



BIOSHIELD® UV SYSTEM

Deepen protection. Lessen chlorine spend.

Reliable, affordable sanitizing technology through the power of UV.

Create a cleaner, healthier aquatic environment with the Pentair NSF-approved BioShield UV commercial systems. BioShield helps improve water and air quality by eliminating harmful chloramines while reducing chemical usage. This lowers operational costs and provides an affordable solution to instantly help protect against chlorine-resistant micro-organisms.

800.831.7133 pentair.com/bioshielduv

Scan the QR code to go now





What makes NSF certification important

NSF Certification HMAC Systems are NSF certified as a water conditioning device.
The BioShield UV system is the first in the industry to receive this certification.



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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 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.
- ECOMMERCE (EC) WARRANTY: Products purchased from an Authorized Pentair Online Reseller receive a one (1) year (parts only) warranty from the date of purchase. To receive an eCommerce warranty, customer must:
- 1. Register the product, and
- 2. Provide a copy of the sales receipt

GENERAL WARRANTY TERMS AND CONDITIONS

DENIAL OF WARRANTY CLAIM

A warranty claim 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.



INFORMATION

1620 Hawkins Ave., Sanford, NC 27330 • (919) 566-8000 10951 W. Los Angeles Avenue, Moorpark, CA 93021 • (805) 553-5000

TERMS AND CONDITIONS

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.)

- Stark[™], THS Series[®] Filters, Manifolds and Controllers
- · Commercial Heaters 500,000 BTU and above
- Aurora[®] and Berkeley[®] Pumps, PS Series[™] In-Line Strainers
- · Paragon Deck Equipment
- AcuDrive[™] XS Variable Frequency Drives
- Acu-Trol[®] Blue Labeled Commercial Chemical Controllers
- AquaTRAM® Access Lifts
- BioShield[®] UV

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 five (5) 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 Customer Service Department

(800) 831-7133 • fax (877) 606-5457 - U.S.A.

Sanford (919) 566-8000

(919) 566-8916 - International Department Fax

Moorpark (805) 553-5000

(805) 530-0177 - International Department Fax

DISCLAIMER

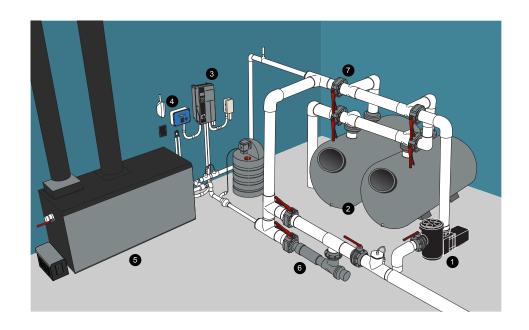
All content in this publication is based on information available at the time of printing. Pentair Water Pool and Spa, Inc. reserves the right to make changes at any time, without prior notice, to product specifications, part numbers, pricing, warranty terms, and to discontinue product or product components.





LARGE MECHANICAL ROOM

COMPLETE SYSTEM SOLUTIONS





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



5. POWERMAX® HEATERS
PowerMax heater provides
peak efficiency in both indoor
and outdoor applications to
2.000,000 BTU's.



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



6. BIOSHIELD® UV SANITIZERS Provide excellent secondary sanitizing system.



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



 FILTER MANIFOLD KITS Feature automatic diaphragm or butterfly valves.



4. COMMERCIAL
INTELLICHEM®
CHEMICAL
CONTROLLER
Helps provide proper
chemical management.



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

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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SMALL MECHANICAL ROOM COMPLETE SYSTEM SOLUTIONS





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



6. INTELLICENTER®,
INTELLITOUCH® &
EASYTOUCH®
AUTOMATION SYSTEMS
Programming and control of vital
pool systems and accessories.



2. MASTERTEMP® &
ETI® 400 HEATERS
Best in class efficiency. Eti 400
Heaters efficient up to 96%.



 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.



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



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



 BIOSHIELD® COMMERCIAL UV DISINFECTION SYSTEMS & HMAC SECONDARY WATER CONDITIONING SYSTEMS Rapidly helps protect against chlorine-resistant micro-organisms while reducing chlorine usage.



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

CALIFORNIA PROPOSITION 65 WARNING

^{*} 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).





COMMERCIAL INTELLICHEM®

COMMERCIAL CHEMICAL CONTROLLER



Commercial IntelliChem Chemical Controller

Featured Highlights

- · Dual sanitizer support
- Programmable chemical feed cycle and mix times for precise water balance
- Aids in safer 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® on iOS® device offers the ability to keep track of pH, ORP, Temperature and Calculated PPM (cPPM) levels and make adjustments locally or remotely
- Compatible with IntelliChlor® Salt Chlorine Generators, external dosing pumps, and CO₂ systems
- · Title-22 Compliant
- IntelliChem Commercial iOS device is available on Apple®App Store®
- 30-day data log storage of pH, ORP, cPPM and temperature
- · Battery backup for RealTime Clock (RTC)

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Ordering Information

Product	Description	Application									
	COMMERCIAL INTELLICHEM CHEMICAL CONTROLLER										
523478	IntelliChem Commercial System No pump	The 523478 Controller is ETL Listed to NSF 50 Standard. Does NOT include ScreenLogic, but available as an option.									
522577	IntelliChem Commercial System 1 pump 1,2	Dual sanitization support w/standalone ScreenLogic remote PC and iOS device connectivity. Pre-mounted and pre-wired on 2x2 plastic backboard. Containers ordered separately. The 522577 Controller is ETL Listed to NSF 50 Standard.									
522578	IntelliChem Commercial System 2 pumps 1,2	Dual sanitization support w/standalone ScreenLogic remote PC and iOS device connectivity. Pre-mounted and pre-wired on 2'x2' plastic backboard. Containers ordered separately. The 522578 Controller is ETL Listed to NSF 50 Standard									
	INTELLI	CHEM CHEMICAL CONTROLLER ACCESSORIES									
523492Z	Stenner 50GPD External Pump 1,2	50GPD Stenner pump for feeding liquid acid or chlorine									
523493	Stenner 50GPD Pump Tube 2 pk. 1,2	50GPD Stenner pump tubes for every 6-month replacement									
523494	Stenner 50GPD Pump Tube 5 pk. 1,2	50GPD Stenner pump tube for every 6-month replacement									
522104	ScreenLogic Bundle (includes 520500	and 522620)									

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





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

LX80 & LX820 SYSTEMS

COMMERCIAL POOL/SPA CONTROL SYSTEMS

Featured Highlights

LX802 Commercial Pool/Spa Control System

- · Emergency Shut-off Switch (disables all pumps)
- · Audio Alarm
- Power Center available 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 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

NOTE: System interfaces with existing Spring Wound Timer

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).

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▲ ADVERTENCIA: Cáncer y Daño Reproductivo.

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Ordering Information

Product	Circuits	Power Relays Std/Max	Circuit Breaker Capacity	Voltage	Relay Amp Inductive
	LX80 & LX820 COM	MERCIAL POOL/S	SPA CONTROL SYS	TEMS	
LX802*	Pool Filter, Spa Filter, Jet1, Jet2	3/8	N/A	115V/230V	20
LX8202	*Spa Filter, Jet1, Jet2	2/3	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
ACCESSO	RIES FOR LX80 COMMERCIAL POOL/SPA CONTROL SYSTEM
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
ACCESSOR	IES FOR LX8202 COMMERCIAL POOL/SPA CONTROL SYSTEM
RLYSC	Additional Power Relay (for second jet pump or filter pump)
RLYSC3HP	Additional 25 Amp, 3 HP Power Relay (for auxiliary equipment))

INTELLIVALVE®

VALVE ACTUATOR

TRADEGRADE



IntelliValve Valve Actuator

The 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.

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
- Sleek, minimalist design is compact and fits easily within any equipment pad
- 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

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azuru4

Ordering Information

Product	Description	
	INTELL	IVALVE
521485	For any Pentair Automation System	Compatible with control systems that use standard actuators

VALVE ACTUATOR

VALVE CONTROL SYSTEMS



Valve Actuator

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

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

CALIFORNIA PROPOSITION 65 WARNING

Ordering Information

Product	Model	Voltage	Cable	Rotation	Compatibility	Motor
				VALVE ACTUAT	OR	
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

INTELLICENTER®

CONTROL SYSTEM FOR POOLS AND SPAS

Featured Highlights

- Easy to program, with step-by-step, on screen instructions
- Color touchscreen interface displays intuitive instructions in clear text and rich colors
- Convenient control from inside and outside the home via outdoor and indoor control panels and wireless remotes
- Remote control from anywhere: Android® and iOS® device, Web browsers on Mac® and PC computers and voice command with Amazon Echo®

CALIFORNIA PROPOSITION 65 WARNING

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▲ ADVERTENCIA: Cáncer y Daño Reproductivo.

www.p65warnings.ca.gov.



IntelliCenter is Pentair's highest-capacity and most service-friendly control system ever. Communication with this system can be done on a wide range of devices and platforms. Many important service, programming and monitoring tasks can be done without an on-location service call. Order popular bundled systems and receive everything in one box or build systems a la carte.

For more information on Pentair Automation systems visit www.pentair.com

INTELLITOUCH® AUTOMATION SYSTEMS

ADVANCED AUTOMATION SYSTEMS FOR POOL AND SPA

Featured Highlights

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. Add a ScreenLogic2 Interface to Pentair automation systems and gain pool access from practically anywhere at anytime using your Android® and iOS® device, Web browsers on Mac® and PC computers.

CALIFORNIA PROPOSITION 65 WARNING

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▲ ADVERTENCIA: Cáncer y Daño Reproductivo.

www.p65warnings.ca.gov.

TRADEGRADE





For more information on Pentair Automation systems visit www.pentair.com

EASYTOUCH® CONTROL SYSTEMS

POOL/SPA CONTROL SYSTEMS

TRADEGRADE





521885 - iS4 Remote Control



EasyTouch System



520547 - EasyTouch wireless for 8 circuit systems

CALIFORNIA PROPOSITION 65 WARNING

▲ WARNING: Cancer and Reproductive Harm.

▲ AVERTISSEMENT: Peut Causer le Cancer et des Dommages au Système Reproducteur.

▲ ADVERTENCIA: Câncer y Daño Reproductivo.

www.p65warnings.ca.gov.

Featured Highlights

The EasyTouch Control System family offers control for homeowner's looking for an 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® PL4/PSL4 CONTROL SYSTEMS

POOL/SPA CONTROL SYSTEMS

TRADEGRADE





522464 - EasyTouch PS4/PSL4 wireless for 4 circuit systems





521885 - iS4 Remote Control

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 a computer, smartphone, mobile digital device 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.

GFCI CIRCUIT BREAKERS

Featured Highlights

- · Personnel Protection GFCI
- Meets 2008 to current NEC Standards for Pool Pumps
- Compatible with IntelliTouch® and EasyTouch® Control System
- Designed to protect personnel exposed to ground faults in AC, DC, and mixed AC/DC systems where levels exceed 6 milliamps

Ordering Information

Product	Description	Carton Oty.	Carton Wt (Lbs.)
	GFCI CIRCUI	T BREAKERS	
PA215GF	2-pole 15 amp GFCI	10	11.50
PA220GF	2-pole 20 amp GFCI	10	11.50



GFCI Circuit Breakers

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ADVERTENCIA: Câncer y Daño Reproductivo.

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STARK™ SS SERIES FILTERS

HORIZONAL SAND FILTRATION SYSTEMS



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
- 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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www.p65warnings.ca.gov.

Ordering Information

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

STARK™ SS SERIES FILTERS (CONT'D)

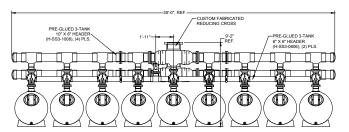
HORIZONAL SAND FILTRATION SYSTEMS

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 dualtank systems)

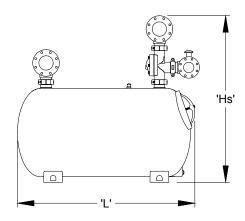
With Fully Automatic (CA100) Control Option

- Effluent Flow Sensor/Saddle
- Temperature Probe

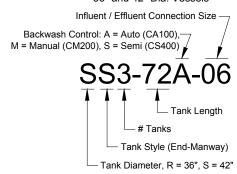
Additional Adders

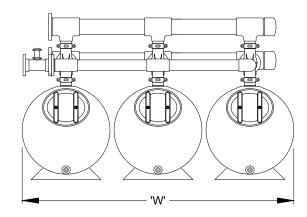
- Pressure Booster System (PBS01)
- Manual or Motorized Butterfly backwash
- Throttling valve for 3+ tank systems
- Advanced backwash controls

Certified to NSF/ANSI Standard 50



SS Series System Numbering 36" and 42" Dia. Vessels





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.
- 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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▲ ADVERTENCIA: Cáncer y Daño Reproductivo.

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***RENTIAL TOTAL TO

STARK™ S SERIES FILTERS

HORIZONAL SAND FILTRATION SYSTEMS





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: Presure Booster System (PBS01); Manual or Morotized 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.

CALIFORNIA PROPOSITION 65 WARNING

Ordering Information

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		CAPACITY	INFORMA	TION (INDEF	PENDEDNT (OF STYLE / C	ONFIGURA	TION)		DIMENSI	ONS - SI	DE-BY-SI	DE
# 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 (Ibs.)	Shipping Weight (lbs.)	Descriptive System Number		ank and : de Syster 'L'	•
\neg	S1-48	42" x 48"	12.8	154	192	4"	16.5	5,280	870	*SC1-48-04	44"	82"	47"
	S1-72	42" x 72"	20.0	240	300	6"	26.0	7,920	1,110	*SA1-72-06	44"	107"	67"
1	S1-96	42" x 96"	27.0	324	405	6"	36.0	10,560	1,350	*SA1-96-06	44"	122"	67"
	S1-120	42" x 120"	35.0	420	525	6"	45.5	13,200	1,590	SA1-120-06	44"	146"	67"
	S1-144	42" x 144"	41.0	492	615	6"	55.5	15,840	1,830	SA1-144-06	44"	170"	67"
	S2-48	42" x 48"	25.6	307	384	4"	33.0	10,560	1,740	*SC2-48-06	96"	80"	56"
	S2-72	42" x 72"	40.0	480	600	6"	52.0	15,840	2,220	*SA2-72-06	99"	92"	86"
2	S2-96	42" x 96"	54.0	648	810	6"	72.0	21,120	2,700	*SA2-96-06	99"	116"	86"
	S2-120	42" x 120"	70.0	840	1050	6"	91.0	26,400	3,180	SA2-120-08	110"	144"	91"
	S2-144	42" x 144"	82.0	984	1230	6"	111.0	31,680	3,660	SA2-144-08	110"	168"	91"
	S3-48	42" x 48"	38.4	461	576	4"	49.5	15,840	2,610	*SC3-48-06	152"	80"	56"
	S3-72	42" x 72"	60.0	720	900	6"	78.0	23,760	3,330	*SA3-72-08	152"	94"	91"
3	S3-96	42" x 96"	81.0	984	1215	6"	108.0	31,680	4,050	*SA3-96-08	152"	117"	91"
	S3-120	42" x 120"	105.0	1260	1575	6"	136.5	39,600	4,770	SA3-120-10	152"	138"	96"
	S3-144	42" x 144"	123.0	1476	1845	6"	166.5	47,520	5,490	SA3-144-10	152"	162"	96"
	S4-48	42" x 48"	51.2	614	768	4"	66.0	21,120	3,480	*SC4-48-06	200"	80"	56"
	S4-72	42" x 72"	80.0	960	1200	6"	104.0	31,680	4,440	*SA4-72-08	200"	94"	91"
4	S4-96	42" x 96"	108.0	1296	1620	6"	144.0	42,240	5,400	*SA4-96-10	200"	118"	96"
	S4-120	42" x 120"	140.0	1680	2100	6"	182.0	52,800	6,360	SA4-120-10	200"	142"	96"
	S4-144	42" x 144"	164.0	1968	2460	6"	222.0	63,360	7,320	SA4-144-12	200"	168"	100"

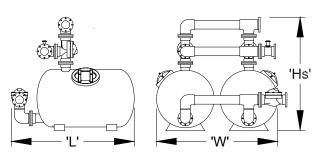
STARK™ S SERIES FILTERS (CONT'D)

HORIZONAL SAND FILTRATION SYSTEMS

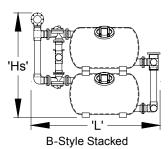
Dimensions and Performance

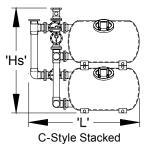
Certified to NSF/ANSI Standard 50

		DIMENS	IONS - STAC	KED SYSTE	MS	
Style	# Tanks	Descriptive System Number	Filtration Area (Sq. Ft.)	'w'	יני	'Hs'
		SB2-48-06ST	25.6	44"	98"	107"
41		SB2-72-06ST	40.0	44"	135"	109"
Style	2	SB2-96-06ST	54.0	44"	159"	109"
- B-		SB2-120-08ST	70.0	44"	191"	109"
Stacked Systems - B-Style		SB2-144-08ST	82.0	44"	215"	109"
Syste		SB4-48-06ST	51.2	92"	99"	108"
ked (4	SB4-72-08ST	80.0	92"	140"	111"
Stacl		SB4-96-10ST	108.0	100"	166"	119"
•		SB4-120-10ST	140.0	100"	190"	119"
		SB4-144-12ST	164.0	104"	217"	122"
		SC2-48-06ST	25.6	50"	80"	107"
41		SC2-72-06ST	40.0	50"	114"	109"
Style	2	SC2-96-06ST	54.0	50"	138"	109"
ڹٛ		SC2-120-08ST	70.0	53"	165"	109"
ems		SC2-144-08ST	82.0	53"	189"	109"
Syst		SC4-48-06ST	51.2	92"	88"	108"
Stacked Systems - C-Style		SC4-72-08ST	80.0	92"	122"	111"
Stac	4	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





S Series System Numbering

Tank Length

Tanks

Tank Style (A, B, or C)

Tank Diameter, S = 42"

Notes:

3.

4.

- 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

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▲ ADVERTENCIA: Cáncer y Daño Reproductivo.

www.p65warnings.ca.gov.

***REMERICAN PRODUCTION PROD

STARK™ 5S SERIES FILTERS

HORIZONTAL SAND FILTRATION SYSTEMS



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 limited in field gluing. The 5S Series Filter Systems include the only 8" backwash valve in the industry, and air valve actuation for a smooth and quick valve movement.

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
- Influent manifold distribution to help prevent clogging
- · Several backwash control options available
- Butterfly-valve options including linked tandem valves are also available.

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Ordering Information

					CAPAC	ITY INFORM	ATION					
# 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.)
	5S1-30-06	60" X 78"	30.0	360	450	6"	62"	83"	106"	63.5	15,000	2,000
	5\$1-35-06	60" X 90"	35.0	420	525	6"	62"	95"	106"	74.3	17,000	2,300
1	5\$1-40-06	60" X 102"	40.0	480	600	6"	62"	107"	106"	85.4	20,000	2,600
	5\$1-45-08	60" X 114"	45.0	540	675	8"	62"	119"	123"	96.4	23,000	2,900
	5\$1-50-08	60" X 126"	50.0	600	750	8"	62"	131"	123"	107.4	25,000	3,200
	5\$2-30-08	60" X 78"	60.0	720	900	6"	128"	83"	111"	127.0	30,000	4,100
	5\$2-35-08	60" X 90"	70.0	840	1,050	6"	128"	95"	111"	148.6	35,000	4,600
2	5\$2-40-08	60" X 102"	80.0	960	1,200	6"	128"	107"	111"	170.8	40,000	5,200
	5\$2-45-08	60" X 114"	90.0	1,080	1,350	8"	128"	119"	127"	192.8	45,000	5,700
	5S2-50-10	60" X 126"	100.0	1,200	1,500	8"	128"	131"	133"	214.8	49,000	6,300
	5\$3-30-08	60" X 78"	90.0	1,080	1,350	6"	194"	83"	111"	190.5	45,000	6,100
	5\$3-35-10	60" X 90"	105.0	1,260	1,575	6"	194"	95"	117"	222.9	53,000	6,900
3	5\$3-40-10	60" X 102"	120.0	1,200	1,800	6"	194"	107"	117"	256.2	60,000	7,800
	5\$3-45-10	60" X 114"	135.0	1,620	2,025	8"	194"	119"	133"	289.2	68,000	8,600
	5\$3-50-12	60" X 126"	150.0	1,800	2,250	8"	194"	131"	135"	322.2	75,000	9,500
	5\$4-30-10	60" X 78"	120.0	1,440	1,800	6"	260"	83"	117"	254.0	61,000	8,100
	5\$4-35-10	60" X 90"	140.0	1,680	2,100	6"	260"	95"	117"	297.2	70,000	9,200
4	5\$4-40-12	60" X 102"	160.0	1,920	2,400	6"	260"	107"	119"	341.6	80,000	10,400
	5\$4-45-12	60" X 114"	180.0	2,160	2,700	8"	260"	119"	135"	385.6	92,000	11,500
	5\$4-50-12	60" X 126"	200.0	2,400	3,000	8"	260"	131"	135"	429.6	100,000	12,600

STARK™ 5S SERIES FILTERS (CONT'D)

HORIZONAL 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 dualtank systems)

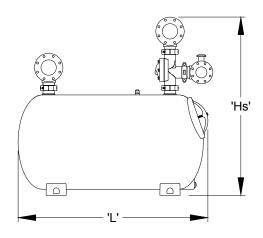
With Fully Automatic (CA100) Control Option

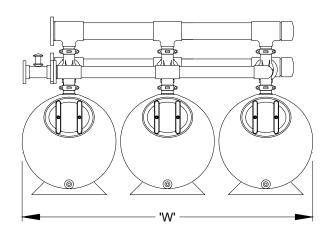
- Effluent Flow Sensor/Saddle
- Temperature Probe

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

Tank Diameter, 5 = 60" Diameter

Influent / Effluent Connection Size

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

553-50A-10

Tank Filter Area

Tanks

Tank Style (End-Manway)

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.
- 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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⚠ ADVERTENCIA: Cáncer y Daño Reproductivo.

www.p65warnings.ca.gov.

STARK™ FILTERS

BACKWASH OPTIONS AND ADDITIONAL FEATURES



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).



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.



Butterfly Valve Systems

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



Optional Pressure Booster System (PBS01)

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



CALIFORNIA PROPOSITION 65 WARNING

STARK™ AQ SERIES™ FILTERS

LARGE DIAMETER SYSTEMS & VESSELS

Stark AQ Series Filters

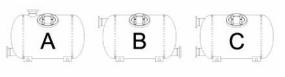
48" and 60" Diameter Stackable Horizontal Filters are available as complete filtration systems The Stark AQ Series Filters are ideal for high-load or large flows of water such as water parks and public aquariums. NSF-50 Listed. 75 psi pressure rating.

Vessel Model Number	Available Styles*	Filtration Area (sq ft)	Internal Diameter (feet)	Internal Length (feet)	Standard Flange Size (ANSI)
A	AQ SERIES VE	SSEL SIZING	AND CAPACIT	Y INFORMAT	ION
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

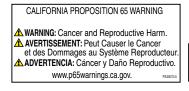
Stark V Series Filters

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		Filtration Area	Internal Diameter	Internal Height	Standard Flange Size
Number	Style	(sq ft)	(feet)	(feet)	(ANSI)
	V SERIES VES	SEL SIZING A	AND CAPACITY	INFORMATION	NC
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"

Optional Integral Insulation

Any Stark Filter can be manufactured with integral insulation by tween 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



Certified to NSF/ANSI Standard 50



Stark V Series Sand Filter



Insulated Vessel at Start of Winding

THS SERIES® HORIZONTAL SAND FILTER



THS Series Horizontal Sand Filter

Featured Highlights

- · Five sizes to 27 sq. ft.
- · Manway cover with viewport in front for easier access and smaller footprint
- 6 in. flanged connections, 4 in. victaulic on the THS Series 3461
- Optional manual, semi-automatic, and automatic backwash systems for one and two tank systems
- · Two backwash controllers to choose from
- · Influent manifold distribution to help 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, coating, provides remarkable surface protection.

Ordering Information

	•								
			Effective			Filter Media			
Product	Model	Description	Filtration Area (Sq. Ft.)	Flow Rate (15 GPM/ Sq. Ft.)	6 Hour Turnover Capacity (In Gallons)	Pea Gravel Required (Lbs.)	Sand Required (Lbs.)	All Sand Required (Lbs.)	Carton Wt. (Lbs.)
			T	HS SERIES F	IORIZONTAL FILTE	R			
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
		CONTR	OLLERS (MUS	ST USE WITH	DIAPHRAGM VALV	/ES MANIFOLD K	ITS)		
156400	Single THS	manual controller	6 in. FP		156850 Sin	igle THS CA100 au	tobackwash co	ntroller	
156450	Dual THS m	nanual controller 6	in. FP		CS400-01 CS	400 backwash con	troller for single	tank system	
156800	Dual THS C	:A100 autobackwas	sh controller		CS400-02 CS	400 backwash con	troller for dual t	ank system	



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).

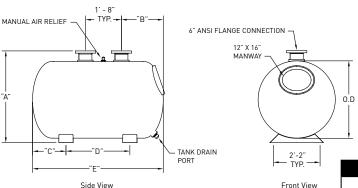
THS SERIES® HORIZONTAL SAND FILTER (CONT'D)

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

		10050000150
		ACCESSORIES
	140325	Adder kit for third THS Filter ²
	156100	Temperature probe kit ⁴
	156150	Flowmeter saddle kit 6 in. 4
	155800	WA-KIT wedge anchor kit ¹
	155706	Manway with Viewport Retrofit Kit - replace existing in field
C	S400DP	Mounted differential pressure switch 5
	B4110	120v to 24v 100w transformer
Е	34221KIT	Gauge Panel Kit Influent/Effluent gauge

- ¹ One each per tank purchased if required.
- Adder Kit provides 6 in., SCH 80 manifold piping, fittings and hardware for the addition of a third THS Series 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.
- ³ Does not require a purchase of a controller.
- ⁴ Only used with CA100 controller option.
- ⁵ Only available with CS400 controller.
- ⁶ Does require a purchase of a controller.
- ⁷ Does not include THS Tanks.

Dimensions and Performance



Certified to NSF/ANSI Standard 50

THS 34 X 61	4" GROOVE COUPLING CONNECTION —
MANUAL AIR RELIEF 1'-8"-"B"	12" X 16" MANWAY
"A"	0.D
	TANK DRAIN 2' - 2" PORT TYP.
Side View	Front View

* 4 in. victaulic on THS 3461 only

		Tank Dimensions							
Model	"A" in.	"B" in.	"C" in.	"D" in.	"E" in.	"O.D." in.	WT		
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		

THS SERIES SPECIFICATION CHART

NSF/ANSI 50 approved for 5-20 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.
   www.p65warnings.ca.gov.

TRITON° C AND TRITON C-3

HIGH CAPACITY FIBERGLASS SIDE MOUNT SAND FILTER WITHOUT VALVES

TRADEGRADE



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.

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

CALIFORNIA PROPOSITION 65 WARNING

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200784

Ordering Information

		Effective		Turnove	r Capacity (In Gal.) ²	Filter	1edia	All		
Product	Model	Filtration Area (Sq. Ft.)	Flow Rate	6 Hour	8 Hour	10 Hour	Pea Gravel Req'd (Lbs.)	Sand Req'd (Lbs.)	Sand Req'd (Lbs.)	Ctn Oty.	Ctn Wt.(Lbs.)
				TRITO	N C SAND	FILTERS					
140315	TR 100C- Almond	4.91	98	35,280	47,040	58,800	150	450	600	1	70
140316	TR 140C- Almond	7.06	141	50,760	67,680	84,600	275	650	925	1	82
				TRITON	N C-3 SANE	FILTERS					
140310	TR 100C-3-Black only	4.91	98	35,280	47,040	58,800	150	450	600	1	65
140342	TR 140C-3-Black only	7.06	141	50,760	67,680	84,600	275	650	925	1	82
				TRITON	C VALVE	OPTIONS	1				
261050	2 in. HiFlow w/ plumbir	ng, for sand filt	ers							1	11
261055	2 in. MPV, for sand filte	ers (SM 20-3)								1	10
263010	Full-Flow valve, sand f	ilters (will only	work on the	e TR100C an	d TR140C m	odels)				1	7
263080	FullFloXF Valve for Sa	nd, inlet port o	n top, Penta	air 2 in. union	s glued on X	F Valve					
			CLE	AR PRO TE	CHNOLOG	GY LATER	AL KITS				
159029	Clear Pro TR 100C Kit										
159031	Clear Pro TR 100C-3 I	Kit									
159030	Clear Pro TR 140C Kit										
159032	Clear Pro TR 140C-3 I	Kit									

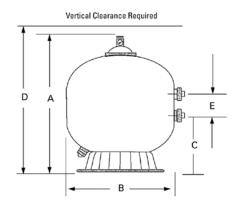
¹ Valves must be purchased separately.

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	39¾ in.	30-1/2 in.	16-½ in.	43-¾ in.	7-½ in.
TR 140 C	45-1/4 in.	36-½ in.	18¾ in.	49-1/4 in.	7-½ in.
TR 100 C-3	39-¾ in.	30-1/2 in.	16-1/16 in.	43¾ in.	7.72 in.
TR 140 C-3	45-1/4 in.	36-1/2 in.	18-½ in.	49-1/4 in.	7.72 in.



 $^{^{\}rm 2}~$ Based on 20 gpm per sq. ft. Tanks are NSF/ANSI 50 approved for 5–20 gpm/sq.ft.

TRITON° HD SIDE MOUNT FILTERS

HEAVY-DUTY FIBERGLASS SAND FILTER WITHOUT VALVES

Featured Highlights

Maximum Operating Pressure 75 psi





TRADEGRADE

Triton HD Filter (Unions not included)

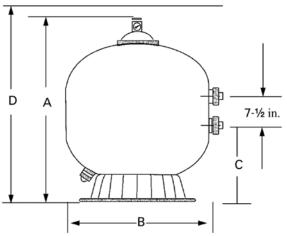
All the same great performance and features of the original Triton filter with maximum operating pressure of 75 psi for those special high pressure installations such as single pump in-floor cleaning systems.

Ordering Information

								•		
Dandarat	Madal	Effective Filtration	Flow Rate (GPM		nover Capa (In Gallons)		<u>Filte</u>	- Media	All Sand	Carton
Product	Model	Area (Sq. Ft.)	Comm)	8 Hour	10 Hour	12 Hour	Pea Gravel Required (Lbs.	Sand Required) (Lbs.)	Req'd (Lbs.)	Wt.(Lbs.)
			TRIT	ON HD S	AND FILTE	R				
140335	TR100 HD	4.91	74	35,520	44,400	53,280	150	450	600	66
			TRITO	N HD VAL	VE OPTIO	NS ¹				
263079	2 in. PVC	slide valve w/o plumbir	ng, for D.E. & sand	filters						3
261049	2 in. HiFlo	w valve, no plumbing								7
261050	2 in. HiFlo	w valve w/ plumbing, fo	or 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			
263064	Push Pull 7-1/2 in. Center Valve, Almond ABS						5			
263080	FullFloXF	Valve for Sand, inlet po	FullFloXF Valve for Sand, inlet port on top, Pentair 2 in. unions glued on XF Valve							

¹ Valves must be purchased separately.

Vertical Clearance Required



Dimensions and Performance

Certified to NSF/ANSI Standard 50

DIMENSION TABLE

MODEL	A. DIM.	B DIM.	C DIM.	D DIM.
TR100 HD	39-¾ in.	30-1/2 in.	16-1/4 in.	41-¾ in.

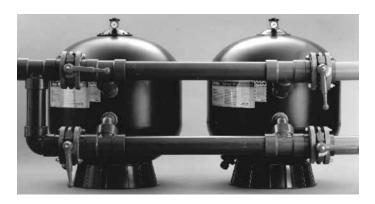
SCH 40 & 80 FOR TR100C, TR140C, TR100C-3 & TR140C-3

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.

Pipe is not included in kits.



