provides 6 in., SCH 80 manifold piping, fittings and hardware for the addition of a third THS filter of equal diameter only when #155720 Dual-Filter Butterfly Valve Face Piping Kit is used. Note: Using a 6 in. Schedule 80 plumbing kit with flows in excess of 812 GPM exceeds the maximum water velocity recommended in ANSI/NSPI-1 2003 Standard for Public Swimming Pools. For higher flows, summary calculations should be provided to show that the greater flow is possible with the pump and piping provided.

<sup>3</sup> Does not require a purchase of a controller.

<sup>4</sup> Only used with CA100 controller option.

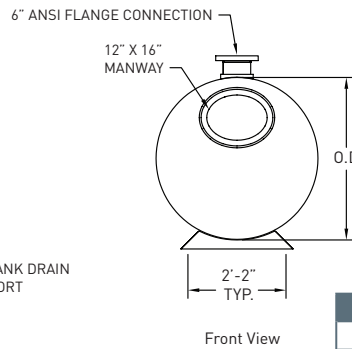
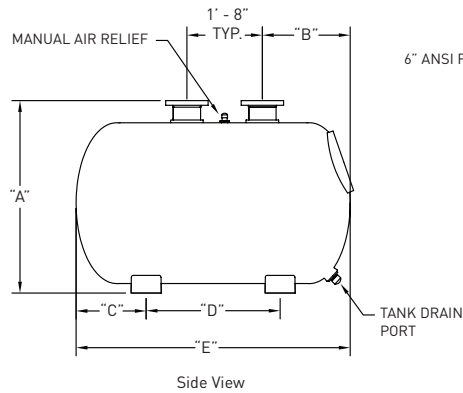
<sup>5</sup> Only available with CS400 controller.

<sup>6</sup> Does require a purchase of a controller.

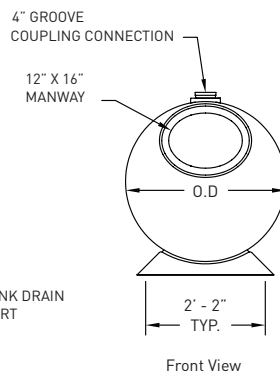
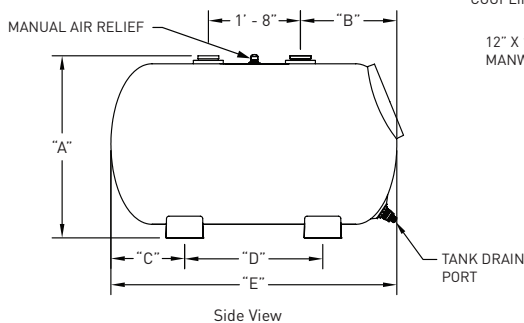
<sup>7</sup> For use on 42" Dia THS Tanks and 34"x 84" only.

## Dimensions and Performance

**Certified to  
NSF/ANSI Standard 50**



### THS 34 X 61



THS SERIES SPECIFICATION CHART							
Model	Tank Dimensions						WT
	"A" in.	"B" in.	"C" in.	"D" in.	"E" in.	"O.D." in.	
THS3461	39-1/2	21	16	30	62	35	550
THS3484	45	21-1/4	24-5/8	35-1/4	85	35	610
THS4272	52-1/4	23-1/4	18-7/8	35-1/4	73	43	650
THS4284	52-1/4	23-1/4	24-7/8	35-1/4	85	43	725
THS4296	52-1/4	23-1/4	30-7/8	35-1/4	97	43	800

NSF-approved for 5–20 gpm/sq. ft.

**\* 4 IN. VICTAULIC ON THS 3461 ONLY**

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# TRITON® HD SIDE MOUNT FILTERS

## HEAVY-DUTY FIBERGLASS SAND FILTER WITHOUT VALVES

### TRADEGRADE

Triton HD Filter  
(Unions not included)



#### Featured Highlights

Maximum Operating Pressure 75 psi

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All the same great performance and features of the original Triton filter with maximum operating pressure of 75 psi for those special high pressure installations such as single pump in-floor cleaning systems.

### Ordering Information

Product	Model	Effective Filtration Area (Sq. Ft.)	Flow Rate (GPM Res) <sup>2</sup>	Flow Rate (GPM Comm) <sup>3</sup>	Turnover Capacity (In Gallons) <sup>3</sup>			Filter Media		All Sand Req'd (Lbs.)	Carton Wt. (Lbs.)
					8 Hour	10 Hour	12 Hour	Pea Gravel Required (Lbs.)	Sand Required (Lbs.)		
<b>TRITON HD SAND FILTER</b>											
140335	TR100 HD	4.91	98	74	35,520	44,400	53,280	150	450	600	66
<b>TRITON HD VALVE OPTIONS <sup>1</sup></b>											
263079	2 in. PVC slide valve w/o plumbing, for D.E. & sand filters										3
261049	2 in. HiFlow valve, no plumbing										7
261050	2 in. HiFlow valve w/ plumbing, for sand filters										11
261055	2 in. MPV, for sand filters (SM 20-3)										10
261173	1-1/2 in. MPV, for sand filters (SM 10-3)										6
263034	Push Pull 7-1/2 in. Center Valve, Almond PVC										5
263080	FullFloXF Valve for Sand, inlet port on top, Pentair 2 in. unions glued on										

<sup>1</sup> Valves must be purchased separately.

<sup>2</sup> Based on 20 gpm per sq. ft.

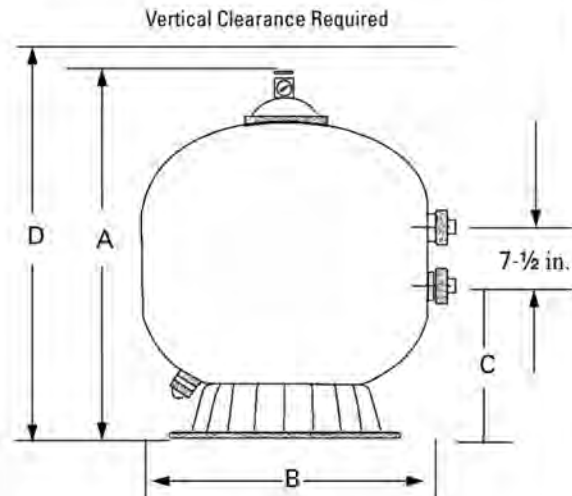
<sup>3</sup> Based on 15 gpm per sq. ft.

### Dimensions and Performance

**Certified to NSF/ANSI Standard 50**

**DIMENSION TABLE**

MODEL	A. DIM.	B. DIM.	C. DIM.	D. DIM.
TR100 HD	39-3/4 in.	30-1/2 in.	16-3/4 in.	41-3/4 in.



# TRITON® C AND TRITON C-3 HIGH CAPACITY FIBERGLASS SIDE MOUNT SAND FILTERS WITHOUT VALVES

## TRADEGRADE

### Featured Highlights

- Maximum Operating Pressure 50 psi
- Full 2 in. Drain
- 8 in. opening for easy access to sand bed
- The Triton C-3 features standard 3 in. flange connections
- TR 100C-3 & TR 140C-3 models are available in black only
- Sand and water weight - TR140 = 1,628 lbs. TR100 = 1,033 pounds



TR 140C-3



TR 100 C

This filter series features multiple diverters for increased filtration rates in commercial applications up to 20 GPM/Sq.ft.

CALIFORNIA PROPOSITION 65 WARNING

⚠️ **WARNING:** Cancer and Reproductive Harm.  
 ⚠️ **AVERTISSEMENT:** Peut Causer le Cancer et des Dommages au Système Reproducteur.  
 ⚠️ **ADVERTENCIA:** Cáncer y Daño Reproductivo.

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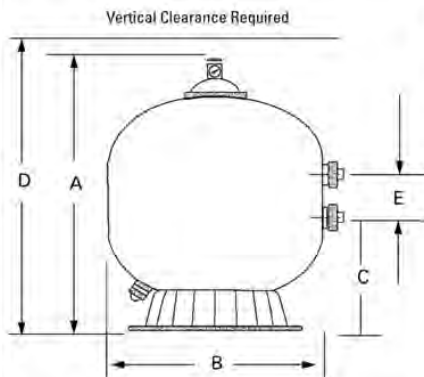
### Ordering Information

Product	Model	Effective Filtration Area (Sq. Ft.)	Flow Rate (GPM Comm) <sup>2</sup>	Flow Rate (GPM Comm) <sup>3</sup>	Turnover Capacity (In Gal.) <sup>3</sup>			Filter Media		All Sand Req'd (Lbs.)	Ctn Qty.	Ctn Wt. (Lbs.)
					6 Hour	8 Hour	10 Hour	Pea Gravel Req'd (Lbs.)	Sand Req'd (Lbs.)			
<b>TRITON C SAND FILTERS</b>												
140315	TR 100C-Almond	4.91	98	74	26,640	35,520	44,400	150	450	600	1	70
140316	TR 140C-Almond	7.06	141	106	38,160	50,880	63,600	275	650	925	1	82
<b>TRITON C-3 SAND FILTERS</b>												
140310	TR 100C-3-Black only	4.91	98	74	26,640	35,520	44,400	150	450	600	1	65
140342	TR 140C-3-Black only	7.06	141	106	38,160	50,880	63,600	275	650	925	1	82
<b>TRITON C VALVE OPTIONS <sup>1</sup></b>												
261050	2 in. HiFlow w/ plumbing, for sand filters										1	11
261055	2 in. MPV, for sand filters (SM 20-3)										1	10
263010	Full-Flow valve, sand filters (will only work on the TR100C and TR140C models)										1	7
263080	FullFloXF Valve for Sand, inlet port on top, Pentair 2 in. unions glued on 100C/140C *For use with 100C-3/140C-3 order TWO #357261 3" Flange Kits											
<b>CLEAR PRO TECHNOLOGY LATERAL KITS</b>												
159029	Clear Pro TR 100C Kit											
159031	Clear Pro TR 100C-3 Kit											
159030	Clear Pro TR 140C Kit											
159032	Clear Pro TR 140C-3 Kit											

<sup>1</sup> Valves must be purchased separately.

<sup>3</sup> Based on 15 gpm per sq. ft.

<sup>2</sup> Based on 20 gpm per sq. ft.



### Dimensions and Performance

**Certified to  
NSF/ANSI Standard 50**

**DIMENSION TABLE**

MODEL	A. DIM.	B DIM.	C DIM.	D DIM.	E DIM.
TR 100 C	39 3/4 in.	30 1/2 in.	16 1/2 in.	43 3/4 in.	7 1/2 in.
TR 140 C	45 1/2 in.	36 1/2 in.	18 3/4 in.	49 1/4 in.	7 1/2 in.
TR 100 C-3	39 3/4 in.	30 3/2 in.	16-1/16 in.	43 3/4 in.	7.72 in.
TR 140 C-3	45 1/4 in.	36 1/2 in.	18 1/2 in.	49 1/4 in.	7.72 in.



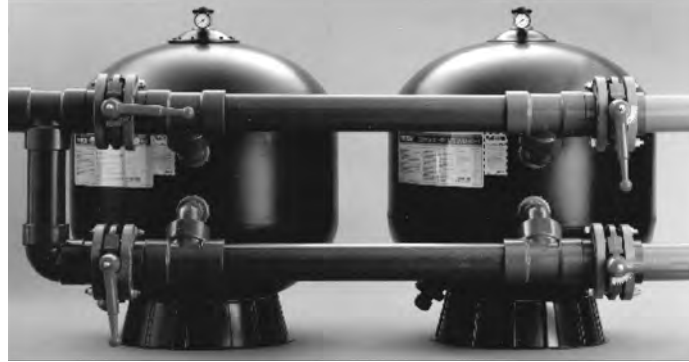
# SCH 40 & 80 FOR TR100C/TR140C/TR100C-3/TR140C-3

## TANDEM FILTER PIPING KITS FOR 2 & 3 IN. FILTERS

These Tandem Filter Piping Kits are designed specifically for use with the Triton TR100C, TR140C, Triton TR100C-3 and TR140C-3 sand filters to make the best even better.

We are providing this additional service for your convenient one-stop shopping. Pipe and filters are all you need.

**Piping is not included in kits.**



Tandem Filter Piping Kits for Triton TR100C, TR140C, TR100C-3 and TR140C-3 Sand Filters

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 ⚠️ **ADVERTENCIA:** Cáncer y Daño Reproductivo.  
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### Ordering Information

Product	Model
For Plumbing Two TR100C or TR140C Filters	
146400	3 in. Two filter kit, SCH 40 (200 GPM)
146402	4 in. Two filter kit, SCH 40 (300 GPM)
146404	6 in. Two filter kit, SCH 40 (700 GPM)
146403	4 in. Two filter kit, SCH 80 (300 GPM)
146405	6 in. Two filter kit, SCH 80 (700 GPM)
For Plumbing Two TR100C-3 or TR140C-3 Filters	
147400	3 in. Two filter kit, SCH 40 (200 GPM)
147402	4 in. Two filter kit, SCH 40 (300 GPM)
147404	6 in. Two filter kit, SCH 40 (700 GPM)
147401	3 in. Two filter kit, SCH 80 (200 GPM)
147403	4 in. Two filter kit, SCH 80 (300 GPM)
147405	6 in. Two filter kit, SCH 80 (700 GPM)

Product	Model
Adder Kits for TR100C and TR140C Filters <sup>1</sup>	
146406	4 in. Single filter kit, SCH 40
146408	6 in. Single filter kit, SCH 40
146407	4 in. Single filter kit, SCH 80
146409	6 in. Single filter kit, SCH 80
Adder Kits for TR100C-3 and TR140C-3 Filters	
147406	4 in. Single filter kit, SCH 40
147408	6 in. Single filter kit, SCH 40
147407	4 in. Single filter kit, SCH 80
147409	6 in. Single filter kit, SCH 80

Note: All kits include hardware, fittings, gaskets.

Note: All kits include hardware, fittings, gaskets and butterfly valves.

Filters	Filter Area Sq. Ft.	Manifold Pipe Dia.	Filter Rate Sq. Ft.		Turnover Capacity		
			15 GPM	20 GPM	6 Hours	8 Hours	10 Hours
TANDEM TRITON 140C FILTER INSTALLATION							
6 TR 140's	42.36	6 in.	635	—	228,600	304,800	381,000
		8 in.	—	847	304,920	406,560	508,200
7 TR 140's	49.42	6 in.	741	—	266,760	355,680	444,600
		8 in.	—	988	355,680	474,240	592,800
8 TR 140's	56.48	8 in.	847	—	304,920	406,560	508,200
		8 in.	—	1130	406,800	542,400	678,000

# SCH 40 & 80 FOR TR100C, TR140C, TR100C-3 & TR140C-3 (CONT'D)

## TANDEM FILTER PIPING KITS FOR 2 & 3 IN. FILTERS

Filters	Filter Area Sq. Ft.	Manifold Pipe Dia.	Filter Rate Sq. Ft.		Turnover Capacity		
			15 GPM	20 GPM	6 Hours	8 Hours	10 Hours
<b>TANDEM TRITON TR100C AND TR100C-3 FILTER INSTALLATION</b>							
2 TR 100's	9.82	3 in.	147	—	52,920	70,560	88,200
		4 in.	—	196	70,560	94,080	117,600
3 TR 100's	14.73	4 in.	221	—	79,560	106,080	132,600
		4 in.	—	295	106,200	141,600	177,000
4 TR 100's	19.64	4 in.	295	—	106,200	141,600	177,000
		5 in.	—	393	141,480	188,640	235,800
5 TR 100's	24.55	5 in.	368	—	132,480	176,640	220,800
		5 in.	—	491	176,760	235,680	294,600
<b>TANDEM TRITON TR140C AND TR140C-3 FILTER INSTALLATION</b>							
2 TR 140's	14.12	4 in.	212	—	76,320	101,760	127,200
		4 in.	—	282	101,520	135,360	169,200
3 TR 140's	21.18	4 in.	318	—	114,480	152,640	190,800
		5 in.	—	424	152,640	203,520	254,400
4 TR 140's	28.24	5 in.	424	—	152,640	203,520	254,400
		6 in.	—	565	203,040	270,720	338,400
5 TR 140's	35.30	5 in.	530	—	190,800	254,400	318,000
		6 in.	—	706	254,160	338,880	423,600

### Dimensions and Performance

Two Filter System	A	B	C	D	E	F	G	H	I	J	K	Total Wt.
3 in.-TR100C	82-3/8 in.	17-15/16 in.	48 in. min.	18 in. min.	39-3/4 in.	15 in.	29-33/64 in.	8-5/8 in.	11-1/32 in.	51-13/16 in.	—	2300 lbs.
3 in.-TR140C	88-3/8 in.	17-15/16 in.	54 in. min.	18 in. min.	45-1/4 in.	18 in.	32-33/64 in.	8-5/8 in.	13-15/32 in.	57-13/16 in.	—	3200 lbs.
4 in.-TR140C	95-3/4 in.	19-35/64 in.	54 in. min.	18 in. min.	45-1/2 in.	18 in.	33-1/8 in.	9-15/16 in.	12-21/32 in.	59-11/64 in.	—	2300 lbs.
6 in.-TR140C*	111-3/4 in.	24-7/32 in.	54 in. min.	18 in. min.	45-1/2 in.	18 in.	35-3/8 in.	12-13/16 in.	10-21/64 in.	64-13/32 in.	64-53/64 in.	3550 lbs.

\* 6 in. piping needs to be rotated upward as shown at 25° so handle will clear the floor.

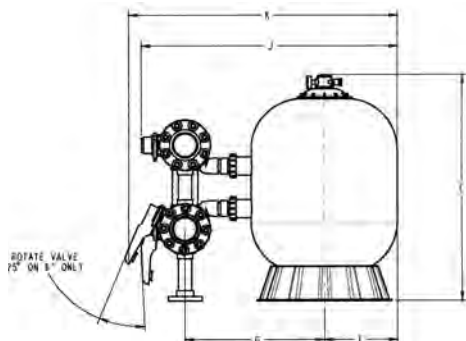


FIGURE 4A

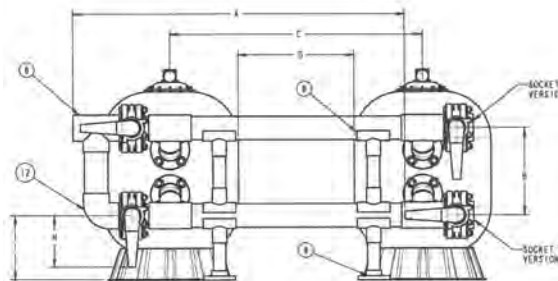


FIGURE 4B

CALIFORNIA PROPOSITION 65 WARNING

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 ⚠️ **ADVERTENCIA:** Cáncer y Daño Reproductivo.  
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# SYSTEM:3<sup>®</sup> MODULAR MEDIA FILTERS

## SM SERIES FILTERS



# TRADEGRADE



System:3 Modular Media Filter  
SM Series

### Featured Highlights

- **Typical Installation** – Inground pools, inground hot tubs, and water features
- **Quality Construction** – Durable two-piece tank housing constructed of Dura-Glas™, Sta-Rite's industry leading glass reinforced composite resin
- **Innovative Design** – The innovative balanced flow design first introduced with the System : 3 Mod Media is still the standard of the industry
- **Low Maintenance** – Complete media coverage combined with shallow pleats means greater dirt holding capabilities, resulting in longer filter cycles and less cleaning
- **Quick Service** – The shallow pleat design allows you to simply hose off the elements in a matter of minutes, making servicing a snap
- **Dual Drain Plugs** – Side plug available for plumbing to waste, while the bottom plug will drain entire filter

With the System : 3 Modular Media Filter, Sta-Rite brings you the product that makes Ultra-Capacity Filtration™ a reality. No longer simply “cartridges,” Sta-Rite’s advanced technology has brought an entirely new class of filtration to the industry. Sta-Rite’s modular media concept incorporates the latest in media science, perfectly balanced flow, and an integral manifold design: namely, Ultra-Capacity Filtration. This filtration concept puts totally care-free operation within reach of today’s pool owners. Modular Filter Tanks allows for quick change of filter medias without changing the tank. Contemporary style and matte black finish looks attractive in any pool setting.

### Ordering Information

Product	Effective Filter Area (Sq. Ft.)	Flow Rated <sup>1</sup> GPM (Sq. Ft.)	Turnover Capacity (In Gallons) (Flow Rate x 60 x Hours)			Tank Port Size	Carton Wt. (Lbs.)
			6 Hour	8 Hour	10 Hour		
<b>SYSTEM:3 MODULAR MEDIA FILTER - SM SERIES</b>							
S7M120	300	50–100	18–36,000	24–48,000	30–60,000	2 in.	120
S7M400 <sup>1</sup>	400	50–115	18–41,000	24–55,000	30–69,000	2 in.	125
S8M150 <sup>1</sup>	450	50–124	18–45,000	24–60,000	30–74,000	2 in.	147
S8M500 <sup>1</sup>	500	50–130	18–46,000	24–62,400	30–78,000	2 in.	150

<sup>1</sup> Based on NSF rated flow range of .333 GPM per square foot for the S7M120.  
.288 GPM per square foot for the S7M400, .275 GPM for the S8M150 and .26 GPM per square foot for the S8M500.

Note: No backwash valve required.

Note: Operating Limits – maximum continual operating pressure of 50 PSI. Pool/spa (bather) applications, maximum operating water temperature (internal filter) 104°F (40°C).

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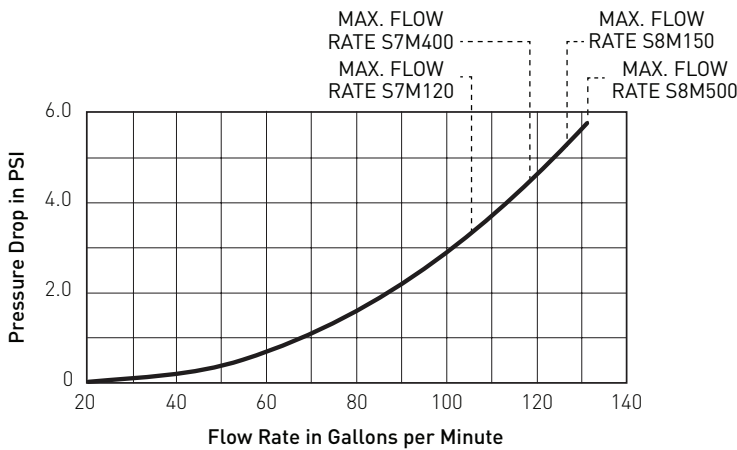
# SYSTEM:3<sup>®</sup> MODULAR MEDIA FILTERS (CONT'D)

## SM SERIES FILTERS

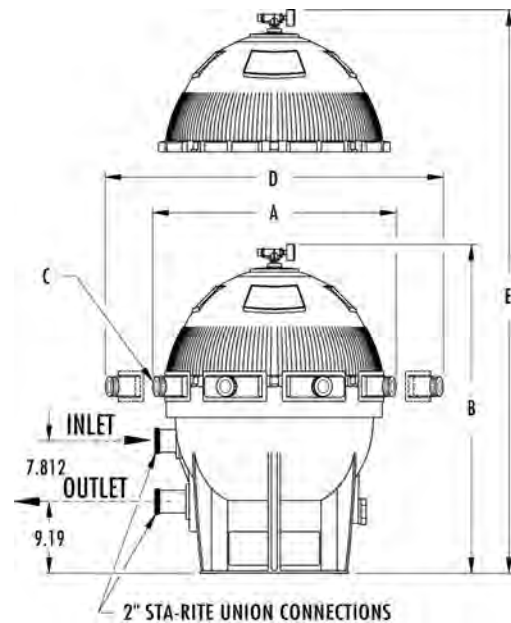
### Ordering Information

Product	Description	Carton Wt. (Lbs.)
<b>ACCESSORIES FOR SYSTEM:3 MODULAR MEDIA FILTER - SM SERIES</b>		
PKG 188	Union x 2 in. Slip Adapter - Pkg. of 2	1
PKG 189	Union x 2 in. FPT Adapter - Pkg. of 2	1
77703-0100	Union x 1-1/2 in. FPT Adapter - Pkg. of 2	1
77703-0101	Union x 1-1/2 in. Slip Adapter - Pkg. of 2	1
25021-0200S	100 sq. ft. Inner Replacement Module for S7M120	9
25022-0201S	200 sq. ft. Outer Replacement Module for S7M120	21
25021-0223S	136 sq. ft. Inner Replacement Module for S7M400	11
25022-0224S	264 sq. ft. Outer Replacement Module for S7M400	24
25021-0202S	191 sq. ft. Inner Replacement Module for S8M150	18
25022-0203S	259 sq. ft. Outer Replacement Module for S8M150	27
25021-0224S	209 sq. ft. Inner Replacement Module for S8M500	19
25022-0225S	291 sq. ft. Outer Replacement Module for S8M500	28
25021-0021	Modular Media Conversion Kit - S7M120/S7M400 (Order Modules Separately)	4
25021-0025	Modular Media Conversion Kit - S8M150/S8M500 (Order Modules Separately)	5

### Dimensions and Performance



**Certified to  
NSF/ANSI Standard 50**



Catalog Number	DIMENSION				
	A	B	C	D	E
S7M120/S7M400	28-1/2	42	7	36	50
S8M150/S8M500	32-1/2	42-1/4	8	40	50

- A = width
  - B = height
  - C = number of clamps
  - D = area (width) needed to take off clamps
  - E = area (height) needed to remove top half of tank
- All dimensions shown in inches.

CALIFORNIA PROPOSITION 65 WARNING

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PK201714

# CLEAN & CLEAR® PLUS FILTERS

## FIBERGLASS REINFORCED POLYPROPYLENE TANK

### TRADEGRADE



#### Featured Highlights

- Superior strength
- Large filter area for increased dirt capacity
- 1-1/2 in., 100% drain clean-out port
- Continuous High Flow™ Internal Air Relief \*
- Base and plumbing kits now available
- Injection molded tank
- Balanced hydraulic flow
- Tension Control™ Clamp
- 100% factory tested
- Black bulkhead unions
- High Flow manual air relief valve

Clean & Clear® Plus Filters have a corrosion resistant injection molded filter tank featuring superior strength and reliability. The cartridge assembly uses four easy to clean, non-woven, polyester cartridges. Each filter is supplied with a bulkhead union set for easy installation.

### Ordering Information

Product	Model	Effective Filtration Area (Sq. Ft.)	Flow Rate <sup>2</sup> (GPM Comm)	Turnover Capacity (In Gallons)			Carton Qty.	Carton Wt. (Lbs.)
				8 Hour	10 Hour	12 Hour		
<b>CLEAN &amp; CLEAR PLUS FILTERS</b>								
160310	CCP240	240	90	43,200	54,000	64,800	1	60
160340	CCP320 <sup>1</sup>	320	120	57,600	72,000	86,400	1	70
160301	CCP420 <sup>1</sup>	420	150	72,000	90,000	108,000	1	80
160332	CCP520 <sup>1</sup>	520	150	72,000	90,000	108,000	1	90

<sup>1</sup> Certified to NSF/ANSI Standard 50.

<sup>2</sup> Commercial rate is a maximum of .375 GPM sq. ft. of filter area.

### Dimensions and Performance

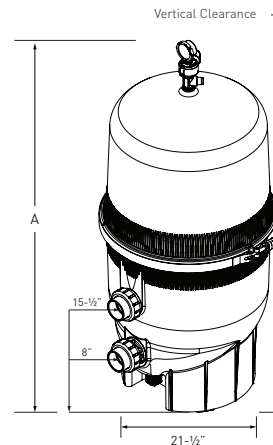
**Certified to NSF/ANSI Standard 50**

Note: Actual system flow will depend on plumbing size and other system components.

Note: Pentair Aquatic Systems does not recommend flow rates above 150 GPM.

\* Integrated continuous High Flow internal air relief is operational only when there is unobstructed flow in the circulating system.

Note: Operating Limits – maximum continual operating pressure of 50 PSI. Pool/spa (bather) applications, maximum operating water temperature (internal filter) 104°F (40°C).



Model	A Dim.	B Dim.
160310	37"	56"
160340	43"	62"
160301	49"	68"
160332	56"	74"

CALIFORNIA PROPOSITION 65 WARNING

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# QUAD D.E.® FILTERS

## CARTRIDGE STYLE FILTER

**TRADEGRADE**

### Featured Highlights

- Four large-capacity cartridges provide maximum filter surface area for greater dirt-trapping capacity and longer periods between cleanings
- Chemical resistant, fiberglass reinforced polypropylene tank for exceptional strength and long life
- Easily removable cartridge elements make maintenance fast and easy
- Water flows through the Quad D.E. Filter so efficiently that your pump will use less energy



Quad D.E. Filter



Quad D.E. combines the finest filtration available for the most sparkling clear water with the convenience and easy-cleaning features usually found only in a cartridge filter. Four easily accessible and removable D.E. cartridges simplify maintenance and save time.

### Ordering Information

Product	Model	Effective Filtration Area (Sq. Ft.)	Flow Rate (GPM)	Turnover Capacity (In Gallons)			D.E. Required (Lbs.)	Carton Qty.	Carton Wt. (Lbs.)
				8 Hour	10 Hour	12 Hour			
<b>QUAD D.E. FILTERS</b>									
188592	Quad D.E. 60	60	120	57,600	72,000	86,400	6.0	1	70
188593	Quad D.E. 80	80	160	76,800	96,000	115,200	8.0	1	80
188594	Quad D.E. 100	100	160	76,800	96,000	115,200	10.0	1	90
<b>QUAD D.E. VALVE OPTIONS <sup>1</sup></b>									
261173	1-1/2 in. MPV, for Triton and Quad D.E. filters (SM 10-3)							1	3
263079	2 in. PVC Slide valve w/o plumbing, for D.E. & sand filters							1	7
261049	2 in. HiFlow valve, no plumbing							1	11
261050	2 in. HiFlow w/ plumbing, for Triton and Quad D.E. filters							1	10
261055	2 in. MPV, for Triton and Quad D.E. filters (SM 20-3)							1	5
263064	Push pull valve, 7-1/2 in. Center, Almond PVC							1	4
270100	Union Kit, 2 in. I.D. (For no valve assembly)							1	1
274426	Adapter Kit, 2-1/2 in. x 2 in.							1	1
263080	Valve for D.E., inlet port on bottom, Pentair 2 in. unions glued on XF Valve							1	12

<sup>1</sup> Valves must be purchased separately.

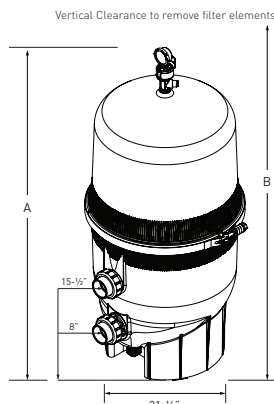
### Dimensions and Performance

Note: Actual system flow will depend on plumbing size and other system components.

Note: Pentair does not recommend flow rates above 150 GPM.

\* Integrated continuous High Flow internal air relief is operational only when there is unobstructed flow in the circulating system.

Note: Operating Limits – maximum continual operating pressure of 50 PSI. Pool/spa (bather) applications, maximum operating water temperature (internal filter) 104°F (40°C).



**Certified to NSF/ANSI Standard 50**

Product	A Dim.	B Dim.
188592	43"	62"
188593	49"	68"
188594	56"	74"

**CALIFORNIA PROPOSITION 65 WARNING**

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# SYSTEM:3<sup>®</sup> MODULAR D.E. FILTERS

## SMD SERIES FILTERS



**TRADEGRADE**



System:3 Modular D.E. Filters  
SMD Series

### Featured Highlights

- Typical Installation – Inground pools, inground hot tubs, and water features
- Quality Construction – Durable two-piece tank housing constructed of Dura-Glas™, Sta-Rite's industry leading glass reinforced composite resin
- Innovative Design – The innovative balanced flow design first introduced with the System : 3 Mod Media is still the standard of the industry
- Low Maintenance – Complete media coverage combined with shallow pleats means greater dirt holding capabilities, resulting in longer filter cycles and less cleaning
- Quick Service – The shallow pleat design allows you to simply hose off the elements in a matter of minutes, making servicing a snap
- Dual Drain Plugs – Side plug available for plumbing to waste, while the bottom plug will drain entire filter

Sta-Rite is proud to bring you the proven technology of System:3 Modular Media into the world of D.E. With its perfectly balanced flow and integral manifold design, the System:3 Modular D.E. filter brings pool filtration to new heights. Available in 2 sizes, 60 and 72 sq. ft., System:3 Modular Media D.E. filtration will bring years of sparkling clear water to your customer's pool or spa. For cleaning, simply remove filter lid and hose off in place. No more hassle of tearing down the grid assembly for cleaning and servicing. The balanced flow design allows for a constant D.E. cake on the entire module, assuring full optimization of the module and longer cycles between cleanings.

### Ordering Information

Product	Effective Filter Area (Sq. Ft.)	Flow Rated <sup>1</sup> at 1-2 GPM (per Sq. Ft.)	Turnover Capacity (Gallons) (Flow Rate x 60 x Hours)			Tank Port Size	D.E. Required (Lbs.)	Carton Wt. (Lbs.)
			6 Hour	8 Hour	10 Hour			
<b>SYSTEM:3 MODULAR D.E. FILTERS - SMD SERIES</b>								
S7MD60	60	60-120	21-32,400	28-43,200	36-54,000	2 in.	9	115
S7MD72	72	72-144	25-38,880	34-51,800	43-64,800	2 in.	11	117
<b>SMD SERIES VALVE OPTIONS</b>								
18201-0300	ABS 6-Position Valve with Union Connections – 2 in. Port Valve							8
263053	VLV Push Pull, 7.81 in. center							12
<b>ACCESSORIES FOR SYSTEM:3 MODULAR D.E. FILTER - SMD SERIES</b>								
25023-0160S	60 sq. ft. Replacement D.E. Element							20
25023-0172S	72 sq. ft. Replacement D.E. Element							21
PKG 188Z	Union x 2 in. Slip Adapter – Pkg. of 2							1
PKG 189	Union x 2 in. FPT Adapter – Pkg. of 2							1
23910-1100S	System 3 Modular D.E. Conversion Kit (replacement element required; new valve may be required)							3

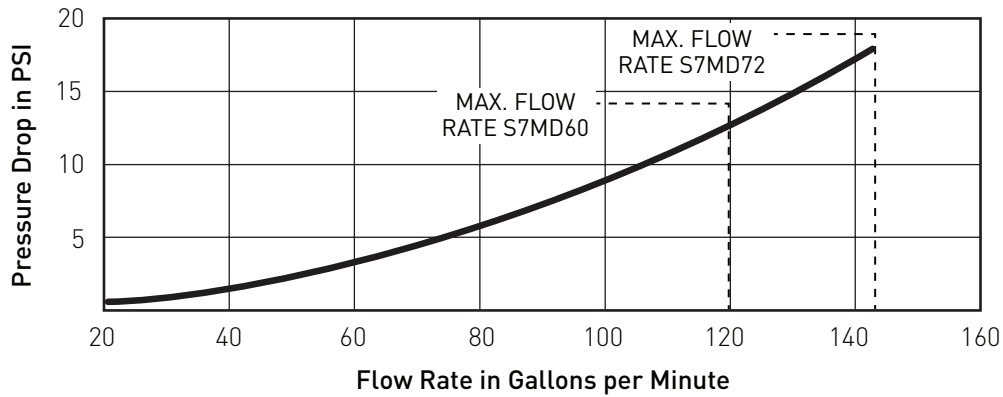
**CALIFORNIA PROPOSITION 65 WARNING**

⚠ **WARNING:** Cancer and Reproductive Harm.  
 ⚠ **AVERTISSEMENT:** Peut Causer le Cancer et des Dommages au Système Reproducteur.  
 ⚠ **ADVERTENCIA:** Cáncer y Daño Reproductivo.  
[www.p65warnings.ca.gov](http://www.p65warnings.ca.gov)

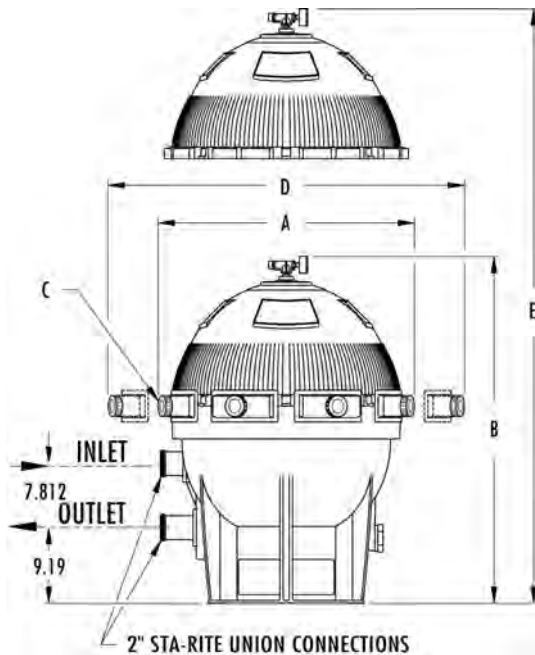
# SYSTEM:3<sup>®</sup> MODULAR D.E. FILTERS (CONT'D)

## SMD SERIES FILTERS

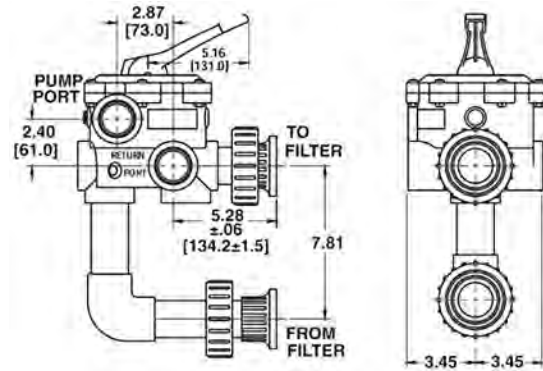
### Dimensions and Performance



**Certified to  
NSF/ANSI Standard 50**



18201-0300  
2 in. MULTIPORT VALVE



14935-0300  
2 in. SLIDE VALVE

Catalog Number	DIMENSION				
	A	B	C	D	E
S7MD60	28-1/2	42	7	36	50
S7MD72	28-1/2	42	7	36	50

- A = width
  - B = height
  - C = number of clamps
  - D = area (width) needed to take off clamps
  - E = area (height) needed to remove top half of tank
- All dimensions shown in inches.



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# HEATERS & HEAT PUMPS





# POWERMAX® HEATER

## HIGH PERFORMANCE ELECTRONIC IGNITION HEATERS



Commercial PowerMax Heater

When performance is critical, the new PowerMax Heater provides peak efficiency and easy maintenance in both indoor and outdoor applications. Seven sizes delivering up to 85% efficiency ratings and meeting all Low NOx requirements. PowerMax Heater is designed for operation to 10,000 foot elevation.

### Featured Highlights

- **CSD-1 and other options available. Contact factory for part numbers**
- Reliable operation in natural or propane models
- Fan-assisted and filtered combustion air
- Dual ignition systems for models greater than 750,000 BTU
- Built-in mixing system reduces condensation possibilities
- Fits through standard doorways
- Gas Supply right or left side
- CSA Certified
- Vent kits must be ordered separately

**CALIFORNIA PROPOSITION 65 WARNING**

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 ⚠ **ADVERTENCIA:** Cáncer y Daño Reproductivo.  
[www.p65warnings.ca.gov](http://www.p65warnings.ca.gov)

### Ordering Information

Product	BTUs (000's)	Installation	Gas Type	Pump System	Heat Exchanger	Carton Wt. (Lbs.)
<b>COMMERCIAL POWERMAX NATURAL GAS MODELS</b>						
PM0500NACC3BXN	500	Indoor/Outdoor	Natural	Pump Mounted	Copper	495
PM0750NACC3BXN	750	Indoor/Outdoor	Natural	Pump Mounted	Copper	575
PM1000NACC3BXN	1000	Indoor/Outdoor	Natural	Pump Mounted	Copper	685
PM1250NACC3BXN	1250	Indoor/Outdoor	Natural	Pump Mounted	Copper	730
PM1500NACC3BXN	1500	Indoor/Outdoor	Natural	Pump Mounted	Copper	830
PM1750NACC3BXN	1750	Indoor/Outdoor	Natural	Pump Mounted	Copper	880
PM2000NACC3BXN	2000	Indoor/Outdoor	Natural	Pump Mounted	Copper	1025
PM0500NACC3PXN	500	Indoor/Outdoor	Natural	Pump Mounted	CuproNickel	495
PM0750NACC3PXN	750	Indoor/Outdoor	Natural	Pump Mounted	CuproNickel	575
PM1000NACC3PXN	1000	Indoor/Outdoor	Natural	Pump Mounted	CuproNickel	685
PM1250NACC3PXN	1250	Indoor/Outdoor	Natural	Pump Mounted	CuproNickel	730
PM1500NACC3PXN	1500	Indoor/Outdoor	Natural	Pump Mounted	CuproNickel	830
PM1750NACC3PXN	1750	Indoor/Outdoor	Natural	Pump Mounted	CuproNickel	880
PM2000NACC3PXN	2000	Indoor/Outdoor	Natural	Pump Mounted	CuproNickel	1025
<b>COMMERCIAL POWERMAX PROPANE GAS MODELS</b>						
PM0500PACC3BXN	500	Indoor/Outdoor	Propane	Pump Mounted	Copper	495
PM0750PACC3BXN	750	Indoor/Outdoor	Propane	Pump Mounted	Copper	575
PM1000PACC3BXN	1000	Indoor/Outdoor	Propane	Pump Mounted	Copper	685
PM1250PACC3BXN	1250	Indoor/Outdoor	Propane	Pump Mounted	Copper	730
PM1500PACC3BXN	1500	Indoor/Outdoor	Propane	Pump Mounted	Copper	830
PM1750PACC3BXN	1750	Indoor/Outdoor	Propane	Pump Mounted	Copper	880
PM2000PACC3BXN	2000	Indoor/Outdoor	Propane	Pump Mounted	Copper	1025
PM0500PACC3PXN	500	Indoor/Outdoor	Propane	Pump Mounted	CuproNickel	495
PM0750PACC3PXN	750	Indoor/Outdoor	Propane	Pump Mounted	CuproNickel	575
PM1000PACC3PXN	1000	Indoor/Outdoor	Propane	Pump Mounted	CuproNickel	685
PM1250PACC3PXN	1250	Indoor/Outdoor	Propane	Pump Mounted	CuproNickel	730
PM1500PACC3PXN	1500	Indoor/Outdoor	Propane	Pump Mounted	CuproNickel	830
PM1750PACC3PXN	1750	Indoor/Outdoor	Propane	Pump Mounted	CuproNickel	880
PM2000PACC3PXN	2000	Indoor/Outdoor	Propane	Pump Mounted	CuproNickel	1025
<b>POWERMAX STACKING SYSTEMS</b>						
Product	Type	Heater Model	Product	Type	Heater Model	
CA000800	Rack	PM500	CA001100	Rack	PM1250	
CA000900	Rack	PM750	CA001200	Rack	PM1500, PM1750	
CA0001000	Rack	PM1000	CA001300	Rack	PM2000	

# POWERMAX® HEATERS (CONT'D)

## HIGH PERFORMANCE ELECTRONIC IGNITION HEATERS

### -sizing charts and clearance data

#### For Indoor Pools

1. Calculate the surface area of the pool in square feet.
2. Refer to the selection chart.
3. Find the closest square footage in the 10° F (6° C) Temperature Difference table and the heater model that corresponds to it. For normal conditions, we recommend using the 10° F (6° C) Temperature Difference columns; this will provide a temperature increase of approximately 6° F (3° C) per 24-hour period.

#### For Outdoor Pools

1. Determine the difference between the desired pool temperature and the average air temperature during the coldest month in which the pool will be used (see the Temperature Difference table below).
2. Calculate the surface area of the pool.
3. Refer to the selection chart. Listed are the maximum pool surface areas for each heater model with typical temperature differences. Make the appropriate selection from the chart.

#### Temperature Difference

	10° F	6° C	15° F	8° C	20° F	11° C	25° F	14° C	30° F	17° C	35° F	19° C	40° F	22° C	45° F	25° C	50° F	28° C	
Surface Area of Pool																			
Model	Sq. Ft.	Sq. M.	Sq. Ft.	Sq. M.	Sq. Ft.	Sq. M.	Sq. Ft.	Sq. M.	Sq. Ft.	Sq. M.	Sq. Ft.	Sq. M.	Sq. Ft.	Sq. M.	Sq. Ft.	Sq. M.	Sq. Ft.	Sq. M.	
500	4,090	370	2,720	250	2,040	180	1,630	150	1,360	120	1,170	100	1,020	90	910	80	810	70	
750	6,130	560	4,090	370	3,060	280	2,450	220	2,040	180	1,750	160	1,530	140	1,360	120	1,220	110	
1,000	8,180	750	5,450	500	4,090	370	3,270	300	2,720	250	2,340	210	2,040	180	1,820	160	1,630	150	
1,250	10,230	950	6,820	630	5,110	470	4,090	370	3,410	310	2,920	270	2,550	230	2,280	210	2,040	180	
1,500	12,270	1,130	8,180	750	6,130	560	4,910	450	4,090	370	3,510	320	3,060	280	2,730	250	2,450	220	
1,750	14,320	1,330	9,540	880	7,160	660	5,720	530	4,770	440	4,090	370	3,580	330	3,190	290	2,860	260	
2,000	16,370	1,520	10,910	1,010	8,180	750	6,540	600	5,450	500	4,680	430	4,090	370	3,650	330	3,270	300	

#### Clearances

Appliance Surface	Clearance From Combustible Material	Service Access Clearance
Right Side	1" 2.5 cm	24" 61 cm
Left Side	1" 2.5 cm	24" 61 cm
Front	1" 2.5 cm	36" 91 cm

Appliance Surface	Clearance From Combustible Material	Service Access Clearance
Top	1" 2.5 cm	12" 30 cm
Back*	1" 2.5 cm	12" 30 cm
Vent	Per venting system supplier's instructions	

\*When vent and/or air is connected to the back, 36" (91 cm) is suggested.

SIZE	OUTDOOR VENT TERMINAL	OUTDOOR COMBUSTION AIR TERMINAL
500	20254703	D2007900
750	20254705	D2008000
1000	20254705	D2008000
1250	D2007700	D2008200
1500	D2007700	D2008200
1750	D2007800	D2008200
2000	D2007800	D2008200

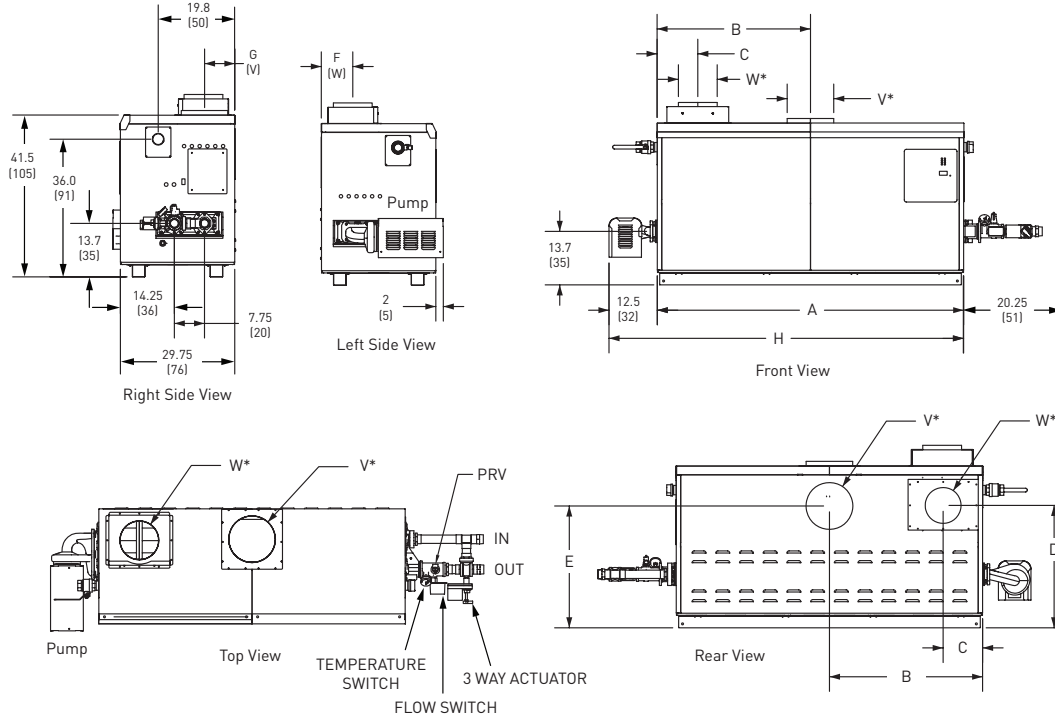
#### Vent Terminals for Outdoor Units



# POWERMAX® HEATERS (CONT'D)

## HIGH PERFORMANCE ELECTRONIC IGNITION HEATERS

### Dimensions and Performance



**Dimensional Data** Dimensions shown in inches, cm.

Size (000's)	A		B		C		D		E		F		G		H		Air Conn. W*		Vent Conn. V*		Horiz. Vent Pipe	
500	33½	85	15¾	40	5¾	15	29¾	76	32¾	83	7¾	20	8¾	22	46	117	6	15	8	15	6	15
750	45½	116	21¾	55	5¾	15	29¾	76	32¾	83	7¾	20	8¾	22	58	147	6	15	10	20	8	15
1000	57½	146	28¾	73	5¾	15	29¾	76	32¾	83	7¾	20	7	18	70	178	8	20	10	25	8	20
1250	68	172	34	86	10¼	26	30¾	78	29½	75	8¾	22	8¾	22	80	203	8	20	12	30	8	20
1500	78½	199	39¾	101	10¼	26	30¾	78	29½	75	8¾	22	8¾	22	91	231	8	20	12	30	8	20
1750	89	226	44½	113	10¼	26	30¾	78	29½	75	8¾	22	8¾	22	101	256	8	20	14	36	8	20
2000	99½	253	49¾	126	10¼	26	30¾	78	29½	75	8¾	22	8¾	22	112	284	12	30	14	36	12	30

\*Air and vent connections may be on top or back of the PowerMax, and are field convertible.

### Sizing Data

Indoor Model	Input <sup>1</sup> BTU/h x1000	Output <sup>1</sup> BTU/h x1000	Gas Conn. Size inches <sup>2</sup>	Heater Water Conn. Size inches <sup>2</sup>	Mixing System Water Conn. Size inches <sup>2</sup>	Shipping Weight	
						lbs.	kg
500	500	425	1¼	2	2	495	225
750	750	638	1¼	2	2	575	261
1000	999	849	1½	2½	2	685	311
1250	1250	1063	2	2½	2	730	331
1500	1500	1275	2	2½	2	830	377
1750	1750	1488	2	2½	2	880	400
2000	1999	1699	2	2½	2	1025	465

NOTES: 1. Input and output must be derated 2% per 1000 feet above sea level when installed above 2000 feet altitude.  
2. Dimensions are nominal.

Note: Contact factory for replacement parts.

# COMMERCIAL MEGATHERM®

## HIGH PERFORMANCE ELECTRONIC IGNITION HEATERS

### Featured Highlights

- **CSD-1 and other options available. Contact factory for part numbers**
- Electronic ignition
- Built-in draft diverter (indoor models) simplifies installation
- Integral pump assures proper water flow (models 500-1825)
- High temperature refractory firebox liner to 2000° F for greater efficiency
- Easy-to-service header flanges
- Corrosion-resistant glass-lined headers
- CSA Certified
- Start-up service by an authorized representative is strongly recommended before regular operation
- Vent kits must be ordered separately



Commercial  
MegaTherm  
Heater

Powerful, efficient, and reliable, MegaTherm pool heaters are designed for commercial, institutional and large residential where economical performance and rapid heat-up are required. Available in indoor and outdoor models in both natural and propane. MegaTherm heaters are design verified to the ANSI Z21.56 Standard for Gas-Fired Pool Heaters (Outdoor 500-1825 units are certified for use without the addition of a draft diverter or external vent. Indoor units incorporate a built-in draft diverter and require only vent piping.)

#### CALIFORNIA PROPOSITION 65 WARNING

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[www.p65warnings.ca.gov](http://www.p65warnings.ca.gov) PR-201714

### Ordering Information

Product	BTUs (000's)	Installation	Gas Type	Pump System	Heat Exchanger	Carton Wt. (Lbs.)
<b>COMMERCIAL MEGATHERM NATURAL GAS MODELS</b>						
MT0500IN09C1PC	500	Indoor	Natural	Pump Mounted	Copper	808
MT0600IN09C1PC	600	Indoor	Natural	Pump Mounted	Copper	819
MT0715IN09C1PC	715	Indoor	Natural	Pump Mounted	Copper	873
MT0850IN09C1PC	850	Indoor	Natural	Pump Mounted	Copper	945
MT0999IN09C1PC	999	Indoor	Natural	Pump Mounted	Copper	1041
MT1010IN09C1PC	1010	Indoor	Natural	Pump Mounted	Copper	1041
MT1200IN09C1PC	1200	Indoor	Natural	Pump Mounted	Copper	1199
MT1430IN09C1PC	1430	Indoor	Natural	Pump Mounted	Copper	1280
MT1670IN09CBPC	1670	Indoor	Natural	Pump Mounted	Copper	1445
MT1825IN09CBPC	1825	Indoor	Natural	Pump Mounted	Copper	1570
MT0500IN09C1PN	500	Indoor	Natural	Pump Mounted	CuproNickel	808
MT0600IN09C1PN	600	Indoor	Natural	Pump Mounted	CuproNickel	819
MT0715IN09C1PN	715	Indoor	Natural	Pump Mounted	CuproNickel	873
MT0850IN09C1PN	850	Indoor	Natural	Pump Mounted	CuproNickel	945
MT0999IN09C1PN	999	Indoor	Natural	Pump Mounted	CuproNickel	1041
MT1010IN09C1PN	1010	Indoor	Natural	Pump Mounted	CuproNickel	1041
MT1200IN09C1PN	1200	Indoor	Natural	Pump Mounted	CuproNickel	1199
MT1430IN09C1PN	1430	Indoor	Natural	Pump Mounted	CuproNickel	1280
MT1670IN09CBPN	1670	Indoor	Natural	Pump Mounted	CuproNickel	1445
MT1825IN09CBPN	1825	Indoor	Natural	Pump Mounted	CuproNickel	1570
MT0500EN09CBPC	500	Outdoor	Natural	Pump Mounted	Copper	855
MT0600EN09CBPC	600	Outdoor	Natural	Pump Mounted	Copper	949
MT0715EN09CBPC	715	Outdoor	Natural	Pump Mounted	Copper	1050
MT0850EN09CBPC	850	Outdoor	Natural	Pump Mounted	Copper	1100
MT0999EN09CBPC	999	Outdoor	Natural	Pump Mounted	Copper	1240
MT1010EN09CBPC	1010	Outdoor	Natural	Pump Mounted	Copper	1240
MT1200EN09CBPC	1200	Outdoor	Natural	Pump Mounted	Copper	1410
MT1430EN09CBPC	1430	Outdoor	Natural	Pump Mounted	Copper	1570
MT1670EN09CBPC	1670	Outdoor	Natural	Pump Mounted	Copper	1622
MT1825EN09CBPC	1825	Outdoor	Natural	Pump Mounted	Copper	1725
MT0500EN09CBPN	500	Outdoor	Natural	Pump Mounted	CuproNickel	855

## COMMERCIAL MEGATHERM® (CONT'D)

### HIGH PERFORMANCE ELECTRONIC IGNITION HEATERS

Product	BTUs (000's)	Installation	Gas Type	Pump System	Heat Exchanger	Carton Wt. (Lbs.)
<b>COMMERCIAL MEGATHERM NATURAL GAS MODELS</b>						
MT0600EN09CBPN	600	Outdoor	Natural	Pump Mounted	CuproNickel	949
MT0715EN09CBPN	715	Outdoor	Natural	Pump Mounted	CuproNickel	1050
MT0850EN09CBPN	850	Outdoor	Natural	Pump Mounted	CuproNickel	1100
MT0999EN09CBPN	999	Outdoor	Natural	Pump Mounted	CuproNickel	1240
MT1010EN09CBPN	1010	Outdoor	Natural	Pump Mounted	CuproNickel	1240
MT1200EN09CBPN	1200	Outdoor	Natural	Pump Mounted	CuproNickel	1410
MT1430EN09CBPN	1430	Outdoor	Natural	Pump Mounted	CuproNickel	1570
MT1670EN09CBPN	1670	Outdoor	Natural	Pump Mounted	CuproNickel	1622
MT1825EN09CBPN	1825	Outdoor	Natuaraal	Pump Mounted	CuproNickel	1725
MT2000IN18CCAC	2000	Indoor	Natural	Less Pump	Copper	1950
MT2450IN18CCAC	2450	Indoor	Natural	Less Pump	Copper	2100
MT3050IN18CCAC	3050	Indoor	Natural	Less Pump	Copper	2250
MT3500IN18CCAC	3500	Indoor	Natural	Less Pump	Copper	2510
MT4050IN18CCAC	4050	Indoor	Natural	Less Pump	Copper	2750
MT4500IN18CCAC	4500	Indoor	Natural	Less Pump	Copper	2900
MT5000IN18CCAC	5000	Indoor	Natural	Less Pump	Copper	3200
MT2000IN18CCAN	2000	Indoor	Natural	Less Pump	CuproNickel	1950
MT2450IN18CCAN	2450	Indoor	Natural	Less Pump	CuproNickel	2100
MT3050IN18CCAN	3050	Indoor	Natural	Less Pump	CuproNickel	2250
MT3500IN18CCAN	3400	Indoor	Natural	Less Pump	CuproNickel	2510
MT4050IN18CCAN	4050	Indoor	Natural	Less Pump	CuproNickel	2750
MT4500IN18CCAN	4500	Indoor	Natural	Less Pump	CuproNickel	2900
MT5000IN18CCAN	5000	Indoor	Natural	Less Pump	CuproNickel	3200
MT2200EN18CCAC	2200	Outdoor	Natural	Less Pump	Copper	2320
MT2800EN18CCAC	2800	Outdoor	Natural	Less Pump	Copper	2500
MT3200EN18CCAC	3200	Outdoor	Natural	Less Pump	Copper	2840
MT3600EN18CCAC	3600	Outdoor	Natural	Less Pump	Copper	3175
MT4000EN18CCAC	4000	Outdoor	Natural	Less Pump	Copper	3940
MT4500EN18CCAC	4500	Outdoor	Natural	Less Pump	Copper	3790
MT2200EN18CCAN	2200	Outdoor	Natural	Less Pump	CuproNickel	2320
MT2800EN18CCAN	2800	Outdoor	Natural	Less Pump	CuproNickel	2500
MT3200EN18CCAN	3200	Outdoor	Natural	Less Pump	CuproNickel	2840
MT3600EN18CCAN	3600	Outdoor	Natural	Less Pump	CuproNickel	3175
MT4000EN18CCAN	4000	Outdoor	Natural	Less Pump	CuproNickel	3940
MT4500EN18CCAN	4500	Outdoor	Natural	Less Pump	CuproNickel	3790
<b>COMMERCIAL MEGATHERM PROPANE MODELS</b>						
MT0500IP09C1PC	500	Indoor	Propane	Pump Mounted	Copper	808
MT0600IP09C1PC	600	Indoor	Propane	Pump Mounted	Copper	819
MT0715IP09C1PC	715	Indoor	Propane	Pump Mounted	Copper	873
MT0850IP09C1PC	850	Indoor	Propane	Pump Mounted	Copper	945
MT0999IP09C1PC	999	Indoor	Propane	Pump Mounted	Copper	1041
MT1010IP09C1PC	1010	Indoor	Propane	Pump Mounted	Copper	1041
MT1200IP09C1PC	1200	Indoor	Propane	Pump Mounted	Copper	1199
MT1430IP09C1PC	1430	Indoor	Propane	Pump Mounted	Copper	1280
MT1670IP09CBPC	1670	Indoor	Propane	Pump Mounted	Copper	1445
MT1825IP09CBPC	1825	Indoor	Propane	Pump Mounted	Copper	1570
MT0500IP09C1PN	500	Indoor	Propane	Pump Mounted	CuproNickel	808
MT0600IP09C1PN	600	Indoor	Propane	Pump Mounted	CuproNickel	819
MT0715IP09C1PN	715	Indoor	Propane	Pump Mounted	CuproNickel	873
MT0850IP09C1PN	850	Indoor	Propane	Pump Mounted	CuproNickel	945

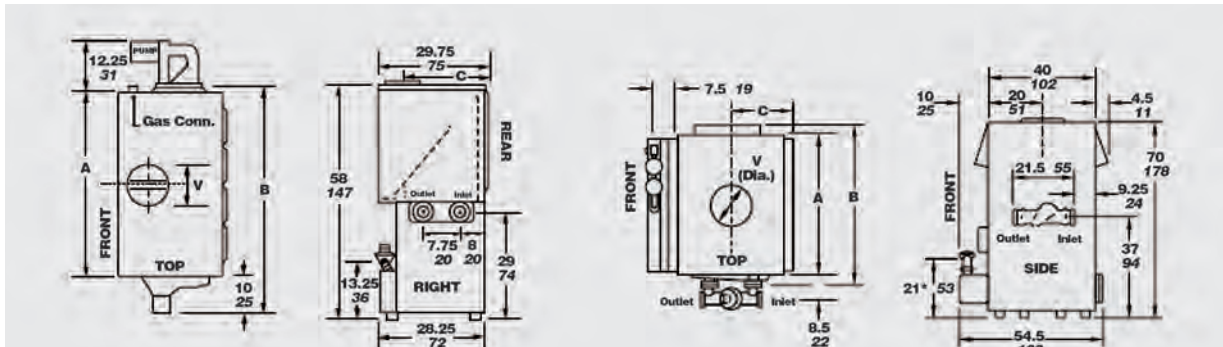


# COMMERCIAL MEGATHERM® (CONT'D)

## HIGH PERFORMANCE ELECTRONIC IGNITION HEATERS

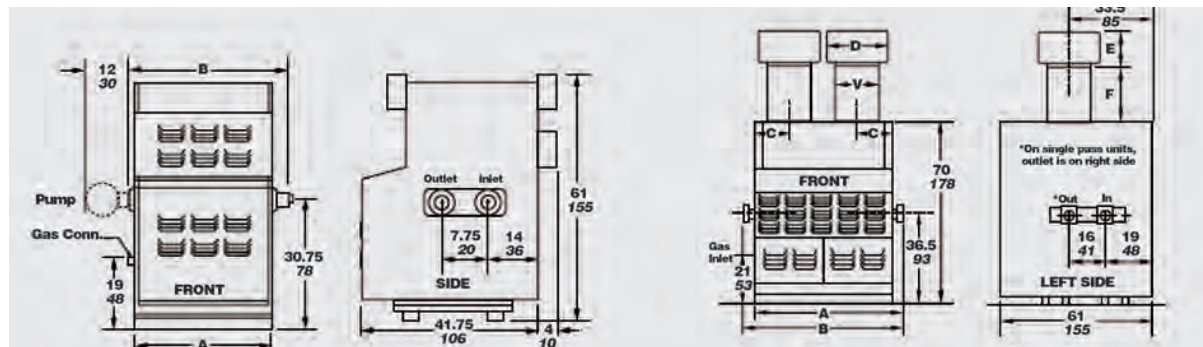
Product	BTUs (000's)	Installation	Gas Type	Pump System	Heat Exchanger	Carton Wt. (Lbs.)
<b>COMMERCIAL MEGATHERM PROPANE MODELS</b>						
MT0999IP09C1PN	999	Indoor	Propane	Pump Mounted	CuproNickel	1041
MT1010IP09C1PN	1010	Indoor	Propane	Pump Mounted	CuproNickel	1041
MT1200IP09C1PN	1200	Indoor	Propane	Pump Mounted	CuproNickel	1199
MT1430IP09C1PN	1430	Indoor	Propane	Pump Mounted	CuproNickel	1280
MT1670IP09CBPN	1670	Indoor	Propane	Pump Mounted	CuproNickel	1445
MT1825IP09CBPN	1825	Indoor	Propane	Pump Mounted	CuproNickel	1570
MT0500EP09CBPC	500	Outdoor	Propane	Pump Mounted	Copper	855
MT0600EP09CBPC	600	Outdoor	Propane	Pump Mounted	Copper	949
MT0715EP09CBPC	715	Outdoor	Propane	Pump Mounted	Copper	1050
MT0850EP09CBPC	850	Outdoor	Propane	Pump Mounted	Copper	1100
MT0999EP09CBPC	999	Outdoor	Propane	Pump Mounted	Copper	1240
MT1010EP09CBPC	1010	Outdoor	Propane	Pump Mounted	Copper	1240
MT1200EP09CBPC	1200	Outdoor	Propane	Pump Mounted	Copper	1410
MT1430EP09CBPC	1430	Outdoor	Propane	Pump Mounted	Copper	1570
MT1670EP09CBPC	1670	Outdoor	Propane	Pump Mounted	Copper	1622
MT1825EP09CBPC	1825	Outdoor	Propane	Pump Mounted	Copper	1725
MT0500EP09CBPN	500	Outdoor	Propane	Pump Mounted	CuproNickel	855
MT0600EP09CBPN	600	Outdoor	Propane	Pump Mounted	CuproNickel	949
MT0715EP09CBPN	715	Outdoor	Propane	Pump Mounted	CuproNickel	1050
MT0850EP09CBPN	850	Outdoor	Propane	Pump Mounted	CuproNickel	1100
MT0999EP09CBPN	999	Outdoor	Propane	Pump Mounted	CuproNickel	1240

### Dimensions and Performance



Indoor  
Sizes 500–1825

Indoor  
Sizes 2000–5000



Outdoor  
Sizes 500–1825

Outdoor  
Sizes 2000–5000

# COMMERCIAL MEGATHERM® (CONT'D)

## HIGH PERFORMANCE ELECTRONIC IGNITION HEATERS

### FOR INDOOR POOLS MODEL I

1. Calculate the surface area of the pool in square feet.
2. Refer to the selection chart for either an indoor or outdoor heater.
3. Find the closest square footage in the 10° F (6° C) Temperature Difference column, and the heater models which correspond to it. For normal conditions, Pentair recommends using the 10° F Temperature Difference columns; this will provide a temperature increase of approximately 6° F per 24 hour period.