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

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

o	
Product	Model
For Plumbin	g 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 fo	r TR100C and TR140C Filters ¹
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	Manifold	Filter Rat	te Sq. Ft.	ַ	Turnover Capacity		
riiters	Sq. Ft.	Pipe Dia.	15 GPM	20 GPM	6 Hours	8 Hours	10 Hours	
		TAN	DEM TRITON 14	OC FILTER INSTA	ALLATION			
6 TD 140'a	40.26	6 in.	635	_	228,600	304,800	381,000	
0 IR 140 S	6 TR 140's 42.36	8 in.	_	847	304,920	406,560	508,200	
7 TD 440'-	49.42	6 in.	741	_	266,760	355,680	444,600	
7 TR 140's		8 in.	_	988	355,680	474,240	592,800	
0 TD 440'-	N- FC 40	8 in.	847	_	304,920	406,560	508,200	
8 TR 140's	56.48	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	Manifold	Filter Rat	te Sq. Ft.]	<u>Turnover Capacity</u>			
riiters	Sq. Ft.	Pipe Dia.	15 GPM	20 GPM	6 Hours	8 Hours	10 Hours		
		TANDEM TRITO	N TR100C AND	TR100C-3 FILTI	ER INSTALLATIO	ON			
2 TR 100's	9.82	3 in.	147	_	52,920	70,560	88,200		
2 110 100 3	3.02	4 in.	_	196	70,560	94,080	117,600		
3 TR 100's	14.73	4 in.	221	_	79,560	106,080	132,600		
3 11 1003	14.75	4 in.	-	295	106,200	141,600	177,000		
4 TR 100's	19.64	4 in.	295	_	106,200	141,600	177,000		
4 110 100 5	19.04	5 in.	_	393	141,480	188,640	235,800		
5 TR 100's	24.55	5 in.	368	_	132,480	176,640	220,800		
3 11 100 3	24.00	5 in.	_	491	176,760	235,680	294,600		
		TANDEM TRITO	N TR140C AND	TR140C-3 FILT	ER INSTALLATIO	DN			
2 TR 140's	14.12	4 in.	212	_	76,320	101,760	127,200		
2 11(1403	17.12	4 in.	_	282	101,520	135,360	169,200		
3 TR 140's	21.18	4 in.	318	_	114,480	152,640	190,800		
0 110 140 3	21.10	5 in.	_	424	152,640	203,520	254,400		
4 TR 140's	28.24	5 in.	424	_	152,640	203,520	254,400		
7 110 140 3	20.24	6 in.	_	565	203,040	270,720	338,400		
5 TR 140's	35.30	5 in.	530	_	190,800	254,400	318,000		
J 111 140 5	33.30	6 in.	_	706	254,160	338,880	423,600		

Dimensions and Performance

Two Filter System	А	В	С	D	E	F	G	Н	I	J	K	Total Wt.
3 inTR100C	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 inTR140C	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 inTR140C	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 inTR140C *	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. 6	4-53/64 in.	3550 lbs.

 $^{^{\}star}$ 6 in. piping needs to be rotated upward as shown at 25° so handle will clear the floor.

FIGURE 4A

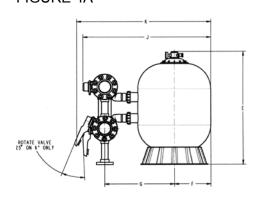
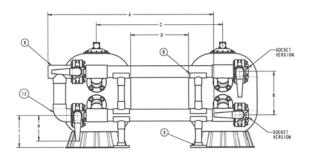


FIGURE 4B



SYSTEM: 3° 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 Balanced-flow tank hydraulics provide maximum dirt-loading and helps prevent clogging
- 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 modular media concept incorporates balanced flow, and an integral manifold design. This filtration concept aids in 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

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

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).

CALIFORNIA PROPOSITION 65 WARNING

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▲ ADVERTENCIA: Cáncer y Daño Reproductivo.

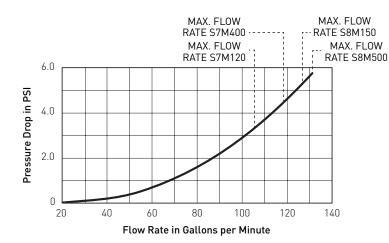
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SYSTEM: 3° MODULAR MEDIA FILTERS (CONT'D)

SM SERIES FILTERS

Ordering Information

	o.uc	inig inionination
Product	Description	Carton Wt. (Lbs.)
	ACCESSORIES FOR SYSTEM: 3 MODULAR MEDIA FILTER - SM SERIES	
PKG 188Z	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
170145	S7M120 Inner & Outer Replacement Cartridge Pack	35
170146	S7M400 Inner & Outer Replacement Cartridge Pack	35
170147	S8M150 Inner & Outer Replacement Cartridge Pack	50
170148	S8M500 Inner & Outer Replacement Cartridge Pack	50



DIMENSION

Catalog Number	Α	В	С	D	Ε
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

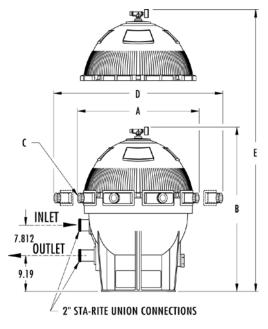
D = area (width) needed to take off clamps

E = area (height) needed to remove top half of tank

All dimensions shown in inches.

Dimensions and Performance

Certified to NSF/ANSI Standard 50



CLEAN & CLEAR® PLUS FILTERS

FIBERGLASS REINFORCED POLYPROPYLENE TANK



Clean & Clear Plus Filters have a corrosion resistant injection molded filter tank featuring 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.

Featured Highlights

- Certified to NSF/ANSI Standard 50
- 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 available
- · Injection molded tank
- · Balanced hydraulic flow
- Tension Control[™] Clamp
- · 100% factory tested
- · Black bulkhead unions
- · High Flow manual air relief valve

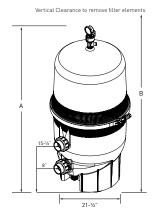
Ordering Information

		Effective Filtration	Flow Rate ²	<u>.</u>	urnover Capaci (In Gallons)	<u>r</u> y	Carton	Carton
Product	Model	Area (Sq. Ft.)	(GPM Res)	8 Hour	10 Hour	12 Hour	Qty.	Wt. (Lbs.)
			CLEAN & CLE	AR PLUS FILTE	ERS			
160310	CCP240	240	90	43,200	54,000	64,800	1	60
160340	CCP320 ¹	320	120	57,600	72,000	86,400	1	70
160301	CCP420 ¹	420	150	72,000	90,000	108,000	1	80
160332	CCP520 ¹	520	150	72,000	90,000	108,000	1	90
		CLEAN 8	& CLEAR PLUS R	EPLACEMENT	CARTRIDGES			
179133	Model 240 Re	Model 240 Replacement Cartridges (4/pack)						
179134	Model 320 Replacement Cartridges (4/pack)							
179135	Model 420 Re	placement Cartridges (4/	pack)					
179136	Model 520 Re	placement Cartridges (4/p	pack)					

¹ Certified to NSF/ANSI Standard 50.

Certified to NSF/ANSI Standard 50

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



Dimensions and Performance

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) $104^{\circ}F$ ($40^{\circ}C$).

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.

² Residential rate .375 GPM per sq. ft. of filter area.

OUAD D.E.º FILTERS

CARTRIDGE STYLE FILTER

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
- · The efficient water flow through the Quad D.E. Filter may assist your pump in using less energy

The Highest Water Clarity with the Lowest Amount of Fuss. 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.



Quad D.E. Filter

TRADEGRADE

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.

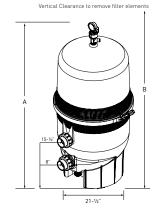
Ordering Information

		Effective	-	Turnove	er Capacity (In	Gallons)			
Product	Model	Filtration Area (Sq. Ft.)	Flow Rate (GPM)	8 Hour	10 Hour	12 Hour	D.E. Require (Lbs.)	d Carton Qty.	Carton Wt.(Lbs.)
			Q	UAD D.E. FIL	TERS				
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
			QUAD	D.E. VALVE C	OPTIONS 1				
261173	1-1/2 in. MPV, for	Triton and Quad D	.E. filters (SM 10	0-3)				1	3
263079	2 in. PVC Slide v	alve w/o plumbing,	for D.E. & sand	filters				1	7
261049	2 in. HiFlow valve	e, no plumbing						1	11
261050	2 in. HiFlow w/ pl	umbing, for Triton a	nd Quad D.E. fil	Iters				1	10
261055	2 in. MPV, for Trit	ton and Quad D.E. f	ilters (SM 20-3)					1	5
263064	Push pull valve,	7-1/2 in. Center, Alm	ond PVC					1	4
270100	Union Kit, 2 in. I.	D. (For no valve ass	embly)					1	1
274426	Adapter Kit, 2-1/2	2 in. x 2 in.						1	1
263080	Valve for D.E., in	let port on bottom, F	Pentair 2 in. unio	ons glued on X	F Valve			1	12

Valves must be purchased separately.

Certified to NSF/ANSI Standard 50

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



Dimensions and Performance

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).

SYSTEM: 3° MODULAR D.E. FILTERS

SMD SERIES FILTERS







System:3 Modular D.E. Filters SMD Series

Featured Highlights

- Typical Installations 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
- Easy Access Posi-Lok™ Clamps provides easy access to tank internals
- Modular Filter Tanks Allows for quick change of filter medias without changing the tank
- Low Maintenance Easy backwash capabilities means less manual cleaning of the grids
- Dual Drain Plugs Side plug assembly includes 1-1/2 in.
 NPT port for direct discharge plumbing
- Sleek Looks Contemporary style and matte black finish looks attractive in any pool setting

Sta-Rite is proud to bring you the proven technology of System: 3 Modular Media into the world of D.E. With 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

	Effective Filter Area	Flow Rated ¹ at 1–2 GPM		er Capacity (G v Rate x 60 x H		Tank Port	D.E. Required	Carton
Product	(Sq. Ft.)	(per Sq. Ft.)	6 Hour	8 Hour	10 Hour	Size	(Lbs.)	Wt. (Lbs.)
		SYSTE	M:3 MODULAF	R D.E. FILTERS	S - SMD SERIES	6		
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
			SMD SERIE	S VALVE OP	TIONS			
18201-0300	ABS 6-Position V	alve with Union (Connections –	2 in. Port Valve	e			8
263053	VLV Push Pull, 7.8	31 in. center						12
	AC	CESSORIES F	OR SYSTEM:	3 MODULAR I	D.E. FILTER - SI	MD SERIES		
25023-0160S	60 sq. ft. Replace	ment D.E. Eleme	ent					20
25023-0172S	72 sq. ft. Replace	ment D.E. Eleme	ent					21
PKG 188Z	Union x 2 in. Slip	Adapter – Pkg. c	f 2					1
PKG 189	Union x 2 in. FPT	Adapter – Pkg.	of 2					1
23910-1100S	System 3 Modula	r D.E. Conversio	n Kit (replacem	nent element re	equired; new val	ve may be r	required)	3

 $^{^{\}rm 1}\,$ Based on NSF recommended flow rate for commercial at 1–2 GPM per square foot.

Note: Operating Limits – maximum continual operating pressure of 50 PSI. Maximum operating water temperature (internal filter) 104°F (40°C).

CALIFORNIA PROPOSITION 65 WARNING

WARNING: Cancer and Reproductive Harm.

AVERTISSEMENT: Peut Causer le Cancer et des Dommages au Système Reproducteur.

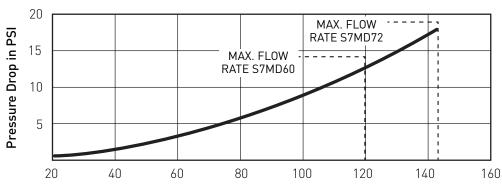
ADVERTENCIA: Cáncer y Daño Reproductivo.

www.p65warnings.ca.gov.

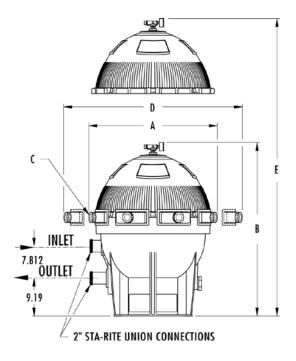
SYSTEM: 3° MODULAR D.E. FILTERS (CONT'D)

SMD SERIES FILTERS

Dimensions and Performance

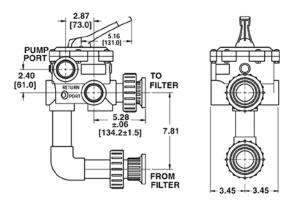


Flow Rate in Gallons per Minute



18201-0300 2 in. MULTIPORT VALVE

Certified to NSF/ANSI Standard 50



18201-0300 2 in. SLIDE VALVE

DIMENSION

Catalog Number	Α	В	С	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.





COMMERCIAL POWERMAX®

HIGH PERFORMANCE ELECTRONIC IGNITION HEATER



Commercial PowerMax Heater

Heater is designed for operation to 10,000 foot elevation.

When performance is critical, the 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

Featured Highlights

- 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 helps reduce condensation possibilities
- Fits through standard doorways
- · Gas supply right or left side
- · CSA Certified
- CSD-1 and other options available. Contact factory for part numbers.

CALIFORNIA PROPOSITION 65 WARNING

Ordering Information

Product	BTUs (000's)	Installation	Gas Type	Pump System	Heat Exchanger	Carton Wt. (Lbs.)
Troduct	(000 s)			NATURAL GAS MODE		Carton Wt. (LDS.)
M0500NACC3BXN	500	Indoor/Outdoor	Natural	Pump Mounted	Copper	495
M0750NACC3BXN	750	Indoor/Outdoor	Natural	Pump Mounted	Copper	575
M1000NACC3BXN	1000	Indoor/Outdoor	Natural	Pump Mounted	Copper	685
M1250NACC3BXN	1250	Indoor/Outdoor	Natural	Pump Mounted	Copper	730
M1500NACC3BXN	1500	Indoor/Outdoor	Natural	Pump Mounted	Copper	830
M1750NACC3BXN	1750	Indoor/Outdoor	Natural	Pump Mounted	Copper	880
M2000NACC3BXN	2000	Indoor/Outdoor	Natural	Pump Mounted	Copper	1025
M0500NACC3PXN	500	Indoor/Outdoor	Natural	Pump Mounted	CuproNickel	495
M0750NACC3PXN	750	Indoor/Outdoor	Natural	Pump Mounted	CuproNickel	575
M1000NACC3PXN	1000	Indoor/Outdoor	Natural	Pump Mounted	CuproNickel	685
M1250NACC3PXN	1250	Indoor/Outdoor	Natural	Pump Mounted	CuproNickel	730
M1500NACC3PXN	1500	Indoor/Outdoor	Natural	Pump Mounted	CuproNickel	830
M1750NACC3PXN	1750	Indoor/Outdoor	Natural	Pump Mounted	CuproNickel	880
M2000NACC3PXN	2000	Indoor/Outdoor	Natural	Pump Mounted	CuproNickel	1025
		COMMERCIA	AL POWERMAX	PROPANE GAS MOD	ELS	
M0500PACC3BXN	500	Indoor/Outdoor	Propane	Pump Mounted	Copper	495
M0750PACC3BXN	750	Indoor/Outdoor	Propane	Pump Mounted	Copper	575
M1000PACC3BXN	1000	Indoor/Outdoor	Propane	Pump Mounted	Copper	685
M1250PACC3BXN	1250	Indoor/Outdoor	Propane	Pump Mounted	Copper	730
M1500PACC3BXN	1500	Indoor/Outdoor	Propane	Pump Mounted	Copper	830
M1750PACC3BXN	1750	Indoor/Outdoor	Propane	Pump Mounted	Copper	880
M2000PACC3BXN	2000	Indoor/Outdoor	Propane	Pump Mounted	Copper	1025
M0500PACC3PXN	500	Indoor/Outdoor	Propane	Pump Mounted	CuproNickel	495
M0750PACC3PXN	750	Indoor/Outdoor	Propane	Pump Mounted	CuproNickel	575
M1000PACC3PXN	1000	Indoor/Outdoor	Propane	Pump Mounted	CuproNickel	685
M1250PACC3PXN	1250	Indoor/Outdoor	Propane	Pump Mounted	CuproNickel	730
M1500PACC3PXN	1500	Indoor/Outdoor	Propane	Pump Mounted	CuproNickel	830
PM1750PACC3PXN	1750	Indoor/Outdoor	Propane	Pump Mounted	CuproNickel	880
M2000PACC3PXN	2000	Indoor/Outdoor	Propane	Pump Mounted	CuproNickel	1025
		PO	WERMAX STAC	KING SYSTEMS		
Product	Туре	Heater Model		Product	Туре	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

- 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.
- 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
Тор	1" 2.5 cm	12" 30 cm
Back*	1" 2.5 cm	12" 30 cm
Vent	Per venting system suppli	er's instructions

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

OUTDOOR VENT	OUTDOOR COMBUSTION
TERWINAL	AIR TERMINAL
20254703	D2007900
	D2008000
20254705	D2008000
D2007700	D2008200
D2007700	D2008200
D2007800	D2008200
D2007800	D2008200
	20254703 20254705 20254705 20254705 D2007700 D2007700 D2007800

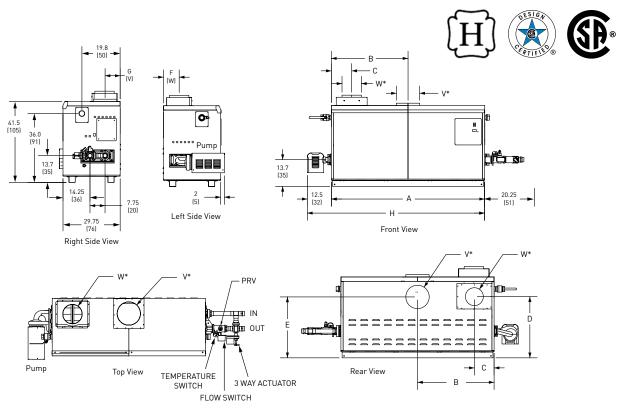
Vent Terminals for Outdoor Units

^{*}Statements of heater/heat pump performance are based on estimates. Actual performance may vary and is not guaranteed. Estimates for heat-up time and temperatures are based on operation in a controlled environment. Real-world operational results may vary due to various factors and variables, including, but not limited to, environmental conditions, geography, elevation, seasonality, weather, wind, sun exposure, humidity, precipitation. Other factors of the pool that may impact heating performance include design and configuration, volume/size, orientation, R-value of construction materials, plumbing length/materials, operating conditions and more. Pentair recommends consulting a pool professional for assistance with heater/heat pump sizing for specific locations and environmental/ operational conditions. Estimates are based on average U.S. air temperatures and maintaining a 17,000-gallon pool at an 82°F target water temperature for an uncovered pool operating March—October under moderate wind conditions with an electricity cost of \$0.12/ kWh and natural gas cost of \$1.10 per 100,000 BTU and comparing energy use to a gas heater that is 82% efficiency.

COMMERCIAL POWERMAX® (CONT'D)

HIGH PERFORMANCE ELECTRONIC IGNITION HEATER

Dimensions and Performance



Dimensional Data Dimensons shown in inches, cm.

Size (000's)	,	A		В		С		D		E		F		G		Н	A Conn			nt n. V*		oriz. : Pipe
500	331/2	85	153/4	40	53/4	15	293/4	76	323/4	83	73/4	20	83/4	22	46	117	6	15	8	15	6	15
750	451/2	116	213/4	55	53/4	15	293/4	76	323/4	83	73/4	20	83/4	22	58	147	6	15	10	20	8	15
1000	571/2	146	283/4	73	53/4	15	293/4	76	323/4	83	73/4	20	7	18	70	178	8	20	10	25	8	20
1250	68	172	34	86	101/4	26	303/4	78	291/2	75	83/4	22	83/4	22	80	203	8	20	12	30	8	20
1500	78 ¹ / ₂	199	39³/₄	101	101/4	26	303/4	78	291/2	75	83/4	22	83/4	22	91	231	8	20	12	30	8	20
1750	89	226	441/2	113	101/4	26	303/4	78	291/2	75	83/4	22	83/4	22	101	256	8	20	14	36	8	20
2000	991/2	253	493/4	126	101/4	26	303/4	78	291/2	75	83/4	22	83/4	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 ¹ BTU/h x1000	Output ¹ BTU/h x1000	Gas Conn. Size inches ²	Heater Water Conn. Size inches ²	Mixing System Water Conn. Size inches ²	Shipping Ibs.	Weight kg
500	500	425	11/4	2	2	495	225
750	750	638	11/4	2	2	575	261
1000	999	849	11/2	21/2	2	685	311
1250	1250	1063	2	21/2	2	730	331
1500	1500	1275	2	21/2	2	830	377
1750	1750	1488	2	21/2	2	880	400
2000	1999	1699	2	21/2	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.

COMMERCIAL MEGATHERM®

HIGH PERFORMANCE ELECTRONIC IGNITION HEATER

Featured Highlights

- · 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
- CSD-1 and other options available. Contact factory for part numbers
- Start-up service by an authorized representative is strongly recommended before regular operation



Commercial MegaTherm Heater

CALIFORNIA PROPOSITION 65 WARNING

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

www.p65warnings.ca.gov.

***azzou.**

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 is design verified to the ANSI Z21.56 Standard for Gas-Fired Pool Heaters (Outdoor 5---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.)

Ordering Information

Product	BTUs (000's)	Installation	Gas Type	Pump System	Heat Exchanger	Carton Wt. (Lbs.)
		COMMERCIA	AL MEGATHERM	NATURAL GAS MOD	ELS	
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

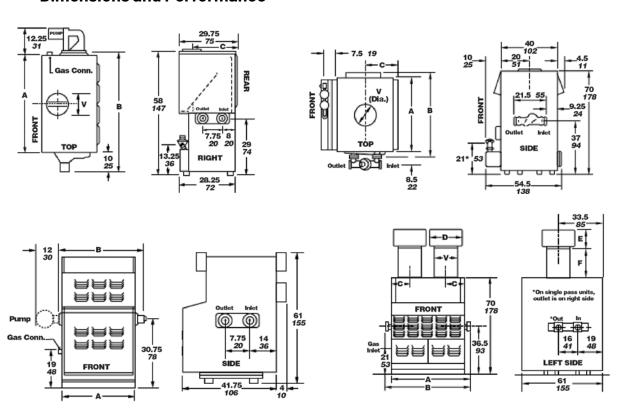
HIGH PERFORMANCE ELECTRONIC IGNITION HEATER

Product	BTUs (000's)	Installation	Gas Type	Pump System	Heat Exchanger	Carton Wt. (Lbs.)
		COMMERCI	AL MEGATHERM	NATURAL GAS MOD	ELS	
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	Natural	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	•		2320
				Less Pump	Copper	
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
		COMMER	CIAL MEGATHER	RM PROPANE MODEL	S	
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

HIGH PERFORMANCE ELECTRONIC IGNITION HEATER

	BTUs					
Product	(000's)	Installation	Gas Type	Pump System	Heat Exchanger	Carton Wt. (Lbs.)
		COMMER	CIAL MEGATHE	RM PROPANE MODEL	S	
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



HIGH PERFORMANCE FI ECTRONIC 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

	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
Model								Surfa	ce Area of	Pools (S	q. 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

					Gas (Siz		Water Conn. Size ₂										
Indoor	Inpu	t₁	Outp	ut₁	. inche	s NPT	- inches NPT			Dimensi	ons2 - i	nches c	m			Wei	ght₃
Size	MBTU/h	kw	MBTU/h	kw	Nat	LP		Α		В		С		'	/	lbs.	kg
500 I	500	147	405	119	1	3/4	21/2	33¾	86	451/4	115	23¾	60	10	25	808	367
600 I	600	176	486	143	1	3/4	21/2	38¾	98	501/4	128	223/4	58	12	30	819	372
715 I	715	210	579	170	1	³ /4	21/2	441/4	112	553/4	142	223/4	58	12	30	873	396
850 I	850	249	689	202	1	3/4	21/2	503/4	129	621/4	158	213/4	55	14	36	945	429
1010 I	1010	296	818	240	11⁄4	1	21/2	58	147	691/2	177	203/4	53	16	41	1041	473
1200 I	1200	352	972	285	11⁄4	1	21/2	661/4	168	773/4	197	203/4	53	16	41	1199	544
1430 I	1430	419	1158	339	11⁄4	11⁄4	21/2	76	193	871/2	222	19¾	50	18	46	1280	581
1670 I	1670	489	1353	396	11/2	11/4	21/2	851/2	217	97	246	19¾	50	18	46	1445	656
1825 I	1825	535	1478	433	11/2	11⁄4	21/2	921/2	235	103¾	264	19¾	50	18	46	1570	713
2000 I	2000	586	1639	480	11/2	11⁄4	4	551/2	141	73	185	241/2	62	22	56	1950	885
2450 I	2450	718	2009	589	11/2	11/2	4	651/2	166	83	211	241/2	62	24	61	2100	913
3050 I	3050	894	2501	733	2	11/2	4	78	198	951/2	243	241/2	62	26	66	2250	1022
3500 I	3500	1025	2870	841	2	11/2	4	88	224	1051/2	268	241/2	62	28	71	2510	1140
4050 I	4050	1186	3321	973	2	2	4	1001/2	255	118	300	241/2	62	30	76	2750	1249
4500 I	4500	1318	3690	1081	21/2	2	4	1101/2	281	128	325	241/2	62	32	81	2900	1317
5000 I	5000	1465	4100	1201	21/2	2	4	123	312	1401/2	357	241/2	62	34	86	3200	1453

NOTES:

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

*Statements of heater/heat pump performance are based on estimates. Actual performance may vary and is not guaranteed. Estimates for heat-up time and temperatures are based on operation in a controlled environment. Real-world operational results may vary due to various factors and variables, including, but not limited to, environmental conditions, geography, elevation, seasonality, weather, wind, sun exposure, humidity, precipitation. Other factors of the pool that may impact heating performance include design and configuration, volume/size, orientation, R-value of construction materials, plumbing length/materials, operating conditions and more. Pentair recommends consulting a pool professional for assistance with heater/heat pump sizing for specific locations and environmental/ operational conditions. Estimates are based on average U.S. air temperatures and maintaining a 17,000-gallon pool at an 82°F target water temperature for an uncovered pool operating March—October under moderate wind conditions with an electricity cost of \$0.12/ kWh and natural gas cost of \$1.10 per 100,000 BTU and comparing energy use to a gas heater that is 82% efficiency.

HIGH PERFORMANCE FLECTRONIC 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

	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
Model								Surfa	ce Area of	Pools (S	q. 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 31/2 mph average wind.

Dimensional Data

Indoor	Inpu	t ₁	Outpu	ut₁	Gas C Siz	e ₂	Water Conn. Size ₂ - inches NPT				[Dimen	sion	s ₂ - inc	hes	ст					
Size	MBTU/h	kw	MBTU/h	kw	Nat	LP		Α		В		С		D		E		F		\	/
500 E	500	147	410	120	1	3/4	21/2	33¾	86	451/4	115	_	_	_	_	_	_	_	_	_	-
600 E	600	176	492	144	1	3/4	21/2	38¾	98	501/4	128	_	_	_	_	_	_	_	_	_	_
715 E	715	210	586	172	1	3/4	21/2	441/4	112	551/4	142	_	_	_	_	_	_	_	_	_	-
850 E	850	249	697	204	1	3/4	21/2	503/4	129	621/4	158	_	_	_	_	_	_	_	_	_	
1010 E	1010	296	828	243	11/4	1	21/2	58	147	691/2	177	_	_	_	_	_	_	_	_	_	-
1200 E	1200	352	984	288	11⁄4	1	21/2	661/4	168	773/4	197	_	_	_	_	_	_	_	_	_	
1430 E	1430	419	1173	344	11⁄4	11/4	21/2	76	193	871/2	222	_	_	_	_	_	_	_	_	_	
1670 E	1670	489	1370	401	11/2	11/4	21/2	851/2	217	97	246	_	_	_	_	_	_	_	_	_	
1825 E	1825	535	1497	439	11/2	11/4	21/2	921/2	235	103¾	264	_	_	_	_	_	_	_	_	_	-
2200 E	2205	646	1786	523	11/2	11/4	4	651/2	166	83	211	16	41	281/4	72	15	38	24	61	18	46
2800 E	2745	804	2223	651	11/2	11/2	4	78	198	951/2	243	20	51	281/4	72	15	38	24	61	18	46
3200 E	3150	923	2552	748	2	11/2	4	88	224	1051/2	268	23	58	311/2	80	161/2	42	36	91	20	51
3600 E	3645	1068	2952	865	2	2	4	1001/2	255	118	300	29	74	311/2	80	161/2	42	36	91	20	51
4000 E	4050	1187	3281	961	21/2	2	4	1101/2	281	128	325	301/2	77	341/2	88	18	46	36	91	22	56
4500 E	4500	1319	3645	1068	21/2	2	4	123	312	1401/2	357	34	86	37¾	96	191/2	50	36	91	24	61

Outdoor	Shipping Weight ₃						
Size	lbs.	kg					
500 E	500	147					
600 E	600	176					
715 E	715	210					
850 E	850	249					
1010 E	1010	296					
1200 E	1200	352					
1430 E	1430	419					
1670 E	1670	489					
1825 E	1825	535					
2200 E	2205	646					
2800 E	2745	804					
3200 E	3150	923					
3600 E	3645	1068					
4000 E	4050	1187					
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

Dimensions are nominal.
 Integral pump included on sizes 500–1825.

*Statements of heater/heat pump performance are based on estimates. Actual performance may vary and is not guaranteed. Estimates for heat-up time and temperatures are based on operation in a controlled environment. Real-world operational results may vary due to various factors and variables, including, but not limited to, environmental conditions, geography, elevation, seasonality, weather, wind, sun exposure, humidity, precipitation. Other factors of the pool that may impact heating performance include design and configuration, volume/size, orientation, R-value of construction materials, plumbing length/materials, operating conditions and more. Pentair recommends consulting a pool professional for assistance with heater/heat pump sizing for specific locations and environmental/ operational conditions. Estimates are based on average U.S. air temperatures and maintaining a 17,000-gallon pool at an 82°F target water temperature for an uncovered pool operating March—October under moderate wind conditions with an electricity cost of \$0.12/ kWh and natural gas cost of \$1.10 per 100,000 BTU and comparing energy use to a gas heater that is 82% efficiency.

ETi[®] 400

HIGH EFFICIENCY HEATER

TRADEGRADE





ETi 400 Heater

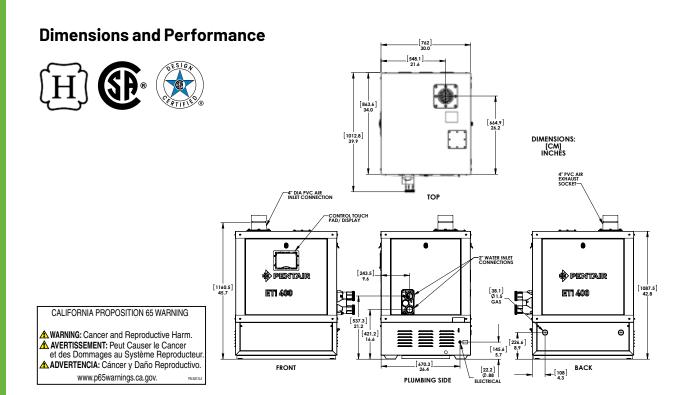
The ETi 400 pool and spa heater brings you TitanTough Direct-Fire Titanium, the toughest ASME certified construction heat exchanger ever built. At 96% thermal efficiency, the ETi 400 heater has the highest efficiency ever built in its class. All this in a heater that operates with ultra-quiet noise level 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
- Factory configured for Natural Gas.
 Propane conversion kit available.

Ordering Information

Product	Gas Type	BTU (400,000)	Crate Qty.	Crate Wt.
		ETi400 Heater		
461113	Natural	400,000 BTU—ASME LISTED	1	365
		ACCESSORIES		
475971	Direct Air Intake Kit (for indoor installations)	1	5
475612	Condensate Neutraliz	er Cartridge Kit	1	5
476072	Propane Gas Convers	sion Kit	1	2



MASTERTEMP® ASME HEATER

HIGH PERFORMANCE HEATERS

Featured Highlights

- Now with smart connectivity and energy-saving automation, it's easier than ever to get the pool warm and ready whenever it's needed.
- New automation functionality and ignition control module with flame strength sensor for always optimized performance.
- Eco-friendly MasterTemp Heater is certified for low NOx emission.
- Multi-position top panel allows digital display to be re-positioned for convenient operation.
- Tough, rustproof exterior handles the heat and weathers the elements.
- · Certified for outdoor and indoor installations.
- Optional Smart Heater Bypass valve control diverts water flow when the heater isn't needed to help save up to 35% in yearly operational costs.*



MasterTemp High Performance 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.

***202044**

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 LCD display 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 for improved performance in more challenging applications, like low pH, high flow or heavy use.

Ordering Information

Note:

The MasterTemp High Performance Heater is certified for low NOx emissions.

*Standard Copper Heat Exchanger 84% Efficient.

Heavy-Duty (HD) Cupro-Nickel Heat Exchanger 82% Efficient.

Product	Gas Type	BTU (000's)	Carton Wt. LBS
	MASTER	RTEMP HEATERS	
461000	Natural	200 ASME	138
460771	Natural	250 ASME	140
461020	Natural	250 ASME HD	140
460775	Natural	400ASME	149
461021	Natural	400 ASME HD	149

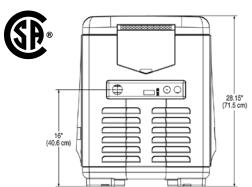
*Savings amount based on lab testing conducted using MasterTemp 400® heater in conjunction with IntelliFlo® VSF Pump and Bypass Kit, which includes IntelliValve® controlled by heater. Test Conditions: Pump flow rate: 50gpm. Pump run time: 3000 hours/yr. Heater run time: 100 hours/yr. Electrical Cost: \$0.21 per kWh. System TDH: Heater and Bypass Kit added to Standardized "Curve C" System Curve performance data as per California Energy Commission Title 20 Appliance Efficiency Regulations. Test conditions assume pump flow rate of 50gpm and Constant Flow operation utilizing a lower motor RPM when flow is bypassing the heater due to lower system TDH. Actual performance and any subsequent energy consumption/savings are dependent upon various characteristics of the plumbing system, including but not limited to, pipe size, pipe lengths, filter type, fittings, system design, equipment run time/settings and more.