### Temperature Difference

Model	10° F	6° C	15° F	8° C	20° F	11° C	25° F	14° C	30° F	17° C	35° F	19° C	40° F	22° C	45° F	25° C	50° F	28° C
	Surface Area of Pools (Sq. Ft.)																	
500 I	3900	362	2600	242	1950	181	1560	145	1300	121	1115	104	975	91	870	81	780	72
600 I	4680	435	3120	290	2340	217	1870	174	1560	145	1340	124	1170	109	1040	97	935	87
715 I	5580	518	3720	346	2790	259	2230	207	1860	173	1595	148	1395	130	1240	115	1115	104
850 I	6630	616	4420	411	3315	308	2650	246	2210	205	1895	176	1660	154	1475	137	1325	123
1010 I	7880	732	5250	488	3940	366	3150	293	2625	244	2259	210	1970	183	1750	163	1575	146
1200 I	9360	870	6240	580	4680	435	3745	348	3120	290	2675	249	2340	217	2080	193	1870	174
1430 I	11155	1036	7435	691	5580	518	4460	414	3720	346	3190	296	2790	259	2480	230	2230	207
1670 I	13025	1210	8685	807	6515	605	5210	484	4340	403	3720	346	3260	303	2895	269	2605	242
1825 I	14235	1322	9490	882	7120	661	5695	528	4745	441	4070	378	3560	331	3165	294	2850	265
2000 I	16400	1524	10935	1016	8200	819	6560	609	5465	508	4685	435	4100	381	3645	339	3280	305
2450 I	20090	1866	13395	1244	10045	933	8035	746	6695	622	5740	533	5025	467	4465	415	4020	373
3050 I	25010	2323	16675	1549	12505	1162	10000	929	8335	744	7145	664	6255	581	5560	517	5000	465
3500 I	28700	2666	19135	1778	14350	1333	11480	1066	9565	889	8200	764	7175	667	6380	593	5740	533
4050 I	33210	3085	22140	2057	16605	1543	13285	1234	11070	1028	9490	882	8300	771	7380	686	6640	617
4500 I	36900	3428	24600	2285	18450	1714	14760	1371	12300	1143	10545	980	9225	857	8200	762	7380	686
5000 I	41000	3809	27335	2539	20500	1904	16400	1524	13665	1269	11715	1088	10250	952	9110	846	8200	762

### Dimensional Data

Indoor Size	Input <sub>1</sub>		Output <sub>1</sub>		Gas Conn. Size <sub>2</sub> - inches NPT		Water Conn. Size <sub>2</sub> - inches NPT	Dimensions <sub>2</sub> - inches cm								Weights <sub>3</sub>		
	MBTU/h	kw	MBTU/h	kw	Nat	LP		A				B				lbs.		kg
500 I	500	147	405	119	1	¾	2½	33¾	86	45¼	115	23¾	60	10	25	808	367	
600 I	600	176	486	143	1	¾	2½	38¾	98	50¼	128	22¾	58	12	30	819	372	
715 I	715	210	579	170	1	¾	2½	44¼	112	55¾	142	22¾	58	12	30	873	396	
850 I	850	249	689	202	1	¾	2½	50¾	129	62¼	158	21¾	55	14	36	945	429	
1010 I	1010	296	818	240	1¼	1	2½	58	147	69½	177	20¾	53	16	41	1041	473	
1200 I	1200	352	972	285	1¼	1	2½	66¼	168	77¾	197	20¾	53	16	41	1199	544	
1430 I	1430	419	1158	339	1¼	1¼	2½	76	193	87½	222	19¾	50	18	46	1280	581	
1670 I	1670	489	1353	396	1½	1¼	2½	85½	217	97	246	19¾	50	18	46	1445	656	
1825 I	1825	535	1478	433	1½	1¼	2½	92½	235	103¾	264	19¾	50	18	46	1570	713	
2000 I	2000	586	1639	480	1½	1¼	4	55½	141	73	185	24½	62	22	56	1950	885	
2450 I	2450	718	2009	589	1½	1½	4	65½	166	83	211	24½	62	24	61	2100	913	
3050 I	3050	894	2501	733	2	1½	4	78	198	95½	243	24½	62	26	66	2250	1022	
3500 I	3500	1025	2870	841	2	1½	4	88	224	105½	268	24½	62	28	71	2510	1140	
4050 I	4050	1186	3321	973	2	2	4	100½	255	118	300	24½	62	30	76	2750	1249	
4500 I	4500	1318	3690	1081	2½	2	4	110½	281	128	325	24½	62	32	81	2900	1317	
5000 I	5000	1465	4100	1201	2½	2	4	123	312	140½	357	24½	62	34	86	3200	1453	

- NOTES:
1. Input and output must be derated 4% per 1000 feet above sea level when installed above 2000 feet altitude.
  2. Dimensions are nominal.
  3. Integral pump included on sizes 500-1825.

# COMMERCIAL MEGATHERM® (CONT'D)

## HIGH PERFORMANCE ELECTRONIC IGNITION HEATERS

### FOR OUTDOOR POOLS MODEL E

1. Determine the difference between the desired pool temperature and the average air temperature during the coldest month in which the pool will be used (referred to in the chart below as "Temperature Difference").
2. Calculate the surface area of the pool.
3. Refer to the selection chart. Listed are the maximum pool surface areas for each heater model with typical temperature differences. Make the appropriate selection from the chart.

### Temperature Difference

Model	10° F	6° C	15° F	8° C	20° F	11° C	25° F	14° C	30° F	17° C	35° F	19° C	40° F	22° C	45° F	25° C	50° F	28° C
	Surface Area of Pools (Sq. Ft.)																	
500 E	4000	372	2665	248	2000	186	1600	149	1330	124	1140	106	1000	93	885	82	800	74
600 E	4800	446	3200	297	2400	223	1920	178	1600	149	1370	127	1200	111	1065	99	960	89
715 E	5720	531	3810	354	2860	266	2285	212	1905	177	1630	151	1430	133	1270	118	1140	106
850 E	6800	632	4530	421	3400	316	2720	253	2265	210	1940	180	1700	158	1510	140	1360	126
1010 E	8080	751	5385	500	4040	375	3230	300	2690	250	2305	214	2020	188	1795	167	1615	150
1200 E	9600	892	6400	595	4800	446	3840	357	3200	297	2740	255	2400	223	2130	198	1920	178
1430 E	11440	1063	7625	708	5720	531	4575	425	3810	354	3265	303	2860	266	2540	236	2285	212
1670 E	13360	1241	8905	827	6680	621	5344	496	4450	413	3815	354	3340	310	2965	275	2670	248
1825 E	14600	1356	9730	904	7300	678	5840	543	4865	452	4170	387	3650	339	3240	301	2920	271
2200 E	17861	1659	11907	1106	8930	830	7144	664	5954	553	5103	474	4465	415	3969	369	3572	332
2800 E	22235	2066	14823	1377	11117	1033	8894	826	7412	689	6353	590	5559	516	4941	459	4447	413
3200 E	25515	2370	17010	1580	12758	1185	10206	948	8505	790	7290	677	6379	593	5670	527	5103	474
3600 E	29525	2743	19683	1829	14762	1371	11810	1097	9842	914	8436	784	7381	686	6561	610	5905	549
4000 E	32805	3048	21870	2032	16403	1524	13122	1219	10935	1016	9373	871	8201	762	7290	677	6561	610
4500 E	36450	3386	24300	2257	18225	1693	14580	1354	12150	1129	10414	967	9113	847	8100	752	7290	677

NOTES: For high altitude pools, reduce the surface area figures shown in the charts by 4% for each 1000 ft. above sea level. (No derating is necessary up to 2000 ft. above sea level.)  
Sizing for outdoor pools is based on 3½ mph average wind.

### Dimensional Data

Indoor Size	Input <sub>1</sub>		Output <sub>2</sub>		Gas Conn. Size <sub>2</sub> - inches NPT		Water Conn. Size <sub>2</sub> - inches NPT	Dimensions <sub>2</sub> - inches cm											Outdoor Size	Shipping Weight <sub>3</sub>				
	MBTU/h	kw	MBTU/h	kw	Nat	LP		A	B	C	D	E	F	V	lbs.	kg								
500 E	500	147	410	120	1	¾	2½	33¾	86	45¼	115	—	—	—	—	—	—	—	—	500 E	500	147		
600 E	600	176	492	144	1	¾	2½	38¾	98	50¼	128	—	—	—	—	—	—	—	—	600 E	600	176		
715 E	715	210	586	172	1	¾	2½	44¼	112	55¼	142	—	—	—	—	—	—	—	—	715 E	715	210		
850 E	850	249	697	204	1	¾	2½	50¾	129	62¼	158	—	—	—	—	—	—	—	—	850 E	850	249		
1010 E	1010	296	828	243	1½	1	2½	58	147	69½	177	—	—	—	—	—	—	—	—	1010 E	1010	296		
1200 E	1200	352	984	288	1½	1	2½	66¼	168	77¾	197	—	—	—	—	—	—	—	—	1200 E	1200	352		
1430 E	1430	419	1173	344	1½	1½	2½	76	193	87½	222	—	—	—	—	—	—	—	—	1430 E	1430	419		
1670 E	1670	489	1370	401	1½	1½	2½	85½	217	97	246	—	—	—	—	—	—	—	—	1670 E	1670	489		
1825 E	1825	535	1497	439	1½	1½	2½	92½	235	103¾	264	—	—	—	—	—	—	—	—	1825 E	1825	535		
2200 E	2205	646	1786	523	1½	1½	4	65½	166	83	211	16	41	28¼	72	15	38	24	61	18	46	2200 E	2205	646
2800 E	2745	804	2223	651	1½	1½	4	78	198	95½	243	20	51	28¼	72	15	38	24	61	18	46	2800 E	2745	804
3200 E	3150	923	2552	748	2	1½	4	88	224	105½	268	23	58	31½	80	16½	42	36	91	20	51	3200 E	3150	923
3600 E	3645	1068	2952	865	2	2	4	100½	255	118	300	29	74	31½	80	16½	42	36	91	20	51	3600 E	3645	1068
4000 E	4050	1187	3281	961	2½	2	4	110½	281	128	325	30½	77	34½	88	18	46	36	91	22	56	4000 E	4050	1187
4500 E	4500	1319	3645	1068	2½	2	4	123	312	140½	357	34	86	37¾	96	19½	50	36	91	24	61	4500 E	4500	1319

NOTES: 1. Input and output must be derated 4% per 1000 feet above sea level when installed above 2000 feet altitude.  
2. Dimensions are nominal.  
3. Integral pump included on sizes 500–1825.



# ETi<sup>®</sup> 400 HIGH EFFICIENCY HEATER



ETi 400 Heater  
**3-year warranty!** **TRADEGRADE**

The ETi 400 pool and spa heater brings you TitanTough Direct-Fire Titanium, the toughest ASME certified construction heat exchanger ever built. At 96% thermal efficiency, the ETi 400 heater has the highest efficiency ever built in its class. All this in a heater that operates with ultra-quiet noise level and out performs energy emissions standards.

### Featured Highlights

- TitanTough™ Direct-Fire Titanium ASME certified heat exchanger
- Certified for Ultra Low NOx Emissions
- Best-in-Class Energy Efficiency for fast heat up times and energy savings
- 4" PVC or CPVC vent up to 120 ft and 6" vent up to 300 ft long
- Indoor and Outdoor rating
- Ultra-Quiet operation
- Convenient 180 degrees rotating controls panel for left or right plumbing orientation
- Convenient front and rear gas connection capability
- Natural and Propane gas

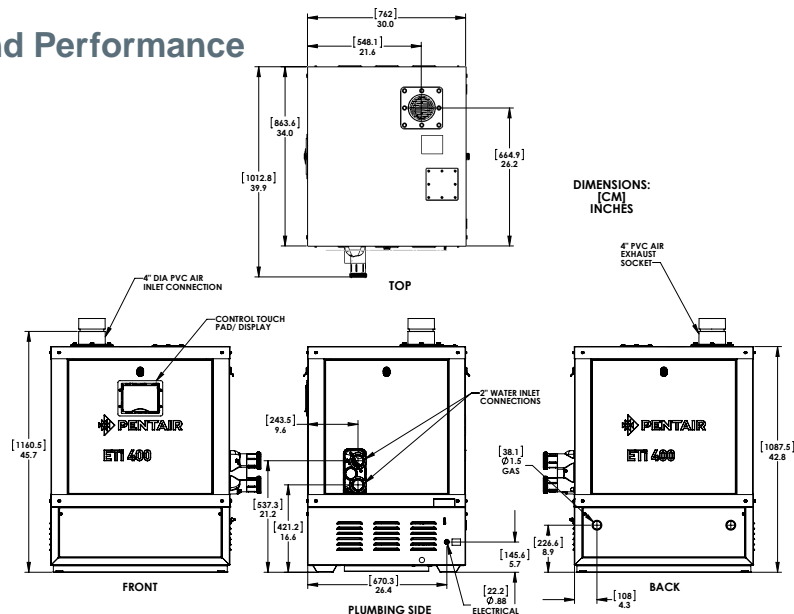
CALIFORNIA PROPOSITION 65 WARNING

⚠ **WARNING:** Cancer and Reproductive Harm.  
 ⚠ **AVERTISSEMENT:** Peut Causer le Cancer et des Dommages au Système Reproducteur.  
 ⚠ **ADVERTENCIA:** Cáncer y Daño Reproductivo.  
[www.p65warnings.ca.gov](http://www.p65warnings.ca.gov)

### Ordering Information

Product	Gas Type	BTU (000's)	Crate Qty.	Crate Wt.
<b>ETi HEATER</b>				
461113	Natural	400 ASME	1	365
<b>ACCESSORIES</b>				
475971	Direct Air Intake KIT ( for indoor installations)		1	5
475612	Condensate Neutralizer Cartridge KIT		1	5
476072	Propane Gas Conversion Kit		1	2

### Dimensions and Performance



# MASTERTEMP® ASME HEATER

## HIGH PERFORMANCE ECO-FRIENDLY HEATERS

### Featured Highlights

- Heats up fast so no long waits before enjoying your pool or spa
- Best-in-class energy efficiency\*
- Manual gas shut-off when service is required
- Eco-friendly MasterTemp Heater is certified for low NOx emission and outperforms industry standards
- Rotating digital display allows for easy viewing
- Tough, rustproof exterior handles the heat and weathers the elements



TRADEGRADE

MasterTemp High Performance Heater

CALIFORNIA PROPOSITION 65 WARNING  
 ⚠️ **WARNING:** Cancer and Reproductive Harm.  
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 ⚠️ **ADVERTENCIA:** Cáncer y Daño Reproductivo.  
 www.p65warnings.ca.gov. PN20514

MasterTemp heaters offer all the efficiency, convenience and reliability features you want in a pool heater, plus a lot more. As easy to use as your home heating system, plus, user-friendly indicator lights and troubleshoot icons make system operation and monitoring a snap. The compact design and super-quiet operation won't intrude on your poolside leisure time. Heavy-duty (HD) unit with cupro-nickel exchanger stands up to the harshest of applications, like low pH, high flow or heavy use.

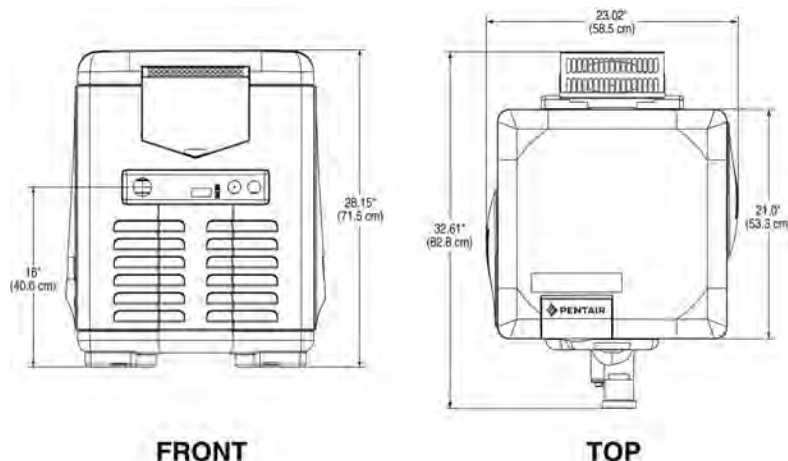
### Ordering Information

Product	Gas Type	BTU (000's)	Carton Qty.	Carton Wt.
<b>MASTERTEMP HEATERS</b>				
461000	Natural	200 ASME	1	138
461001	Propane	200 ASME	1	138
460771	Natural	250 ASME	1	140
460772	Propane	250 ASME	1	140
461020	Natural	250 ASME HD	1	140
460775	Natural	400ASME	1	149
461021	Natural	400 ASME HD	1	149
460776	Propane	400ASME	1	149

Note: The MasterTemp® Heater is certified for low NOx emissions.

\* Standard Copper Heat Exchanger 84% Efficient.  
 Heavy Duty (HD) Cupro-Nickel Heat Exchanger 82% Efficient.

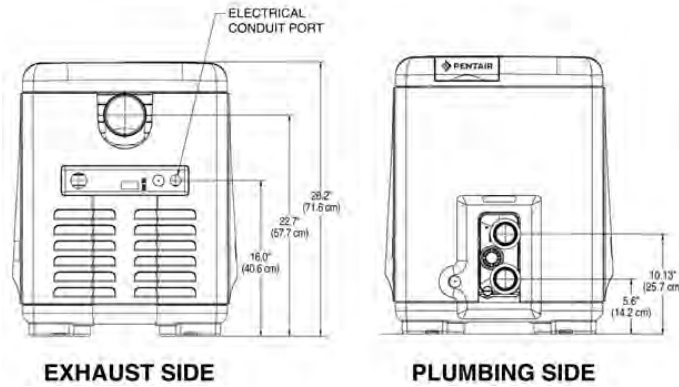
### Dimensions and Performance



# MASTERTEMP® ASME HEATER (CONT'D)

## HIGH PERFORMANCE ECO-FRIENDLY HEATERS

### Dimensions and Performance



### POOL SIZING\*

°F Temperature Change/ 24 Hrs.	Heater Size			Heater Size		
	Model 200	Model 250/250HD	Model 400/400HD	Model 200	Model 250/250HD	Model 400/400HD
	Pool Capacity in Gallons			Pool Surface Area in Sq. Ft. at 5.5' Depth		
5	97,383	121,729	194,766	2,364	2,955	4,727
10	48,691	60,864	97,383	1,182	1,478	2,364
15	32,461	40,576	64,922	788	985	1,576
20	24,346	30,433	48,691	591	739	1,182
25	19,477	24,346	38,953	473	591	945
30	16,230	20,288	32,461	394	493	788
35	13,912	17,390	27,824	338	423	675
40	12,173	15,216	24,346	295	369	591

### SPA SIZING\*

Model	Spa Volume (Gallons)								
	200	300	400	500	600	700	800	900	1,000
	Minutes for 30°F Temperature Rise (Heater Input in 1000 BTU/HR)								
200	18.0	27.0	35.0	44.0	53.0	62.0	71.0	80.0	89.0
250/250HD	15.8	23.5	30.8	38.5	46.5	54.3	62.0	70.0	77.8
400/400HD	9.0	13.0	18.0	22.0	27.0	31.0	35.0	40.0	44.0



# MAX-E-THERM® ASME HEATER

## POOL AND SPA HEATER



### Featured Highlights

- **Lightweight** – Lightest heater in its class
- **Best-in-class** – energy efficiency\*
- **Compact Design** – Ideal for retro-fit installations
- **Easy to Switch** – Change gas sources with installation of separate orifice
- **Environmentally Friendly** – All units are low NOx
- **Rustproof Housing** – Sleek, matte black enclosure is made of Dura-Glas™ – an exclusive Sta-Rite material that handles the heat and weathers the elements
- **Lower Operating Costs** – 84% efficiency rating – rated 1st in its class for highest energy efficiency
- **Custom or Retrofit** – Direct-connects to Sta-Rite System:3® Mod Media™ Filter or easily fits other systems



**TRADEGRADE** Max-E-Therm Pool and Spa Heater

CALIFORNIA PROPOSITION 65 WARNING  
 ⚠️ **WARNING:** Cancer and Reproductive Harm.  
 ⚠️ **AVERTISSEMENT:** Peut Causer le Cancer et des Dommages au Système Reproducteur.  
 ⚠️ **ADVERTENCIA:** Cáncer y Daño Reproductivo.  
 www.p65warnings.ca.gov. P65 2015.4

For indoor or outdoor installations on pools and spas. Features include an LCD temperature readout with dual thermostat controls, temperature safety lockout, and 6-position control panel. PMG burner technology requires no outdoor draft hood. Proven Dura-Glas Resin provides rust-proof construction. Heavy-duty (HD) unit with cupro-nickel exchanger stands up to the harshest of applications, like low pH, high flow or heavy use.

### Ordering Information

Product	Description	BTU (000's)	Carton Wt.
<b>MAX-E-THERM POOL/SPA HEATER</b>			
460767	Max-E-Therm 250 BTU ASME Natural Gas Heater	250	151
460768	Max-E-Therm 250 BTU ASME Propane Gas Heater	250	151
460763	Max-E-Therm 400 BTU ASME Natural Gas Heater	400	149
460764	Max-E-Therm 400 BTU ASME Propane Gas Heater	400	149

Note: The Max-E-Therm® Heater is certified for low NOx emissions. \* Standard Copper Heat Exchanger 84% Efficient.

### POOL SIZING\*

°F Temperature Change/ 24 Hrs.	Heater Size		Heater Size		
	Model 250/250HD	Model 400/400HD	Model 200	Model 250/250HD	Model 400/400HD
	Pool Capacity in Gallons		Pool Surface Area in Sq. Ft. at 5.5' Depth		
5	121,729	194,766	2,364	2,955	4,727
10	60,864	97,383	1,182	1,478	2,364
15	40,576	64,922	788	985	1,576
20	30,433	48,691	591	739	1,182
25	24,346	38,953	473	591	945
30	20,288	32,461	394	493	788
35	17,390	27,824	338	423	675
40	15,216	24,346	295	369	591

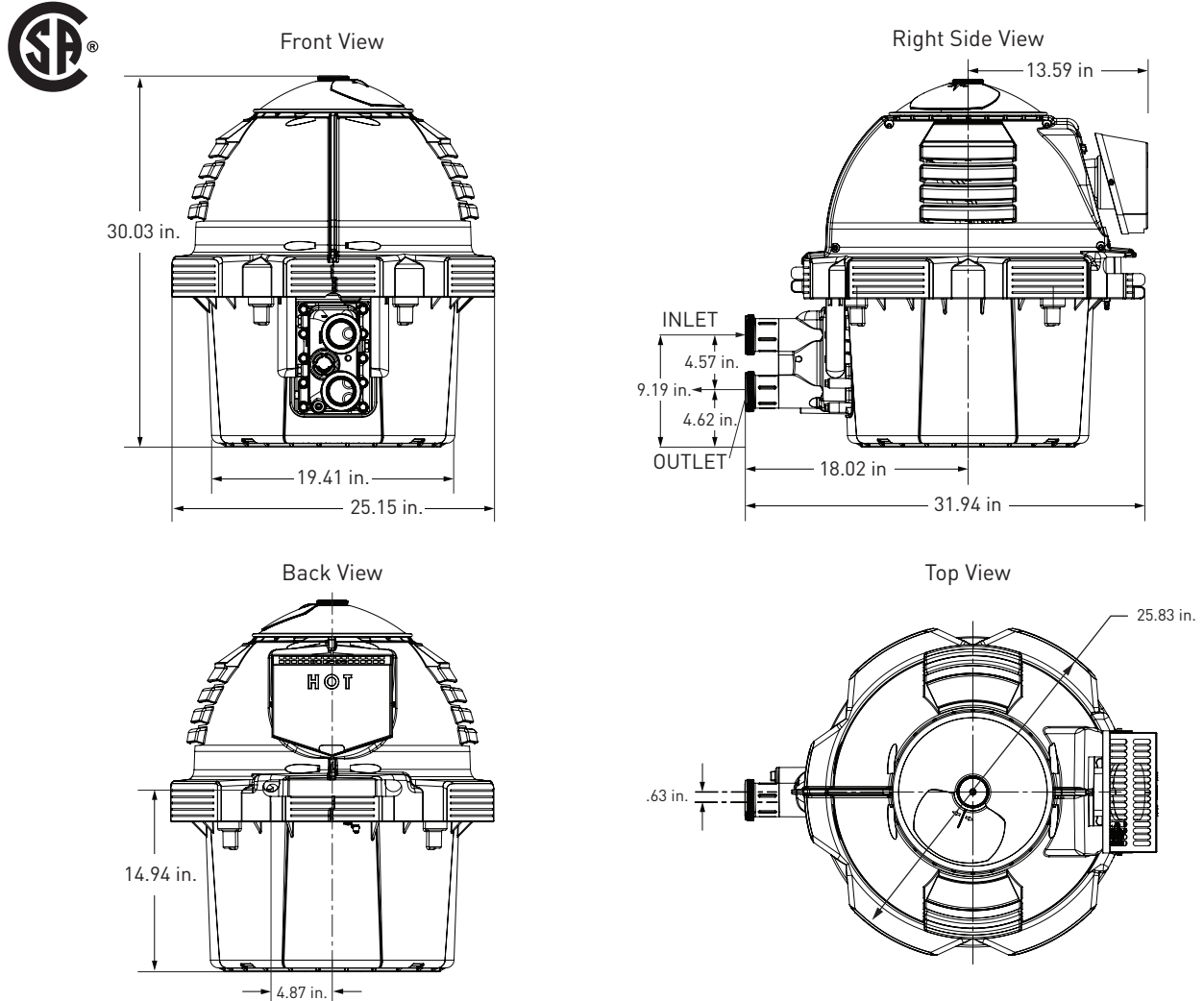
### SPA SIZING\*

Model	Spa Volume (Gallons)								
	200	300	400	500	600	700	800	900	1,000
	Minutes for 30°F Temperature Rise (Heater Input in 1000 BTU/HR)								
250/250HD	15.8	23.5	30.8	38.5	46.5	54.3	62.0	70.0	77.8
400/400HD	9.0	13.0	18.0	22.0	27.0	31.0	35.0	40.0	44.0

# MAX-E-THERM® ASME HEATER (CONT'D)

## POOL AND SPA HEATER

### Dimensions and Performance



## MAX-E-THERM® AND MASTERTEMP® HEATER ACCESSORIES

### Ordering Information

Product	Description	Approx. Ship. Weight (Lbs.)
<b>VERTICAL VENTING – NEGATIVE PRESSURE</b>		
77707-0076	4 in. x 6 in. Metal Flue Collar	3
77707-0077	4 in. x 8 in. Metal Flue Collar	3
<b>HORIZONTAL OR VERTICAL VENTING – POSITIVE PRESSURE <sup>4</sup></b>		
77707-0086	Appliance Adapter, Stainless Steel – Manufactured by Heat-Fab® venting manufactured by Selkirk Corp. *	3
77707-0087	Appliance Adapter, Stainless Steel – Manufactured by Z-Flex U.S. Venting	3

**CALIFORNIA PROPOSITION 65 WARNING**

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 ⚠ **ADVERTENCIA:** Cáncer y Daño Reproductivo.  
[www.p65warnings.ca.gov](http://www.p65warnings.ca.gov)

# MAX-E-THERM® AND MASTERTEMP® HEATER ACCESSORIES (CONT'D)

## Ordering Information

Product	Description	Approx. Ship. Weight (Lbs.)
<b>CONVERSION KITS – NATURAL GAS TO LPG</b>		
77707-1461	Conversion Kit NG-LPG 200K for Pool and Spa Heater	1
460741	NG to Propane Conversion Kit – Model 250	
460755	NG to Propane Conversion Kit – Model 300	
77707-1451	Conversion Kit NG-LPG 333K for Pool and Spa Heater	1
77707-1441	Conversion Kit NG-LPG 400K for Pool and Spa Heater	1
<b>CONVERSION KITS – LPG to NATURAL GAS</b>		
77707-1431	Conversion Kit LPG-NG for 200K Pool and Spa Heater	1
460742	Propane to NG Conversion Kit – Model 250	
460756	Propane to NG Conversion Kit – Model 300	
77707-1421	Conversion Kit LPG-NG for 333K Pool and Spa Heater	1
77707-1411	Conversion Kit LPG-NG for 400K Pool and Spa Heater	1
<b>HEATER ACCESSORIES</b>		
42001-0085S	Heater Bolt Down Bracket Kit (Max-E-Therm)	1
460738	Heater Bolt Down Bracket Kit (MasterTemp)	
PKG 188	Union Package	1
U11-197P	2 in. Adapter (for service loop)	1
<b>OUTDOOR AIR KITS</b>		
475002	Direct Air Intake Kit (Max-E-Therm)	1
461031	Direct Air Intake Kit (MasterTemp)	1

CALIFORNIA PROPOSITION 65 WARNING  
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[www.p65warnings.ca.gov](http://www.p65warnings.ca.gov) PN200714

<b>Combustion Air Intake 3 in. Pipe (Vertical or Horizontal)</b>	
No. of 90° Elbows	Maximum Length in Feet (M)
0	70 ft. (21.3 M)
1	58 ft. (17.7 M)
2	46 ft. (14.0 M)
3	34 ft. (10.4 M)
4	22 ft. ( 6.7 M)

### Direct Air Intake Kit

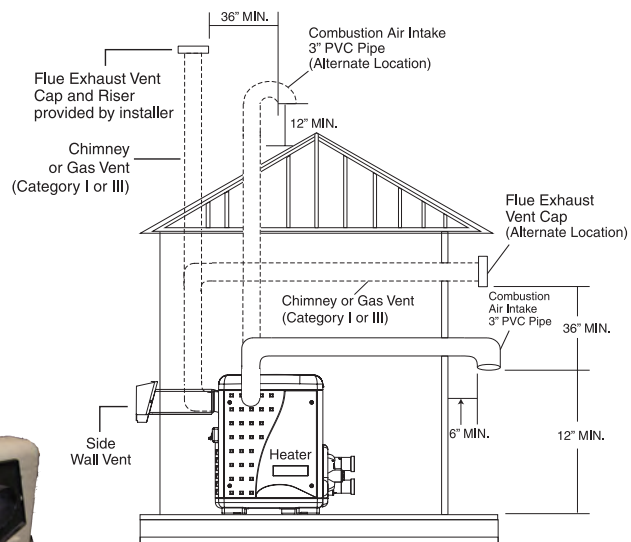
(includes: service panel with cut-out, air orifice adapter, short 3" PVC pipe, 3" PVC union, screened termination cap.)



PN 475002



PN 461031



Direct Air Intake Duct with 3-inch PVC Pipe (Indoor Installation)



# ULTRATEMP® HEAT PUMPS

## HIGH PERFORMANCE HEAT PUMP

TRADEGRADE



UltraTemp 120Q Heat Pump

The industry's first heat pump charged with non-ozone depleting refrigerant, R410A.

### Featured Highlights

- 100% titanium heat exchanger assures corrosion-free performance for extra long life
- LCD control board displays an intuitive menu-driven read out with easy to follow full word messages...no more codes
- AutoSet (time clock over-ride) feature monitors water temperature and turns the water circulation pump on and off as needed to maintain desired pool temperatures
- Automatic defrost feature senses refrigerant temperature and prevents freezing, allowing the heat pump to operate at even lower temperatures
- Compatible with ALL automated control packages
- Long-life corrosion resistant plastic composite cabinet stands up to severe climates and pool chemicals
- Emerson® Copeland Scroll® Compressor
- ETL listed for safe operation
- Thermostatic Expansion Valve (TXV) controls refrigerant flow for optimum efficiency and BTU output over a wider operating range
- Highest efficiency available, meets or exceeds existing codes and standards
- BTU and efficiency performance independently certified by the Air-Conditioning, Heating and Refrigeration Institute, AHRI

### Ordering Information

Part #		Model	80/80/80* BTU/COP	80/63/80* BTU/COP	50/63/80* BTU/COP	Freq (Hz)	Breaker Size (amp)	Phase	Volt	Ctn Qty.	Ctn Wt.	"A" Dim.
BLACK	ALMOND											
<b>ULTRATEMP HEAT PUMPS</b>												
460960	460930	70	75,000/5.9	70,000/5.7	50,000/4.0	60	40	1	230	1	290	33.5
460961	460931	90	90,000/5.8	85,000/5.6	60,000/4.0	60	50	1	230	1	300	33.5
460962	460932	110	110,000/6.1	101,000/5.8	70,000/4.0	60	50	1	230	1	271	45.5
460863	460833	120Q	127,000/5.7	120,000/5.5	80,000/4.0	60	50	1	230	1	270	48.1
460964	460934	140	145,000/5.8	135,000/5.6	90,000/4.0	60	50	1	230	1	335	45.5
460965	460935	120 H/C	125,000 Heat/5.5 71,000 Cool/4.1	118,000/5.3	80,000/4.0	60	50	1	230	1	283	45.5
460959	460958	140 H/C	140,000 Heat/5.6 71,000 Cool/4.1	132,000/5.4	85,000/4.0	60	50	1	230	1	344	45.5
460967	460937	120 C	122,000/5.5	114,000/5.3	76,000/4.0	60	50	3	230	1	264	45.5
460929	460928	140C	140,000/5.7	130,000/5.5	85,000/4.0	60	50	3	230	1	335	45.5

\* Rating in accordance with ARI Standard 1160 (air temp. °F. / % relative humidity / water temp °F.)

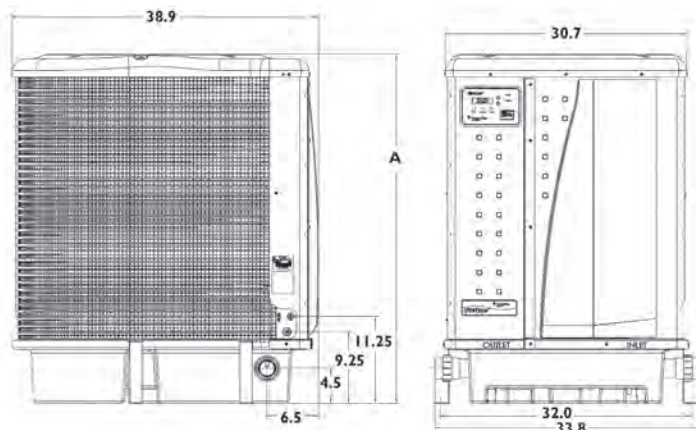
Emerson® is a registered trademark of Emerson Electric Co. and Copeland Scroll® is a registered trademark of Emerson Climate Technologies, Inc.

**CALIFORNIA PROPOSITION 65 WARNING**

⚠ **WARNING:** Cancer and Reproductive Harm.  
 ⚠ **AVERTISSEMENT:** Peut Causer le Cancer et des Dommages au Système Reproducteur.  
 ⚠ **ADVERTENCIA:** Cáncer y Daño Reproductivo.

www.p65warnings.ca.gov. PH2011A

### Dimensions and Performance



The AHRI Certified® Mark is applied only to HVACR equipment and components that have been independently tested to certify manufacturers' performance claims are accurate. Visit [www.ahridirectory.org](http://www.ahridirectory.org) for a complete list of certified products.

CEC indicates that Heat Pump has been evaluated to California Title-20, listed in the California Energy Commission's (CEC) database of compliant heat pumps, and certified to use on Residential Swimming Pool Filtration Systems.







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# ADA-COMPLIANT LIFTS





# AQUATRAM® POOL ACCESS LIFTS

## ADA-COMPLIANT POOL LIFTS



### Featured Highlights

- All AquaTRAM lifts comply with ADA Guidelines
- Dual flip-up arm rests provide easy and safe access
- Rechargeable battery-powered operation for easy use
- Comfortable seat with adjustable lap belt
- Simple-to-operate controls provide easy access in and out of pool
- Stainless steel with corrosion-resistant powder coated finish
- Lifting capacities up to 500 pounds

ADA Regulations mandate that most types of commercial swimming pools must have ADA-compliant pool lifts or other approved means of access installed. AquaTRAM pool access lifts provide, safe, easy swimming pool access for swimmers with physical disabilities. With four versions to choose from, there is an AquaTRAM lift that fits every pool and budget. Standard features include simple to operate controls, rechargeable battery-powered operation and lifting capacities of up to 500 pounds.

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[www.p65warnings.ca.gov](http://www.p65warnings.ca.gov) PK2018A

### Ordering Information

Product	Model	Carton Qty.	Carton Wt. (Lbs.)
<b>AQUATRAM 90</b>			
11220	AquaTRAM 90 Lift with Quickset Dual Wedge Anchor	1	245
11220-A	AquaTram 90 Lift without Quickset Dual Wedge Anchor	1	235
11221	AquaTRAM 90 Lift with Round Anchor	1	245
11221-A	AquaTram 90 Lift without Round Anchor	1	235
<b>AQUATRAM</b>			
11200	AquaTRAM Lift with Anchor	1	200
11200-A	AquaTRAM Lift without Anchor	1	190
11201	AquaTRAM Lift with Anchor-Left facing	1	200
11201-A	AquaTRAM Lift without Anchor-Left facing	1	190
<b>AQUATRAM LT</b>			
11230	AquaTRAM LT Lift with Anchor Kit	1	200
11230-A	AquaTRAM LT Lift without Anchor Kit	1	190
<b>AQUATRAM 360</b>			
11250	AquaTRAM 360 Lift with Anchor	1	335
11250-A	AquaTRAM 360 Lift without Anchor	1	325
<b>AQUATRAM PT</b>			
11280	AquaTRAM PT Portable Lift	1	425

\* Includes cover, headrest, chest strap and extra integrated battery/control box unit.

Note: Not every lift will work for every application and pool profile. For example, the AquaTRAM and AquaTRAM LT lifts are not designed to clear high curbs or walls. To ensure that you are selecting an appropriate lift for your facility, please refer to our AquaTRAM verification guides or contact customer service for additional applications assistance. AquaTRAM verification guides are available on our website at [www.pentair.com](http://www.pentair.com).

Note: For best efficiency please fax your purchase orders directly to 845-463-7291 or email: [paragoncustserv@pentair.com](mailto:paragoncustserv@pentair.com).

For information about AquaTRAM lift accessories, please contact your Pentair Representative.

AquaTRAM products may have extended lead-times and cannot be combined with any Pentair freight programs.



# AQUATRAM® POOL ACCESS LIFTS

## POOL LIFT ACCESSORIES

Features and Benefits	AquaTRAM 90	AquaTRAM 360	AquaTRAM Lift with in-deck tool-free anchoring
Lifting capacity	300 lbs.	500 lbs.	400 lbs.
ADA Compliant	√	√	√
Rotation for tight-area access	90° right or left	360°	
Boom arm design adapts to the most demanding and specialized applications; superb reach and wall clearance	√	√	
Can serve 2 adjoining pools with 1 lift		√	
Low profile design uses minimal deck space	√		√
22" wide seat standard		√	
Compact and lightweight, fits through most doorways	√		√
Secure in-deck anchoring with patented design; tool-free removal; portable with optional Transport Cart	√ Using Dual Wedge Anchor		√
Secure Docking Bar included to secure in place per ADA requirement			
Lag bolt anchoring, quick removal with tools; portable with optional Transport Cart			
Dual flip-up armrests for easier access and safer transfers	√	√	√
Adjustable & removable footrest fits users across a wide range of sizes	√	√	√
Adjustable lap belt with hook & eye fastening	√	√	√
Easy-to-use Slim Line controls can be operated from seat or pool ledge	√	√	√
Stainless steel construction, durable powder-coat finish	√	√	√
Battery-operated; easier to install & smoother transport than water power	√	√	√
Slim, one-piece 24v rechargeable battery	√	√	√
Submersible remote	√	√	√
5-year Limited Warranty (pro-rated after Year 2 on electronics)		√	√
Lifetime Limited Warranty on frame		√	√
2-year Limited Warranty	√		

Features and Benefits	AquaTRAM LT Lift with Lag-bolt anchoring	AquaTRAM PT
Lifting capacity	350 lbs.	350 lbs.
ADA Compliant	√	√
Rotation for tight-area access		
Boom arm design adapts to the most demanding and specialized applications; superb reach and wall clearance		
Can serve 2 adjoining pools with 1 lift		
Low profile design uses minimal deck space	√	√
22" wide seat standard		
Compact and lightweight, fits through most doorways	√	√
Secure in-deck anchoring with patented design; tool-free removal; portable with optional Transport Cart		
Secure Docking Bar included to secure in place per ADA requirement		√
Lag bolt anchoring, quick removal with tools; portable with optional Transport Cart	√	
Dual flip-up armrests for easier access and safer transfers	√	√
Adjustable & removable footrest fits users across a wide range of sizes	√	√
Adjustable lap belt with hook & eye fastening	√	√
Easy-to-use Slim Line controls can be operated from seat or pool ledge	√	√
Stainless steel construction, durable powder-coat finish	√	√
Battery-operated; easier to install & smoother transport than water power	√	√
Slim, one-piece 24v rechargeable battery	√	√
Submersible remote	√	√
5-year Limited Warranty (pro-rated after Year 2 on electronics)		
Lifetime Limited Warranty on frame		
2-year Limited Warranty	√	√

CALIFORNIA PROPOSITION 65 WARNING

⚠️ **WARNING:** Cancer and Reproductive Harm.  
 ⚠️ **AVERTISSEMENT:** Peut Causer le Cancer et des Dommages au Système Reproducteur.  
 ⚠️ **ADVERTENCIA:** Cáncer y Daño Reproductivo.

[www.p65warnings.ca.gov](http://www.p65warnings.ca.gov)
PN2014A



# AQUATRAM® POOL ACCESS LIFTS

## POOL LIFT ACCESSORIES

AquaTRAM LT Lift and Anchor	
Pentair P/N	Description
11230	AquaTRAM LT Lift w/ Anchor Kit
11230-A	AquaTRAM LT Lift Less Anchor Kit
11231	AquaTRAM LT Anchor Kit only
11232	AquaTRAM LT Transport Cart
11204	AquaTRAM Protective Cover
11205	Adjustable Headrest, AquaTRAM only
11270	AquaTRAM Replacement Hand Control
11271	AquaTRAM Replacement Control Box (LINAK)
11278	AquaTRAM Replacement Control Box (VITO)
11273	AquaTRAM Replacement Actuator Cover

AquaTRAM Series SHARED Options & Accessories	
Pentair P/N	Description
11206	AquaTRAM Adjustable Chest Strap
11208	AquaTRAM Pull-out Leg rest
11211	AquaTRAM Replacement Battery (LINAK)
11277	AquaTRAM Replacement Charger (LINAK)
11212	AquaTRAM Replacement Battery (VITO)
11279	AquaTRAM Replacement Charger (VITO)
11213	AquaTRAM Replacement Footrest
11207	AquaTRAM Cycle Attachment
11305	AquaTRAM Replacement Seat w/ Arms
11215	AquaTRAM Replacement Seat Belt
11306	AquaTRAM Foot Rest




AquaTRAM PT Lift	
Pentair P/N	Description
11280	AquaTRAM PT Lift w/ Sand Ballast (sand not incl.)
11280-C	AquaTRAM PT Lift w/ Concrete Ballast (concrete incl.)
11285	AquaTRAM PT Cover, Blue
11287	AquaTRAM PT Accessory Upgrade Kit
11289	Affixment Kit (contains docking bar and anchor)

AquaTRAM 360 Lift and Accessories	
Pentair P/N	Description
11250	AquaTRAM 360 Lift w/ Anchor
11250-A	AquaTRAM 360 Lift without Anchor
11252	AquaTRAM 360 Anchor Kit w/ Cap
11257	AquaTRAM 360 Protective Cover
11254	AquaTRAM 360 Adjustable Headrest
11253	AquaTRAM 360 Transport Cart
11255	AquaTRAM 360 Sling Arm Option (500# Capacity)
11256-C	AquaTRAM 360 Replacement Sling Chain Set
11256	AquaTRAM 360 Replacement Sling (500# Capacity)
11256-B	AquaTRAM 360 Replacement Sling Bars
11258	AquaTRAM 360 Gurney Option
11260	AquaTRAM 360 Spine Board Option
11261	AquaTRAM 360 Head Immobilizer for Spine Board
11274	AquaTRAM 360 Replacement Hand Control, 4-Button
11275	AquaTRAM 360 Replacement Control Box
11276	AquaTRAM 360 Replacement Actuator
11259	AquaTRAM 360 Wheelchair Option 22" Chair included

AquaTRAM Lift and Anchor	
Pentair P/N	Description
11200	AquaTRAM Lift w/ Anchor
11200-A	AquaTRAM Lift without Anchor
11201	AquaTRAM Lift w/ Anchor - Left facing
11201-A	AquaTRAM Lift without Anchor - Left facing
11202	QuickSet Dual Wedge Anchor for AquaTRAM Lift
11203	AquaTRAM Transport Cart
11302	AquaTRAM Replacement Actuator w/ Frame
11204	AquaTRAM Protective Cover
11205	Adjustable Headrest, AquaTRAM Only
11270	AquaTRAM Replacement Hand Control
11271	AquaTRAM Replacement Control Box
11273	AquaTRAM Replacement Actuator Cover

AquaTRAM 90 Lift	
Pentair P/N	Description
11220	AquaTRAM 90 Lift w/ Quickset Dual Wedge Anchor
11220-A	AquaTRAM 90 Lift w/o Quickset Dual Wedge Anchor
11221	AquaTRAM 90 Lift for Round Anchor Post w/Anchor
11221-A	AquaTRAM 90 Lift for Round Anchor w/o Anchor
11222	AquaTRAM 90 Lift Cover
11224	AquaTRAM 90 Lift Transport Cart
11226	AquaTRAM 90 Anchor for Round Post Model
11202	AquaTRAM 90 Anchor for Square Post Anchor
11240	2-1/2"OD x 1.95"ID Anchor Adapter Sleeve
11241	2-3/8"OD x 1.95"ID Anchor Adapter Sleeve
11242	2-5/8"OD x 1.95"ID Anchor Adapter Sleeve
11243	Round Anchor for Wood Framed Deck

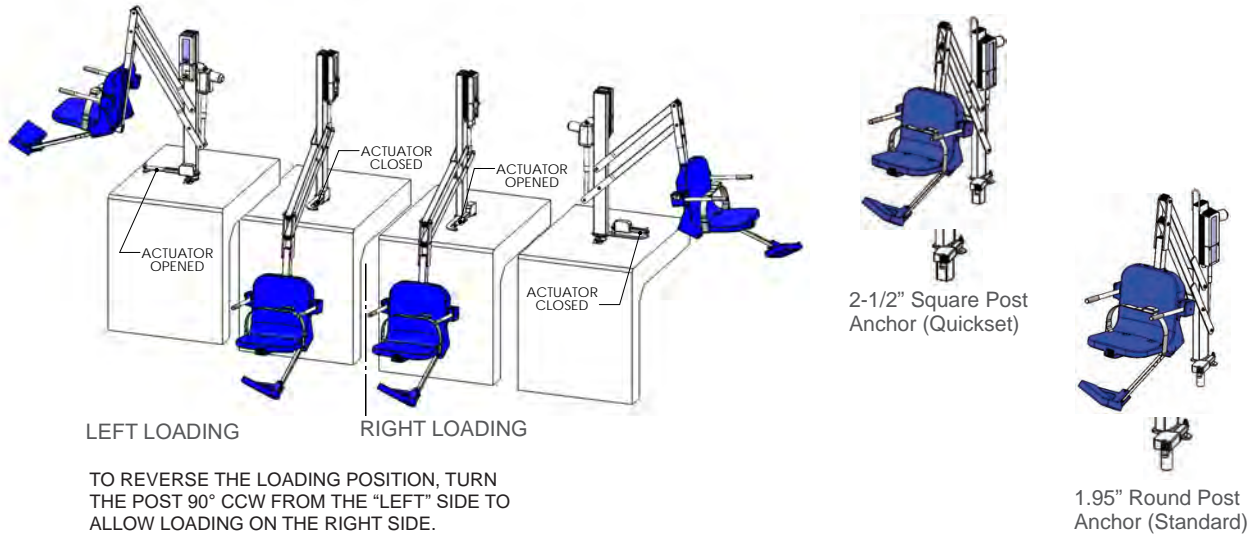
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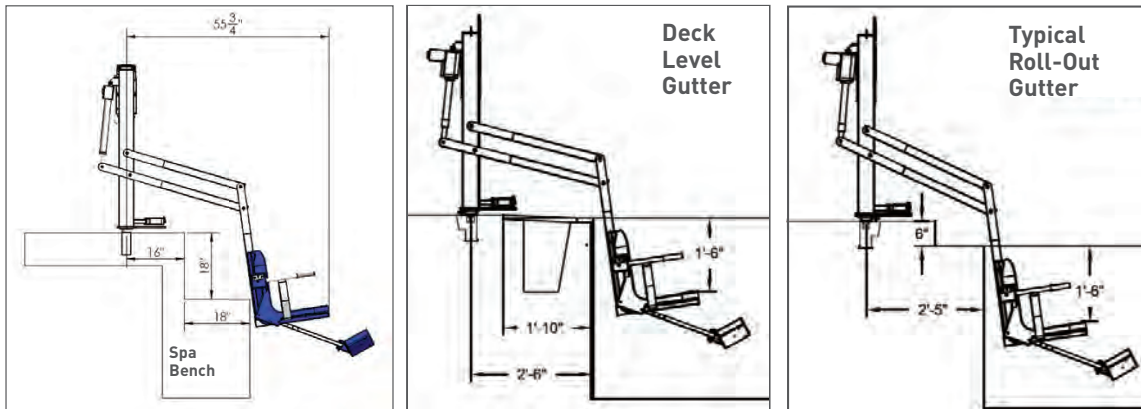
PS 201514

# AQUATRAM® POOL ACCESS LIFTS

## ADA-COMPLIANT POOL LIFTS



### AQUATRAM Reach/Clearance



- A. Can clear a 18" Built-In (Spa) Bench when installed with a 16" anchor set-back\* (at 6" d-w).
- B. Can accommodate anchor set-back\* of 16"-20" for "Square" Pool Profiles (with max d-w).
- C. Can accommodate up to 29" anchor set-back\* for typical "Roll-Out" Gutter Profile (based on 6" d-w dimensions).
- D. Consult with factory for assistance with your application.

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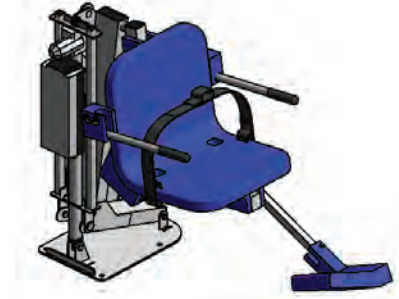
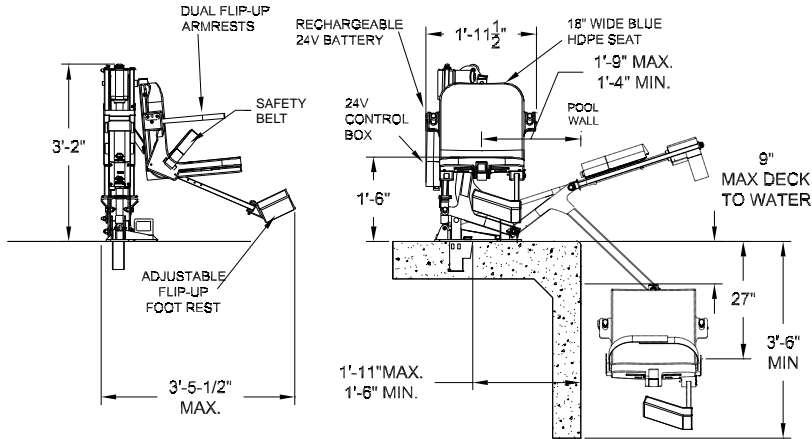
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www.p65warnings.ca.gov.      PR2017A

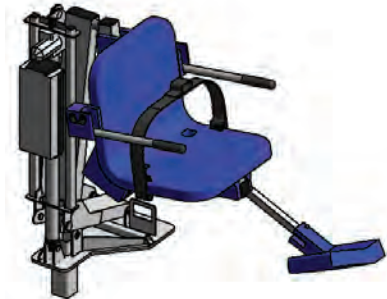
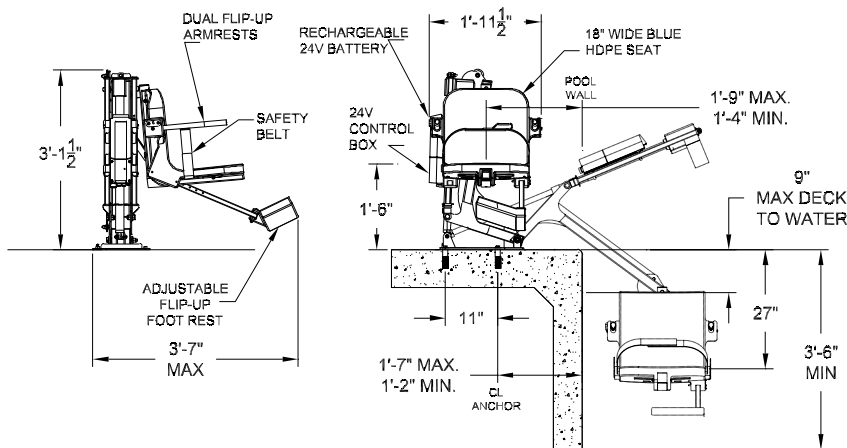
# AQUATRAM® POOL ACCESS LIFTS

## ADA-COMPLIANT POOL LIFTS

### AquaTRAM LT



### AquaTRAM



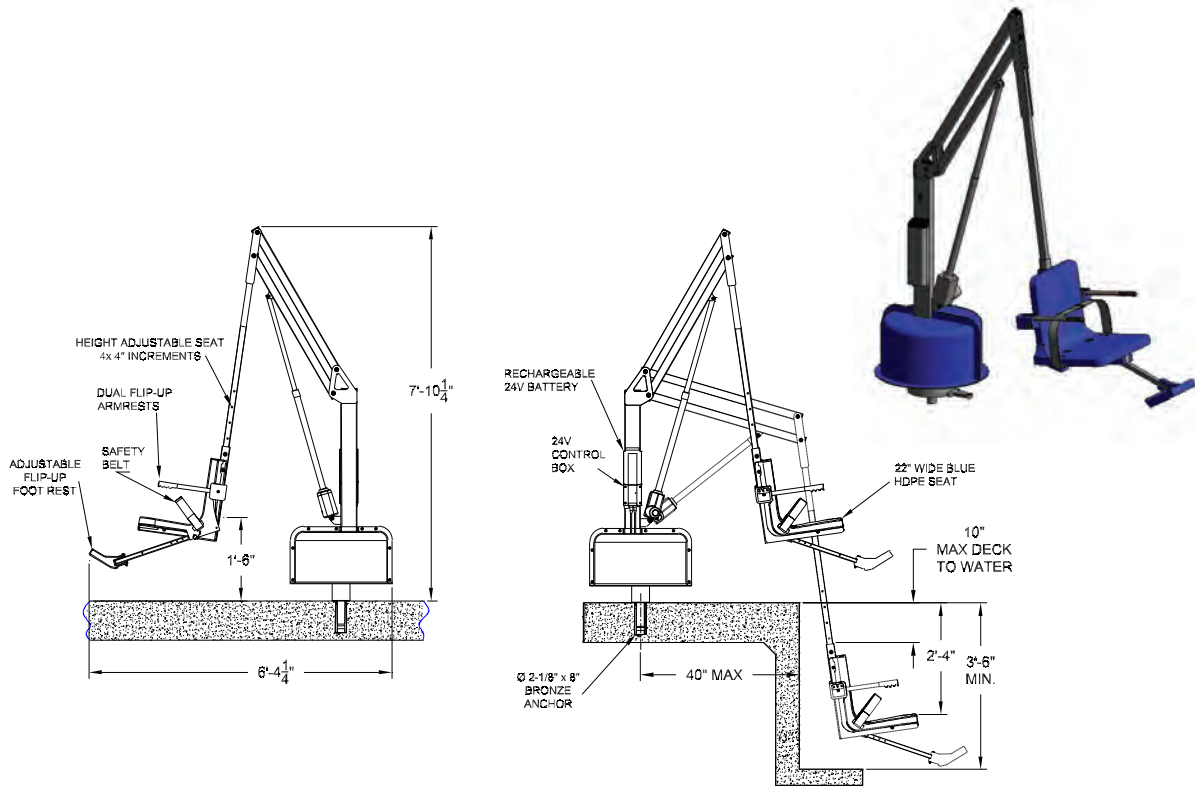
CALIFORNIA PROPOSITION 65 WARNING  
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 www.p65warnings.ca.gov. PN20751A



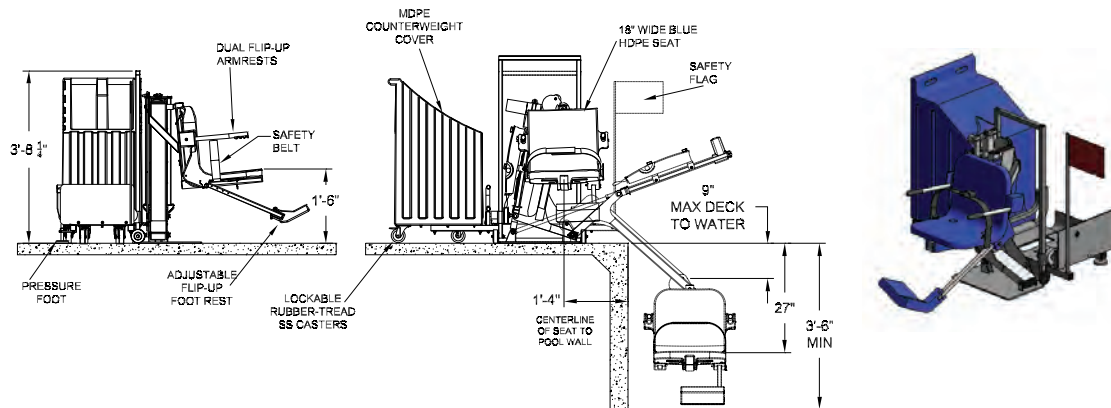
# AQUATRAM® POOL ACCESS LIFTS

## ADA-COMPLIANT POOL LIFTS

### AquaTRAM 360



### AquaTRAM PT



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# PARAGON™ DECK EQUIPMENT

## POOL ACCESSORIES

For over 50 years, KDI Paragon products have been the flagship of the aquatics industry for quality, craftsmanship and innovation. We remain focused on the core values that helped make us the leader: we build to our customer's specifications with a commitment to custom products and continuous improvement; we provide superior customer service and communication by listening and being responsive to our partners in the aquatics industry, whether architects, engineers, distributors, contractors, facility managers or competitive swimming and diving professionals.



Track Start PLUS+™ is a new modular concept that adds optional enhancements to new and existing Track Start starting platforms. These features will be factory installed if ordered with new Track Start platforms. The same kits, complete with mounting hardware and installation instructions will be provided for an easy retrofit in the field for existing platforms.



### Track Start PLUS+™ STS Starting Platform features include:

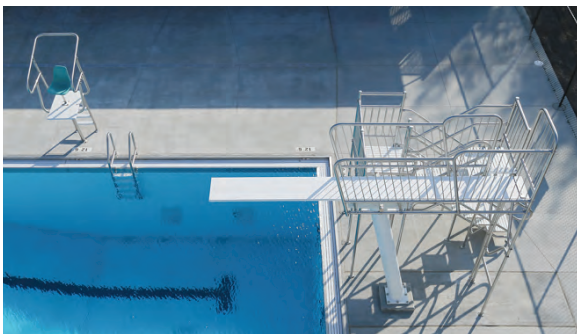
- Modular concept enhancing swimmers performance with seamless upgrade to existing Quickset/Paralyte or Competitor style platforms
- Side-to-side adjustment for unimpeded rear access with or without a step
- Non-skid, white sand finish, UV inhibited polypropylene kick plate adjusts infinitely from side-to-side
- Color options available for frame and sand-finish kick plate. Call for more information.