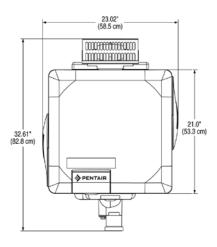
MASTERTEMP° ASME HEATER (CONT'D)

HIGH PERFORMANCE HEATERS

Dimensions and Performance

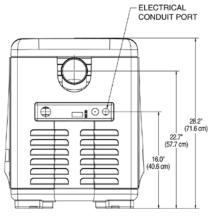


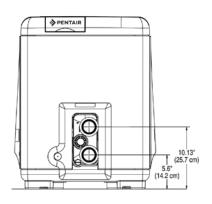




FRONT

TOP





EXHAUST SIDE

PLUMBING SIDE

POOL SIZING*

°F		Heater Size		Heater Size					
Temperature Change/	Model 200	Model 250/250HD	Model 400/400HD	Model 200	Model 250/250HD	Model 400/400HD			
24 Hrs.	Poo	ol Capacity in Gall	ons	Pool Surfac	e Area in Sq. Ft. a	t 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*

		Spa Volume (Gallons)									
	200	300	400	500	600	700	800	900	1,000		
Model		Min	utes for 30°	F Temperat	ure Rise (He	ater 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

- Now with smart connectivity and energy-saving automation, it's easier than ever to get the pool warm and ready whenever it's needed.
- New automation functionality and ignition control module with flame strength sensor for always optimized performance.
- Eco-friendly Max-E-Therm Heater is certified for low NOx emission.
- Multi-position top panel allows digital display to be re-positioned for convenient operation.
- Tough, rustproof exterior handles the heat and weathers the elements.
- · Certified for outdoor and indoor installations.
- Optional Smart Heater Bypass valve control diverts water flow when the heater isn't needed to help save up to 35% in yearly operational costs.*

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 for improved performance in more challenging applications, like low pH, high flow or heavy use.





Max-E-Therm Pool and Spa Heater

Ordering Information

Product	Description	BTU (000's)	Carton Wt.
	MAX-E-THERM POOL/SPA HE	ATER	
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	Heate	r Size		Heater Size			
Temperature Change/	Model 250/250HD	Model 400/400HD	Model 200	Model 250/250HD	Model 400/400HD		
24 Hrs.	Pool Capaci	ty in Gallons	Pool Surface	e 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		

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SPA SIZING*

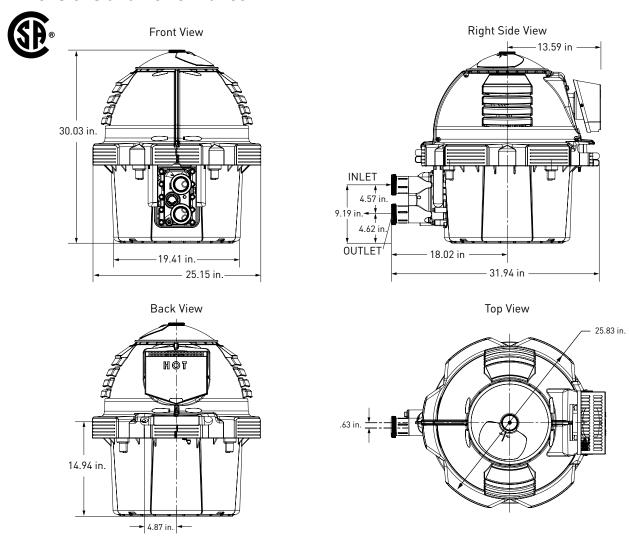
	Spa Volume (Gallons)								
	200	200 300 400 500 600 700 800 900 1,000							
Model	Minutes for 30°F Temperature Rise (Heater Input in 1000 BTU/HR)								
250/250HD	15.8	23.5	30.8	38.5	46.5	54.3	62.0	70.0	77.8
400/400HD	9.0	13.0	18.0	22.0	27.0	31.0	35.0	40.0	44.0

^{*}Savings amount based on lab testing conducted using MasterTemp 400® heater in conjunction with IntelliFlo® VSF Pump and Bypass Kit, which includes IntelliValve® controlled by heater. Test Conditions: Pump flow rate: 50gpm. Pump run time: 3000 hours/yr. Heater run time: 100 hours/yr. Electrical Cost: \$0.21 per kWh. System TDH: Heater and Bypass Kit added to Standardized "Curve C" System Curve performance data as per California Energy Commission Title 20 Appliance Efficiency Regulations. Test conditions assume pump flow rate of 50gpm and Constant Flow operation utilizing a lower motor RPM when flow is bypassing the heater due to lower system TDH. Actual performance and any subsequent energy consumption/savings are dependent upon various characteristics of the plumbing system, including but not limited to, pipe size, pipe lengths, filter type, fittings, system design, equipment run time/settings and more.

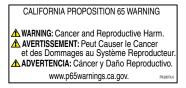
MAX-E-THERM® ASME HEATER (CONT'D)

POOL AND SPA HEATER

Dimensions and Performance



MAX-E-THERM® AND MASTERTEMP® HEATER ACCESSORIES



Featured Highlights

 Optional Smart Heater Bypass valve control diverts water flow when the heater isn't needed to help save up to 35% in yearly operational costs.*

Ordering Information

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

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

Product	Description CONVERSION KITS – NATURAL GAS TO LPG	Approx. Ship. Weight (Lbs.)
461063	NG to LP Conversion Kit - Model 125	1
401003	NG to EF Conversion Rit - Model 125	
460794	NG to LP Conversion Kit - Model 175	1
77707-1461	Conversion Kit NG-LPG 200K for Pool and Spa Heater	1
460741	NG to Propane Conversion Kit – Model 250	1
460755	NG to Propane Conversion Kit – Model 300	1
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
	CONVERSION KITS – LPG to NATURAL GAS	
461062	LP to NG Conversion Kit - Model 125	1
460795	LP to NG Conversion Kit - Model 175	1
77707-1431	Conversion Kit LPG-NG for 200K Pool and Spa Heater	1
460742	Propane to NG Conversion Kit – Model 250	1
460756	Propane to NG Conversion Kit – Model 300	1
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
	HEATER ACCESSORIES	
	Heater Bolt Down Bracket Kit (Max-E-Therm)	1
460738	Heater Bolt Down Bracket Kit (MasterTemp)	1
PKG 188Z	Union Package (2" Unions)	1
474974	Union Package (1-1/2" Unions)	1
U11-197P	2 in. Adapter (for service loop)	1
461031	Direct Air Intake Duct Kit (MasterTemp)	5
475002	Direct Air Intake Duct Kit (Max-E-Therm)	5
474845	Direct Air Intake Duct Kit (MasterTemp 125)	5
	SERVICE PROFESSIONAL PARTS KIT	
461100	Pro Service Package – Heater Master Package of Water & Electrical System Parts. Includes many common repair parts for Pentair & Sta-Rite heaters in reusable hard case ¹	5
461101	Pro Service Package – Heaters Electrical System Parts. Includes common Electrical System repair parts for Pentair & Sta-Rite heaters in reusable hard case ¹	3
461102	Pro Service Package – Heaters Water System Parts. Includes common Water System repair parts for Pentair & Sta-Rite heaters in reusable hard case ¹	3
461102	Smart Bypass Kit	

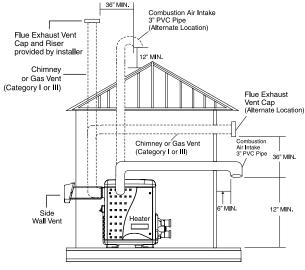
Combustion Air Intake 3 in. Pipe (Vertical or Horizontal)				
Maximum Length in Feet (M)				
70 ft. (21.3 M)				
58 ft. (17.7 M)				
46 ft. (14.0 M)				
34 ft. (10.4 M)				
22 ft. (6.7 M)				

Direct Air Intake Kit

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







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

See Engineering Data pages 593–604 for information on selecting the proper size heater and for gas supply and pipe sizing information.

* HeatFab® is a registered trademark of Hart & Cooley, Inc.

¹ Compatible with Pentair MasterTemp® High Performance Heaters, Sta-Rite Max-E-Therm® High Performance Heaters, Models 175/200/250/300/333/400. Not compatible with 125,000 BTU heater

^{*}Savings amount based on lab testing conducted using MasterTemp 400® heater in conjunction with IntelliFlo® VSF Pump and Bypass Kit, which includes IntelliValve® controlled by heater. Test Conditions: Pump flow rate: 50gpm. Pump run time: 3000 hours/yr. Heater run time: 100 hours/yr. Electrical Cost: \$0.21 per kWh. System TDH: Heater and Bypass Kit added to Standardized "Curve C" System Curve performance data as per California Energy Commission Title 20 Appliance Efficiency Regulations. Test conditions assume pump flow rate of 50gpm and Constant Flow operation utilizing a lower motor RPM when flow is bypassing the heater due to lower system TDH. Actual performance and any subsequent energy consumption/savings are dependent upon various characteristics of the plumbing system, including but not limited to, pipe size, pipe lengths, filter type, fittings, system design, equipment run time/settings and more.

ULTRATEMP® HEAT PUMP

HIGH PERFORMANCE HEAT PUMP

TRADEGRADE



UltraTemp 120Q Heat Pump

UltraTemp heat pumps are manufactured with non-ozone depleting R410 refrigerant.

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
- · 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

Pa	rt#		00/00/00*	00/07/00*	F0 /07 /00*	_	Breaker			٠.	٠.	""
BLACK	ALMOND	Model	80/80/80* BTU/COP	80/63/80* BTU/COP	50/63/80* BTU/COP	Freq (Hz)	Size (amp)	Phase	Volt	Ctn Oty.	Ctn Wt.	"A" Dim.
				ULTRATE	EMP HEAT PUMPS	3						
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.)

CALIFORNIA PROPOSITION 65 WARNING

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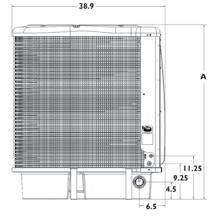


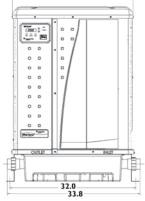


The AHRI Certified® Mark is applied only to HVACR equipment and components that have been independently tested to certify manufacturers' performance claims are accurate. Visit www.ahridirectory.org for a complete list of certified products.

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.

Dimensions and Performance





30.7

NOTES:





ADA-COMPLIANT COMMERCIAL POOL LIFTS



AquaTRAM 90+

AquaTRAM LT-2



AquaTRAM PT-2

AquaTRAM 360

Featured Highlights

- · All AquaTRAM lifts comply with ADA Guidelines
- · Dual flip-up arm rests provide easy and aids in a safer 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
- · Color options available

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 aid in a safer and easier 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.

Ordering Information

Product	Model	Carton Oty.	Carton Wt. (Lbs.)
	AQUATRAM 90+ LIFT		
11420	AquaTRAM 90+ Lift with Quickset Dual Wedge Anchor	1	225
11420-A	AquaTRAM 90+ without Quickset Dual Wedge Anchor	1	220
11421	AquaTram 90+ Lift for Round Anchor Post with Anchor	1	225
11421-A	AquaTRAM 90+ for Round Anchor Post without Anchor	1	215
	AQUATRAM LT-2 LIFT AND ANCHOR		
11430	AquaTRAM LT-2 Lift with Anchor Kit	1	170
11430-A	AquaTRAM LT-2 Lift Less Anchor Kit	1	160
	AQUATRAM PT-2 LIFT		
11480	AquaTRAM PT-2 Lift with Sand Ballast (sand not included)	1	425
	AQUATRAM 360		
11250	AquaTRAM 360 Lift with Anchor	1	365
11250-A	AquaTRAM 360 Lift without Anchor	1	350

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.

Note: For best efficiency please email your purchase orders to: 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.

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www.p65warnings.ca.gov.

POOL LIFT ACCESSORIES

CHOOSE THE AQUATRAM LIFT THAT RISES TO YOUR NEEDS

Features and Benefits	AquaTRAM 90+	AquaTRAM 360 Lift with in-deck, tool-free anchoring	AquaTRAM LT-2 Lift with lag-bolt anchoring	AquaTRAM PT-2
Lifting capacity	400 lbs.	500 lbs.	350 lbs.	325 lbs.
ADA Compliant	✓	✓	1	✓
Rotation for tight-area access	90° right or left	360°		90° right or left
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 aids in safer transfers	✓	✓	✓	✓
Adjustable & removable footrest fits users across a wide range of sizes	✓	√	1	✓
Adjustable lap belt with hook & eye fastening	✓	✓	1	✓
Easy-to-use Slim Line controls can be operated from seat or pool ledge	✓	✓	✓	/
Stainless steel construction, durable powder-coat finish	✓	1	✓	✓
Battery-operated; easier to install & smoother transport than water power	✓	✓	✓	/
Slim, one-piece 24V rechargeable battery	1	1	1	✓
Submersible remote	✓	✓	1	✓
5-year Limited Warranty (prorated after year 2 on electronics)		✓		/
Lifetime Limited Warranty on frame		1		
2-year Limited Warranty	✓		✓	
Solar Upgrade Option Available	✓		✓	
Plastics Color: Blue (standard) Tan Gray White	✓	✓	✓	✓
Powder Coat Color: White (standard) Tan Gray	/	✓	✓	/

POOL LIFT ACCESSORIES (CONT'D)

AQUATRAM 90+ LIFT

•	
Pentair P/N	Description
11420	AquaTRAM 90+ Lift w/ Quickset Dual Wedge Anchor
11420-A	AquaTram 90+ Lift w/o Quickset Dual Wedge Anchor
11421	AquaTRAM 90+ Lift for Round Anchor Post w/Anchor
11421-A	AquaTRAM 90+ Lift for Round Anchor w/o Anchor
11222	AquaTRAM 90+ Lift Cover
11343	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

AQUATRAM LT-2 LIFT AND ANCHOR

Pentair P/N	Description
11430	AquaTRAM LT-2 Lift w/ Anchor Kit
11430-A	AquaTRAM LT-2 Lift Less Anchor Kit
11231	AquaTRAM LT-2 Anchor Kit only
11232	AquaTRAM LT-2 Transport Cart
11204	AquaTRAM Protective Cover
11205	Adjustable Headrest, AquaTRAM LT only
11270	AquaTRAM Replacement Hand Control
11271	AquaTRAM Replacement Control Box (LINAK)
11278	AquaTRAM Replacement Control Box (VITO)
11273	AquaTRAM Replacement Actuator Cover

AQUATRAM PT-2 LIFT

Pentair P/N	Description
11480	AquaTRAM PT-2 Lift w/ Sand Ballast (sand not incl.)
11285	AquaTRAM PT-2 Cover, Blue
11287	AquaTRAM PT-2 Accessory Upgrade Kit**
11289	Affixment Kit (contains docking bar and anchor)
**Includes cover	headrest chest stran and extra hattery

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 Footrest

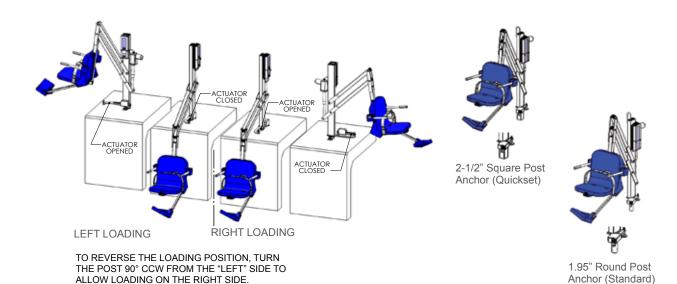
AQUATRAM 360 LIFT AND ACCESSORIES

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-lb. capacity)
11256-C	AquaTRAM 360 Replacement Sling Chain Set
11256	AquaTRAM 360 Replacement Sling (500-lb. 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

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.

ADA-COMPLIANT POOL LIFTS

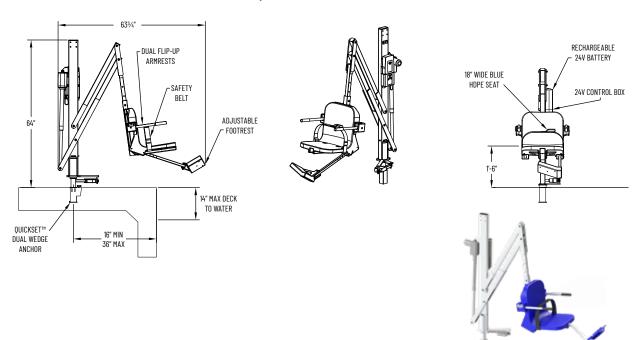


CALIFORNIA PROPOSITION 65 WARNING

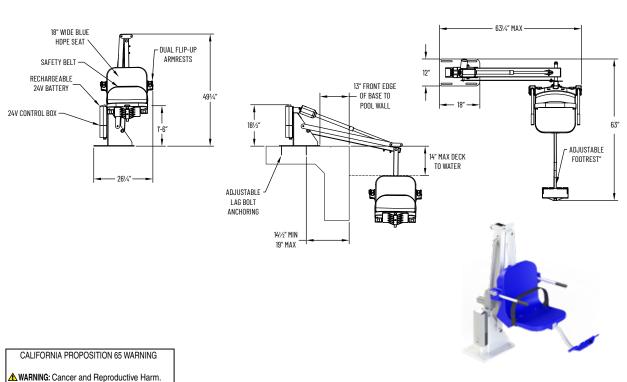
▲ WARNING: Cancer and Reproductive Harm.
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ADA-COMPLIANT POOL LIFTS

AQUATRAM 90+ LIFT



AQUATRAM LT-2 LIFT



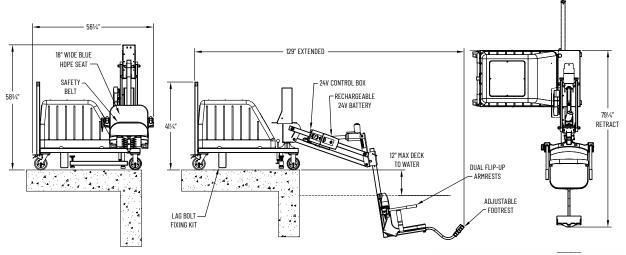
▲ AVERTISSEMENT: Peut Causer le Cancer et des Dommages au Système Reproducteur.

▲ ADVERTENCIA: Cáncer y Daño Reproductivo.

www.p65warnings.ca.gov.

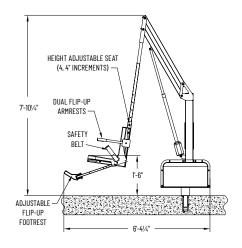
ADA-COMPLIANT POOL LIFTS

AQUATRAM PT-2

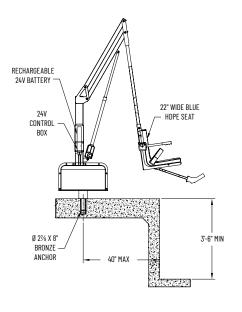




AQUATRAM 360 LIFT







CALIFORNIA PROPOSITION 65 WARNING

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▲ ADVERTENCIA: Cáncer y Daño Reproductivo.

www.p65warnings.ca.gov.

PARAGON™ DECK EOUIPMENT

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 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 unimipeded rear access with or without a step
- Non-skid, white sand finish, UV inhibited polypropylene kick plate asjusts 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.

PARAGON™ DECK EOUIPMENT

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).

CALIFORNIA PROPOSITION 65 WARNING





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

- · Utilizing less energy than comparable incandescent lights.
- Energy efficient utilizing up to 86% less energy than comparable incandescent lights
- Unique 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

CALIFORNIA PROPOSITION 65 WARNING

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▲ ADVERTENCIA: Cáncer y Daño Reproductivo.

www.p65warnings.ca.gov.

Ordering Information for Pool Lights

						1 0 0	
Product	Voltage	Wattage	Cord Length (Ft.)	Incandescent Equivalency	Primary Listing and Certifications	Carton Oty.	Carton W (Lbs.)
	INT	ELLIBRITE 5g	WHITE POOL LIGHTS	– 300 WATT EQUIVA	ALENT, 120 VOLT		
601100	120V	40	30	300W	UL, cUL, CSA	1	
601101	120V	40	50	300W	UL, cUL, CSA	1	
601102	120V	40	100	300W	UL, cUL, CSA	1	
601103	120V	40	150	300W	UL, cUL, CSA	1	
601104	120V	40	250	300W	UL, cUL, CSA	1	
	IN	TELLIBRITE 50	WHITE POOL LIGHTS	S – 300 WATT EQUIV	ALENT, 12 VOLT		
601105	12V	40	30	300W	UL, cUL, CSA	1	
601106	12V	40	50	300W	UL, cUL, CSA	1	
601107	12V	40	100	300W	UL, cUL, CSA	1	
601108	12V	40	150	300W	UL, cUL, CSA	1	
	INT	ELLIBRITE 5g	WHITE POOL LIGHTS	– 400 WATT EQUIVA	ALENT, 120 VOLT		
601200	120V	48	30	400W	UL, cUL, CSA	1	
601201	120V	48	50	400W	UL, cUL, CSA	1	
601202	120V	48	100	400W	UL, cUL, CSA	1	
601203	120V	48	150	400W	UL, cUL, CSA	1	
601204	120V	48	250	400W	UL, cUL, CSA	1	
	IN	TELLIBRITE 5	g WHITE POOL LIGHTS	S – 400 WATT EQUIV	ALENT, 12 VOLT		
601205	12V	48	30	400W	UL, cUL, CSA	1	
601206	12V	48	50	400W	UL, cUL, CSA	1	
601207	12V	48	100	400W	UL, cUL, CSA	1	
601208	12V	48	150	400W	UL, cUL, CSA	1	
	INT	ELLIBRITE 5g	WHITE POOL LIGHTS	– 500 WATT EQUIVA	ALENT, 120 VOLT		
601300	120V	55	30	500W	UL, cUL, CSA	1	
601301	120V	55	50	500W	UL, cUL, CSA	1	
601302	120V	55	100	500W	UL, cUL, CSA	1	
601303	120V	55	150	500W	UL, cUL, CSA	1	
601304	120V	55	250	500W	UL, cUL, CSA	1	
	IN	TELLIBRITE 5	WHITE POOL LIGHTS	S – 500 WATT EQUIV	ALENT, 12 VOLT		
601305	12V	55	30	500W	UL, cUL, CSA	1	
601306	12V	55	50	500W	UL, cUL, CSA	1	
601307	12V	55	100	500W	UL, cUL, CSA	1	
601308	12V	55	150	500W	UL, cUL, CSA	1	

NOTE: Appearance of color and white LED light may vary between various models of lights. Appearance and perception of pool lighting may vary depending on a number of factors including, but not limited to, the particular model of light, the location/depth/angle of the light's installation, pool finish/material, pool depth/shape/geometry, ambient light sources, subjective factors and more. For best results when using multiple lights, use all the same model and do not mix multiple models of lights within a single installation.

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	Primary Listing and Certifications	Carton Oty.	Carton Wt. (Lbs.)	
INTELLIBRITE 5g WHITE SPA LIGHTS - 120 VOLT								
640140	120V	18W	30	100W	UL, cUL	1	6.5	
640141	120V	18W	50	100W	UL, cUL	1	8	
640142	120V	18W	100	100W	UL, cUL	1	12	
640143	120V	18W	150	100W	UL, cUL	1	16	
640144	120V	18W	250	100W	UL, cUL	1	25	
INTELLIBRITE 5g WHITE SPA LIGHTS - 12 VOLT								
640150	12V	18W	30	100W	UL, cUL	1	5.5	
640151	12V	18W	50	100W	UL, cUL	1	7	
640152	12V	18W	100	100W	UL, cUL	1	11	
640153	12V	18W	150	100W	UL, cUL	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.

4.87

IntelliBrite White Spa Light Dimensions

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

¹Notice: 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.

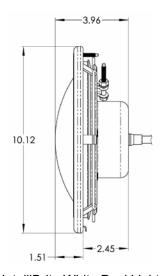
Note: IntelliBrite Pool Sized Lights can be utilized to replace: Sta-Rite: SunSaver', SunBrite¹, SunGlow¹. American Products: Amerlite¹. Purex-Triton: SunRay¹, Pool Star¹, Hatteras¹. PacFab: Spectrum Amerlite¹. (SAM), AmerQuartz¹, and most lights that are 10.12" across. To ensure proper grounding of replacement lights, please see the notice directly above.

IntelliBrite Spa Sized Light can be utilized to replace:

Sta-Rite: SunBurst¹. **American Products:** Hi-Lite¹, Aqua-Light¹, Spa Brite¹. **Purex-Triton:** SunRise¹. **PacFab:** Spectrum Aqualight¹ (SAL). To ensure proper grounding of replacement lights, please see the notice directly above.

Dimensions and Certifications





IntelliBrite White Pool Light Dimensions

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.

GLOBRITE® WHITE LED LIGHTS

UNDERWATER LED LIGHTS FOR SWIMMING POOLS AND SPAS

TRADEGRADE





GloBrite LED Light Fiberglass Niche



GloBrite LED Light Gunite/Concrete Niche

Featured Highlights

- Advanced technology for energyefficient high quality pool lighting.
- Can be placed in as little as 4 in.
 of water even in the floor pointing up
- Does not require grounding or bonding for quick and easy installations
- Compatible with all Pentair Lighting Controllers and Automation Systems for advanced control features
- Compatible with gunite/concrete, fiberglass and vinyl pools

GloBrite LED lighting is a brilliant way to showcase your backyard oasis and highlight pool features like sun shelves, steps, beach entries and bubblers.

GloBrite LED Light

Vinyl Niche

Note: Only GloBrite **white** lights have two dimming levels. GloBrite color lights cannot be dimmed.

Product	Voltage	Wattage	Cord Length (Ft.)	Carton Oty.	Carton Wt. (Lbs.)
	GLO	BRITE WI	HITE LED LIG	HTS	
602102	12	15W	30	1	5
602103	12	15W	50	1	6
602104	12	15W	100	1	9
602105	12	15W	150	1	12

Ordering Information

Product	Description	Carton Oty.	Carton Wt. (Lbs.)
	GLOBRITE NICHES		
620040	Gunite/Concrete Niche for GloBrite (includes white, blue, black, gray and tan rings)	1	1.3
620039	Vinyl Niche for GloBrite (includes white, blue, and gray 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 (gray)	1	1.3
	GLOBRITE WHITE KITS, INCLUDING NICHE & TRANSFORMER		
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
602108	2 GloBrite White 100 ft. with 300W Transformer + 2 Vinyl Niches	1	40
	TRANSFORMERS (LANDSCAPE AND POOL RATED)		
619962	120V Input, 12-14V Output, 100W	1	12
619963	120V Input, 12-14V Output, 300W	1	12
	ACCESSORIES		
620314	GloBrite LED Light Glare Shield		
602136	Replacement Face Ring Kit for GloBrite Vinyl Liner Niche, Blue*		
602137	Replacement Face Ring Kit for GloBrite Vinyl Liner Niche, Gray*		
602138	Replacement Face Ring Kit for GloBrite Vinyl Liner Niche, White*		

^{*} Includes three (3) faceplates in specified color, three (3) gaskets, twelve (12) screws. Each kit can fully equip three (3) GloBrite lights with new faceplates, gaskets and screws.

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

NOTE: Appearance of color and white LED light may vary between various models of lights. Appearance and perception of pool lighting may vary depending on a number of factors including, but not limited to, the particular model of light, the location/depth/angle of the light's installation, pool finish/material, pool depth/shape/geometry, ambient light sources, subjective factors and more. For best results when using multiple lights, use all the same model and do not mix multiple models of lights within a single installation.



CALIFORNIA PROPOSITION 65 WARNING

MICROBRITE® WHITE LED LIGHT

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, can be installed horizontally or vertically
- No niche required installs in any standard 1.5 inch pool wall fitting
- Connect to any Pentair control system or the Pentair Color Sync[™] Controller





TRADEGRADE



Give pools a brilliant lighting upgrade without the installation difficulties.
Only 3.5-in. long, MicroBrite lights fit easily into standard 1.5-in. wall
All Pentair UL Listed underwater lights are certified for use in fresh water with up to 6,000 ppm salinity.

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

Ordering Information

Product	Description	Color		Lights	Cord Length	Voltage	Watts
		MICROBRITE LI	ED LIGHT				
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
602165	MicroBrite-G Light	White LED, for installation in Per or Pentair ColorVision		One	150'	12V	14W
620457	MicroBrite Light	Warm White LE	:D	One	100'	12V	14W
602155	MicroBrite Light	Warm White LE	:D	One	150'	12V	14W
602167	MicroBrite-G Light	Warm White LED, for installation Niche or Pentair ColorVis		One	150'	12V	14W
602157	MicroBrite Light	Turtle Edition*	·	One	150'	12V	14W
	MIC	CROBRITE COMBO KITS WITH	300 WATT TRANS	FORMER			
602131	MicroBrite 2 Light Combo	Kit White LED	Two	100'		12V	
602132	MicroBrite 2 Light Combo	Kit Warm White LED	Two	100'		12V	
602134	MicroBrite 4 Light Combo	Kit White LED	Four	100'		12V	
602135	MicroBrite 4 Light Combo	Kit Warm White LED	Four	100'		12V	

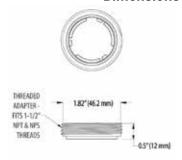
*620nm red/orange light, for special oceanfront pool applications in certain areas with regulations intended to protect sea turtles. Note: A 300W transformer is included in each combo kit. Transformer is 120V input, 12V-14V output.

Product	Description
	REPLACEMENT KITS
620460	MicroBrite Light Adaptor, Replacement
620459	Installation Tool, Replacement. (Hex/Wrench Style)
602158Z	Installation Tool, Replacement (Hand/Grip Style)
620463	Conduit Seal O-Ring, Replacement
618040	Adapter for MicroBrite to GloBrite

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Product	Voltage	Wattage
TRAN	SFORMERS (LANDSCAPE POO	L RATED)
619962	120V Input, 12-14V Output	100W
619963	120V Input, 12-14V Output	300W

Dimensions and Certifications



THREADED ADAPTER

CALIFORNIA PROPOSITION 65 WARNING

Note: Appearance of color and white LED light may vary between various models of lights. Appearance and perception of pool lighting may vary depending on a number of factors including, but not limited to, the particular model of light, the location/depth/angle of the light's installation, pool finish/material, pool depth/shape/geometry, ambient light sources, subjective factors and more. For best results when using multiple lights, use all the same model and do not mix multiple models of lights within a single installation.

SLIMLITE[™] **5G LED LIGHTS**

UNDERWATER COMMERCIAL LIGHTS





Slimlite Underwater Commercial Lights

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

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
- Integrated lens geometry and innovative reflector design create a wider beam and more uniform light distribution
- UL Listed

CALIFORNIA PROPOSITION 65 WARNING

Ordering Information

Product	Voltage	Cord Length (Ft.)	Incandescent Equivalency	Carton Oty.	Carton Wt.
	SLIMLITE 5G WITH POW	DER-COATED GRILL	.E – 500 WATT, 120 VC	DLT	
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.

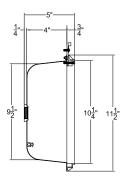
Note: All 120 volt pool and spa lights must be connected to a branch circuit protected by a ground fault circuit interrupter (GFCI).

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

Slimlite 5G Model	<u>Watts</u>
500 equiv.	55

Dimensions and Certifications

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



Slimlite Niche Dimensions

AMERLITE®

UNDERWATER INCANDESCENT LIGHTS WITH S/S FACE RINGS

Featured Highlights

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

Amerlite light, a 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 unitension clamp. Amerlite lights are UL listed to install in full-sized Pentair Pool Products, American, PacFab and Purex niches.



TRADEGRADE

Amerlite Incandescent Light

CALIFORNIA PROPOSITION 65 WARNING

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www.p65warnings.ca.gov.