### Grab Rails:

- Grab rails come in pairs. They are used to keep racing lanes free from obstructions when used in conjunction with built-in steps.
- Figure 4 model shown to left. Pentair's most popular model. For flat deck without unusual curbs or coping.
- Many more styles available

### Diving Towers and Stair Systems:



- Our diving towers offer significant differences to satisfy varying needs, including budgets, preferences, and job conditions.
- Sizes vary from 1/2 meter to 3 meters in height. Paraflyte towers are available in one meter and three meter models.
- Each tower is furnished with railings, rear anchor, front anchor, pedestal and fulcrum.

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[www.p65warnings.ca.gov](http://www.p65warnings.ca.gov) PK2017A

# PARAGON™ DECK EQUIPMENT

## POOL ACCESSORIES

### Griff's Vision Guard Station™

- Minimum footprint; maximum impact
- Lighter; less costly; ships flat
- 3 heights available



### All Terrain Griff's Guard Station®

- Most versatile guard chair ever
- Super portable - tip and roll with ease over any terrain
- Front and back guard access



### Custom-Made Railings

We will fabricate railings to your specifications whenever custom fabricated, corrosion-resistant, stainless steel railings are required. Can be used for any pool application including entry, ADA compliant, stairs, deck guards and diving towers. Design and engineering support are readily available.

Our railings are manufactured and verified to meet your project's unique specifications. All rails are factory welded and are shipped ready for installation requiring no field cutting, drilling or modifications.



We manufacture most rail goods in 1.90" O.D. stainless steel tubing, and have extensive experience manufacturing custom rails in 1.50" O.D. as well. If rails are not being installed directly into the concrete, anchor sockets are available to accommodate 1.90" and 1.50" rails.

For our complete Paragon Deck Equipment product line, contact Customer Service and request a Paragon Deck Catalog (part #PCA-103).

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 ⚠️ **ADVERTENCIA:** Cáncer y Daño Reproductivo.

www.p65warnings.ca.gov. PR020174





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# LIGHTING





# INTELLIBRITE® 5G WHITE LED LIGHTS

## UNDERWATER LED LIGHTS FOR SWIMMING POOLS AND SPAS

### TRADEGRADE



IntelliBrite 5g White LED Pool Light

IntelliBrite 5g White LED light offers a brighter, more energy efficient alternative to incandescent white lighting. Utilizing its array of LEDs, it is also ideal for commercial applications.

All Pentair UL Listed underwater lights are certified for use in fresh water with up to 6,000 ppm salinity.

#### Featured Highlights

- The brightest most energy efficient white LED pool light on the market
- Energy efficient utilizing up to 86% less energy than comparable incandescent lights
- Superior lens geometry and innovative reflector design combine to create a wider beam and more uniform light distribution
- Pool lens can be rotated to 180 degrees to provide wide beam pattern (standard) or narrow beam pattern
- Compatible with Pentair stainless steel and plastic niches
- Available in 120V and 12V versions
- Available in 300W, 400W, and 500W incandescent equivalencies

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[www.p65warnings.ca.gov](http://www.p65warnings.ca.gov)

### Ordering Information for Pool Lights

Product	Voltage	Wattage	Cord Length (Ft.)	Incandescent Equivalency	Carton Qty.
<b>INTELLIBRITE 5g WHITE POOL LIGHTS – 300 WATT EQUIVALENT, 120 VOLT</b>					
601100	120V	40	30 ft.	300W Equivalency	1
601101	120V	40	50 ft.	300W Equivalency	1
601102	120V	40	100 ft.	300W Equivalency	1
601103	120V	40	150 ft.	300W Equivalency	1
601104	120V	40	250 ft.	300W Equivalency	1
<b>INTELLIBRITE 5g WHITE POOL LIGHTS – 300 WATT EQUIVALENT, 12 VOLT</b>					
601105	12V	40	30 ft.	300W Equivalency	1
601106	12V	40	50 ft.	300W Equivalency	1
601107	12V	40	100 ft.	300W Equivalency	1
601108	12V	40	150 ft.	300W Equivalency	1
<b>INTELLIBRITE 5g WHITE POOL LIGHTS – 400 WATT EQUIVALENT, 120 VOLT</b>					
601200	120V	48	30 ft.	400W Equivalency	1
601201	120V	48	50 ft.	400W Equivalency	1
601202	120V	48	100 ft.	400W Equivalency	1
601203	120V	48	150 ft.	400W Equivalency	1
601204	120V	48	250 ft.	400W Equivalency	1
<b>INTELLIBRITE 5g WHITE POOL LIGHTS – 400 WATT EQUIVALENT, 12 VOLT</b>					
601205	12V	48	30 ft.	400W Equivalency	1
601206	12V	48	50 ft.	400W Equivalency	1
601207	12V	48	100 ft.	400W Equivalency	1
601208	12V	48	150 ft.	400W Equivalency	1
<b>INTELLIBRITE 5g WHITE POOL LIGHTS – 500 WATT EQUIVALENT, 120 VOLT</b>					
601300	120V	55	30 ft.	500W Equivalency	1
601301	120V	55	50 ft.	500W Equivalency	1
601302	120V	55	100 ft.	500W Equivalency	1
601303	120V	55	150 ft.	500W Equivalency	1
601304	120V	55	250 ft.	500W Equivalency	1
<b>INTELLIBRITE 5g WHITE POOL LIGHTS – 500 WATT EQUIVALENT, 12 VOLT</b>					
601305	12V	55	30 ft.	500W Equivalency	1
601306	12V	55	50 ft.	500W Equivalency	1
601307	12V	55	100 ft.	500W Equivalency	1
601308	12V	55	150 ft.	500W Equivalency	1



# INTELLIBRITE® 5G WHITE LED LIGHTS (CONT'D)

## UNDERWATER LED LIGHTS FOR SWIMMING POOLS AND SPAS

### Ordering Information for Spa Lights

Product	Voltage	Wattage	Cord Length (Ft.)	Incandescent Equivalency	Carton Qty.	Carton Wt. (Lbs.)
<b>INTELLIBRITE 5g WHITE SPA LIGHTS - 120 VOLT</b>						
640140	120V	18W	30 ft.	100W Equivalency	1	6.5
640141	120V	18W	50 ft.	100W Equivalency	1	8
640142	120V	18W	100 ft.	100W Equivalency	1	12
640143	120V	18W	150 ft.	100W Equivalency	1	16
640144	120V	18W	250 ft.	100W Equivalency	1	25
<b>INTELLIBRITE 5g WHITE SPA LIGHTS - 12 VOLT</b>						
640150	12V	18W	30 ft.	100W Equivalency	1	5.5
640151	12V	18W	50 ft.	100W Equivalency	1	7
640152	12V	18W	100 ft.	100W Equivalency	1	11
640153	12V	18W	150 ft.	100W Equivalency	1	18

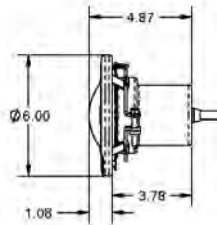
**Warning:** The IntelliBrite White LED light cannot be used with a dimmer circuit. Using a dimmer switch will result in permanent damage to the light.

Note: All 120 volt pool and spa lights must be connected to a branch circuit protected by a ground fault circuit interrupter (GFCI).

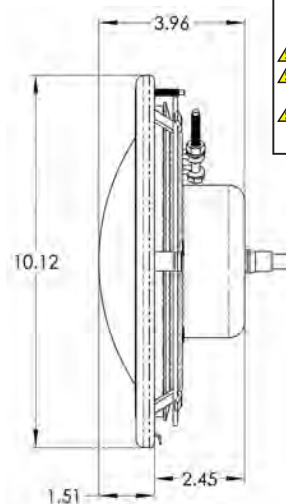
<sup>1</sup>**Notice:** Underwriters Laboratories has listed Pentair Water Pool and Spa, Inc. lights for use with Pentair Water Pool and Spa, Pentair Pool Products, American Products, Purex, or PacFab niches ONLY. To ensure proper grounding/bonding connections install only Pentair Water Pool and Spa lights in Pentair, Water Pool and Spa, Pentair Pool Products, American Products, Purex or PacFab niches only.

Note: **IntelliBrite Pool Sized Lights** can be utilized to replace: **Sta-Rite:** SunSaver<sup>1</sup>, SunBrite<sup>1</sup>, SunGlow<sup>1</sup>. **American Products:** Amerlite<sup>1</sup>. **Purex-Triton:** SunRay<sup>1</sup>, Pool Star<sup>1</sup>, Hatteras<sup>1</sup>. **PacFab:** Spectrum Amerlite<sup>1</sup> (SAM), AmerQuartz<sup>1</sup>, and most lights that are 10.12" across. To ensure proper grounding of replacement lights, please see the notice directly above.

**IntelliBrite Spa Sized Light** can be utilized to replace: **Sta-Rite:** SunBurst<sup>1</sup>. **American Products:** Hi-Lite<sup>1</sup>, Aqua-Light<sup>1</sup>, Spa Brite<sup>1</sup>. **Purex-Triton:** SunRise<sup>1</sup>. **PacFab:** Spectrum Aqualight<sup>1</sup> (SAL). To ensure proper grounding of replacement lights, please see the notice directly above.



IntelliBrite White Spa Light  
Dimensions



IntelliBrite White Pool Light  
Dimensions



Please refer to pages 77-78 for Canadian listed Pool Lights.

CALIFORNIA PROPOSITION 65 WARNING

▲ **WARNING:** Cancer and Reproductive Harm.  
▲ **AVERTISSEMENT:** Peut Causer le Cancer et des Dommages au Système Reproducteur.  
▲ **ADVERTENCIA:** Cáncer y Daño Reproductivo.

www.p65warnings.ca.gov. P820174.A

**IntelliBrite 5G Color LED Lights also available.**

# GLOBRITE® WHITE LED LIGHTS

## SHALLOW WATER LED

### TRADEGRADE



Fiberglass Niche



Vinyl Niche



Concrete Niche



### Featured Highlights

- The brightest and most efficient LEDs available
- Can be placed in as little as 4 in. of water
- Does not require grounding or bonding for quick and easy installations
- Compatible with IntelliTouch® or EasyTouch® Control Systems for advanced control features
- Compatible with gunite, fiberglass and vinyl pools
- 15W power consumption provides 190 equivalent incandescent watts.

GloBrite LED Lights use advanced technology for energy-efficient, high quality light displays, delivered with enhanced LED brightness and superior optics, while using 18% less energy than other shallow water LED lights. GloBrite lights are compatible with IntelliTouch and EasyTouch control systems and IntelliBrite 5g LED pool lights. GloBrite LED lighting is a brilliant way to showcase and enhance pool features like baja shelves, steps, beach entries and shallow water features.

### Ordering Information

Product	Voltage	Wattage	Cord Length (Ft.)	Carton Qty.	Carton Wt. (Lbs.)
<b>GLOBRITE WHITE LED LIGHTS</b>					
602102	12	15W	30	1	5
602103	12	15W	50	1	6
602104	12	15W	100	1	9
602105	12	15W	150	1	12
<b>GLOBRITE NICHES</b>					
620040	Gunite Niche for GloBrite (includes white, blue, black, grey and tan rings)			1	1.3
620041	Fiberglass Niche for GloBrite (white)			1	1.3
620093	Fiberglass Niche for GloBrite (blue)			1	1.3
620094	Fiberglass Niche for GloBrite (grey)			1	1.3
<b>GLOBRITE KITS</b>					
602106	2 GloBrite White 100 ft. with 300W Transformer + 2 Gunite Niches			1	40
602107	2 GloBrite White 100 ft. with 300W Transformer + 2 Fiberglass Niches			1	40
<b>TRANSFORMERS (LANDSCAPE AND POOL RATED)</b>					
619962	12V-14V	100W		1	12
619963	12V-14V	300W		1	12
<b>ACCESSORIES</b>					
620314	GloBrite Snap-On Glare Shield				

### Dimensions and Certifications



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 ⚠️ **ADVERTENCIA:** Cáncer y Daño Reproductivo.  
[www.p65warnings.ca.gov](http://www.p65warnings.ca.gov) P65-2015-11

### Also available — GloBrite Color LED Lights

All Pentair UL Listed underwater lights are certified for use in fresh water with up to 6,000 ppm salinity.

# MICROBRITE® WHITE LED LIGHTS

## WHITE LED LIGHT

TRADEGRADE



MicroBrite White LED Light

Give pools a brilliant lighting upgrade without the installation difficulties. Only 3.5-in. long, they fit easily into standard 1.5-in. wall fittings and are suitable for retrofit into many pools with older fiber optic systems.

### Featured Highlights

- Energy-saving, LED efficiency from the industry's most compact 12V LED plastic light
- Only 3.5 inches long, fits into narrow walls and tight spaces
- No niche required — installs in any standard 1.5 inch pool wall fitting
- Can be installed horizontally or vertically
- Connect to any Pentair control system or the Pentair IntelliBrite® Controller
- Available in Warm White, provides the gentle tone of incandescent lighting

**CALIFORNIA PROPOSITION 65 WARNING**

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 ⚠ **ADVERTENCIA:** Cáncer y Daño Reproductivo.  
[www.p65warnings.ca.gov](http://www.p65warnings.ca.gov)

All Pentair UL Listed underwater lights are certified for use in fresh water with up to 6,000 ppm salinity.

### Ordering Information

Product	Description	Color	Lights	Cord Length	Voltage	Watts
<b>MICROBRITE LED LIGHT</b>						
620428	MicroBrite Light	White LED	One	50'	12V	14W
620429	MicroBrite Light	White LED	One	100'	12V	14W
620430	MicroBrite Light	White LED	One	150'	12V	14W
620457	MicroBrite Light	Warm White LED	One	100'	12V	14W
<b>MICROBRITE COMBO KITS WITH 300 WATT TRANSFORMER</b>						
602131	MicroBrite Light Combo Kit	White LED	Two	100'	12V	
602132	MicroBrite Light Combo Kit	Warm White LED	Two	100'	12V	
602134	MicroBrite Light Combo Kit	White LED	Four	100'	12V	
602135	MicroBrite Light Combo Kit	Warm White LED	Four	100'	12V	

Note: A 300W transformer is included in each combo kit. Transformer is 120V input, 12V-14V output.

Product	Voltage	Wattage
<b>TRANSFORMERS (LANDSCAPE POOL RATED)</b>		
619962	120V Input, 12-14V Output	100W
619963	120V Input, 12-14V Output	300W

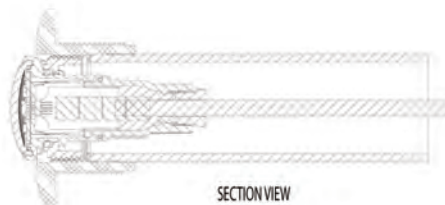
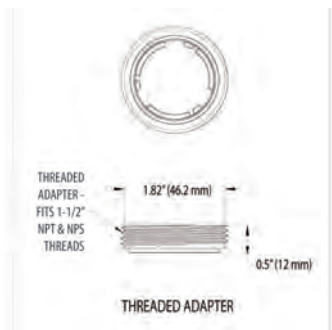
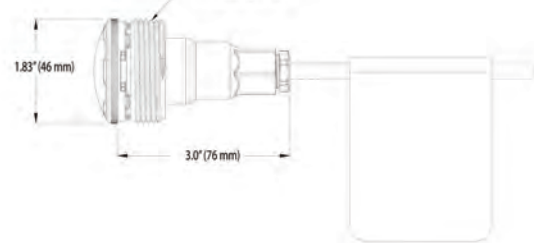
Product	Description
<b>REPLACEMENT KITS</b>	
620460	MicroBrite Light Adaptor (Replacement)
620459	Installation Tool (Replacement)
620463	Conduit Seal O-Ring (Replacement)



INSTALLATION TOOL



THREADED ADAPTER



SECTION VIEW



# SLIMLITE™ 5G LED LIGHTS

## UNDERWATER COMMERCIAL LIGHTS



Slimlite Underwater Commercial Lights



### Featured Highlights

- Retrofits into existing Paragon™ Slimlite niches
- Slim design: 10" diameter light utilizes a 4" deep niche for simplified installation in concrete pool walls
- Powder-coated, cast bronze, protective grille
- Energy efficient utilizing up to 86% less energy than comparable halogen bulbs
- Superior lens geometry and innovative reflector design create a wider beam and more uniform light distribution
- UL Listed

Slimlite 5g LED light offers superior energy savings with a shallow niche design simplifying concrete wall installation, and a robust, powder-coated protective grille.

CALIFORNIA PROPOSITION 65 WARNING  
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 ⚠️ **ADVERTENCIA:** Cáncer y Daño Reproductivo.  
[www.p65warnings.ca.gov](http://www.p65warnings.ca.gov) PS/2013/4

### Ordering Information

Product	Voltage	Cord Length (Ft.)	Incandescent Equivalency	Carton Qty.	Carton Wt.
<b>SLIMLITE 5G WITH POWDER-COATED GRILLE – 500 WATT, 120 VOLT</b>					
56400	120V	30	500W Equivalency	1	16
56401	120V	50	500W Equivalency	1	17.5
56402	120V	100	500W Equivalency	1	22
56403	120V	150	500W Equivalency	1	26.5
56404	120V	250	500W Equivalency	1	35.5

Warning: The Slimlite LED light cannot be used on a dimmer circuit. Using a dimmer switch will result in permanent damage to the light.

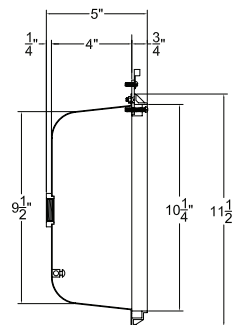
Note: All 120 volt pool and spa lights must be connected to a branch circuit protected by a ground fault circuit interrupter (GFCI).

Notice: Underwriters Laboratories has listed Pentair Slimlite lights for use with Slimlite and Paragon Slimlite niches ONLY.

Slimlite 5G Model	Watts
500 equiv.	55

### Dimensions and Certifications

<b>NICHES FOR SLIMLITE 5G LIGHTS</b>	
CONCRETE	500W
3/4"	56503
1"	56504



Slimlite Niche Dimensions

# AMERLITE® LIGHTS

## UNDERWATER INCANDESCENT LIGHTS WITH S/S FACE RINGS

### TRADEGRADE



Amerlite Incandescent Light

Amerlite light, the world standard of reliability for underwater lights, features a stainless steel shell, 8-3/8 in. prismatic tempered glass lens, and stainless steel face ring with uni-tension clamp. Amerlite lights are UL listed to install in full-sized Pentair Pool Products, American, PacFab and Purex niches.

All Pentair UL Listed underwater lights are certified for use in fresh water with up to 6,000 ppm salinity.

#### Featured Highlights

- World standard of reliability
- Stainless steel face ring with uni-tension clamp
- Superior light diffusion
- Prismatic tempered lens
- Low water cutoff
- Medium blue lenses available
- Plastic snap-on face rings available for s/s lights

#### CALIFORNIA PROPOSITION 65 WARNING

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[www.p65warnings.ca.gov](http://www.p65warnings.ca.gov)

Product	Voltage	Wattage	Cord Length (Ft.)	Carton Qty.	Carton Wt. (Lbs.)
<b>AMERLITE WITH STAINLESS STEEL FACE RING – 300 WATT, 120 VOLT</b>					
78421100	120	300	15	1	6
78428100	120	300	50	1	10
78928500	120	300	100	1	15
78927000	120	300	150	1	20
78927900	120	300	200	1	25
<b>AMERLITE WITH STAINLESS STEEL FACE RING – 400 WATT, 120 VOLT</b>					
78441100	120	400	15	1	6
78448100	120	400	50	1	10
78949100	120	400	100	1	15
78447100	120	400	150	1	20
78449100	120	400	200	1	25
<b>AMERLITE WITH STAINLESS STEEL FACE RING – 500 WATT, 120 VOLT</b>					
78451100	120	500	15	1	6
78458100	120	500	50	1	10
78456300	120	500	100	1	15
78457100	120	500	150	1	20
78459100	120	500	200	1	25
78458300	120	500	250	1	35
<b>AMERLITE WITH STAINLESS STEEL FACE RING – 100 WATT, 12 VOLT</b>					
78411100	12	100	15	1	6
78418100	12	100	50	1	10
78415100	12	100	100	1	15

# AMERLITE® LIGHTS (CONT'D)

## UNDERWATER INCANDESCENT LIGHTS WITH S/S FACE RINGS

Product	Voltage	Wattage	Cord Length (Ft.)	Carton Qty.	Carton Wt. (Lbs.)
<b>AMERLITE WITH STAINLESS STEEL FACE RING – 300 WATT, 12 VOLT</b>					
78431100	12	300	15	1	10
78438100	12	300	50	1	17
78435100	12	300	100	1	20
<b>STAINLESS STEEL AMERLITE WITH MEDIUM BLUE LENS – 400 WATT, 120 VOLT</b>					
78444200	120	400	30	1	8
78448200	120	400	50	1	10
78950100	120	400	100	1	15
<b>STAINLESS STEEL AMERLITE WITH MEDIUM BLUE LENS – 500 WATT, 120 VOLT</b>					
78454200	120	500	30	1	8
78458200	120	500	50	1	10
78958500	120	500	100	1	15
<b>LENS, COVERS, AND FACE RINGS FOR AMERLITE</b>					
79100100	Clear Lens, tempered			1	1
79100200	Medium Blue Lens, tempered			1	1/2
78900100	Plastic Snap-on Color Lens Kit (Blue, Green, Red)			1	1
79110600	Stainless Steel Face Ring			1	1/2
79213100	Plastic Snap-on face ring (White), Qty. 24			24	2
79212165	Plastic Snap-on face ring (Gray) Qty. 1			1	1/2
79212111	Plastic Snap-on face ring (Black) Qty. 1			1	1/2

Please refer to page 78 for CSA listed Amerlite Pool Lights.

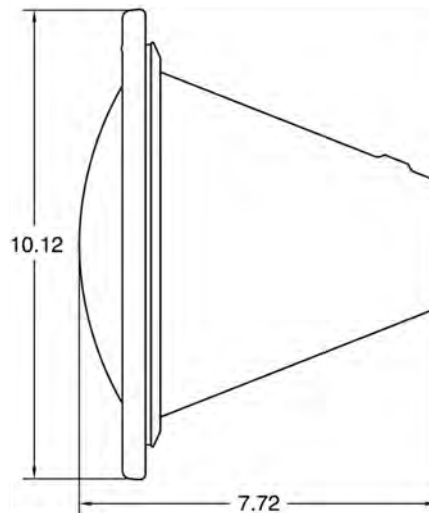
### Dimensions and Certifications



Note: All 120 volt pool and spa lights must be connected to a branch circuit protected by a ground fault circuit interrupter (GFCI).

Note: All cord lengths over 50 feet on 12 volt lights create resistance that dramatically reduces the light output. This condition exists on all low voltage lights regardless of design or manufacturer.

Notice: Underwriters Laboratories has listed Pentair Water Pool and Spa, Inc. lights for use with Pentair Water Pool and Spa, Pentair Pool Products, American Products, Purex, or PacFab niches ONLY. To ensure proper grounding/bonding connections install only Pentair Water Pool and Spa lights in Pentair, Water Pool and Spa, Pentair Pool Products, American Products, Purex or PacFab niches only.



AmerLite Incandescent Light

CALIFORNIA PROPOSITION 65 WARNING

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 ⚠️ **AVERTISSEMENT:** Peut Causer le Cancer et des Dommages au Système Reproducteur.  
 ⚠️ **ADVERTENCIA:** Cáncer y Daño Reproductivo.

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# CANADIAN POOL LIGHTS

## CSA LISTED LIGHTS

# TRADEGRADE



### Ordering Information - Canadian IntelliBrite® White Pool Lights

Product	Voltage	Wattage	Incandescent Equivalency	Cord Length(Ft.)	Carton Qty.	Carton Wt. (Lbs.)
<b>CANADIAN INTELLIBRITE 5g WHITE POOL LIGHTS – 300 WATT EQUIVALENT, 120 VOLT</b>						
601100	120V	40	300W Equivalency	30 ft.	1	6.5
601101	120V	40	300W Equivalency	50 ft.	1	8
601102	120V	40	300W Equivalency	100 ft.	1	12
601103	120V	40	300W Equivalency	150 ft.	1	16
601104	120V	40	300W Equivalency	250 ft.	1	25
<b>CANADIAN INTELLIBRITE 5g WHITE POOL LIGHTS – 300 WATT EQUIVALENT, 12 VOLT</b>						
601105	12V	40	300W Equivalency	30 ft.	1	5.5
601106	12V	40	300W Equivalency	50 ft.	1	7
601107	12V	40	300W Equivalency	100 ft.	1	11
601108	12V	40	300W Equivalency	150 ft.	1	18
<b>CANADIAN INTELLIBRITE 5g WHITE POOL LIGHTS – 400 WATT EQUIVALENT, 120 VOLT</b>						
601200	120V	48	400W Equivalency	30 ft.	1	6.5
601201	120V	48	400W Equivalency	50 ft.	1	8
601202	120V	48	400W Equivalency	100 ft.	1	12
601203	120V	48	400W Equivalency	150 ft.	1	16
601204	120V	48	400W Equivalency	250 ft.	1	25
<b>CANADIAN INTELLIBRITE 5g WHITE POOL LIGHTS – 400 WATT EQUIVALENT, 12 VOLT</b>						
601205	12V	48	400W Equivalency	30 ft.	1	5.5
601206	12V	48	400W Equivalency	50 ft.	1	7
601207	12V	48	400W Equivalency	100 ft.	1	11
601208	12V	48	400W Equivalency	150 ft.	1	18

### Ordering Information - Canadian IntelliBrite® 5g White Pool Lights

Product	Voltage	Cord Length (Ft.)	Incandescent Equivalency	Carton Qty.
<b>CANADIAN INTELLIBRITE 5g WHITE POOL LIGHTS – 500 WATT EQUIVALENT, 120 VOLT</b>				
601300	120V	30 ft.	500W Equivalency	1
601301	120V	50 ft.	500W Equivalency	1
601302	120V	100 ft.	500W Equivalency	1
601303	120V	150 ft.	500W Equivalency	1
601304	120V	250 ft.	500W Equivalency	1
<b>CANADIAN INTELLIBRITE 5g WHITE POOL LIGHTS – 500 WATT EQUIVALENT, 12 VOLT</b>				
601305	12V	30 ft.	500W Equivalency	1
601306	12V	50 ft.	500W Equivalency	1
601307	12V	100 ft.	500W Equivalency	1
601308	12V	150 ft.	500W Equivalency	1

Note: Plastic niches are only listed for use with 12V lights in Canada.

Note: All 120 volt pool and spa lights must be connected to a branch circuit protected by a ground fault circuit interrupter (GFCI).

Notice: Underwriters Laboratories has listed Pentair Water Pool and Spa, Inc. lights for use with Pentair Water Pool and Spa, Pentair Pool Products, American Products, Purex, or PacFab niches ONLY. To ensure proper grounding/bonding connections install only Pentair Water Pool and Spa lights in Pentair, Water Pool and Spa, Pentair Pool Products, American Products, Purex or PacFab niches only.

### Dimensions and Certifications



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⚠️ **ADVERTENCIA:** Cáncer y Daño Reproductivo.

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# CANADIAN POOL LIGHTS (CONT'D)

## CSA LISTED LIGHTS



### Ordering Information - Canadian IntelliBrite 5g White Spa Lights

Product	Voltage	Cord Length (Ft.)	Incandescent Equivalency	Carton Qty.
<b>INTELLIBRITE 5g WHITE SPA LIGHTS - 120 VOLT</b>				
640140	120V	30 ft.	100W Equivalency	1
640141	120V	50 ft.	100W Equivalency	1
640142	120V	100 ft.	100W Equivalency	1
640143	120V	150 ft.	100W Equivalency	1
640144	120V	250 ft.	100W Equivalency	1
<b>INTELLIBRITE 5g WHITE SPA LIGHTS - 12 VOLT</b>				
640150	12V	30 ft.	100W Equivalency	1
640151	12V	50 ft.	100W Equivalency	1
640152	12V	100 ft.	100W Equivalency	1
640153	12V	150 ft.	100W Equivalency	1

### Ordering Information - Canadian Lights

<b>AMERLITE® WITH STAINLESS STEEL FACE RING (Page XXX)</b>						
78453102	AmerLite Light	120	500	30	4	11
<b>LARGE STAINLESS STEEL NICHE FOR CONCRETE INSTALLATION (Page 79)</b>						
78210701	3/4 in. rear hub				1	0.25
<b>SMALL STAINLESS STEEL NICHE FOR CONCRETE INSTALLATION (Page 80)</b>						
78244202	3/4 in. rear hub				12	3
<b>SMALL STAINLESS STEEL NICHE FOR MANUFACTURED POOLS, SPAS &amp; TUBS (Page 80)</b>						
78241202	3/4 in. top hub				12	2
78242202	3/4 in. rear hub				12	2
<b>NICHE CONCRETE SHIELD</b>						
45361500	Niche shield for SpaBrite/AquaLight Niche				1	0.25
45361000	Niche shield, concrete/plaster for AmerLite				1	0.25
<b>ACCESSORIES</b>						
619962	100W Transformer 12V-14V				1	10
619963	300W Transformer 12V-14V				1	11

### Dimensions and Certifications



Note: All 120 volt pool and spa lights must be connected to a branch circuit protected by a ground fault circuit interrupter (GFCI).

Notice: Underwriters Laboratories has listed Pentair Water Pool and Spa, Inc. lights for use with Pentair Water Pool and Spa, Pentair Pool Products, American Products, Purex, or PacFab niches ONLY. To ensure proper grounding/bonding connections install only Pentair Water Pool and Spa lights in Pentair, Water Pool and Spa, Pentair Pool Products, American Products, Purex or PacFab niches only.

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PK201714

# PENTAIR LARGE STAINLESS STEEL NICHEs

## NICHEs FOR SWIMMING POOLs AND SPAS



Pentair Large Niches

Large stainless steel niches are formed with brass fittings. All niches have internal and external grounding lugs for use with either metal or PVC conduit.

### Featured Highlights

- Niches for all installations
- Stainless steel housing
- Brass hub: 1/2, 3/4, or 1 in.
- Internal/external bonding lugs
- Vinyl niches with chrome/brass sealing rings
- Sandwich gasket for vinyl
- Powder coated sealing ring (optional)

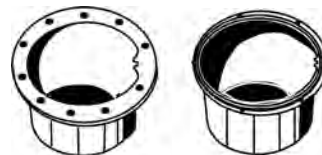
### Ordering Information

Product	Description	Carton Qty.	Carton Wt. (Lbs.)
<b>LARGE STAINLESS STEEL NICHEs FOR CONCRETE INSTALLATION</b>			
78210200	1/2 in. top hub	1	3
78210300	1/2 in. rear hub	1	3
78210400	3/4 in. top hub	1	3
78210700	3/4 in. rear hub	1	3
78210500	1 in. top hub	1	3
78210600	1 in. rear hub	1	3
<b>VINYL AND FIBERGLASS INSTALLATION, STANDARD 10 HOLE PATTERN</b>			
78232400	Fiberglass/liner, 3/4 in. rear hub	1	5
78232500	Fiberglass/liner, 1 in. rear hub	1	5
<b>LARGE STAINLESS STEEL NICHE, CONCRETE SHIELD</b>			
45361000	Niche Shield for construction	1	0.325
79211600Z	Replacement/Repair Niche plaster ring	1	5
<b>POWDER COATED SEALING RINGs, VINYL/FIBERGLASS</b>			
79200255	Sealing ring, large niche (white)	1	0.01
<b>SEALANT FOR NICHE BONDING LUGs</b>			
60028300	Listed potting compound	1	0.0375

### Dimensions and Certifications

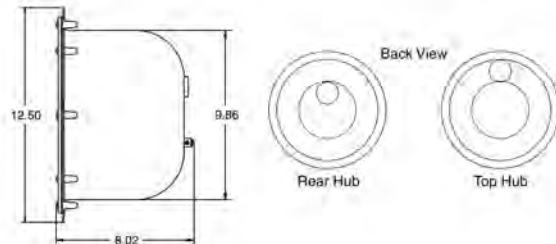


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Standard 10 Hole Pattern

Gunite Hole Pattern



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# PENTAIR SMALL STAINLESS STEEL NICHES

## NICHES FOR SWIMMING POOLS AND SPAS



Pentair Small Niches

Small stainless steel niches are formed with brass fittings. All niches have internal and external bonding lugs and can be used with either metal or PVC conduit.

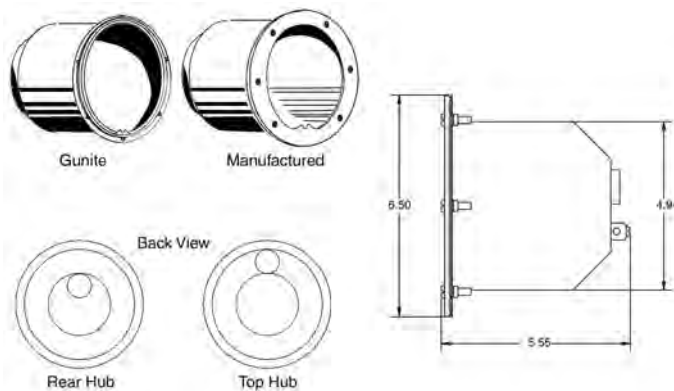
### Featured Highlights

- Stainless steel housing
- Brass hub: 1/2, 3/4, 1 in.
- Internal/external bonding lugs
- Vinyl niches with chrome/brass sealing rings
- Niches for all installations
- Sandwich gasket for vinyl

### Ordering Information

Product	Description	Carton Qty.	Carton Wt. (Lbs.)
<b>SMALL STAINLESS STEEL NICHES FOR CONCRETE INSTALLATION</b>			
78244100	Concrete pools or spas, 1/2 in. rear hub	1	2
78244200	Concrete pools or spas, 3/4 in. rear hub	1	2
78244300	Concrete pools or spas, 1 in. rear hub	1	2
78243100	Concrete pools or spas, 1/2 in. top hub	1	2
78243200	Concrete pools or spas, 3/4 in. top hub	1	2
78243300	Concrete pools or spas, 1 in. top hub	1	2
<b>MANUFACTURED POOLS, SPAS &amp; TUBS INSTALLATION</b>			
78242200	Manufactured pools, spas & tubs, 3/4 in. rear hub	1	3
78242300	Manufactured pools, spas & tubs, 1 in. rear hub	1	3
<b>SMALL STAINLESS STEEL NICHE SHIELD</b>			
45361500	Niche shield for SpaBrite/AquaLight Niche	1	0.25
<b>VINYL/FIBERGLASS NICHE SEALING RING, POWDER-COATED</b>			
79206055	Sealing ring, small niche	1	0.01
<b>SEALANT FOR NICHE BONDING LUGS</b>			
60028300	Listed potting compound	1	0.325

### Dimensions and Certifications



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# PLASTIC NICHEs

## PLASTIC NICHEs FOR SWIMMING POOLs AND SPAs

### Featured Highlights

- Gunite Plastic Niches:**
- Innovative cord seal grommet (Accessory sold separately)
  - Large and small models
  - Rebar tie-backs
  - Plaster ring for secure sealing
  - Internal/external bonding lugs
  - High strength PVC construction
  - Rear one inch PVC hub
  - Includes 45° and 3/4 in. reducer bushings
  - Includes gunite/plaster shield



**Gunite Plastic Niches** – These plastic concrete niches are molded of high strength, corrosion resistant PVC with a one inch PVC hub. Both 450 and 3/4 in. reducer bushings are included. Gunite models feature rebar tie-backs and a plaster ring for clean, simple installations and all are packed with a gunite/plaster shield.

### Ordering Information

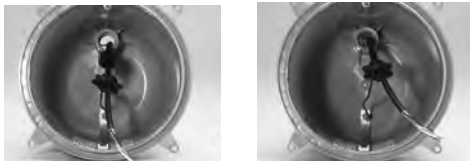
Product	Description	Carton Qty.	Carton Wt. (Lbs.)
<b>PLASTIC NICHE - CONCRETE</b>			
79206600	Small PVC niche, concrete	12	2
79206700	Large PVC niche, concrete	8	3
<b>ACCESSORIES</b>			
670044	Cord Seal Grommet Kit, (Qty. 3)	3	1
60028300	Scotchcast™ 2136 Sealant	1	0.325

### Dimensions and Certifications



1

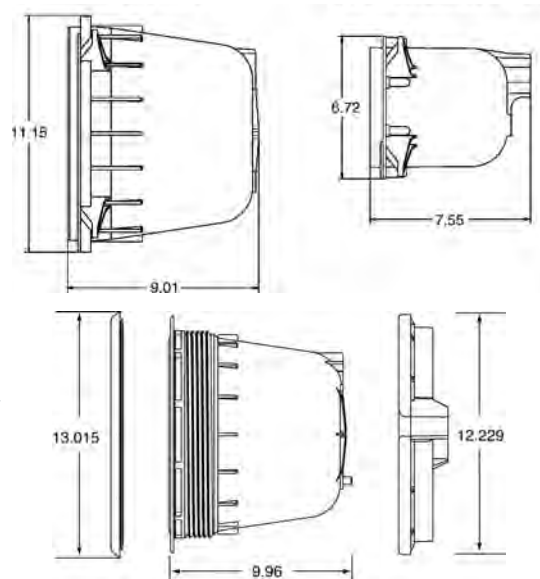
<sup>1</sup> Cord seal grommet not available for Quick Niche.



Innovative cord seal grommet accessory  
(p/n 670044)

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<sup>1</sup> Plastic niches are only listed for use with 12V lights in Canada.



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# LIGHT ACCESSORIES AND JUNCTION BOXES

## ADD-ON FEATURES AND ACCESSORIES FOR ALL PENTAIR LIGHTS



Add-on Light Features and Accessories

### Featured Highlights

#### Kwik-Change Lens Covers

- Snap-on plastic face rings available for s/s lights
- Available in 3 sizes: 1/2, 3/4 & 1 in.
- Polycarbonate cover with brass base
- Built-in strain relief
- UL listed

Our optional light and niche features are designed to enhance our standard products and accommodate your specific project requirements.

### Ordering Information

Product	Description	Carton Qty.	Carton Wt. (Lbs.)
<b>KWIK-CHANGE LENS COVERS</b>			
650015	SpaBrite/AquaLight lens, magenta	1	0.5
650016	SpaBrite/AquaLight lens, purple	1	0.5
650017	SpaBrite/AquaLight lens, teal	1	0.5
650018	SpaBrite/AquaLight lens, green	1	0.5
78900800	Amerlite lens, blue	1	0.5
78900900	Amerlite lens, red	1	0.5
650019	SpaBrite/AquaLight lens, 6 assorted colors	1	0.5
78900100	Amerlite lens (3 colors - red, green, blue)	1	1
78900700	Amerlite lens, green	1	0.5
<b>SNAP-ON PLASTIC FACE RINGS FOR AMERLITE</b>			
79212111	Black	1	0.01
79212100	White	1	0.01
79212165	Grey	1	0.01
79213111	Black	24	0.01
79213100	White	24	0.01

Product	Description	Carton Qty.	Carton Wt. (Lbs.)
<b>SNAP-ON PLASTIC FACE RINGS FOR SPABRITE/AQUALIGHT</b>			
79212200	White	1	0.01
79212211	Black	1	0.06
79212265	Grey	1	0.06
<b>JUNCTION BOX BRASS BASE W/ POLYCARBONATE COVER <sup>1</sup></b>			
78310500	(3) - 1/2 in. ports	12	1
78310600	(3) - 3/4 in. ports	12	1
78310700	3/4 in. x 1 in. x 3/4 in. ports	12	1

<sup>1</sup> UL Listed.

### Dimensions and Certifications



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# UNDERWATER SPEAKERS FOR USE IN SWIMMING POOLS

## Featured Highlights

- Sealed speaker - No metal parts exposed to pool water
- Provides underwater communication between coach and swimmers
- Provides background music for synchronized swimming and for scuba instruction
- Equipped with 50 foot, 3 conductor waterproof cable
- UL Listed when used with 68102 Niche



Underwater Speaker

The UW30 30-Watt Underwater Loud Speaker is fully encased in high-impact ABS case and sealed for underwater use to a depth of up to 10 feet. Recommended mounting location is up to 4 feet below the surface of the water for optimum efficiency. The niche is made with a heavy-duty, cast bronze construction with a 3/4" IPS threaded connection. Speaker, Niche and Grill must be ordered separately.

## Ordering Information

Product	Description	Carton Qty.
<b>UNDERWATER SPEAKERS</b>		
68101-1	UW30 Underwater Loud Speaker	1
68102	Niche for UW30 Speaker	1
68103SS	Stainless Steel Grille	1

## Dimensions and Certifications

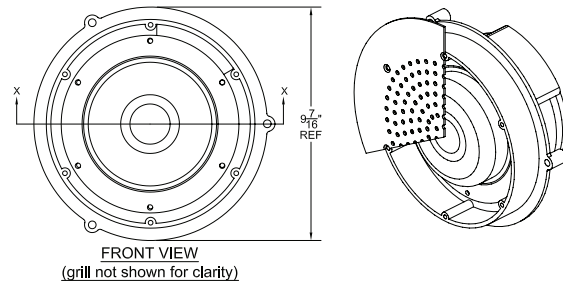


## Product Specifications

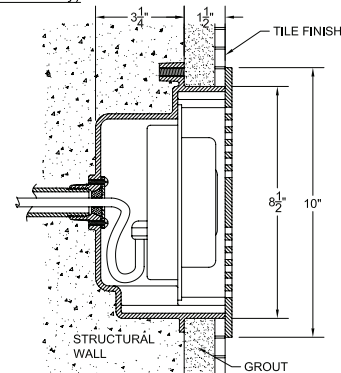
- Frequency Response:** 100-10,000 Hz  
**Power Handling Capacity:** 30 watts continuous pink noise  
**Impedance:** 8 ohms  
**Dispersion:** Omni-directional underwater

### Spacing / Layout Guide:

A single speaker is recommended for up to 900 sf of pool surface area. For larger bodies of water, one speaker is recommended for each 900 sf of pool surface area in deep water (1200 sf in shallow water). More units may be required if a high level of turbulence need to be overcome (such as swimming and diving classes). Using more speakers results in better sound dispersion and avoids excessive volume at each speaker. Speaker must be connected to proper approved amplifying system.



FRONT VIEW  
(grill not shown for clarity)

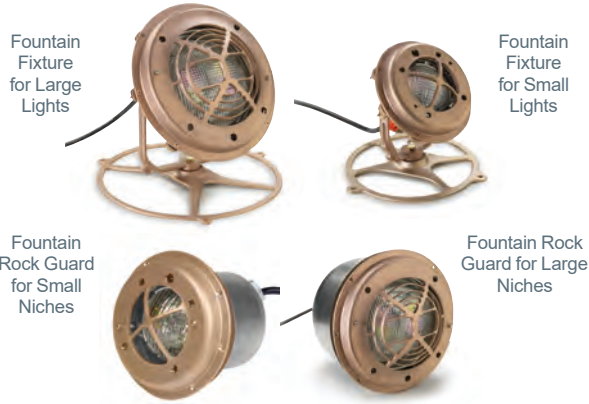


Dimensions

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# FOUNTAIN LIGHTS AND FIXTURES FOR USE IN FOUNTAINS



**Pentair Fountain Fixtures** are the only fixtures that offer true color lighting capabilities, as well as traditional white lighting. When combined with Pentair's IntelliBrite 5g color lights, these systems can bathe fountains in a constantly changing spectrum of color. Both large and small fixtures are designed for easy installation and for use with Pentair lights only.

### Featured Highlights

**Fountain Fixtures**

- Sturdy cast bronze construction with attractive natural bronze finish
- Base and yoke-mount rotate 360° and pivot 180°
- Integrated bonding lug for electrical safety
- Innovative strain-relief prevents damage to wiring connections
- Niche installation option available
- Large fixture for use with the IntelliBrite® 5g Pool Light for water fountains, and Amerilite® Lights listed for fountain use
- Small fixture for use with IntelliBrite 5g Spa Light, AquaLight®, and SpaBrite® Lights listed for fountain use
- For use with Pentair fountain fixtures and niche kits
- Same functionality and color cycles as the standard IntelliBrite 5g Light for swimming pools
- Selectable beam pattern lens for standard and wide beam angle options

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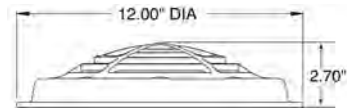
## Ordering Information

Product	Description	Carton Qty.	Carton Wt. (Lbs.)
<b>INTELLIBRITE 5g LED POOL LIGHT FOR WATER FOUNTAINS</b>			
601000	IntelliBrite 5g – 120 volt, 30 ft. cord	1	
601001	IntelliBrite 5g – 120 volt, 50 ft. cord	1	
<b>INTELLIBRITE COLOR LED SPA LIGHT FOR WATER FOUNTAINS</b>			
640120	IntelliBrite Color Spa – 120 volt, 30 ft. cord	1	
640121	IntelliBrite Color Spa – 120 volt, 50 ft. cord	1	
<b>FOUNTAIN FIXTURES</b>			
560000	Fountain fixture for large lights with rock guard <sup>1</sup>	1	15
560001	Fountain fixture for small lights with rock guard <sup>1</sup>	1	9
<b>FOUNTAIN ROCK GUARDS</b>			
560002	Fountain rock guard for large niches <sup>2</sup>	1	7
560003	Fountain rock guard for small niches <sup>2</sup>	1	4

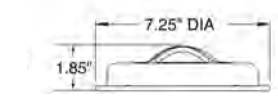
<sup>1</sup> Light is sold separately.

<sup>2</sup> Light and niche sold separately.

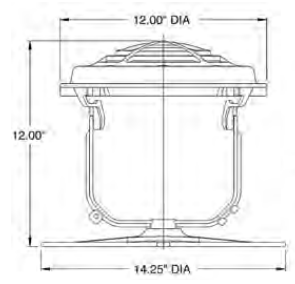
## Dimensions and Certifications



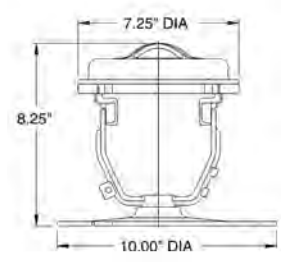
Fountain Rock Guard for Large Niches



Fountain Rock Guard for Small Niches



Fountain Fixture for Large Lights



Fountain Fixture for Small Lights



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MAINTENANCE,  
SAFETY EQUIPMENT  
WHITE GOODS &  
CLEANERS





# BRUSHES AND SCRUBBERS

## POOL, SPA, DECK AND TILE BRUSHES



Pool, Spa, Deck and Tile Brushes

### Featured Highlights

#### Curved Brushes

- UV stabilized polypropylene or nylon bristles.
- Snap-adapt handle fits most poles
- Aluminum Back Brushes with strong die cast aluminum back

#### Scrubbers

- 650 Scrubber has a molded hand grip and includes 3 interchangeable pads
- 651 Universal Scrubber features an ABS back with a swivel joint handle and a light duty replaceable pad

#### Stainless Steel Algae Brushes

- All algae brushes feature quality stainless steel bristles
- Perfect for removing tough algae on plaster surfaces
- Snap-adapt handle fits most poles

### Ordering Information

Product	Model	Description	Carton Qty.	Carton Wt. (Lbs.)
<b>CURVED BRUSHES</b>				
R111342	905	24 in. Aluminum Back Blue nylon	12	19
R111358	907	18 in. Aluminum Back Blended, Stainless & nylon	12	13
<b>ALGAE BRUSH – (NOT FOR VINYL LINER POOLS)</b>				
R111646	718	18 in., Aluminum Back Stainless Steel for plaster, Concrete, Gunite	12	15
<b>ACID-WASH/TILE/DECK BRUSHES</b>				
R111584		10 in. Blue & white crimped bristles	25	21
<b>SCRUBBERS</b>				
R111556	650	Multi-purpose scrub brush w/ 3 pads	12	6
R111560	651	Universal swivel handle, 4-5/8 in. x 10 in. w/ removable pad	12	6

<sup>1</sup> Not for use on vinyl liner pools.

Note: All items with snap-adapt handle include a high performance Acetal Resin Spring and will snap into all standard poles or can be bolted on, if preferred, simply by removing the Acetal Resin Spring.

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PR020114A



# HAND SKIMMERS AND LEAF RAKES

## Featured Highlights

Snap-adapt handles allow for use with most poles

### Hand Skimmers

- Heavy-duty reversible nets stand up to tough wear

### 122 Leaf Rake

- Designed to easily remove leaves and debris. Screen and frame completely covered with squeegee for scraping fine, loose debris on pool bottom

### 123 Econo Leaf Rake

- ABS molded frame with aluminum reinforcement

### 117 Pro Leaf Rake

- Replaceable snap-on frame and net fits on 3/8 in. solid anodized aluminum rod



Hand Skimmers and Leaf Rakes

## Ordering Information

Product	Model	Description	Carton Qty.	Carton Wt. (Lbs.)
<b>HAND SKIMMERS</b>				
R121196	126	Professional Grade Heavy-duty Skimmer, 3/8 in. solid aluminum rod, Deep net molded into ABS snap-on replacement frame	12	13
R121216	126R	No. 126 Professional Grade Replacement frame and net	12	6
<b>LEAF RAKES</b>				
R121106	122	Leaf rake, 3/8 in. aluminum rod with attached handle and heavy-duty fiberglass screen	12	18
R121126	123	Econo leaf rake, ABS molded frame reinforced with aluminum, frame has raised lip for scraping bottom	12	10
R121230	117	Pro leaf rake, replaceable frame and net snaps onto 3/8 in. solid aluminum rod, replaceable squeegee strip	12	18
R121232	117R	Replacement frame, squeegee and netting for No. 117 and No. 122	12	12

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## FLOATS, FLOAT ROPE, AND SAFETY HOOK



Floats, Float Rope, and Safety Hook

### Featured Highlights

#### Floats & Safety Equipment

- Unsinkable, durable, polyethylene floats are available in a variety of sizes

#### Safety Float Lines

- Include 3/8 in. poly rope, 3 in. x 5 in. floats, solid chrome brass rope hook, 1 fid and locking device

### Ordering Information

Product	Model	Description	Carton Qty.	Carton Wt. (Lbs.)
<b>SAFETY POOL HOOK</b>				
R221026	153	Fits any standard straight pole (do not attach to telescopic poles), nut. Mounting Hardware set not included. See item R221030	12	14
R221030	153	Hardware set for Pool Hook	Bulk	
<b>FLOATS</b>				
R181086	590	Blue and white, 5 in. x 9 in. Oval Float, Fits 3/4 in. Rope	24	11
R181096	590	Red and white, 5 in. x 9 in. Oval Float, Fits 3/4 in. Rope	24	11
R181156	770	Solid white, 7 in. x 7 in. Round Float, Fits 3/4 in Rope	20	10
<b>SAFETY FLOAT LINES</b>				
R181206	3520	20 ft. Pool Dimension, 9 floats	6	15
R181216	3518	18 ft. Pool Dimension, 7 floats	6	14
R181226	3516	16 ft. Pool Dimension, 5 floats	6	12
R181200	3525	25 ft. Pool Dimension, 9 floats (Available Built to Order Only)	1	
R181268	3524	24 ft. Pool Dimension, 9 floats (Available Built to Order Only)	1	
R181269	3530	30 ft. Pool Dimension, 9 floats (Available Built to Order Only)	1	

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# MAINTENANCE KITS

## Featured Highlights

### Maintenance Kits

- Pentair has a variety of standard kits with the most popular combinations requested by our customers. Each kit is packaged in an attractive box with a handle. Custom designed combinations are available on request.



Ordering Information - See Pentair residential catalog for more information.

## Featured Highlights

- **Pentair Telescopic Poles** are constructed of high quality drawn aluminum tubing. The 1-1/8 in. OD inside tube is clear anodized and the 1-1/4 in. OD outer tube is bright blue anodized. Each has a bicycle type vinyl hand grip and packed in a protective poly sleeve.
- **Pentair Fiberglass Poles** with E-Z Lock compression lock are manufactured to withstand abuse. Required for service pros in areas where protection from electrical shock is mandatory. UV protective coating helps prevent splintering with age.



## Ordering Information

Product	Model	Description	Carton Qty.	Carton Wt. (Lbs.)
<b>POLES</b>				
R191088	806-24	Commercial Aluminum Pole - 12 ft. to 23-1/2 ft. E-Z Lock	12	52
R191090	812-24	Commercial Aluminum Pole - 12 ft. to 23-1/2 ft. Metal cam	12	52
R191091	808-12	Commercial Fiberglass Pole - 6 ft. to 12 ft.	6	20
R191092	808-16	Commercial Fiberglass Pole - 8 ft. to 16 ft.	6	25
R191095	818-12	Commercial Fiberglass Pole - Straight 12 ft. w/ pole cap	6	21
R191101	808-22	Commercial Fiberglass Pole - 11-1/2 ft. to 22 ft.	6	32
R191104	818-16	Commercial Fiberglass Pole - Straight 16 ft. w/ pole cap	3	38
R191380		3 piece telescopic pole - E-Z Lock device - 12 ft.-36 ft., aluminum	6	35

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## POOL & SPA SIGNS

### Featured Highlights

#### Pool & Spa Signs

Pentair commercial quality pool and spa signs are constructed of weather-resistant, high impact plastic and finished with brass grommets for easy, secure hanging.



### Ordering Information

Product	Description	Size	Ctn Qty.
<b>POOL &amp; SPA SIGNS</b>			
R230200	Pool Rules (Calif.)	18 in. x 24 in.	6
R230300	Spa Rules	18 in. x 24 in.	6
R230400	Pool Rules	18 in. x 24 in.	6
R230500	No Lifeguard On Duty. (4 in. letters)	24 in. x 18 in.	6
R235100	No Lifeguard On Duty. (4 in. letters - Georgia and Texas)	24 in. x 24 in.	6
R230800	Public Pool Use Notice	18 in. x 24 in.	6
R230900	Pool Capacity	18 in. x 12 in.	6
R231100	C.P.R.	24 in. x 18 in.	6
R231200	No Diving Allowed	18 in. x 12 in.	6
R231400	Pool Closed	12 in. x 6 in.	6
R231700	Emergency Phone No. 911	12 in. x 6 in.	6
R232600	No Glassware In Pool Area	9 in. x 12 in.	6
R233800	No Diving (South Carolina)	24 in. x 24 in.	6
R233900	Caution Spa Rules (South Carolina)	24 in. x 36 in.	6
R234000	Pool Rules (South Carolina)	24 in. x 36 in.	6
R234100	Pool Rules (North Carolina)	24 in. x 36 in.	6
R234200	SPA Rules (North Carolina)	24 in. x 36 in.	6
R234500	Water Conditions (Virginia)	12 in. x 9 in.	6
R234700	Danger Pool Closed	18 in. x 12 in.	6
R234800	Pool Rules (Florida)	24 in. x 42 in.	6
R234900	Spa Rules (Florida)	18 in. x 24 in.	6
R235200	Pool Risks (Georgia)	24 in. x 29.5 in.	6
R235300	No Lifeguard (South Carolina) 6 in. x 4 in. letters	36 in. x 24 in.	6
<b>SPANISH POOL &amp; SPA SIGNS</b>			
R233700	(Reglamentos) Pool Rules	18 in. x 24 in.	6

CALIFORNIA PROPOSITION 65 WARNING

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 ⚠️ **ADVERTENCIA:** Cáncer y Daño Reproductivo.

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Note: See sign images on the following pages.

# POOL & SPA SIGNS (CONT'D)



R230500 No Lifeguard On Duty  
24 in. x 18 in.



R235100 No Lifeguard On Duty, 24 in. x 24 in.  
(4 in. letters, Georgia and Texas)



R230800 Public Pool Use Notice 18 in. x 24 in.



R230600 Pool Capacity 18 in. x 12 in.



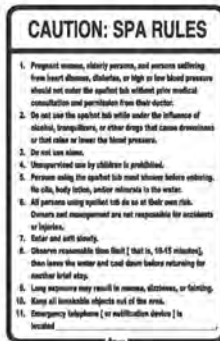
R231100 "C.P.R." 24 in. x 18 in.



R231200 No Diving Allowed, 18 in. x 12 in.



R231700 Emergency Phone No. 911, 12 in. x 6 in.



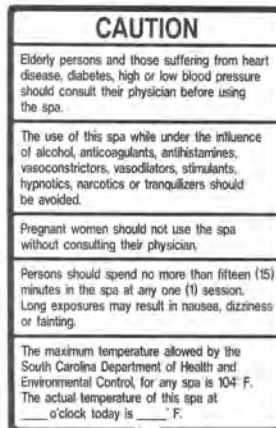
R234200 Caution Spa Rules (N. Carolina) 24 in. x 36 in.



R232600 No Glassware In Pool Area, 9 in. x 12 in.



R231400 Pool Closed 12 in. x 6 in.



R233900 Caution Spa Users (S. Carolina), 24 in. x 36 in.



R233800 No Diving (S. Carolina) 24 in. x 24 in.



R234000 Pool Rules (S. Carolina), 24 in. x 36 in.

## POOL & SPA SIGNS (CONT'D)



R234100 Pool Rules  
(N. Carolina), 24 in. x 36 in.



R230200 Pool Rules  
(Calif.) 18 in. x 24 in.



R230300 Spa Rules  
18 in. x 24 in.



R234700 Danger  
Pool Closed 18 in. x 12 in.



R235200 Pool Risks  
Georgia, 24 in. x 29.5 in.



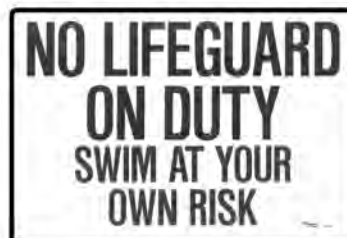
R234900 Spa Rules  
(Florida), 18 in. x 24 in.



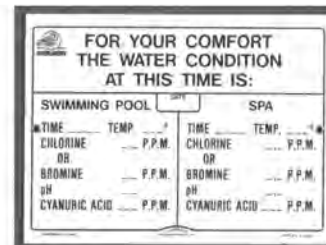
R234800 Pool Rules  
(Florida), 24 in. x 42 in.



R230400 Pool Rules  
18 in. x 24 in.



R235300 No Lifeguard  
(S. Carolina), 36 in. x 24 in.  
(6 in. x 4 in. letters)



R234500 Water Conditions  
(Virginia), 12 in. x 9 in.



R233700 Reglamentos  
(Pool Rules), 18 in. x 24 in.



# TEST KITS

## DPD, BROMINE, PH & CHLORINE TEST KITS

### Featured Highlights

Pentair testing kits and chemicals are manufactured under the strictest quality control standards in a laboratory staffed by certified chemists where all Pentair Test Solutions are formulated and packaged. To guarantee reliability, test reagents should be replaced annually. Replacement and bulk reagents are available in a variety of sizes and packaging.



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### Ordering Information

Product	Model	Description	Carton Qty.	Carton Wt. (Lbs.)
<b>BROMINE TEST KITS</b>				
R151196	756	"2 n 1" Bromine test kit, 1/2 oz. OTO and pH, Br range 0.5–6.5, yellow hinged case, packed 12 kits per counter display	24	10
R151201	756	"2 n 1" Bromine test kit, 1/2 oz. OTO and pH, Br range 0.5–6.5, yellow hinged case, packed 12 kits per counter display, for Canada	24	10
<b>DPD TEST KITS</b>				
R151190	77DPD	4 in 1 Chlorine/Bromine test kit. DPD No. 1 and No. 3 tablets, solutions No. 2, No. 3, No. 4, No. 5, wide Lucite test cell	12	16
R151246	78DPD	"All-in-One" test kit, free, total and combined Cl, pH, acid demand and total Alkalinity, Lucite test cell, 50 each DPD No. 1 and No. 3 tabs, 1 oz. No. 2, No. 3, 1/2 oz. No. 4, No. 5, water test booklet, red display box	12	17
R151248	78DPD+	"All-in-One" plus test kit, for servicemen or homeowners, free, total and combined Cl, Cyanuric Acid, pH, Acid Demand, Alkali Demand and Total Alkalinity, Lucite test cell, 50 each DPD No. 1 and No. 3 tablets, 10 Cyanuric acid tablets, 1 oz. No. 2, No. 3, 1/2 oz. No. 3B, No. 4, No. 5, water test booklet, red display box	12	18
200063	752DPD/PH	Free chlorine and pH analyzer test kit. DPD and pH tablets, 30 tablets each.	12	5
<b>pH &amp; CHLORINE TEST KITS</b>				
R151076	752	"2 n 1" Test Kit 1/2 oz. OTO and Pre-Blended pH, Cl range 0.3–3.0, blue hinged case, packed 12 Kits per counter dispenser	24	10
R151082	752	"2 n 1" Test Kit 1/2 oz. OTO and Pre-Blended pH, Cl range 0.3–3.0, blue hinged case, packed 12 Kits per counter dispenser, for Canada	24	10
R151083	752	"2 n 1" Test Kit 1/2 oz. OTO and Pre-Blended pH, Cl range 0.3–3.0, blue hinged case, packed 12 Kits per counter dispenser, bubble pack, with Spanish instructions	24	10
R151186	78HR	"All-in-One" 4 Way Test Kit, Cl, pH, Acid Demand, Total Alkalinity, Lucite test cell with wide standards, 1 oz. No. 1, No. 2, No. 3, 1/2 oz. No. 4, No. 5, water test booklet, blue display box	12	16

Note: Products containing OTO not available in the State of California.

# WATER HARDNESS/SPECIALTY TEST KITS



PRO11

## Featured Highlights

### Professionals Pro 11 Test Lab

- Complete 11 test lab designed for service professionals. Free, Total and Combined Cl, Br, Iodine, pH, Acid Demand, Total Alkalinity, Water Hardness and Cyanuric Acid. Handy red tote box contains complete instructions, solutions and tests. Pro-Design Test Cell features Cl range to 10ppm and meets recommended industry standards.