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

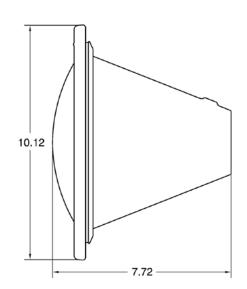
Product	Voltage	Wattage	Cord Length (Ft.)	Carton Oty.	Carton Wt. (Lbs.)
	AMERLITE WIT	TH STAINLESS STE	EL FACE RING – 300 WA	ATT, 120 VOLT	
78421100	120	300	15	1	6
78428100	120	300	50	1	10
78928500	120	300	100	1	15
78927000	120	300	150	1	20
78927900	120	300	200	1	25
	AMERLITE WIT	TH STAINLESS STE	EL FACE RING – 400 WA	ATT, 120 VOLT	
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
	AMERLITE WIT	TH STAINLESS STE	EL FACE RING – 500 WA	ATT, 120 VOLT	
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
	AMERLITE WI	TH STAINLESS STE	EL FACE RING – 100 W	ATT, 12 VOLT	
78411100	12	100	15	1	6
78418100	12	100	50	1	10
78415100	12	100	100	1	15

AMERLITE® (CONT'D)

UNDERWATER INCANDESCENT LIGHTS WITH S/S FACE RINGS

Product	Voltage	Wattage	Cord Length (Ft.)	Carton Oty.	Carton Wt. (Lbs.)
	AMERLITE WI	TH STAINLESS STE	EEL FACE RING – 300 W	ATT, 12 VOLT	
78431100	12	300	15	1	10
78438100	12	300	50	1	17
78435100	12	300	100	1	20
	STAINLESS STEEL	AMERLITE WITH M	IEDIUM BLUE LENS – 40	00 WATT, 120 VOL	Γ
78444200	120	400	30	1	8
78448200	120	400	50	1	10
78950100	120	400	100	1	15
	STAINLESS STEEL	AMERLITE WITH M	IEDIUM BLUE LENS – 50	00 WATT, 120 VOL	Γ
78454200	120	500	30	1	8
78458200	120	500	50	1	10
78958500	120	500	100	1	15
	AMERLITE W	ITH STAINLESS ST	EEL FACE RING - CANA	DIAN LIGHT	
78453102	120	500	30	4	11
	LEN	S, COVERS, AND FA	ACE RINGS FOR AMERI	.ITE	
79100100	Clear Lens, tempered	d		1	1
79100200	Medium Blue Lens, to	empered		1	1/2
78900100	Plastic Snap-on Colo	r Lens Kit (Blue, Gree	en, 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

Dimensions and Certifications



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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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.

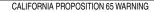
Note: Amerlite Incandescent Lights can be ulitlized to replace: Sta-Rite: SunSaver, SunGlow. Purex-Triton: Hatteras. PacFab: AmerQuartz, Spectrum Amerlite (SAM). To ensure proper grounding of replacement lights, please see the notice directly above.

PENTAIR SMALL STAINLESS STEEL NICHES

NICHES FOR SWIMMING POOLS AND SPAS

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



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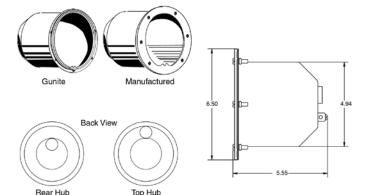
Pentair Small Niches

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.

Ordering Information

Product	Description	Carton Qty.	Carton Wt. (Lbs.)
	SMALL STAINLESS STEEL NICHES FOR CONCRETE INST	ALLATION	
78243200	Concrete pools or spas, 3/4 in. top hub	1	2
78244200	Concrete pools or spas, 3/4 in. rear hub	1	2
78243300	Concrete pools or spas, 1 in. top hub	1	2
78244300	Concrete pools or spas, 1 in. rear hub	1	2
	MANUFACTURED POOLS, SPAS & TUBS INSTALLAT	ΓΙΟΝ	
78242200	Manufactured pools, spas & tubs, 3/4 in. rear hub	1	3
78242300	Manufactured pools, spas & tubs, 1 in. rear hub	1	3
	SMALL STAINLESS STEEL NICHE SHIELD		
45361500	Niche shield for SpaBrite/AquaLight Niche	1	0.25
	VINYL/FIBERGLASS NICHE SEALING RING, POWDER-0	COATED	
79206055	Sealing ring, small niche	1	0.01
	SEALANT FOR NICHE BONDING LUGS		
60028300	Listed potting compound	1	0.325
	SMALL STAINLESS STEEL NICHES - CANADIAN LIG	HTS	
78241202	For manufactured pools, spas & tubs, 3/4" top hub - Canadian Lights	12	2
78242202	For manufactured pools, spas & tubs, 3/4" rear hub - Canadian Lights	12	2
78244202	For Concrete Installation - 3/4 in. rear hub - Canadian Lights	12	3

Dimensions and Certifications





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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.

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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 Oty.	Carton Wt. (Lbs.)				
	LARGE STAINLESS STEEL NICHES FOR	CONCRETE INSTALLATION					
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				
	VINYL AND FIBERGLASS INSTALLATION,S	TANDARD 10 HOLE PATTERN					
78232400	Fiberglass/liner, 3/4 in. rear hub	1	5				
78232500	Fiberglass/liner, 1 in. rear hub	1	5				
	LARGE STAINLESS STEEL NICHE,	CONCRETE SHIELD					
45361000	Niche Shield for construction	1	0.325				
79211600Z	Replacement/Repair Niche plaster ring	1	5				
	LARGE STAINLESS STEEL NICHE	- CANADIAN LIGHTS					
78210701	For Concrete Installation - 3/4 in. rear hub	1	0.25				
78232401	For Vinyl and Fiberglass Installation - 3/4 in. rear hub						
	POWDER COATED SEALING RINGS	, VINYL/FIBERGLASS					
79200255	Sealing ring, large niche (white)	1	0.01				
	SEALANT FOR NICHE BONDING LUGS						
60028300	Listed potting compound	1	0.0375				

Dimensions and Certifications





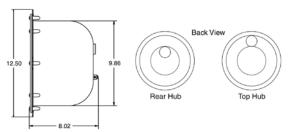
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Standard 10 Hole Pattern

Gunite Hole Pattern



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



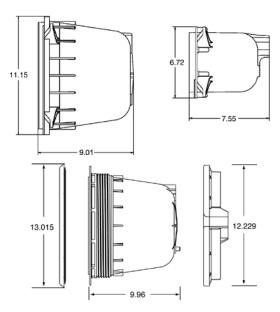
Gunite Plastic Niches – These plastic concrete niches are molded of high strength, corrosion resistant PVC with a one inch PVC hub. Both 45O and 3/4 in. reducer bushings are included. Gunite models feature rebar tie-backs and a plaster ring for clean, simple installations and all are packed with a gunite/plaster shield.

Ordering Information

Product	Description	Carton Qty.	Carton Wt. (Lbs.)
	PLASTIC NICHE	- CONCRETE	
79206600	Small PVC niche, concrete	1	2
79206700	Large PVC niche, concrete	1	3
	ACCESS	ORIES	
670044	Cord Seal Grommet Kit	3	1
60028300	Listed potting compound	1	0.325

Dimensions and Certifications









Innovative cord seal grommet accessory (p/n 670044)

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¹ 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

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

Featured Highlights

Kwik-Change Lens Covers

- · Powder coated vinyl niche sealing ring
- Snap-on plastic face rings available for s/s lights

Junction Boxes

- Available in 3 sizes: 1/2, 3/4 & 1 in.
- · Polycarbonate cover with brass base
- · Built-in strain relief
- · UL listed

Ordering Information

Product	Description	Carton Wt. (Lbs.)	
	KWIK-CHANGE LENS COV	ERS	
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/AmerQuartz lens, blue	1	0.5
78900900	Amerlite/AmerQuartz lens, red	1	0.5
650019	SpaBrite/AquaLight lens, 6 assorted colors	1	0.5
78900100	Amerlite/AmerQuartz lens (3 colors - red, green, blue)	1	1
78900700	Amerlite/AmerQuartz lens, green	1	0.5

Product	Description	Carton Qty.	Carton Wt. (Lbs.)
SNA	AP-ON PLASTIC FACE RINGS	FOR AMERL	ITE
79212111	Black	1	0.01
79212165	Gray	1	0.01
79213111	Black	24	0.01
79213100	White	24	0.01
SNAP-ON	PLASTIC FACE RINGS FOR S	PABRITE/AC	QUALIGHT
79212200	White	1	0.01
79212211	Black	1	0.06
79212265	Gray	1	0.06
JUNCTIO	N BOX BRASS BASE W/ POLYC	CARBONATE	COVER 1
78310500	(3) - 1/2 in. ports	1	1
78310600	(3) - 3/4 in. ports	1	1
78310700	3/4 in. x 1 in. x 3/4 in. ports	1	1

¹ 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 1 0 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 Oty.
	UNDERWATER SPEAKERS	
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.

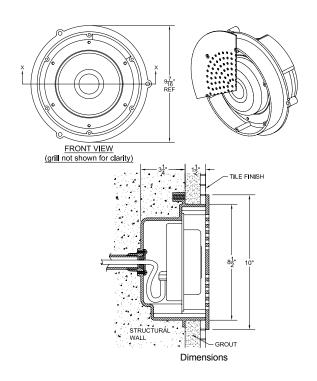
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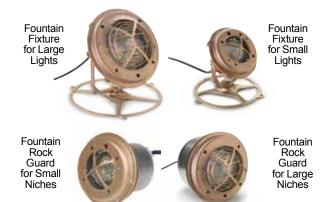
FOUNTAIN LIGHTS AND FIXTURES

FOR USE IN FOUNTAINS

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 Amerlite® Lights listed for fountain use
- Small fixture for use with IntelliBrite 5g Spa Light, AquaLight[®], and SpaBrite[®] Lights listed for fountain use



Pentair Fountain Lights are commercial grade fixtures that offer 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.

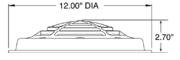
Ordering Information

Product	Description	Carton Oty.	Carton Wt. (Lbs.)
	FOUNTAIN FIXTURES		
560000	Fountain fixture for large lights with rock guard ¹	1	15
560001	Fountain fixture for small lights with rock guard ¹	1	9
	FOUNTAIN ROCK GUARDS		
560002	Fountain rock guard for large niches ²	1	7
560003	Fountain rock guard for small niches 2	1	4

¹ Light is sold separately.

Dimensions and Certifications



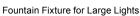


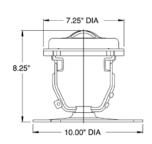
Fountain Rock Guard for Large Niches



Fountain Rock Guard for Small Niches







Fountain Fixture for Small Lights

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² Light and niche sold separately.

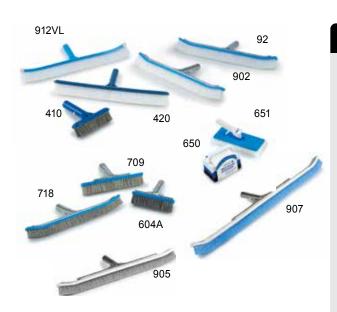
NOTES:





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
- Molded Brushes with heavy-duty one piece molded construction
- Model 907 has a 50/50 blend of stainless and nylon bristles. Recommended for new pool start-up brushing or mild algae cleaning.

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

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

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Ordering Information

Product	Model	Description	Carton Oty.	Carton Wt. (Lbs.)
		CURVED BRUSHES		
R111046	92	18 in. Aluminum Back White nylon	12	13
R111316	902	18 in. Aluminum Back White polypropylene	12	12
R111358	907 1	18 in. Aluminum Back Blended, stainless & nylon	12	13
R111342	905	24 in. Aluminum Back Blue nylon	12	19
R111366	912	18 in. Molded Back White polypropylene	12	10
R111386	912VL	18 in. Molded Back White nylon, end caps for vinyl liner pools	12	10
R500013	420	18 in. Molded Back White polypropylene	12	9
		ALGAE BRUSH – (NOT FOR VINYL LINER POOLS)		
R500012	410	6 in. Molded Back, Stainless Steel for Plaster, Concrete, Gunite	12	7
R111616	604A	6 in. Aluminum Back, Stainless Steel for plaster, Concrete, Gunite	12	6
R111626	709	9 in., Aluminum Back Stainless Steel for plaster, Concrete, Gunite	12	9
R111646	718	18 in., Aluminum Back Stainless Steel for plaster, Concrete, Gunite	12	15
		ACID-WASH/TILE/DECK BRUSHES		
R111584		10 in. Blue & white crimped bristles	25	21
		SCRUBBERS		
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

¹ 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.

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

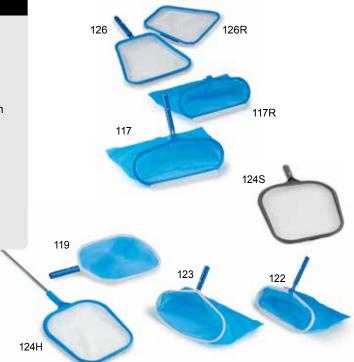
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Hand Skimmers and Leaf Rakes

Product	Model	Description	Carton Oty.	Carton Wt. (Lbs.)
		HAND SKIMMERS		
R121026	119	Molded Frame Skimmer reinforced with aluminum and aluminum handle	12	8
R121166	124S	Spa/Aboveground Skimmer, screen molded into frame, with magnet	12	7
R121186	124H	Long Handle Skimmer, molded frame with 1 in. x 4 ft. pole	12	11
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
		LEAF RAKES		
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

FLOATS, FLOAT ROPE, AND SAFETY HOOK





Float Keepers

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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

Floats, Float Rope, and Safety Hook

Product	Model	Description	Carton Oty.	Carton Wt. (Lbs.)
		SAFETY POOL HOOK		
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	1	
		SWIM TEACHER		
R221056	58	Two 7 in. x 7 in. poly floats with 30 in. white PVC bar, packed in bag with header	6	10
		FLOATS		
R181026	350	Red and white, 3 in. x 5 in. Oval Float, Fits 1/2 in. Rope	100	12
R181016	350	Blue and white, 3 in. x 5 in. Oval Float, Fits 1/2 in Rope	100	12
R181046	350	Solid white, 3 in. x 5 in. Oval Float, Fits 1/2 in. Rope	100	12
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
		FLOAT KEEPERS & ROPE HOOKS		
R181436	71	Secures No. 590 to 3/4 in. rope, two pieces and two screws, one set holds one float in place	1	
R181446	71	Set of two, bubble pack	12	1
R181486	74	Secures No. 590 to 3/4 in. rope, four pieces and two screws, one set holds one float in place	1	
R06017	355	Replacement chrome brass rope hook	1	
R181416	355	Replacement chrome brass rope hook, bubble pack	12	2
		SAFETY FLOAT LINES		
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	3
R181268	3524	24 ft. Pool Dimension, 9 floats (Available Built to Order Only)	1	3
R181269	3530	30 ft. Pool Dimension, 9 floats (Available Built to Order Only)	1	2

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.



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						Leaf Net/Leaf	Pole/Hose	Discharge	
Product	VL/Gunite	Brush	Vacuum	Thermometer	Test Kit	Rake	Hanger	Hose	Qty.
			SW	IMMING POOL N	MAINTENANCE KI	TS			
R131016 ¹		912		125	752	119	145		3
R131020 ¹		912		125	754 For Canada	119	145		3
R131021 ²	VL	912VL	191LW	125	752	124S			1
R131037 ¹		902B		127	3-Way Strips	119	145		3
R131046 ¹		902		130	78HR	126	145		3
R131048 ¹	VL	912	194	127		119			3
R131066 ¹	VL	902	194	127	752	126			3
R131074 ¹	VL	912	193	127	752	124S			3
R131075 ¹	VL	912	196	127	752	124S			3
R131076 ¹	VL	912VL	193	127	752	124S			3
R131078 ¹	VL	912VL	196	127	752	124S			3
R131079 ¹	VL	912VL	194		752	119			3
R131106 ¹		902		127	754 For Canada	126	145/165		3
R131146 ¹		912		127	78HR	124S			3
R131147 ¹		902		130	78HR	119			3
R131148A ²		902		133	78HR	119			1
R131155 ¹	Gunite	902	203	133	78HR	123	145		3
R131204 ²		902		136	78DPD	124S	145		1
R131256A ²		903 Alt.4		133	752	119			1
R131316 ²	VL	902	194	136	752	124S		1.5 in. x 50 ft.	1
R131360 ²	Gunite	902	188	127	78HR	119			1
R131371 ²	Gunite	902	203	127 and 133		126			1
R131388 ¹	Gunite	902	201		78HR	119			3
R131398 ²	VL	902	196	127		119			1
R131404 ¹	Gunite	902	203		78HR	124S			3
R131410 ³	Gunite	902	203	125	Test Strips	119	145		1
R131418 ¹	Gunite	912	203	136		119			3
R131442 ³	VL	902	196	127	752	123		1.5 in. x 50 ft.	1
R131448 ¹	Gunite	903 Alt.4	203	Yes - Jumbo	5-Way Strips	124S			3

Pentair kraft box style.

² Corrugated box style.

³ Corrugated white box style.

⁴ Brush model 903 has been replaced with an alternate direct replacement.

POLES



Featured Highlights

- 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.
- 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.

CALIFORNIA PROPOSITION 65 WARNING

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 ▲ ADVERTENCIA: Cáncer y Daño Reproductivo.
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Product	Model	Description	Carton Oty.	Carton Wt. (Lbs.)
		POLES		
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
R191104	818-16	Commercial Fiberglass Pole - Straight 16 ft. w/ pole cap	3	38

POOL & SPA SIGNS

Featured Highlights

Pool & Spa Signs

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



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Product	Description	Size	Ctn Qty.
	POOL & SPA SIGNS		
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 - Texas)	24 in. x 24 in	6
200186	No Lifeguard On Duty. (4 in. letters - Georgia)	24 in. x 36 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
	SPANISH POOL & SPA SIGNS		
R233700	(Reglamentos) Pool Rules	18 in. x 24 in.	6

POOL & SPA SIGNS (CONT'D)



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



R230900 Pool Capacity 18 in. x 12 in.



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



R231400 Pool Closed 12 in. x 6 in.



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



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



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



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

CAUTION

Elderly persons and those suffering from heart disease, diabetes, high or low blood pressure should consult their physician before using

The use of this spa while under the influence of alcohol, anticoagulants, antihistamines, vasoconstrictors, vasodilators, stimulants hypnotics, narcotics or tranquilizers should be avoided.

Pregnant women should not use the spa without consulting their physician.

Persons should spend no more than fifteen (15) minutes in the spa at any one (1) session. Long exposures may result in nausea, dizziness

The maximum temperature allowed by the South Carolina Department of Health and Environmental Control, for any spa is 104° F. The actual-temperature of this spa at o'clock today is ___

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



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



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



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

POOL RULES

- THERE SHOULD BE NO SOLD SWIMMING. THERE SHOULD BE NO RUNNING, BOISTEROUS OR ROUGH PLAY.
- NOUGH PLAY.

 3. NO PERSON UNDER THE INFLUENCE OF ALCOHOL OR DRUGS SHOULD USE THE POOL.

 THERE SHOULD BE NO SPITTING OR BLOWING NOSE IN THE POOL.

- 1. THERE SHOULD BE NO SHITTING OR BLOWING MOSE IN THE POOL.
 5. PERSONS WITH DIARRHEAL ILLNESS OR NAUSEA SHOULD NOT ENTER THE POOL.
 6. PERSONS WITH SKIRL, FEY, EARD OR RESPIRATIORY INFECTIONS SHOULD NOT ENTER THE POOL.
 7. PERSONS WITH OPEN LESIONS OF WOLIMOS SHOULD NOT ENTER THE POOL.
 8. MO ANIMALS OR PETS ALLOWED IN THE POOL COSUME.
 9. MO GLASS ALLOWED IN THE POOL OR ON THE CECK.
 10. MO CHECKEN SHOULD BE IN THE POOL. WITHOUT SUPERYSHOULD.
 11. VOLUMENT SHOULD BE IN THE POOL. WITHOUT SUPERYSHOULD.
 11. VOLUMENT SHOULD BE NOT THE POOL OF THE POOL.
 11. VOLUMENT SHOULD BE SHOWER BEFORE ENTERING THE POOL.
- POOL IS OPEN FROM A.M. TO P.M.
 13. THE MAXIMUM NUMBER OF SWIMMERS ALLOWED IN THE POOL IS THE POOL IS THE SAVING EQUIPMENT IS LOCATED
 15. LIFE SAVING EQUIPMENT IS LOCATED

- 16. AN EMERGENCY PHONE (or other notification device) IS
- 17. THE POOL OPERATOR OF RECORD AT THIS FACILITY IS CERTIFICATION NUMBER

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

POOL & SPA SIGNS (CONT'D)

POOL RULES 1. NO RUNNING. 2. NO RUNNING. 2. NO RUNNING. 3. NO RUNNING HUMBERN WARENS OF THE POOL LESS THAM 5 FEET DEEP OR IN PRODS. NOT A PROPOSED FOR DUNNING. 4. CHARLERS SHOULD NOT USE THE SYMMETHING POOL NUTROUT AULU! 5. SEPERATION. 5. AULUS SHOULD NOT USE THE SYMMETHING POOL NUTROUT AULU! 5. SEPERATION. 6. NO PERSON WITHES THE REPIRENCE OF ALCOHOL OR DRIVES SHOULD 10. OF THE POOL. 7. NO PERSON WITH SUM, EYE EAR OR NASAL INFECTIONS ALLONED 10. THE POOL. 8. NO PERSON WITH SUMMETHING DISPLESSES ALLONED IN THE POOL. 9. NO PERSON WITH SUMMETHING DISPLESSES ALLONED IN THE POOL. 9. NO PERSON WITH SUMMETHING DISPLESSES ALLONED IN THE POOL. 9. NO PERSON WITH SUMMETHING DISPLESSES ALLONED IN THE POOL. 9. NO PERSON WITH SUMMETHING DISPLESSES ALLONED SO INJURIES. 9. DOLL IS THE PROPART USE. REMIREDS AND DISECT DIV. 9. AMAGEMENTHE DESEN'S THE RIGHT TO DERY USE OF THE POOL TO AMAGEMENT AND THE POOL. 9. THIS POOL IS OPER PROOF. 9. THIS POOL IS OPER PROOF. 9. THIS POOL IS DEEP FROM. 9. THE RAILWAND NUMBER OF SYMMETHS ALLONED IN THE POOL IS. 9. A PERST AND INT IS LOCATED. 9. E REMINING NUMBER OF SYMMETHS ALLONED IN THE POOL IS. 9. A PERST AND INT IS LOCATED. 9. E REMEMBER WITH THE POOL IS. 9. A PERST AND INT IS LOCATED. 9. E REMEMBER OF SYMMETHS ALLONED IN THE POOL IS. 9. A PERST AND INT IS LOCATED. 9. CHARGE MAY TELEPROME FOR WHITE ALLONED IN THE POOL IS. 9. A PERST AND INT IS LOCATED. 9. CHARGE MAY TELEPROME FOR WHITE ALLONED IN THE POOL IS. 9. A PERST AND INT IS LOCATED. 9. CHARGE MAY TELEPROME FOR WHITE ALLONED IN THE POOL IS. 9. A PERST AND INT IS LOCATED. 9. CHARGE MAY TELEPROME FOR WHITE ALLONED IN THE POOL IS. 9. A PERST AND INT IS LOCATED. 9. CHARGE MAY TELEPROME FOR WHITE ALLONED IN THE POOL IS. 9. A PERST AND INT IS LOCATED. 9. CHARGE MAY TELEPROME FOR WHITE ALLONED IN THE POOL IS. 9. CHARGE MAY TELEPROME FOR WHITE ALLONED IN THE POOL IS. 9. CHARGE MAY THE POOL TO THE PO

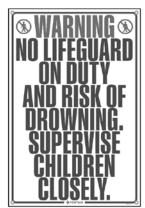
R234100 Pool Rules (N. Carolina), 24 in. x 36 in.



R234700 Danger Pool Closed 18 in. x 12 in.

POOL RULES
1. NO FOOD OR BEVERAGES IN POOL OR ON POOL WET DECK. Commercially Bottled Water in Plastic Bottles is Allowed on the Pool wet deck for Pool Patron Hydratidm.
2. NO GLASS OR ANIMALS IN THE FENCED POOL AREA (OR SO FEET FROM UNFENCED POOL).
3. BATHING LOAD: PERSONS.
4. POOL HOURS: A.M. TO P.M.
C ON NOT SWALLOW THE DOOR WATER
7. DO NOT USE POOL IF YOU ARE ILL WITH CHARRIER.
8. IF THE POOL INCLUDES A SUN SHELF,
WARNING:
<u> Drop off at sun</u>
SHELF EDGE IS
FEET DEEP.
9. IF THE POOL INCLUDES A SUN SHELF, "DO NOT PLACE FURNITURE IN POOL."
10. POOL MAXIMUM DEPTH:
NO DIVING

R234800 Pool Rules (Florida),24 in. x 50 in.



200186 No Lifeguard On Duty (Georgia), 24 in. x 36 in. (4 in. letters)



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



R235200 Pool Risks Georgia, 24 in. x 29.5 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)



R230300 Spa Rules 18 in. x 24 in.



R234900 Spa Rules (Florida), 18 in. x 25 in.



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 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.

CALIFORNIA PROPOSITION 65 WARNING







Ordering Information

Product	Model	Description	Carton Qty.	Carton Wt. (Lbs.)
		BROMINE TEST KITS		
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
		DPD TEST KITS		
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 CI, 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
		pH & CHLORINE TEST KITS		
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, CI 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.

Note: Air shipment of OTO solution and kits containing OTO solution is prohibited.

WATER HARDNESS/SPECIALTY TEST KITS

Featured Highlights

Professionals Pro 11 Test Lab

 Complete 11 test lab designed for service professionals. Free, Total and Combined CI, 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 CI range to 10ppm and meets recommended industry standards.



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Ordering Information

				Carton
Product	Model	Description	Carton Oty.	Wt. (Lbs.)
		CYANURIC ACID TEST KITS		
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
		PRO 11 MINI LAB		
R151716	PRO 11	Professional Test Lab	6	13
		TOTAL ALKALINITY TEST KITS		
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
		WATER HARDNESS TEST KITS		
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





Water Hardness/Specialty Test Kits

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

Ordering Information

Product	Model	Description	Carton Oty.	Carton Wt. (Lbs.)
		241 SUPER PROVAC		
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
		250 COMMERCIAL FLEXIBLE VACUUM		
R201126	250	Swivel wheel 19 in., boxed	4	37
		PROVAC SERIES RESIDENTIAL & COMMERCIAL VACUUMS		
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.

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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

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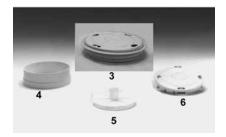
www.p65warnings.ca.gov.

Product	GPM	Description	Carton Oty.	Carton Wt. (Lbs.)
		LARGE BODY FLOWMETERS		
LDF451B	8–75	1 in., Brass sweat 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
LDF462T	15–100	1-1/2 in., Brass threaded end	1	1-1/2

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

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

Ordering Information

Product	Description	Carton Oty.	Carton Wt. (Lbs.)
	S20 SKIMMERS FOR CONCRETE CONSTRUCTION	N	
84420500	S20, circ. weir, equalizer, 2 in. threaded, FIPT ¹	1	12
84420505	S20, circ. weir, equalizer, 2 in. slip ¹	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 ¹	1	12
84420605	S20, flap weir, equalizer, 2 in. slip ¹	1	12
84420630	S20, flap weir, equalizer, 2 in. threaded, tan ¹	1	12
84420635	S20, flap weir, equalizer, 2 in. slip, tan	1	12
	SKIMMER ACCESSORIES		
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

¹ NSF listed for commercial installation.

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ADMIRAL™ S20 SKIMMERS (CONT'D)

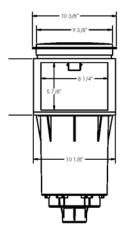
Short Throat Skimmer

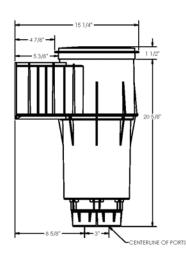
10 3/8" 7 3/8" 18 3/4" 18 3/4" 18 3/4" 11 1/2" 20 5/8" CASKESS [2] REGUIRED

Dimensions and Performance

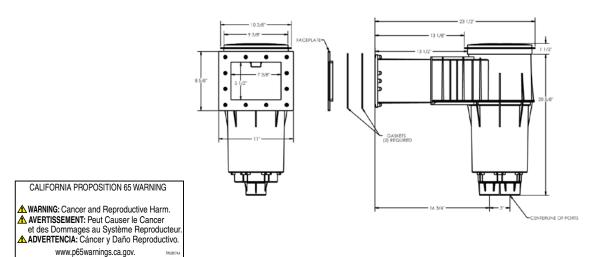
Certified to NSF/ANSI Standard 50

Adminral S20 Skimmer for Concrete





Long Throat Skimmer



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 onepiece construction with sturdy external ribbing for superior strength.

Ordering Information

Product	Description	Material Type	Carton Oty.	Carton Wt. (Lbs.)		
GUNITE SKIMMERS						
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		
	GUNITE SKIMMERS WITH FLO	OAT VALVE ASSEM	BLY			
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		
	GUNITE SKIMMERS WITH FLOAT VALVE	& EQUALIZER VAL	VE ASSEMBLY			
506370	2 in. slip ports, white ¹ (BKG)	PVC	1	10		
506380	2 in. slip ports, white ¹ (ABKG)	ABS	1	10		
506381	2 in. threaded ports, white ¹ (ABKG)	ABS	1	10		







CALIFORNIA PROPOSITION 65 WARNING

▲ WARNING: Cancer and Reproductive Harm.
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▲ ADVERTENCIA: Cáncer y Daño Reproductivo.

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¹ NSF listed.

BERMUDA™ SKIMMERS (CONT'D)





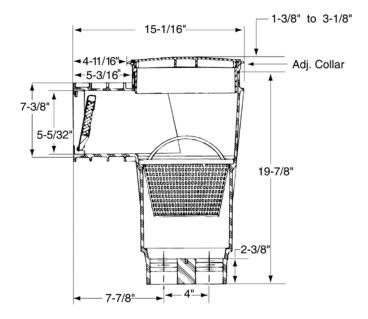






Item	Product	Description	Carton Wt. (Lbs.)
		BERMUDA ACCESSORIES	
Α	506160	Float valve assembly	1
В	506161	Vacuum plate/insert assembly, white	0.50
С	506162	Equalizer valve assembly	1.3
D	516220	Square deck ring seat, white	0.62
E	516253	Gunite extension collar, white, 3-1/8 in. length	0.20
E	516258	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



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U-3 SKIMMERS

SWIMQUIP INGROUND SKIMMERS



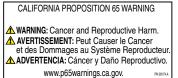


Ordering Information

Product	Description	Carton Oty.	Carton Wt. (Lbs.)
	SKIMMERS FOR CONCRETE POOLS		
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 ¹	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 ¹	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 $^{\rm 1}$	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 1	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 1	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 $^{\rm 1}$	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 $^{\rm 1}$	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 1	48	10

¹ NSF Certified. Only skimmers with Float Valve assemblies are NSF approved.

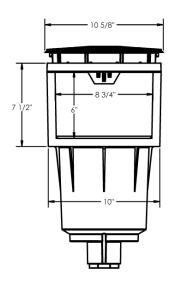
Note: All U-3 Skimmers are made with high strength ABS plastic.

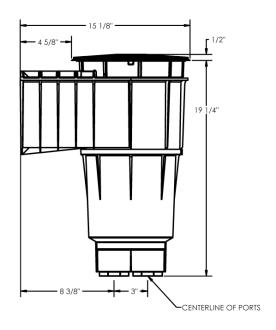


U-3 SKIMMERS (CONT'D)

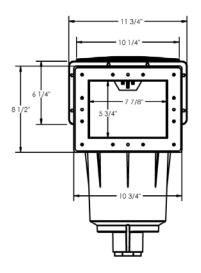
SWIMQUIP INGROUND SKIMMERS

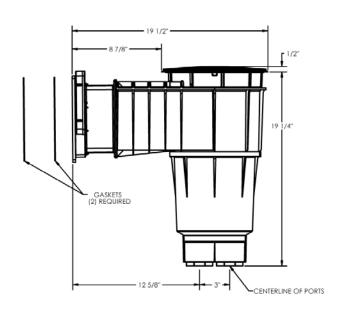
Dimensions and Performance





U3 Skimmer for concrete





CALIFORNIA PROPOSITION 65 WARNING

RETURN FITTINGS

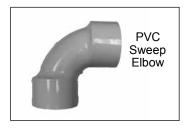
FOR SWIMMING POOLS

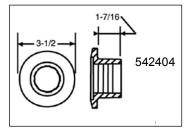






542405

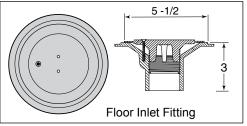












Ordering Information

Product	Description	Carton Oty.	Carton Wt. (Lbs.)
	GUNITE/CONCRETE		
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
	INSIDER FITTINGS FOR GUNITE/CONCRETE POO	LS	
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
	ENERGY EFFICIENT FITTINGS		
178741	Sweep Elbow, PVC, White, 2-1/2 in. Socket, 3 in. Spigot. W=.75	1	0.92
	FLOOR INLET FITTINGS		
08417-0000	2 in. Slip with 1-1/2 in. slip bushing, white ³	1	1
08417-0100	2 in. Slip with 1-1/2 in. slip bushing, gray ³	1	1
08417-0200	2 in. Slip with 1-1/2 in. slip bushing, black ³	1	1

¹ Includes face plate, screws & gaskets.

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² Includes back gaskets.

AUTOMATIC WATER FILLERS

WATER LEVEL CONTROL

Featured Highlights

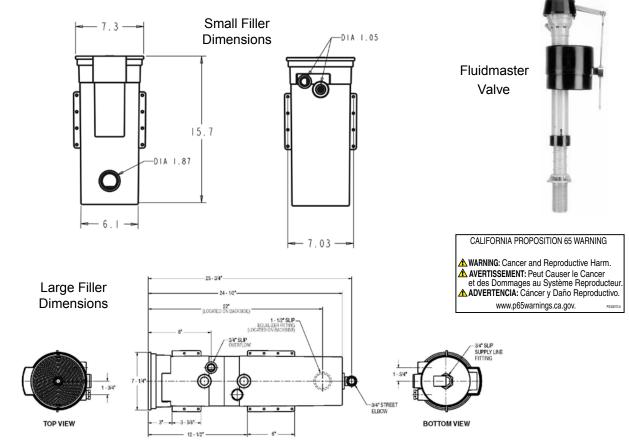
- Available for standard in-ground and vanishing edge pools
- Prevents equipment damage due to low water levels
- · No electronic controls
- Prevents water waste and landscape damage due to overfilling pool
- Available with white, black, gray, and almond colored lids



Automatic Water Fillers

Product	Description
	AUTOMATIC WATER FILLERS
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
	AUTOMATIC WATER FILLERS
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



PENTAIR PROWLER® 930W

ROBOTIC INGROUND POOL CLEANER

TRADEGRADE



Pentair Prowler 930W

This pool cleaner is the right option for people who want the easiest way to control their pool cleaning. Mainly because it provides pool owners with anytime control via the Pentair Home app. The 930W connects to WiFi for smart device control.



Powered by Dolphin



Featured Highlights

- Using a smart device, the Pentair Home app lets pool owners go right to the problem spots and get them done fast
- All-surface deep cleaning using a powerful, high-speed scrubbing brush
- · Programmable daily cleaning schedules
- Dual-level filtration with top access basket captures both large and ultra-fine debris
- Robust storage caddy for increased mobility and easy storage

CALIFORNIA PROPOSITION 65 WARNING

Ordering Information

Product	Description	Carton Oty.	Carton Wt. (Lbs.)	
	PENTAIR PROWLER 930W ROBOTIC CLEANER			
360540	Prowler 930W Robotic Inground Pool Cleaner	1	40	

PENTAIR PROWLER® 920

ROBOTIC INGROUND POOL CLEANER

TRADEGRADE



Pentair Prowler 920

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.



Powered by Dolphin



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

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Product	Description	Carton Oty.	Carton Wt. (Lbs.)
	PENTAIR PROWLER 920 ROBOTIC CLEANER		
360322	Prowler 920 Robotic Inground Pool Cleaner	1	29

NOTES:

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COMMERCIAL ACU DRIVE™ XS

VARIABLE FREQUENCY DRIVE





Featured Highlights

- Save up to 60% or more on pump's electricity usage*
- "Right-size" your pump to the exact flow required
- Helps save 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

- Great match for 3-phase models of EQ Series® Pumps
- Overload trip protection helps protect motor and Acu Drive XS VF Drive from Voltage Spikes and phase unbalance
- Can connect to an IntelliTouch[®] Automation System
- Optional: Factory Start-up upgrade 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 for energy and cost savings, the Acu Drive XS VF Drive offers a 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 pumps.

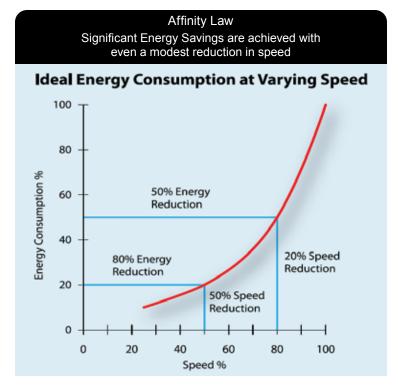
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Status Quick Main Menu Alarm log

On OK Warn.
Alarm
Hand Off Auto on Reset



^{*}Savings based on single speed pool pumps traditionally configured without VFD's, up to 20% larger than actual required flow and head pressure. 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.

COMMERCIAL ACU DRIVE™ XS

VARIABLE FREQUENCY DRIVE (CONT'D)

Ordering Information

					Ordering	y iiii oi iiiatioii	
	3-PHASE I	INCLUDES FUSED DI	SCONNECT, BATTER	Y BACKUP, & PENTAI	R SMART START*		
Horse	NE	EMA-12 RATED (IP 54/5	5)		NEMA-4X RATED (IP 66)		
Power (HP)	200-240 VAC	360-480 VAC	525-600 VAC	200-240 VAC	360-480 VAC	525-600 VAC	
3	AD030X-2303-N12	AD030X-4603-N12	AD030X-5753-N12	AD030X-2303-N4X	AD030X-4603-N4X	AD030X-5753-N4X	
5	AD050X-2303-N12	AD050X-4603-N12	AD050X-5753-N12	AD050X-2303-N4X	AD050X-4603-N4X	AD050X-5753-N4X	
7-1/2	AD075X-2303-N12	AD075X-4603-N12	AD075X-5753-N12	AD075X-2303-N4X	AD075X-4603-N4X	AD075X-5753-N4X	
10	AD100X-2303-N12	AD100X-4603-N12	AD100X-5753-N12	AD100X-2303-N4X	AD100X-4603-N4X	AD100X-5753-N4X	
15	AD150X-2303-N12	AD150X-4603-N12	AD150X-5753-N12	AD150X-2303-N4X	AD150X-4603-N4X	AD150X-5753-N4X	
20	AD200X-2303-N12	AD200X-4603-N12	AD200X-5753-N12	AD200X-2303-N4X	AD200X-4603-N4X	AD200X-5753-N4X	
25	AD250X-2303-N12	AD250X-4603-N12	AD250X-5753-N12	AD250X-2303-N4X	AD250X-4603-N4X	AD250X-5753-N4X	
		SINGLE-PHASE INPU DARD DISCONNECT			PS ONLY) PENTAIR SMART STA	RT*	
Horse Power (HP)	<u>N</u>	EMA-12 RATED (IP 54/5 200-240 VAC	5)		NEMA-4X RATED (IP 66) 200-240 VAC	1	
3		AD030X-2301-N12			AD030X-2301-N4X		
5		AD050X-2301-N12			AD050X-2301-N4X		
7-1/2		AD075X-2301-N12			AD075X-2301-N4X		
10		AD100X-2301-N12			AD100X-2301-N4X		
15 - 20		AD200X-2301-N12			AD200X-2301-N4X		

For 30HP and higher - Please contact factory.

3-PHASE Units available with Optional Bypass Contactor mounted to common back plate. Please contact factory.

*Startup Services

Optional Accessories and Warranties

TECHNICIANS I	ART-UP ASSISTANCE BY TRAINED S AVAILABLE FOR PURCHASE WITH ALL ACU DRIVE VFD'S. DUCT NUMBERS AS FOLLOWS:
AD-STDSU01	Startup for single Drive (with or without Bypass Option)
AD-SUDW01	Batch Startup for 2-3 standard drives (4 hr. onsite / day)
AD-SUFW01	Batch Startup for 4-6 standard drives (8 hr. onsite / day)

"ENHANCED SERVICE WARRANTY - ON SITE* INCLUDES PARTS, LABOR, TRAVEL AND ON-SITE WARRANTY REPAIR. USE PRODUCT NUMBERS AS FOLLOWS:"								
	200-24	360-480 VAC						
DURATION	3 HP & Below	5-25 HP	10 HP & Below	15-40 HP				
6 YEARS	AD-EWW172	AD-EWW272	AD-EWW172	AD-EWW272				

Flow Sensor Options

		ACU DRIVE XS	- FLOW SENSOR KIT	S
Pipe Size (inches)	Flow Sensor Blind		Flow Sensor Display	
2"	97014-4202KIT	Includes:	_	Includes:
3"	97014-4203KIT	 Sch80 PVC Clamp-on Pipe Saddle. 	97014BL-03KIT	Sch80 PVC Clamp-on Pipe Saddle(3"-8").
4"	97014-4204KIT	 100 linear feet shielded signal wire. 	97014BL-04KIT	• Iron Saddle (10"-14").
6"	97016-4206KIT	Strain relief connector.	97016BL-06KIT	100 linear feet shielded signal wire.
8"	97016-4208KIT	Does not include separate wall-mount	97016BL-08KIT	Strain relief connector.
10"	_	flow display.	97020BL-10KIT	Separate wall-mount flow display/transmitter.
12"	_		97020BL-12KIT	
14"	_		97020BL-14KIT	
			97014MM-4204KIT	Kit, 4" Magmeter Flow Sensor with integral 4-20 output
			97016MM-4206KIT	Kit, 6" Magmeter Flow Sensor with integral 4-20 output
			97016MM-4208KIT	Kit, 8" Magmeter Flow Sensor with integral 4-20 output

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

Other options and add-ons are available including "Bypass Contactors", and "Contact Motor Select" upgrades, 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 XS Drive and accessories.

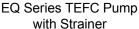
Standard Acu Drive XS VF Drives can be returned within 12 months of invoice only if unused, in original packaging, and subject to a 35% restocking charge. Special drives are non-returnable.

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 4X enclosure provides a degree of protection against solid foreign objects(windblown dust), water(rain, sleet, snow, splashing water, and hose directed water), and an additional level of protection against corrosion; and that will be undamaged by the external formation of ice on the enclosure.

COMMERCIAL PLASTIC PUMP WITH AND WITHOUT HAIR AND LINT STRAINER







EQ Series Pump without Strainer

Commercial Plastic pump built specifically for commercial and large residential pools. Pump features electrical and hydraulic designs that helps reduce electrical costs, less wear and tear on critical moving parts, and lightweight for ease of installation.

CALIFORNIA PROPOSITION 65 WARNING

Featured Highlights

- Efficiency 3-phase motors
- Commercial grade, noncorrosive 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	НР	SF	SFHP	Primary Listings and Certifications ⁶	Port Size (ANSI Flange)	Motor Class	Carton Wt. (Lbs.)	Curve Key
		PREMI	UM EFFICIENC	Y SIN	IGLE P	HASE P	OOL PUMP WITHOU	T STRAINER - C			
340019	EQ-500	230	20.0	5	1.15	5.75	NSF ² , ETL ⁵	6 in. x 4 in.	F	97	Α
340021	EQ-750	230	30.4	7.5	1.15	8.63	NSF ²	6 in. x 4 in.	F	132	В
▶ 340237	EQ-1000	230	40.0	10	1.15	11.50	NSF ²	6 in. x 4 in.	F	125	С
		IEMA RATED	PREMIUM EFF	ICIEN	NCY TH	IREE PH	HASE POOL PUMP W	ITHOUT STRAI			
340020	EQK-500	208-230/460	13.5-12.3/6.2	5	1.15	5.75	NSF ²	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 ²	6 in. x 4 in.	F	87	Е
340023	EQK-1000	208-230/460	27.0/26.2-13.1	10	1.15	11.50	NSF ²	6 in. x 4 in.	F	117	F
▶ 340024	EQK-1500		40.0-38.0/18.8	15	1.15	17.25	NSF ²	6 in. x 4 in.	F	132	G
	N	EMA RATED	PREMIUM EFF	ICIEN	ICY TH	REE PH	ASE POOL PUMP W	ITHOUT STRAIN			
340608	EQKT-500	208-230/460	13.4-12.2/6.1	5	1.25	6.25	NSF ² , UL ⁷	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 ² , UL ⁷	6 in x 4 in	F	117	Е
▶ 340610	EQKT-1000	208-230/460	26.4-23.5/11.7	10	1.25	12.50	NSF ² , UL ⁷	6 in x 4 in	F	163	F
340611	EQKT-1500	208-230/460	39.0-36.0/18.0	15	1.25	18.75	NSF ² , UL ⁸	6 in x 4 in	F	177	G
	NEMA	RATED PREM	MIUM EFFICIEN	ICY T	HREE	PHASE	POOL PUMP WITHO	UT STRAINER -	575 VOLT - OI	DP	
340148	EQK-500	575	5.1	5	1.15	5.75	NSF ²	6 in. x 4 in.	F	77	D
340149	EQK-750	575	7.2	7.5	1.15	8.63	NSF ²	6 in. x 4 in.	F	87	Е
▶ 340150	EQK-1000	575	10.2	10	1.15	11.50	NSF ²	6 in. x 4 in.	F	117	F
▶ 340151	EQK-1500	575	15.0	15	1.15	17.25	NSF ²	6 in. x 4 in.	F	132	G
		PREI	MIUM EFFICIEN	ICY S	INGLE	PHASE	POOL PUMP WITH	STRAINER - OD	P		
▶ 340030	EQ-500	230	20.0	5	1.15	5.75	NSF 3, ETL 5	6 in. x 4 in.	F	126	Α
▶ 340032	EQ-750	230	30.4	7.5	1.15	8.63	NSF ³	6 in. x 4 in.	F	161	В
▶ 340238	EQ-1000	230	40.0	10	1.15	11.50	NSF ³	6 in. x 4 in.	F	160	С
		NEMA RATE	ED PREMIUM E	FFICI	ENCY	THREE	PHASE POOL PUMP	WITH STRAINE	R - ODP		
▶ 340031	EQK-500	208-230/460	13.5-12.3/6.2	5	1.15	5.75	NSF ³	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 ³	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 ³	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 ³	6 in. x 4 in.	F	161	G
		NEMA RATE	D PREMIUM EI	FFICIE	ENCY 1	THREE	PHASE POOL PUMP	WITH STRAINE	R - TEFC		
340604	EQKT-500	208-230/460	13.4-12.2/6.1	5	1.25	6.25	NSF ³ , UL ⁷	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 3, UL 7	6 in x 4 in	F	147	Е
▶340606	EQKT-1000	208-230/460	26.4-23.5/11.7	10	1.25	12.50	NSF 3, UL 7	6 in x 4 in	F	193	F
			39.0-36.0/18.0	15	1.25	18.75	NSF 3, UL 8	6 in x 4 in	F	207	G

COMMERCIAL PLASTIC PUMP WITH AND WITHOUT HAIR AND LINT STRAINER

Product	Description	Voltage	Amps	HP	SF	SFHP	Primary Listings and Certifications ⁶	Port Size (ANSI Flange)	Motor Class	Carton Wt. (Lbs.)	Curve Key
	NEM/	A RATED PRE	MIUM EFFICI	ENCY	′ THRE	E PHAS	E POOL PUMP WITH	STRAINER - ODP -	- 575 VOLT	-	
▶ 340155	EQK-500	575	5.1	5	1.15	5.75	NSF ³	6 in. x 4 in.	F	106	D
▶ 340156	EQK-750	575	7.2	7.5	1.15	8.63	NSF ³	6 in. x 4 in.	F	116	Е
▶ 340157	EQK-1000	575	10.2	10	1.15	11.50	NSF ³	6 in. x 4 in.	F	146	F
▶ 340159	EQK-1500	575	15.0	15	1.15	17.25	NSF ³	6 in. x 4 in.	F	161	G
		SINGL	E PHASE W	ATERI	FALL P	UMP WI	THOUT STRAINER - C	DDP - 1750 RPM			
▶ 340014	EQW-300	208-230	19.5/19.2	3	1.15	3.45	NSF ² , ETL ⁵	6 in. x 4 in.	F	97	Н
▶ 340017	EQW-500	208-230	23.0-20.1	5	1.25	6.25	NSF ² , ETL ⁵	6 in. x 4 in.	F	97	1
	NEMA RAT	ED PREMIUM	EFFICIENCY	THR	EE PHA	ASE WAT	ERFALL PUMP WITH	OUT STRAINER -	ODP - 1750	0 RPM	
▶ 340016	EQWK-300	208-230/460	8.4-7.8/3.9	3	1.15	3.45	NSF ²	6 in. x 4 in.	F	77	Н
▶ 340018	EQWK-500	208-230/460	13.8-13.0/6.5	5	1.25	6.25	NSF ²	6 in. x 4 in.	F	77	I
		SIN	GLE PHASE	WATE	RFALL	PUMP \	VITH STRAINER - OD	P - 1750 RPM			
▶ 340026	EQW-300	208/230	19.5/19.2	3	1.15	3.45	NSF 3, ETL 5	6 in. x 4 in.	F	126	Н
▶ 340028	EQW-500	208-230	23.0/20.1	5	1.25	6.25	NSF ⁴ , ETL ⁵	6 in. x 4 in.	F	126	I
	NE	MA RATED P	REMIUM EFF	ICIEN	CY THE	REE PHA	ASE WATERFALL PUN	IP WITH STRAINE	R - ODP		
▶340027	EQWK-300	208-230/460	8.4-7.8/3.9	3	1.15	3.45	NSF ³	6 in. x 4 in.	F	106	Н
▶340029	EQWK-500	208-230/460	13.8-13.0/6.5	5	1.25	6.25	NSF ⁴	6 in. x 4 in.	F	106	I
		HAIR AN	D LINT STRA	INER	WITH (CAM AN	D RAMP LID, BASKET	AND HARDWARE			
340013	EQ 6X6 Strain	ner					NSF ⁴	6 in. x 6 in.		33	J
			EQ SERIES	PUM	P ACC	ESSORI	ES FLANGE ASSEMB	LY KITS			
357262	Flange 4 in. w	/ gasket and S	S hardware ¹	(See i	mages	on next	page)			20	
357263	Flange 6 in. w	/ gasket and S	S hardware 1	(See i	mages	on next	page)			23	
357212	Flange 6 in. w	/ gasket and S	S hardware. Fo	or use	on EQ	Pumps	without Strainer.			23	

See page 249 for an assortment of PS Series In-Line Strainers that work well with EQ Series pumps.

- ¹ Thermoplastic PVC socket style.
- ² '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.
- 3 '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.
- 4 'NSF' indicates that product bears a mark signifying evaluation to NSF Standard 50 For Materials and Components.
- ⁵ '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).
- ⁶ 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.
- 7 '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).
- 8 '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.

COMMERCIAL PLASTIC PUMP WITH AND WITHOUT HAIR AND LINT STRAINER (CONT'D)

Dimensions and Performance

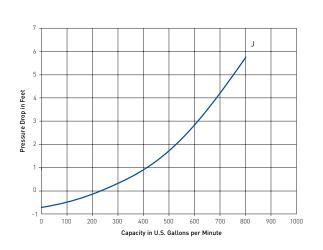
Single Phase Pumps - EQ Models

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BEST EFFICIENCY SIZING

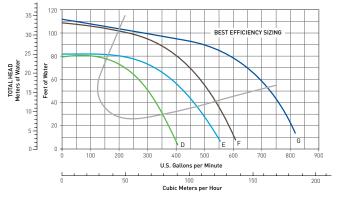
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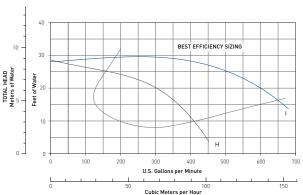
EQ Strainer Only



Three Phase Pumps - EQK Models

WaterFall Pumps - EQW & EQWK Models





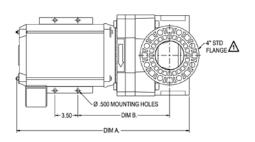
For detailed efficiency curves go to www.pentair.com

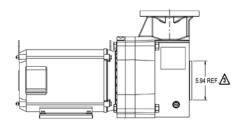
COMMERCIAL PLASTIC PUMP WITH AND WITHOUT HAIR AND LINT STRAINER

(CONT'D)

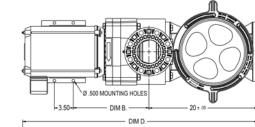
Dimensions and Performance

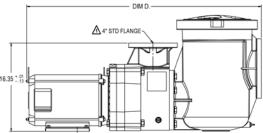
EQ Series Commercial Pump without Strainer

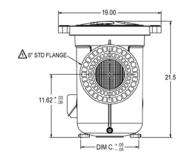




EQ Series Commercial Pump with Strainer

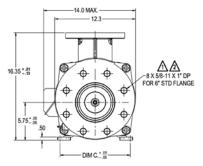






EQ Series Pump Flange Assembly Kit





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.

A THIS DIAMETER FITS INSIDE 6 in. SCH 40 PIPE. DO NOT USE SCH 80 PIPE AS FINAL PIPE SIZE WHEN MAKING THIS FLANGE CONNECTION.

COMMERCIAL BRONZE PUMPS



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

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
- For 200-208v applications order 200-208v model pump

Ordering Information

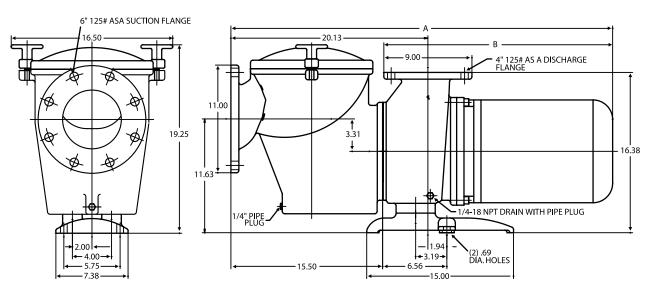
Product	Description	Voltage	Amps	НР	SF	SFHP	Primary Listings and Certifications ²	Motor Class	Port Size (ANSI Flange)	Carton Wt. (Lbs.)	Curve Key
			NEMA F	RATED S	STANDA	ARD EFF	ICIENCY SINGLE PHA	SE 230V	,		
▶011651	CM-50	230	24.0	5	1.15	5.75	NSF ¹	В	6 in. x 4 in.	352	F
▶ 011656	CH-50	230	24.0	5	1.15	5.75	NSF 1	В	6 in. x 4 in.	352	Α
▶347917	CM-75	230	37.0	7-1/2	1.15	8.63	NSF 1	В	6 in. x 4 in.	375	G
▶347916	CH-75	230	37.0	7-1/2	1.15	8.63	NSF 1	В	6 in. x 4 in.	375	В
347964	CM-100	230	51.0	10	1.15	11.50	NSF 1	В	6 in. x 4 in.	370	Н
▶347963	CH-100	230	51.0	10	1.15	11.50	NSF 1	В	6 in. x 4 in.	370	С
			NEMA RAT	ED STA	NDARI	D EFFIC	IENCY SINGLE PHASE	200 - 20	V8V		
▶347938	CM-50	200-208	29.0	5	1.15	5.75	NSF ¹	В	6 in. x 4 in.	322	F
▶348001	CM-75	200-208	42.6	7-1/2	1.15	8.63	NSF ¹	В	6 in. x 4 in.	375	G
NEMA RATED STANDARD EFFICIENCY THREE PHASE 200 - 208V											
▶347940	CMK-50	200-208	16.1	5	1.15	5.75	NSF ¹	В	6 in. x 4 in.	346	F
▶ 347941	CHK-50	200-208	16.1	5	1.15	5.75	NSF 1	В	6 in. x 4 in.	350	Α
▶347942	CMK-75	200-208	22.3	7-1/2	1.15	8.63	NSF 1	В	6 in. x 4 in.	346	G
▶347943	CHK-75	200-208	22.3	7-1/2	1.15	8.63	NSF 1	В	6 in. x 4 in.	346	В
▶347944	CMK-100	200-208	28.7	10	1.15	11.50	NSF 1	В	6 in. x 4 in.	370	Н
▶ 347945	CHK-100	200-208	28.7	10	1.15	11.50	NSF 1	В	6 in. x 4 in.	356	С
▶347948	CHK-200	200-208	54.0	20	1.15	23.00	NSF 1	F	6 in. x 4 in.	406	Е
			NEMA RA	TED ST	ANDAF	RD EFFIC	CIENCY THREE PHASE	220/440	V		
▶011657	CHK-50	220/440	13.0/6.5	5	1.15	5.75	NSF 1	F	6 in. x 4 in.	336	Α
▶011658	CHK-75	220/440	18.4/9.2	7-1/2	1.15	8.63	NSF ¹	F	6 in. x 4 in.	349	В
▶011659	CHK-100	220/440	25.3/12.6	10	1.15	11.50	NSF 1	В	6 in. x 4 in.	376	С
▶011660	CHK-150	220/440	37.5/18.8	15	1.15	17.25	NSF 1	В	6 in. x 4 in.	398	D
▶011661	CHK-200	220/440	49.0/24.6	20	1.15	23.00	NSF 1	F	6 in. x 4 in.	403	E

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

Product	Description	Voltage	Amps	НР	SF	SFHP	Primary Listings and Certifications ²	Motor Class	Port Size (ANSI Flange)	Carton Wt. (Lbs.)	Curve Key
	NEMA RATED STANDARD EFFICIENCY THREE PHASE 575V										
▶347967	CHK-50	575	5.6	5	1.15	5.75	NSF 1	F	6 in. x 4 in.	336	Α
▶347935	CHK-200	575	19.5	20	1.15	23.00	NSF 1	F	6 in. x 4 in.	406	Е
	NEMA RATED STANDARD EFFICIENCY THREE PHASE 380-415V- 50 HZ										
▶014884	CHKL-200	380-415	28.0-26.0	20	1.15	23.00	NSF 1	F	6 in. x 4 in.	403	

^{1 &}quot;NSF" indicates that pump has bee certified to NSF/ANSI 50, the Standard for Equipment for swimming pools, spas, hot tubs and other recreational water features.

Dimensions and Performance



PUN	PUMP DIMENSIONS								
THREE-PHASE AMPS @ 220/440 & 380/415 V									
HP	AMPS	Α	В						
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	Α	В					
	5	26	35.50	20.50					
ı	7.5	37	35.88	20.50					

	PUMP DIMENSIONS								
	SINGLE-PHASE AMPS @ 200 VOLTS								
1	HP	AMPS	Α	В					
	5	29	35.50	20.50					
1	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 \pm .25.

² 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.

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



C Series Commercial Bronze Pump without Hair and Lint Strainer

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
- •For 200-208v applications order 200-208v model pump

Ordering Information

▲ 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.

Product	Description	Voltage	Amps	HP	SF	SFHP	Primary Listings and Certifications ³	Motor Class	Port Size (ANSI Flange)	Carton Wt. (Lbs.)	Curve Key
			NEMA RA	TED ST	ANDA	RD EFFI	CIENCY SINGLE PHASE	200-208	V		
▶347950	CH-50	200-208	29.0	5	1.15	5.75	NSF ²	В	5 in. x 4 in.	302	Α
▶347961	CM-75	200-208	42.6	7-1/2	1.15	8.63	NSF ²	В	5 in. x 4 in.	315	G
		С	SERIES &	AUROF	RA PUI	MP ACC	ESSORIES FLANGE ASS	EMBLY K	ITS		
357260	Flange 5 in. w/	gasket and S	SS hardwar	e 1 for p	ump le	ss straine	er			22	
357262	Flange 4 in. w/	gasket and S	SS hardwar	е ¹						20	
357263	Flange 6 in. w/	gasket and S	SS hardwar	е ¹						23	

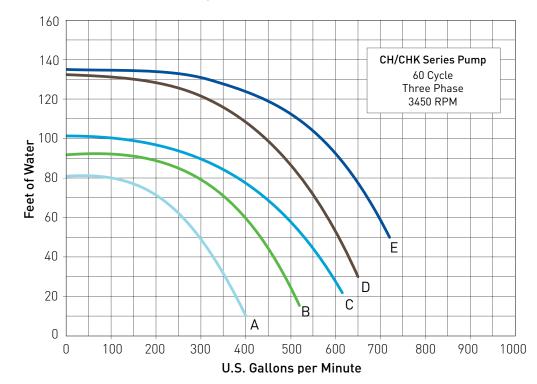
¹ Thermoplastic PVC socket style

² '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.

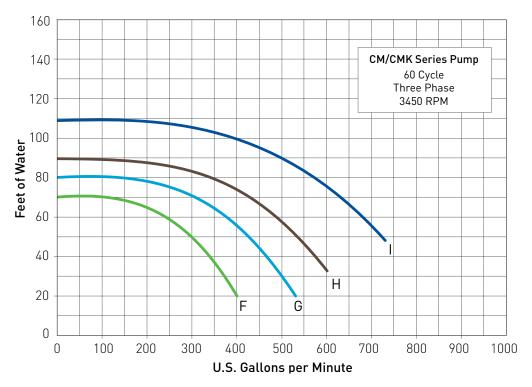
³ Product may have been evaluated to other state and local regulatory standards. Listing status may change. Always confirm status with appropriate agency if in doubt.

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





CM/CMK SERIES PUMP - 60HZ



For detailed efficiency curves go to www.pentair.com

CSP/CCSP SERIES™

COMMERCIAL SELF-PRIMING PUMP

CSP/CCSP Series Commercial Self-Priming Pump with PKG 184 Strainer (sold 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. 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

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▲ ADVERTENCIA: Cáncer y Daño Reproductivo.

www.p65warnings.ca.gov.

Ordering Information

Product	Voltage	Amps 1	HP	SF	SFHP	Primary Listings and Certifications 4	Port Size (ANSI Flange)	Carton Wt. (Lbs.)	Curve Key
		NEMA RATED	STAND	ARD EF	FICIENCY	SINGLE PHASE CAST	IRON		
CSPHK-142	230	39	7.5	1.15	8.63	NSF ²	6 in. x 4 in.	270	Α
CSPHL-143	230	46	10	1.15	11.50	NSF ²	6 in. x 4 in.	275	В
	NEM	IA RATED STANDA	RD EF	FICIENC'	Y SINGLE	PHASE EPOXY COATE	D CAST IRON		
CCSPHK-142	230	39	7.5	1.15	8.63	NSF ²	6 in. x 4 in.	270	E
CCSPHL-143	230	46	10	1.15	11.50	NSF ²	6 in. x 4 in.	275	F
		NEMA RATE	STANE	ARD EF	FICIENC	THREE PHASE CAST	RON		
▶ CSPHK3-142	230/460	21.2-19.2/9.6	7-1/2	1.25	9.38	NSF ²	6 in. x 4 in.	265	Α
CSPHL3-143	230/460	27.6-24.4/12.2	10	1.25	12.50	NSF ²	6 in. x 4 in.	270	В
▶ CSPHM3-144	230/460	44.2-40/20	15	1.25	18.75	NSF ²	6 in. x 4 in.	280	С
CSPHN3-145	230/460	55.3-50/25	20	1.25	25.00	NSF ²	6 in. x 4 in.	325	D
		NEMA RATED STA	ANDARI	D EFFICI	ENCY TH	REE PHASE CAST IRON	N - 200V ⁶		
▶ CSPH2K3-142	200	22.1	7-1/2	1.15	8.63	NSF ²	6 in. x 4 in.	265	Α
CSPH2L3-143	200	28.1	10	1.25	12.50	NSF ²	6 in. x 4 in.	270	В
▶ CSPH2M3-144	200	42.3	15	1.25	18.75	NSF ²	6 in. x 4 in.	280	С
CSPH2N3-145	200	57.3	20	1.25	25.00	NSF ²	6 in. x 4 in.	350	D
	NEM	MA RATED STAND	ARD EF	FICIENC	Y THREE	PHASE EPOXY COATE	D CAST IRON		
CCSPHK3-142	230/460	21.2-19.2/9.6	7-1/2	1.25	9.38	NSF ²	6 in. x 4 in.	265	E
CCSPHL3-143	230/460	27.6-24.4/12.2	10	1.25	12.50	NSF ²	6 in. x 4 in.	270	F
CCSPHM3-144	230/460	44.2-40/20	15	1.25	18.75	NSF ²	6 in. x 4 in.	280	G
CCSPHN3-145	230/460	55.3-50/25	20	1.25	25.00	NSF ²	6 in. x 4 in.	325	Н
	NEMA R	ATED STANDARD	EFFICIE	ENCY TH	IREE PHA	SE EPOXY COATED CA	AST IRON - 200 V 6		
▶ CCSPH2K3-142	200	22.1	7-1/2	1.15	8.63	NSF ²	6 in. x 4 in.	265	Е
CCSPH2L3-143	200	28.1	10	1.25	12.50	NSF ²	6 in. x 4 in.	270	F
CCSPH2M3-144	200	42.3	15	1.25	18.75	NSF ²	6 in. x 4 in.	280	G
▶ CCSPH2N3-145	200	57.3	20	1.25	25.00	NSF ²	6 in. x 4 in.	350	Н
			ACCES	SORIES	FOR CSP	CCSP SERIES			
PKG 184	Strainer for CS capacity)	SP/CCSP 6 in. ANSI	flange (1	I,100 cu. i	n.	NSF ³	6 in. x 6 in.	180	1
PKG 184C	Same as PKG	184 Except Strainer	is Epox	y Coated		NSF ³	6 in. x 6 in.	180	I
357262	Flange 4 in. w/	gasket and SS hard	lware 5					20	
357263	Flange 6 in. w/	gasket and SS hard	lware 5					23	

¹ Amp draw may vary depending on motor manufacturer.

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

^{3 &#}x27;NSF(2)' indicates that product bears a mark signifying evaluation to NSF Standard 50 For Materials and Components.

⁴ 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.

⁵ Thermoplastic PVC socket style.

 $^{^{\}rm 6}~$ For 208 volt applications, use 200v model options.