## Ordering Information

Product	Model	Description	Carton Qty.	Carton Wt. (Lbs.)
<b>CYANURIC ACID TEST KITS</b>				
R151226	79	Determine parts per million of Cyanuric Acid, test vial designed for positive readout, 8 oz. reagent, instructions in Styrene box with clear top	6	8
<b>PRO 11 MINI LAB</b>				
R151716	PRO 11	Professional Test Lab	6	13
<b>TOTAL ALKALINITY TEST KITS</b>				
R151306	1300	Indicates ppm of alkalinity, test vial, 1 oz. No. 3, 1/2 oz. No. 4, No. 5, blue compact box with instructions	24	12
<b>WATER HARDNESS TEST KITS</b>				
R151276	1200	Total Water Hardness Test Kit, total Hardness in ppm or grains, test vial, 1/2 oz. No. 6, 1 oz. No. 7 and instructions, compact box	24	11



1200

1300



79

## Water Hardness/Specialty Test Kits

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# PROVAC® II

## FLEXIBLE COMMERCIAL VACUUMS

### Featured Highlights

- Eco Select® Brand environmentally friendly composite weight system
- Suction chamber concentrates vacuum velocity for fast thorough cleaning
- Convertible wheel system – locks for straight cleaning pattern or pivots 360° for additional coverage
- Ultra smooth ball bearing wheels for effortless movement
- Flexible body hugs pool contours connection



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### Ordering Information

Product	Model	Description	Carton Qty.	Carton Wt. (Lbs.)
<b>PROVAC II</b>				
200084	216	16 in. environmentally friendly, high performance vacuum with convertible wheel system	6	48
200086		Replacement wheel kit (4 per kit)		

# PROVAC®

## FLEXIBLE COMMERCIAL VACUUMS

### Featured Highlights

#### ProVac Residential & Commercial Vacuums

- The ProVac vacuum cleans a pool bottom in half the time
- Suction chamber concentrates vacuum velocity equally
- Full width flex strips guide debris into the suction chamber
- All wheels are adjustable to increase or decrease the vacuum velocity
- Includes 1-1/2 in. vac hose swivel connection

#### 241 Super ProVac Vacuum

- Increased speed in cleaning large commercial pools

#### 241 Super ProVac Vacuum (cont'd)

- 41 in. wide, dual port vacuum
- 22 ball bearing polyurethane wheels
- Includes adapters for 1-1/2 in. and 2 in. vacuum hose

#### 250 Swivel Wheel 19 in. Commercial Flexible Vacuum

- ABS and polyethylene wheels with 6 lead weights swivel in any direction
- 19 in. body has 1-1/2 in. vacuum swivel adapter which allows hose to move freely without twisting. 2 in. hose fits directly on vacuum.
- Has snap-adapt handle and all component parts are replaceable



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### Ordering Information

Product	Model	Description	Carton Qty.	Carton Wt. (Lbs.)
<b>241 SUPER PROVAC</b>				
R201298	241	Super ProVac Vacuum, 22 ball bearing polyurethane wheels, suction chamber, strategic weighting and dual manifold with handle joining assembly, includes adapters for 1-1/2 in. and 2 in. vacuum hose, boxed	1	21
<b>250 COMMERCIAL FLEXIBLE VACUUM</b>				
R201126	250	Swivel wheel 19 in., boxed	4	37
<b>PROVAC SERIES RESIDENTIAL &amp; COMMERCIAL VACUUMS</b>				
R201276	214	14 in. Commercial model, metal swivel handle, ball bearing wheels, SS nut and bolt, boxed	6	46
R201286	222	22 in. Commercial model, metal swivel handle, ball bearing wheels, stainless steel shaft, boxed	1	9
R201296	229	29 in. Commercial model, metal swivel handle, ball bearing wheels, stainless steel shaft, boxed	1	11

Note: Refer to price list for vacuum replacement items such as handles, pins, hardware, wheels, axle assemblies, High Performance Acetal Resin clips and brushes.

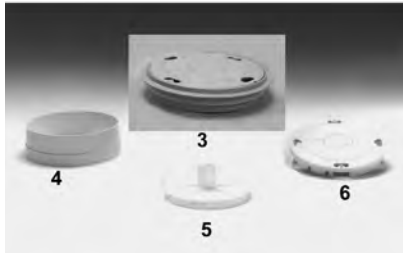


# ADMIRAL™ S20 SKIMMERS

## ADMIRAL SKIMMERS FOR POOLS AND SPAS



Admiral Skimmers



Admiral Skimmer Accessories

Admiral S20 Skimmers have a PVC reinforced twin port base. S20 may be purchased with equalizer for commercial and NSF applications or for when the second port is connected to the main drain. All models include the innovative lock down lid that can be personalized with custom logo disks and are available with a flap weir or the exclusive circular weir for superior skimming action.

**Certified to  
NSF/ANSI Standard 50**

### Ordering Information

#### Featured Highlights

- Admiral S20 Skimmers: Reinforced PVC base
- Slip FIPT, 1-1/2 inch or 2 inch
- Variety of throat lengths
- Easy to install
- Innovative lock down lid
- 1-1/2 inch and 2 inch ports
- Lid extension collars
- Flap weir or the exclusive circular weir
- Custom logo disk available

Product	Description	Carton Qty.	Carton Wt. (Lbs.)
<b>S20 SKIMMERS FOR CONCRETE CONSTRUCTION</b>			
84420500	S20, circ. weir, equalizer, 2 in. threaded, FIPT <sup>1</sup>	1	12
84420505	S20, circ. weir, equalizer, 2 in. slip <sup>1</sup>	1	12
84420530	S20, circ. weir, equalizer, 2 in. threaded, tan	1	12
84420535	S20, circ. weir, equalizer, 2 in. slip, tan	1	12
84420600	S20, flap weir, equalizer, 2 in. threaded, FIPT <sup>1</sup>	1	12
84420605	S20, flap weir, equalizer, 2 in. slip <sup>1</sup>	1	12
84420630	S20, flap weir, equalizer, 2 in. threaded, tan <sup>1</sup>	1	12
84420635	S20, flap weir, equalizer, 2 in. slip, tan	1	12
<b>SKIMMER ACCESSORIES</b>			
87204600	Hydrostatic Relief Spring Valve, 2 in. for S20 commercial equalizer	1	0.25
85018000	Lid with ring seat, S15 & S20, 9 in. beige	1	1
85002300	Extension collar for ring seat, adjustable to 3 in.	1	0.50
85001900	Vacuum plate adapter, S15 & S20	1	0.50
85007400	Lock down lid for existing Admiral skimmers, white	1	0.50
85007411	Lock down lid for existing Admiral skimmers, black	1	0.50
85007413	Lock down lid for existing Admiral skimmers, gray	1	0.50
85007430	Lock down lid for existing Admiral skimmers, tan	1	0.50
85000400	Lid/collar set, white	1	0.50
85000411	Lid/collar set, black	1	0.50

<sup>1</sup> NSF listed for commercial installation.

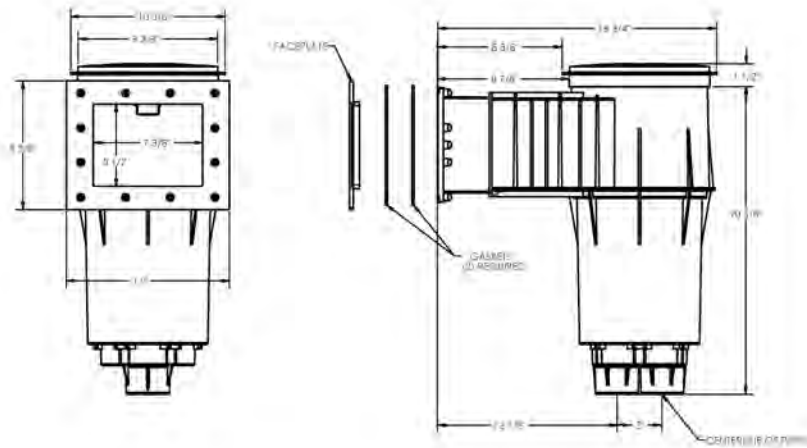
**CALIFORNIA PROPOSITION 65 WARNING**

⚠ **WARNING:** Cancer and Reproductive Harm.  
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 ⚠ **ADVERTENCIA:** Cáncer y Daño Reproductivo.  
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# ADMIRAL™ S20 SKIMMERS (CONT'D)

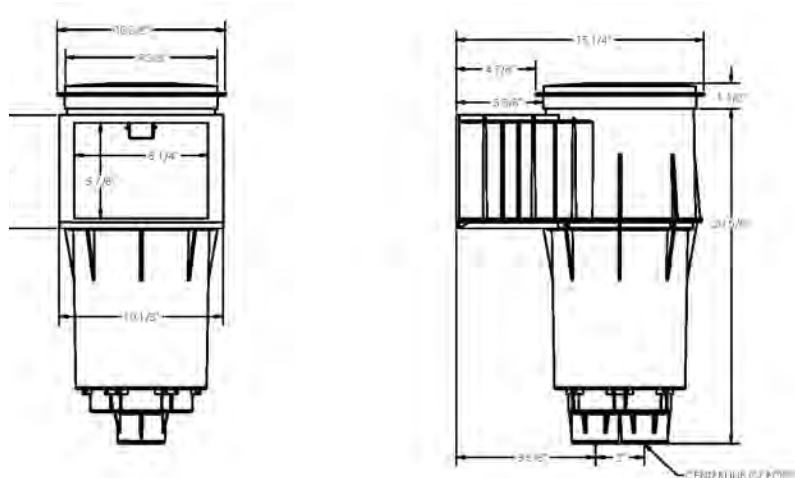
## Dimensions and Performance

Short Throat Skimmer

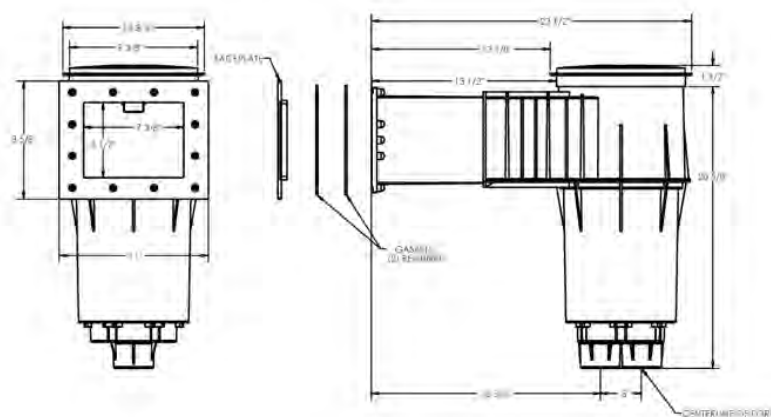


Certified to  
NSF/ANSI Standard 50

Admiral S20 Skimmer for Concrete



Long Throat Skimmer



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[www.p65warnings.ca.gov](http://www.p65warnings.ca.gov) P650204

# BERMUDA™ SKIMMERS

## SKIMMERS FOR GUNITE POOLS



Gunite Skimmer

### Featured Highlights

Choose among the following configurations:

- ABS or PVC
- White, black and tan colors available
- 1-1/2 in. or 2 in. slip or threaded ports
- Optional equalizer valve

Bermuda Skimmers feature a heavy-duty one-piece construction with sturdy external ribbing for superior strength.

### Ordering Information

Product	Description	Material Type	Carton Qty.	Carton Wt. (Lbs.)
<b>GUNITE SKIMMERS</b>				
506300	2 in. Slip ports, white	PVC	1	10
506301	2 in. Threaded ports, white	PVC	1	10
506302	2 in. Slip ports, tan	PVC	1	10
506304	1-1/2 in. Slip ports, white	PVC	1	10
506361	2 in. Slip ports, white	ABS	1	10
506362	2 in. Threaded ports, white	ABS	1	10
506363	1-1/2 in. Slip ports, white	ABS	1	10
506364	1-1/2 in. Threaded ports, white	ABS	1	10
506365	2 in. Slip ports, black	ABS	1	10
<b>GUNITE SKIMMERS WITH FLOAT VALVE ASSEMBLY</b>				
506382	2 in. Slip ports, tan	ABS	1	10
506308	2 in. Slip ports with float valve, white	PVC	1	10
506309	2 in. Threaded ports with float valve, white	PVC	1	10
506310	2 in. Slip ports, tan	PVC	1	10
<b>GUNITE SKIMMERS WITH FLOAT VALVE &amp; EQUALIZER VALVE ASSEMBLY</b>				
506370	2 in. slip ports, white <sup>1</sup> (BKG)	PVC	1	10
506380	2 in. slip ports, white <sup>1</sup> (ABKG)	ABS	1	10
506381	2 in. threaded ports, white <sup>1</sup> (ABKG)	ABS	1	10

<sup>1</sup> NSF listed.



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# BERMUDA™ SKIMMERS (CONT'D)



A

B



D



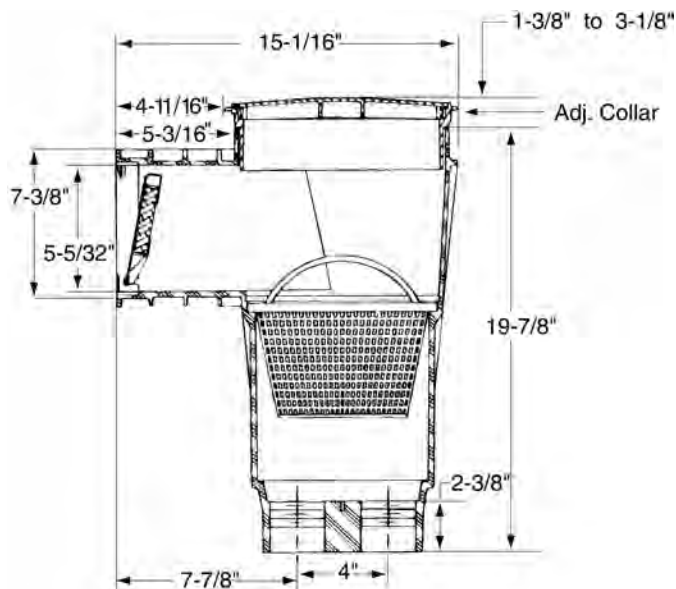
E



F

Item	Product	Description	Carton Wt. (Lbs.)
<b>BERMUDA ACCESSORIES</b>			
A	506160	Float valve assembly	1
B	506161	Vacuum plate/insert assembly, white	0.50
C	506162	Equalizer valve assembly	1.3
D	516220	Square deck ring seat, white	0.62
E	516253	Gunite extension collar, white, 3-1/8 in. length	0.20
E	516258	Gunite extension collar, tan, 3-1/8 in. length	0.60
E	516329	Gunite extension collar, black, 3-1/8 in. length	0.60
F	510327	Deck lid and collar assembly with screws, dark gray	1.3
F	510332	Deck lid, dark gray	0.50
F	516215	Deck lid, white	0.50
F	516216	Deck lid, tan	0.50
F	516254	Deck lid and collar assembly with screws, white	1.3
F	516261	Deck lid and collar assembly with screws, tan	1.3
F	516306	Deck lid, black	0.50
F	516328	Deck lid and collar assembly with screws, black	1.3

## Dimensions and Performance



### CALIFORNIA PROPOSITION 65 WARNING

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# U-3 SKIMMERS

## SWIMQUIP INGROUND SKIMMERS



### Ordering Information

Product	Description	Carton Qty.	Carton Wt. (Lbs.)
<b>SKIMMERS FOR CONCRETE POOLS</b>			
08650-1403	U-3 Skimmer White w/ White Lid & Frame, 2 in. NPT with 1-1/2 in. NPT Reducers; Incl. Float and Check Valve, Basket <sup>1</sup>	48	10
08650-3403	U-3 Skimmer Gray w/ Gray Lid & Frame, 2 in. NPT with 1-1/2 in. NPT Reducers; Incl. Float and Check Valve, Basket; NSF <sup>1</sup>	48	10
08650-3403E	U-3 Skimmer Gray, w/ Tan Lid & Frame, 2 in. NPT with 1-1/2 in. NPT Reducers; Incl. Float and Check Valve, Basket; NSF <sup>1</sup>	48	10
08650-2403	U-3 Skimmer White w/ Tan Lid & Frame, 2 in. NPT with 1-1/2 in. NPT Reducers; Incl. Float and Check Valve, Basket <sup>1</sup>	48	10
08650-1404	U-3 Skimmer White w/ White Lid & Frame, 2 in. Slip with 1-1/2 in. Slip Reducers; Incl. Float and Check Valve, Basket <sup>1</sup>	48	10
08650-3404	U-3 Skimmer Gray w/ Gray Lid & Frame, 2 in. Slip with 1-1/2 in. Slip Reducers; Incl. Float and Check Valve, Basket; NSF <sup>1</sup>	48	10
08650-3404E	U-3 Skimmer Gray, w/ Tan Lid & Frame, 2 in. Slip with 1-1/2 in. Slip Reducers; Incl. Float and Check Valve, Basket; NSF <sup>1</sup>	48	10
08650-2404	U-3 Skimmer White w/ Tan Lid & Frame, 2 in. Slip with 1-1/2 in. Slip Reducers; Incl. Float and Check Valve, Basket <sup>1</sup>	48	10

<sup>1</sup> NSF Certified. Only skimmers with Float Valve assemblies are NSF approved.

Note: All U-3 Skimmers are made with high strength ABS plastic.

CALIFORNIA PROPOSITION 65 WARNING

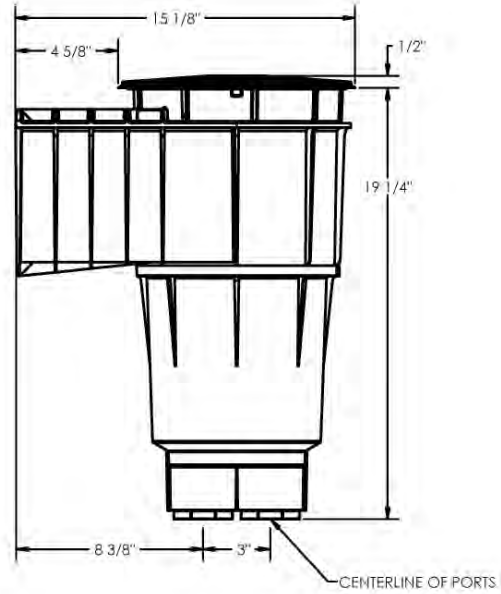
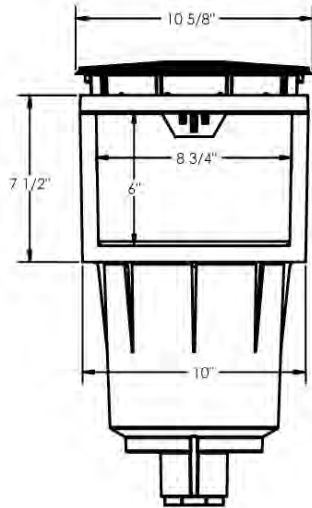
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www.p65warnings.ca.gov. P65.2017.1A

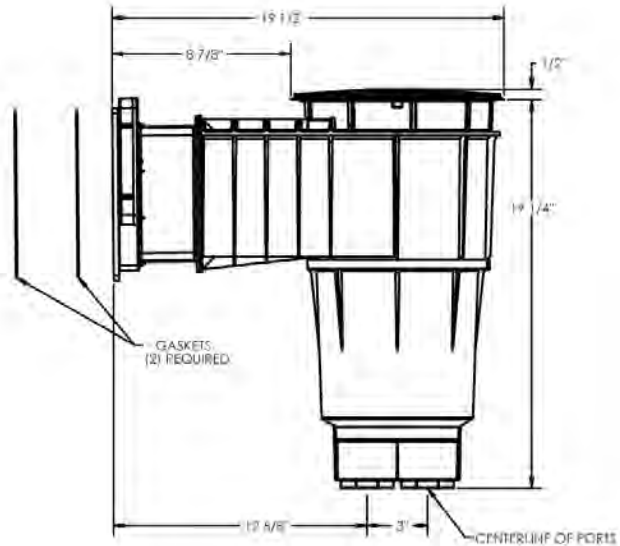
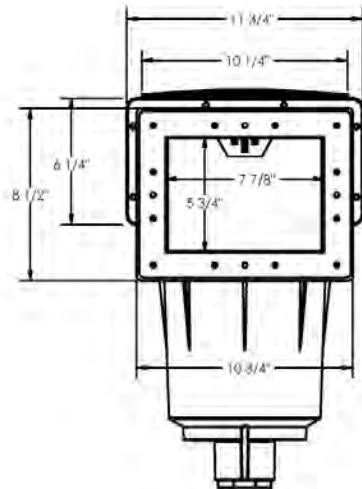
# U-3 SKIMMERS (CONT'D)

## SWIMQUIP INGROUND SKIMMERS

### Dimensions and Performance



U3 Skimmer for concrete



CALIFORNIA PROPOSITION 65 WARNING  
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## RETURN FITTINGS FOR SWIMMING POOLS



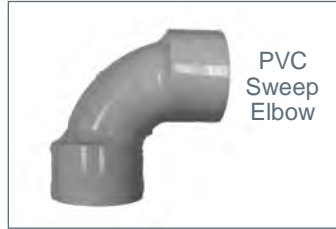
542402



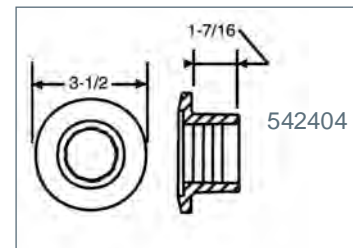
542404



542405



PVC  
Sweep  
Elbow



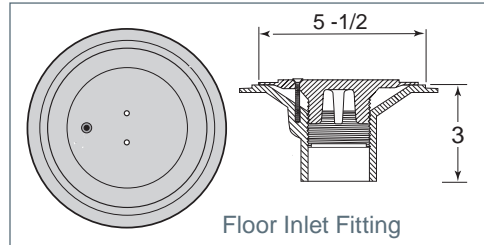
542417



542418



542419



Floor Inlet Fitting

### Ordering Information

Product	Description	Carton Qty.	Carton Wt. (Lbs.)
<b>GUNITE/CONCRETE</b>			
542402	Long body, 1-1/2 in. threaded x 1-1/2 in. socket, white	50	9
542417	Long body, 1-1/2 in. threaded x 1-1/2 in. socket, black	50	9
542404	Standard body, 1-1/2 in. threaded x 1-1/2 in. threaded, white	50	9
542405	Standard body, 1-1/2 in. threaded x 1-1/2 in. socket, white	50	9
542418	Standard body, 1-1/2 in. threaded x 1-1/2 in. threaded, black	50	9
542419	Standard body, 1-1/2 in. threaded x 1-1/2 in. socket, black	50	9
<b>INSIDER FITTINGS FOR GUNITE/CONCRETE POOLS</b>			
542423	2 in. slip body, for schedule 40 pvc pipe, white	50	7
542424	2 in. slip body, for schedule 40 pvc pipe, black	50	7
<b>ENERGY EFFICIENT FITTINGS</b>			
178741	Sweep Elbow, PVC, White, 2-1/2 in. Socket, 3 in. Spigot. W=75	1	0.92
<b>FLOOR INLET FITTINGS</b>			
08417-0000	2 in. Slip with 1-1/2 in. slip bushing, white <sup>3</sup>	1	1
08417-0100	2 in. Slip with 1-1/2 in. slip bushing, gray <sup>3</sup>	1	1
08417-0200	2 in. Slip with 1-1/2 in. slip bushing, black <sup>3</sup>	1	1

<sup>1</sup> Includes face plate, screws & gaskets.

<sup>2</sup> Includes back gaskets.

CALIFORNIA PROPOSITION 65 WARNING

⚠ **WARNING:** Cancer and Reproductive Harm.  
 ⚠ **AVERTISSEMENT:** Peut Causer le Cancer et des Dommages au Système Reproducteur.  
 ⚠ **ADVERTENCIA:** Cáncer y Daño Reproductivo.

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PR020714

# AUTOMATIC WATER FILLERS

## WATER LEVEL CONTROL

### Featured Highlights

- Available for standard in-ground and vanishing edge pools
- Prevents equipment damage due to low water levels
- No electronic controls
- Prevents water waste and landscape damage due to overfilling pool
- Available with white, black, gray, and almond colored lids

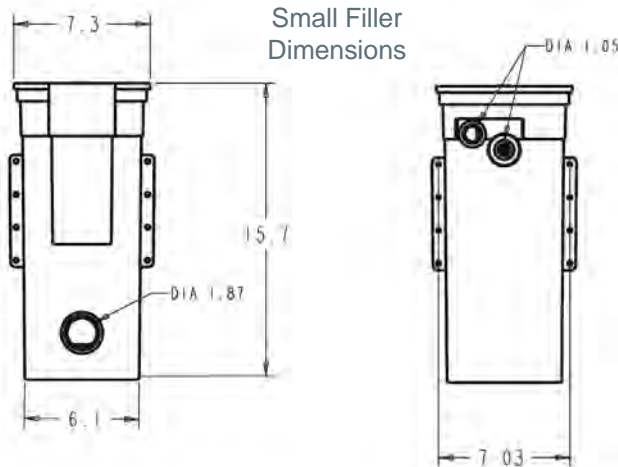


Automatic Water Fillers

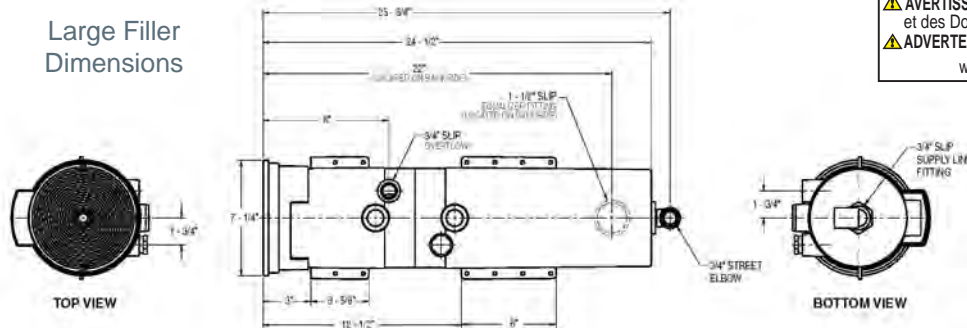
### Ordering Information

Product	Description
<b>AUTOMATIC WATER FILLERS</b>	
T40BBE	AutoFill w/ side mounted float valve, almond
T40BBK	AutoFill w/ side mounted float valve, black
T40BG	AutoFill w/ side mounted float valve, gray
T40BDG	AutoFill w/side mounted float valve, dark gray
T40BW	AutoFill w/ side mounted float valve, white
T40FB	AutoFill w/ Fluidmaster® valve, almond
T40FBK	AutoFill w/ Fluidmaster valve, black
T40FG	AutoFill w/ Fluidmaster valve, gray

Product	Description
<b>AUTOMATIC WATER FILLERS</b>	
T40FW	AutoFill w/ Fluidmaster valve, white
T40FDG	AutoFill 2/Fluidmaster valve, dark gray
T40FNB	AutoFill Vanishing Edge w/ Fluidmaster valve, almond
T40FNBK	AutoFill Vanishing Edge w/ Fluidmaster valve, black
T40FNG	AutoFill Vanishing Edge w/ Fluidmaster valve, gray
T40FNDG	AutoFill Vanishing Edge w/ Fluidmaster valve, dark gray
T40FNW	AutoFill Vanishing Edge w/ Fluidmaster valve, white



Fluidmaster Valve



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# FLOWMETERS

## FOR COMMERCIAL AND INDUSTRIAL LIQUID APPLICATIONS



Flowmeter

### Featured Highlights

- Stainless steel guide and floats
- Easy installation and maintenance; no tools required, tightens by hand
- Textured surface on back of meter for improved readability
- Easy to read GPM and LPM Scales
- Brass threaded knurled nuts for durability

### Ordering Information

Product	GPM	Description	Carton Qty.	Carton Wt. (Lbs.)
<b>LARGE BODY FLOWMETERS</b>				
LDF450B	2–40	1 in., Brass sweat end	1	1-1/4
LDF450T	2–40	1 in., Brass threaded end	1	1-1/4
LDF460T	2–40	1-1/2 in., Brass threaded end	1	1-1/2
LDF451B	8–75	1 in., Brass sweat end	1	1-1/4
LDF451T	8–75	1 in., Brass threaded end	1	1-1/4
LDF461T	8–75	1-1/2 in., Brass threaded end	1	1-1/2
LDF452B	15–100	1 in., Brass sweat end	1	1-1/4
LDF452T	15–100	1 in., Brass threaded end	1	1-1/4
LDF462T	15–100	1-1/2 in., Brass threaded end	1	1-1/2

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## PENTAIR PROWLER® 930 ROBOTIC INGROUND POOL CLEANER

### Featured Highlights

- Ultimate convenience with smart device control featuring *Bluetooth®* wireless technology
- All-surface deep cleaning using a powerful, high-speed scrubbing brush
- Programmable daily cleaning schedules with built-in weekly timer, including fast clean mode
- Dual-level filtration with top access basket captures both large and ultra-fine debris
- Robust storage caddy for increased mobility and easy storage

Command cleaning schedules and cleaning modes from the Prowler 930 Power Supply. Our easy-to-use app lets you operate the cleaner from the convenience of your smart phone. For quick spot clean-ups, you can manually "drive" the cleaner to areas of concentrated debris for fast removal.



Pentair Prowler 930

Powered by Dolphin



### Ordering Information

Product	Description	Carton Qty.	Carton Wt. (Lbs.)
<b>PENTAIR PROWLER 930 ROBOTIC CLEANER</b>			
360323	Prowler 930 Robotic Inground Pool Cleaner w/ App for Remote Control	1	40

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## PENTAIR PROWLER® 920 ROBOTIC INGROUND POOL CLEANER

### Featured Highlights

- All-surface deep cleaning with a powerful, high-speed scrubbing brush
- Fast and easy debris removal with a top access filtration basket
- Select from a large or fine debris filtration cartridges
- Programmable daily cleaning schedules with a built-in weekly timer

Pool walls and floor get deep-scrubbing and powerful vacuuming action, all the way up to the tile line. Prowler 920 comes with separate mesh baskets made for either large or fine debris, to customize the filtration level or do lightning-fast swap out for touchups.



Pentair Prowler 920

Powered by Dolphin



### Ordering Information

Product	Description	Carton Qty.	Carton Wt. (Lbs.)
<b>PENTAIR PROWLER 920 ROBOTIC CLEANER</b>			
360322	Prowler 920 Robotic Inground Pool Cleaner	1	29

CALIFORNIA PROPOSITION 65 WARNING

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**PENTAIR**

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**PUMPS**







# COMMERCIAL ACU DRIVE™ XS

## VARIABLE FREQUENCY DRIVE

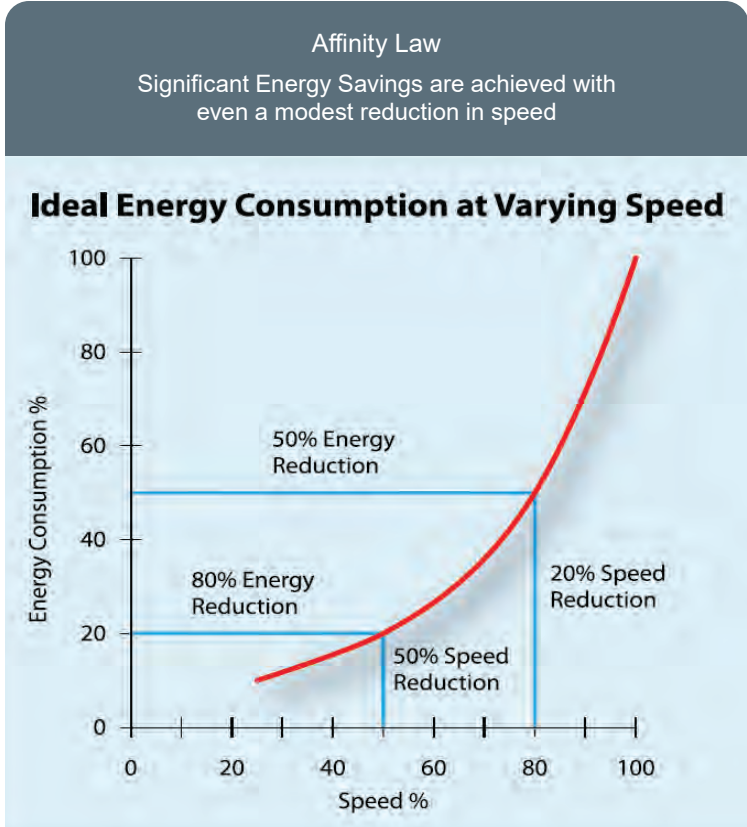


### Featured Highlights

- Great match for 3-phase models of EQ Series® Pumps
- Save up to 60% or more on pump's electricity usage
- "Right-size" your pump to the exact flow required
- Saves energy with constant flow as the filters gets dirty (with optional flow sensor)
- Off-hour flow management capability
- Does not blow corrosive filter-room air across the circuitry
- High efficiency up to 98% – adjusts drive input voltage for best efficiency point
- Eliminates need for motor starters
- Integrated disconnects, fusing and optional bypasses
- 2-step ramps (Soft Start Feature)
- Real-time clock for time based functions
- Overload trip protection protects motor and Acu Drive XS VF Drive from Voltage Spikes and phase unbalance
- Can connect to an IntelliTouch® Automation System
- Up to a six year on-site warranty available
- Start-up included with every drive (technical training option available)
- Indoor & Outdoor-rated enclosures
- One drive type for the full power range
- For use with 3 phase pumps only
- Acu Drive XS VF Drives with single phase input power available

The Acu Drive XS VF Drive offers built-in intelligence for increased performance in all aquatic pump applications. Specified to save money, energy and time, the Acu Drive XS VF Drive offers very fast return on investment. The Acu Drive XS VF Drive allows the pump to run at its most efficient point on the curve. Preventative maintenance costs will drop due to motor protection, motor soft start, and a significant decrease in water hammer protecting the shaft and impeller. Up to an additional 5% savings due to the Acu Drive XS VF Drive's ability to balance power phase and harmonic suppression. Built with powerful standard and optional features specifically designed for energy optimization, the Acu Drive XS VF Drive is perfectly matched with the full line of Pentair commercial pool pumps.

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# COMMERCIAL ACU DRIVE™ XS VARIABLE FREQUENCY DRIVE (CONT'D)

## Ordering Information

3 PHASE INCLUDES FUSED DISCONNECT, ON-SITE START-UP* AND BATTERY BACK-UP						
Horse Power (HP)	NEMA RATED 1 (IP 20/21)			NEMA RATED 12 (IP 54/55)		
	200–240 VAC	360–480 VAC	525–600 VAC	200–240 VAC	360–480 VAC	525–600 VAC
3	AD030-2303-N01	AD030-4603-N01	AD030-5753-N01	AD030-2303-N12	AD030-4603-N12	AD030-5753-N12
5	AD050-2303-N01	AD050-4603-N01	AD050-5753-N01	AD050-2303-N12	AD050-4603-N12	AD050-5753-N12
7-1/2	AD075-2303-N01	AD075-4603-N01	AD075-5753-N01	AD075-2303-N12	AD075-4603-N12	AD075-5753-N12
10	AD100-2303-N01	AD100-4603-N01	AD100-5753-N01	AD100-2303-N12	AD100-4603-N12	AD100-5753-N12
15	AD150-2303-N01	AD150-4603-N01	AD150-5753-N01	AD150-2303-N12	AD150-4603-N12	AD150-5753-N12
20	AD200-2303-N01	AD200-4603-N01	AD200-5753-N01	AD200-2303-N12	AD200-4603-N12	AD200-5753-N12

SINGLE PHASE INPUT DRIVES (FOR USE WITH 3 PHASE PUMPS ONLY) INCLUDES DISCONNECT ONLY (NO FUSES) ON-SITE START-UP* AND BATTERY BACK-UP		
Horse Power (HP)	NEMA RATED 1 (IP 20/21)	NEMA RATED 12 (IP 54/55)
	200–240 VAC	200–240 VAC
3	AD030-2301-N01	AD030-2301-N12
5	AD050-2301-N01	AD050-2301-N12
7-1/2	AD075-2301-N01	AD075-2301-N12
10	AD100-2301-N01	AD100-2301-N12
15–20	AD200-2301-N01	AD200-2301-N12

For 25 HP and higher and Nema 4 options - Please contact factory.

## Optional Accessories and Warranties

ENHANCED SERVICE WARRANTY - ON-SITE* INCLUDES PARTS, LABOR, TRAVEL AND ON-SITE WARRANTY REPAIR. USE PRODUCT NUMBERS AS FOLLOWS:				
	208–230 Volts		380–690 Volts	
DURATION	3 HP & Below	5–25 HP	10 HP & Below	15–40 HP
6 YEAR	AD-EWW172	AD-EWW272	AD-EWW172	AD-EWW272

Part Number	Size	Description
97014-4202KIT	2"	<b>FLOW SENSOR KITS - WITH INTEGRAL (4-20mA SIGNAL)</b> Includes: SCH80 PVC, Clamp-On Saddle 100lf of shielded signal wire & strain relief connector. Does <u>not</u> include a separate wall-mount flow display.
97014-4203KIT	3"	
97014-4204KIT	4"	
97016-4206KIT	6"	
97016-4208KIT	8"	

Part Number	Size	Description
97014BL-03KIT	3"	<b>FLOW SENSOR KITS - WITH SEPARATE WALL-MOUNT DISPLAY TRANSMITTER (4-20mA SIGNAL) includes:</b> SCH80 PVC, Clamp-On Saddle(3"-8") Iron Saddle(10"-12") 100lf of shielded signal wire & strain relief connector. Separate wall-mount flow display / transmitter.
97014BL-04KIT	4"	
97016BL-06KIT	6"	
97016BL-08KIT	8"	
97020BL-10KIT	10"	
97020BL-12KIT	12"	
97020BL-14KIT	14"	

\* Additional charges will apply if on-site start-up exceeds four hours (including round-trip travel) per Acu Drive VF Drive.

Other options and add-ons are available including Nema Rated 4X (IP66) enclosure, "Fused Bypass" upgrade, and additional on-site technical training. For more information on these options, other sizes, or applications assistance call 1-800-831-7133.

Some pump motors (e.g. 230/460V versions) can be wired to accommodate multiple voltages. This is not true of VFDs. In order to ensure proper VFD selection, the actual pump motor input voltage must be consistent with the drives operating range as shown.

The Acu Drive VF Drive is recommended for use with all "High" or

"Premium" efficiency motors and all motors that have Class F insulation or better. For all non-Class F motors, please contact the factory for proper selection of Acu Drive VF Drive and accessories.

Standard Acu Drive XS VF Drives can be returned within 12 months of invoice only if unused, in original packaging, and subject to a 35% restocking charge. Special drives are non-returnable.

Nema Rated 12 enclosure provides protection against dust, dirt and light splashing. Nema Rated 12 units may be used outdoors when sheltered from direct precipitation and sunlight. Nema Rated 1 enclosure provides basic protection against accidental contact and falling dirt, and is only recommended for ideal, indoor installations.

# EQ SERIES®

## COMMERCIAL PLASTIC PUMP WITH AND WITHOUT HAIR AND LINT STRAINER



EQ Series TEFC Pump with Strainer



EQ Series Pump without Strainer

Commercial Plastic pump built specifically for commercial and large residential pools. Pump features extraordinary electrical and hydraulic efficiency that pays premiums in low electrical costs, less wear and tear on critical moving parts, and quiet operation.

### Featured Highlights

- NEMA Rated Premium Grade Efficiency Motors
- Commercial grade, non-corrosive Plastic Parts for durability and long life
- Now available in TEFC and ODP 3-phase motor options
- Cam and Ramp™ See -Through Lid
- Self-priming with Hair and Lint Strainer
- Light weight
- **3-phase models compatible with Acu Drive™ XS VF Drive**
- Drop-in replacement for C Series® and CSP Series™ Pumps
- Waterfall models great for low head, high flow applications
- Easy cleaning and serviceability
- 50 Hz models available -contact factory

### Ordering Information

Product	Description	Voltage	Amps	HP	SF	SFHP	Primary Listings and Certifications <sup>6</sup>	Port Size (ANSI Flange)	Motor Class	Carton Wt. (Lbs.)	Curve Key
<b>NEMA RATED PREMIUM EFFICIENCY SINGLE PHASE POOL PUMP WITHOUT STRAINER - ODP</b>											
340019	EQ-500	230	20.0	5	1.15	5.75	NSF <sup>2</sup> , ETL <sup>5</sup>	6 in. x 4 in.	F	97	A
340021	EQ-750	230	30.4	7.5	1.15	8.63	NSF <sup>2</sup>	6 in. x 4 in.	F	132	B
340237	EQ-1000	230	40.0	10	1.15	11.50	NSF <sup>2</sup>	6 in. x 4 in.	F	125	C
<b>NEMA RATED PREMIUM EFFICIENCY THREE PHASE POOL PUMP WITHOUT STRAINER - ODP</b>											
340020	EQK-500	208-230/460	13.5-12.3/6.2	5	1.15	5.75	NSF <sup>2</sup>	6 in. x 4 in.	F	77	D
340022	EQK-750	208-230/460	20.4-18.2/9.1	7.5	1.15	8.63	NSF <sup>2</sup>	6 in. x 4 in.	F	87	E
340023	EQK-1000	208-230/460	27.0/26.2-13.1	10	1.15	11.50	NSF <sup>2</sup>	6 in. x 4 in.	F	117	F
340024	EQK-1500	208-230/460	40.0-38.0/18.8	15	1.15	17.25	NSF <sup>2</sup>	6 in. x 4 in.	F	132	G
<b>NEMA RATED PREMIUM EFFICIENCY THREE PHASE POOL PUMP WITHOUT STRAINER - TEFC</b>											
340608	EQKT-500	208-230/460	13.4-12.2/6.1	5	1.25	6.25	NSF <sup>2</sup> , UL <sup>7</sup>	6 in x 4 in	F	97	D
340609	EQKT-750	208-230/460	19.9-17.8/8.9	7.5	1.25	9.38	NSF <sup>2</sup> , UL <sup>7</sup>	6 in x 4 in	F	117	E
340610	EQKT-1000	208-230/460	26.4-23.5/11.7	10	1.25	12.50	NSF <sup>2</sup> , UL <sup>7</sup>	6 in x 4 in	F	163	F
340611	EQKT-1500	208-230/460	36.0/17.8	15	1.25	18.75	NSF <sup>2</sup> , UL <sup>8</sup>	6 in x 4 in	F	177	G
<b>NEMA RATED PREMIUM EFFICIENCY THREE PHASE POOL PUMP WITHOUT STRAINER - 575 VOLT - ODP</b>											
340148	EQK-500	575	5.1	5	1.15	5.75	NSF <sup>2</sup>	6 in. x 4 in.	F	77	D
340149	EQK-750	575	7.2	7.5	1.15	8.63	NSF <sup>2</sup>	6 in. x 4 in.	F	87	E
340150	EQK-1000	575	10.2	10	1.15	11.50	NSF <sup>2</sup>	6 in. x 4 in.	F	117	F
340151	EQK-1500	575	15.0	15	1.15	17.25	NSF <sup>2</sup>	6 in. x 4 in.	F	132	G
<b>NEMA RATED PREMIUM EFFICIENCY SINGLE PHASE POOL PUMP WITH STRAINER - ODP</b>											
340030	EQ-500	230	20.0	5	1.15	5.75	NSF <sup>3</sup> , ETL <sup>5</sup>	6 in. x 4 in.	F	126	A
340032	EQ-750	230	30.4	7.5	1.15	8.63	NSF <sup>3</sup>	6 in. x 4 in.	F	161	B
340238	EQ-1000	230	40.0	10	1.15	11.50	NSF <sup>3</sup>	6 in. x 4 in.	F	160	C
<b>NEMA RATED PREMIUM EFFICIENCY THREE PHASE POOL PUMP WITH STRAINER - ODP</b>											
340031	EQK-500	208-230/460	13.5-12.3/6.2	5	1.15	5.75	NSF <sup>3</sup>	6 in. x 4 in.	F	106	D
340033	EQK-750	208-230/460	20.1-18.3/9.1	7.5	1.15	8.63	NSF <sup>3</sup>	6 in. x 4 in.	F	116	E
340034	EQK-1000	208-230/460	27.0/26.2-13.1	10	1.15	11.50	NSF <sup>3</sup>	6 in. x 4 in.	F	146	F
340035	EQK-1500	208-230/460	40.0-36.0/17.8	15	1.15	17.25	NSF <sup>3</sup>	6 in. x 4 in.	F	161	G
<b>NEMA RATED PREMIUM EFFICIENCY THREE PHASE POOL PUMP WITH STRAINER - TEFC</b>											
340604	EQKT-500	208-230/460	13.4-12.2/6.1	5	1.25	6.25	NSF <sup>3</sup> , UL <sup>7</sup>	6 in x 4 in	F	127	D
340605	EQKT-750	208-230/460	19.9-17.8/8.9	7.5	1.25	9.38	NSF <sup>3</sup> , UL <sup>7</sup>	6 in x 4 in	F	147	E
340606	EQKT-1000	208-230/460	26.4-23.5/11.7	10	1.25	12.50	NSF <sup>3</sup> , UL <sup>7</sup>	6 in x 4 in	F	193	F
340607	EQKT-1500	208-230/460	36.0/17.8	15	1.25	18.75	NSF <sup>3</sup> , UL <sup>8</sup>	6 in x 4 in	F	207	G

# EQ SERIES®

## COMMERCIAL PLASTIC PUMP WITH AND WITHOUT HAIR AND LINT STRAINER

Product	Description	Voltage	Amps	HP	SF	SFHP	Primary Listings and Certifications <sup>6</sup>	Port Size (ANSI Flange)	Motor Class	Carton Wt. (Lbs.)	Curve Key
<b>NEMA RATED PREMIUM EFFICIENCY THREE PHASE POOL PUMP WITH STRAINER - ODP - 575 VOLT</b>											
340155	EQK-500	575	5.1	5	1.15	5.75	NSF <sup>3</sup>	6 in. x 4 in.	F	106	D
340156	EQK-750	575	7.2	7.5	1.15	8.63	NSF <sup>3</sup>	6 in. x 4 in.	F	116	E
340157	EQK-1000	575	10.2	10	1.15	11.50	NSF <sup>3</sup>	6 in. x 4 in.	F	146	F
340159	EQK-1500	575	15.0	15	1.15	17.25	NSF <sup>3</sup>	6 in. x 4 in.	F	161	G
<b>NEMA RATED PREMIUM EFFICIENCY SINGLE PHASE WATERFALL PUMP WITHOUT STRAINER - ODP - 1750 RPM</b>											
340014	EQW-300	208-230	19.5/19.2	3	1.15	3.45	NSF <sup>2</sup> , ETL <sup>5</sup>	6 in. x 4 in.	F	97	H
340017	EQW-500	208-230	23.0-20.1	5	1.25	6.25	NSF <sup>2</sup> , ETL <sup>5</sup>	6 in. x 4 in.	F	97	I
<b>NEMA RATED PREMIUM EFFICIENCY THREE PHASE WATERFALL PUMP WITHOUT STRAINER - ODP - 1750 RPM</b>											
340016	EQWK-300	208-230/460	8.4-7.8/3.9	3	1.15	3.45	NSF <sup>2</sup>	6 in. x 4 in.	F	77	H
340018	EQWK-500	208-230/460	13.8-13.0/6.5	5	1.25	6.25	NSF <sup>2</sup>	6 in. x 4 in.	F	77	I
<b>NEMA RATED PREMIUM EFFICIENCY SINGLE PHASE WATERFALL PUMP WITH STRAINER - ODP - 1750 RPM</b>											
340026	EQW-300	208/230	19.5/19.2	3	1.15	3.45	NSF <sup>3</sup> , ETL <sup>5</sup>	6 in. x 4 in.	F	126	H
340028	EQW-500	208-230	23.0/20.1	5	1.25	6.25	NSF <sup>4</sup> , ETL <sup>5</sup>	6 in. x 4 in.	F	126	I
<b>NEMA RATED PREMIUM EFFICIENCY THREE PHASE WATERFALL PUMP WITH STRAINER - ODP</b>											
340027	EQWK-300	208-230/460	8.4-7.8/3.9	3	1.15	3.45	NSF <sup>3</sup>	6 in. x 4 in.	F	106	H
340029	EQWK-500	208-230/460	13.8-13.0/6.5	5	1.25	6.25	NSF <sup>4</sup>	6 in. x 4 in.	F	106	I
<b>HAIR AND LINT STRAINER WITH CAM AND RAMP LID, BASKET AND HARDWARE</b>											
340013	EQ 6X6 Strainer						NSF <sup>4</sup>	6 in. x 6 in.		33	J
<b>EQ SERIES PUMP ACCESSORIES FLANGE ASSEMBLY KITS</b>											
357262	Flange 4 in. w/ gasket and SS hardware <sup>1</sup> (See images on next page)									20	
357263	Flange 6 in. w/ gasket and SS hardware <sup>1</sup> (See images on next page)									23	
357212	Flange 6 in. w/ gasket and SS hardware. For use on EQ Pumps without Strainer.									23	

See page 151 for an assortment of PS Series In-Line Strainers that work well with EQ Series pumps.

<sup>1</sup> Thermoplastic PVC socket style.

<sup>2</sup> 'NSF' indicates that pump bears a mark signifying evaluation to NSF Standard 50 For Non Self-Priming Centrifugal Pumps For Swimming Pools, Spas and Hot Tubs.

<sup>3</sup> 'NSF' indicates that pump bears a mark signifying evaluation to NSF Standard 50 For Self-Priming Centrifugal Pumps For Swimming Pools, Spas and Hot Tubs.

<sup>4</sup> 'NSF' indicates that product bears a mark signifying evaluation to NSF Standard 50 For Materials and Components.

<sup>5</sup> 'ETL' indicates that pump bears a specific ETL mark signifying evaluation to U.S. Standards UL1081 for Permanently Connected Swimming Pool and Spa Pumps and to Canadian Standards CAN/

CSA C22.2 No. 108-01 Liquid Pumps For Swimming Pools And Spas. (Enclosure 3).

<sup>6</sup> Product may have been evaluated to other state and local regulatory standards. Listing status may change. Always confirm status with appropriate agency if in doubt.

<sup>7</sup> 'UL' indicates that pump bears a UL mark signifying evaluation to U.S. Standards UL1081 for Permanently Connected Swimming Pool and Spa Pumps and to Canadian Standards CAN/CSA C22.2 No. 108-01 Liquid Pumps For Swimming Pools Only (Enclosure 3).

<sup>8</sup> 'UL' indicates that pump bears a UL mark signifying evaluation to U.S. Standards UL1081 for Permanently Connected Swimming Pool and Spa Pumps.

Dimensions and Performance - See next page.

#### CALIFORNIA PROPOSITION 65 WARNING

⚠ **WARNING:** Cancer and Reproductive Harm.  
 ⚠ **AVERTISSEMENT:** Peut Causer le Cancer et des Dommages au Système Reproducteur.  
 ⚠ **ADVERTENCIA:** Cáncer y Daño Reproductivo.

www.p65warnings.ca.gov.

PN202174

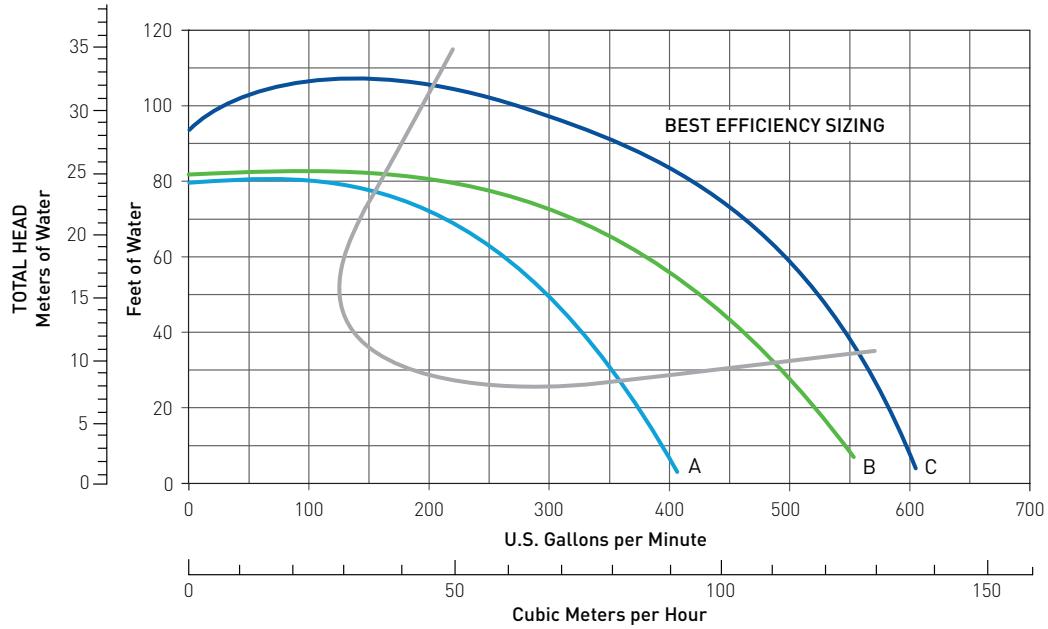


# EQ SERIES®

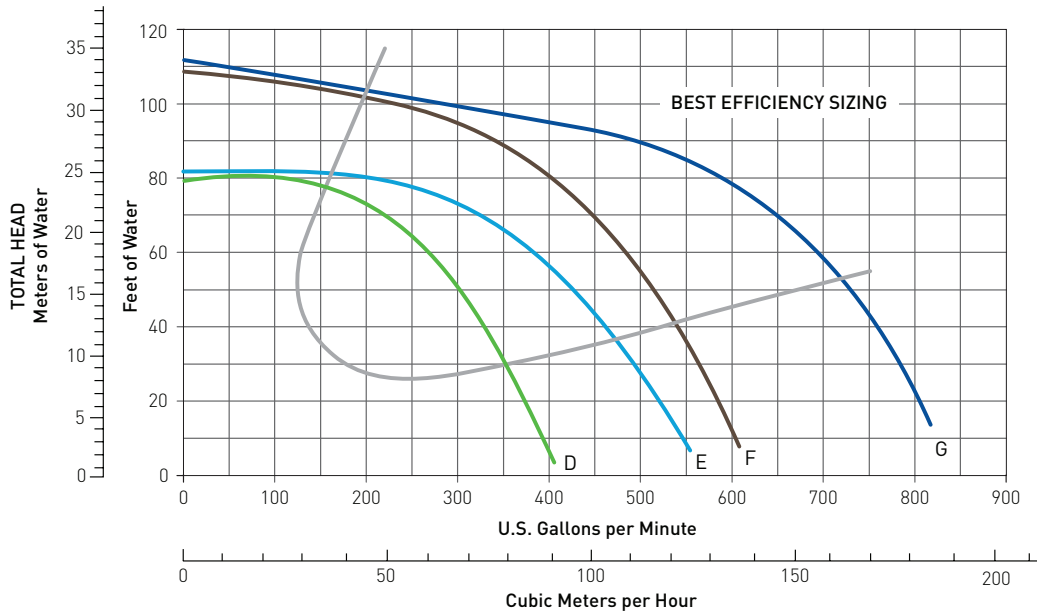
## COMMERCIAL PLASTIC PUMP W/ AND W/O HAIR AND LINT STRAINER (CONT'D)

### Dimensions and Performance

Single Phase Pumps - EQ Models



Three Phase Pumps - EQK Models

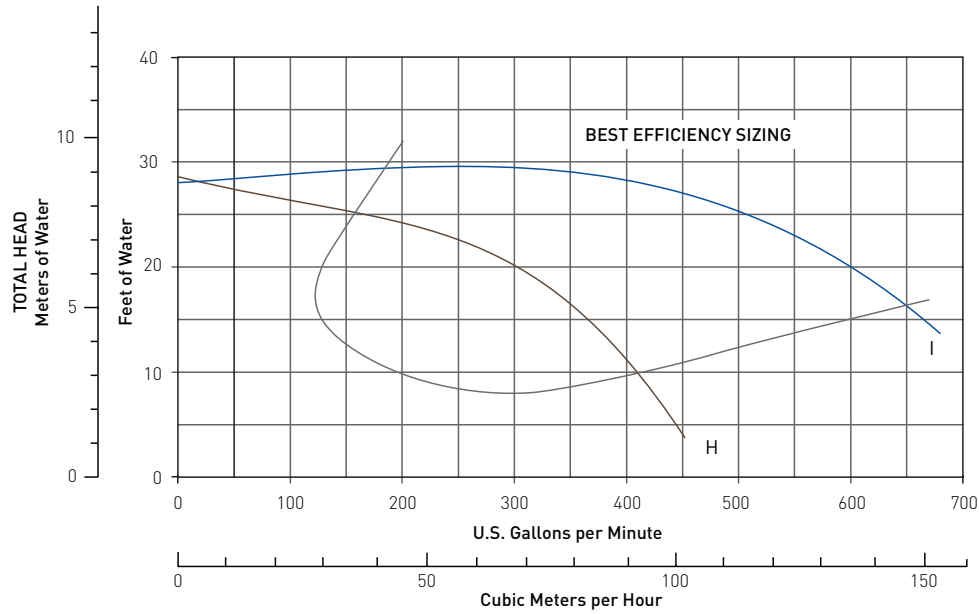


# EQ SERIES®

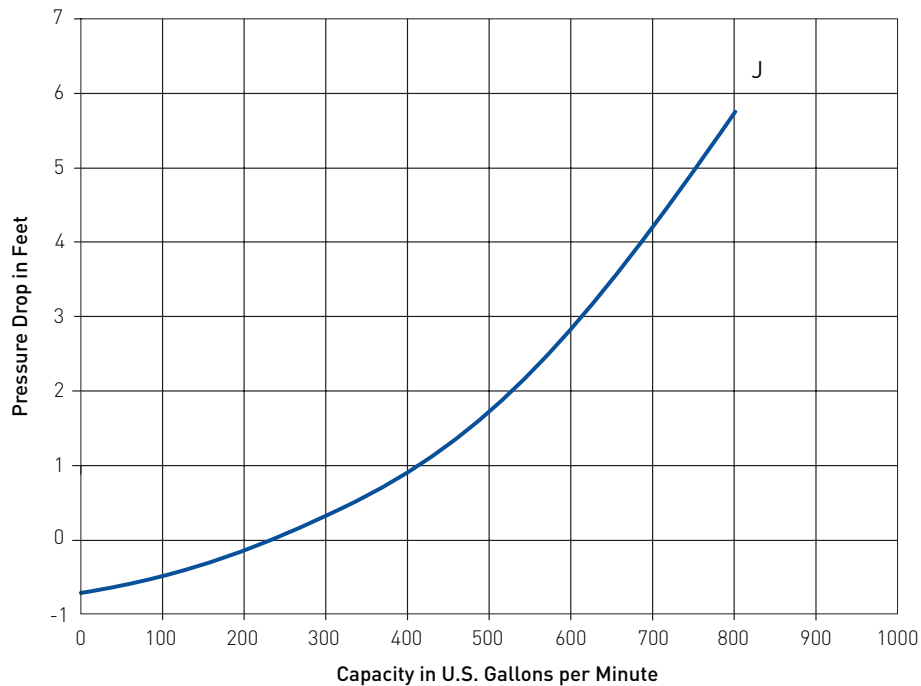
## COMMERCIAL PLASTIC PUMP W/ AND W/O HAIR AND LINT STRAINER (CONT'D)

### Dimensions and Performance

WaterFall Pumps - EQW & EQWK Models



EQ Strainer Only



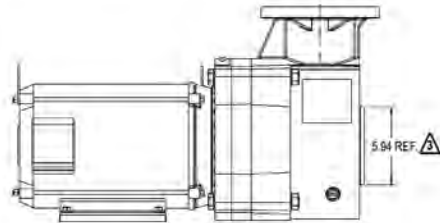
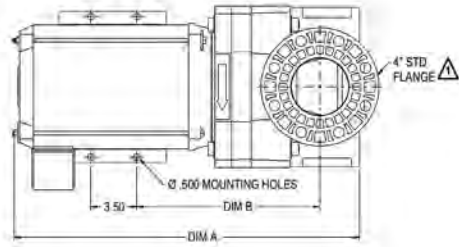
For detailed efficiency curves go to [www.pentair.com](http://www.pentair.com)

# EQ SERIES®

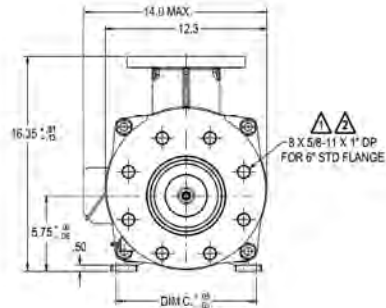
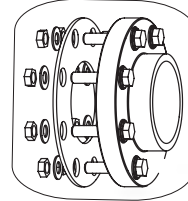
## COMMERCIAL PLASTIC PUMP W/ AND W/O HAIR AND LINT STRAINER (CONT'D)

### Dimensions and Performance

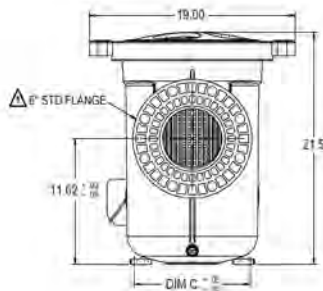
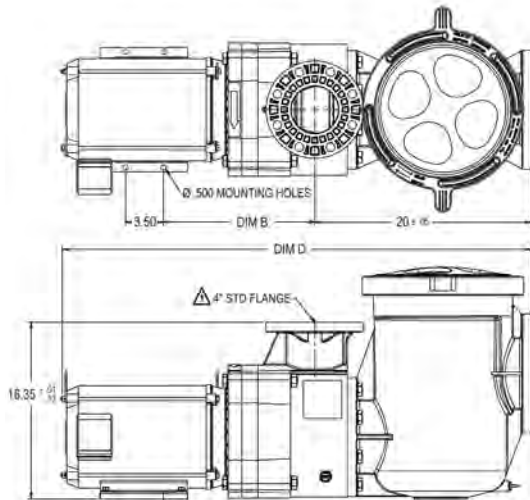
EQ Series Commercial Pump without Strainer



EQ Series Pump Flange Assembly Kit



EQ Series Commercial Pump with Strainer



Product No W/O Pot	Product No. W/ Pot	Dim A*	Dim B*	Dim C*	Dim D*
340014	340026	26.62	13.32	9.69	43.59
340017	340028	26.62	14.21	9.69	43.59
340019	340030	26.62	13.32	9.69	43.59
340021	340032	27.53	14.21	10.69	44.59
340237	340238	26.94	14.03	10.69	43.92
340016	340027	23.12	13.32	9.69	40.09
340018	340029	23.12	13.32	9.69	40.09
340020	340031	23.12	13.32	9.69	40.09
340022	340033	24.50	13.32	9.69	41.56
340023	340034	26.31	14.38	10.69	43.29
340024	340035	26.31	14.38	10.69	43.29
340148	340155	24.62	13.32	7.50	41.59
340149	340156	24.62	13.32	7.50	41.59
340150	340157	26.31	14.07	8.50	43.29
340151	340159	26.31	14.07	8.50	43.29
340608	340604	24.52	13.48	9.69	41.50
340609	340605	26.52	14.19	10.69	43.50
340610	340606	28.02	14.19	10.69	45.00
340611	340607	28.02	14.19	10.69	45.00
340086	340082	24.62	13.48	9.69	41.59
340085	340081	24.62	13.48	9.69	41.59
340084	340080	28.31	14.19	10.69	45.29
340083	340049	28.31	14.19	10.69	45.29
340048	340046	28.31	14.19	10.69	45.29
340047	340045	28.31	14.19	10.69	45.29

\* This value may vary slightly depending upon manufacturer and motor design.

- ▲ FASTENERS AND O-RING ARE INCLUDED WITH PENTAIR POOL PRODUCTS EQ 6X6 STRAINER TO CONNECT STRAINER DIRECTLY TO EQ SERIES PUMP. IF PUMP IS TO BE INSTALLED WITHOUT STRAINER MAKE BOTH CONNECTIONS PER NOTE 1.
- ▲ USE ANSI CLASS 150 PLASTIC FLANGE AND 1/8 in. THICK CLASS 150 FULL FLANGE GASKET TO MAKE CONNECTION.
- ▲ THIS DIAMETER FITS INSIDE 6 in. SCH 40 PIPE. DO NOT USE SCH 80 PIPE AS FINAL PIPE SIZE WHEN MAKING THIS FLANGE CONNECTION.