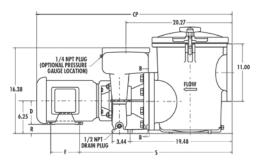
CSP/CCSP SERIES™

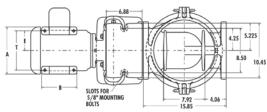
COMMERCIAL SELF-PRIMING PUMP (CONT'D)

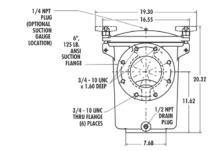
Featured Highlights

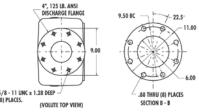
Options: CCSP Models feature special epoxy coated castings for maximum performance and corrosion resistance. 60 Hz T.E.F.C., 60 Hz premium efficiency, or 575 volt motors available. Inverter duty rated class F motors available for most models. Contact factory for details.

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.

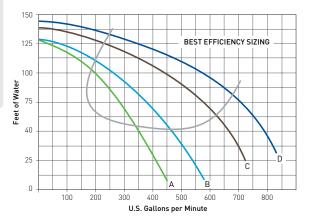


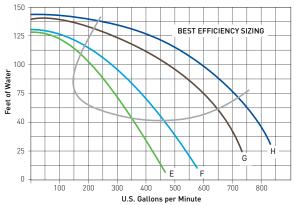


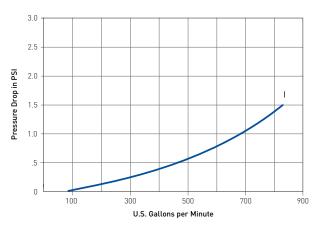




Dimensions and Performance







Catalog Number	Α	В	СР	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 Pot (sold separately)

CALIFORNIA PROPOSITION 65 WARNING

▲ WARNING: Cancer and Reproductive Harm.

▲ AVERTISSEMENT: Peut Causer le Cancer et des Dommages au Système Reproducteut.

▲ ADVERTENCIA: Cáncer y Daño Reproductivo.

www.p65warnings.ca.gov.

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 1	HP	SF	SFHP	Primary Listings and Certifications ³	Port Size (ANSI Flange)	Carton Wt. (Lbs.)	Curve Key
		SINGLE I	PHASE	CAST IR	ON WITH	HOUT STRAINER- 50 HZ			
▶5CSPHJ-142	220-240	35.5-32.5	5	1.00	5		6 in. x 4 in.	270	Α
▶5CSPHK-143	220-240	43.0-39.4	7-1/2	1.00	7-1/2		6 in. x 4 in.	280	В
		THREE F	PHASE	CAST IR	ON WITH	HOUT STRAINER- 50 HZ			
▶5CSPHJ3-142	220-240/380-415	13.0/6.9	5	1.00	5		6 in. x 4 in.	260	Α
▶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	В
▶5CSPHL3-144	220-240/380-415	27.0-27.5/15.6- 15.9	10	1.00	10		6 in. x 4 in.	280	С
▶ 5CSPHM3-145	220-240/380-415	38.9-20.6	15	1.00	15		6 in. x 4 in.	300	D
		THREE PHASE E	POXY	COATED	CAST IR	ON WITHOUT STRAINER	R - 50 HZ		
▶5CCSPHJ3-142	220-240/380-415	13.0/6.9	5	1.00	5		6 in. x 4 in.	260	Α
▶5CCSPHK3-143	220-240/380-415	20.7-11.0	7-1/2	1.00	7-1/2		6 in. x 4 in.	270	В
▶5CCSPHL3-144	220-240/380-415	26.9-14.3	10	1.00	10		6 in. x 4 in.	280	С
▶ 5CCSPHM3-145	220-240/380-415	38.9-20.6	15	1.00	15		6 in. x 4 in.	300	D
		A	CCESS	ORIES F	OR 5CSI	P/5CCSP SERIES			
PKG 184	Strainer for CSP capacity)	P/CCSP 6 in. ANSI	flange (1,100 cu. i	n.	NSF ⁴	6 in. x 6 in.	180	1
PKG 184C	Same as PKG 1	84 Except Strainer	is Epox	y Coated		NSF ⁴	6 in. x 6 in.	180	1
357262	Flange 4 in. w/ g	asket and SS hard	ware ²					20	
357263	Flange 6 in. w/ g	asket and SS hard	ware 2					23	

¹ Amp draw may vary depending on motor manufacturer. Full load amps on motor model plate.

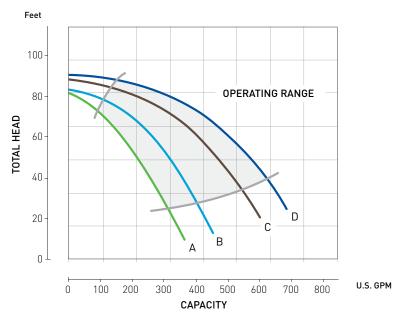
² Thermoplastic PVC socket style.

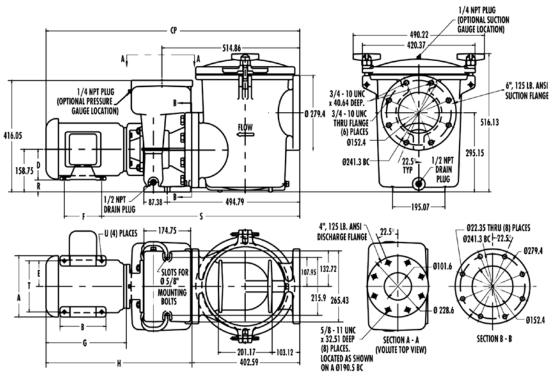
³ Product may have been evaluated to other state and local regulatory standards. Listing status may change. Always confirm status with appropriate agency if in doubt.

^{4 &#}x27;NSF(2)' indicates that product bears a mark signifying evaluation to NSF Standard 50 For Materials and Components.

5CSP/5CCSP SERIES™

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





Catalog Number	Α	В	СР	D	E	F	R	S	Т
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

AURORA® 3800 SERIES AND 410 SERIES

END SUCTION AND SPLIT CASE PUMPS



Featured Highlights

- · Multiple configurations available
- · Models to 100 ft. TDH
- Compatible with Acu Drive[™] XS VF Drive
- · Cast Iron Stainless Steel 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
			CTION W/ EPOXY NS, 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
			CTION W/ EPOXY NS, 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

Product Description Carton Wt. (Lbs.)

Please contact our factory (1-800-831-7133) for applications sizing, pricing, and availability.

	AURORA PUMP ACCESSORIES FLANGE ASSEMBLY KITS	
357259	Flange 2-1/2 in. w/ gasket and SS hardware 1	16
357260	Flange 5 in. w/ gasket and SS hardware 1	22
357261	Flange 3 in. w/ gasket and SS hardware 1	18
357262	Flange 4 in. w/ gasket and SS hardware 1	20
357263	Flange 6 in. w/ gasket and SS hardware 1	23

¹ Thermoplastic PVC socket style.

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.

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 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.

• Berkeley pumps are not NSF approved.



Berkeley B-Series

CALIFORNIA PROPOSITION 65 WARNING

Ordering Information CALL FOR OUOTE

Product	General Pump Design Model	HP	Best Operating Performance G.P.M.	Connection at X ft. of Head	RPM	Flange (inches)
			BERKELEY B-SERIES PUMPS			
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.

D-SERIES™

CAST IRON SELF-PRIMING CENTRIFUGAL COMMERCIAL PUMP





D Series Cast Iron Self-Priming Centrifugal Commercial Pump

CALIFORNIA PROPOSITION 65 WARNING

Featured Highlights

- Especially designed for commercial 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.

Ordering Information

Product	Voltage	Amps ¹	НР	Primary Listings and Certifications ³	Port Size (NPT)	Carton Wt. (Lbs.)	Curve Key
		STANI	DARD EFFICIEN	NCY THREE PHASE HIGH F	HEAD		
DHH3-169	230/460	8.6/4.3	3	NSF ²	1-1/2 in.	135	Α
▶ DMH3-171	230/460	8.6/4.3	3	NSF ²	2 in.	135	С
		STANDA	ARD EFFICIENC	CY THREE PHASE MEDIUM	HEAD		
DHJ3-170	230/460	13.2/6.6	5	NSF ²	2 in.	178	В
▶ DMJ3-172	230/460	13.2/6.6	5	NSF ²	2-1/2 in.	178	D

^{* 200} Volt models available. Contact factory for details.

See pages 236 for Hair and Lint Strainer Packages.

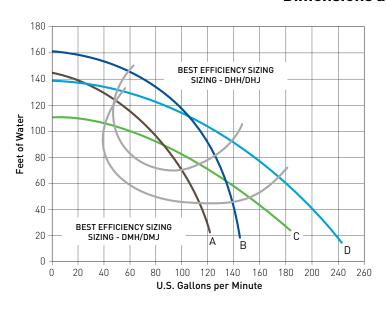
¹ Dimensions and Max Load Amps may vary per motor manufacturer.

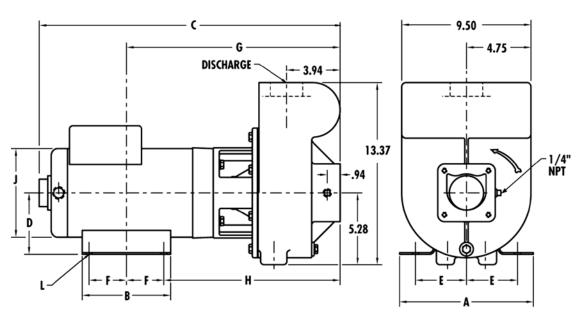
^{2 &#}x27;NSF(1)' indicates that pump bears a mark signifying evaluation to NSF Standard 50 For Self-Priming Centrifugal Pumps For Swimming Pools, Spas and Hot Tubs when installed with a NSF certified Hair and Lint Strainer.

³ 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.

D-SERIES™

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





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

Catalog Number	НР	Discharge (NPT)	А	В	C*	D	E	F	G	Н	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-170	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° 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, condominum) 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

Ordering Information

Product	THP	WEF	ННР	Service Factor	Voltage	Frequency	Current	Port Size	Weight	Certifications ³		
WHISPERFLOXF VARIABLE SPEED												
022025	F 0	F 0	2.09	1.00	Single-Phase: 208-230/277-460	E0/60	Single-Phase: 20-21/17-11	2.5" x 2.5"	0.5	LII 1 NOE2		
022035	5.0 5.0	2.09	1.00	Three-Phase: 208-460	50/60	Three-Phase: 13-6	or 3" x 3"	95	UL ¹ , NSF ²			
	ACCESSORIES											
356324Z	RS-485	RS-485 Automation Wiring Kit, 25 ft.										
400012	XF Riser	F Riser Base - Simplies installation of XF-series pumps in application where Challenger Pumps are being replaced.										

*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 356324Z sold separately) is required.

- ¹ '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).
- 2 '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.
- ³ 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.

CALIFORNIA PROPOSITION 65 WARNING

▲ WARNING: Cancer and Reproductive Harm.

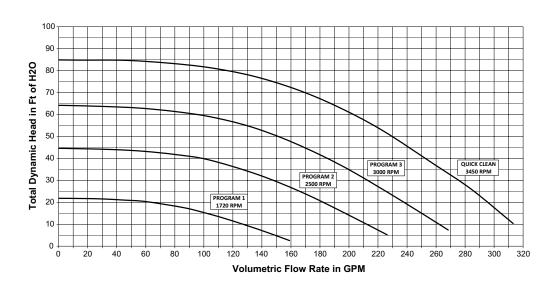
▲ AVERTISSEMENT: Peut Causer le Cancer et des Dommages au Système Reproducteur.

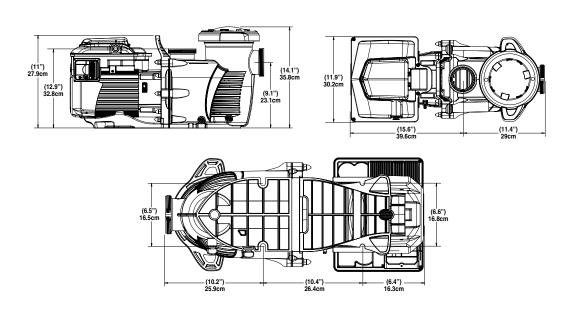
▲ ADVERTENCIA: Cáncer y Daño Reproductivo.

www.p65warnings.ca.gov.

WHISPERFLOXF VS

COMMERCIAL VARIABLE SPEED PUMP (CONT'D)





WHISPERFLOXF° HIGH PERFORMANCE PUMPS

TRADEGRADE



WhisperFloXF Pump shown with TEFC Motor

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.

Featured Highlights

- Drop-in replacement for all WhisperFlo® Pump models.
 Simple replacement for Challenger® Pumps.*
- 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

Ordering Information

	•											
Product	Rated HP	ТНР	WEF	ННР	Service Factor	Voltage	Frequency	Current	Port Size	Weight	Certifications ³	Curve Key
						COMMER	CIAL SINGLE	-SPEED TEFC				
022034	5	5	N/A	N/A	1.00	208-230	60	20.0-18.8	2.5" x 2.5" or 3" x 3"	67	UL ¹ , NSF ²	С
					TEF	C SINGLE-SP	EED—NOT F	OR SALE IN TH	HE USA			
022032-INT	2	2.60	N/A	N/A	1.30	208-230	60	11.1-9.5	2.5" x 2.5" or 3" x 3"	57	UL ¹ , NSF ²	В
022033-INT	3	3.45	N/A	N/A	1.15	208-230	60	14.6-12.7	2.5" x 2.5" or 3" x 3"	61	UL ¹ , NSF ²	Α
						THRE	E-PHASE SU	PER-DUTY				
022017	2	2.6	N/A	N/A	1.30	208-230/460	60	7.5-7.2/3.6	2.5" x 2.5" or 3" x 3"	60	UL ¹ , NSF ²	- 1
022018	3	3.25	N/A	N/A	1.15	208-230/460	60	9.8-9.4/4.7	2.5" x 2.5" or 3" x 3"	60	UL ¹ , NSF ²	Н
022019	5	5.00	N/A	N/A	1.00	208-230/460	60	13.9-13.1/6.6	2.5" x 2.5" or 3" x 3"	72	UL ¹ , NSF ²	G
							ACCESSOR	IES				
400012	XF Rise	r Rase	- Simi	nlifies ir	nstallation	of XF-series nun	nns in annlicatio	ons where Challer	nger numns are heing ren	laced		

¹ '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).

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.

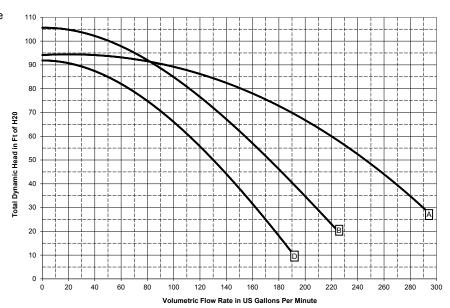
^{2 &#}x27;NSF' indicates that pump bears a mark signifying evaluation to NSF Standard 50 For Self-Priming Centrifugal Pumps For Swimming Pools, Spas and Hot Tubs.

³ 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.

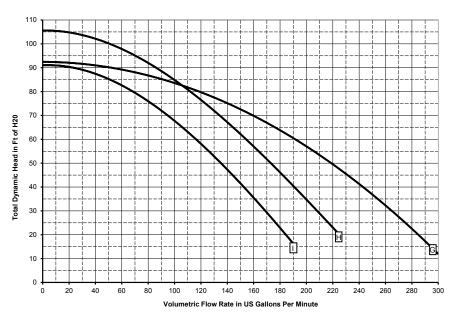
WHISPERFLOXF°

HIGH PERFORMANCE PUMPS (CONT'D)

1 & 2-Speed Performance Curve



3 Phase Performance Curve



B-VARYING LENGTH

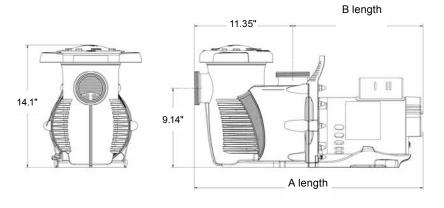
HP TEFC 3-PH

2 13.05 12.35

3 13.65 13.05

5 14.55 13.88

A-VARY	/ING LENGTH							
HP	HP TEFC							
2	24.4	23.7						
3	25	24.4						
5	25.9	25.23						



INTELLIFLOXF° VSF

VARIABLE SPEED AND FLOW PUMP

TRADEGRADE







IntelliFloXF VSF Variable Speed and Flow Pump

Patent Information: www.pentair.com/patents

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
- · Maintains system flow requirements
- · Compatible with Pentair Automation

The IntelliFlo VSF pump family 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 to power waterfalls, slides, negative edges and more.

Ordering Information

Product	Description	ТНР	WEF	ННР	Service Factor	Voltage	Frequency	Current	Port Size (NPT)	Weight	Certifications ³		
	INTELLIFLOXF VSF ENERGY EFFICIENT VARIABLE SPEED AND FLOW PUMP												
022056	IntelliFloXF VSF	elliFloXF VSF 3.95 5.6 2.10 1.0 230 50/60 16.0 2.5" x 2.5" 60 UL¹, NSF²											
	ACCESSORIES												
400012	XF Riser Base - Sin	nplifies ir	stallation	of XF-se	ries pumps	in application	ons where Cha	llenger pum	ps are being rep	laced.			
521109	IntelliCom 2 - Rate	ed 9 - 30	V DC wit	h 4 inputs	5						1		
350122	Communication C	able - 50	ft Inclu	ided with	pump						2		
356904Z	Keypad Relocation	n Kit									2		

- ¹ '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).
- 2 'NSF' indicates that pump bears a mark signifying evaluation to NSF Standard 50 For Self-Priming Centrifugal Pumps For Swimming Pools Only.
- ³ 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 15 for a selection of 2-Pole GFCI breakers which offer 6 milliamp personnel protection while meeting 2008 to current NEC Standards for Pool Pumps.

CALIFORNIA PROPOSITION 65 WARNING

▲ WARNING: Cancer and Reproductive Harm.

▲ AVERTISSEMENT: Peut Causer le Cancer et des Dommages au Système Reproducteur.

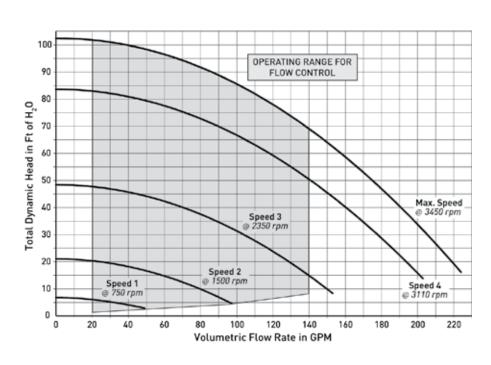
▲ ADVERTENCIA: Cáncer y Daño Reproductivo.

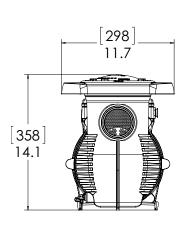
www.p65warnings.ca.gov.

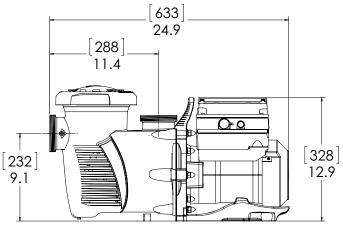
**Page 124

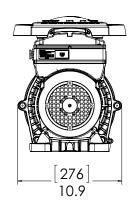
INTELLIFLOXF° VSF

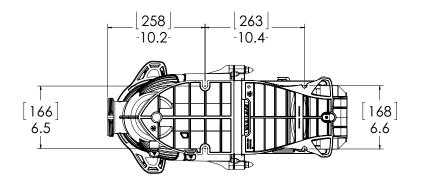
VARIABLE SPEED AND FLOW PUMP (CONT'D)











INTELLIFLO® VS+SVRS

HIGH PERFORMANCE PUMPS





IntelliFlo VS+SVRS High Performance Pump

Patent Information: www.pentair.com/patents

IntelliFlo pumps combine variable speed technology, onboard digitial 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 helps 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 suitable operation for a longer 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.

Ordering Information

Product	Description	THP	WEF	ННР	Service Factor	Voltage	Frequency	Current	Port Size	Weight	Certifications ³		
	E	NERGY	EFFICIE	ENT VARI	ABLE SPE	ED WITH S	SAFETY VACU	JUM RELEA	SE SYSTEM				
011057	IntelliFlo VS+SVRS	3.95	6.9	1.88	1.0	230	50/60	16.0	2" x 2"	53	UL ¹ , NSF ²		
		ACCESSORIES											
521109	IntelliCom 2 - Rate	telliCom 2 - Rated 9 - 30 V DC with 4 inputs									1		
350122	Communication Ca	able - 50	ft Incl	uded with	pump						2		
350250Z	SVRS KIT - Allows	use of c	lischarge	e check va	alves with S	VRS pump					1		
356198	Chemical/Salt/Ozd	ne Resi	stant EP	DM & SS	Seal Quick	Kit					1		
						UNIONS							
11201-0154	2 in. x 2 in. Union (2 in. NP	T male x	2 in. fema	ale NPT qui	ck connect)	* Note: two r	equired per p	ump (sold indivi	dually)	2		

- ¹ '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).
- 2 'NSF' indicates that pump bears a mark signifying evaluation to NSF Standard 50 For Self-Priming Centrifugal Pumps For Swimming Pools Only.
- ³ 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 15 for a selection of 2-Pole GFCI breakers which offer 6 milliamp personnel protection while meeting 2008 to Current NEC Standards for Pool Pumps.

CALIFORNIA PROPOSITION 65 WARNING

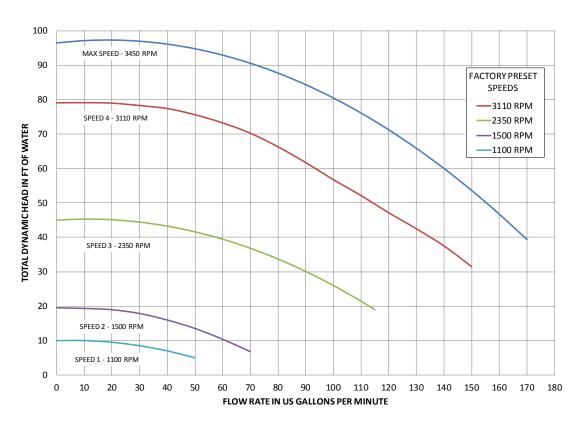
▲ WARNING: Cancer and Reproductive Harm.
▲ AVERTISSEMENT: Peut Causer le Cancer et des Dommages au Système Reproducteur.
▲ ADVERTENCIA: Cáncer y Daño Reproductivo.

www.p65warnings.ca.gov.

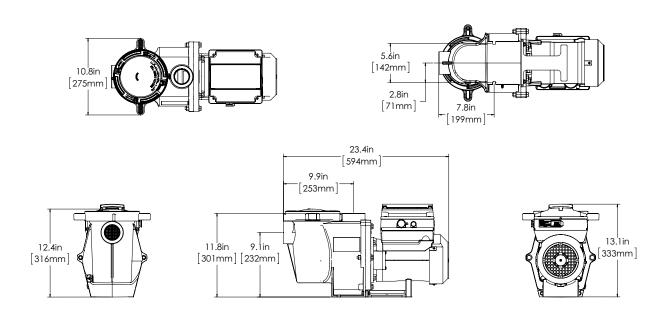
INTELLIFLO® VS+SVRS

HIGH PERFORMANCE PUMPS (CONT'D)

Dimensions and Performance



Note: IntelliFlo VS+SVRS minimum speed is 1100 RPM



WHISPERFLO®

HIGH PERFORMANCE PUMPS

TRADEGRADE





WhisperFlo Pump shown with TEFC Motor

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



Ordering Information

Product	Rated HP	ТНР	WEF	ННР	Service Factor	Voltage	Frequency	Current	Port Size	Weight	Certifications ³	Curve Key
						DOE COMPLIA	ANT SINGLE-	SPEED TEFC				
015583	N/A	1.1	3.4	0.69	1.00	115/208-230	60	10.5/5.4-5.4	2" x 2"	50	UL ¹ , NSF ²	E
				EN	ERGY EFF	ICIENT SINGL	E-SPEED - N	OT FOR SALE IN	N THE USA			
011511-INT	1/2	0.95	N/A	N/A	1.00	115/208-230	60	8.8/4.5-4.4	2" x 2"	44	UL ¹ , NSF ²	Е
011512-INT	3/4	1.25	N/A	N/A	1.00	115/208-230	60	12.8/7.0-6.4	2" x 2"	44	UL ¹ , NSF ²	F
					TEFC	SINGLE-SPEE	D - NOT FOR	SALE IN THE U	ISA			
011527-INT	1	1.65	N/A	N/A	1.00	115/208-230	60	15.1/8.5-7.7	2" x 2"	50	UL ¹ , NSF ²	G
011528-INT	1 1/2	2.21	N/A	N/A	1.00	208-230	60	10.3-9.1	2" x 2"	53	UL ¹ , NSF ²	Н
011529-INT	2	2.60	N/A	N/A	1.00	208-230	60	11.7-10.3	2" x 2"	58	UL ¹ , NSF ²	1
011530-INT	3	3.45	N/A	N/A	1.00	208-230	60	14.6-12.7	2" x 2"	62	UL ¹ , NSF ²	J
				ENER	GY EFFICII	ENT 50 HZ SIN	IGLE-SPEED	- NOT FOR SAL	E IN THE USA			
347926-INT	1/2	0.55	N/A	N/A	1.10	240/120	50	7.5/15.0	2" x 2"	45	_	_
347927-INT	3/4	0.83	N/A	N/A	1.10	240/120	50	7.5/15.0	2" x 2"	45	_	_
347928-INT	1	1.10	N/A	N/A	1.10	240/120	50	6.9/13.8	2" x 2"	52	_	_
347929-INT	1 1/2	1.65	N/A	N/A	1.10	240	50	7.2	2" x 2"	52	_	_
347930-INT	2	2.20	N/A	N/A	1.10	240	50	9.4	2" x 2"	55	_	_
						THREE-F	PHASE SUPE	R-DUTY				
011641	1	1.65	2.9	1.10	1.65	208-230/460	60	4.9-4.5/2.3	2" x 2"	41	UL ¹ , NSF ²	G
011642	1.5	2.21	2.6	1.44	1.47	208-230/460	60	6.4-6.3/3.2	2" x 2"	43	UL ¹ , NSF ²	Н
011643	2	2.60	2.5	1.61	1.30	208-230/460	60	7.5-7.2/3.6	2" x 2"	47	UL ¹ , NSF ²	I
011644	3	3.45	2.1	2.02	1.15	208-230/460	60	9.8-9.4/4.7	2" x 2"	52	UL ¹ , NSF ²	J
						A	CCESSORIES	3				

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

¹ 'UL' indicates that pump bears a UL mark signifying evaluation to U.S. Standards UL1081 for Permanently Connected Swimming Pool and Spa

Chemical/Salt/Ozone/Resistant EPDM & SS Seal Quick Kit

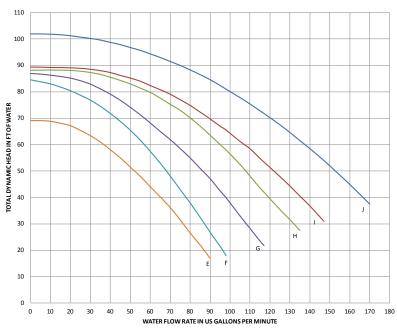
Standards UL1081 for Permanently Connected Swimming Pool and Spa Pumps and to Canadian Standards CAN/CSA C22.2 No. 108-01 Liquid Pumps For Swimming Pools Only (Enclosure 3).

² '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.

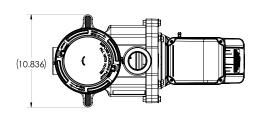
³ Product may have been evaluated to other state and local regulatory standards. Listing status may change. Always confirm status with appropriate agency if in doubt.

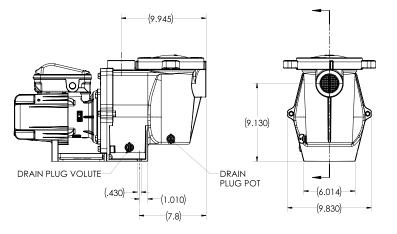
WHISPERFLO®

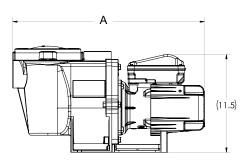
HIGH PERFORMANCE PUMPS (CONT'D)



	A-	VARYING	LENGTH	
HP	EE	TEFC	DOE Compliant	3-PH
0.5	24.41	_	_	-
0.75	24.41	_	_	_
1	_	21.71	_	21.5
1.1	_	ı	22.5	_
1.5	_	22.16	_	21.5
2	_	22.51	_	21.81
3	_	23.21	_	22.61







MAX-E-PROXF° VS

COMMERCIAL VARIABLE SPEED PUMP



TRADEGRADE



Max-E-ProXF 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, condominum) 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

Ordering Information

Product	THP	WEF	ННР	Service Factor	Voltage	Frequency	Current	Port Size	Weight	Certifications ³			
	WHISPERFLOXF VARIABLE SPEED												
023035	5.0	5.0	2.09	1.00	Single-Phase: 208-230/277-460 Three-Phase: 208-460	50/60	Single-Phase: 20-21/17-11 Three-Phase: 13-6	2.5" x 2.5" or 3" x 3"	95	UL¹, NSF²			
					ACCE	SSORIES							
356324Z	RS-485	Automati	on Wiring	Kit, 25 ft.									
400012	XF Riser	Base - S	implies in	nstallation of	f XF-series pumps in a	application whe	ere Challenger Pum	ps are being rep	laced.				

*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 356324Z sold separately) is required.

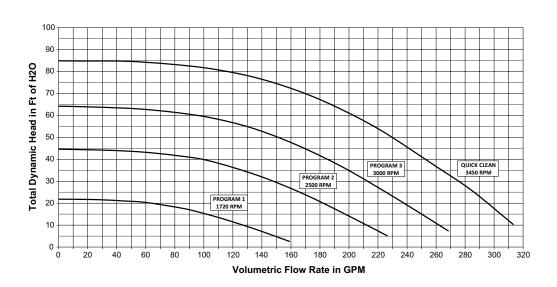
- 1 'UL' indicates that pump bears a UL mark signifying evaluation to U.S. Standards UL1081 for Permanently Connected Swimming Pool and Spa Pumps and to Canadian Standards CAN/CSA C22.2 No. 108-01 Liquid Pumps For Swimming Pools Only (Enclosure 3).
- 2 'NSF' indicates that pump bears a mark signifying evaluation to NSF Standard 50 For Self-Priming Centrifugal Pumps For Swimming Pools, Spas and Hot Tubs.
- 3 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.

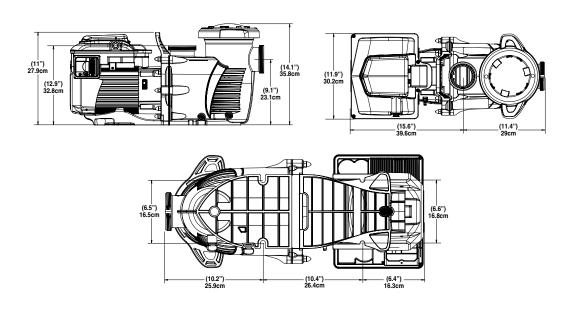
CALIFORNIA PROPOSITION 65 WARNING

▲ 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.

MAX-E-PROXF° VS

COMMERCIAL VARIABLE SPEED PUMP (CONT'D)





MAX-E-PROXF

HIGH PERFORMANCE PUMPS



TRADEGRADE



Max-E-ProXF Pump shown with TEFC Motor

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® Pump models.
 Simple replacement for Challenger® 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

Ordering Information

Product	Rated HP	ТНР	WEF	ННР	Service Factor	Voltage	Frequency	Current	Port Size	Weight	Certifications ³	Curve Key
						COMMERCIA	AL SINGLE-S	PEED TEFC				
023034	5	5	N/A	N/A	1.00	208-230	60	20.0-18.8	2.5" x 2.5" or 3" x 3"	67	UL ¹ , NSF ²	С
					TEFC	SINGLE-SPEE	D - NOT FOR	R SALE IN THE	EUSA			
023032-INT	2	2.60	N/A	N/A	1.30	208-230	60	11.1-9.5	2.5" x 2.5" or 3" x 3"	57	UL ¹ , NSF ²	В
023033-INT	3	3.45	N/A	N/A	1.15	208-230	60	14.6-12.7	2.5" x 2.5" or 3" x 3"	61	UL ¹ , NSF ²	Α
						THREE-F	PHASE SUPE	R-DUTY				
023017	2	2.6	N/A	N/A	1.30	208-230/460	60	7.5-7.2/3.6	2.5" x 2.5" or 3" x 3"	60	UL ¹ , NSF ²	ı
023018	3	3.25	N/A	N/A	1.15	208-230/460	60	9.8-9.4/4.7	2.5" x 2.5" or 3" x 3"	60	UL ¹ , NSF ²	Н
023019	5	5.00	N/A	N/A	1.00	208-230/460	60	13.9-13.1/6.6	2.5" x 2.5" or 3" x 3"	72	UL ¹ , NSF ²	G
						А	CCESSORIE	S				
400012	XF Rise	r Base	e - Sim	olifies in	stallation of)	KF-series pumps	in applications	where Challeng	ger pumps are being repl	aced.		

¹ '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).

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ADVERTENCIA: Cáncer y Daño Reproductivo.

www.p65warnings.ca.gov.

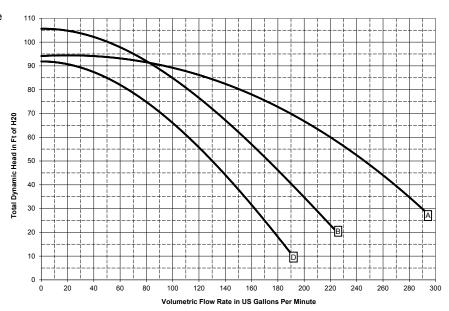
^{2 &#}x27;NSF' indicates that pump bears a mark signifying evaluation to NSF Standard 50 For Self-Priming Centrifugal Pumps For Swimming Pools, Spas and Hot Tubs.

³ 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.

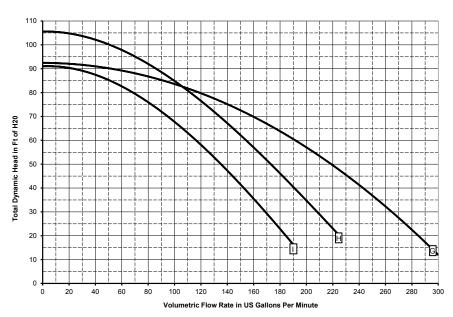
MAX-E-PROXF°

HIGH PERFORMANCE PUMPS (CONT'D)

1 & 2-Speed Performance Curve

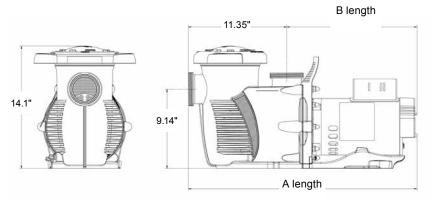


3 Phase Performance Curve



| B-VARYING LENGTH | HP | TEFC | 3-PH | 2 | 13.05 | 12.35 | 3 | 13.65 | 13.05 |

A-VAR		
HP	TEFC	3-PH
2	24.4	23.7
3	25	24.4



MAX-E-PRO®

HIGH-EFFICIENCY POOL/SPA PUMPS







Max-E-Pro Pump shown with TEFC Motor

CALIFORNIA PROPOSITION 65 WARNING

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www.p65warnings.ca.gov.

**REMINATION OF THE PRODUCTION OF THE PRODUCTION OF THE PRODUCTION OF THE PRODUCTION OF THE PE

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
- Efficient 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	Rated HP	ТНР	WEF	ННР	Service Factor	Voltage	Frequency	Current	Port Size	Weight	Certifications ³	Curve Key
					DOE CC	MPLIANT SINC	GLE-SPEED T	EFC				
348185	N/A	1.1	3.5	0.65	1.00	115/208-230	60	10.5/5.4-5.4	2" x 2"	50	UL ¹ , NSF ²	В
			EN	ERGY	EFFICIENT	SINGLE-SPEE	O - NOT FOR	SALE IN THE I	JSA			
P6E6C-204L-INT	1/2	0.95	N/A	N/A	1.00	115/208-230	60	11/5.5	2" x 2"	44	UL ¹ , NSF ²	Α
P6E6D-205L-INT	3/4	1.25	N/A	N/A	1.00	115/208-230	60	13.8/6.9	2" x 2"	44	UL ¹ , NSF ²	С
				TE	FC SINGLE	-SPEED - NOT	FOR SALE IN	THE USA				
348150-INT	1	1.65	N/A	N/A	1.00	115/208-230	60	15.1/8.5-7.7	2" x 2"	50	UL ¹ , NSF ²	D
348151-INT	1-1/2	2.21	N/A	N/A	1.00	208-230	60	10.3-9.1	2" x 2"	53	UL ¹ , NSF ²	Е
348152-INT	2	2.60	N/A	N/A	1.00	208-230	60	11.7-10.3	2" x 2"	58	UL ¹ , NSF ²	F
348153-INT	3	3.45	N/A	N/A	1.00	208-230	60	14.6-12.7	2" x 2"	62	UL ¹ , NSF ²	G
			ENER	GY EFF	FICIENT 50	HZ SINGLE-SP	EED - NOT FO	OR SALE IN TH	IE USA			
5P6R6D-209-INT	1/2	0.55	N/A	N/A	1.10	240/120	50	12.6/6.1	2" x 2"	45	_	1
5P6R6E-210-INT	3/4	0.83	N/A	N/A	1.10	240/120	50	15.4/7.7	2" x 2"	45	_	J
5P6R6F-211-INT	1	1.10	N/A	N/A	1.10	240/120	50	19.4/9.7	2" x 2"	52	_	K
5P6R6G-212-INT	1-1/2	1.65	N/A	N/A	1.10	240	50	10.5	2" x 2"	52	_	L
5P6R6H-213-INT	2	2.20	N/A	N/A	1.10	240	50	13.9	2" x 2"	55	_	М

MAX-E-PRO®

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

Ordering Information

	Rated				Service		_					Curve
Product	HP	THP	WEF	ННР	Factor	Voltage	Frequency	Current	Port Size	Weight	Certifications ³	Key
						THREE-PHASE						
345076	1	1.65	*	*	1.65	208-230/460	60	4.9-4.5/2.3	2" x 2"	41	UL ¹ , NSF ²	D
345077	1-1/2	2.21	*	*	1.47	208-230/460	60	6.4-6.3/3.2	2" x 2"	43	UL ¹ , NSF ²	Е
345078	2	2.60	*	*	1.30	208-230/460	60	7.5-7.2/3.6	2" x 2"	47	UL ¹ , NSF ²	F
345079	3	3.45	*	*	1.15	208-230/460	60	9.8-9.4/4.7	2" x 2"	52	UL ¹ , NSF ²	G
			1	THREE	-PHASE S	SINGLE-SPEED -	HIGH VOLTAG	SE APPLICATI	ONS			
P6EA6D36-204	3/4	1.12	*	*	1.50	575	60	1.2	2" x 2"	37	NSF ²	С
P6EA6E36-205	1	1.4	*	*	1.40	575	60	1.5	2" x 2"	40	NSF ²	D
P6EA6F36-206	1-1/2	1.65	*	*	1.10	575	60	1.9	2" x 2"	41	NSF ²	Е
P6EA6G36-207	2	2	*	*	1.00	575	60	3.2	2" x 2"	45	NSF ²	F
P6E6H36-209	3	3.45	*	*	1.15	575	60	3.9	2" x 2"	52	NSF ²	G
			Tŀ	HREE-	PHASE 50	HZ SINGLE-SPE	ED - NOT FO	R SALE IN THE	EUSA			
5P6R6D3-209-INT	3/4	0.95	N/A	N/A	1.27	220-240/380-415	50	3.6/2.1	2" x 2"	38	_	ı
5P6R6E3-210-INT	1	1.25	N/A	N/A	1.25	220-240/380-415	50	4.0/2.3	2" x 2"	40	_	J
5P6R6F3-211-INT	1-1/2	1.65	N/A	N/A	1.10	220-240/380-415	50	5.2/3.0	2" x 2"	47	_	K
5P6R6G3-212-INT	2	2.2	N/A	N/A	1.10	220-240/380-415	50	6.6/3.8	2" x 2"	49	_	L
5P6R6H3-213-INT	3	3	N/A	N/A	1.10	220-240/380-415	50	8.0/4.7	2" x 2"	58	_	М
						ACCESS	ORIES					
77703-0100	2 in. Un	ion Ha	ılf x 1-1	1/2 in. F	PT – Packa	ge Of Two						
77703-0101	2 in. Un	ion Ha	ılf x 1-1	1/2 in. S	lip – Packa	ge Of Two						
PKG 188Z	2 in. Un	ion Ha	ılf x 2 i	n. Slip -	- Package (Of Two						
PKG 189	2 in. Un	ion Ha	ılf x 2 i	n. FPT	– Package	Of Two						
356196	Chemic	al/Salt	/Ozon	e Resis	tant EPDM	& SS Seal Quick Ki	t					

¹ '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).

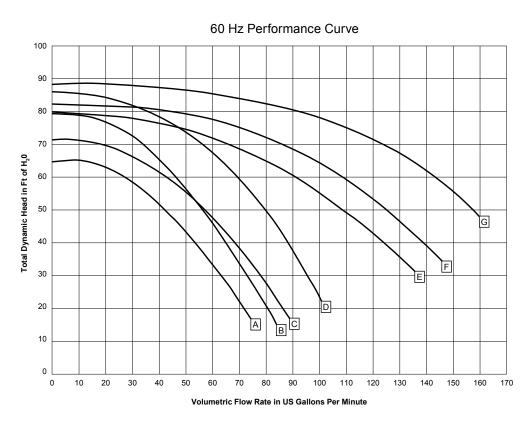
² 'NSF' indicates that pump bears a mark signifying evaluation to NSF Standard 50 For Self-Priming Centrifugal Pumps For Swimming Pools, Spas and Hot Tubs.

³ 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.

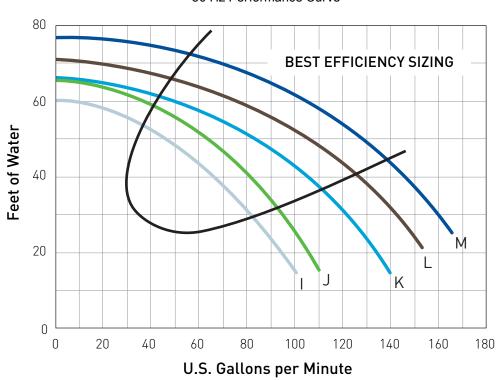
^{*} WEF and HHP values will be updated at a date TBD. For product specific requests contact Pentair.

MAX-E-PRO®

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

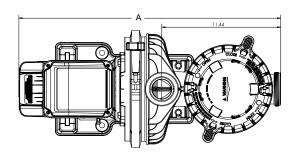


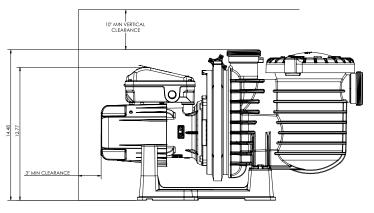


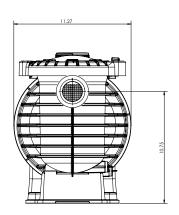


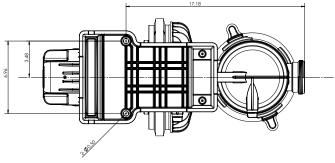
MAX-E-PRO°

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









	A-	VARYING LE	NGTH		
HP	STD EFF	EE	1PH TEFC	3PH	DOE COMPLIANT
0.5	26.92	_	_	_	_
0.75	26.92	_	_	_	_
1	27.29	28.45	25.03	24.76	_
1.1	_	_	_	_	25.18
1.5	28.92	28.45	25.48	24.76	_
2	28.92	29.08	25.93	25.17	_
3	28.92	29.08	26.53	25.87	_

INTELLIPROXF° VSF

VARIABLE SPEED AND FLOW PUMP



IntelliProXF VSF Pump

Patent Information: www.pentair.com/patents

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
- · Maintains system flow requirements
- · Compatible with Pentair Automation

The IntelliPro VSF pump family 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.

Ordering Information

Product	Description	ТНР	WEF	ННР	Service Factor	Voltage	Frequency	Current	Port Size	Weight	Certifications ³
			INTE	LLIPRO	KF VSF VA	ARIABLE S	PEED AND FI	OW PUMP			
023056	IntelliProXF VSF	3.95	5.6	2.10	1.0	230	50/60	16.0	2" x 2"	60	UL¹, NSF²
	ACCESSORIES										
400012	XF Riser Base - Si	implifies	installatio	on of XF-s	series pump	s in applica	tions where Ch	nallenger pur	nps are being re	eplaced.	
521109	IntelliCom 2 - Rated 9 - 30 V DC with 4 inputs									1	
350122	Communication Cable - 50 ft Included with pump									2	
356905Z	Keypad Relocation	n Kit								1	

- ¹ '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).
- 2 'NSF' indicates that pump bears a mark signifying evaluation to NSF Standard 50 For Self-Priming Centrifugal Pumps For Swimming Pools Only.
- ³ 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 15 for a selection of 2-Pole GFCI breakers which offer 6 milliamp personnel protection while meeting 2008 to current NEC Standards for Pool Pumps.

CALIFORNIA PROPOSITION 65 WARNING

WARNING: Cancer and Reproductive Harm.

AVERTISSEMENT: Peut Causer le Cancer et des Dommages au Système Reproducteur.

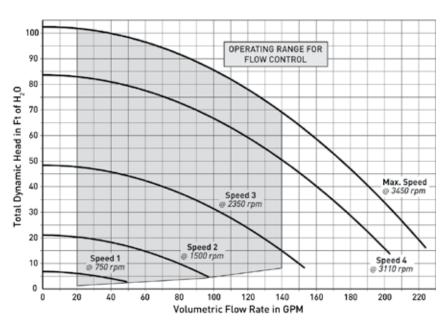
ADVERTENCIA: Cáncer y Daño Reproductivo.

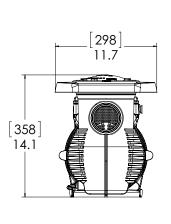
www.p65warnings.ca.gov.

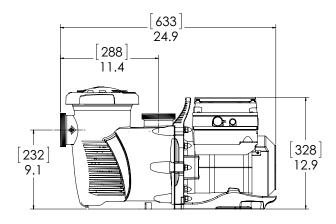
INTELLIPROXF° VSF

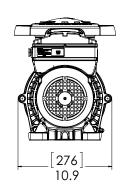
VARIABLE SPEED AND FLOW PUMP (CONT'D)

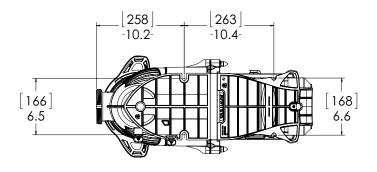
Dimensions and Performance











INTELLIPRO® VS+SVRS

HIGH PERFORMANCE PUMPS





Patent Information: www.pentair.com/patents

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.

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 helps 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 suitable operation for a longer life
- · Compatible with Pentair Automation Systems
- Compliant with the current ASME A112.19.17 standard for Safety Vacuum Release Systems (SVRS)

Ordering Information

Product	Description	THP	WEF	ННР	Service Factor	Voltage	Frequency	Current	Port Size	Weight	Certifications ³	
	INTELLIPRO VS+ SVRS VARIABLE SPEED WITH SAFETY VACUUM RELEASE SYSTEM											
013004	IntelliPro VSF	3.95	6.6	2.10	1.0	230	50/60	16.0	2" x 2"	53	UL ¹ , NSF ²	
	ACCESSORIES											
521109	IntelliCom 2 - Rate	ntelliCom 2 - Rated 9 - 30 V DC with 4 inputs									1	
350122	Communication Ca	able - 50 ft	Include	d with pu	mp						2	
350250Z	SVRS KIT - Allows	use of dis	scharge ch	neck valve	es with SVRS p	ump					1	
356905Z	Optional Keypad V	Vall Mount	Kit									
356196	Chemical/Salt/Ozd	Chemical/Salt/Ozone Resistant EPDM & SS Seal Quick Kit									1	
						UNIONS						
11201-0154	2 in. x 2 in. Union (2 in. NPT	male x 2 iı	n. female	NPT quick con	nect) * N	ote: two require	d per pump (s	old individually)		2	

- '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).
- 2 'NSF' indicates that pump bears a mark signifying evaluation to NSF Standard 50 For Self-Priming Centrifugal Pumps For Swimming Pools Only.
- ³ 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.

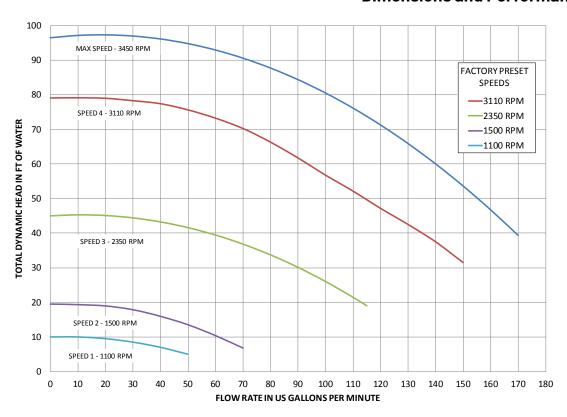
Refer to catalog page 15 for a selection of 2-Pole GFCI breakers which offer 6 milliamp personnel protection while meeting 2008 to Current NEC Standards for Pool Pumps.

 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 sizeand length, pump model, service factor and other hydraulic factors

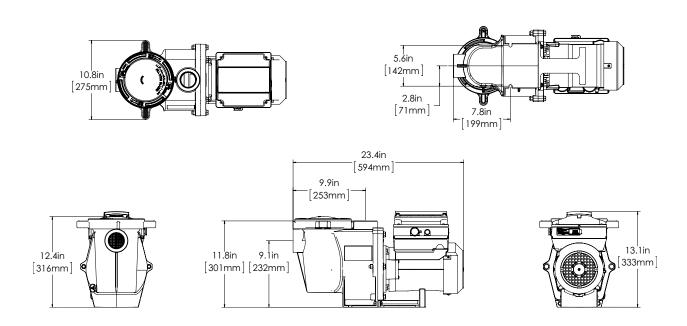
INTELLIPRO® VS+SVRS

HIGH PERFORMANCE PUMPS (CONT'D)

Dimensions and Performance



* IntelliPro VS+SVRS minimum speed is 1100 RPM



VARIABLE SPEED PUMP







IntelliFlo i2 Variable Speed Pump

Patent Information: www.pentair.com/patents

Featured Highlights

- · Rotable keypad for easy programming and viewing
- Keypad has the ability to be wall mounted with optional wall kit (sold separately)
- Intuitive interface/HMI simplifies programming and use
- Top-mounted field wiring compartment for easy access and installation
- · 8 programmable speed settings and built in timer
- Totally-enclosed fan-cooled design (TEFC) for quiet operation
- Built-in diagnostics helps protect the pump for longer service life
- Interfaces perfectly with Pentair automation systems

IntelliFlo i2 Variable Speed pump is hydraulically engineered to provide maximum performance on a 15-amp breaker. It has a maximum rating of 11.8 amps, also making retrofits easier in applications that are limited by existing wire gauge size. The IntelliFlo i2 pump provides all the great features that have made our best-selling IntelliFlo pumps the industry standard.

Ordering Information

Product	Description	THP	WEF	ННР	Service Factor	Voltage	Frequency	Current	Port Size	Weight	Certifications ³	
		Е	NERGY	EFFICIE	NT VARIAI	BLE SPEE	FULL RATE)				
011060	IntelliFlo i2	3.95	6.9	1.69	1.0	230	50/60	11.8	2" x 2"	53	UL ¹ , NSF ²	
	ACCESSORIES											
521109	IntelliCom 2 - Rat	IntelliCom 2 - Rated 9 - 30 V DC with 4 inputs										
350122	Automation Com	municatio	n Cable	for IntelliF	lo - Include	d with pump)			2		
357156	Chemical Resista	Chemical Resistant Lid								1		
356904Z	Optional Keypad	Wall Mou	nt Kit							2		
356198	Chemical/Salt/Oz	zone/Resi	stant EP	DM & SS	Seal Quick	Kit				1		

¹ '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 Only (Enclosure 3).

Refer to catalog page 15 for a selection of 2-Pole GFCI breakers which offer 6 milliamp personnel protection while meeting 2008 to current NEC Standards for Pool Pumps.

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.

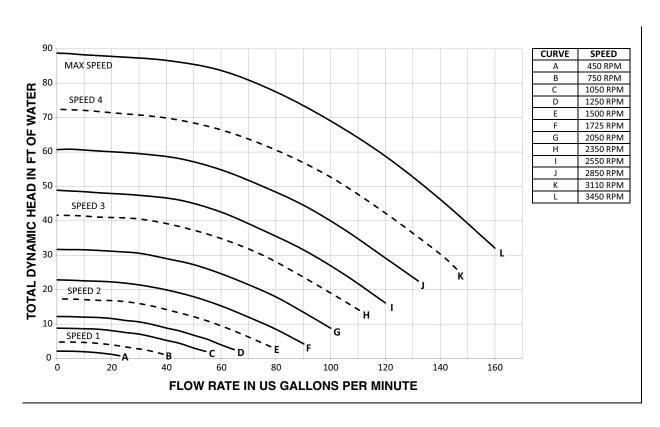
www.p65warnings.ca.gov.

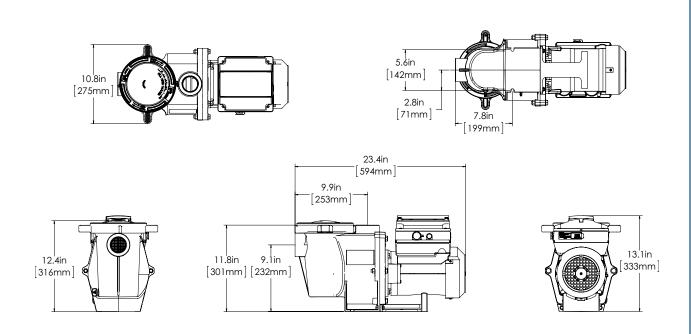
^{2 &#}x27;NSF' indicates that pump bears a mark signifying evaluation to NSF Standard 50 For Self-Priming Centrifugal Pumps For Swimming Pools Only.

³ 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.

VARIABLE SPEED PUMP (CONT'D)

Dimensions and Performance





VARIABLE SPEED PUMP



IntelliFlo i1 Variable Speed Pump

Patent Information: www.pentair.com/patents

Featured Highlights

- · Rotable keypad for easy programming and viewing
- Keypad has the ability to be wall mounted with optional wall kit (sold separately)
- · Intuitive interface/HMI simplifies programming and use
- Top-mounted field wiring compartment for easy access and installation
- · 8 programmable speed settings and built in timer
- Totally-enclosed fan-cooled design (TEFC) for quiet operation
- Built-in diagnostics helps protect the pump for longer service life
- Interfaces perfectly with Pentair automation systems

IntelliFlo i1 Variable Speed pump has a unique hydraulic platform designed for compliance in specific geographical areas with certain flow rates. IntelliFlo i1 pump provides all the features as standard IntelliFlo pumps but is engineered to be limited to the flow rate of a 1-HP pump. It also has a max amp rating of 7 amps for easy retrofits with limited existing wire gauge size.

Ordering Information

Product	Description	THP	WEF	ННР	Service Factor	Voltage	Frequency	Current	Port Size	Weight	Certifications ³
		E	NERGY	EFFICIE	NT VARIA	BLE SPEE	FULL RATE	D			
011059	IntelliFlo i1	3.95	7.5	1.13	1.0	230	50/60	7.3	2" x 2"	53	UL ¹ , NSF ²
521109	IntelliCom 2 - Ra	ntelliCom 2 - Rated 9 - 30 V DC with 4 inputs									
350122	Automation Com	municatio	n Cable f	for IntelliF	lo - Include	d with pump)			2	
357156	Chemical Resista	Chemical Resistant Lid								1	
356904Z	Optional Keypad	otional Keypad Wall Mount Kit									
356198	Chemical/Salt/O	zone/Resi	stant EP	DM & SS	Seal Quick	Kit				1	

¹ '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 Only (Enclosure 3).

Refer to catalog page 15 for a selection of 2-Pole GFCI breakers which offer 6 milliamp personnel protection while meeting 2008 to current NEC Standards for Pool Pumps

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.

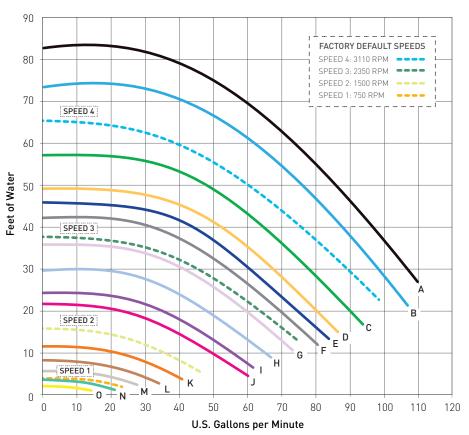
PAREMAL

^{2 &#}x27;NSF' indicates that pump bears a mark signifying evaluation to NSF Standard 50 For Self-Priming Centrifugal Pumps For Swimming Pools Only.

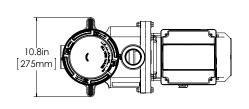
³ Product may have been evaluated to other state and local regulatory standards. Listing status may change. Always confirm status with appropriate agency if in doubt.

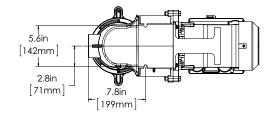
VARIABLE SPEED PUMP (CONT'D)

Dimensions and Performance

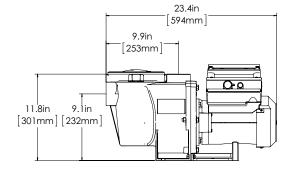


CURVE	SPEED
A —	3450 RPM
В —	3250 RPM
<u> </u>	2850 RPM
D —	2650 RPM
E —	2550 RPM
F —	2450 RPM
G —	2250 RPM
Н	2050 RPM
_	1850 RPM
_	1725 RPM
к —	1250 RPM
_	1050 RPM
м —	850 RPM
N —	650 RPM
0 —	450 RPM











PS SERIES™ IN-LINE STRAINER

FOR COMMERCIAL SERIES PUMPS



PS Series In-Line Strainer

Featured Highlights

- · Designed 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

CALIFORNIA PROPOSITION 65 WARNING

▲ WARNING: Cancer and Reproductive Harm.

▲ AVERTISSEMENT: Peut Causer le Cancer et des Dommages au Système Reproducteur.

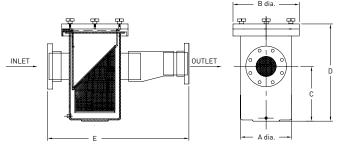
▲ ADVERTENCIA: Cáncer y Daño Reproductivo.

www.p65warnings.ca.gov.

The Commercial PS Series In-Line Strainers from Pentair 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

		Flange	e Size	Typical Max. Flow	Α	В	С	D	E
Product	Description	Inlet (suction)	Outlet (pump)	(GPM)	(Inches)	(Inches)	(Inches)	(Inches)	(Inches)
			PS SERII	ES 6 INCH SUCTION	١				
PS6X6	Straight	6 in.	6 in.	540	12-3/4	16-1/2	13-5/8	25-1/2	23-5/8
PS6X5E	Eccentric Reducing	6 in.	5 in.	540	12-3/4	16-1/2	13-5/8	25-1/2	35-1/4
PS6x4E	Eccentric Reducing	6 in.	4 in.	540	12-3/4	16-1/2	13-5/8	25-1/2	32-7/8
PS6X3E	Eccentric Reducing	6 in.	3 in.	540	12-3/4	16-1/2	13-5/8	25-1/2	38
			PS SERI	ES 8 INCH SUCTION	١				
PS8X8	Straight	8 in.	8 in.	930	12-3/4	16-1/2	13-5/8	25-1/2	23-3/8
PS8X6E	Eccentric Reducing	8 in.	6 in.	930	12-3/4	16-1/2	13-5/8	25-1/2	35-7/8
PS8X5E	Eccentric Reducing	8 in.	5 in.	930	12-3/4	16-1/2	13-5/8	25-1/2	43-1/2
PS8X4E	Eccentric Reducing	8 in.	4 in.	930	12-3/4	16-1/2	13-5/8	25-1/2	41-1/4
			PS SERIE	S 10 INCH SUCTIO	N				
PS10X10	Straight	10 in.	10 in.	1470	12-3/4	16-1/2	20-5/8	32-1/2	24-1/2
PS10X8E	Eccentric Reducing	10 in.	8 in.	1470	12-3/4	16-1/2	20-5/8	32-1/2	38-3/4
PS10X6E	Eccentric Reducing	10 in.	6 in.	1470	12-3/4	16-1/2	20-5/8	32-1/2	47
PS10X5E	Eccentric Reducing	10 in.	5 in.	1470	12-3/4	16-1/2	20-5/8	32-1/2	54-1/2
				BASKETS					
67150	PS6 and PS8 Basket								
67152	PS10 Basket								



Dimensions and Performance

- 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

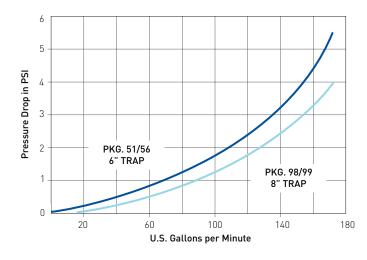


Ordering Information

Product	Description	Suction Port Size	Carton Wt. (Lbs.)
	HAIR AND LINT STRAINER PACKAGES		
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 73	3 in. Suction Flange (For C, CC, and D Series Pumps)		
PKG 72	2.5 in. Suction Flange (For C, CC, and D Series Pumps)		
PKG 52	1.5 in. Suction Flange (For C, CC, and D Series Pumps)		
PKG 53	1.5 in. Suction Flange (For C, CC, and D Series Pumps)		



Dimensions and Performance







PKG 76 PKG 98 - 8 in.



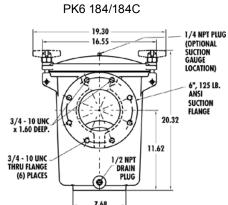


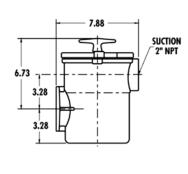
PKG 184 - 8 in.

PKG 51 - 5 in. OR 6 in.

11.25 SUCTION 3" NPT 10.31 5.93 3.44

PKG 98/99 - 8 INCH TRAP





PKG 51/56 - 6 INCH TRAP

PCD-1000 SUBMERSIBLE PUMP

STAINLESS STEEL 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.

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

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.

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	НР	Carton Wt.(Lbs.)
	STAINLESS STEEL S	UBMERSIBLE WITH BRA	ASS BASE		
▶ PCD-1000	Submersible Utility Pump	115	6.4	3/4	15
	А	CCESSORIES			
ZBR46760	Replacement Float Switch				

Dimensions and Performance

		Motor		Minimum	Liquid	Switch	Setting	Pumps
Model	HP	Full Load (Amps)	RPM	Circuit Req.	Temperature Range	On	Off	Down To
PCD-1000	3/4	6.4	3450	15 amps	32/130°F 0/54°C	12" 30 cm	6" 15.2 cm	1³%" 3.5 cm

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

NOTES:





COMMERCIAL BIOSHIELD° CLP

UV DISINFFCTION STERII IZER









Establishing a heathier swimming facility begins at the pool design stage. Pentair BioShield Commercial lowpressure UV systems helps protect against Giardia, harmful waterborne pathogens and irritating chloramines.

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 25% compared to Medium Pressure UV systems
- · NSF certified with flow rates up to 2,335 GPM
- 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 508 Listed
- Single-end UV lamp and quartz sleeve access for easy servicing
- · Choice of input / output piping connections
- Enhanced, 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

Micro-Processor Standard Features

- · Touch Screen 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
- · Output Alarm Relay
- · UV Intensity Monitor
- · Thermoplastic NEMA 12 Enclosure
- · External Power Switch
- · 20 Foot Lamp Cables
- · Enclosure Cooling Fan
- RJ11 Modbus Communication (CLP6 only)



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***RIPINATE NO. ***RIPINATE NO.

COMMERCIAL 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. 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 ²	To help the inactivation of most of the Cryplosporidium and other chlorine tolerant pathogens
60 mJ/cm ²	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.