# C SERIES® COMMERCIAL BRONZE PUMPS

## Featured Highlights

- Large commercial pump with s/s basket
- Easy serviceability
- All-bronze construction for strength and durability
- 6 in. suction and 4 in. discharge for maximum capabilities
- Heavy-gauge stainless steel strainer basket with an open area 5 times the area of the suction port
- Closed impeller for longer motor bearing life
- Heat-resistant seal capable of operation at up to 150°
- Available in single and three-phase, 50 and 60-Hertz models



C Series Commercial Bronze Pump

Bronze volute and pot, coated cast iron foot, flanged connections, 6 in. suction, 4 in. discharge.

CALIFORNIA PROPOSITION 65 WARNING  
 ⚠️ **WARNING:** Cancer and Reproductive Harm.  
 ⚠️ **AVERTISSEMENT:** Peut Causer le Cancer et des Dommages au Système Reproducteur.  
 ⚠️ **ADVERTENCIA:** Cáncer y Daño Reproductivo.  
[www.p65warnings.ca.gov](http://www.p65warnings.ca.gov)      P650073A

## Ordering Information

Product	Description	Voltage	Amps	HP	SF	SFHP	Primary Listings and Certifications <sup>2</sup>	Motor Class	Port Size (ANSI Flange)	Carton Wt. (Lbs.)	Curve Key
<b>NEMA RATED STANDARD EFFICIENCY SINGLE PHASE 230V</b>											
011651	CM-50	230	24.0	5	1.15	5.75	NSF <sup>1</sup>	B	6 in. x 4 in.	352	F
011656	CH-50	230	24.0	5	1.15	5.75	NSF <sup>1</sup>	B	6 in. x 4 in.	352	A
347917	CM-75	230	37.0	7-1/2	1.15	8.63	NSF <sup>1</sup>	B	6 in. x 4 in.	375	G
347916	CH-75	230	37.0	7-1/2	1.15	8.63	NSF <sup>1</sup>	B	6 in. x 4 in.	375	B
347964	CM-100	230	51.0	10	1.15	11.50	NSF <sup>1</sup>	B	6 in. x 4 in.	370	H
347963	CH-100	230	51.0	10	1.15	11.50	NSF <sup>1</sup>	B	6 in. x 4 in.	370	C
<b>NEMA RATED STANDARD EFFICIENCY SINGLE PHASE 200 - 208V</b>											
347938	CM-50	200-208	29.0	5	1.15	5.75	NSF <sup>1</sup>	B	6 in. x 4 in.	322	F
347939	CH-50	200-208	29.0	5	1.15	5.75	NSF <sup>1</sup>	B	6 in. x 4 in.	322	A
348001	CM-75	200-208	42.6	7-1/2	1.15	8.63	NSF <sup>1</sup>	B	6 in. x 4 in.	375	G
348005	CH-75	200-208	42.6	7-1/2	1.15	8.63	NSF <sup>1</sup>	B	6 in. x 4 in.	375	B
<b>NEMA RATED STANDARD EFFICIENCY THREE PHASE 200 - 208V</b>											
347940	CMK-50	200-208	16.1	5	1.15	5.75	NSF <sup>1</sup>	B	6 in. x 4 in.	346	F
347941	CHK-50	200-208	16.1	5	1.15	5.75	NSF <sup>1</sup>	B	6 in. x 4 in.	350	A
347942	CMK-75	200-208	22.3	7-1/2	1.15	8.63	NSF <sup>1</sup>	B	6 in. x 4 in.	346	G
347943	CHK-75	200-208	22.3	7-1/2	1.15	8.63	NSF <sup>1</sup>	B	6 in. x 4 in.	346	B
347944	CMK-100	200-208	28.7	10	1.15	11.50	NSF <sup>1</sup>	B	6 in. x 4 in.	370	H
347945	CHK-100	200-208	28.7	10	1.15	11.50	NSF <sup>1</sup>	B	6 in. x 4 in.	356	C
347946	CMK-150	200-208	43.5	15	1.15	17.25	NSF <sup>1</sup>	B	6 in. x 4 in.	369	I
347947	CHK-150	200-208	43.5	15	1.15	17.25	NSF <sup>1</sup>	B	6 in. x 4 in.	350	D
347948	CHK-200	200-208	54.0	20	1.15	23.00	NSF <sup>1</sup>	F	6 in. x 4 in.	406	E
<b>NEMA RATED STANDARD EFFICIENCY THREE PHASE 220/440V</b>											
011652	CMK-50	220/440	13.0/6.5	5	1.15	5.75	NSF <sup>1</sup>	F	6 in. x 4 in.	336	F
011657	CHK-50	220/440	13.0/6.5	5	1.15	5.75	NSF <sup>1</sup>	F	6 in. x 4 in.	336	A
011653	CMK-75	220/440	18.4/9.2	7-1/2	1.15	8.63	NSF <sup>1</sup>	F	6 in. x 4 in.	346	G
011658	CHK-75	220/440	18.4/9.2	7-1/2	1.15	8.63	NSF <sup>1</sup>	F	6 in. x 4 in.	349	B
011654	CMK-100	220/440	25.3/12.6	10	1.15	11.50	NSF <sup>1</sup>	B	6 in. x 4 in.	374	H
011659	CHK-100	220/440	25.3/12.6	10	1.15	11.50	NSF <sup>1</sup>	B	6 in. x 4 in.	376	C
011655	CMK-150	220/440	37.5/18.8	15	1.15	17.25	NSF <sup>1</sup>	B	6 in. x 4 in.	396	I
011660	CHK-150	220/440	37.5/18.8	15	1.15	17.25	NSF <sup>1</sup>	B	6 in. x 4 in.	398	D
011661	CHK-200	220/440	49.0/24.6	20	1.15	23.00	NSF <sup>1</sup>	F	6 in. x 4 in.	403	E

# C SERIES®

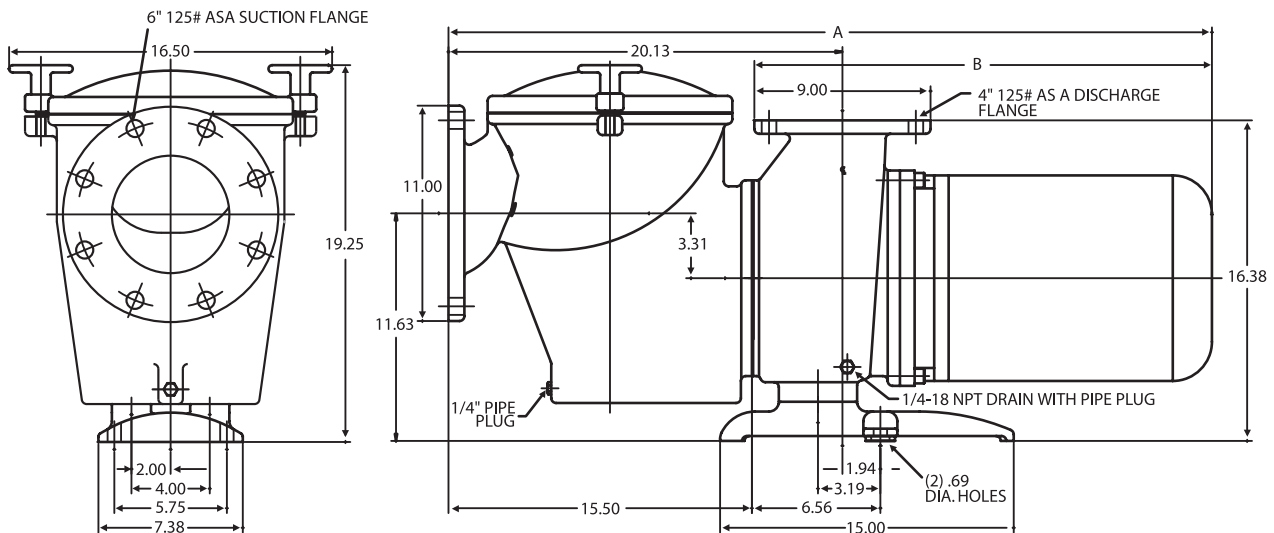
## COMMERCIAL BRONZE PUMPS (CONT'D) WITH HAIR AND LINT STRAINER

Product	Description	Voltage	Amps	HP	SF	SFHP	Primary Listings and Certifications <sup>2</sup>	Motor Class	Port Size (ANSI Flange)	Carton Wt. (Lbs.)	Curve Key
<b>NEMA RATED STANDARD EFFICIENCY THREE PHASE 575V</b>											
347931	CMK-50	575	5.6	5	1.15	5.75	NSF <sup>1</sup>	F	6 in. x 4 in.	336	F
347967	CHK-50	575	5.6	5	1.15	5.75	NSF <sup>1</sup>	F	6 in. x 4 in.	336	A
347936	CMK-75	575	7.7	7-1/2	1.15	8.63	NSF <sup>1</sup>	F	6 in. x 4 in.	349	G
347937	CHK-75	575	7.7	7-1/2	1.15	8.63	NSF <sup>1</sup>	F	6 in. x 4 in.	349	B
347932	CMK-100	575	10.0	10	1.15	11.50	NSF <sup>1</sup>	F	6 in. x 4 in.	374	H
347968	CHK-100	575	10.0	10	1.15	11.50	NSF <sup>1</sup>	F	6 in. x 4 in.	374	C
347934	CMK-150	575	15.2	15	1.15	17.25	NSF <sup>1</sup>	B	6 in. x 4 in.	398	I
347933	CHK-150	575	15.2	15	1.15	17.25	NSF <sup>1</sup>	B	6 in. x 4 in.	398	D
347935	CHK-200	575	19.5	20	1.15	23.00	NSF <sup>1</sup>	F	6 in. x 4 in.	406	E
<b>NEMA RATED STANDARD EFFICIENCY THREE PHASE 380-415V- 50 HZ</b>											
014900	CMKL-50	380-415	7.5-6.8	5	1.15	5.75	NSF <sup>1</sup>	F	6 in. x 4 in.	336	
014880	CHKL-50	380-415	7.5-6.8	5	1.15	5.75	NSF <sup>1</sup>	F	6 in. x 4 in.	336	
014901	CMKL-75	380-415	11.0-10.0	7-1/2	1.00	7-1/2	NSF <sup>1</sup>	F	6 in. x 4 in.	346	
014881	CHKL-75	380-415	11.0-10.0	7-1/2	1.00	7-1/2	NSF <sup>1</sup>	F	6 in. x 4 in.	346	
014902	CMKL-100	380-415	14.5-14.6	10	1.15	11.50	NSF <sup>1</sup>	F	6 in. x 4 in.	376	
014882	CHKL-100	380-415	14.5-14.6	10	1.15	11.50	NSF <sup>1</sup>	F	6 in. x 4 in.	374	
014903	CMKL-150	380-415	20.5-19.0	15	1.15	17.25	NSF <sup>1</sup>	F	6 in. x 4 in.	398	
014883	CHKL-150	380-415	20.5-19.0	15	1.15	17.25	NSF <sup>1</sup>	F	6 in. x 4 in.	396	
014884	CHKL-200	380-415	28.0-26.0	20	1.15	23.00	NSF <sup>1</sup>	F	6 in. x 4 in.	403	

<sup>1</sup> "NSF" indicates that pump has been certified to NSF/ANSI 50, the Standard for Equipment for swimming pools, spas, hot tubs and other recreational water features.

<sup>2</sup> Product may have been evaluated to other state and local regulatory standards. Listing status may change. Always confirm status with appropriate agency if in doubt.

### Dimensions and Performance



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 IT DEPENDS ON MOTOR MANUFACTURER.

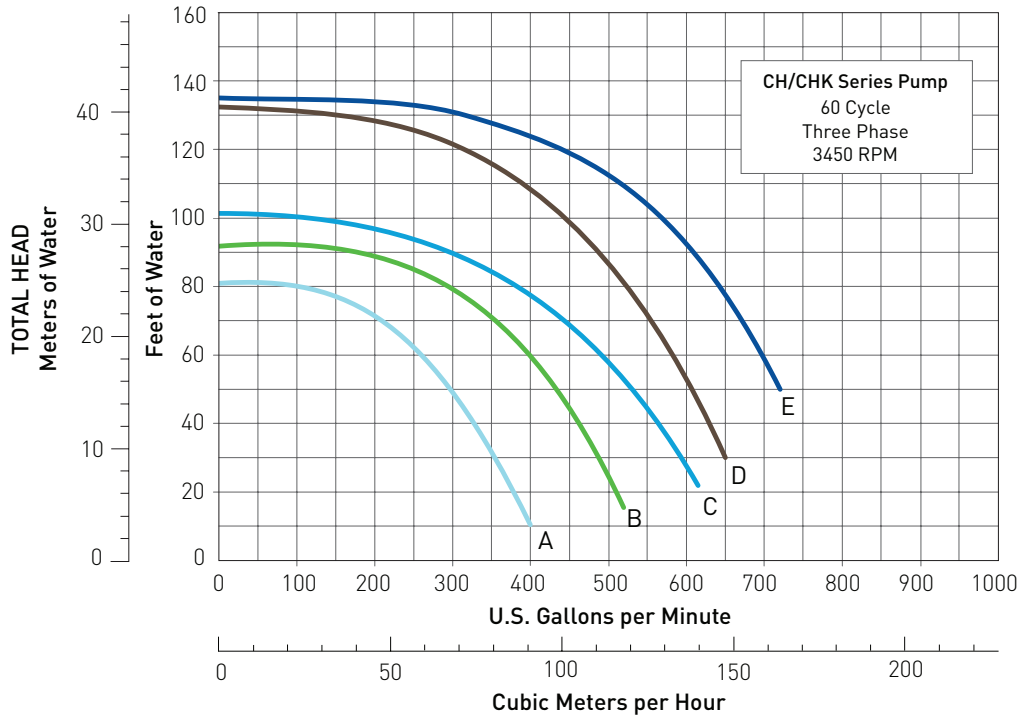
2. ALL DIMENSIONS ARE IN INCHES AND MAY VARY ± .25.

# C SERIES®

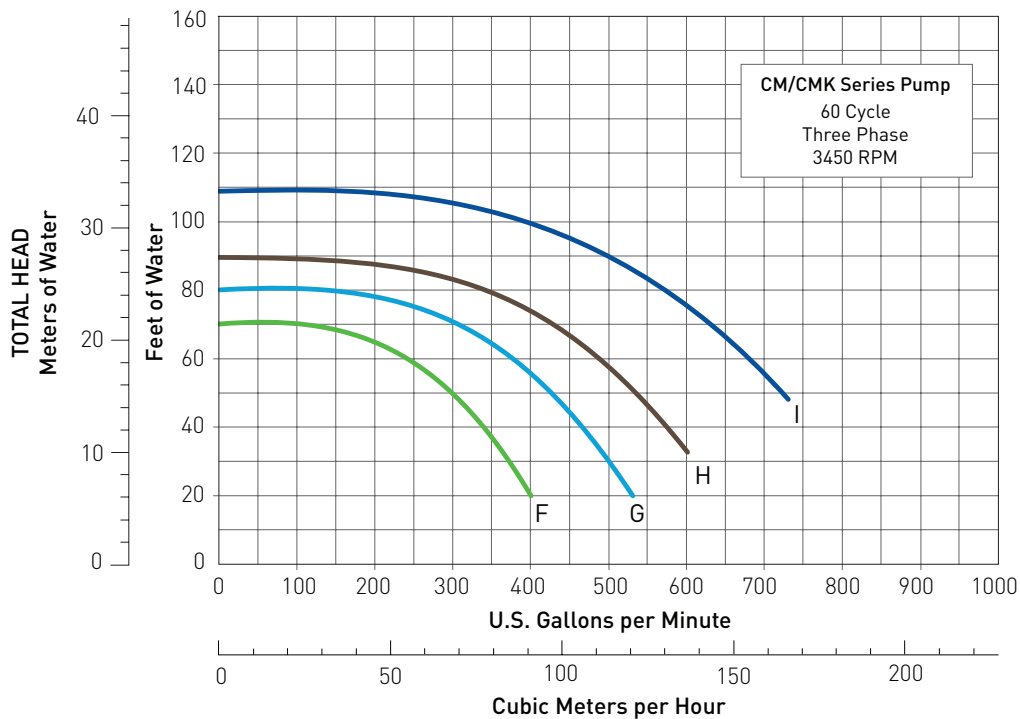
## COMMERCIAL BRONZE PUMPS (CONT'D) WITH HAIR AND LINT STRAINER

### Dimensions and Performance

CH/CHK SERIES PUMP - 60HZ



CM/CMK SERIES PUMP - 60HZ



For detailed efficiency curves go to [www.pentair.com](http://www.pentair.com)



# C SERIES®

## COMMERCIAL BRONZE PUMPS (CONT'D) WITHOUT HAIR AND LINT STRAINER



C Series Commercial Pump  
Without Hair and Lint Strainer

Bronze construction, coated cast iron foot, flanged connections. 5 in. suction, 4 in. discharge.

### Featured Highlights

- High performance motors for maximum flow
- All-bronze construction for strength and durability
- 5 in. suction and 4 in. discharge for maximum capabilities
- Closed impeller for longer motor bearing life
- Heat-resistant seal capable of operation at up to 150°
- Available in single and three-phase, 50 and 60-hertz models

#### CALIFORNIA PROPOSITION 65 WARNING

⚠ **WARNING:** Cancer and Reproductive Harm.  
 ⚠ **AVERTISSEMENT:** Peut Causer le Cancer et des Dommages au Système Reproducteur.  
 ⚠ **ADVERTENCIA:** Cáncer y Daño Reproductivo.  
[www.p65warnings.ca.gov](http://www.p65warnings.ca.gov) PK33075A

### Ordering Information

Product	Description	Voltage	Amps	HP	SF	SFHP	Primary Listings and Certifications <sup>3</sup>	Motor Class	Port Size (ANSI Flange)	Carton Wt. (Lbs.)	Curve Key
<b>NEMA RATED STANDARD EFFICIENCY SINGLE PHASE 230V</b>											
011605	CH-50	230	24.0	5	1.15	5.75	NSF <sup>2</sup>	B	5 in. x 4 in.	302	A
347966	CM-100	230	51.0	10	1.15	11.50	NSF <sup>2</sup>	B	5 in. x 4 in.	326	H
347965	CH-100	230	51.0	10	1.15	11.50	NSF <sup>2</sup>	B	5 in. x 4 in.	326	C
<b>NEMA RATED STANDARD EFFICIENCY SINGLE PHASE 200–208V</b>											
347949	CM-50	200–208	29.0	5	1.15	5.75	NSF <sup>2</sup>	B	5 in. x 4 in.	302	F
347950	CH-50	200–208	29.0	5	1.15	5.75	NSF <sup>2</sup>	B	5 in. x 4 in.	302	A
347961	CM-75	200–208	42.6	7-1/2	1.15	8.63	NSF <sup>2</sup>	B	5 in. x 4 in.	315	G
347960	CH-75	200–208	42.6	7-1/2	1.15	8.63	NSF <sup>2</sup>	B	5 in. x 4 in.	315	B
<b>NEMA RATED STANDARD EFFICIENCY THREE PHASE 200–208V</b>											
347951	CMK-50	200–208	16.1	5	1.15	5.75	NSF <sup>2</sup>	B	5 in. x 4 in.	296	F
347952	CHK-50	200–208	16.1	5	1.15	5.75	NSF <sup>2</sup>	B	5 in. x 4 in.	300	A
347953	CMK-75	200–208	22.3	7-1/2	1.15	8.63	NSF <sup>2</sup>	B	5 in. x 4 in.	296	G
347954	CHK-75	200–208	22.3	7-1/2	1.15	8.63	NSF <sup>2</sup>	B	5 in. x 4 in.	296	B
347955	CMK-100	200–208	28.7	10	1.15	11.50	NSF <sup>2</sup>	B	5 in. x 4 in.	320	H
347956	CHK-100	200–208	28.7	10	1.15	11.50	NSF <sup>2</sup>	B	5 in. x 4 in.	306	C
347957	CMK-150	200–208	43.5	15	1.15	17.25	NSF <sup>2</sup>	B	5 in. x 4 in.	319	I
347958	CHK-150	200–208	43.5	15	1.15	17.25	NSF <sup>2</sup>	B	5 in. x 4 in.	300	D
347959	CHK-200	200–208	54.0	20	1.15	23.00	NSF <sup>2</sup>	F	5 in. x 4 in.	356	E

# C SERIES®

## COMMERCIAL BRONZE PUMPS WITHOUT HAIR AND LINT STRAINER

### Ordering Information

Product	Description	Voltage	Amps	HP	SF	SFHP	Primary Listings and Certifications <sup>3</sup>	Motor Class	Port Size (ANSI Flange)	Carton Wt. (Lbs.)	Curve Key
<b>NEMA RATED STANDARD EFFICIENCY THREE PHASE 220/440V</b>											
011601	CMK-50	220/440	13.0/6.5	5	1.15	5.75	NSF <sup>2</sup>	F	5 in. x 4 in.	286	F
011606	CHK-50	220/440	13.0/6.5	5	1.15	5.75	NSF <sup>2</sup>	F	5 in. x 4 in.	286	A
011602	CMK-75	220/440	18.4/9.2	7-1/2	1.15	8.63	NSF <sup>2</sup>	F	5 in. x 4 in.	296	G
011607	CHK-75	220/440	18.4/9.2	7-1/2	1.15	8.63	NSF <sup>2</sup>	F	5 in. x 4 in.	296	B
011603	CMK-100	220/440	25.3/12.6	10	1.15	11.50	NSF <sup>2</sup>	B	5 in. x 4 in.	326	H
011608	CHK-100	220/440	25.3/12.6	10	1.15	11.50	NSF <sup>2</sup>	B	5 in. x 4 in.	324	C
011604	CMK-150	220/440	37.5/18.8	15	1.15	17.25	NSF <sup>2</sup>	B	5 in. x 4 in.	348	I
011609	CHK-150	220/440	37.5/18.8	15	1.15	17.25	NSF <sup>2</sup>	B	5 in. x 4 in.	346	D
011610	CHK-200	220/440	49.0/24.6	20	1.15	23.00	NSF <sup>2</sup>	F	5 in. x 4 in.	353	E
<b>C SERIES &amp; AURORA PUMP ACCESSORIES FLANGE ASSEMBLY KITS</b>											
357260	Flange 5 in. w/ gasket and SS hardware <sup>1</sup>									22	
357262	Flange 4 in. w/ gasket and SS hardware <sup>1</sup>									20	
357263	Flange 6 in. w/ gasket and SS hardware <sup>1</sup>									23	

<sup>1</sup> Thermoplastic PVC socket style

<sup>2</sup> 'NSF(1)' indicates that pump bears a mark signifying evaluation to NSF Standard 50 For Non Self-Priming Centrifugal Pumps For Swimming Pools, Spas and Hot Tubs.

<sup>3</sup> Product may have been evaluated to other state and local regulatory standards. Listing status may change. Always confirm status with appropriate agency if in doubt.

### Dimensions and Performance

See C Series with Hair and Lint Strainer for Dimension and Performance Information.

# CSP/CCSP SERIES™

## COMMERCIAL SELF-PRIMING PUMP



CSP/CCSP Series Commercial Self-Priming Pump with PKG 184 Strainer. **Strainer must be ordered separately.**

### Ordering Information

### Featured Highlights

Especially designed for commercial and public swimming pools and spas, aquatic facilities, water parks and fountain applications where high performance and self-priming are required. Pump has enclosed bronze impeller and standard 6 in. x 4 in. A.N.S.I. rated flange connections. The pump strainer (order separately) has capacity of 1,100 cubic inches. Both pump and strainer can be ordered with optional epoxy coated castings to provide additional performance and corrosion resistance.

#### CALIFORNIA PROPOSITION 65 WARNING

⚠ **WARNING:** Cancer and Reproductive Harm.  
 ⚠ **AVERTISSEMENT:** Peut Causer le Cancer et des Dommages au Système Reproducteur.  
 ⚠ **ADVERTENCIA:** Cáncer y Daño Reproductivo.  
[www.p65warnings.ca.gov](http://www.p65warnings.ca.gov)

Product	Voltage	Amps <sup>1</sup>	HP	SF	SFHP	Primary Listings and Certifications <sup>4</sup>	Port Size (ANSI Flange)	Carton Wt. (Lbs.)	Curve Key
<b>NEMA RATED STANDARD EFFICIENCY SINGLE PHASE CAST IRON</b>									
CSPHK-142	230	39	7.5	1.15	8.63	NSF <sup>2</sup>	6 in. x 4 in.	270	A
CSPHL-143	230	46	10	1.15	11.50	NSF <sup>2</sup>	6 in. x 4 in.	275	B
<b>NEMA RATED STANDARD EFFICIENCY SINGLE PHASE EPOXY COATED CAST IRON</b>									
CCSPHK-142	230	39	7.5	1.15	8.63	NSF <sup>2</sup>	6 in. x 4 in.	270	E
CCSPHL-143	230	46	10	1.15	11.50	NSF <sup>2</sup>	6 in. x 4 in.	275	F
<b>NEMA RATED STANDARD EFFICIENCY THREE PHASE CAST IRON</b>									
CSPHK3-142	230/460	21.2-19.2/9.6	7-1/2	1.25	9.38	NSF <sup>2</sup>	6 in. x 4 in.	265	A
CSPHL3-143	230/460	27.6-24.4/12.2	10	1.25	12.50	NSF <sup>2</sup>	6 in. x 4 in.	270	B
CSPHM3-144	230/460	44.2-40/20	15	1.25	18.75	NSF <sup>2</sup>	6 in. x 4 in.	280	C
CSPHN3-145	230/460	55.3-50/25	20	1.25	25.00	NSF <sup>2</sup>	6 in. x 4 in.	325	D
<b>NEMA RATED STANDARD EFFICIENCY THREE PHASE CAST IRON - 200V <sup>6</sup></b>									
CSPH2K3-142	200	22.1	7-1/2	1.15	8.63	NSF <sup>2</sup>	6 in. x 4 in.	265	A
CSPH2L3-143	200	28.1	10	1.25	12.50	NSF <sup>2</sup>	6 in. x 4 in.	270	B
CSPH2M3-144	200	42.3	15	1.25	18.75	NSF <sup>2</sup>	6 in. x 4 in.	280	C
CSPH2N3-145	200	57.3	20	1.25	25.00	NSF <sup>2</sup>	6 in. x 4 in.	350	D
<b>NEMA RATED STANDARD EFFICIENCY THREE PHASE EPOXY COATED CAST IRON</b>									
CCSPHK3-142	230/460	21.2-19.2/9.6	7-1/2	1.25	9.38	NSF <sup>2</sup>	6 in. x 4 in.	265	E
CCSPHL3-143	230/460	27.6-24.4/12.2	10	1.25	12.50	NSF <sup>2</sup>	6 in. x 4 in.	270	F
CCSPHM3-144	230/460	44.2-40/20	15	1.25	18.75	NSF <sup>2</sup>	6 in. x 4 in.	280	G
CCSPHN3-145	230/460	55.3-50/25	20	1.25	25.00	NSF <sup>2</sup>	6 in. x 4 in.	325	H
<b>NEMA RATED STANDARD EFFICIENCY THREE PHASE EPOXY COATED CAST IRON - 200 V <sup>6</sup></b>									
CCSPH2K3-142	200	22.1	7-1/2	1.15	8.63	NSF <sup>2</sup>	6 in. x 4 in.	265	E
CCSPH2L3-143	200	28.1	10	1.25	12.50	NSF <sup>2</sup>	6 in. x 4 in.	270	F
CCSPH2M3-144	200	42.3	15	1.25	18.75	NSF <sup>2</sup>	6 in. x 4 in.	280	G
CCSPH2N3-145	200	57.3	20	1.25	25.00	NSF <sup>2</sup>	6 in. x 4 in.	350	H
<b>ACCESSORIES FOR CSP/CCSP SERIES</b>									
PKG 184	Strainer for CSP/CCSP 6 in. ANSI flange (1,100 cu. in. capacity)					NSF <sup>3</sup>	6 in. x 6 in.	180	I
PKG 184C	Same as PKG 184 Except Strainer is Epoxy Coated					NSF <sup>3</sup>	6 in. x 6 in.	180	I
357262	Flange 4 in. w/ gasket and SS hardware <sup>5</sup>							20	
357263	Flange 6 in. w/ gasket and SS hardware <sup>5</sup>							23	

<sup>1</sup> Amp draw may vary depending on motor manufacturer.

<sup>2</sup> 'NSF(1)' indicates that pump bears a mark signifying evaluation to NSF Standard 50 For Self-Priming Centrifugal Pumps For Swimming Pools And Spas.

<sup>3</sup> 'NSF(2)' indicates that product bears a mark signifying evaluation to NSF Standard 50 For Materials and Components.

<sup>4</sup> Product may have been evaluated to other state and local regulatory standards. Listing status may change. Always confirm status with appropriate agency if in doubt.

<sup>5</sup> Thermoplastic PVC socket style.

<sup>6</sup> For 208 volt applications, use 200v model options.

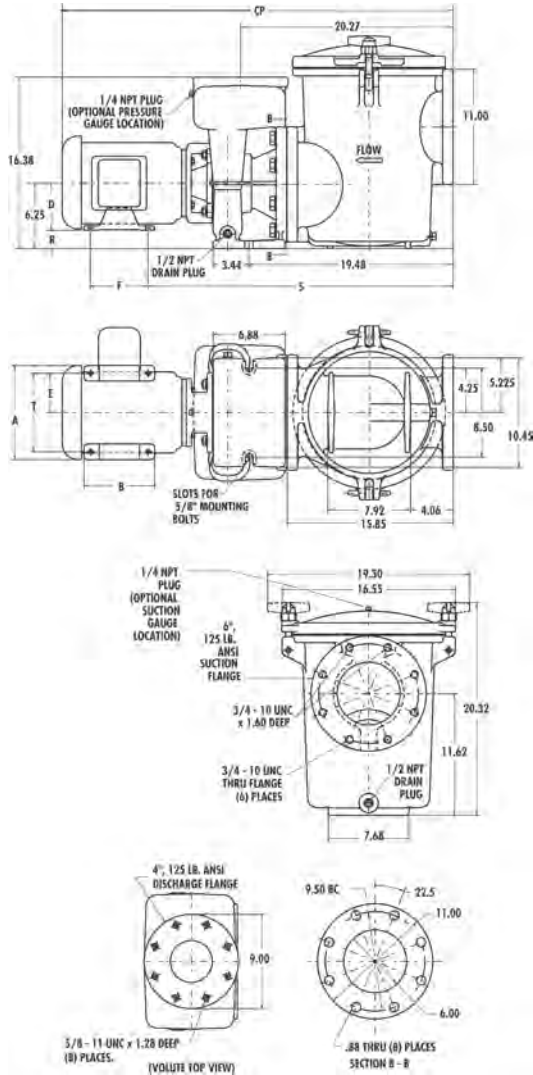
# CSP/CCSP SERIES™

## COMMERCIAL SELF-PRIMING PUMP (CONT'D)

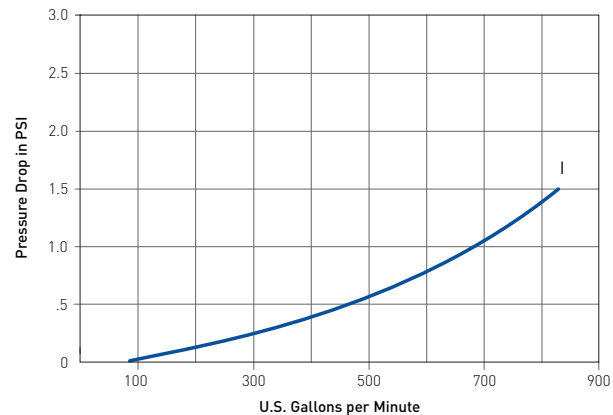
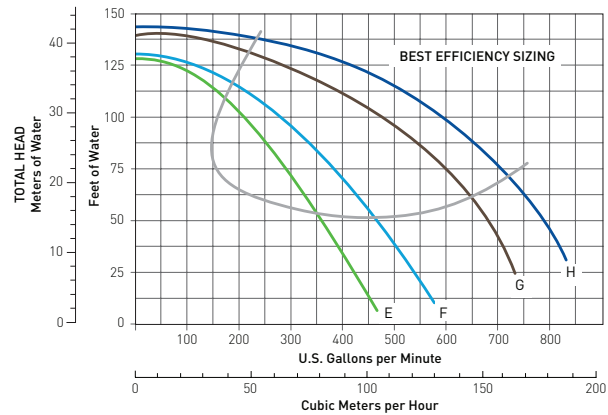
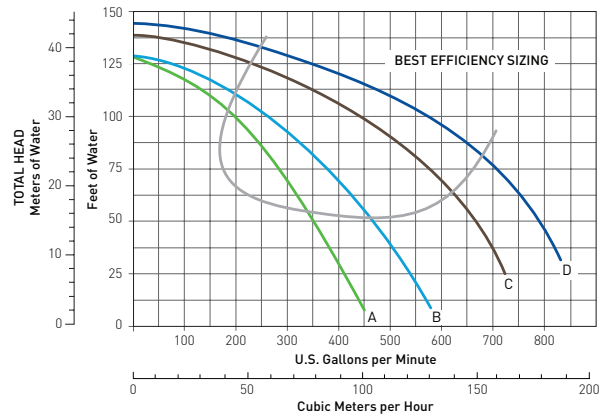
### Featured Highlights

Options: CCSP Models feature special epoxy coated castings for maximum performance and corrosion resistance. 60 Hz T.E.F.C., 60 Hz premium efficiency, or 575 volt motors available. Inverter duty Class F Rated motors available for most models. Contact factory for details.

Note: Maximum ambient temperature for motor is 104°F (40°C). All pump motors require external overload protection (magnetic starter). Pump strainer must be ordered separately. Full load amps on motor model plate.



### Dimensions and Performance



Catalog Number	A	B	CP	D	E	F	R	S	T
CSPHK, CCSPHK	10.62	7.00	39.44	5.25	4.25	5.50	1.00	30.00	8.50
CSPHK3, CCSPHK3, CSPH2K3	9.00	6.75	40.31	4.50	3.75	5.50	1.75	29.13	7.50
CSPHL, CCSPHL	10.35	8.26	42.69	5.25	4.25	7.00	1.00	30.00	8.50
CSPHL3, CCSPHL3	10.62	7.00	41.00	5.25	4.25	5.50	1.00	30.00	8.50
CSPHM3, CCSPHM3	10.62	8.50	42.50	5.25	4.25	7.00	1.00	30.00	8.50
CSPH2L3, CSPH2M3	10.62	8.50	42.50	5.25	4.25	7.00	1.00	30.00	8.50
CSPHN3, CCSPHN3	12.50	10.80	46.75	6.25	5.00	8.20	0.00	31.62	10.00
CSPH2N3, CCSPH2N3	13.38	12.44	48.50	6.25	5.00	10.00	0.00	31.65	10.00

All dimensions shown in inches.



# 5CSP/5CCSP SERIES™

## 50 HERTZ COMMERCIAL SELF-PRIMING PUMP



5CSP/5CCSP Series  
Commercial Self-Priming Pump with PKG 184 Strainer.  
**Strainer must be ordered separately.**

### Featured Highlights

Especially designed for commercial and public swimming pools and spas, aquatic facilities, water parks and fountain applications where high performance and self-priming are required. Pump has enclosed bronze impeller and standard 6 in. x 4 in. A.N.S.I. flange connections. The pump strainer (order separately) has capacity of 1,100 cubic inches. Both pump and strainer can be ordered with optional epoxy coated castings to provide additional performance and corrosion resistance.

**Note: 50 hertz pumps cannot be used in North America.**

### Ordering Information

Product	Voltage	Amps <sup>1</sup>	HP	SF	SFHP	Primary Listings and Certifications <sup>3</sup>	Port Size (ANSI Flange)	Carton Wt. (Lbs.)	Curve Key
<b>SINGLE PHASE CAST IRON WITHOUT STRAINER- 50 HZ</b>									
5CSPHJ-142	220-240	35.5-32.5	5	1.00	5		6 in. x 4 in.	270	A
5CSPHK-143	220-240	43.0-39.4	7-1/2	1.00	7-1/2		6 in. x 4 in.	280	B
<b>THREE PHASE CAST IRON WITHOUT STRAINER- 50 HZ</b>									
5CSPHJ3-142	220-240/380-415	13.0/6.9	5	1.00	5		6 in. x 4 in.	260	A
5CSPHK3-143	220-240/380-415	20.7-21.5/12.0/12.4	7-1/2	1.00	7-1/2		6 in. x 4 in.	270	B
5CSPHL3-144	220-240/380-415	27.0-27.5/15.6-15.9	10	1.00	10		6 in. x 4 in.	280	C
5CSPHM3-145	220-240/380-415	38.9-20.6	15	1.00	15		6 in. x 4 in.	300	D
<b>THREE PHASE EPOXY COATED CAST IRON WITHOUT STRAINER - 50 HZ</b>									
5CCSPHJ3-142	220-240/380-415	13.0/6.9	5	1.00	5		6 in. x 4 in.	260	A
5CCSPHK3-143	220-240/380-415	20.7-11.0	7-1/2	1.00	7-1/2		6 in. x 4 in.	270	B
5CCSPHL3-144	220-240/380-415	26.9-14.3	10	1.00	10		6 in. x 4 in.	280	C
5CCSPHM3-145	220-240/380-415	38.9-20.6	15	1.00	15		6 in. x 4 in.	300	D
<b>ACCESSORIES FOR 5CSP/5CCSP SERIES</b>									
PKG 184	Strainer for CSP/CCSP 6 in. ANSI flange (1,100 cu. in. capacity)					NSF <sup>4</sup>	6 in. x 6 in.	180	I
PKG 184C	Same as PKG 184 Except Strainer is Epoxy Coated					NSF <sup>4</sup>	6 in. x 6 in.	180	I
357262	Flange 4 in. w/ gasket and SS hardware <sup>2</sup>							20	
357263	Flange 6 in. w/ gasket and SS hardware <sup>2</sup>							23	

<sup>1</sup> Amp draw may vary depending on motor manufacturer. Full load amps on motor model plate.

<sup>2</sup> Thermoplastic PVC socket style.

<sup>3</sup> Product may have been evaluated to other state and local regulatory standards. Listing status may change. Always confirm status with appropriate agency if in doubt.

<sup>4</sup> 'NSF(2)' indicates that product bears a mark signifying evaluation to NSF Standard 50 For Materials and Components.

See pages 151 and 152 for Hair and Lint Strainer Packages.

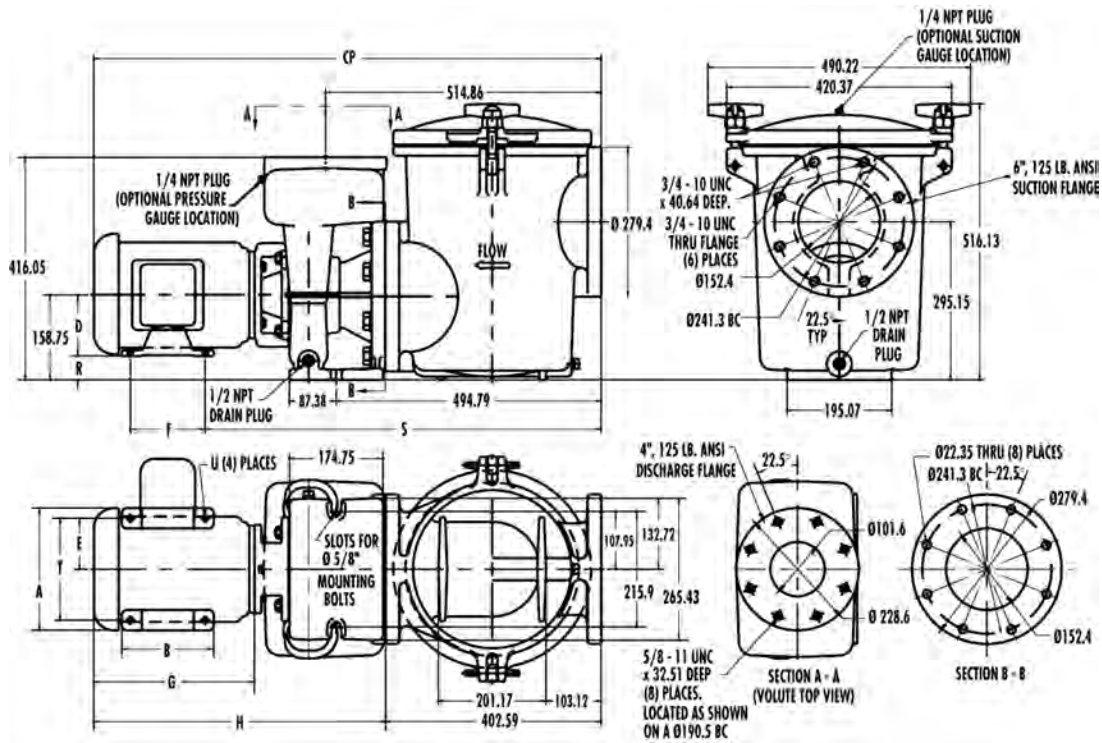
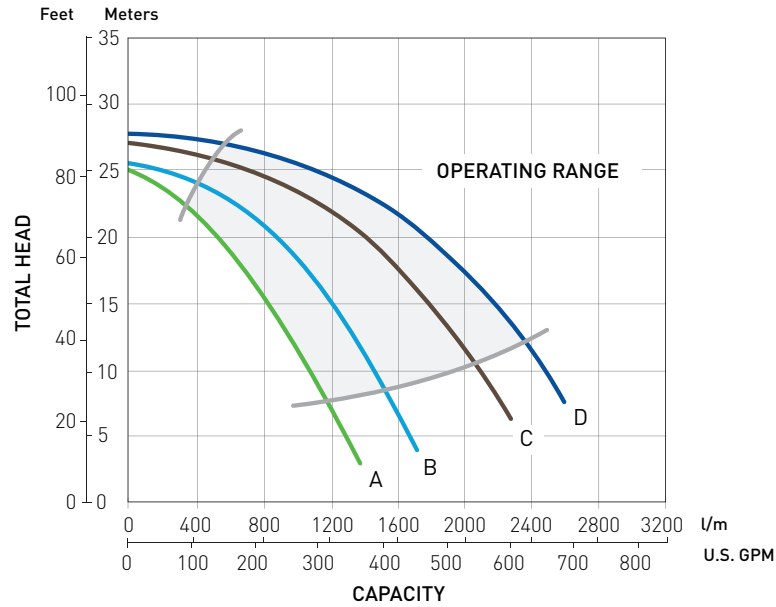
**CALIFORNIA PROPOSITION 65 WARNING**

⚠ **WARNING:** Cancer and Reproductive Harm.  
 ⚠ **AVERTISSEMENT:** Peut Causer le Cancer et des Dommages au Système Reproducteur.  
 ⚠ **ADVERTENCIA:** Cáncer y Daño Reproductivo.  
[www.p65warnings.ca.gov](http://www.p65warnings.ca.gov) PK202114

# 5CSP/5CCSP SERIES™

## 50 HERTZ COMMERCIAL SELF-PRIMING PUMP (CONT'D)

### Dimensions and Performance



Catalog Number	A	B	CP	D	E	F	R	S	T
5CSPHJ	269.75	177.8	1039.62	133.25	107.95	139.7	25.4	733.3	215.9
5CSPHK	269.75	215.9	1075.69	133.25	107.95	177.8	25.4	733.3	215.9
5CSPHJ3	228.6	171.45	988.82	133.25	95.25	139.7	44.45	734.06	190.5
5CSPHK3	269.75	177.8	1039.62	133.25	107.95	139.7	25.4	733.3	215.9
5CSPHL3	269.75	215.9	1075.69	133.25	107.95	177.8	25.4	733.3	215.9
5CSPHM3	317.5	274.32	1185.67	158.75	127.0	209.55	—	793.75	254.0

All dimensions shown in millimeters.

# AURORA® 3800 SERIES AND 410 SERIES

## END SUCTION AND SPLIT CASE PUMPS



Aurora 3801

CALIFORNIA PROPOSITION 65 WARNING  
 ⚠️ **WARNING:** Cancer and Reproductive Harm.  
 ⚠️ **AVERTISSEMENT:** Peut Causer le Cancer et des Dommages au Système Reproducteur.  
 ⚠️ **ADVERTENCIA:** Cáncer y Daño Reproductivo.  
[www.p65warnings.ca.gov](http://www.p65warnings.ca.gov) PK380154

### Featured Highlights

- Multiple configurations available
- Models to 100 ft. TDH
- Compatible with Acu Drive™ XS VF Drive
- Cast Iron Bronze Fitted Models
- Flooded Suction applications
- Highly reliable performance
- NSF approved models available
- Various flow capabilities for all applications
- Epoxy Coating option available
- ODP and TEFC motors in Standard and Premium efficiency available
- PS Series In-line Strainers match up to most Aurora pumps.

Pentair now offers the Aurora 3800 Series End Suction and the 410 Series Split Case Pumps for commercial pools, spas, and other water applications. The 3800 and 410 Series are available in horizontal and vertical configurations in horsepower's to 150 and flows to 8,000 GPM.

### Ordering Information

Pump	Power	RPM	HP Range
3801N SERIES; CLOSED-COUPLED END SUCTION W/ EPOXY COATED CASING. TEFC/ODP MOTOR OPTIONS, 3PH, 1800 RPM			
2.5 X 3 X 9	3 PH	1800	7.5HP-10HP
3 X 4 X 9B	3 PH	1800	15HP-20HP
4 X 5 X 9A	3 PH	1800	7.5HP-10HP
4 X 5 X 9A	3 PH	1800	15HP-20HP
4 X 5 X 9B	3 PH	1800	7.5HP-10HP
4 X 5 X 9B	3 PH	1800	15HP-20HP

Pump	Power	RPM	HP Range
3801N SERIES; CLOSED-COUPLED END SUCTION W/ EPOXY COATED CASING. TEFC/ODP MOTOR OPTIONS, 3PH, 1800 RPM			
6 X 6 X 9	3 PH	1800	7.5HP-10HP
6 X 6 X 9	3 PH	1800	15HP-20HP
5 X 6 X 11	3 PH	1800	15HP-20HP
5 X 6 X 11	3 PH	1800	25HP-30HP
6 X 6 X 11	3 PH	1800	15HP-20HP
6 X 6 X 11	3 PH	1800	25HP-30HP

230/460V and 575V motors available.

Product	Description	Carton Wt. (Lbs.)
AURORA PUMP ACCESSORIES FLANGE ASSEMBLY KITS		
357259	Flange 2-1/2 in. w/ gasket and SS hardware <sup>1</sup>	16
357260	Flange 5 in. w/ gasket and SS hardware <sup>1</sup>	22
357261	Flange 3 in. w/ gasket and SS hardware <sup>1</sup>	18
357262	Flange 4 in. w/ gasket and SS hardware <sup>1</sup>	20
357263	Flange 6 in. w/ gasket and SS hardware <sup>1</sup>	23

<sup>1</sup> Thermoplastic PVC socket style.

**Please contact our factory (1-800-831-7133) for other pump models, applications sizing, pricing, and availability or email [PoolApplicationRFQ@pentair.com](mailto:PoolApplicationRFQ@pentair.com).**

# BERKELEY® B-SERIES CENTRIFUGAL COMMERCIAL PUMPS



## Featured Highlights

Where a large volume of water is needed, in flooded suction applications, Berkeley brand pumps can accommodate almost any water-moving needs. Berkeley brand pumps have been one of the top names in the water systems for decades. Once recognized for only being affiliated with irrigation and water systems, Berkeley pumps are now available in many configurations to be used in the following applications:

- Water features
- Water parks
- Aquaculture
- Commercial pools and spas

The pumps pictured above and included in the chart below show just a small sampling of the many pump sizes and designs that are available. In addition, we offer a wide range of gpm/head configurations; 1200, 1750, or 3450 rpm motors; 50 or 60 Hz; optional high-efficiency motors; voltage, horsepower, and service factor options; lead-free bronze impellers; flange or threaded connection in many sizes; and packing or mechanical shaft seal design pumps. Flooded suction required. For a complete selection guide to help you size the pump(s) that best fit your needs, call our customer service at 1-800-831-7133, or use the convenient Berkeley Electronic Catalog (BEC) located at [www.berkeleypumps.com](http://www.berkeleypumps.com); or email [PoolApplicationRFQ@pentair.com](mailto:PoolApplicationRFQ@pentair.com)

- **Berkeley Pumps are not NSF approved.**



Berkeley B-Series

CALIFORNIA PROPOSITION 65 WARNING

⚠️ **WARNING:** Cancer and Reproductive Harm.  
 ⚠️ **AVERTISSEMENT:** Peut Causer le Cancer et des Dommages au Système Reproducteur.  
 ⚠️ **ADVERTENCIA:** Cáncer y Daño Reproductivo.

[www.p65warnings.ca.gov](http://www.p65warnings.ca.gov) PH200714

## Ordering Information CALL FOR QUOTE

Product	General Pump Design Model	HP	Best Operating Performance G.P.M.	Connection at X ft. of Head	RPM	Flange (inches)
<b>BERKELEY B-SERIES PUMPS</b>						
B71943S	B3ZPMS	5 HP	350	40	1800	3 x 4
B71945S	B3ZPMS	7.5 HP	400	53	1800	3 x 4
B71947S	B3ZPMS	10 HP	500	60	1800	3 x 4
B71949S	B3ZPMS	15 HP	600	63	1800	3 x 4
B76775	B5EPHS	20 HP	950	60	1800	5 x 6
B76776	B5EPHS	25 HP	1050	65	1800	5 x 6
B75861	B4GPBHS	30 HP	1100	85	1800	4 x 6
B74945	B6JPBMS	40 HP	1500	80	1800	6 x 8
B76786	B8GPBMS	50 HP	2700	50	1800	8 x 10

Options: The above pumps have silicon bronze impellers, flanged connections, close-coupled, open drip-proof motors, and mechanical shaft seals. As mentioned in the text at the top of the page, many options are available. Please call our Customer Service at 800-831-7133 or try using the convenient "BEC" system at [www.berkeleypumps.com](http://www.berkeleypumps.com).



# D-SERIES™ CAST IRON SELF-PRIMING CENTRIFUGAL COMMERCIAL PUMP



## Featured Highlights

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 self-priming, high performance pumps are available in high head and medium head models, providing a complete range of performance characteristics. Motors are open drip-proof, continuous duty rated 3450 RPM.



D Series Cast Iron Self-Priming Centrifugal Commercial Pool Pump

## Ordering Information

Product	Voltage	Amps <sup>1</sup>	HP	Primary Listings and Certifications <sup>3</sup>	Port Size (NPT)	Carton Wt. (Lbs.)	Curve Key
<b>STANDARD EFFICIENCY SINGLE PHASE HIGH HEAD</b>							
DHH-169	230	14	3	NSF <sup>2</sup>	1-1/2 in.	135	A
DMH-171	230	14	3	NSF <sup>2</sup>	2 in.	135	C
<b>STANDARD EFFICIENCY SINGLE PHASE MEDIUM HEAD</b>							
DHJ-170	230	21.5	5	NSF <sup>2</sup>	2 in.	178	B
DMJ-172	230	21.5	5	NSF <sup>2</sup>	2-1/2 in.	178	D
<b>STANDARD EFFICIENCY THREE PHASE HIGH HEAD</b>							
DHH3-169	230/460	9.6/4.8	3	NSF <sup>2</sup>	1-1/2 in.	135	A
DMH3-171	230/460	9.6/4.8	3	NSF <sup>2</sup>	2 in.	135	C
<b>STANDARD EFFICIENCY THREE PHASE MEDIUM HEAD</b>							
DHJ3-170	230/460	15.2/7.6	5	NSF <sup>2</sup>	2 in.	178	B
DMJ3-172	230/460	15.2/7.6	5	NSF <sup>2</sup>	2-1/2 in.	178	D

\* 200 Volt models available. Contact factory for details.

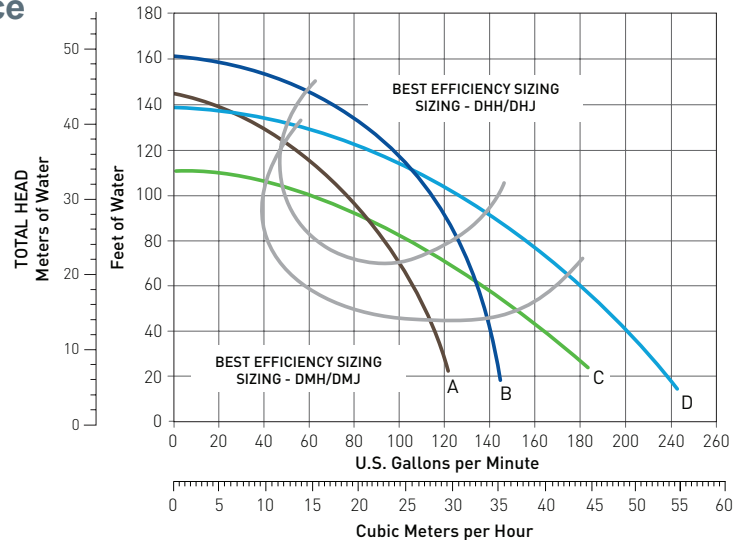
<sup>1</sup> Dimensions and Max Load Amps may vary per motor manufacturer.

<sup>2</sup> 'NSF(1)' indicates that pump bears a mark signifying evaluation to NSF Standard 50 For Self-Priming Centrifugal Pumps For Swimming Pools, Spas and Hot Tubs when installed with a NSF certified Hair and Lint Strainer.

<sup>3</sup> Product may have been evaluated to other state and local regulatory standards. Listing status may change. Always confirm status with appropriate agency if in doubt.

See pages 151 and 152 for Hair and Lint Strainer Packages.

## Dimensions and Performance

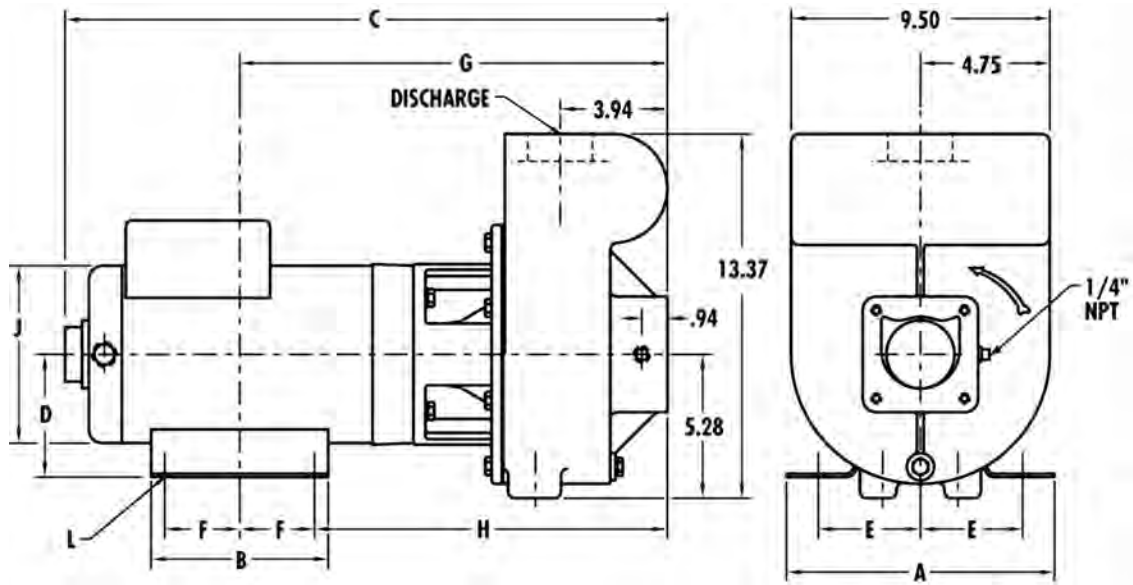


CALIFORNIA PROPOSITION 65 WARNING  
 ⚠️ **WARNING:** Cancer and Reproductive Harm.  
 ⚠️ **AVERTISSEMENT:** Peut Causer le Cancer et des Dommages au Système Reproducteur.  
 ⚠️ **ADVERTENCIA:** Cáncer y Daño Reproductivo.  
 www.p65warnings.ca.gov. P650214

# D-SERIES™

## CAST IRON SELF-PRIMING CENTRIFUGAL COMMERCIAL PUMP (CONT'D)

### Dimensions and Performance



Note: "L" mounting dimension: .44 Slot = 3/8 in. Bolt .34 Diameter = 5/16 in.

Catalog Number	HP	Discharge (NPT)	A	B	C*	D	E	F	G	H	J	L
DHH-169	3	1-1/2	8.75	6.50	21.37	4.50	3.75	2.25	15.21	12.96	6.51	.44 SLOT
DHH3-169	3	1-1/2	6.50	6.50	19.87	3.50	2.75	2.50	14.45	12.20	6.51	.34 DIA.
DHJ-172	5	2	8.75	6.50	22.12	4.50	3.75	2.75	15.71	12.96	6.51	.44 SLOT
DHJ3-172	5	2	8.75	6.50	21.62	4.50	3.75	2.25	15.21	12.96	6.50	.44 SLOT
DMH-171	3	2	8.75	6.50	21.37	4.50	3.75	2.25	15.21	12.96	6.51	.44 SLOT
DMH3-171	3	2	6.50	6.50	19.87	3.50	2.75	2.50	14.45	12.20	6.51	.34 DIA.
DMJ-172	5	2-1/2	8.75	6.50	22.12	4.50	3.75	2.75	15.71	12.96	6.51	.44 SLOT
DMJ3-172	5	2-1/2	8.75	6.50	21.62	4.50	3.75	2.25	15.21	12.96	6.50	.44 SLOT

# WHISPERFLOXF<sup>®</sup> VS COMMERCIAL VARIABLE SPEED PUMP

## TRADEGRADE



WhisperFloXF VS Pump

The first variable speed pump that runs on single-phase or three-phase power. It's economical, combined motor/drive solution for HMAc (hotel, motel, apartment, condominium) or large residential installations, providing sophisticated, energy-saving pump technology without the high costs typically associated with independent pump/external drive setups.

### Featured Highlights

- Integrated 5HP motor/drive; no expensive external drive required
- Versatile power input capability; runs off a wide range of single- or three-phase power
- Speed or flow control for maximum efficiency and pool performance\*
- External control capability through automation systems or relays
- Intuitive programming and operation
- Meets commercial codes and agency requirements
- Does not require motor starter
- WEF 5.0 THP 5.0

## Ordering Information

Product	Model	Voltage	Full Load Amps	HP	SF	SFHP	FREQ	Primary Listings and Certifications <sup>4</sup>	Port Size (NPT)
<b>WHISPERFLOXF VS COMMERCIAL PUMP</b>									
022035	WhisperFloXF VS	Single-Phase: 208-230/277-460 Three-Phase : 208-230/460	Single-Phase: 20-21/17-11 Three-Phase : 13-6	5	1.0	5.0	50/60HZ	UL, NSF	2.5" x 2.5" or 3.0" x 3.0"
									<b>Carton Wt. (Lbs.)</b>
									95

\*When connected to Pentair's inline 4-20mA flowmeter for 3" plumbing (P/N 97014-4203KIT—sold separately), or similar 4-20mA flowmeters, this pump is capable of maintaining a constant flow based on the needs of your pool system. To connect the flowmeter and pump, the digital input cable provided in the External Control Wiring Kit (P/N 353129Z— sold separately) is required.

CALIFORNIA PROPOSITION 65 WARNING

⚠️ **WARNING:** Cancer and Reproductive Harm.  
 ⚠️ **AVERTISSEMENT:** Peut Causer le Cancer et des Dommages au Système Reproducteur.  
 ⚠️ **ADVERTENCIA:** Cáncer y Daño Reproductivo.

www.p65warnings.ca.gov. P650714

<sup>1</sup> 'UL' indicates that pump bears a UL mark signifying evaluation to U.S. Standards UL1081 for Permanently Connected Swimming Pool and Spa Pumps and to Canadian Standards CAN/CSA C22.2 No. 108-01 Liquid Pumps For Swimming Pools Only (Enclosure 3).

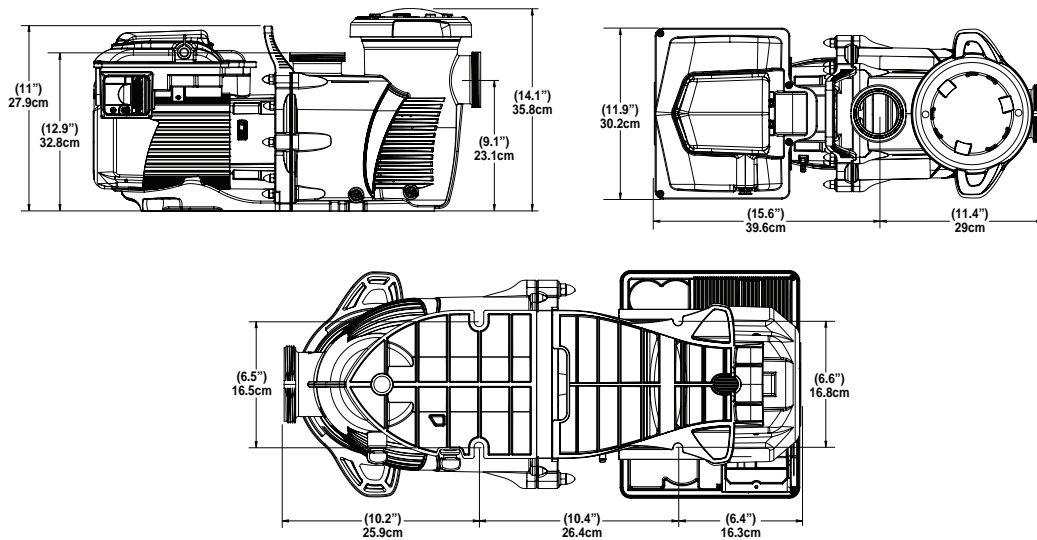
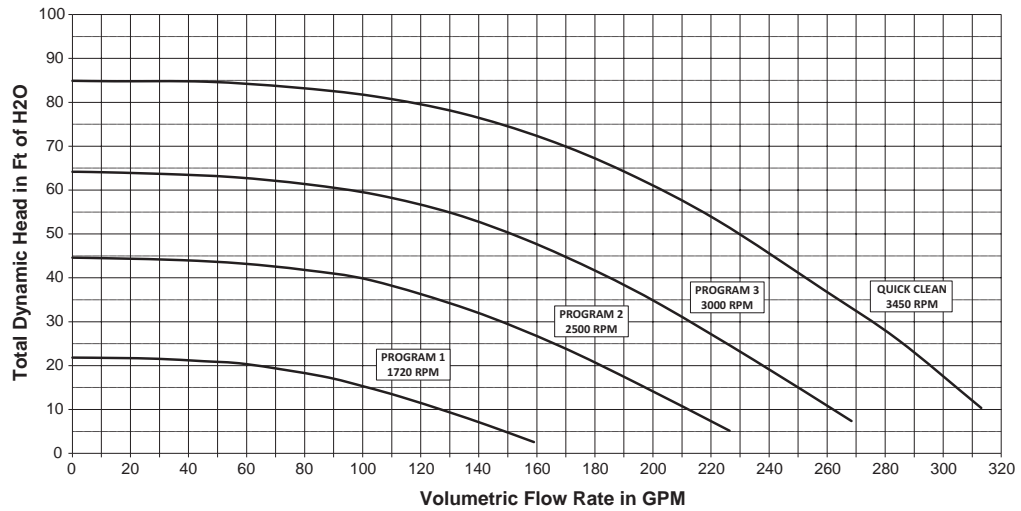
<sup>2</sup> 'NSF' indicates that pump bears a mark signifying evaluation to NSF Standard 50 For Self-Priming Centrifugal Pumps For Swimming Pools, Spas and Hot Tubs.

<sup>3</sup> 'APSP' Pump has been evaluated to ANSI/APSP/ICC-15 and California Title 20 and is certified to use on Residential Swimming Pool Filtration Systems.

<sup>4</sup> Product may have been evaluated to other state and local regulatory standards. Listing status may change. Always confirm status with appropriate agency if in doubt.

# WHISPERFLOXF VS COMMERCIAL VARIABLE SPEED PUMP (CONT'D)

## Dimensions and Performance





# WHISPERFLOXF<sup>®</sup>

## HIGH PERFORMANCE PUMPS



WhisperFloXF Pump

Developed using the most advanced engineering tools available - CFD (Computational Fluid Dynamics) and FEA (Finite Element Analysis). The impeller design delivers high level of precision concentricity for increased efficiency. \*Optional riser base for Challenger pump replacements. Part # 400012 available separately.

TEFC Super-Duty Single Speed Models are designated

**TRADEGRADE**

Product 022032, 022033, 022034



CALIFORNIA PROPOSITION 65 WARNING  
 ⚠️ WARNING: Cancer and Reproductive Harm.  
 ⚠️ AVERTISSEMENT: Peut Causer le Cancer et des Dommages au Système Reproducteur.  
 ⚠️ ADVERTENCIA: Cáncer y Daño Reproductivo.  
 www.p65warnings.ca.gov. P8.201714

### Ordering Information

Product	Model	Voltage	Full Load Amps	HP	SF	SFHP	Primary Listings and Certifications <sup>4</sup>	Port Size (NPT)	Carton Wt. (Lbs.)	Curve Key
<b>TEFC SUPER-DUTY SINGLE SPEED</b>										
022032	XFET-8	208-230V	11.1-9.5	2	1.3	2.6	UL <sup>1</sup> , NSF <sup>2</sup>	2-1/2 x 2-1/2" OR 3 x 3"	57	D
022033	XFET-12	208-230V	14.6-12.7	3	1.15	3.45	UL <sup>1</sup> , NSF <sup>2</sup>	2-1/2 x 2-1/2" OR 3 x 3"	61	B
022034	XFET-20	208-230V	20.0-18.8	5	1.0	5.0	UL <sup>1</sup> , NSF <sup>2</sup>	2-1/2 x 2-1/2" OR 3 x 3"	67	A
<b>EFFICIENT SINGLE SPEED FULL RATED</b>										
022009	XFE-8	208V-230V	11.0-10.2	2	1.3	2.6	UL <sup>1</sup> , NSF <sup>2</sup>	2-1/2 x 2-1/2" OR 3 x 3"	55	D
022010	XFE-12	208V-230V	15.0-13.6	3	1.15	3.45	UL <sup>1</sup> , NSF <sup>2</sup>	2-1/2 x 2-1/2" OR 3 x 3"	60	B
022011	XFE-20	208V-230V	22.0-23.0	5	1.0	5.0	UL <sup>1</sup> , NSF <sup>2</sup>	2-1/2 x 2-1/2" OR 3 x 3"	72	A
<b>STANDARD SINGLE SPEED FULL RATED</b>										
022012	XF-8	208V-230V	11.5-11.0	2	1.3	2.6	UL <sup>1</sup> , NSF <sup>2</sup>	2-1/2 x 2-1/2" OR 3 x 3"	55	D
022013	XF-12	230V	14.1	3	1.15	3.45	UL <sup>1</sup> , NSF <sup>2</sup>	2-1/2 x 2-1/2" OR 3 x 3"	60	C
<b>EFFICIENT TWO-SPEED FULL RATED</b>										
022007	XFDS-8	230V	11.0-1.8	2.0/25	1.3	2.6/0.33	UL <sup>1</sup> , NSF <sup>2</sup> , APSP <sup>3</sup>	2-1/2 x 2-1/2" OR 3 x 3"	55	D, F
022008	XFDS-12	230V	15.0-2.6	3.0/38	1.15	3.45/0.44	UL <sup>1</sup> , NSF <sup>2</sup> , APSP <sup>3</sup>	2-1/2 x 2-1/2" OR 3 x 3"	60	C, E
<b>EFFICIENT TWO-SPEED UP RATED</b>										
022026	XFDS-30	230V	11.0-1.8	2.5/31	1.04	2.6/32	UL <sup>1</sup> , NSF <sup>2</sup> , APSP <sup>3</sup>	2-1/2 x 2-1/2" OR 3 x 3"	60	D, F
<b>STANDARD SINGLE SPEED UP RATED</b>										
022027	XF-30	208V-230V	11.5-11.0	2.5	1.04	2.6	UL <sup>1</sup> , NSF <sup>2</sup>	2-1/2 x 2-1/2" OR 3 x 3"	55	D
<b>EFFICIENT SINGLE SPEED UP RATED</b>										
022028	XFE-30	208V-230V	11.0-10.2	2.5	1.04	2.6	UL <sup>1</sup> , NSF <sup>2</sup>	2-1/2 x 2-1/2" OR 3 x 3"	55	D
<b>THREE-PHASE SUPER-DUTY</b>										
022017	XFK-8	208-230V/460V	7.5-7.2/3.6	2	1.3	2.6	UL <sup>1</sup> , NSF <sup>2</sup>	2-1/2 x 2-1/2" OR 3 x 3"	60	I
022018	XFK-12	208-230V/460V	9.8-9.4/4.7	3	1.15	3.45	UL <sup>1</sup> , NSF <sup>2</sup>	2-1/2 x 2-1/2" OR 3 x 3"	60	H
022019	XFK-20	208-230V/460V	13.9-13.1/6.6	5	1.0	5.0	UL <sup>1</sup> , NSF <sup>2</sup>	2-1/2 x 2-1/2" OR 3 x 3"	72	G

**ACCESSORIES**

400012 XF Riser Base - Simplifies installation of XF-series pumps in applications where Challenger pumps are being replaced.

<sup>1</sup> 'UL' indicates that pump bears a UL mark signifying evaluation to U.S. Standards UL1081 for Permanently Connected Swimming Pool and Spa Pumps and to Canadian Standards CAN/CSA C22.2 No. 108-01 Liquid Pumps For Swimming Pools Only (Enclosure 3).

<sup>2</sup> 'NSF' indicates that pump bears a mark signifying evaluation to NSF Standard 50 For Self-Priming Centrifugal Pumps For Swimming Pools, Spas and Hot Tubs.

<sup>3</sup> 'APSP' Pump has been evaluated to ANSI/APSP/ICC-15 and California Title 20 and is certified to use on Residential Swimming Pool Filtration Systems.

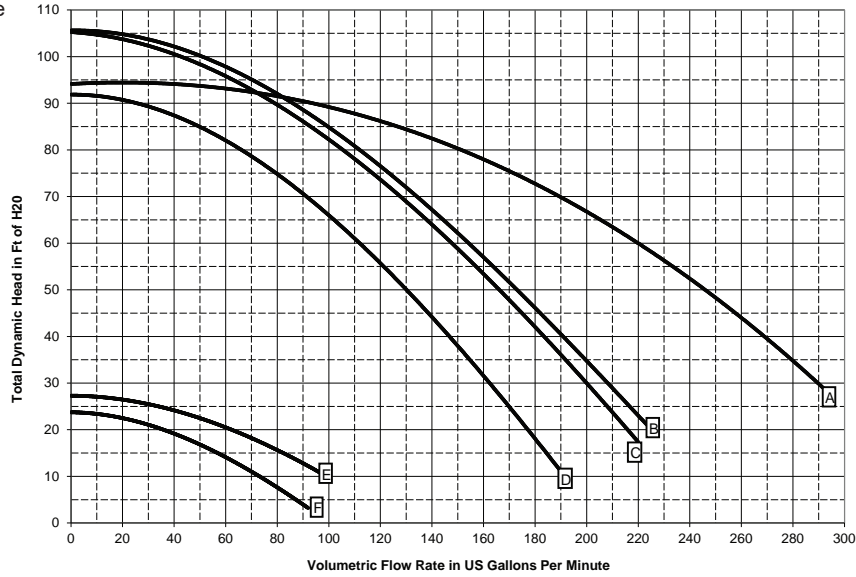
<sup>4</sup> Product may have been evaluated to other state and local regulatory standards. Listing status may change. Always confirm status with appropriate agency if in doubt.

• **Pumps and replacement motors that are single speed and one (1) Total HP or greater cannot be sold, offered for sale, or installed in a residential pool filtration use in California, Title 20 CCR sections 1601-1609.**

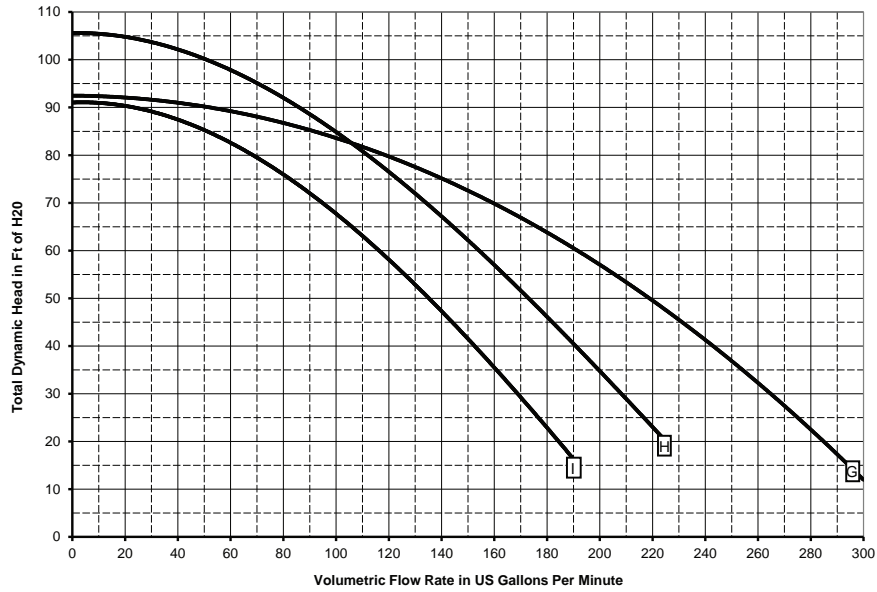
# WHISPERFLOXF<sup>®</sup> HIGH PERFORMANCE PUMPS (CONT'D)

## Dimensions and Performance

1 & 2-Speed  
Performance  
Curve

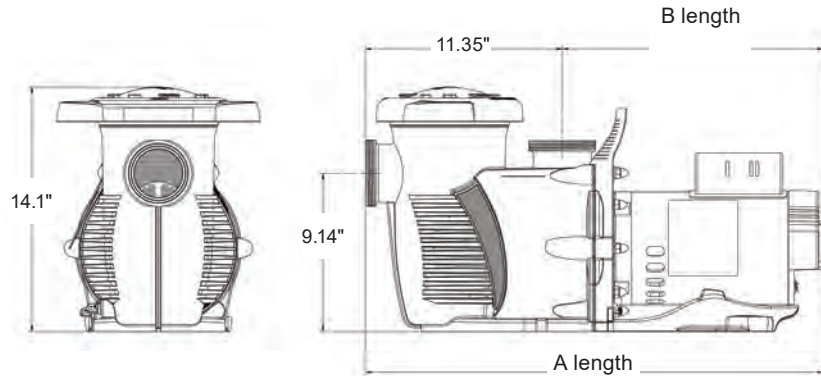


3 Phase  
Performance  
Curve



B- VARYING LENGTH				
HP	STD EFF	EE	1PH TEFC	3PH
2	15.04"	16.04"	13.05"	12.35"
2.5	15.04"	16.04"	-	-
3	16.04"	16.29"	13.65"	13.05"
5	-	16.78"	14.55"	13.88"

A- VARYING LENGTH				
HP	STD EFF	EE	1PH TEFC	3PH
2	26.39"	27.39"	24.40"	23.70"
2.5	26.39"	27.39"	-	-
3	27.39"	27.64"	25.00"	24.40"
5	-	28.13"	25.90"	25.23"



# INTELLIFLOXF<sup>®</sup> VSF HIGH PERFORMANCE PUMP

TRADEGRADE



IntelliFloXF VSF Pump



This product may be protected by one or more of the following US Patents and all corresponding foreign counterparts: 7,686,587; 7,854,597; 8,043,070; 8,469,675; 8,573,952; D568,340; D606,562; D611,430

IntelliFloXF VSF pump is the first variable speed and flow pump that adjusts to changes in flow system conditions to maintain its programmed flow rate. With its available performance and efficiency, it is perfectly suited for large and feature rich pools with high flow demand.

## Featured Highlights

- Eight programmable speed or flow settings and built-in timer
- Rotatable keypad with optional wall mount kit (sold separately)
- Top-mounted field wiring compartment is easier to access and connect
- Totally enclosed fan-cooled design keeps motor shielded from the elements for extended life
- Menus are easier than ever to use
- Union connectors included for connecting directly to 2.5" or 3" plumbing
- Precisely maintains system flow requirements
- Compatible with Pentair Automation
- WEF [5.6](#) THP [3.95](#)

### CALIFORNIA PROPOSITION 65 WARNING

⚠ **WARNING:** Cancer and Reproductive Harm.  
 ⚠ **AVERTISSEMENT:** Peut Causer le Cancer et des Dommages au Système Reproducteur.  
 ⚠ **ADVERTENCIA:** Cáncer y Daño Reproductivo.  
[www.p65warnings.ca.gov](http://www.p65warnings.ca.gov) PN200714A

## Ordering Information

Product	Model	Voltage	Full Load Amps	kW	HP	SF	SFHP	FREQ.	Primary Listings and Certifications <sup>4</sup>	Port Size (NPT)	Carton Wt. (Lbs.)
<b>INTELLIFLOXF VSF ENERGY EFFICIENT VARIABLE SPEED AND FLOW PUMP</b>											
022056	IntelliFloXF VSF	230	16	3.2	3	1.32	3.95	50HZ/60HZ	UL <sup>1</sup> , NSF <sup>2</sup> , APSP <sup>3</sup>	2.5 in. x 2.5 in. OR 3 in. X 3in.	58
<b>ACCESSORIES</b>											
400012	XF Riser Base - Simplifies installation of XF-series pumps in applications where Challenger pumps are being replaced.										
521109	IntelliCom 2 - Rated 9 - 30 V DC with 4 inputs										1
350122	Communication Cable - 50 ft. - Included with pump										2
356904Z	Keypad Relocation Kit										2

<sup>1</sup> 'UL' indicates that pump bears a UL mark signifying evaluation to U.S. Standards UL1081 for Permanently Connected Swimming Pool and Spa Pumps and to Canadian Standards CAN/CSA C22.2 No. 108-01 Liquid Pumps For Swimming Pools Only (Enclosure 3).

<sup>2</sup> 'NSF' indicates that pump bears a mark signifying evaluation to NSF Standard 50 For Self-Priming Centrifugal Pumps For Swimming Pools Only.

<sup>3</sup> 'APSP' Pump has been evaluated to ANSI/APSP/ICC-15 and California Title 20 and is certified to use on Residential Swimming Pool Filtration Systems.

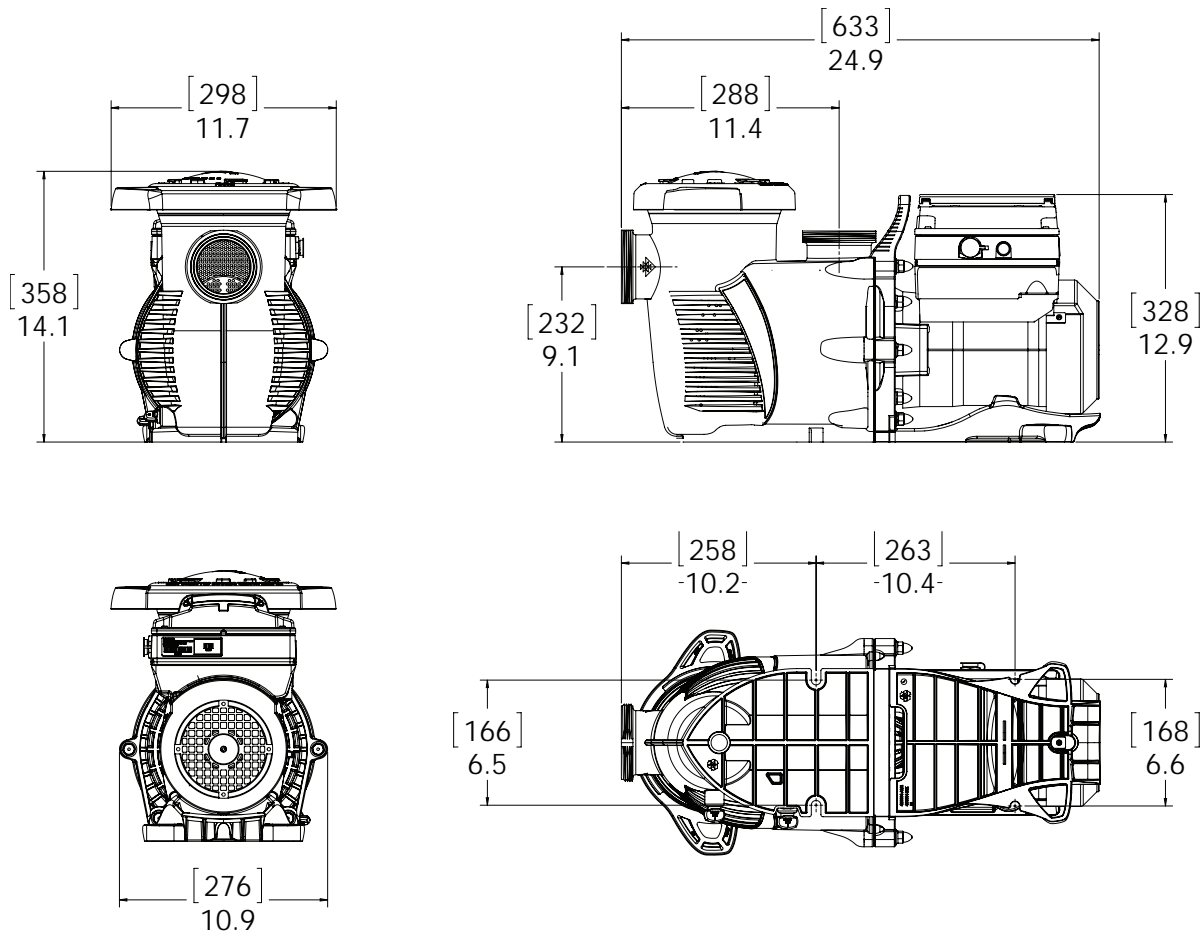
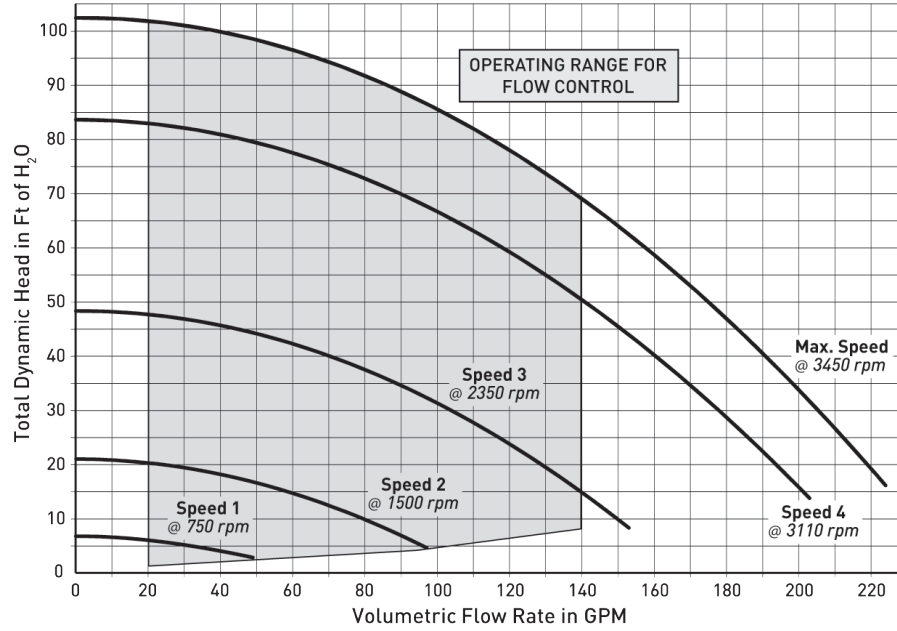
<sup>4</sup> Product may have been evaluated to other state and local regulatory standards. Listing status may change. Always confirm status with appropriate agency if in doubt.

Note: Pump must be used with current collectors when installed on spas or hot tubs in Canada.

Refer to catalog page 18 for a selection of 2-Pole GFCI breakers which offer 6 milliamp personnel protection while meeting 2008 to current NEC Standards for Pool Pumps.

# INTELLIFLOXF<sup>®</sup> VSF HIGH PERFORMANCE PUMP (CONT'D)

## Dimensions and Performance\*





# INTELLIFLO® VS+SVRS HIGH PERFORMANCE PUMPS



IntelliFlo VS+SVRS  
High Performance Pump



This product may be protected by one or more of the following US Patents and all corresponding foreign counterparts: 8,313,306; 8,469,675; 8,602,743; 8,573,952; 8,602,745 8,043,070; 7,686,587; 7,854,597; 9,243,413; D568,340; D606,562, D611,430

IntelliFlo pumps combine variable speed technology, onboard digital intelligence and permanent magnet motors (used in hybrid cars) to reduce pump-related energy costs by up to 90%. The IntelliFlo VS+SVRS pump models were the first swimming pool pumps to feature a built-in Safety Vacuum Release System that detects drain blockage and automatically shuts the pump off.

## Featured Highlights

- Ability to program exact pump speeds for specific operations – filtering, heating, cleaning, spa jets, water features and more
- SVRS complies with Virginia Graeme Baker Safety Act
- Built-in diagnostics protect the IntelliFlo pump from the most common causes of premature failure – overheating, freezing, and voltage irregularities.
- Includes priming protection. No SVRS calibrations needed. Built-in SVRS cannot be turned off.
- Safety lock-out feature (password protected) prevents pump speed settings from being changed by unauthorized personnel
- Ability to set minimum and maximum speeds so pump will only operate within the ranges set to help assure safe operation and long life
- Compatible with Pentair Automation Systems
- Compliant with the current ASME A112.19.17 Standard for Safety Vacuum Release Systems (SVRS)
- Operates seamlessly on 50 hz or 60 hz input power. Flow/speed are constant when operating on 50hz or 60 hz.
- WEF 6.1 THP 3.95

CALIFORNIA PROPOSITION 65 WARNING  
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 ⚠️ **ADVERTENCIA:** Cáncer y Daño Reproductivo.  
[www.p65warnings.ca.gov](http://www.p65warnings.ca.gov)

## Ordering Information

Product	Model	Voltage	Full Load Amps	kW	HP	SF	SFHP	FREQ.	Primary Listings and Certifications <sup>6</sup>	Port Size(NPT)	Carton Wt.(Lbs.)
<b>ENERGY EFFICIENT VARIABLE SPEED WITH SAFETY VACUUM RELEASE SYSTEM</b>											
011057	IntelliFlo VS+SVRS	230	16	3.2	3	1.32	3.95	50hz/60hz	UL <sup>1</sup> , NSF <sup>2</sup> , CSA <sup>3</sup> , ASME <sup>4</sup> , ETL, APSP <sup>5</sup>	2 in. x 2 in.	55
<b>ACCESSORIES</b>											
521109	IntelliCom 2 - Rated 9 - 30 V DC with 4 inputs										1
350122	Communication Cable - 50 ft. - Included with pump										2
350250Z	SVRS KIT - Allows use of discharge check valves with SVRS pump										1
<b>UNIONS</b>											
11201-0154	2 in. x 2 in. Union (2 in. NPT male x 2 in. female NPT quick connect)									* Note: two required per pump (sold individually)	2

<sup>1</sup> 'UL' indicates that pump bears a UL mark signifying evaluation to U.S. Standards UL1081 for Permanently Connected Swimming Pool and Spa Pumps and to Canadian Standards CAN/CSA C22.2 No. 108-01 Liquid Pumps For Swimming Pools Only (Enclosure 3).

<sup>2</sup> 'NSF' indicates that pump bears a mark signifying evaluation to NSF Standard 50 For Self-Priming Centrifugal Pumps For Swimming Pools Only.

<sup>3</sup> 'CSA' indicates that pump bears a CSA mark signifying evaluation to Canadian Standards CAN/CSA C22.2 No. 108-01 Liquid Pumps For Swimming Pools Only (Enclosure 3).

<sup>4</sup> 'ASME' indicates that pump bears a specific mark signifying evaluation to ASME/ANSI Standard A.112.19.17 Manufactured Safety Vacuum Relief System (SVRS).

<sup>5</sup> 'APSP' Pump has been evaluated to ANSI/APSP/ICC-15 and California Title 20 and is certified to use on Residential Swimming Pool Filtration Systems.

<sup>6</sup> Product may have been evaluated to other state and local regulatory standards. Listing status may change. Always confirm status with appropriate agency if in doubt.

Note: Pump must be used with current collectors when installed on spas or hot tubs in Canada.

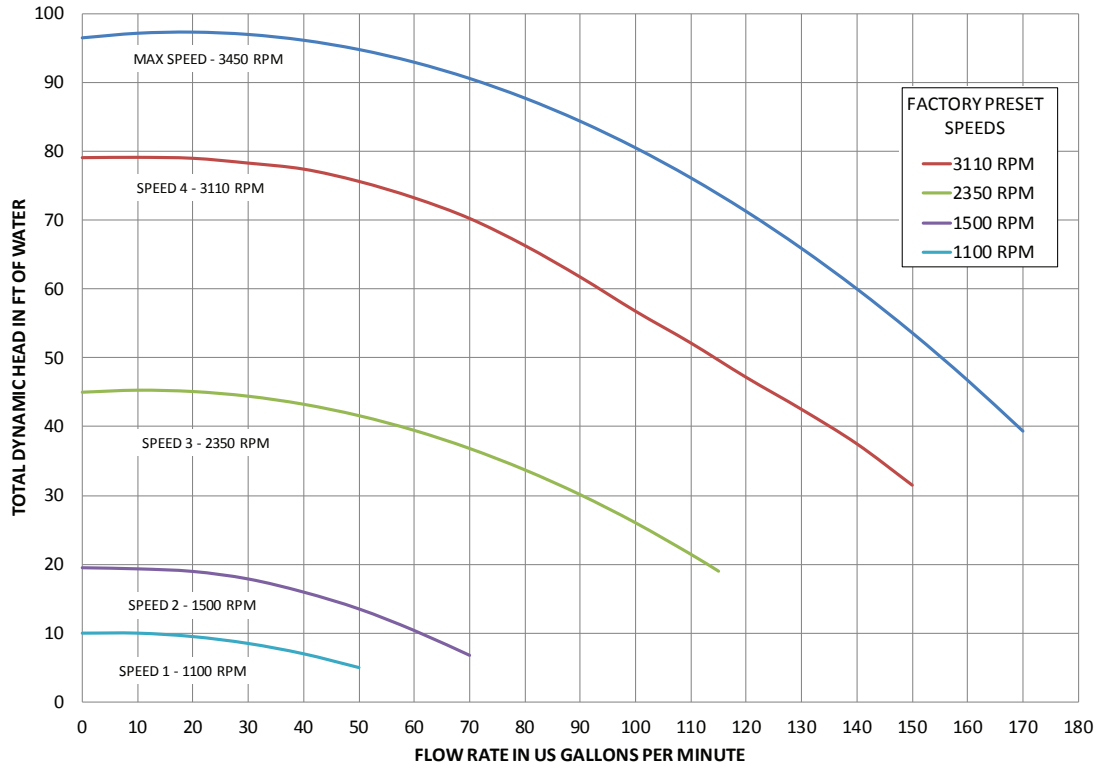
• Savings based on variable speed pump compared to a single-speed pump running 12 hours per day at an average of \$0.16 per kWh in a 20,000 gallon pool. Actual savings may vary based on local utility rates, pool size, pump run time, pump horsepower, pump rpm, plumbing size and length, pump model, service factor and other hydraulic factors.

Refer to catalog page 18 for a selection of 2-Pole GFCI breakers which offer 6 milliamp personnel protection while meeting 2008 to Current NEC Standards for Pool Pumps.

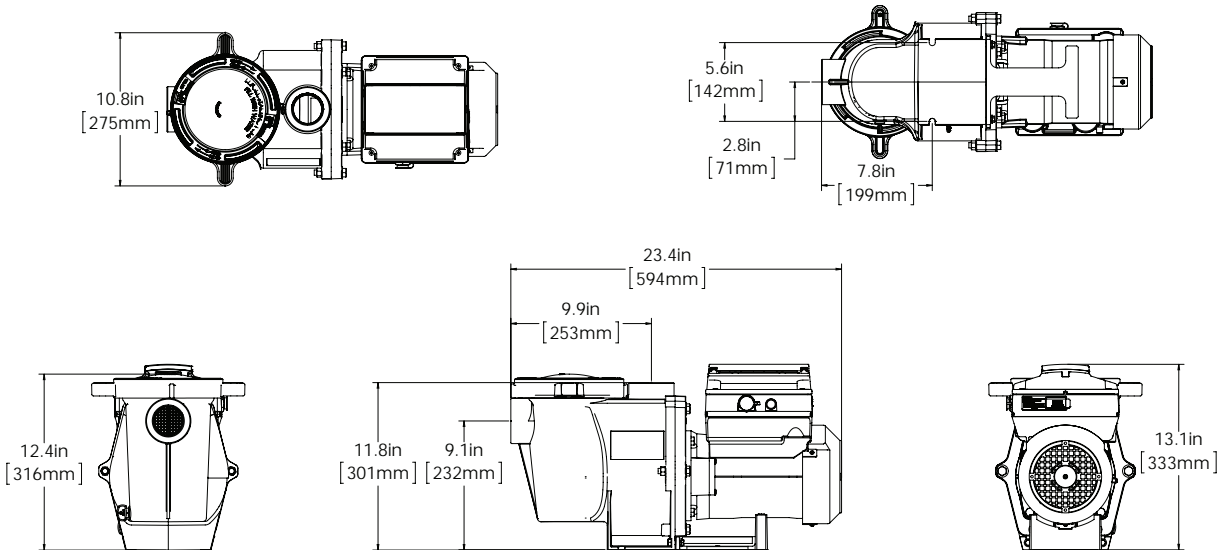
# INTELLIFLO® VS+SVRS

## HIGH PERFORMANCE PUMPS (CONT'D)

### Dimensions and Performance



**Note: IntelliFlo VS+SVRS minimum speed is 1100 RPM**



# WHISPERFLO®

## HIGH PERFORMANCE PUMPS



WhisperFlo Pump

Robust thermoplastic with the Cam & Ramp™ See-Through Lid design. Self-priming, high flow with Funnel-Flo™ Diffusers. 2 in. suction and discharge ports. Motor features threaded shaft and durable commercial duty 56 frame motor.



### Featured Highlights

- Oversized strainer basket and volute —industry standard in pool pumps
- TEFC Motors available
- Lower HP's deliver higher performance than industry standard
- Compatible with all cleaning systems, various filters and jet action spas
- Heavy-duty/durable construction is designed for long life
- Designed for residential and commercial applications

TEFC Super-Duty Single Speed Models are designated

### TRADEGRADE

Product 011527, 011528, 011529, 011530

#### CALIFORNIA PROPOSITION 65 WARNING

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 ⚠ **ADVERTENCIA:** Cáncer y Daño Reproductivo.  
[www.p65warnings.ca.gov](http://www.p65warnings.ca.gov) PH200714

### Ordering Information

Product	Model	Voltage	Full Load Amps	HP	SF	SFHP	Primary Listings and Certifications <sup>4</sup>	Port Size (NPT)	Carton Wt. (Lbs.)	Curve Key
<b>TEFC SUPER-DUTY SINGLE SPEED</b>										
011527	WFET-4	115/208-230	15.1/8.5-7.7	1	1.65	1.65	UL <sup>1</sup> , NSF <sup>2</sup>	2 in. x 2 in.	48	G
011528	WFET-6	208-230	10.3-9.1	1-1/2	1.47	2.21	UL <sup>1</sup> , NSF <sup>2</sup>	2 in. x 2 in.	51	H
011529	WFET-8	208-230	11.7-10.3	2	1.3	2.6	UL <sup>1</sup> , NSF <sup>2</sup>	2 in. x 2 in.	55	I
011530	WFET-12	208-230	14.6-12.7	3	1.15	3.45	UL <sup>1</sup> , NSF <sup>2</sup>	2 in. x 2 in.	59	J
<b>ENERGY EFFICIENT SINGLE SPEED FULL RATED</b>										
011511	WFE-2	115/208-230	8.8/4.5-4.4	1/2	1.90	0.95	UL <sup>1</sup> , NSF <sup>2</sup> , APSP <sup>3</sup>	2 in. x 2 in.	41	E
011512	WFE-3	115/208-230	12.8/7.0-6.4	3/4	1.67	1.25	UL <sup>1</sup> , NSF <sup>2</sup>	2 in. x 2 in.	41	F
011513	WFE-4	115/208-230	14.8/7.8-7.4	1	1.65	1.65	UL <sup>1</sup> , NSF <sup>2</sup>	2 in. x 2 in.	46	G
011514	WFE-6	208-230	9.6-8.8	1-1/2	1.47	2.20	UL <sup>1</sup> , NSF <sup>2</sup>	2 in. x 2 in.	54	H
011515	WFE-8	208-230	11.0-10.2	2	1.30	2.60	UL <sup>1</sup> , NSF <sup>2</sup>	2 in. x 2 in.	55	I
011516	WFE-12	208-230	15.0-13.6	3	1.15	3.45	UL <sup>1</sup> , NSF <sup>2</sup>	2 in. x 2 in.	56	J
<b>ENERGY EFFICIENT SINGLE SPEED UP RATED</b>										
011517	WFE-24	115/208-230	12.8/7.0-6.4	1	1.25	1.25	UL <sup>1</sup> , NSF <sup>2</sup>	2 in. x 2 in.	41	F
011518	WFE-26	115/208-230	14.8/7.8-7.4	1-1/2	1.10	1.65	UL <sup>1</sup> , NSF <sup>2</sup>	2 in. x 2 in.	46	G
011519	WFE-28	208-230	9.6-8.8	2	1.10	2.20	UL <sup>1</sup> , NSF <sup>2</sup>	2 in. x 2 in.	54	H
011520	WFE-30	208-230	11.0-10.2	2-1/2	1.04	2.60	UL <sup>1</sup> , NSF <sup>2</sup>	2 in. x 2 in.	55	I
<b>STANDARD EFFICIENCY SINGLE SPEED FULL RATED</b>										
011578	WF-2	115/208-230	10.8/5.2-5.4	1/2	1.95	0.95	UL <sup>1</sup> , NSF <sup>2</sup> , APSP <sup>3</sup>	2 in. x 2 in.	41	E
011579	WF-3	115/208-230	13.2/6.2-6.6	3/4	1.67	1.25	UL <sup>1</sup> , NSF <sup>2</sup>	2 in. x 2 in.	41	F
011580	WF-4	115/208-230	16.0/7.8-8.0	1	1.65	1.65	UL <sup>1</sup> , NSF <sup>2</sup>	2 in. x 2 in.	46	G
011581	WF-6	115/208-230	21.0/10.0-10.5	1-1/2	1.50	2.25	UL <sup>1</sup> , NSF <sup>2</sup>	2 in. x 2 in.	54	H
011582	WF-8	208-230	11.5-11.0	2	1.30	2.60	UL <sup>1</sup> , NSF <sup>2</sup>	2 in. x 2 in.	55	I
011583	WF-12	230	14.1	3	1.15	3.45	UL <sup>1</sup> , NSF <sup>2</sup>	2 in. x 2 in.	56	J
<b>STANDARD EFFICIENCY SINGLE SPEED UP RATED</b>										
011771	WF-23	115/208-230	10.8/5.2-5.4	3/4	1.24	0.93	UL <sup>1</sup> , NSF <sup>2</sup>	2 in. x 2 in.	41	E
011772	WF-24	115/208-230	13.2/6.2-6.6	1	1.24	1.24	UL <sup>1</sup> , NSF <sup>2</sup>	2 in. x 2 in.	41	F
011773	WF-26	115/208-230	16.0/7.8-8.0	1-1/2	1.10	1.65	UL <sup>1</sup> , NSF <sup>2</sup>	2 in. x 2 in.	46	G
011774	WF-28	115/208-230	21.0/10.0-10.5	2	1.10	2.20	UL <sup>1</sup> , NSF <sup>2</sup>	2 in. x 2 in.	54	H
011775	WF-30	208-230	11.5-11.0	2-1/2	1.04	2.60	UL <sup>1</sup> , NSF <sup>2</sup>	2 in. x 2 in.	55	I
<b>THREE-PHASE SUPER-DUTY</b>										
011641	WFK-4	208-230/460	4.9-4.5/2.3	1	1.65	1.65	UL <sup>1</sup> , NSF <sup>2</sup>	2 in. x 2 in.	46	G
011642	WFK-6	208-230/460	6.4-6.3/3.2	1-1/2	1.47	2.21	UL <sup>1</sup> , NSF <sup>2</sup>	2 in. x 2 in.	48	H
011643	WFK-8	208-230/460	7.5-7.2/3.6	2	1.30	2.60	UL <sup>1</sup> , NSF <sup>2</sup>	2 in. x 2 in.	51	I
011644	WFK-12	208-230/460	9.8-9.4/4.7	3	1.15	3.45	UL <sup>1</sup> , NSF <sup>2</sup>	2 in. x 2 in.	58	J

# WHISPERFLO®

## HIGH PERFORMANCE PUMPS (CONT'D)

Product	Model	Voltage	Full Load Amps	HP	SF	SFHP	Primary Listings and Certifications <sup>4</sup>	Port Size (NPT)	Carton Wt. (Lbs.)	Curve Key
<b>EFFICIENT TWO SPEED 3450 RPM, LOW SPEED 1725 RPM FULL RATED</b>										
012530	WFDS-3	115	14.6/4.7	3/4	1.67	1.25	UL <sup>1</sup> , NSF <sup>2</sup> , APSP <sup>3</sup>	2 in. x 2 in.	42	A, F
011486	WFDS-4	230	7.8/3.0	1	1.65	1.65	UL <sup>1</sup> , NSF <sup>2</sup> , APSP <sup>3</sup>	2 in. x 2 in.	47	B, G
011522	WFDS-6	230	10.0/3.5	1-1/2	1.47	2.20	UL <sup>1</sup> , NSF <sup>2</sup> , APSP <sup>3</sup>	2 in. x 2 in.	55	C, H
011523	WFDS-8	230	11.0/4.0	2	1.30	2.60	UL <sup>1</sup> , NSF <sup>2</sup> , APSP <sup>3</sup>	2 in. x 2 in.	56	D, I
<b>EFFICIENT TWO SPEED 3450 RPM, LOW SPEED 1725 RPM UP RATED</b>										
012485	WFDS-24	115	14.6/4.7	1	1.25	1.25	UL <sup>1</sup> , NSF <sup>2</sup> , APSP <sup>3</sup>	2 in. x 2 in.	42	A, F
012518	WFDS-26	230	7.8/3.0	1-1/2	1.10	1.65	UL <sup>1</sup> , NSF <sup>2</sup> , APSP <sup>3</sup>	2 in. x 2 in.	47	B, G
011524	WFDS-28	230	10.0/3.5	2	1.10	2.20	UL <sup>1</sup> , NSF <sup>2</sup> , APSP <sup>3</sup>	2 in. x 2 in.	55	C, H
011525	WFDS-30	230	11.0/4.0	2-1/2	1.04	2.60	UL <sup>1</sup> , NSF <sup>2</sup> , APSP <sup>3</sup>	2 in. x 2 in.	56	D, I
<b>EFFICIENT SINGLE PHASE - 50HZ INPUT POWER FREQUENCY</b>										
347926	WFEL-2	240/120	7.5/15.0	1/2	1.10	0.55		2 in. x 2 in.	41	
347927	WFEL-3	240/120	7.5/15.0	3/4	1.10	0.83		2 in. x 2 in.	41	
347928	WFEL-4	240/120	6.9/13.8	1	1.10	1.10		2 in. x 2 in.	46	
347929	WFEL-6	240	7.2	1.5	1.10	1.65		2 in. x 2 in.	54	
347930	WFEL-8	240	9.4	2	1.10	2.20		2 in. x 2 in.	55	
<b>ACCESSORIES</b>										
11201-0154	2 in. x 2 in. Union (2 in. NPT male x 2 in. female NPT quick connect)		* Note: two required per pump (sold individually)							
357156	Cover/Lid, Chemical Resistant, CAM & RAMP									

<sup>1</sup> 'UL' indicates that pump bears a UL mark signifying evaluation to U.S. Standards UL1081 for Permanently Connected Swimming Pool and Spa Pumps and to Canadian Standards CAN/CSA C22.2 No. 108-01 Liquid Pumps For Swimming Pools Only (Enclosure 3).

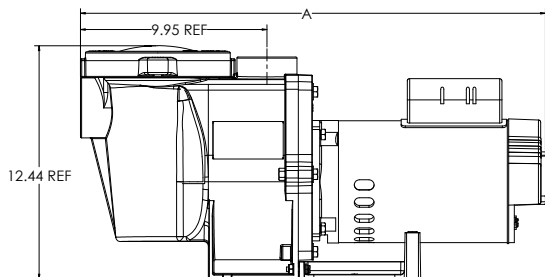
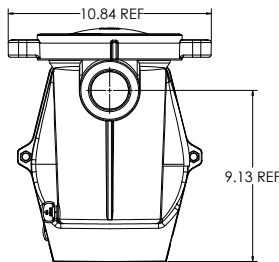
<sup>2</sup> 'NSF' indicates that pump bears a mark signifying evaluation to NSF Standard 50 For Self-Priming Centrifugal Pumps For Swimming Pools, Spas and Hot Tubs.

<sup>3</sup> 'APSP' Pump has been evaluated to ANSI/APSP/ICC-15 and California Title 20 and is certified to use on Residential Swimming Pool Filtration Systems.

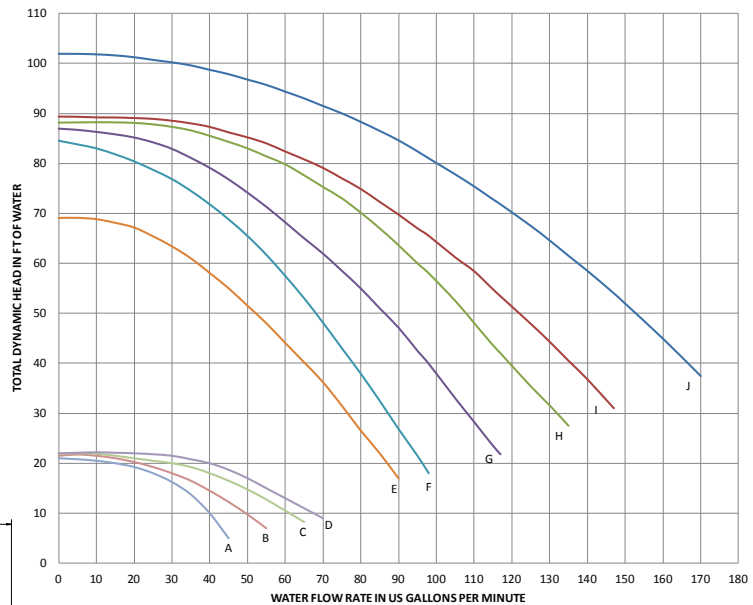
<sup>4</sup> Product may have been evaluated to other state and local regulatory standards. Listing status may change. Always confirm status with appropriate agency if in doubt.

• Pumps and replacement motors that are single speed and one (1) Total HP or greater cannot be sold, offered for sale, or installed in a residential pool filtration use in California, Title 20 CCR sections 1601-1609.

A- VARYING LENGTH				
HP	STD EFF	EE	1PH TEFC	3PH
.5	23.66	24.41		
.75	23.66	24.41		
1	24.03	24.66	21.71	21.5
1.5	25.66	25.16	22.16	21.5
2	25.66	25.66	22.51	21.81
2.5	25.66	25.66		
3	25.66	25.66	23.21	22.61



### Dimensions and Performance





# MAX-E-PROXF<sup>®</sup> VS COMMERCIAL VARIABLE SPEED PUMP



## TRADEGRADE



Max-E-ProXF VS Pump



### Featured Highlights

- Integrated 5HP motor/drive; no expensive external drive required
- Versatile power input capability; runs off a wide range of single- or three-phase power
- Speed or flow control for maximum efficiency and pool performance\*
- External control capability through automation systems or relays
- Intuitive programming and operation
- Meets commercial codes and agency requirements
- Does not require motor starter
- WEF 5.0 THP 5.0

The first variable speed pump that runs on single-phase or three-phase power. It's economical, combined motor/drive solution for HMC (hotel, motel, apartment, condominium) or large residential installations, providing sophisticated, energy-saving pump technology without the high costs typically associated with independent pump/external drive setups.

### Ordering Information

Product	Model	Voltage	Full Load Amps	HP	SF	SFHP	FREQ	Primary Listings and Certifications <sup>4</sup>	Port Size (NPT)
<b>MAX-E-PROXF VS COMMERCIAL PUMP</b>									
023035	Max-E-ProXF VS	Single-Phase: 208-230/277-460 Three-Phase : 208-230/460	Single-Phase: 20-21/17-11 Three-Phase : 13-6	5	1.0	5.0	50/60HZ	UL, NSF	2.5" x 2.5" or 3.0" x 3.0"
									<b>Carton Wt. (Lbs.)</b>
									95

\*When connected to Pentair's inline 4-20mA flowmeter for 3" plumbing (P/N 97014-4203KIT--sold separately), or similar 4-20mA flowmeters, this pump is capable of maintaining a constant flow based on the needs of your pool system. To connect the flowmeter and pump, the digital input cable provided in the External Control Wiring Kit (P/N 353129Z-- sold separately) is required.

CALIFORNIA PROPOSITION 65 WARNING

⚠ **WARNING:** Cancer and Reproductive Harm.  
 ⚠ **AVERTISSEMENT:** Peut Causer le Cancer et des Dommages au Système Reproducteur.  
 ⚠ **ADVERTENCIA:** Cáncer y Daño Reproductivo.

www.p65warnings.ca.gov. FR2013J1

<sup>1</sup> 'UL' indicates that pump bears a UL mark signifying evaluation to U.S. Standards UL1081 for Permanently Connected Swimming Pool and Spa Pumps and to Canadian Standards CAN/CSA C22.2 No. 108-01 Liquid Pumps For Swimming Pools Only (Enclosure 3).

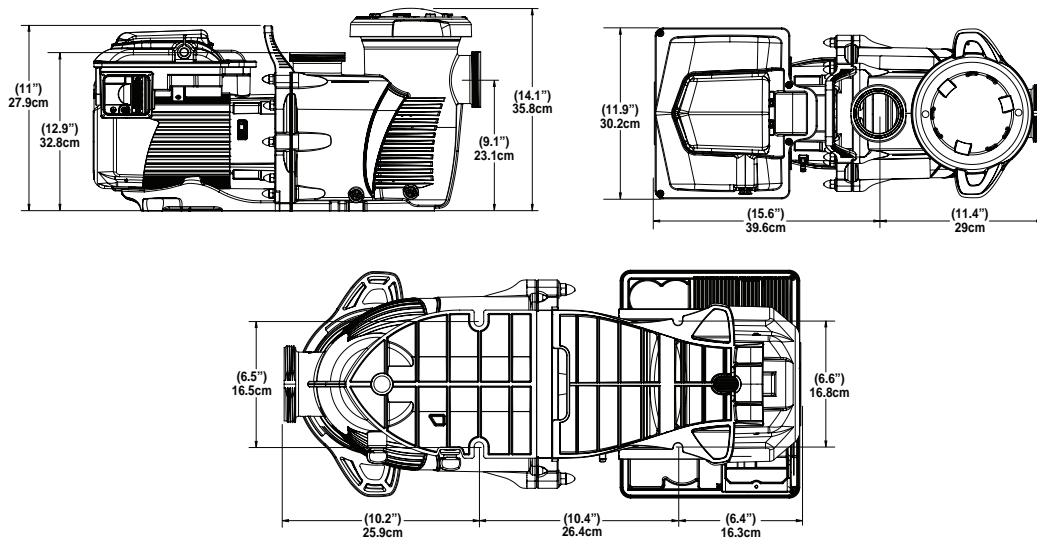
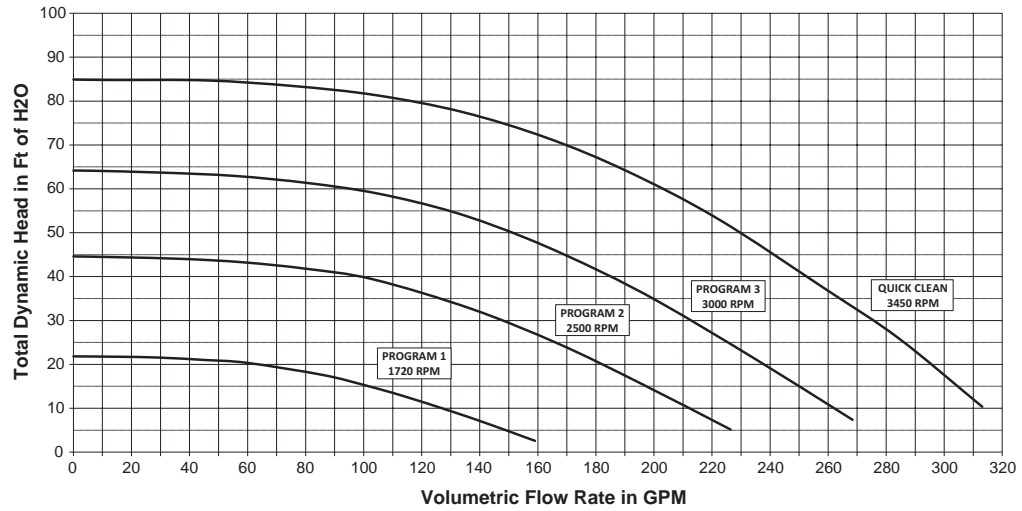
<sup>2</sup> 'NSF' indicates that pump bears a mark signifying evaluation to NSF Standard 50 For Self-Priming Centrifugal Pumps For Swimming Pools, Spas and Hot Tubs.

<sup>3</sup> 'APSP' Pump has been evaluated to ANSI/APSP/ICC-15 and California Title 20 and is certified to use on Residential Swimming Pool Filtration Systems.

<sup>4</sup> Product may have been evaluated to other state and local regulatory standards. Listing status may change. Always confirm status with appropriate agency if in doubt.

# MAX-E-PROXF<sup>®</sup> VS COMMERCIAL VARIABLE SPEED PUMP (CONT'D)

## Dimensions and Performance



# MAX-E-PROXF<sup>®</sup> HIGH PERFORMANCE PUMPS



## TRADEGRADE



Max-E-ProXF Pump

Developed using the most advanced engineering tools available - CFD (Computational Fluid Dynamics) and FEA (Finite Element Analysis). The impeller design delivers high level of precision concentricity for increased efficiency.

### Featured Highlights

- Drop-in replacement for all Max-E-Pro<sup>®</sup> Pump models. Simple replacement for Challenger<sup>®</sup> Pumps \*
- Hydraulic isolator separates priming water from pumping water for faster priming, more turbulent-free flow and increased efficiency
- Union connectors included for connecting directly to 2.5 in. or 3 in. plumbing
- Extra large, robust basket with smooth surface for easy debris removal
- Easy-carry handle; easily removable ergonomic lock ring; and see-through lid for easy basket inspection
- Three Phase XF pumps are compatible with Pentair's Acu Drive XS VFD's
- Optional riser base for Challenger pump replacements, part #400012 available separately

#### CALIFORNIA PROPOSITION 65 WARNING

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 ⚠️ **AVERTISSEMENT:** Peut Causer le Cancer et des Dommages au Système Reproducteur.  
 ⚠️ **ADVERTENCIA:** Cáncer y Daño Reproductivo.  
[www.p65warnings.ca.gov](http://www.p65warnings.ca.gov) PN 20151A

### Ordering Information

Product	Model	Voltage	Full Load Amps	HP	SF	SFHP	Primary Listings and Certifications <sup>4</sup>	Port Size (NPT)	Carton Wt. (Lbs.)	Curve Key
<b>TEFC SUPER-DUTY SINGLE SPEED</b>										
023032	XPET-8	208V-230V	11.0-9.5	2	1.30	2.60	UL <sup>1</sup> , NSF <sup>2</sup>	2-1/2 x 2-1/2" OR 3 x 3"	57	D
023033	XPET-12	208V-230V	14.6-12.7	3	1.15	3.45	UL <sup>1</sup> , NSF <sup>2</sup>	2-1/2 x 2-1/2" OR 3 x 3"	61	B
023034	XPET-20	208V-230V	20.0-18.8	5	1.0	5.0	UL <sup>1</sup> , NSF <sup>2</sup>	2-1/2 x 2-1/2" OR 3 x 3"	67	A
<b>EFFICIENT SINGLE SPEED FULL RATED</b>										
023009	XPE-8	208V-230V	11.0-10.2	2	1.30	2.60	UL <sup>1</sup> , NSF <sup>2</sup>	2-1/2 x 2-1/2" OR 3 x 3"	55	D
023010	XPE-12	208V-230V	15.0-13.6	3	1.15	3.45	UL <sup>1</sup> , NSF <sup>2</sup>	2-1/2 x 2-1/2" OR 3 x 3"	60	B
023011	XPE-20	208V-230V	22.0-23.0	5	1.0	5.0	UL <sup>1</sup> , NSF <sup>2</sup>	2-1/2 x 2-1/2" OR 3 x 3"	72	A
<b>STANDARD SINGLE SPEED</b>										
023012	XP-8	208V-230V	11.5-11.0	2	1.30	2.60	UL <sup>1</sup> , NSF <sup>2</sup>	2-1/2 x 2-1/2" OR 3 x 3"	55	D
023013	XP-12	230V	14.1	3	1.15	3.45	UL <sup>1</sup> , NSF <sup>2</sup>	2-1/2 x 2-1/2" OR 3 x 3"	60	C
<b>EFFICIENT TWO-SPEED FULL RATED</b>										
023007	XPDS-8	230V	11.0/1.8	2.0/0.25	1.30	2.6/0.33	UL <sup>1</sup> , NSF <sup>2</sup> , APSP <sup>3</sup>	2-1/2 x 2-1/2" OR 3 x 3"	55	D, F
023008	XPDS-12	230V	15.0/2.6	3.0/0.38	1.15	3.45/0.44	UL <sup>1</sup> , NSF <sup>2</sup> , APSP <sup>3</sup>	2-1/2 x 2-1/2" OR 3 x 3"	60	B, E
<b>EFFICIENT TWO-SPEED UP RATED</b>										
023026	XPDS-30	230V	11.0/1.8	2.5/1.31	1.04	2.6/0.32	UL <sup>1</sup> , NSF <sup>2</sup> , APSP <sup>3</sup>	2-1/2 x 2-1/2" OR 3 x 3"	60	D, F
<b>STANDARD SINGLE SPEED UP RATED</b>										
023027	XP-30	208-230V	11.5-11.0	2.5	1.04	2.6	UL <sup>1</sup> , NSF <sup>2</sup>	2-1/2 x 2-1/2" OR 3 x 3"	55	D
<b>EFFICIENT SINGLE SPEED UP RATED</b>										
023028	XPE-30	208-230V	11.0-10.2	2.5	1.04	2.6	UL <sup>1</sup> , NSF <sup>2</sup>	2-1/2 x 2-1/2" OR 3 x 3"	55	D
<b>THREE-PHASE SUPER-DUTY</b>										
023017	XPX-8	208-230V/460V	7.5-7.2/3.6	2	1.3	2.6	UL <sup>1</sup> , NSF <sup>2</sup>	2-1/2 x 2-1/2" OR 3 x 3"	60	I
023018	XPX-12	208-230V/460V	9.8-9.4/4.7	3	1.15	3.45	UL <sup>1</sup> , NSF <sup>2</sup>	2-1/2 x 2-1/2" OR 3 x 3"	60	H
023019	XPX-20	208-230V/460V	13.9-13.1/6.6	5	1.0	5.0	UL <sup>1</sup> , NSF <sup>2</sup>	2-1/2 x 2-1/2" OR 3 x 3"	72	G
<b>ACCESSORIES</b>										
400012	XF Riser Base - Simplifies installation of XF-series pumps in applications where Challenger pumps are being replaced.									

<sup>1</sup> 'UL' indicates that pump bears a UL mark signifying evaluation to U.S. Standards UL1081 for Permanently Connected Swimming Pool and Spa Pumps and to Canadian Standards CAN/CSA C22.2 No. 108-01 Liquid Pumps For Swimming Pools Only (Enclosure 3).

<sup>2</sup> 'NSF' indicates that pump bears a mark signifying evaluation to NSF Standard 50 For Self-Priming Centrifugal Pumps For Swimming Pools, Spas and Hot Tubs.

<sup>3</sup> 'APSP' Pump has been evaluated to ANSI/APSP/ICC-15 and California Title 20 and is certified to use on Residential Swimming Pool Filtration Systems.

<sup>4</sup> Product may have been evaluated to other state and local regulatory standards. Listing status may change. Always confirm status with appropriate agency if in doubt.

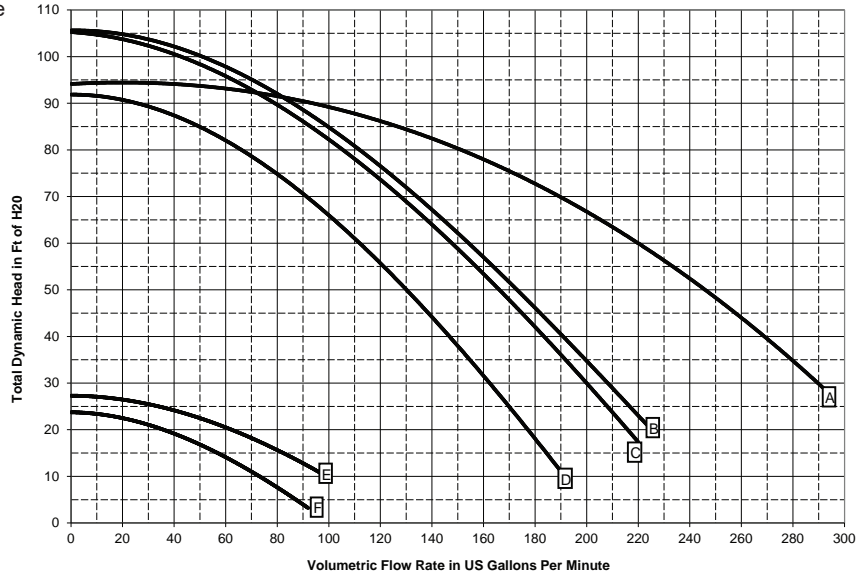
• **Pumps and replacement motors that are single speed and one (1) Total HP or greater cannot be sold, offered for sale, or installed in a residential pool filtration use in California, Title 20 CCR sections 1601-1609.**

# MAX-E-PROXF<sup>®</sup>

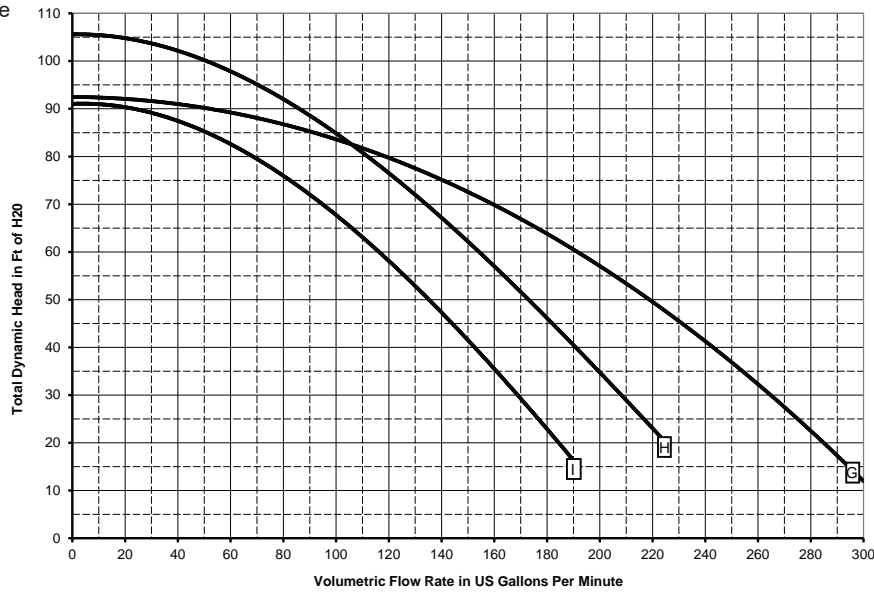
## HIGH PERFORMANCE PUMPS (CONT'D)

### Dimensions and Performance

1 & 2-Speed Performance Curve

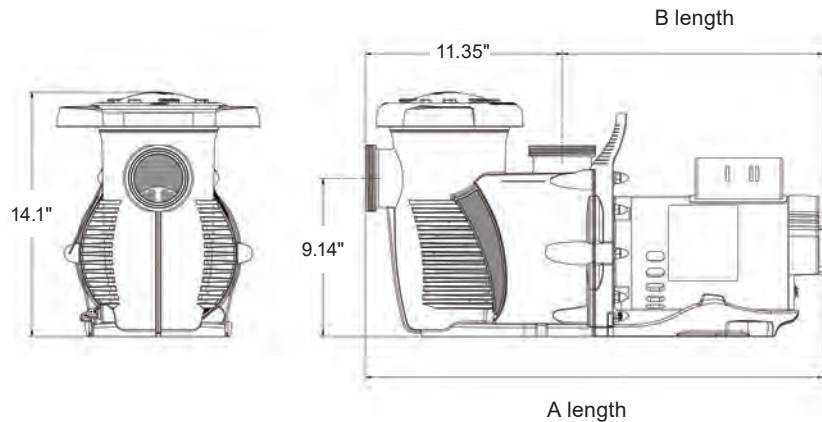


3 Phase Performance Curve



B- VARYING LENGTH				
HP	STD EFF	EE	1PH TEFC	3PH
2	15.04"	16.04"	13.05"	12.35"
2.5	15.04"	16.04"	-	-
3	16.04"	16.29"	13.65"	13.05"
5	-	16.78"	14.55"	13.88"

A- VARYING LENGTH				
HP	STD EFF	EE	1PH TEFC	3PH
2	26.39"	27.39"	24.40"	23.70"
2.5	26.39"	27.39"	-	-
3	27.39"	27.64"	25.00"	24.40"
5	-	28.13"	25.90"	25.23"





# MAX-E-PRO®

## HIGH-EFFICIENCY POOL/SPA PUMPS



### TRADEGRADE

Max-E-Pro Pump



CALIFORNIA PROPOSITION 65 WARNING  
 ⚠️ **WARNING:** Cancer and Reproductive Harm.  
 ⚠️ **AVERTISSEMENT:** Peut Causer le Cancer et des Dommages au Système Reproducteur.  
 ⚠️ **ADVERTENCIA:** Cáncer y Daño Reproductivo.  
[www.p65warnings.ca.gov](http://www.p65warnings.ca.gov) PR201914



#### Featured Highlights

- Typical Installation – Inground pools, pool/spa combinations, inground spas, fountains and water features
- Easy-to-Install – 2 in. ports include external and internal threads for more plumbing options
- Superior Hydraulic Design – Moves larger volumes of water, resulting in lower operating costs
- Impeller Manufactured with PPO Resin – Withstands the toughest water environments
- EDPM Rubber Shaft Seal – Longer-lasting seal stands up to the harshest environments
- Self-lubricating Lid O-ring – Does not require lubricant

**P6 & 5P6R SERIES** – High efficiency, low maintenance and maximum performance—all the features demanded by today’s pool professionals. The Max-E-Pro pump has our new Quick-Lock™ Trap Cover Ring and the 2 in. ports incorporate internal and external threads. Available in single- and two-speed models, with ratings from 1/2 to 3 HP. **Built with quality construction** using a durable one-piece pump housing constructed of industry leading glass-reinforced composite resin. **Fast cleaning** with a new Quick-Lock trap cover ring permits fast access to strainer basket. Large see-through lid makes it simple to check for debris. A **strong, sturdy**, specially-designed base dampens sound and vibration, making the Max-E-Pro pump one of the quietest pumps in its class.

### Ordering Information

Product	Voltage	Full Load Amps	HP	SF	SFHP	Primary Listings and Certifications <sup>3</sup>	Port Size (NPT)	Carton Wt. (Lbs.)	Curve Key
<b>TEFC SUPER-DUTY SINGLE SPEED</b>									
348150	115/208-230	15.1/8.5-7.7	1	1.65	1.65	UL <sup>1</sup> , NSF <sup>2</sup>	2 in. x 2 in.	48	N
348151	208-230	10.3-9.1	1-1/2	1.47	2.21	UL <sup>1</sup> , NSF <sup>2</sup>	2 in. x 2 in.	51	F
348152	208-230	11.7-10.3	2	1.3	2.6	UL <sup>1</sup> , NSF <sup>2</sup>	2 in. x 2 in.	54	G
348153	208-230	14.6-12.7	3	1.15	3.45	UL <sup>1</sup> , NSF <sup>2</sup>	2 in. x 2 in.	58	H
<b>EFFICIENT SINGLE SPEED FULL RATED</b>									
P6E6C-204L	115/208-230	11/5.5	1/2	1.90	0.95	UL <sup>1</sup> , NSF <sup>2</sup> , <b>APSP<sup>3</sup></b>	2 in. x 2 in.	46	C
P6E6D-205L	115/208-230	13.8/6.9	3/4	1.65	1.23	UL <sup>1</sup> , NSF <sup>2</sup>	2 in. x 2 in.	47	D
P6E6E-206L	115/208-230	16/8	1	1.65	1.65	UL <sup>1</sup> , NSF <sup>2</sup>	2 in. x 2 in.	49	E
P6E6F-207L	230	10.4	1-1/2	1.47	2.20	UL <sup>1</sup> , NSF <sup>2</sup>	2 in. x 2 in.	55	F
P6E6G-208L	230	11.2	2	1.30	2.60	UL <sup>1</sup> , NSF <sup>2</sup>	2 in. x 2 in.	57	G
P6E6H-209L	230	15.0	3	1.15	3.45	UL <sup>1</sup> , NSF <sup>2</sup>	2 in. x 2 in.	62	H
<b>EFFICIENT SINGLE SPEED UP RATED</b>									
P6EA6E-205L	115/208-230	13.8/6.9	1	1.25	1.25	UL <sup>1</sup> , NSF <sup>2</sup>	2 in. x 2 in.	46	D
P6EA6F-206L	115/208-230	16/8	1-1/2	1.10	1.65	UL <sup>1</sup> , NSF <sup>2</sup>	2 in. x 2 in.	48	E
P6EAA6F-216L	230	10.4	1-3/4	1.25	1.93	UL <sup>1</sup> , NSF <sup>2</sup>	2 in. x 2 in.	54	F
P6EA6G-207L	230	10.4	2	1.10	2.20	UL <sup>1</sup> , NSF <sup>2</sup>	2 in. x 2 in.	54	F
P6EAA6G-208L	230	11.2	2-1/2	1.00	2.50	UL <sup>1</sup> , NSF <sup>2</sup>	2 in. x 2 in.	57	G
<b>STANDARD SINGLE SPEED FULL RATED</b>									
P6R6D-205L	115/208-230	13.2/6.2-6.6	3/4	1.65	1.25	UL <sup>1</sup> , NSF <sup>2</sup>	2 in. x 2 in.	40	D
P6R6E-206L	115/208-230	16.0/7.8-8.0	1	1.65	1.65	UL <sup>1</sup> , NSF <sup>2</sup>	2 in. x 2 in.	45	E
P6R6F-207L	115/208-230	21.0/10.0-10.5	1-1/2	1.47	2.20	UL <sup>1</sup> , NSF <sup>2</sup>	2 in. x 2 in.	51	F
P6R6G-208L	208-230	11.5-11.0	2	1.30	2.60	UL <sup>1</sup> , NSF <sup>2</sup>	2 in. x 2 in.	53	G
P6R6H-209L	230	14.1	3	1.15	3.45	UL <sup>1</sup> , NSF <sup>2</sup>	2 in. x 2 in.	58	H

# MAX-E-PRO®

## HIGH-EFFICIENCY POOL/SPA PUMPS (CONT'D)

### Ordering Information

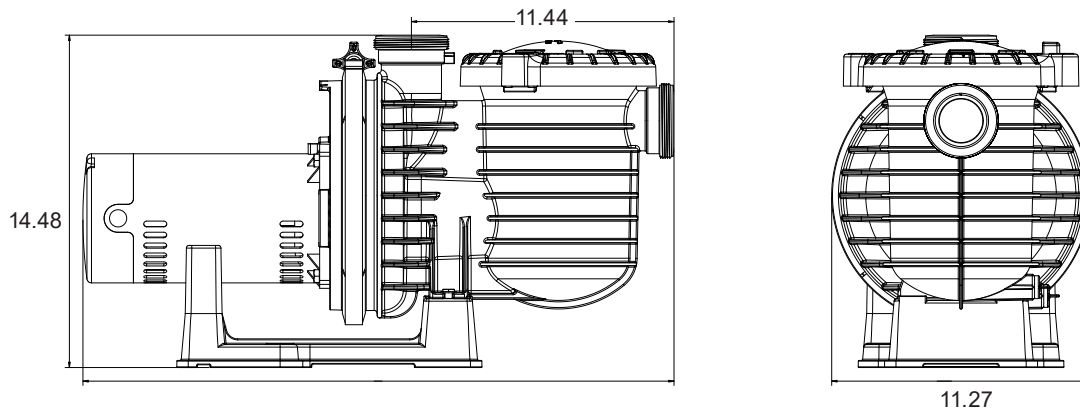
Product	Voltage	Full Load Amps	HP	SF	SFHP	Primary Listings and Certifications <sup>4</sup>	Port Size (NPT)	Carton Wt. (Lbs.)	Curve Key
<b>50 HZ ENERGY EFFICIENT SINGLE SPEED - 3 PHASE</b>									
5P6R6D3-209	220-240/380-415	3.6/2.1	3/4	1.27	.95		2 in. x 2 in.	38	I
5P6R6E3-210	220-240/380-415	4.0/2.3	1	1.25	1.25		2 in. x 2 in.	40	J
5P6R6F3-211	220-240/380-415	5.15/3.0	1-1/2	1.10	1.65		2 in. x 2 in.	47	K
5P6R6G3-212	220-240/380-415	6.6/3.8	2	1.10	2.20		2 in. x 2 in.	49	L
5P6R6H3-213	220-240/380-415	8.0/4.7	3	1.00	3.00		2 in. x 2 in.	58	M
<b>ACCESSORIES</b>									
77703-0100	2 in. Union Half x 1-1/2 in. FPT – Package Of Two							1	
77703-0101	2 in. Union Half x 1-1/2 in. Slip – Package Of Two							1	
PKG 188	2 in. Union Half x 2 in. Slip – Package Of Two							1	
PKG 189	2 in. Union Half x 2 in. FPT – Package Of Two							1	

<sup>1</sup> 'UL' indicates that pump bears a specific UL mark signifying evaluation to U.S. Standards UL1081 for Permanently Connected Swimming Pool and Spa Pumps and to Canadian Standards CAN/CSA C22.2 No. 108-01 Liquid Pumps For Swimming Pools And Spas. (Enclosure 3).

<sup>2</sup> 'NSF' indicates that pump bears a mark signifying evaluation to NSF Standard 50 For Self-Priming Centrifugal Pumps For Swimming Pools, Spas and Hot Tubs.

<sup>3</sup> 'APSP' Pump has been evaluated to ANSI/APSP/ICC-15 and California Title 20 and is certified to use on Residential Swimming Pool Filtration Systems.

<sup>4</sup> Product may have been evaluated to other state and local regulatory standards. Listing status may change. Always confirm status with appropriate agency if in doubt.

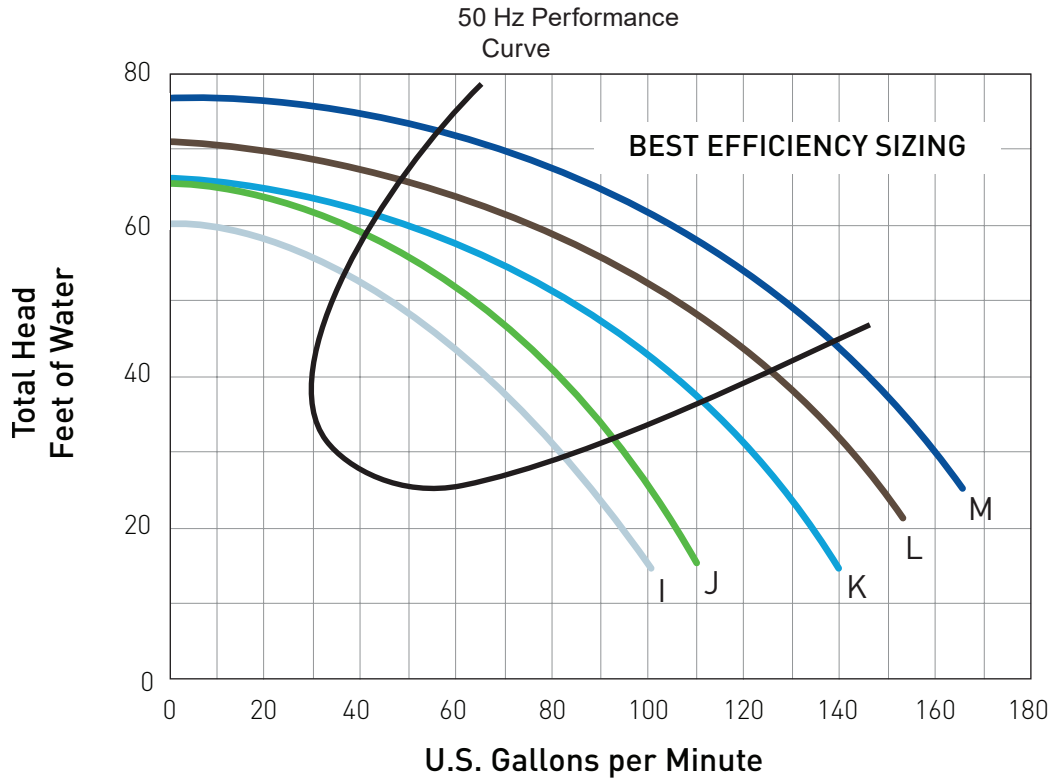
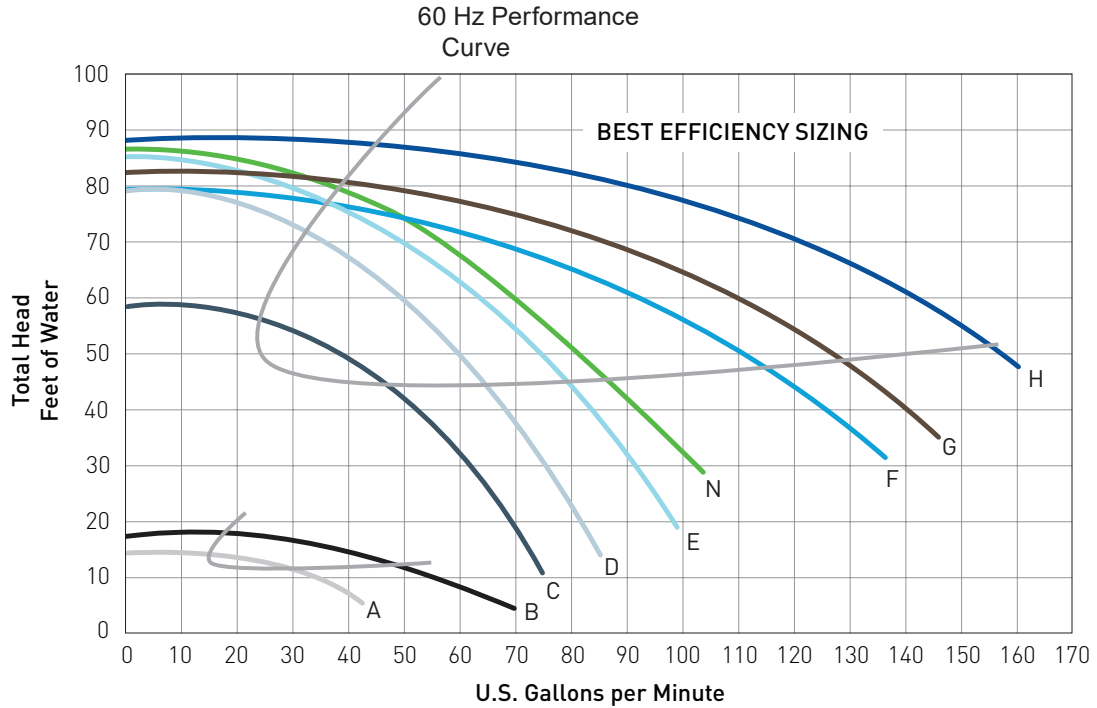


A- VARYING LENGTH			
HP	STD EFF	EE	3PH TEFC
.5	26.92		
.75	26.92		
1	27.29	28.45	24.76
1.5	28.92	28.45	24.76
2	28.92	29.08	25.17
3.0	28.92	29.08	25.87

# MAX-E-PRO<sup>®</sup>

## HIGH-EFFICIENCY POOL/SPA PUMPS (CONT'D)

### Dimensions and Performance



# INTELLIPROXF<sup>®</sup> VSF HIGH PERFORMANCE PUMP



TRADEGRADE



IntelliProXF VSF  
Pump



## Featured Highlights

- Eight programmable speed or flow settings and built-in timer
- Rotatable keypad with optional wall mount kit (sold separately)
- Top-mounted field wiring compartment is easier to access and connect
- Totally enclosed fan-cooled design keeps motor shielded from the elements for extended life
- Menus are easier than ever to use
- Union connectors included for connecting directly to 2.5" or 3" plumbing
- Precisely maintains system flow requirements
- Compatible with Pentair Automation
- WEF 5.6 THP 3.95

This product may be protected by one or more of the following US Patents and all corresponding foreign counterparts: 7,686,587; 7,854,597; 8,043,070; 8,469,675; 8,573,952; D568,340; D606,562; D611,430

IntelliProXF VSF pump is the first variable speed and flow pump that adjusts to changes in flow system conditions to maintain its programmed flow rate. With its available performance and efficiency, it is perfectly suited for large and feature rich pools with high flow demand.

### CALIFORNIA PROPOSITION 65 WARNING

⚠ **WARNING:** Cancer and Reproductive Harm.  
 ⚠ **AVERTISSEMENT:** Peut Causer le Cancer et des Dommages au Système Reproducteur.  
 ⚠ **ADVERTENCIA:** Cáncer y Daño Reproductivo.  
[www.p65warnings.ca.gov](http://www.p65warnings.ca.gov)

## Ordering Information

Product	Model	Voltage	Full Load Amps	kW	HP	SF	SFHP	FREQ.	Primary Listings and Certifications <sup>4</sup>	Port Size (NPT)	Carton Wt. (Lbs.)
<b>INTELLIPROXF VSF VARIABLE SPEED AND FLOW PUMP</b>											
023056	IntelliProXF VSF	230	16	3.2	3	1.32	3.95	50HZ/60HZ	UL <sup>1</sup> , NSF <sup>2</sup> , APSP <sup>3</sup>	2.5 in. x 2.5 in. OR 3 in. X 3in.	58
<b>ACCESSORIES</b>											
400012	XF Riser Base - Simplifies installation of XF-series pumps in applications where Challenger pumps are being replaced.										
521109	IntelliCom 2 - Rated 9 - 30 V DC with 4 inputs										1
350122	Communication Cable - 50 ft. - Included with pump										2
356905Z	Keypad Relocation Kit										1

<sup>1</sup> 'UL' indicates that pump bears a UL mark signifying evaluation to U.S. Standards UL1081 for Permanently Connected Swimming Pool and Spa Pumps and to Canadian Standards CAN/CSA C22.2 No. 108-01 Liquid Pumps For Swimming Pools Only (Enclosure 3).

<sup>2</sup> 'NSF' indicates that pump bears a mark signifying evaluation to NSF Standard 50 For Self-Priming Centrifugal Pumps For Swimming Pools Only.

<sup>3</sup> 'APSP' Pump has been evaluated to ANSI/APSP/ICC-15 and California Title 20 and is certified to use on Residential Swimming Pool Filtration Systems.

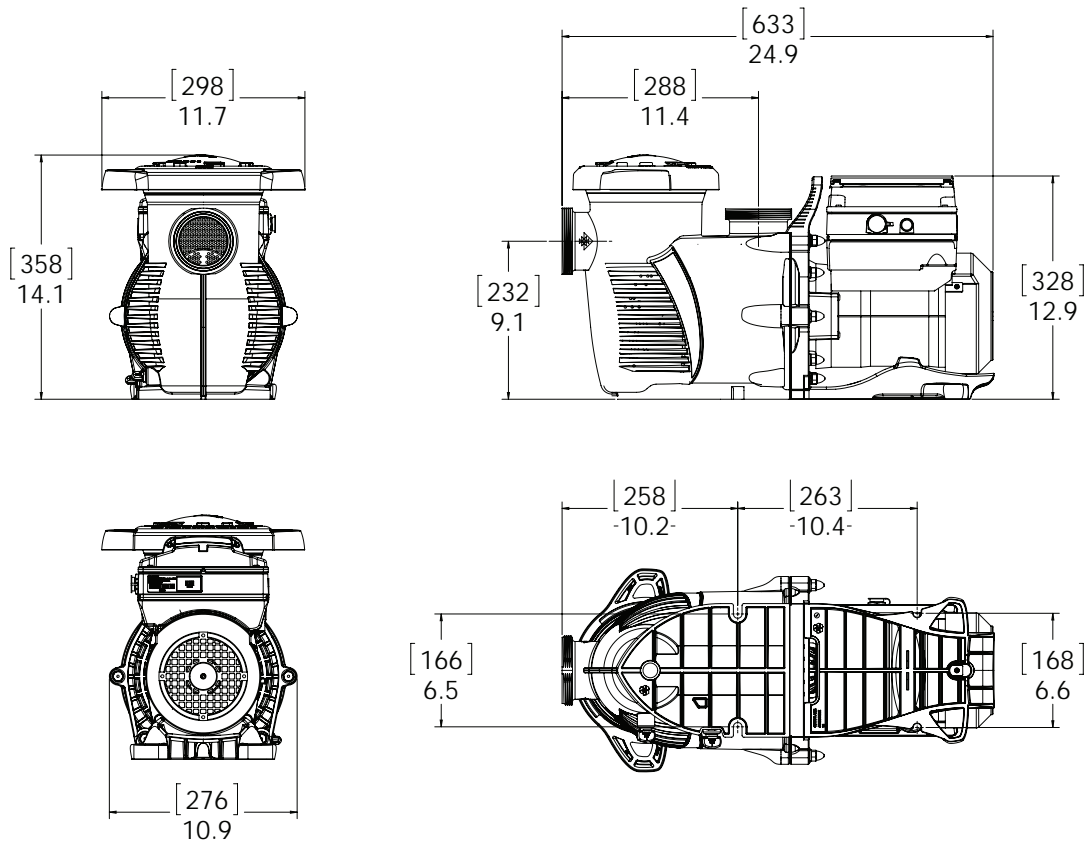
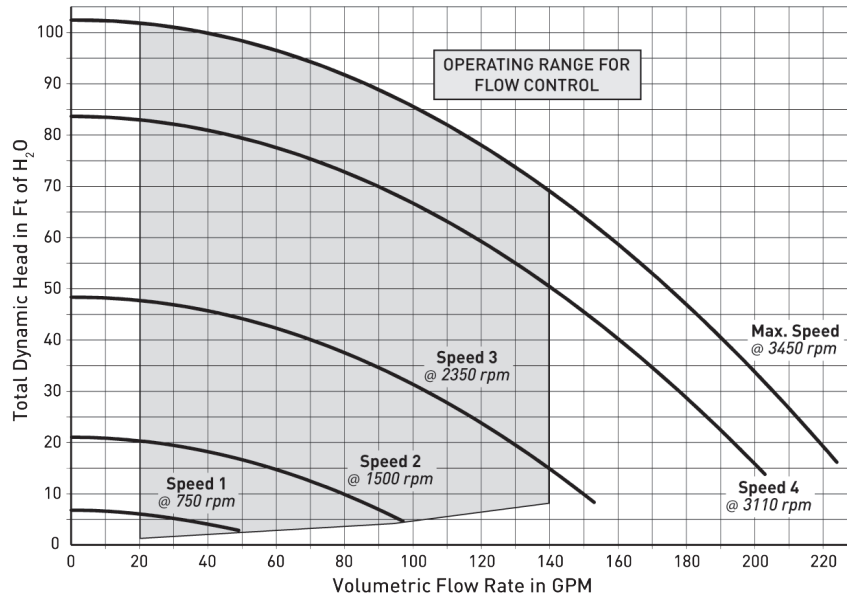
<sup>4</sup> Product may have been evaluated to other state and local regulatory standards. Listing status may change. Always confirm status with appropriate agency if in doubt.

Refer to catalog page 18 for a selection of 2-Pole GFCI breakers which offer 6 milliamp personnel protection while meeting 2008 to current NEC Standards for Pool Pumps.



# INTELLIPROXF<sup>®</sup> VSF HIGH PERFORMANCE PUMP (CONT'D)

## Dimensions and Performance\*



# INTELLIPRO® VS+SVRS HIGH PERFORMANCE PUMPS



IntelliPro VS+SVRS  
Variable Speed Pump



This product may be protected by one or more of the following US Patents and all corresponding foreign counterparts: 7,686,587; 7,854,597; D611,430; D606,562; 8,313,306; 8,602,743; 8,469,675; 8,573,952; 8,602,745; 8,043,070; 9,243,413

IntelliPro pumps combine variable speed technology, onboard digital intelligence and permanent magnet motors (used in hybrid cars) to reduce pump-related energy costs by up to 90%. The IntelliPro VS+SVRS pump models were the first swimming pool pumps to feature a built-in Safety Vacuum Release System that detects drain blockage and automatically shuts the pump off.

CALIFORNIA PROPOSITION 65 WARNING

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 ⚠️ **ADVERTENCIA:** Cáncer y Daño Reproductivo.  
[www.p65warnings.ca.gov](http://www.p65warnings.ca.gov) PB 201714

### Featured Highlights

- Ability to program exact pump speeds for specific operations – filtering, heating, cleaning, spa jets, water features and more
- SVRS complies with Virginia Graeme Baker Safety Act
- Built-in diagnostics protect the IntelliPro pump from the most common causes of premature failure – overheating, freezing, and voltage irregularities.
- Includes priming protection. No SVRS calibrations needed. Built-in SVRS cannot be turned off.
- Safety lock-out feature (password protected) prevents pump speed settings from being changed by unauthorized personnel
- Ability to set minimum and maximum speeds so pump will only operate within the ranges set to help assure safe operation and long life
- Compatible with Pentair Automation Systems
- Compliant with the current ASME A112.19.17 standard for Safety Vacuum Release Systems (SVRS)
- WEF 6.1 THP 3.95

## Ordering Information

Product	Model	Voltage	Full Load Amps	kW	HP	SF	SFHP	FREQ.	Primary Listings and Certifications <sup>6</sup>	Port Size(NPT)	Carton Wt.(Lbs.)
<b>INTELLIPRO VS+ SVRS VARIABLE SPEED WITH SAFETY VACUUM RELEASE SYSTEM</b>											
013002	IntelliPro VS+SVRS	230	16	3.2	3	1.32	3.95	50hz/60hz	UL <sup>1</sup> , NSF <sup>2</sup> , CSA <sup>3</sup> , ASME <sup>4</sup> , ETL APSP <sup>5</sup>	2 in. x 2 in.	55
<b>ACCESSORIES</b>											
521109	IntelliCom 2 - Rated 9 - 30 V DC with 4 inputs										1
350122	Communication Cable - 50 ft. - Included with pump										2
350250Z	SVRS KIT - Allows use of discharge check valves with SVRS pump										1
356905Z	Optional Keypad Wall Mount Kit										
<b>UNIONS</b>											
11201-0154	2 in. x 2 in. Union (2 in. NPT male x 2 in. female NPT quick connect)									* Note: two required per pump (sold individually)	2

<sup>1</sup> 'UL' indicates that pump bears a UL mark signifying evaluation to U.S. Standards UL1081 for Permanently Connected Swimming Pool and Spa Pumps and to Canadian Standards CAN/CSA C22.2 No. 108-01 Liquid Pumps For Swimming Pools Only (Enclosure 3).

<sup>2</sup> 'NSF' indicates that pump bears a mark signifying evaluation to NSF Standard 50 For Self-Priming Centrifugal Pumps For Swimming Pools Only.

<sup>3</sup> 'CSA' indicates that pump bears a CSA mark signifying evaluation to Canadian Standards CAN/CSA C22.2 No. 108-01 Liquid Pumps For Swimming Pools Only (Enclosure 3).

<sup>4</sup> 'ASME' indicates that pump bears a specific mark signifying evaluation to ASME/ANSI Standard A.112.19.17 Manufactured Safety Vacuum Relief System (SVRS).

<sup>5</sup> 'APSP' Pump has been evaluated to ANSI/APSP/ICC-15 and California Title 20 and is certified to use on Residential Swimming Pool Filtration Systems.

<sup>6</sup> Product may have been evaluated to other state and local regulatory standards. Listing status may change. Always confirm status with appropriate agency if in doubt.

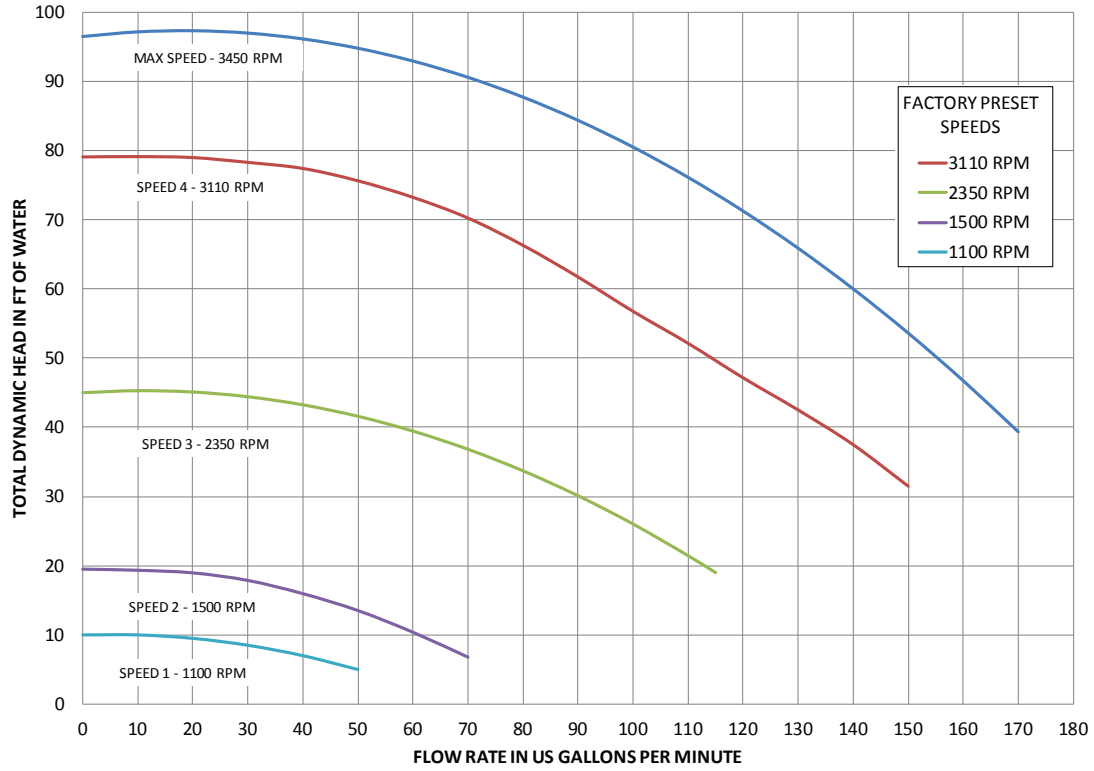
Note: Pump must be used with current collectors when installed on spas or hot tubs in Canada.

Refer to catalog page 18 for a selection of 2-Pole GFCI breakers which offer 6 milliamp personnel protection while meeting 2008 to Current NEC Standards for Pool Pumps.

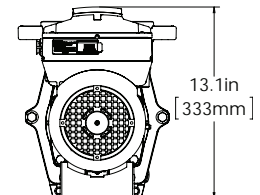
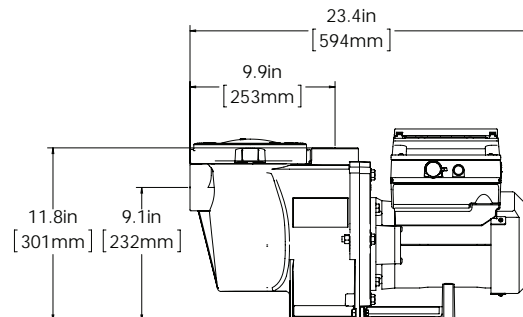
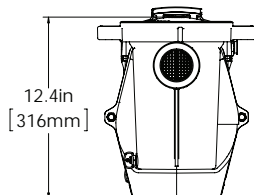
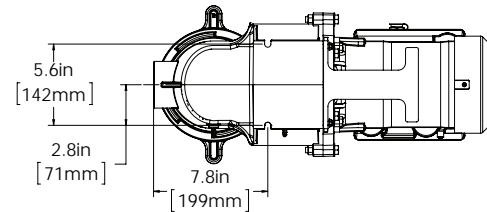
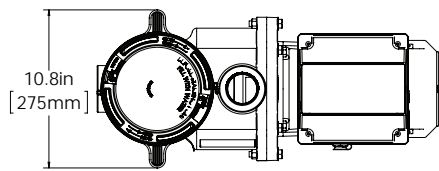
• Savings based on variable speed pump compared to a single-speed pump running 12 hours per day at an average of \$0.16 per kWh in a 20,000 gallon pool. Actual savings may vary based on local utility rates, pool size, pump run time, pump horsepower, pump rpm, plumbing size and length, pump model, service factor and other hydraulic factors

# INTELLIPRO® VS+SVRS HIGH PERFORMANCE PUMPS (CONT'D)

## Dimensions and Performance



\* IntelliPro VS+SVRS minimum speed is 1100 RPM



# PS SERIES™ IN-LINE STRAINER

## FOR COMMERCIAL SERIES PUMPS

### Featured Highlights

- Superior design for hydraulic performance
- Clear lid with easy access allows for simple visibility of debris
- Extra large stainless steel strainer basket
- 50 psi rating
- NSF listed



PS Series In-Line Strainer

CALIFORNIA PROPOSITION 65 WARNING  
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 ⚠️ **ADVERTENCIA:** Cáncer y Daño Reproductivo.  
[www.p65warnings.ca.gov](http://www.p65warnings.ca.gov) PS2018A

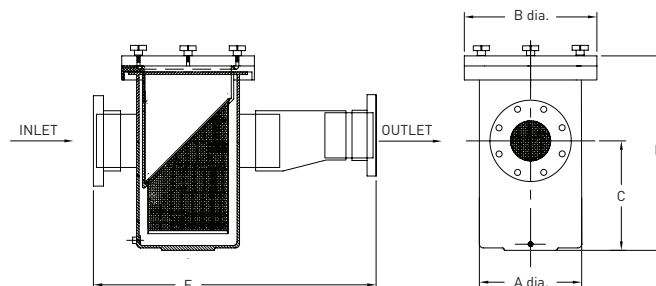
The PS Series In-Line Strainers from Pentair Commercial Aquatics are designed for ease of installation and hydraulic efficiencies in commercial aquatics applications. In three standard sizes and with the addition of eccentric reducers PS Series strainers fit with almost any plumbing configuration. The design of the PS Series accommodates the high-flow performance in a variety of applications. ANSI flange bolt pattern allows for ease of installation and peace of mind.

### Ordering Information

Product	Description	Flange Size		Typical Max. Flow (GPM)	A (Inches)	B (Inches)	C (Inches)	D (Inches)	E (Inches)
		Inlet (suction)	Outlet (pump)						
<b>PS SERIES 6 INCH SUCTION</b>									
PS6X6	Straight	6 in.	6 in.	540	12-3/4 in.	16-1/2 in.	13-5/8 in.	25-1/2 in.	23-5/8 in.
PS6X5E	Eccentric Reducing	6 in.	5 in.	540	12-3/4 in.	16-1/2 in.	13-5/8 in.	25-1/2 in.	35-1/4 in.
PS6x4E	Eccentric Reducing	6 in.	4 in.	540	12-3/4 in.	16-1/2 in.	13-5/8 in.	25-1/2 in.	32-7/8 in.
PS6X3E	Eccentric Reducing	6 in.	3 in.	540	12-3/4 in.	16-1/2 in.	13-5/8 in.	25-1/2 in.	38 in.
<b>PS SERIES 8 INCH SUCTION</b>									
PS8X8	Straight	8 in.	8 in.	930	12-3/4 in.	16-1/2 in.	13-5/8 in.	25-1/2 in.	23-3/8 in.
PS8X6E	Eccentric Reducing	8 in.	6 in.	930	12-3/4 in.	16-1/2 in.	13-5/8 in.	25-1/2 in.	35-7/8 in.
PS8X5E	Eccentric Reducing	8 in.	5 in.	930	12-3/4 in.	16-1/2 in.	13-5/8 in.	25-1/2 in.	43-1/2 in.
PS8X4E	Eccentric Reducing	8 in.	4 in.	930	12-3/4 in.	16-1/2 in.	13-5/8 in.	25-1/2 in.	41-1/4 in.
<b>PS SERIES 10 INCH SUCTION</b>									
PS10X10	Straight	10 in.	10 in.	1470	12-3/4 in.	16-1/2 in.	20-5/8 in.	32-1/2 in.	24-1/2 in.
PS10X8E	Eccentric Reducing	10 in.	8 in.	1470	12-3/4 in.	16-1/2 in.	20-5/8 in.	32-1/2 in.	38-3/4 in.
PS10X6E	Eccentric Reducing	10 in.	6 in.	1470	12-3/4 in.	16-1/2 in.	20-5/8 in.	32-1/2 in.	47 in.
PS10X5E	Eccentric Reducing	10 in.	5 in.	1470	12-3/4 in.	16-1/2 in.	20-5/8 in.	32-1/2 in.	54-1/2 in.
<b>STAINLESS STEEL REPLACEMENT BASKET</b>									
67150	PS6/PS8								
67152	PS10								

### Dimensions and Performance

1. Select inlet size based on size of suction pipe. Use chart above to determine Typical Max. Flow in pipe size based on flow velocity of 6 fps.
2. Select strainer outlet size to match pump inlet where practical.
3. Also available with custom flange sizes. Call factory for more information.



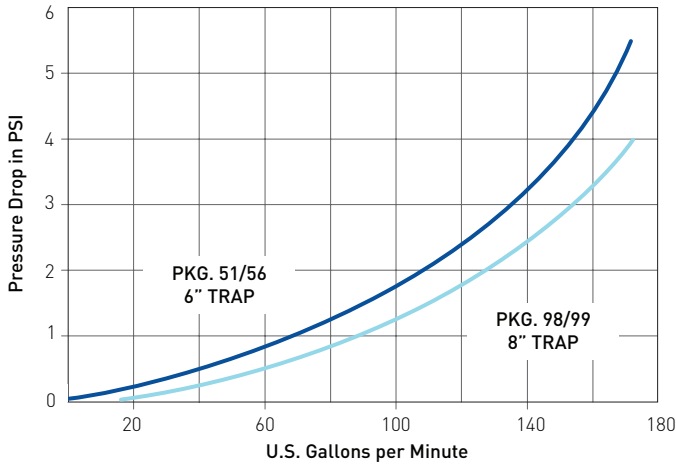


# HAIR AND LINT STRAINER PACKAGES



## Ordering Information

Product	Description	Suction Port Size	Carton Wt. (Lbs.)
<b>HAIR AND LINT STRAINER PACKAGES</b>			
PKG 115	5 in. Trap with Basket (For Dura-Glas, Max-E-Glas and JWP Pumps)	1-1/2 in. NPT	5
PKG 51	6 in. Cast Iron Trap with Basket (For C, CC, and D Series Pumps)	2 in. NPT	20
PKG 56	6 in. Bronze Trap with Basket (For C, CC, and D Series Pumps)	2 in. NPT	20
PKG 98	8 in. Cast Iron Trap with Basket (For C, CC, and D Series Pumps)	3 in. NPT	40
PKG 76	Cast Iron Flange for Remote Trap Install	3 in. NPT	4
PKG 161	6 in. PPO Resin Strainer (For P2R, PE Series, Dura-Glas and Max-E-Glas Pumps)	2 in. NPT	6
PKG 184	CSP Series Hair and Lint Strainer (1100 cu. in. capacity)	6 in. ANSI Flange	180
PKG 184C	CCSP Series Hair and Lint Strainer – Coated (1100 cu. in. capacity)	6 in. ANSI Flange	180



PKG 76



PKG 98 - 8 in.



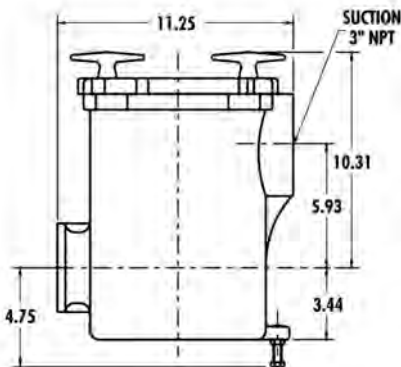
PKG 184 - 8 in.



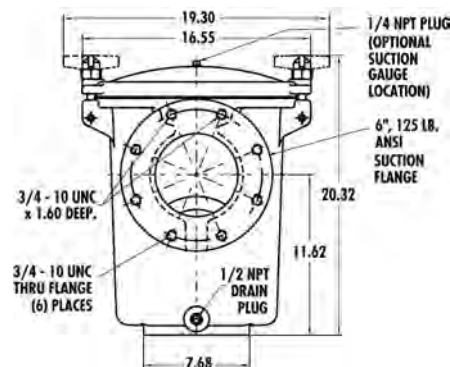
PKG 51 - 5 in. OR 6 in.

CALIFORNIA PROPOSITION 65 WARNING  
 ⚠️ **WARNING:** Cancer and Reproductive Harm.  
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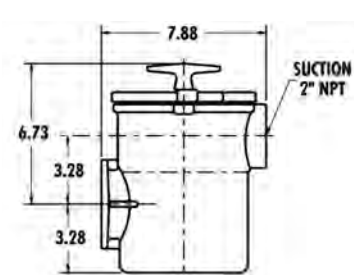
PKG 98/99 - 8 INCH TRAP



PKG 184/184C



PKG 51/56 - 6 INCH TRAP



# PCD-1000 SUBMERSIBLE PUMP

## STAINLESS STEEL SUBMERSIBLE POOL SERVICE PUMP

### Featured Highlights

- 115V, 60 Hz single phase, permanent split capacitor motor
- Automatic thermal overload protection
- Clog-resistant cast stainless steel impeller
- Accommodates water temperatures ranging from 32 degrees F to 130 degrees F
- Permanently lubricated ball bearings
- Equipped with 15-foot, 18/3 grounding type power cord
- Convenient top-mounted handle
- Rubber feet to eliminate scratching
- Optional float switch included



Submersible Pool Service Pump

The PCD-1000 submersible, portable, high capacity pump designed for use by the professional in draining pools and spas as well as for general purpose applications, now has improved flow rates, and stainless steel casing, suction strainer, impeller and shaft for greater corrosion resistance and longer service life. The PCD-1000 can pump water down to 1-3/8 inches in depth. Debris and stones up to 3/4 inch are able to pass through the pump. It also features a 1-1/4 inch discharge port for faster draining. Discharge port adapters are included. Optional float switch included; switch stops pump when low water level reached. Remove float switch for constant run.

Optional  
Float Switch  
Included



Adaptors included:

- 1-1/4 in. Female NPT Elbow
- 1-1/4 in. Male NPT to 1-1/2 in. Female NPT Adaptor



### Ordering Information

Product	Description	Voltage	Full Load Amps	HP	Carton Wt. (Lbs.)
<b>STAINLESS STEEL SUBMERSIBLE WITH BRASS BASE</b>					
PCD-1000	Submersible Utility Pump	115	6.4	3/4	15
<b>ACCESSORIES</b>					
ZBR46760	Replacement Float Switch				

### Dimensions and Performance

Model	HP	Motor Full Load (Amps)	RPM	Minimum Circuit Req.	Liquid Temperature Range	Switch Setting		Pumps Down To
						On	Off	
PCD-1000	3/4	6.4	3450	15 amps	32/130°F 0/54°C	12" 30 cm	6" 15.2 cm	1 3/8" 3.5 cm

Pump Performance TDH/GPM						Shut Off Head
TDH	5'	10'	15'	20'	25'	28
GPM	55	45.5	36.5	25	8.5	N/A

CALIFORNIA PROPOSITION 65 WARNING

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- ▲ **ADVERTENCIA:** Cáncer y Daño Reproductivo.

www.p65warnings.ca.gov.

PN200714





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# SANITIZERS







# BIOSHIELD® CLP UV DISINFECTION STERILIZER



Establishing a bio-secure swimming facility begins at the pool design stage. Low-pressure UV systems are a proven solution to harmful water borne pathogen problems and irritating chloramines. Pentair BioShield Commercial UV systems provide instant protection against Cryptosporidium, Giardia and remove chloramines.



**Certified to  
NSF/ANSI Standard 50**

CALIFORNIA PROPOSITION 65 WARNING  
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 ⚠️ **ADVERTENCIA:** Cáncer y Daño Reproductivo.  
 www.p65warnings.ca.gov. PK32074

## Micro-processor Standard Features

- Menu-Driven, Digital Interface
- Power Enclosure Over-Temp. Safety Shut-Down
- Vessel Over-Temp. safety Shut-Down
- Individual Lamp Status and Re-settable Hour Meter
- Master System Hour Meter
- Low-High Voltage Set-points/Shut-down
- Output Alarm Relay
- RS232 Data Port
- UV Intensity Monitor (1% - 100% Scale)
- Thermoplastic NEMA 12X Enclosure
- External Power Switch
- 10 or 20 Foot Lamp Cables
- Enclosure Cooling Fan
- Optional Features:
  - ◊ Water Flow Meter
  - ◊ ORP Meter
  - ◊ pH Meter
  - ◊ Ethernet Port
  - ◊ 4-20 milliamp Output Port
  - ◊ UV Dose Tracking
  - ◊ Data Logging

## Featured Highlights

- Energy efficient Low Pressure UV converts up to 30-40% energy into UV-C light
- Cost effective UV inhibited Schedule 80 PVC vessels stand up to UV degradation and corrosion caused by pool water
- Conserve free-chlorine by as much as 30% compared to Medium Pressure UV systems
- NSF certified with flow rates up to 2,335 GPM
- Quality American-made, low-pressure Amalgam UV lamps offer up to 12,000 hours of continuous operation
- Low temperature lamps conserve energy and negate the need for quartz sleeve wiper systems
- UL 508L Listed
- Single-end UV lamp and quartz sleeve access for easy servicing
- Choice of input / output piping connections
- Water-tight design protects all electrical hardware from water damage.
- Enhanced, state of the art electronic ballast, sized precisely to the lamp's power requirement, ensures optimal UV-C output and maximum useful lamp life
- Most effective and efficient UV-spectral power distribution



# BIOSHIELD® CLP

## UV DISINFECTION STERILIZER

### SIZING YOUR BIOSHIELD UV SYSTEM

1. Establishing flow rate requirements in GPM is critical to selecting the correct UV system for your application.
2. Know your UVT and dose requirement. UVT is the measure of UV-C light transmittance (254nm) in water. Contaminates and waterborne agents suspended in water will absorb UV light, preventing transmittance. Pentair has selected 90% UVT as a realistic measure of light transmittance in swimming pool water. Other manufacturers may use a higher UVT% which can greatly overrate flow capacity.

Dose is a factor of UV light intensity and contact time. Pentair calculates two average dose levels for pool applications as follows:

UV Dose	Commercial Application
40 mJ/cm <sup>2</sup>	Inactivation of Cryptosporidium and other chlorine tolerant pathogens
60 mJ/cm <sup>2</sup>	Additional breakdown of chloramines for greatly improved air and water quality.

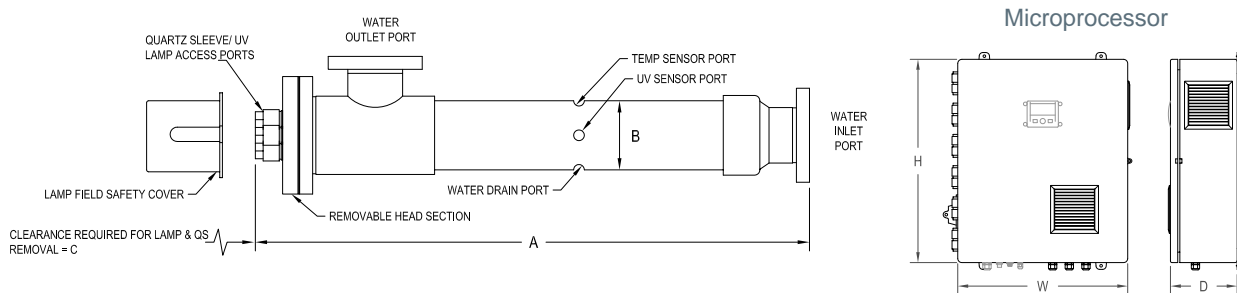
3. Choose your BioShield UV system model. Select desired dose column below. Identify maximum flow rate that meets system flow rate requirement. Complete this step for model CLP4 or CLP6 and with provided vessel and power enclosure dimensions, choose the best model suited for the mechanical space. \*Note max flow rate for desired port size on each model.

Model <sup>1</sup>	Lamps/Watts	UV-C Spectrum Output Watts	Max. Flow Rate at 90% UVT 40 mJ/cm <sup>2</sup> (GPM)	Max. Flow Rate at 90% UVT 60 mJ/cm <sup>2</sup> (GPM)	Port Size	Max. Flow for Port Size	Amps Max Load @ 120/230 VAC	UV Vessel Dimensions <sup>2</sup> (A x B x C)	Power Enclosure Dimensions (H x W x D)	Max. PSI
<b>CLP4</b>										
CLP41A6-XN	1/130	40	49	33	2"	-	2.1/1.0	56" x Ø6" x 47"	16" x 14" x 8.4"	150
CLP42A6-XN	2/130	80	90	60	2"	*64	3.9/2.0	56" x Ø6" x 47"	16" x 14" x 8.4"	150
					3"	-				
CLP43A6-XN	3/130	120	125	83	3"	-	5.8/2.9	56" x Ø6" x 47"	16" x 14" x 8.4"	150
CLP43A8-XN	3/130	120	167	111	3"	*144	5.8/2.9	62" x Ø8" x 51"	16" x 14" x 8.4"	150
					4"	-				
CLP44A8-XN	4/130	160	227	151	3"	*144	7.5/3.7	62" x Ø8" x 51"	20.2" x 16.3" x 8.4"	150
					4"	-				
CLP45A8-XN	5/130	200	272	181	4"	*251	9.4/4.7	62" x Ø8" x 51"	24.6" x 20.2" x 10.6"	150
					6"	-				
CLP46A10-XN	6/130	240	365	244	4"	*251	11.2/5.6	64" x Ø10" x 51"	24.6" x 20.2" x 10.6"	120
					6"	-				
CLP47A10-XN	7/130	280	430	287	6"	-	13.3/6.5	64" x Ø10" x 51"	24.6" x 20.2" x 10.6"	120
CLP47A12-XN	7/130	280	492	328	6"	-	13.3/6.5	69" x Ø12" x 51"	24.6" x 20.2" x 10.6"	90
CLP48A12-XN	8/130	320	555	369	6"	-	15.0/7.5	69" x Ø12" x 51"	30.5" x 24.1" x 12.6"	90
<b>CLP6 Only available 230V</b>										
CLP61A6-XN	1/320	98	113	75	2"	*64	1.6	85" x Ø6" x 76"	24.6" x 20.2" x 10.6"	150
					3"	-				
CLP62A6-XN	2/320	196	200	133	3"	*144	3.0	85" x Ø6" x 76"	24.6" x 20.2" x 10.6"	150
					4"	-				
CLP63A6-XN	3/320	294	279	186	4"	*251	4.5	85" x Ø6" x 76"	24.6" x 20.2" x 10.6"	150
					6"	-				
CLP63A8-XN	3/320	294	372	247	4"	*251	4.5	86" x Ø8" x 76"	24.6" x 20.2" x 10.6"	150
					6"	-				
CLP64A8-XN	4/320	392	505	336	6"	-	6.0	86" x Ø8" x 76"	24.6" x 20.2" x 10.6"	150
CLP65A8-XN	5/320	490	606	403	6"	*569	7.5	86" x Ø8" x 76"	24.6" x 20.2" x 10.6"	150
					8"	-				
CLP66A10-XN	6/320	588	814	542	6"	*569	9.0	88" x Ø10" x 76"	30.5" x 24.1" x 12.6"	120
					8"	-				
CLP67A10-XN	7/320	686	953	638	6"	*569	11.0	88" x Ø10" x 76"	30.5" x 24.1" x 12.6"	120
					8"	-				
CLP67A12-XN	7/320	686	1095	729	8"	*996	11.0	90" x Ø12" x 76"	30.5" x 24.1" x 12.6"	90
					10"	-				
CLP68A12-XN	8/320	784	1235	823	8"	*996	13.0	90" x Ø12" x 76"	30.5" x 24.1" x 12.6"	90
					10"	-				
CLP69A14-XN	9/320	882	1462	974	8"	*996	14.0	92" x Ø14" x 76"	30.5" x 24.1" x 12.6"	50
					10"	-				
CLP610A16-XN	10/320	980	1690	1127	10"	*1567	16.0	94" x Ø16" x 76"	30.5" x 24.1" x 12.6"	50
					12"	-				
CLP611A18-XN	11/320	1,078	1963	1308	10"	*1567	17.0	96" x Ø18" x 76"	40.4" x 32.5" x 12.6"	50
					12"	-				
CLP612A20-XN	12/320	1,176	2335	1555	10"	*1567	19.0	98" x Ø20" x 76"	40.4" x 32.5" x 12.6"	50
					12"	*2218				
					14"	-				

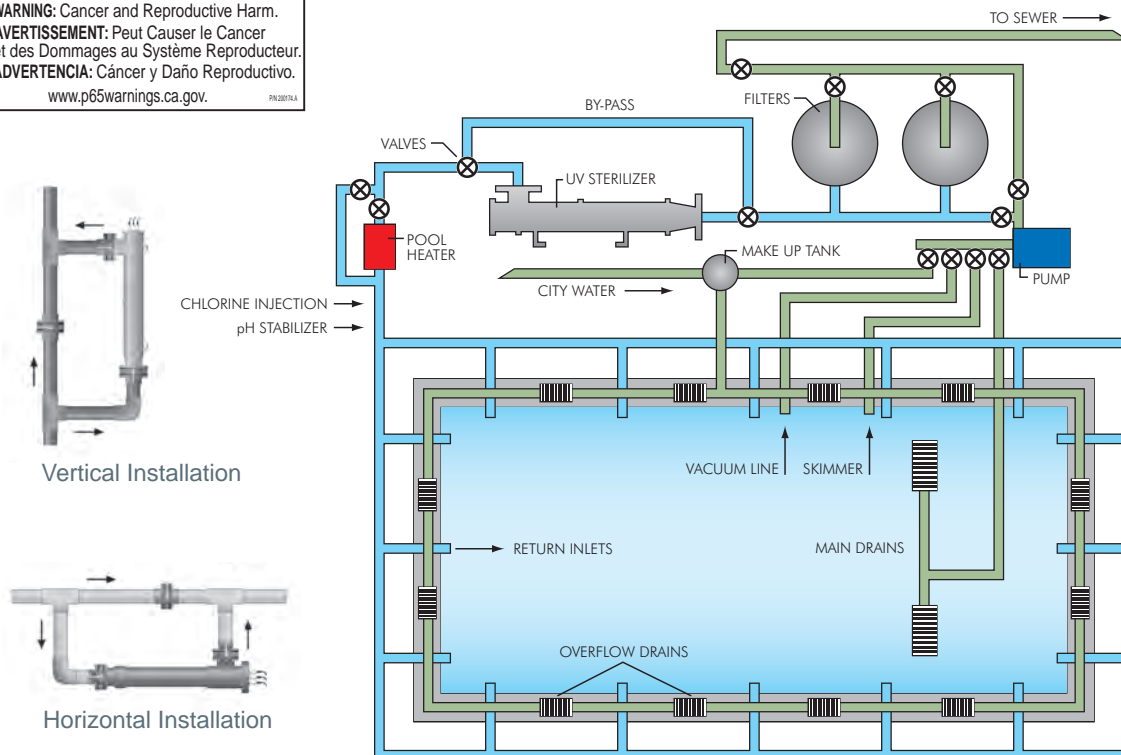
<sup>1</sup> When ordering: Replace 'X' in part number with requested flange size; eg. '2' for two-inch flange.

<sup>2</sup> Vessel Dimension "C" represents clearance requirement for glassware maintenance.

# BIOSHIELD® CLP UV DISINFECTION STERILIZER



**CALIFORNIA PROPOSITION 65 WARNING**  
 ⚠️ **WARNING:** Cancer and Reproductive Harm.  
 ⚠️ **AVERTISSEMENT:** Peut Causer le Cancer et des Dommages au Système Reproducteur.  
 ⚠️ **ADVERTENCIA:** Cáncer y Daño Reproductivo.  
[www.p65warnings.ca.gov](http://www.p65warnings.ca.gov)



Vertical Installation



Horizontal Installation

### BioShield UV Sterilizer Installation:

1. Position the BioShield UV Sterilizer after the pool filters so it receives solids-free water. This will ensure optimum Bio-Security against Recreation Water Illnesses such as Cryptosporidium, Giardia and E.Coli, while protecting the quartz sleeves and lamps from potential damage.
2. The NSF-50 certified BioShield UV Sterilizer vessel is equipped with various sensor ports (UV intensity and Water Over-Temperature Protection Sensors). All sensor ports are clearly labeled on the vessel based on their respective function. Additionally, the vessel is equipped with a 1/2" threaded drain port for installation of the Drain Valve Assembly.
3. For horizontal or vertical piping installation, it is recommended to install a piping bypass manifold(as shown) which will allow for BioShield UV Sterilizer removal from the filter-loop without disrupting water flow or filter operation. Isolation Valves are necessary for vessel removal and chemical cleaning procedure.
4. Always install BioShield UV Sterilizer's with the outlet port facing upward, allowing trapped air to escape. Trapped air can result in rupture or heat damage to the vessel.
5. Provide enough space around the electrical end of the BioShield UV Sterilizer to allow for easy removal of the UV lamp and quartz sleeves. A 46" clearance for CLP4 models and 76" clearance for CLP6 models is required.
6. Do not install or operate any UV system without thoroughly reading the operators manual.

# BIOSHIELD® CVP

## UV DISINFECTION STERILIZER



**Certified to  
NSF/ANSI Standard 50**

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### Featured Highlights

**System Features:**

- Enhanced, state-of-the-art electronic ballast, sized precisely to the lamp's power requirement, ensures optimal UV-C output and maximum "useful lamp life"
- Small footprint: vertical operation reduces required horizontal space
- Cost-effective Schedule 80 solvent welded PVC plastic vessels stand up to corrosive Chlorine environments.
- Single-End UV lamp and quartz sleeve access for easy servicing
- Watertight design protects all electrical hardware from water damage
- Highest-quality, low-pressure high-output UV lamps offer 12,000 hours of continuous operation (80% efficient after 12,000 hours)
- Choice of inlet/outlet port sizes
- Included Over-Temp System Shutdown Sensor shuts down the lamp field to avoid damage when water temperature inside the vessel exceeds 120° F
- 6-foot power cord and 20-foot lamp cables

When operating space is restricted, our vertical BioShield UV Systems provide the small footprint you need. These vertical models feature single-end, top-loading quartz sleeves to minimize space required and maximize serviceability. Each model is extremely durable and features a corrosion-resistant UV vessel and control panel. All models are designed to deliver optimum UV performance by utilizing the UV lamp's UV-C output to its maximum potential. BioShield UV Systems are water-tight and designed for indoor/outdoor use. Each model is equipped with a flanged base for easy installation.

Model	Lamps/ Watts	UV-C Spectrum Output Watts	Max. Flow rate at 90% UVT 40 mJ/ cm <sup>2</sup> (GPM)	Max. Flow rate at 90% UVT 60 mJ/ cm <sup>2</sup> (GPM)	Port Size <sup>2</sup>	Max. Flow for Port Size (GPM)	Amps Max. Load @ 120/230	UV Vessel Dimensions <sup>1</sup> (A x B x C)	Power Enclosure Dimensions (H x W x D)	Max. PSI
522904	1/130	40	49	33	2"	-	2.1/1.0	57" x 6" x 47"	16" x 14" x 8.4"	50
522905	2/130	80	90	60	2"	*64	3.9/2.0	57" x 6" x 47"	16" x 14" x 8.4"	50
522918					3"	-				
522919	3/130	120	125	83	3"	-	5.8/2.9	57" x 6" x 47"	16" x 14" x 8.4"	50
522907	3/130	120	167	111	3"	*144	5.8/2.9	63" x 8" x 47"	16" x 14" x 8.4"	50
522920					4"	-				
522908	4/130	160	227	151	3"	*144	7.5/3.7	63" x 8" x 47"	20.2" x 16.3" x 8.4"	50
522921					4"	-				
522922	5/130	200	272	181	4"	*251	9.4/4.7	63" x 8" x 47"	24.6" x 20.2" x 10.6"	50
522935					6"	-				
522910	6/130	240	365	244	4"	*251	11.2/5.6	68" x 10" x 51"	24.6" x 20.2" x 10.6"	50
522923					6"	-				
522924	7/130	280	430	287	6"	-	13.3/6.5	68" x 10" x 51"	24.6" x 20.2" x 10.6"	50
522912	7/130	280	492	328	6"	-	13.3/6.5	75" x 12" x 51"	24.6" x 20.2" x 10.6"	50
522913	8/130	320	555	369	6"	-	15.0/7.5	75" x 12" x 51"	30.5" x 24.1" x 12.6"	50

<sup>1</sup> Vessel dimension "C" represents clearance requirement for glassware maintenance  
<sup>2</sup> When selecting a port size, be sure the system flow rate with never exceed "Max. Flow for Port Size"  
<sup>3</sup> When ordering optional 230VAC add "-2" to end of part number



# BIOSHIELD® HMAC UV DISINFECTION SYSTEM

## TRADEGRADE



BioShield UV Disinfection Sterilizer falls under the APSP 11 Standard for Commercial Swimming Pools as a Water Conditioning Device.

NSF Recreational Water  
CCS-18325

### Featured Highlights

#### System Features:

- Housing Material: Heavy-Wall UV Resistant High-Density Polymer
- Housing Pressure (Max.): 50 psi / 3.4 bar
- Housing Inlet/Outlet Port Size: 2" Union
- UV Lamp(s): Low-Pressure High-Output, T6-style
- Highest-quality, low-pressure high-output UV lamps offer 12,000 hours of continuous operation (80% efficient after 12,000 hours)

BioShield residential UV sterilizers feature Low Pressure High Output (LPHO) lamps that offer approximately twice the UV output of standard Low Pressure (LP) lamps with the same arc length. UV vessels are built of a UV-resistant, high density polymer with a removable end cap to provide easy internal access. Viewing ports allow visual indication of lamp status. Units have 2" slip unions and 5 3/4" diameter housings. 10' cable to ballast and 6' cord. 115V and 230V units are available. Models include an in-line, sealed water-tight power supply for wet applications.

### Ordering Information

MODEL	INPUT WATTS	UV-C OUTPUT WATTS	UV VESSEL DIMENSIONS	VOLTAGE	AMPS MAX LOAD	30 MJ/CM <sup>2</sup> GPM/LPM	40 MJ/CM <sup>2</sup> GPM/LPM
<b>HIGH-OUTPUT STERILIZERS</b>							
522635	50	15	30" x 6"	115/230V	1.15/0.57	25/94	17/64
522636	80	27	45" x 6"	115/230V	1.15/0.57	45/170	32/121
522637	120	37	57" x 6"	115/230V	1.15/0.57	62/234	43/162
522638*	150	57	71" X 6"	115V	1.85	100/378	70/264
522945*	150	57	71" X 6"	230V	0.85	100/378	70/264

WATTS	SEAL KITS	BALLAST	VOLTAGE	4-PIN LAMP CONNECTOR	LAMP	QUARTZ SLEEVE
<b>HIGH-OUTPUT STERILIZER REPLACEMENT PARTS</b>						
50	523031	523032	115/230V	523034	523035	523039
80	523031	523032	115/230V	523034	523036	523040
120	523031	523032	115/230V	523034	523037	523041
150	523031	523033	115V	523034	523038	523042
150	523031	523053	230V	523034	523038	523042

\* 3" unions

CALIFORNIA PROPOSITION 65 WARNING

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 ⚠️ **ADVERTENCIA:** Cáncer y Daño Reproductivo.

www.p65warnings.ca.gov

# COMMERCIAL INTELLICHLOR® SALT CHLORINE GENERATOR

## Featured Highlights

- Each single cell produces up to 2 lbs of chlorine per day
- Manifold systems to 8 cells
- Systems available with 16 lbs of chlorine output per day\*
- Color LED status displays
- Performance data captured daily
- Tracking of remaining cell life
- Automatic shut-off feature helps protect and prolong cell life
- Pre-mounted multi-power center configuration
- Works with ORP Control System to generate chlorine on demand
- Self-cleaning
- NSF listed
- UL Listed



IntelliChlor Salt Chlorine Generator Cell

IntelliChlor Salt Chlorine Generator uses common table salt to produce all the chlorine a pool needs, safely, effectively, and automatically. Same sanitation performance as manual chlorine addition without the drawbacks. No need for customers to buy, transport and store chlorine compounds.

### Possible Power Center and Manifold Configurations



Output Manifold

- Need 30 GPM per cell in manifold to trigger flow switch
- Power Centers are mounted on PVC boards and pre-wired for 220 VAC and ORP



Compatible with Acu-Trol® and IntelliChem® pH/ORP Control Systems.

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## Ordering Information

PART NUMBER	DESCRIPTION	NUMBER OF PRIMARY (P) AND SECONDARY (S) IC60 CELLS	NUMBER OF PRIMARY POWER CENTERS (520978)	NUMBER OF SECONDARY POWER CENTERS (520556)	CHLORINE PER DAYS (LBS.) <sup>1</sup>
520970	COMSYS-2	1P	1	0	2
520971	COMSYS-4	1P, 1S	1	1	4
520972	COMSYS-6	1P, 2S	1	2	6
520973	COMSYS-8	1P, 3S	1	3	8
520974	COMSYS-10	1P, 4S	1	4	10
520975	COMSYS-12	1P, 5S	1	5	12
520976	COMSYS-14	1P, 6S	1	6	14
520977	COMSYS-16	1P, 7S	1	7	16

<sup>1</sup> Codes for commercial pools typically require 2 lbs. of chlorine production per every 10,000 gallons. Please consult your local codes for chlorine production requirements.

Note: COMSYS-System includes: Primary Cell, Secondary Cells, Primary Power Center, Secondary Power Centers, and the manifold.

\* Call factory for sizing Commercial IntelliChlor systems for pools larger than 80,000 gallons.

Product	Description	Carton Qty.	Carton Wt. (Lbs.)
<b>COMMERCIAL INTELLICHLOR SALT CHLORINE GENERATOR FOR UNITED STATES</b>			
521151	IntelliChlor CIC60P Replacement Primary Commercial Cell	1	7.5
521005	IntelliChlor CIC60S Replacement Secondary Commercial Cell	1	7.0
520978	IntelliChlor IC60P Replacement Primary Power Center	1	14.0
520556	IntelliChlor Replacement Secondary Power Center	1	13.0

For replacement parts please call Technical Service at 1-800-831-7133.

# PENTAIR AUTOMATIC CHLORINE/BROMINE FEEDERS



Pentair Chlorine and Bromine Feeders

Years of customer use and satisfaction have proven Pentair feeders to be the performance leader in pool & spa chemical dispensers.

## Featured Highlights

- 300 and 320 series filters available in clear amber for easy tablet level monitoring
- Completely enclosed system – no special venting required
- No escaping gases
- 50 PSI maximum operating pressure

### In-Line Feeders

- **320 Series.** For permanent installation in return line of new or existing pools or spas. Installs in return line on pressure side of pump downstream of all equipment. Standard with 2 in. slip PVC fittings and adapters for 1-1/2 in.

### Off-Line Feeders

- **300 Series.** Retrofits into existing pools or spas. Operates on pressure side of pump. Uses 1/4 in. feeder hoses, control valve and fittings.

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## Ordering Information

Product	Model	Description	Carton Qty.	Carton Wt. (Lbs.)
<b>IN-LINE FEEDERS</b>				
R171096 <sup>1</sup>	320	Holds 11 large or 98 small Bromine or slow dissolving Trichlor tablets. Treats 6,500 to 27,000 gallons bottom feed and 18,000 to 70,000 gallons top feed.	1	30
R171218 <sup>1</sup>	320C	Holds 11 large or 98 small Bromine or slow dissolving Trichlor tablets. Treats 6,500 to 27,000 gallons in a bottom feed configuration and 18,000 to 70,000 gallons in a top feed configuration with see-through amber body.	1	30
<b>OFF-LINE FEEDERS</b>				
R171016 <sup>1</sup>	300	Holds 11 large or 98 small tablets. Treats 12,000 to 48,000 gallons.	1	26
R171022 <sup>1</sup>	300C	Holds 11 large or 98 small tablets. Treats 12,000 to 48,000 gallons with see-through amber body.	1	26
R171026	302	Spa feeder. Includes spa chamber. Treats 500 to 2,000 gallons. Holds 15 small tablets.	1	28
R171056 <sup>1</sup>	300-19	Spa feeder includes double-capacity 19 in. chamber. Treats 13,000 to 52,000 gallons.	1	5
R171066 <sup>1</sup>	300-29	Spa feeder includes triple-capacity 29 in. chamber. Treats 14,000 to 57,000 gallons.	1	6
<b>COMMERCIAL AND HIGH CAPACITY FEEDERS</b>				
R171070 <sup>1</sup>	300-29X	Heavy duty 1/2 in. control valve and tubing optimizes flow and erosion to provide larger amounts of sanitizer. Dispenses 8.5 lbs. of 1 in. Trichlor Tablets in 24 hours. Holds 29 large or 237 small tablets. Treats 80,000 to 322,000 gallons.	1	8
R171215 <sup>1</sup>	HC-3315	High capacity for 1 in. hard plumbing installations. Holds 15 lbs. of tablets. Treats up to 20,200 gallons with Bromine and up to 97,600 gallons with Trichlor.	1	9
R171230 <sup>1</sup>	HC-3330	High capacity for 1 in. hard plumbing installations. Holds 30 lbs. of tablets. Treats up to 40,000 gallons with Bromine and up to 160,000 gallons with Trichlor.	1	12
R171240 <sup>1</sup>	HC-3340	High capacity for 1 in. hard plumbing installations. Holds 40 lbs. of tablets. Treats up to 61,000 gallons with Bromine and up to 332,000 gallons with Trichlor.	1	14

Note: Pentair Automatic Chlorine/Bromine feeders are for use with slow dissolving trichlor or bromine tablets only.

<sup>1</sup> NSF listed

## PENTAIR AUTOMATIC CHLORINE/BROMINE SIZING CHART

Model	Chamber Capacity				Maximum Erosion in 24 Hours <sup>1</sup>	Treats Pool/Spa Size			H	W	D	Service Clearance for Lid Removal
	1 in. Tablet		3 in. Tablet			@ 10 ppm	@ 5 ppm	@ 2-1/2 ppm				
	Qty.	Wt.	Qty.	Wt.								
<b>AUTOMATIC CHLORINE/BROMINE SIZING CHART</b>												
#300	98	3.5 lbs.	11	4.8 lbs.	1.19 lbs.	11,900	23,800	47,600	21 in.	7 in.	12 in.	22-1/4 in.
#302 with spa chamber	15	0.5 lbs.	—	—	0.5 lbs.	500	1,000	2,000	21 in.	7 in.	12 in.	22-1/4 in.
#300-19	153	5.5 lbs.	20	8.8 lbs.	1.30 lbs.	13,000	26,000	52,000	28-1/2 in.	7 in.	12 in.	29-3/4 in.
#300-29	237	9.8 lbs.	29	12.7 lbs.	1.41 lbs.	14,100	28,200	56,400	38-1/2 in.	7 in.	12 in.	39-3/4 in.
#300-29X commercial model	237	9.8 lbs.	29	12.7 lbs.	8.05 lbs.	80,500	161,000	322,000	38-1/2 in.	7 in.	12 in.	39-3/4 in.
#320 bottom feed	98	3.5 lbs.	11	4.8 lbs.	0.67 lbs.	6,700	13,400	26,800	17-3/4 in.	5 in.	10 in.	19 in.
#320 top feed	98	3.5 lbs.	11	4.8 lbs.	1.75 lbs.	17,500	35,000	70,000	17-3/4 in.	5 in.	10 in.	19 in.

WITH 10 in. FEEDER EXTENSION ON #300 – REFER TO #300-19, max. height 11 in.6 PPM-COMMERCIAL POOLS & SPAS

WITH 20 in. FEEDER EXTENSION ON #300 – REFER TO #300-29, max. height 21 in.3 PPM-RESIDENTIAL POOL & SPAS

Note: This chart is only a suggested guide. Consult your local authority to determine their guidelines if needed. Results may vary due to pool/spa equipment and many other factors.

<sup>1</sup> Based on use of 1 in. Trichlor in 24 hours. Use of 3 in. tablets or sticks or bromine tablets will lower results. For 8 hour turnover divide by 3.

**Certified to  
NSF/ANSI Standard 50**

## PENTAIR HIGH CAPACITY CHLORINE/BROMINE SIZING CHART

Model	Capacity	Maximum Erosion In 24 Hours		Treats Pool/Spa Size In Gallons Per 24 Hours		H	W	D	Service Clearance
		Chlorine	Bromine	Chlorine (10 ppm)	Bromine (10 ppm)				
		<b>HIGH CAPACITY CHLORINE/BROMINE SIZING CHART</b>							
HC3315	15 lbs.	29.28 lbs.	13.68 lbs.	97,600	20,200	21-1/2 in.	8 in.	15 in.	22 3/4 in.
HC3330	30 lbs.	48.00 lbs.	27.60 lbs.	160,000	40,900	39-1/8 in.	8 in.	15 in.	40-3/8 in.
HC3340	40 lbs.	99.60 lbs.	41.52 lbs.	332,000	61,500	49 3/4 in.	8 in.	15 in.	51 in.

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[www.p65warnings.ca.gov](http://www.p65warnings.ca.gov)
PB 201714





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# VALVES





# DIVERTER AND CHECK VALVES – 1-1/2 IN. AND 2 IN. 2-WAY, 3-WAY AND CHECK

263027



263026



263042



### Featured Highlights

- All valves available in CPVC or PVC
- Maintenance-free PTFE coated diverter seal
- Optimum positive-seal
- High Flow Rate
- Fiberglass reinforced handle
- Withstands pressure up to 150 psi
- Chemical-resistant
- Used for diverting, shut-off or mixing applications
- Accepts 1-1/2 in., 2 in., and 2-1/2 in. PVC plumbing
- Field-adjustable stop positions
- Plumbed with inlet at any port
- Designed to work with most industry standard actuators

CALIFORNIA PROPOSITION 65 WARNING

⚠ **WARNING:** Cancer and Reproductive Harm.  
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 ⚠ **ADVERTENCIA:** Cáncer y Daño Reproductivo.  
[www.p65warnings.ca.gov](http://www.p65warnings.ca.gov) PK201754

### Ordering Information

Product	Description	Carton Qty.	Carton Wt. (Lbs.)
<b>2-WAY AND 3-WAY DIVERTER VALVES</b>			
263026	3-Way CPVC 2 in. (2-1/2 in. slip outside)	1	2
263027	2-Way CPVC 2 in. (2-1/2 in. slip outside)	1	2
263028	3-Way PVC 2 in. (2-1/2 in. slip outside)	1	2
263029	2-Way PVC 2 in. (2-1/2 in. slip outside)	1	2
263035	3-Way CPVC 1-1/2 in. (2 in. slip outside)	1	2
263036	2-Way CPVC 1-1/2 in. (2 in. slip outside)	1	2
263037	3-Way PVC 1-1/2 in. (2 in. slip outside)	1	2
263038	2-Way PVC 1-1/2 in. (2 in. slip outside)	1	2
263047	3-Way Solar Valve w/ drain-down, CPVC 2 in. (2-1/2 in. slip outside)	1	2
<b>CHECK VALVES</b>			
263042	Check Valve CPVC 2 in. (straight 2-1/2 in. slip outside)	1	2
263042Z	Check Valve Rebuild Kit		



263027



263029



263026



263028

PVC Valves not recommended for climates that can reach air temperatures of over 104°F.



# FULLFLOXF<sup>®</sup> DIVERTER & CHECK VALVES 2-1/2 IN. & 3 IN. 2-WAY, 3-WAY AND CHECK

## Featured Highlights

- Valves available in CPVC for maximum heat resistance
- Maintenance-free PTFE coated diverter seal
- Optimum positive-seal
- Maximum Flow Rate, low head loss
- Chemical-resistant
- Used for diverting, shut-off or mixing applications
- Accepts 2-1/2 in. and 3 in. PVC plumbing
- Field-adjustable stop positions
- Plumbed with inlet at any port
- Designed to work with most industry standard actuators



263059



263060



263068



263056/263057



263077

## Ordering Information

Product	Description	Carton Qty	Carton Wt (Lbs)
<b>2-WAY AND 3-WAY DIVERTER VALVES</b>			
263056	3-Way CPVC 2.5 in. (3 in. slip outside)	1	4
263057	3-Way Solar Valve w/ drain-down, CPVC 2.5 in. (3 in. slip outside)	1	4
263059	2-Way CPVC 2.5 in. (3 in. slip outside)	1	4
263068	90 degree 2-way CPVC 2.5 in. (3 in. slip outside)	1	4
<b>2-WAY AND 90 DEGREE CHECK VALVES</b>			
263060	Check Valve CPVC 2.5 in. (3 in. slip outside)	1	4
263077	90 degree Check Valve CPVC 2.5 in. (3 in. slip outside)	1	3
270119Z	Check Valve Rebuild Kit		

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# PRE-PLUMBED VALVES

## BACKWASH VALVES FOR 1-1/2 & 2 IN. D.E. AND SAND FILTERS

Side mounted HiFlow™ and Multiport Valves are designed for maximum performance and working pressures. Available in 1-1/2 and 2 in. threaded or slip models.

### Featured Highlights

- PVC body
- The right valve for easy operation
- Six-position, positive-lock operation
- Special winterizing position

### Ordering Information

Product	Description	Carton Qty.	Carton Wt. (Lbs.)
<b>MULTIPOINT VALVE KIT FOR FILTERS, SLIP</b>			
261055	2 in. MPV, for Triton & Quad D.E. filters [SM 20-3] 7-1/2 in. Centerline	1	9
261152	2 in. MPV, for FNS, FNS Plus & NSP filters [SM 20-2] 7-1/2 in. Centerline	1	9
261173	1-1/2 in. MPV, for Triton & Quad D.E. filters [SM 10-3] 7-1/2 in. Centerline	1	8
261177	1-1/2 in. MPV, for FNS, FNS Plus & NSP filters [SM 10-2] 7-1/2 in. Centerline	1	8
<b>HIFLOW VALVE KIT FOR FILTERS, SLIP</b>			
261050	2 in., w/ bulkhead fittings, for Triton & Quad D.E. filters, 7-1/2 in. Centerline	1	9
261142	2 in., w/ bulkhead fittings, for FNS, FNS Plus & NSP filters, 7-1/2 in. Centerline	1	9
<b>PVC SLIDE VALVE, SLIP</b>			
263064	Push Pull Valve, 7-1/2 in. Center, PVC, Almond	1	4.5
263079	2 in. w/o bulkhead fittings for D.E. and sand filters, 7-1/2 in. Centerline	1	
<b>FULLFLOXF BACKWASH VALVES</b>			
262507	Sta-Rite version for System 3 Mod D.E., inlet on top, with Sta-Rite offset adapters glued on		
262508	Sta-Rite version for System 3 D.E. and Sand, inlet on bottom, with Sta-Rite offset adapters glued on		
262509	Valve with filter inlet port on top, no fittings, only valve		
262511	Valve with filter inlet port on bottom, no fittings, only valve		
263080	Valve for Sand and Quad D.E., inlet port on top, Pentair 2 in. unions glued on		
263081	Valve for D.E., inlet port on bottom, Pentair 2 in. unions glued on		



HiFlow Valve Kit  
261050



PVC Slide Valve Kit  
263064



Multiport Valve Kit  
261055



FullFloXF™  
Backwash  
Valve Kit  
263080

CALIFORNIA PROPOSITION 65 WARNING  
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[www.p65warnings.ca.gov](http://www.p65warnings.ca.gov) PN 201514



# SLIDE VALVES

## ABS SLIDE VALVES/MULTIPOINT VALVES (SIDE MOUNT)



### Featured Highlights

Six-position dial-type valves offer convenience, ease of use and efficient operation. Includes connecting pipe to match side ports in sand and D.E. filters. 2 in. PVC unions for filter-to-valve connection. Positive seal prevents leakage between ports.



18201-0110

### Featured Highlights

Two-position backwash valves have minimal flow restriction. Innovative handle design allows easier operation; pin locks valve in filter position. Connects directly to side ports in D.E. or sand filters with 2 in. PVC unions.



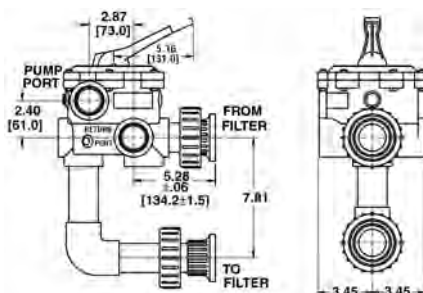
263053

## Ordering Information

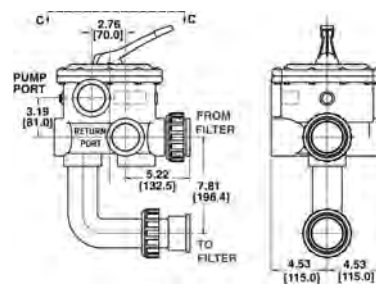
Product	Description	Valve Port Size	Carton Wt. (Lbs.)
<b>SLIDE VALVES - UNION CONNECTION DESIGN</b>			
263053	Push Pull Valve, 7.81 in. Center	2 in.	4
<b>SLIDE VALVES - HOSE CONNECTION DESIGN <sup>1</sup></b>			
263078	Slide Valves, 2 position, Plastic	2 in.	4
<b>MULTIPOINT VALVES - UNION CONNECTION DESIGN</b>			
18201-0300	ABS 6-Position Valve (for System 3 Mod DE)	2 in.	8
18202-0250	ABS 6-Position Valves with piping	1-1/2 in.	5
18202-0150	ABS 6-Position Valves with 1-1/2 in. piping	1-1/2 in.	5
18201-0200	ABS 6-Position Valves with piping	2 in.	8
<b>MULTIPOINT VALVES - UNION CONNECTION DESIGN <sup>1</sup></b>			
18202-0150H	ABS 6-Position Valves (hoses not included)	1-1/2 in.	5
18201-0200H	ABS 6-Position Valves (hoses not included)	2 in.	8
<b>ACCESSORIES - HOSE CONNECTOR KITS - VALVE TO FILTER</b>			
24750-0331	1-1/2 in. x 1-1/2 in. Connector		2
24750-0624	1-1/2 in. x 2 in. Connector		2
24750-0341	2 in. x 2 in. Connector		2

<sup>1</sup> Replacement Valves for Old Design Filters.

## Dimensions and Performance



1-1/2 in. Multipoint Valve  
18201-0110



2 in. Multipoint Valve  
18201-0300

**Certified to  
NSF/ANSI Standard 50**

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[www.p65warnings.ca.gov](http://www.p65warnings.ca.gov) PH 201714

# HIFLOW™ VALVE

## BACKWASH VALVE FOR SIDE MOUNTED SAND & D.E. FILTERS



HiFlow Valve 261049

The side mounted HiFlow valve is designed for maximum performance and working pressures. Available in 2 in. slip models.

**Certified to  
NSF/ANSI Standard 50**

### Featured Highlights

- PVC body
- Large, one-piece handle for trouble-free operation
- Six-position, positive-lock operation
- Noryl heavy-duty diverter
- 2 in. ports for unrestricted flow
- Specific Valves for D.E. and sand applications
- Special winterizing position

### Ordering Information

Product	Description	Carton Qty.	Carton Wt. (Lbs.)
<b>HIFLOW VALVE</b>			
261049	2 in. HiFlow Valve, no plumbing	1	10

**CALIFORNIA PROPOSITION 65 WARNING**

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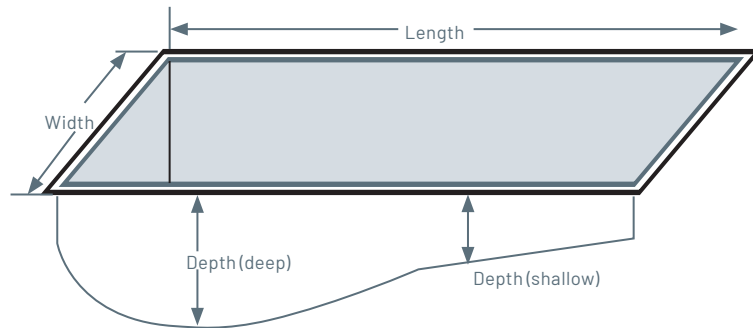
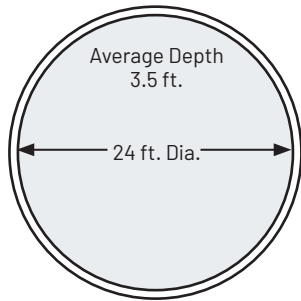
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# ENGINEERING DATA



# ENGINEERING DATA

## ESTIMATING TOTAL GALLONS IN A POOL OR SPA



Radius<sup>2</sup> x 3.14 x A.D. x 7.5 = Gallons

12 x 12 x 3.14 x 3.5 x 7.5 = 11,869 Gals.

Dia. x Dia. x Av Dp x 5.9 = Gallons

24 x 24 x 3.5 x 5.9 = 11,894 Gals.

Gal.cu.ft.	
Rectangle:	7.5
Oval:	6.7
Kidney:	7.0

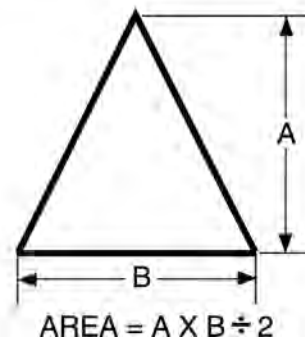
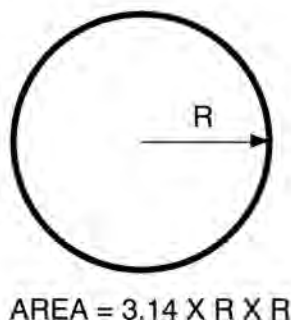
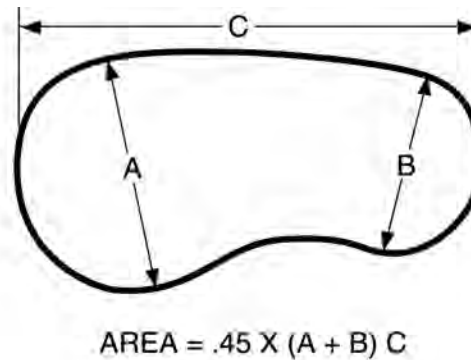
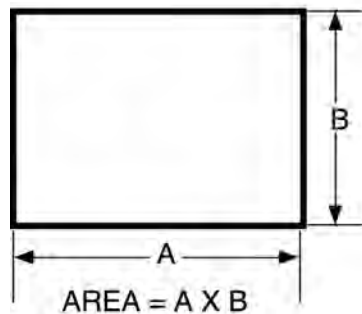
Formula A: Length X Width X Average Depth X Gal.cu.ft. = Gallons

Example: Pool Length = 40 ft.  
 Pool Width = 20 ft.  
 Shallow Depth = 3 ft.  
 Deep Depth = +8 ft.

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Total Depth = 11 ft.

Using formula A: 40 X 20 = 800 sq. ft., 800 X 5.5 = 4,400 cubic ft.,  
 4,400 X 7.5 = 33,000 gallons



# ENGINEERING DATA

## UNITS OF MEASURE

### UNITS OF PRESSURE

UNIT	INCHES OF WATER	FEET OF WATER	POUNDS PER SQUARE INCH	INCHES OF MERCURY
INCHES OF WATER	1.0	.0833	.0361	.0736
FEET OF WATER	12.0	1.0	.433	.883
POUNDS PER SQUARE INCH	27.72	2.31	1.0	2.04
INCHES OF MERCURY	13.596	1.133	.4906	1.0

### CURRENT CAPACITY (AMPS) OF WIRE\*

Three wires in cable, ambient temp. 86°F

WIRE SIZE	AMPERES	
	COPPER	ALUMINIUM
14	20	-
12	25	20
10	30	25
8	40	30
6	55	40
4	70	55
3	85	65
2	95	75
1	110	85
0	125	100

\* Wire size is minimum for amperes listed.

### EFFICIENCY

EFFICIENCY	$\frac{\text{POWER OUTPUT}}{\text{POWER INPUT}}$
MOTOR EFFICIENCY	$\frac{\text{HP OUTPUT}}{\text{K.W. INPUT}}$
PUMP EFFICIENCY	$\frac{\text{G.P.M.} \times \text{TOTAL HEAD (F.T.)}}{3960 \times \text{BHP}}$
OVERALL PLANT EFFICIENCY (OPE)	$\frac{\text{G.P.M.} \times \text{TOTAL HEAD (F.T.)}}{5310 \times \text{K.W. INPUT}}$

Amperage =	$\frac{\text{Watts}}{\text{Volts}}$
Watts =	Volts x Amperage
WHP =	Water Horsepower (output HP of pump) = $\frac{\text{g.p.m} \times \text{total head}}{3960}$
HP input (to motor) =	KW input x 1.341
Total Head =	Discharge head + Pumping water level (ft)
Discharge Head =	Discharge Pressure (PSI) x 2.31 ft. of head

# ENGINEERING DATA

## HEATER SIZING INFORMATION

ETi 400 ASME HIGH EFFICIENCY HEATER MODEL  
REQUIRED TIME TO TEMPERATURE RISE

° F Temperature Rise	Pool Volume (Gallons)									
	10,000	20,000	30,000	40,000	50,000	60,000	70,000	80,000	90,000	100,000
	Hours to Reach Temperature									
5	1.08	2.17	3.26	4.34	5.43	6.52	7.60	8.69	9.77	10.86
10	2.17	4.34	6.52	8.69	10.86	13.03	15.20	17.38	19.55	21.72
15	3.25	6.52	9.77	13.03	16.29	19.55	22.80	26.06	29.32	35.58
20	4.35	8.69	13.03	17.38	21.72	26.06	30.41	34.75	39.09	43.44
25	5.43	10.86	16.29	21.72	27.15	32.58	38.01	43.44	48.87	54.30
30	6.52	13.03	19.55	26.06	32.58	39.09	45.61	52.13	58.64	65.16
35	7.60	15.20	22.80	30.41	38.01	45.61	53.21	60.81	68.41	76.02
40	8.68	17.38	26.06	34.75	43.44	52.13	60.81	69.50	78.19	86.88
50	9.77	19.55	29.32	39.09	48.87	58.64	68.41	78.19	87.96	97.73
	10.87	21.72	32.58	43.44	54.30	65.16	76.02	86.88	97.73	108.59

### ETI HEATER - POOL SIZING

TEMPERATURE RISE IN 24 HOURS (°F)	POOL GALLON CAPACITY
5	221,000
10	110,500
15	73,700
20	55,300
25	44,250
30	36,800

### ETI HEATER - SPA SIZING

MINUTES TO RISE 30 DEGREES (°F)	SPA GALLONS
16	400
20	500
23	600
27	700
31	800
35	900
39	1,000

Note: The chart is based on a 30°F (16.6°C) temperature rise, discounting losses and only based on heat required to raise temperature in minutes.

For more specification information and sizing assistance, contact your local Pentair Sales Representative or [www.pentair.com](http://www.pentair.com)

# ENGINEERING DATA

## ACU DRIVE™ XS STARTUP INFORMATION

### Acu Drive Startup Request Information Sheet

Please complete the following information and return to Pentair Aquatic Systems (phone - 845-463-7200, ext. 2 / fax - 845-463-7291 / email - paragoncustserv@pentair.com) in order to schedule the startup service for your new Acu Drive. A startup service partner will contact the job site contact person listed below to schedule the

**\*\* Before Requesting a Start-Up be Performed, Please  
Ensure the Following has been Completed \*\***

- All VFDs requiring start-up have been properly mounted per installation guide
- The power wiring has been properly connected to each VFD
- Any control wiring (i.e. flowmeter, level control, alarms) have been properly connected
- If needed, be prepared to explain any special programming requirements with startup representative

\*\*\*\* Appointments are based on availability. Allot up to 10 working days to schedule a startup appointment.

**Startup Job Site Information:**

\_\_\_\_\_/\_\_\_\_\_/\_\_\_\_\_  
Requested Startup Date (NUMBERS ONLY)

\_\_\_\_\_  
Facility Name

\_\_\_\_\_  
Street

\_\_\_\_\_  
City

\_\_\_\_\_  
State/Province

\_\_\_\_\_  
Zip Code

\_\_\_\_\_  
Number of units to startup

\_\_\_\_\_  
Site Contact Name

\_\_\_\_\_  
PM NUMBER  
DISTRIBUTOR

\_\_\_\_\_  
PO NUMBER  
DATE

\_\_\_\_\_  
Contact Phone Number

\_\_\_\_\_  
INITIAL

\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

**ACU DRIVE SERIAL #(S): REQUIRED**

**By signing below, please confirm that your equipment will be ready for startup by the requested startup date listed below:**

"I confirm that the equipment for startup will be ready for startup at a time and date agreed to by the contact person listed above and startup service partner. All control and power wiring necessary to perform startup will be completed by the agreed date. All processes will be ready and available by the agreed date. All equipment is installed per Danfoss installation instructions and all local codes. I will coordinate all personnel and contractors that I want present at startup. I agree to notify the startup service partner 24 hours prior to the agreed startup time and date of any changes to the schedule. I accept any additional charges not covered by the service agreement for the startup contract."

Print Name: \_\_\_\_\_

Phone: \_\_\_\_\_

Signature: \_\_\_\_\_

Date: \_\_\_\_\_



# ENGINEERING DATA, FRICTION FLOW

## FRICTION/FLOW CHART FOR SCHEDULE 40 RIGID PVC PIPE\*

U.S. Gal. per min.	3/4 in. pipe		1 in. pipe		1-1/4 in. pipe		1-1/2 in. pipe		2 in. pipe		2-1/2 in. pipe		3 in. pipe		4 in. pipe		5 in. pipe		6 in. pipe		U.S. Gal. per min.		
	Velocity feet per second	Loss in feet	Velocity feet per second	Loss in feet	Velocity feet per second	Loss in feet	Velocity feet per second	Loss in feet	Velocity feet per second	Loss in feet	Velocity feet per second	Loss in feet	Velocity feet per second	Loss in feet	Velocity feet per second	Loss in feet	Velocity feet per second	Loss in feet	Velocity feet per second	Loss in feet			
1	.71	.40	.40	.10	0.26	0.03															1		
2	1.43	1.44	.80	.35	.51	.12	.36	.05														2	
3	2.14	3.05	1.20	.75	.77	.25	.53	.10														3	
4	2.85	5.19	1.60	1.28	1.03	.43	.71	.18														4	
5	3.56	7.85	2.00	1.94	1.28	.65	.89	.27	.50	.07	.32	.02	.22	.01								5	
6	4.28	11.01	2.41	2.71	1.54	.92	1.07	.38	.60	.09	.38	.03	.27	.01								6	
8	5.70	18.75	3.21	4.62	2.05	1.56	1.43	.64	.80	.16	.51	.05	.36	.02								8	
10	7.13	28.34	4.01	6.99	2.57	2.36	1.78	.97	1.00	.24	.64	.08	.45	.03								10	
15	10.69	60.06	6.01	14.81	3.85	5.00	2.67	2.06	1.50	.51	.96	.17	.67	.07								15	
20			8.02	25.24	5.13	8.52	3.56	3.51	2.00	.87	1.28	.29	.89	.12	.50	.03						20	
25			10.02	38.16	6.41	12.88	4.45	5.31	2.51	1.31	1.60	.44	1.11	.18	.63	.04						25	
30			12.03	53.48	7.70	18.06	5.34	7.44	3.01	1.83	1.92	.62	1.34	.26	.75	.06	.48	.02				30	
35					8.98	24.03	6.24	9.89	3.51	2.44	2.24	.82	1.56	.34	.88	.08	.56	.03				35	
40					10.26	30.77	7.13	12.67	4.01	3.13	2.57	1.06	1.78	.43	1.00	.11	.64	.04				40	
45					11.54	38.27	8.02	15.76	4.51	3.89	2.89	1.31	2.00	.54	1.13	.13	.72	.05				45	
50					12.83	46.51	8.91	19.16	5.01	4.72	3.21	1.60	2.23	.66	1.25	.16	.80	.05	.56	.02		50	
60							10.69	26.85	6.01	6.62	3.85	2.24	2.67	.92	1.50	.23	.96	.08	.67	.03		60	
70									7.01	8.81	4.49	2.98	3.12	1.23	1.75	.30	1.12	.10	.78	.04		70	
80									8.02	11.28	5.13	3.81	3.56	1.57	2.00	.39	1.28	.13	.89	.05		80	
90									9.02	14.03	5.77	4.74	4.01	1.95	2.25	.48	1.44	.16	1.00	.07		90	
100									10.02	17.06	6.41	5.76	4.45	2.37	2.51	.59	1.60	.20	1.11	0.08		100	
125											8.02	8.71	5.57	3.59	3.13	.88	2.00	.30	1.39	.12		125	
150											9.62	12.20	6.68	5.03	3.76	1.24	2.41	.42	1.67	.17		150	
175													7.79	6.69	4.38	1.65	2.81	.56	1.95	.23		175	
200													8.91	8.56	5.01	2.11	3.21	.71	2.23	.29		200	
225													10.02	10.65	5.64	2.63	3.61	.89	2.51	.37		225	
250													11.13	12.95	6.26	3.19	4.01	1.08	2.78	.44		250	
275															6.89	3.81	4.41	1.29	3.06	.53		275	
300															7.52	4.48	4.81	1.51	3.34	.62		300	
325															8.14	5.19	5.21	1.75	3.62	.72		325	
350																8.77	5.95	5.61	2.01	3.90	.83	350	
375																9.39	6.77	6.01	2.28	4.18	.94	375	
400																10.02	7.63	6.41	2.57	4.45	1.06	400	
425																	6.81	2.88	4.73	1.19		425	
450																	7.22	3.20	5.01	1.32		450	
475																	7.62	3.54	5.29	1.46		475	
500																	8.02	3.89	5.57	1.60		500	
550																		8.82	4.64	6.12	1.91		550
600																		9.62	5.46	6.68	2.25		600
650																				7.24	2.61		650
700																				7.79	2.99		700
750																				8.35	3.40		750
1000																				11.13	5.79		1000

\* Friction loss of water in feet per 100 feet length of pipe. Based on Williams & Hazen formula using constant 150.

\* Recommended operating flow velocities indicated by boxed areas.

# ENGINEERING DATA

## FRICTION LOSS CHARTS

### Hydraulic Charts and Tables

#### Friction/Flow Chart For Schedule 40 Rigid PVC Pipe

Friction Loss of Water in Feet per 100 Feet Length of Pipe

Based on Williams & Hazen Formula Using Constant 150. Sizes of Standard Pipe in Inches.

U.S. Gals. per Min.	3/4" Pipe		1" Pipe		1 1/4" Pipe		1 1/2" Pipe		2" Pipe		2 1/2" Pipe		3" Pipe		4" Pipe		6" Pipe		U.S. Gals. per Min.
	Vel. Ft. per Sec.	Loss in Feet	Vel. Ft. per Sec.	Loss in Feet	Vel. Ft. per Sec.	Loss in Feet	Vel. Ft. per Sec.	Loss in Feet	Vel. Ft. per Sec.	Loss in Feet	Vel. Ft. per Sec.	Loss in Feet	Vel. Ft. per Sec.	Loss in Feet	Vel. Ft. per Sec.	Loss in Feet	Vel. Ft. per Sec.	Loss in Feet	
1	.60	.25	.37	.07	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	1
2	1.20	.90	.74	.28	.43	.07	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	2
3	1.80	1.92	1.11	.60	.64	.16	.47	.07	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	3
4	2.41	3.28	1.48	1.02	.86	.25	.63	.12	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	4
5	3.01	5.8	1.86	1.52	1.07	.39	.79	.18	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	5
6	3.61	7.0	2.33	2.15	1.29	.55	.95	.25	.57	.07	.....	.....	.....	.....	.....	.....	.....	.....	6
8	4.81	11.8	2.97	3.6	1.72	.97	1.25	.46	.76	.14	.54	.05	.....	.....	.....	.....	.....	.....	8
10	6.02	17.9	3.71	5.5	2.15	1.46	1.58	.69	.96	.21	.67	.09	.....	.....	.....	.....	.....	.....	10
15	9.02	37.8	5.57	11.7	3.22	3.07	2.36	1.45	1.43	.44	1.01	.18	.65	.07	.....	.....	.....	.....	15
20	.....	.....	7.42	19.9	4.29	4.2	3.15	2.47	1.91	.74	1.34	.30	.87	.12	.....	.....	.....	.....	20
25	.....	.....	9.28	30.0	5.36	7.9	3.94	3.8	2.39	1.11	1.67	.46	1.08	.16	.....	.....	.....	.....	25
30	.....	.....	11.14	42.0	6.43	11.1	4.73	5.2	2.87	1.55	2.01	.65	1.30	.23	.....	.....	.....	.....	30
35	.....	U.S. GAL. PER MIN.	.....	.....	7.51	14.7	5.52	7.0	3.35	2.06	2.35	.88	1.52	.30	.88	.07	.....	.....	35
40	.....	.....	8" PIPE		8.58	18.9	6.30	8.9	3.82	2.63	2.64	1.11	1.73	.39	1.01	.09	.....	.....	40
45	.....	.....	.....	.....	9.65	23.5	7.09	11.1	4.30	3.28	3.01	1.39	1.95	.48	1.13	.12	.....	.....	45
50	.....	700	4.37	.66	10.72	28.5	7.88	13.5	4.78	4.0	3.35	1.69	2.17	.58	1.26	.16	.....	.....	50
60	.....	750	4.70	.75	.....	.....	9.46	18.9	5.74	5.6	4.02	2.36	2.60	.81	1.51	.21	.....	.....	60
70	.....	800	4.99	.82	.....	.....	11.03	25.1	6.69	7.4	4.69	3.14	3.04	1.09	1.76	.28	.....	.....	70
80	.....	850	5.37	.95	.....	.....	.....	.....	7.65	9.5	5.35	4.0	3.47	1.39	2.02	.37	.....	.....	80
90	.....	900	5.64	1.06	.....	.....	.....	.....	8.60	11.8	6.03	5.0	3.91	1.73	2.27	.46	.....	.....	90
100	.....	950	5.94	1.23	.....	.....	.....	.....	9.56	14.4	6.70	6.1	4.34	2.10	2.52	.55	1.11	.07	100
125	.....	1000	6.25	1.28	.....	U.S. GAL. PER MIN.	.....	.....	11.95	21.8	8.38	9.2	5.42	3.19	3.15	.85	1.39	.12	125
150	.....	1050	6.57	1.40	.....	.....	.....	.....	.....	.....	10.05	12.8	6.51	4.5	3.78	1.18	1.67	.16	150
175	.....	1100	6.89	1.51	.....	.....	10" PIPE		.....	.....	.....	.....	7.59	5.9	4.41	1.57	1.94	.21	175
200	.....	1150	7.20	1.65	.....	.....	.....	.....	.....	.....	.....	.....	8.68	7.9	5.04	2.08	2.22	.28	200
225	.....	1200	7.51	1.79	.....	1500	5.99	.92	.....	.....	.....	.....	9.76	9.4	5.67	2.52	2.50	.35	225
250	.....	1250	7.82	1.94	.....	1600	6.40	1.03	.....	.....	.....	.....	10.85	11.5	6.30	3.05	2.78	.42	250
275	.....	1300	8.13	2.09	.....	1700	6.80	1.15	.....	.....	.....	.....	.....	.....	6.93	3.6	3.05	.48	275
300	.....	1350	8.45	2.23	.....	1800	7.20	1.27	.....	.....	.....	.....	.....	.....	7.56	4.3	3.33	.58	300
325	.....	1400	8.77	2.37	.....	1900	7.60	1.41	.....	.....	.....	.....	.....	.....	8.19	5.0	3.61	.67	325
350	.....	1450	9.08	2.53	.....	2000	7.99	1.54	.....	.....	.....	.....	.....	.....	8.82	5.7	3.89	.79	350
375	.....	1500	9.39	2.68	.....	2100	8.39	1.68	.....	.....	.....	.....	.....	.....	9.45	6.5	4.17	.88	375
400	.....	1550	9.70	2.85	.....	2200	8.80	1.82	.....	.....	.....	.....	.....	.....	10.08	7.3	4.44	.99	400
425	.....	1600	10.00	3.01	.....	2300	9.20	1.99	.....	.....	.....	.....	.....	.....	.....	.....	4.72	1.11	425
450	.....	1650	10.32	3.21	.....	2400	9.60	2.17	.....	.....	.....	.....	.....	.....	.....	.....	5.00	1.22	450
475	.....	1700	10.64	3.40	.....	2500	10.00	2.34	.....	.....	.....	.....	.....	.....	.....	.....	5.28	1.36	475
500	.....	1750	10.96	3.59	.....	2600	10.40	2.50	.....	.....	.....	.....	.....	.....	.....	.....	5.55	1.50	500
550	.....	1800	11.27	3.78	.....	2700	10.79	2.69	.....	.....	.....	.....	.....	.....	.....	.....	6.11	1.80	550
600	.....	1850	11.58	3.98	.....	2800	11.18	2.88	.....	.....	.....	.....	.....	.....	.....	.....	6.67	2.10	600
650	.....	1900	11.89	4.19	.....	2900	11.59	3.08	.....	.....	.....	.....	.....	.....	.....	.....	7.22	2.44	650
700	.....	1950	12.21	4.40	.....	3000	11.99	3.28	.....	.....	.....	.....	.....	.....	.....	.....	7.78	2.79	700
750	.....	2000	12.52	4.61	.....	3100	12.39	3.52	.....	.....	.....	.....	.....	.....	.....	.....	8.33	3.19	750
800	.....	.....	.....	.....	.....	3200	12.79	3.75	.....	.....	.....	.....	.....	.....	.....	.....	8.89	3.6	800

Normal safe operating selection;  Suction piping;  Discharge or pressure piping.  
**Note:** Where long pipe runs are encountered, make selection in minimum head loss range.

#### P.V.C. Pipe Specifications

PVC Pipe Size	Nominal Diameter (Inches)	Nominal Square Inch	Cubic Feet Water	Gallons Water/ Foot
0.5	0.622	0.303858694	0.00211013	0.01578
0.75	0.824	0.53326775	0.003703248	0.02770
1	1.049	0.864254945	0.00600177	0.04489
1.25	1.38	1.49571576	0.010386915	0.07769
1.5	1.61	2.03583534	0.014137745	0.10575
2	2.067	3.355612861	0.023302867	0.17431
2.5	2.469	4.787767769	0.033248387	0.24870
3	3.068	7.39267489	0.05133802	0.38401
4	4.026	12.73029413	0.08840482	0.66127
6	6.065	28.89033032	0.200627294	1.50069
8	7.961	49.77670499	0.345671562	2.58562
10	10.02	78.85447416	0.547600515	4.09605
12	11.938	111.9319439	0.777305166	5.81424

# ENGINEERING DATA

## FRICTION LOSS CHARTS

### Hydraulic Charts and Tables

#### Friction/Flow Chart For Schedule 80 Rigid PVC Pipe

Friction Loss of Water in Feet per 100 Feet Length of Pipe

Based on Williams & Hazen Formula Using Constant 150. Sizes of Standard Pipe in Inches.

U.S. Gals. per Min.	½" Pipe		¾" Pipe		1" Pipe		1¼" Pipe		1½" Pipe		2" Pipe		2½" Pipe		3" Pipe		3½" Pipe		4" Pipe		
	Vel. Ft. per Sec.	Loss in Feet	Vel. Ft. per Sec.	Loss in Feet	Vel. Ft. per Sec.	Loss in Feet	Vel. Ft. per Sec.	Loss in Feet	Vel. Ft. per Sec.	Loss in Feet	Vel. Ft. per Sec.	Loss in Feet	Vel. Ft. per Sec.	Loss in Feet	Vel. Ft. per Sec.	Loss in Feet	Vel. Ft. per Sec.	Loss in Feet	Vel. Ft. per Sec.	Loss in Feet	
2	2.74	6.72	1.48	1.51	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
4	5.48	24.2	2.97	5.45	1.79	1.54	1.00	.39	.73	.177	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
6	8.23	51.2	4.45	11.5	2.68	3.34	1.50	.82	1.09	.375	.65	.107	.....	.....	.....	.....	.....	.....	.....	.....	.....
8	11.0	86.9	5.94	19.6	3.57	5.69	2.00	1.39	1.45	.64	.87	.183	.61	.077	.....	.....	.....	.....	.....	.....	.....
10	13.7	132.0	7.42	29.6	4.46	8.60	2.50	2.10	1.82	.96	1.09	.276	.76	.115	.485	.039	.....	.....	.....	.....	.....
12	.....	.....	8.91	41.5	5.36	12.0	3.00	2.94	2.18	1.35	1.30	.387	.91	.161	.572	.055	.....	.....	.....	.....	.....
15	.....	.....	11.1	62.7	6.7	22.9	3.76	4.45	2.72	2.04	1.63	.585	1.14	.243	.727	.083	.54	.035	.....	.....	.....
18	.....	.....	13.4	87.9	8.03	25.5	4.50	6.25	3.27	2.86	1.96	.818	1.36	.340	.873	.116	.65	.056	.....	.....	.....
20	.....	.....	14.8	107	8.92	30.9	5.00	7.57	3.63	3.47	2.17	.996	1.51	.414	.97	.140	.72	.068	.56	.037	.....
25	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
30	.53	.025	.....	.....	.....	11.2	58.8	6.25	11.4	4.55	5.25	2.71	1.51	1.9	.625	1.21	.212	.90	.103	.695	.055
35	.62	.034	.....	.....	.....	13.4	65.3	7.50	16.0	5.45	7.38	3.26	2.11	2.27	.874	1.44	.297	1.08	.145	.84	.077
40	.71	.043	.....	.....	.....	15.6	86.9	8.75	21.3	6.38	9.78	3.80	2.81	2.65	1.16	1.70	.396	1.26	.192	.973	.103
45	.795	.054	.....	.....	.....	17.9	111	10.0	27.3	7.26	12.5	4.35	3.59	3.03	1.49	1.94	.507	1.44	.246	1.12	.132
50	.88	.065	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
55	.973	.078	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
60	1.06	.091	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
65	1.15	.106	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
70	1.23	.121	.86	.051	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
75	1.33	.138	.923	.057	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
80	1.41	.155	.98	.065	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
85	1.50	.174	1.04	.072	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
90	1.59	.193	1.11	.080	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
95	1.67	.213	1.20	.089	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
100	1.76	.234	1.23	.098	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
110	1.95	.279	1.36	.117	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
120	2.11	.329	1.48	.137	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
130	2.3	.381	1.60	.159	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
140	2.47	.437	1.72	.182	.98	.047	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
150	2.65	.496	1.85	.207	1.05	.054	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
160	2.82	.559	1.97	.234	1.12	.059	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
170	3.0	.626	2.08	.261	1.19	.067	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
180	3.16	.696	2.22	.290	1.26	.074	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
190	3.36	.769	2.34	.321	1.33	.082	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
200	3.52	.846	2.46	.353	1.41	.091	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
220	3.88	1.01	2.71	.421	1.55	.108	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
240	4.23	1.18	2.96	.484	1.69	.126	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
260	4.58	1.37	3.20	.573	1.83	.147	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
280	4.94	1.57	3.45	.658	1.97	.168	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
300	5.29	1.79	3.69	.747	2.11	.191	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
320	5.64	2.01	3.94	.841	2.24	.215	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
340	5.99	2.26	4.19	.940	2.39	.240	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
360	6.35	2.51	4.43	1.05	2.64	.261	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
380	6.70	2.77	4.68	1.16	2.88	.295	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
400	7.05	3.05	4.93	1.27	3.12	.325	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
450	7.95	3.79	5.54	1.58	3.16	.404	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
500	8.82	4.61	6.16	1.92	3.51	.493	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
550	9.70	5.50	6.77	2.29	3.86	.587	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
600	10.6	6.44	7.39	2.69	4.22	.686	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
650	11.5	7.47	8.00	3.12	4.57	.799	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
700	12.3	8.60	8.63	3.58	4.92	.916	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
750	13.2	9.77	9.24	4.07	5.27	1.04	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
800	14.1	11.0	9.85	4.58	5.62	1.17	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
850	15.0	12.3	10.5	5.12	5.97	1.31	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
900	15.9	13.7	11.1	5.69	6.32	1.46	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
950	16.7	15.1	11.7	6.29	6.67	1.61	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
1000	17.6	16.6	12.3	6.91	7.03	1.77	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
1100	19.4	19.8	13.5	8.27	7.83	2.11	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
1200	21.1	23.3	14.8	9.73	8.43	2.48	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
1300	.....	.....	.....	.....	9.13	2.87	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
1400	.....	.....	.....	.....	9.83	3.30	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
1500	.....	.....	.....	.....	10.5	3.75	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
1600	.....	.....	.....	.....	11.2	4.23	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
1800	.....	.....	.....	.....	12.6	5.26	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
2000	.....	.....	.....	.....	14.1	6.39	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
2200	.....	.....	.....	.....	15.5	7.80	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
2400	.....	.....	.....	.....	16.9	8.93	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....

\* Data shown is calculated from Williams and Hazen Formula  $H = \frac{3.023}{C} \frac{V^{1.852}}{D^{1.167}}$  using C-150.

For water at 60° F. Where H = head loss, V = fluid velocity ft./sec., D = diameter of pipe, ft.

C = coefficient representing roughness of pipe interior surface.

# ENGINEERING DATA

## 2 AND 3 SYSTEM MANIFOLDS

### 3 SYSTEM MANIFOLDS

**SUCTION MANIFOLD**

**RETURN MANIFOLD**

**TECHNICAL DATA**

Gallons	Gallons Per Min.	Turn Over Rate.-Hrs.	Pump H.P.(3)	Filter Sq.Ft.	Filter Flow Rate	A	B	Pipe Sizing			
								C	D	E	F
43,200	120	6.0	1/2	900	.133	3"	2"	2"	3"	2"	1 1/2"
64,800	180	6.0	3/4	900	.20	4"	2 1/2"	2"	3"	2 1/2"	2"
78,800	219	6.0	1	1,350	.16	4"	3"	2 1/2"	4"	2 1/2"	2"
91,800	255	6.0	1.5	1,350	.19	6"	3"	3"	4"	3"	2"
113,400	315	6.0	1.5	1,350	.233	6"	4"	3"	4"	3"	3"
124,200	345	6.0	2	1,350	.26	6"	4"	3"	6"	3"	3"
155,500	432	6.0	3	2,700	.16	6"	4"	4"	6"	4"	3"
167,400	465	6.0	5	2,700	.17	6"	6"	4"	8"	4"	3"
216,000	600	6.0	5	2,700	.22	8"	6"	4"	8"	4"	4"
324,000	900	6.0	7.5	4,050	.22	8"	6"	6"	8"	6"	4"
459,000	1,275	6.0	10	5,400	.24	10"	8"	6"	8"	6"	6"

ALL SUCTION PIPING SIZED AT 6 FPS OR BETTER.

ALL RETURN PIPING SIZED AT 8 FPS OR BETTER.

ALL PUMPS AVAILABLE IN SINGLE OR THREE PHASE.

PIPE SIZING BASED ON 35' RUNS OR LESS.

GALLONS PER MINUTE ARE BASED ON 60 FOOT OF HEAD.

FILTER FLOW RATES OF .375 OR LOWER ARE REQUIRED.

**3 SYSTEM MANIFOLDS**

### 3 SYSTEM MANIFOLDS

**SUCTION MANIFOLD**

**RETURN MANIFOLD**

**TECHNICAL DATA**

Gallons	Gallons Per Min.	Turn Over Rate.-Hrs.	Pump H.P.(4)	Filter Sq.Ft.	Filter Flow Rate	A	B	Pipe Sizing			
								C	D	E	F
57,600	160	6.0	1/2	1,200	.133	4"	2"	2"	3"	2"	2"
86,400	240	6.0	3/4	1,200	.20	4"	2 1/2"	2"	3"	3"	2"
105,120	292	6.0	1	1,800	.16	6"	3"	2 1/2"	4"	3"	2"
122,400	340	6.0	1.5	1,800	.19	6"	3"	2 1/2"	6"	3"	2"
151,200	420	6.0	1.5	1,800	.233	6"	3"	3"	6"	4"	2 1/2"
165,600	460	6.0	2	1,800	.26	6"	4"	3"	6"	4"	3"
207,360	576	6.0	3	3,600	.16	8"	4"	4"	8"	4"	3"
223,200	620	6.0	5	3,600	.17	8"	4"	4"	8"	4"	3"
288,000	800	6.0	5	5,400	.22	8"	6"	4"	8"	6"	4"
432,000	1,200	6.0	7.5	7,200	.22	10"	6"	6"	8"	6"	6"
612,000	1,700	6.0	10	10,800	.24	12"	8"	6"	10"	8"	6"

ALL SUCTION PIPING SIZED AT 6 FPS OR BETTER.

ALL RETURN PIPING SIZED AT 8 FPS OR BETTER.

ALL PUMPS AVAILABLE IN SINGLE OR THREE PHASE.

PIPE SIZING BASED ON 35' RUNS OR LESS.

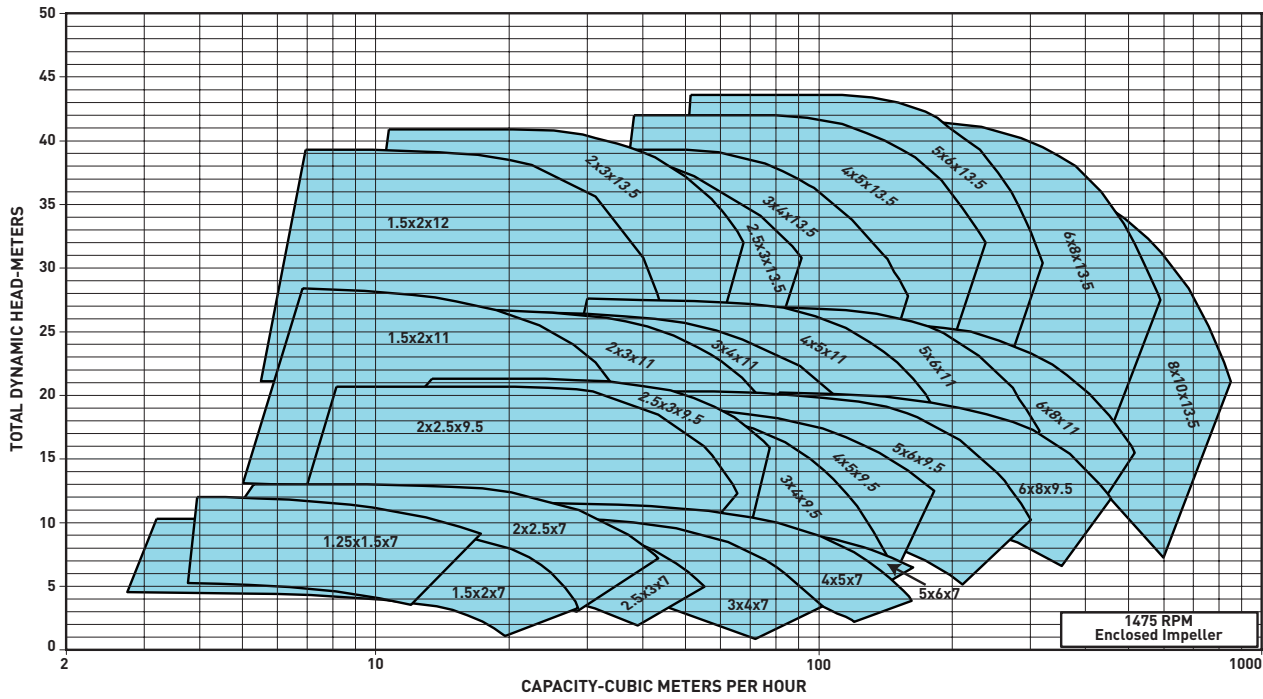
GALLONS PER MINUTE ARE BASED ON 60 FOOT OF HEAD.

FILTER FLOW RATES OF .375 OR LOWER ARE REQUIRED.



# ENGINEERING DATA

## AURORA 3801 SERIES PUMP SELECTIONS



For assistance in selecting the proper pump, please contact our commercial sales team or technical support.

# CONVERSION REFERENCE CHARTS

<b>1 U.S. Gallon/Minute = 0.22712470704 Cubic Meter/Hour</b>
<b>1 U.S. Gallon/Minute = 0.83267418463 UK Gallon/Minute</b>
<b>1 Foot of Water/Head = 0.30487804878 Meter of Water/Head</b>
<b>1 Foot of Water/Head = 0.43352750193 Pound/Square Inch</b>

<b>Pressure to Head Conversion</b>		
<b>Feet of Water</b>	<b>Meters of Water</b>	<b>PSI</b>
10	3.05	4.34
20	6.10	8.67
30	9.15	13.01
40	12.20	17.34
50	15.24	21.68
60	18.29	26.01
70	21.34	30.35
80	24.39	34.68
90	27.44	39.02
100	30.49	43.35
110	33.54	47.69
120	36.59	52.02
130	39.63	56.36
140	42.68	60.69
150	45.73	65.03

<b>Volumetric Flow Rate Conversion</b>		
<b>US Gallons per Minute</b>	<b>Cubic Meters per Hour</b>	<b>British Gallons per Minute</b>
10	2.27	8.33
20	4.54	16.65
30	6.81	24.98
40	9.09	33.31
50	11.36	41.64
60	13.63	49.96
70	15.90	58.29
80	18.17	66.62
90	20.44	74.94
100	22.71	83.27
110	24.98	91.60
120	27.26	99.92
130	29.53	108.25
140	31.80	116.58
150	34.07	124.91
160	36.34	133.23
170	38.61	141.56
180	40.88	149.89
190	43.15	158.21
200	45.43	166.54
210	47.70	174.87
220	49.97	183.19
230	52.24	191.52
240	54.51	199.85
250	56.78	208.18
260	59.05	216.50
270	61.32	224.83
280	63.60	233.16
290	65.87	241.48
300	68.14	249.81
310	70.41	258.14
320	72.68	266.46
330	74.95	274.79
340	77.22	283.12
350	79.49	291.45
360	81.77	299.77
370	84.04	308.10
380	86.31	316.43
390	88.58	324.75
400	90.85	333.08





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MT2450IN18CCAC	46	PM0500NACC3PXN	42	R151083	95	R231700	92		
MT2450IN18CCAN	46	PM0500PACC3BXN	42	R151186	95	R232600	92		
MT2800EN18CCAC	46	PM0500PACC3PXN	42	R151190	95	R233700	92		
MT2800EN18CCAN	46	PM0750NACC3BXN	42	R151196	95	R233800	92		
MT3050IN18CCAC	46	PM0750NACC3PXN	42	R151201	95	R233900	92		
MT3050IN18CCAN	46	PM0750PACC3BXN	42	R151226	96	R234000	92		
MT3200EN18CCAC	46	PM0750PACC3PXN	42	R151246	95	R234100	92		
MT3200EN18CCAN	46	PM1000NACC3BXN	42	R151248	95	R234200	92		
MT3500IN18CCAC	46	PM1000NACC3PXN	42	R151276	96	R234500	92		
MT3500IN18CCAN	46	PM1000PACC3BXN	42	R151306	96	R234700	92		
MT3600EN18CCAC	46	PM1000PACC3PXN	42	R151716	96	R234800	92		
MT3600EN18CCAN	46	PM1250NACC3BXN	42	R171016	162	R234900	92		
MT4000EN18CCAC	46	PM1250NACC3PXN	42	R171022	162	R235100	92		
MT4000EN18CCAN	46	PM1250PACC3BXN	42	R171026	162	R235200	92		
MT4050IN18CCAC	46	PM1250PACC3PXN	42	R171056	162	R235300	92		
MT4050IN18CCAN	46	PM1500NACC3BXN	42	R171066	162	RCS1	14		
MT4500EN18CCAC	46	PM1500NACC3PXN	42	R171070	162	RLYLX	14		
MT4500EN18CCAN	46	PM1500PACC3BXN	42	R171096	162	RLYLX3HP	14		
MT4500IN18CCAC	46	PM1500PACC3PXN	42	R171215	162	RLYSC	14		
MT4500IN18CCAN	46	PM1750NACC3BXN	42	R171218	162	RLYSC3HP	14		
MT5000IN18CCAC	46	PM1750NACC3PXN	42	R171230	162	RYALX	14		
MT5000IN18CCAN	46	PM1750PACC3BXN	42	R171240	162				
		PM1750PACC3PXN	42	R181086	90				
	P	PM2000NACC3BXN	42	R181096	90	S			
P6E6C-204L	144	PM2000NACC3PXN	42	R181156	90	S7M120	36		
P6E6D-205L	144	PM2000PACC3BXN	42	R181200	90	S7M400	36		
P6E6E-206L	144	PM2000PACC3PXN	42	R181206	90	S7MD60	40		
P6E6F-207L	144	PS10X10	151	R181216	90	S7MD72	40		
P6E6G-208L	144	PS10X5E	151	R181226	90	S8M150	36		
P6E6H-209L	144	PS10X6E	151	R181268	90	S8M500	36		
P6EA6E-205L	144	PS10X8E	151	R181269	90				
P6EA6F-206L	144	PS6X3E	151	R191088	91	T			
P6EA6G-207L	144	PS6x4E	151	R191090	91	T40BBE	105		
P6EA6F-216L	144	PS6X5E	151	R191091	91	T40BBK	105		
P6EA6G-208L	144	PS6X6	151	R191092	91	T40BDG	105		
P6R6D-205L	144	PS8X4E	151	R191095	91	T40BG	105		
P6R6E-206L	144	PS8X5E	151	R191101	91	T40BW	105		
P6R6F-207L	144	PS8X6E	151	R191104	91	T40FB	105		
P6R6G-208L	144	PS8X8	151	R191380	91	T40FBK	105		
P6R6H-209L	144			R201126	97	T40FDG	105		
PA215GF	18	R		R201276	97	T40FG	105		
PA220GF	18	R111342	88	R201286	97	T40FN	105		
PCD-1000	153	R111358	88	R201296	97	T40FNB	105		
PKG 115	152	R111556	88	R201298	97	T40FNBK	105		
PKG 161	152	R111560	88	R221026	90	T40FNDG	105		
PKG 184	122, 124, 152	R111584	88	R221030	90	T40FNG	105		
PKG 184C	122, 124, 152	R111646	88	R230200	92	T40FNW	105		
PKG 188	145, 37, 55	R121106	89	R230300	92	T40FW	105		
PKG 188Z	40	R121126	89	R230400	92	TS5L	14		
PKG 189	145, 37, 40	R121196	89	R230500	92				
PKG 51	152	R121216	89	R230800	92	U			
PKG 56	152	R121230	89	R230900	92	U11-197P	55		
PKG 76	152	R121232	89	R231100	92				
PKG 98	152	R151076	95	R231200	92	Z			
PM0500NACC3BXN	42	R151082	95	R231400	92	ZBR46760	153		