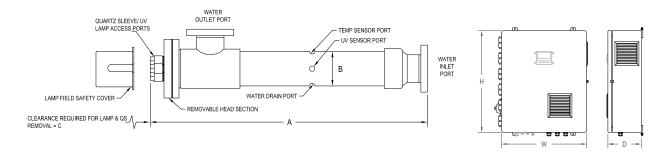
Model ¹	Lamps/ Watts	Max Flow Rate (GPM) 40 mJ/cm ²	Max Flow Rate (GPM) 60 mJ/cm ²	Port Size ¹	Max. Flow	Amps Max Load	UV Vessel Dimensions ² (A x B x C)	Power Enclosure Dimensions (H x W x D)	Max. PSI
ONLY AVAILABL	E IN 120VA	C			•	'		•	•
CLP41A6-XN	1/130	62	42	2"	64	2.1/1.0	56" x 6"x 47"	24.6" x 20.2" x 10.6"	100
CLP42A6-XN	2/130	105	70	3"	144	3.9/2.0	56" x 6" x 47"	24.6" x 20.2" x 10.6"	100
CLP43A6-XN	3/130	152	101	3" 4"	144 251	5.8/2.9	56" x 6" x 47"	24.6" x 20.2" x 10.6"	100
CLP43A8-XN	3/130	225	150	4"	251	5.8/2.9	62" x 8" x 51"	24.6" x 20.2" x 10.6"	100
CLP44A8-XN	4/130	295	196	4" 6"	251 569	7.5/3.7	62" x 8" x 51"	24.6" x 20.2" x 10.6"	100
CLP45A8-XN	5/130	350	233	4"	251	9.4/4.7	62" x 8" x 51"	30.5" x 24.9" x 12.6"	100
021 10/10 /11	0/100	000	200	6"	569	0.171.7	02 X 0 X 0 1	00.0 X 2 1.0 X 12.0	100
CLP46A10-XN	6/130	500	334	6"	569	11.2/5.6	64" x 10" x 51"	30.5" x 24.9" x 12.6"	75
CLP47A10-XN	7/130	585	390	6" 8"	569 996	13.3/6.5	64" x 10" x 51"	30.5" x 24.9" x 12.6"	75
CLP47A12-XN	7/130	700	467	6" 8"	569 996	13.3/6.5	69" x 12" x 51"	30.5" x 24.9" x 12.6"	50
CLP48A12-XN	8/130	790	525	6" 8"	569 996	15.0/7.5	69" x 12" x 51"	30.5" x 24.9" x 12.6"	50
ONLY AVAILABL	E IN 240VA	C							
CLP61A6-XN	1/320	185	123	3"	144	1.6	85" x 6" x 76"	24.6 " x 20.2" x 10.6"	100
				4"	251				
CLP62A6-XN	2/320	325	216	3"	144	3	85" x 6" x 76"	24.6 " x 20.2" x 10.6"	100
				4"	251				
CLP63A6-XN	3/320	465	310	3" 4"	144 251	4.5	85" x 6" x 76"	24.6 " x 20.2" x 10.6"	100
CLP63A8-XN	3/320	660	438	4"	251	4.5	85" x 6" x 76"	24.6 " x 20.2" x 10.6"	100
				6"	569				
CLP64A8-XN	4/320	850	566	4" 6"	251 569	6	85" x 6" x 76"	24.6 " x 20.2" x 10.6"	100
CLP65A8-XN	5/320	1020	678	6"	569	7.5	85" x 6" x 76"	30.5" x 24.1" x 12.6"	100
CLP66A10-XN	6/320	1470	979	6"	569	9	88" x10"x 76"	30.5" x 24.1" x 12.6"	75
021 00/110 /11	0/020	1110	0.0	8"	996			00.0 X 2 1.1 X 12.0	
CLP67A10-XN	7/320	1730	1158	6" 8"	569 996	- 11	88" x10"x 76"	30.5" x 24.1" x 12.6"	75
				8"	996				
CLP67A12-XN	7/320	2080	1385	10"	1567	11	90" x 12" x 76"	30.5" x 24.1" x 12.6"	50
CLP68A12-XN	8/320	2350	1566	8"	996	- 13	90" x 12" x 76"	30.5" x 24.1" x 12.6"	50
				10"	1567				
CLP69A14-XN	9/320	2870	1912	12"	2218	14	92" x 14" x 76"	40.4" x 32.5" x 12.6"	50
CLP610A16-XN	10/320	3400	2267	12" 14"	2218 2650	16	94" x 16" x 76"	40.4" x 32.5" x 12.6"	50

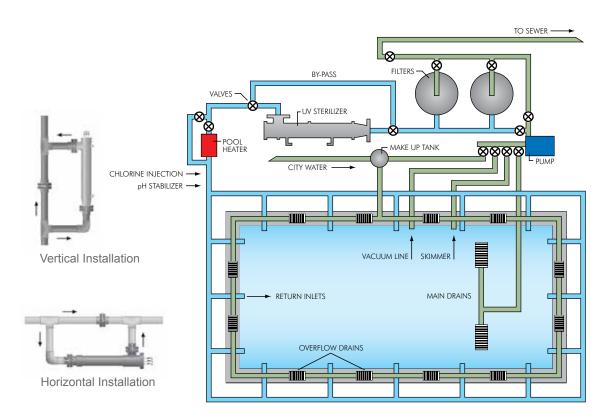
¹ When ordering: Replace 'X' in part number with requested flange size; eg. '2' for two-inch flange.

² Vessel dimension "C" represents clearance requirement for glassware maintenance.

COMMERCIAL BIOSHIELD®

UV DISINFFCTION STFRILIZER





BioShield UV Sterilizer Installation:

- Position the BioShield UV Sterilizer after the pool filters so it receives solids-free water. This will assist in neutralizing bacteria and pathogens that cause Recreation Water Illnesses such in pool water, while protecting the quartz sleeves and lamps from potential damage.
- 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.
- 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.

COMMERCIAL BIOSHIELD° CVP

UV DISINFFCTION STFRILIZER

Featured Highlights

System Features:

- Enhanced, 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 stan 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
- Low-pressure Amalgam UV lamps offer up to 12,000 hours of continuous operation
- · Choice of inlet/outlet port styles
- Included Over-Temp System Shutdown Sensor shuts down the lamp field to avoid damage when water temperature inside the vessel exceeds 120° F
- · 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 sleeve(s) to minimize space required and maximize serviceability. Each model is extremely durable and features a corrosion-resistant remote power supply enclosure and UV vessel. 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. Unit can also be installed horizontally.

Ordering Information

Model (120/240 VAC)	Lamps/ Watts	Max Flow Rate (GPM) 40 mJ/cm ²	Max Flow Rate (GPM) 60 mJ/cm ²	Port Size	Max. Flow²	Amps Max Load @ 120/240 VAC	UV Vessel Dimensions ¹ (A x B x C)	Power Enclosure Dimensions (H x W x D)	Max. PSI
522904/523171	1/130	62	42	2"	64	2.1/1.0	56" x 6"x 47"	24.6" x 20.2" x 10.6"	50
522918/523175	2/130	105	70	3"	144	3.9/2.0	56" x 6" x 47"	24.6" x 20.2" x 10.6"	50
522919/523178	3/130	152	101	3"	144	5.8/2.9	56" x 6" x 47"	24.6" x 20.2" x 10.6"	50
522932/523179	3/130	152	101	4"	251	5.6/2.9	50 X 0 X 47	24.0 X 20.2 X 10.0	50
522920/523181	3/130	225	150	4"	251	5.8/2.9	62" x 8" x 51"	24.6" x 20.2" x 10.6"	50
522921/523184	4/130	295	196	4"	251	7.5/3.7	62" x 8" x 51"	24.6" x 20.2" x 10.6"	50
522934/523185	4/130	295	190	6"	569	1.5/3.1	02 80 831	24.0 X 20.2 X 10.0	50
522922/523187	5/130	350	233	4"	251	9.4/4.7	62" x 8" x 51"	30.5" x 24.9" x 12.6"	50
522935/523188	5/130	350	233	6"	569	9.4/4.7	02 80 851	30.5 X 24.9 X 12.6	50
522923/523190	6/130	500	334	6"	569	11.2/5.6	64" x 10" x 51"	30.5" x 24.9" x 12.6"	50
522924/523193	7/100	505	200	6"	569	40.0/C F	64" x 10" x 51"	30.5" x 24.9" x 12.6"	50
522937/523194	7/130	585	390	8"	996	13.3/6.5	04 X IU X 5 I	30.5 X 24.9 X 12.6	50
522912/523195	7/130	700	467	6"	569	13.3/6.5	69" x 12" x 51"	30.5" x 24.9" x 12.6"	50
522925/523196	1/130	700	467	8"	996	13.3/6.5	09 X 12 X 51	30.5 X 24.9 X 12.6	50
522913/523197	8/130	790	525	6"	569	15.0/7.5	69" x 12" x 51"	30.5" x 24.9" x 12.6"	50
522926/523198	0/130	790	525	8"	996	15.0/7.5	09 X 12 X 51	30.0 X 24.9 X 12.0	30

¹ Vessel dimension "C" represents clearance requirement for glassware maintenance

² When selecting a port size, be sure the system flow rate will never exceed "Max. Flow for Port Size"

BIOSHIELD° UV DISINFECTION STERILIZER

TRADEGRADE



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", 2.5", or 3" 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 are made with a 5-3/4" diameter housing and have inlet/outlet ports fittings to accommodate 2", 2.5", and 3" plumbing. Ballast comes with a 10' cable to lamp, 6' power cord and 10' cable to flow switch. Flow switch comes with 10' cable. 115V and 230V units are available. Models include an in-line, sealed water-tight power supply for wet applications.

Ordering Information

DDEVIOUS

Commercial Swimming Pools as a Water Conditioning Device.

MODEL	INPUT WATTS	UV-C OUTPUT Watts	UV VESSEL DIMENSIONS	VOLTAGE	AMPS MAX LOAD	30 MJ/CM ² GPM/LPM	40 MJ/CM ² GPM/LPM	60 MJ/CM ² GPM/LPM
			HIGH	I-OUTPUT S	TERILIZERS			
522635	50	15	30" x 6"	115/230V	1.15/0.57	31/117	25/94	16/60
522636	80	27	45" x 6"	115/230V	1.15/0.57	56/211	45/170	30/113
522637	120	37	57" x 6"	115/230V	1.15/0.57	79/299	62/234	41/155
522638	150	57	71" X 6"	115/230V	1.85/0.85	128/448	100/378	64/242

	PREVIOUS		CURRI	ENI XF					
WATTS	SEAL KITS	BALLAST	SEAL KITS	BALLAST	FLOW SWITCH	4-PIN LAMP CONNECTOR	LAMP SPACER	LAMP	QUARTZ SLEEVE
			HIGH-OL	TPUT STERI	LIZER REPLA	CEMENT PARTS	3		
50	523031	523032	523383	523460	523458	523034	523423	523035	523039
80	523031	523032	523383	523460	523458	523034	523423	523036	523040
120	523031	523032	523383	523460	523458	523034	523423	523037	523041
150	523031	523033*	523383	523462	523458	523034	523423	523038	523042
150	523031	523053**			523458	523034	523423	523038	523042

CHIDDENT VE

200 Only

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ADVERTENCIA: Cáncer y Daño Reproductivo.

www.p65warnings.ca.gov.



^{* 115}V Only ** 230V Only

COMMERCIAL INTELLICHLOR®

SALT CHLORINE GENERATOR

Featured Highlights

- Each single cell produces up to 2 lbs of chlorine per day
- Color LED status displays
- Performance data captured daily
- Automatic shut-off feature helps protect and prolong cell life

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- Pre-mounted multi-power center configuration
- Must be used with an external ORP/pH Controller
- · Self-cleaning
- Listed to UL 1563/CSA C22.2 No. 218-1
- Certified to NSF/ANSI 50



- 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 Controller





Possible Power Center and Manifold Configurations

IntelliChlor Salt Chlorine Generator uses common table salt to produce all the chlorine a pool needs, effectively, and automatically. Same sanitation performance as manual chlorine addition without the drawbacks.

Must use an external ORP Controller. We suggest Commercial IntelliChem Systems.



Ordering Information

PART NUMBER	DESCRIPTION	NUMBER OF PRIMARY (P) AND SECONDARY (S) IC60 CELLS	NUMBER OF PRIMARY POWER CEN- TERS (520978)	NUMBER OF SECONDARY POWER CEN- TERS (520556)	CHLORINE PER 24 HRS (LBS.)	POOL VOLUME (GAL) ¹
520970	COMSYS-2	1P	1	0	2	10,000
520971	COMSYS-4	1P, 1S	1	1	4	20,000
520972	COMSYS-6	1P, 2S	1	2	6	30,000
520973	COMSYS-8	1P, 3S	1	3	8	40,000
520974	COMSYS-10	1P, 4S	1	4	10	50,000
520975	COMSYS-12	1P, 5S	1	5	12	60,000
520976	COMSYS-14	1P, 6S	1	6	14	70,000
520977	COMSYS-16	1P, 7S	1	7	16	80,000

¹Commercial 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 Oty.	Carton Wt. (Lbs.)
	COMMERCIAL INTELLICHLOR SALT CHLORINE GENERATOR	FOR UNITED STATES	
521151	IntelliChlor CIC60P Replacement Primary Commercial Cell	1	
521005	IntelliChlor CIC60S Replacement Secondary Commercial Cell	1	
520978	IntelliChlor IC60P Replacement Primary Power Center	1	
520556	IntelliChlor Replacement Secondary Power Center	1	
P104-1	IntelliChlor Surge Board with ORP (Commercial)	1	

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 feeders 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 Oty.	Carton Wt. (Lbs.)
		IN-LINE FEEDERS		
R171096 ¹	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 ¹	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
		OFF-LINE FEEDERS		
R171016 ¹	300	Holds 11 large or 98 small tablets. Treats 12,000 to 48,000 gallons.	1	26
R1710221	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 ¹	300-19	Spa feeder includes double-capacity 19 in. chamber. Treats 13,000 to 52,000 gallons.	1	5
R1710661	300-29	Spa feeder includes triple-capacity 29 in. chamber. Treats 14,000 to 57,000 gallons.	1	6
		COMMERCIAL AND HIGH CAPACITY FEEDERS		
R171070 ¹	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 ¹	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 ¹	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 ¹	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.

PENTAIR AUTOMATIC CHLORINE/BROMINE SIZING CHART

		Chamber	Capaci	ty								
	<u>1 in.</u>	<u>Tablet</u>	<u>3 in.</u>	<u>Tablet</u>	Maximum Erosion in	Trea	ats Pool/Sp	a Size				Service Clearance for Lid
Model	Qty.	Wt.	Qty.	Wt.	24 Hours 1	@ 10 ppm	@ 5 ppm	@ 2-1/2 ppm	Н	w	D	Removal
				AUTO	MATIC CHLOR	INE/BROMIN	E SIZING (CHART				
#300 ¹	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 ¹	15	0.5 lbs.	_	_	0.5 lbs.	500	1,000	2,000	21 in.	7 in.	12 in.	22-1/4 in.
#300-19 ¹	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 ¹	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 ¹ 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 ¹	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 1	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.

CALIFORNIA PROPOSITION 65 WARNING

PENTAIR HIGH CAPACITY CHLORINE/BROMINE SIZING CHART

		Maximun In 24			Ŀ				
Model	Capacity	Chlorine	Bromine	Chlorine (10 ppm)	Bromine (10 ppm)	н	w	D	Service Clearance
			HIGH CAPAC	ITY CHLORINE/E	ROMINE SIZIN	IG CHART			
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.

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.

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.



VALVES



DIVERTER AND CHECK VALVES - 1-1/2 IN. AND 2 IN.

2-WAY, 3-WAY AND CHECK



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

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www.p65warnings.ca.gov.

PRINDINA

Ordering Information

Product	Description	Carton Qty.	Carton Wt. (Lbs.)
	2-WAY AND 3-WAY DIVERTER VALVES	6	
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
	CHECK VALVES		
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° 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



eco select®





263077

CALIFORNIA PROPOSITION 65 WARNING

Ordering Information

Product	Description	Carton Qty	Carton Wt (Lbs)
	2-WAY AND 3-WAY DIVERTER VALVES		
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
	2-WAY AND 90 DEGREE CHECK VALVES		
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		

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.

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www.p65warnings.ca.gov.

Featured Highlights

- PVC body
- · The right valve for easy operation
- · Six-position, positive-lock operation
- · Special winterizing position

Ordering Information

Product	Description	Carton Oty.	Carton Wt. (Lbs.)
	MULTIPORT VALVE KIT FOR FILTERS, SLIP		
261055	2 in. MPV, for Triton & Quad D.E. filters [SM 20-3] 7-1/2 in. Centerline	1	10
261152	2 in. MPV, for FNS, FNS Plus & NSP filters [SM 20-2] 7-1/2 in. Centerline	1	10
261173	1-1/2 in. MPV, for Triton & Quad D.E. filters [SM 10-3] 7-1/2 in. Centerline	1	6
261177	1-1/2 in. MPV, for FNS, FNS Plus & NSP filters [SM 10-2] 7-1/2 in. Centerline	1	7
	HIFLOW VALVE KIT FOR FILTERS, SLIP		
261050	2 in., w/ bulkhead fittings, for Triton & Quad D.E. filters, 7-1/2 in. Centerline	1	11
261142	2 in., w/ bulkhead fittings, for FNS, FNS Plus & NSP filters, 7-1/2 in. Centerline	1	11
	PVC SLIDE VALVE, SLIP		
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	3
	FULLFLOXF BACKWASH VALVES		
262507	Sta-Rite version for System 3 Mod D.E., inlet on top, with Sta-Rite offset adapters glued on	1	11
262508	Sta-Rite version for System 3 D.E. and Sand, inlet on bottom, with Sta-Rite offset adapters glued on	1	10
262509	Valve with filter inlet port on top, no fittings, only valve	1	10
262511	Valve with filter inlet port on bottom, no fittings, only valve	1	10
263080	Valve for Sand and Quad D.E., inlet port on top, Pentair 2 in. unions glued on	1	12
263081	Valve for D.E., inlet port on bottom, Pentair 2 in. unions glued on	1	12



HiFlow Valve Kit 261050



PVC Slide Valve Kit 263064



Multiport Valve Kit 261055



FullFloXF®
Backwash
Valve Kit
263080

SLIDE VALVES

ABS SLIDE VALVES/MULTIPORT 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

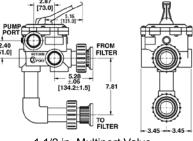
Product	Description	Valve Port Size	Carton Wt. (Lbs.)							
SLIDE VALVES - UNION CONNECTION DESIGN										
263053	Push Pull Valve, 7.81 in. Center	2 in.	4							
	SLIDE VALVES - HOSE CONNECTION DESIG	SN ¹								
263078	Slide Valves, 2 position, Plastic	2 in.	5							
	MULTIPORT VALVES - UNION CONNECTION DESIGN									
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.	6							
18202-0150	ABS 6-Position Valves with 1-1/2 in. piping	1-1/2 in.	6							
18201-0200	ABS 6-Position Valves with piping	2 in.	10							
	MULTIPORT VALVES - UNION CONNECTION DE	ESIGN 1								
18202-0150H	ABS 6-Position Valves (hoses not included)	1-1/2 in.	6							
18201-0200H	ABS 6-Position Valves (hoses not included)	2 in.	9							
	ACCESSORIES - HOSE CONNECTOR KITS - VALVE	TO FILTER								
24750-0624	1-1/2 in. x 2 in. Connector		1							

¹ Replacement Valves for Old Design Filters.

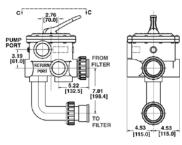


Dimensions and Performance





1-1/2 in. Multiport Valve 18201-0110



2 in. Multiport Valve 18201-0300

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.



Featured Highlights

- PVC body
- Large, one-piece handle fortrouble-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

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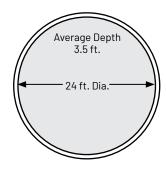
Ordering Information

Product	Description	Carton Oty.	Carton Wt. (Lbs.)			
	HIFLOW VALVE					
261049	2 in. HiFlow Valve, no plumbing	1	10			



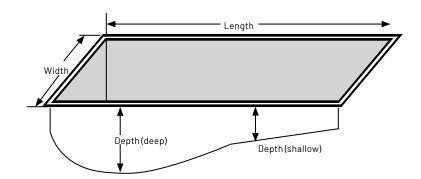


ESTIMATING TOTAL GALLONS IN A POOL OR SPA



Radius² x 3.14 x A.D. x 7.5 = Gallons $12 \times 12 \times 3.14 \times 3.5 \times 7.5 = 11,869$ Gals. Dia. x Dia. x Av Dp x 5.9 = Gallons $24 \times 24 \times 3.5 \times 5.9 = 11,894$ Gals.

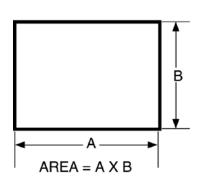
Gal.cu.ft.
Rectangle: 7.5
Oval: 6.7
Kidney: 7.0

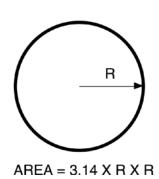


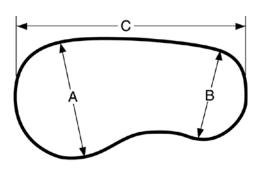
Formula A: Length X Width X Average Depth X Gal.cu.ft. = Gallons

Example: $\begin{array}{cccc} \mbox{Pool Length} & = & 40 \, \mbox{ft.} \\ \mbox{Pool Width} & = & 20 \, \mbox{ft.} \\ \mbox{Shallow Depth} & = & 3 \, \mbox{ft.} \\ \mbox{Deep Depth} & = & +8 \, \mbox{ft.} \\ \mbox{Total Depth} & = & 11 \, \mbox{ft.} \end{array}$

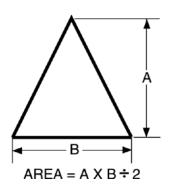
Using formula A: $40 \times 20 = 800 \text{ sq. ft.}$, $800 \times 5.5 = 4,400 \text{ cubic ft.}$, $4,400 \times 7.5 = 33,000 \text{ gallons}$







AREA = .45 X (A + B) C



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	<u>AMPERES</u>							
WINE SIZE	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	<u>POWER OUTPUT</u> POWER INPUT							
MOTOR EFFICIENCY	<u>HP OUTPUT</u> K.W. INPUT							
PUMP EFFICIENCY	G.P.M x TOTAL HEAD (F.T.) 3960 x BHP							
OVERALL PLANT EFFICIENCY (OPE)	G.P.M x TOTAL HEAD (F.T.) 5310 x K.W. INPUT							

Amperage =	Watts Volts
Watts=	Volts x Amperage
WHP=	Water Horsepower (output HP of pump)= 9.p.m x 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

HEATER SIZING INFORMATION

ETI 400 ASME HIGH EFFICIENCY HEATER MODEL REQUIRED TIME TO TEMPERATURE RISE

	Pool Volume (Gallons)											
° F Temperature Rise	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 $^{\circ}F$ (16.6 $^{\circ}$ 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

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

			Start-Up be Perfor ng has been Comp		
	☐ All VFDs	requiring start-up ha	ve been properly mount	ted per installation guide	
	☐ The powe	er wiring has been pr	operly connected to each	ch VFD	
	☐ Any contr	rol wiring (i.e. flowme	eter, level control, alarm	s) have been properly co	onnected
	☐ If needed represent		lain any special progran	mming requirements with	startup
	**** Appointm	ents are based on a	vailability. Allot up to 10	working days to schedule	e a startup appointment.
Startup Job Site	Information	:			
1 1					
Requested Startup	Date (NUMBE	RS ONLY)			
Facility Name					
•					
Street					
City		·			
State/Province	-	Zip Code			
Number of units to	startup				
	•		PM NUMBER	PO NUMBER	
Site Contact Name)		DISTRIBUTOR	DATE	
				INITIAL	
Contact Phone Nu	mber				
ACU DRIVE SEF	 RIAL #(S): RE	QUIRED			
listed below: "I confirm that the startup service par processes will be r codes. I will coord	equipment for striner. All controlled available all persor agreed startup t	startup will be ready of and power wiring nable by the agreed danel and contractors time and date of any	for startup at a time and necessary to perform sta ate. All equipment is in that I want present at st	I date agreed to by the co artup will be completed by stalled per Danfoss instal artup. I agree to notify the	e requested startup date ontact person listed above and y the agreed date. All llation instructions and all local he startup service partner 24 hal charges not covered by the
Print Name:			Phone:		
Signature:			Date:		

ENGINEERING DATA, FRICTION FLOW

FRICTION/FLOW CHART FOR SCHEDULE 40 RIGID PVC PIPE*

	3/4 in.	pipe	1 in.	pipe	1-1/4 in	. pipe	1-1/2 in. pipe		2 in. p	nipe	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	U.S. Gal.per min.														
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 80									7.01 8.02	8.81 11.28	4.49 5.13	2.98 3.81	3.12 3.56	1.23	1.75 2.00	.30	1.12	.10	.78	.04	70 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.

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.

	%" F	Pipe	1"	Pipe	1%"	Pine	1%"	Pipe	2"	Pipe	2%"	Pipe	3" [Pipe	4" F	Pine	6" F	Pine	
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	U.S. Gals. per Min.
1 2 3 4 5	.60 1.20 1.80 2.41 3.01	.25 .90 1.92 3.28 5.8	.37 .74 1.11 1.48 1.86	.07 .28 .60 1.02 1.52	 .43 .64 .86 1.07	.07 .16 .25	 .47 .63 .79	 .07 .12 .18											1 2 3 4 5
6 8 10 15 20	3.61 4.81 6.02 9.02	7.0 11.8 17.9 37.8	2.33 2.97 3.71 5.57 7.42	2.15 3.6 5.5 11.7 19.9	1.29 1.72 2.15 3.22 4.29	.55 .97 1.46 3.07 4.2	.95 1.25 1.58 2.36 3.15	.25 .46 .69 1.45 2.47	.57 .76 .96 1.43 1.91	.07 .14 .21 .44 .74	 .54 .67 1.01 1.34	.05 .09 .18 .30	 .65 .87	 .07 .12					6 8 10 15 20
25 30 35 40		U.S. GAL. PER	9.28 11.14	30.0 42.0	5.36 6.43 7.51 8.58	7.9 11.1 14.7 18.9	3.94 4.73 5.52 6.30	3.8 5.2 7.0 8.9	2.39 2.87 3.35 3.82	1.11 1.55 2.06 2.63	1.67 2.01 2.35 2.64	.46 .65 .88	1.08 1.30 1.52 1.73	.16 .23 .30	 .88 1.01				25 30 35 40
45 50 60 70 80 90		700 750 800 850 900	4.37 4.70 4.99 5.37 5.64	.66 .75 .82 .95 1.06	9.65 10.72	28.5	7.09 7.88 9.46 11.03	11.1 13.5 18.9 25.1	4.30 4.78 5.74 6.69 7.65 8.60	3.28 4.0 5.6 7.4 9.5 11.8	3.01 3.35 4.02 4.69 5.35 6.03	1.39 1.69 2.36 3.14 4.0 5.0	1.95 2.17 2.60 3.04 3.47 3.91	.58 .81 1.09 1.39 1.73	1.13 1.26 1.51 1.76 2.02 2.27	.12 .16 .21 .28 .37			50 60 70 80 90
100 125 150 175 200		950 1000 1050 1100 1150	5.94 6.25 6.57 6.89 7.20	1.23 1.28 1.40 1.51 1.65		U.S. GAL. PER MIN.	10"		9.56 11.95	14.4 21.8	6.70 8.38 10.05	6.1 9.2 12.8	4.34 5.42 6.51 7.59 8.68	2.10 3.19 4.5 5.9 7.9	2.52 3.15 3.78 4.41 5.04	.55 .85 1.18 1.57 2.08	1.11 1.39 1.67 1.94 2.22	.07 .12 .16 .21	100 125 150 175 200
225 250 275 300 325		1200 1250 1300 1350 1400	7.51 7.82 8.13 8.45 8.77	1.79 1.94 2.09 2.23 2.37		1500 1600 1700 1800 1900	5.99 6.40 6.80 7.20 7.60	.92 1.03 1.15 1.27 1.41					9.76 10.85 	9.4 11.5 	5.67 6.30 6.93 7.56 8.19	2.52 3.05 3.6 4.3 5.0	2.50 2.78 3.05 3.33 3.61	.35 .42 .48 .58	225 250 275 300 325
350 375 400 425 450		1450 1500 1550 1600 1650	9.08 9.39 9.70 10.00 10.32	2.53 2.68 2.85 3.01 3.21		2000 2100 2200 2300 2400	7.99 8.39 8.80 9.20 9.60	1.54 1.68 1.82 1.99 2.17							8.82 9.45 10.08	5.7 6.5 7.3	3.89 4.17 4.44 4.72 5.00	.79 .88 .99 1.11 1.22	350 375 400 425 450
475 500 550 600 650		1700 1750 1800 1850 1900	10.64 10.96 11.27 11.58 11.89	3.40 3.59 3.78 3.98 4.19		2500 2600 2700 2800 2900	10.00 10.40 10.79 11.18 11.59	2.34 2.50 2.69 2.88 3.08									5.28 5.55 6.11 6.67 7.22	1.36 1.50 1.80 2.10 2.44	475 500 550 600 650
700 750 800		1950 2000	12.21 12.52	4.40 4.61		3000 3100 3200	11.99 12.39 12.79	3.28 3.32 3.35									7.78 8.33 8.89	2.79 3.19 3.6	700 750 800

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

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.

J.S.	½" P	Pipe	3/"	Pipe	1" [Pipe	1¼"	Pipe	1½"	Pipe	2" F	Pipe	2½"	Pipe	3" [Pipe	3½"	Pipe	4" P	ipe
als.	Vel.	Loss																		
oer Min.	Ft. per Sec.	in Feet																		
2	2.74	6.72	1.48	1.51																
4 6	5.48 8.23	24.2 51.2	2.97 4.45	5.45 11.5	1.79 2.68	1.54 3.34	1.00 1.50	.39 .82	.73 1.09	.177 .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 8.91	29.6 41.5	4.46 5.36	8.60 12.0	2.50 3.00	2.10	1.82	.96 1.35	1.09	.276	.76	.115	.485	.039				
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 20	5" P	IPE	13.4 14.8	87.9 107	8.03 8.92	25.5 30.9	4.50 5.00	6.25 7.57	3.27 3.63	2.86 3.47	1.96 2.17	.818 .996	1.36 1.51	.340 .414	.873 .97	.116 .140	.65 .72	.056 .068	.56	.037
25 30		.025			11.2 13.4	58.8 65.3	6.25 7.50	11.4 16.0	4.55 5.45	5.25 7.38	2.71 3.26	1.51 2.11	1.9 2.27	.625 .874	1.21 1.44	.212 .297	.90 1.08	.103 .145	.695 .84	.055 .077
35	.62	.025			15.6	86.9	8.75	21.3	6.38	9.78	3.80	2.11	2.65	1.16	1.70	.396	1.26	.192	.973	.103
40 45	.71 .795	.043 .054	6" F	DIDE	17.9	111	10.0 11.2	27.3 33.9	7.26 8.26	12.5 15.6	4.35 4.89	3.59 4.46	3.03 3.41	1.49 1.86	1.94 2.18	.507 .629	1.44 1.63	.246 .306	1.12 1.25	.132 .164
50	.88	.065	.62	.027			12.5	41.3	9.08	18.9	5.43	5.41	3.79	2.25	2.42	.766	1.80	.372	1.40	.199
55 60	.973 1.06	.078 .091	.676 .74	.032			13.7 15.0	49.2 57.8	10.0 10.9	32.0 26.5	5.98 6.52	6.44 7.61	4.16 4.54	2.68 3.16	2.67 2.92	.912 1.07	1.99 2.17	.443 .522	1.53 1.67	.237 .279
65	1.15	.106	.80	.044			16.1	67.0	11.8	30.7	7.06	8.84	4.92	3.66	3.14	1.25	2.35	.604	1.81	.323
70 75	1.23 1.33	.121 .138	.86 .923	.051 .057			17.5 18.8	77.1 87.4	12.7 13.6	35.3 40.1	7.61 8.15	10.1 11.5	5.30 5.68	4.20 4.79	3.39 3.64	1.43 1.62	2.53 2.70	.691 .787	1.95 2.08	.371 .421
80	1.41	.155	.98	.065			20.0	98.2	14.5	45.2	8.69	12.9	6.05	5.36	3.88	1.83	2.89	.888	2.23	.475
85 90	1.50 1.59	.174 .193	1.04 1.11	.072 .080			21.2 22.5	110 122	15.4 16.3	50.3 55.9	9.03 9.78	14.5 16.1	6.43 6.81	6.02 6.53	4.10 4.33	2.04	3.05 3.25	.992 1.10	2.34 2.51	.531
95	1.67	.213	1.20	.089					17.2	62.0	10.3	17.8	7.19	7.38	4.57	2.51	3.42	1.21	2.64	.652
100 110	1.76 1.95	.234 .279	1.23 1.36	.098 .117					18.2 20.0	68.2 81.3	10.9 12.0	19.6 23.4	7.57 8.33	8.13 9.68	4.85 5.33	2.76 3.29	3.67 3.97	1.34 1.60	2.79 3.07	.719 .855
120	2.11	.329	1.48	.137	8" F	PIPE			21.8	95.4	13.0	27.4	9.08	11.4	5.80	3.87	4.33	1.88	3.35	1.00
130 140	2.3 2.47	.381 .437	1.60 1.72	.159 .182		.047			23.6 25.4	111 127	14.1 15.2	31.8 36.5	9.84 10.6	13.2 15.1	6.30 6.80	4.48 5.12	4.69 5.05	2.18 2.50	3.63 3.91	1.16 1.33
150	2.65	.496	1.85	.207	1.05	.054					16.3	41.5	11.3	17.2	7.27	5.87	5.41	2.84	4.19	1.52
160 170	2.82 3.0	.559 .626	1.97 2.08	.234 .261	1.12 1.19	.059 .067					17.4 18.5	46.7 52.2	12.1 12.9	19.4 21.7	7.75 8.20	6.58 7.37	5.78 6.14	3.20 3.58	4.47 4.75	1.71 1.91
180	3.16	.696	2.22	.290	1.26	.074					19.6	58.3	13.6	24.1	8.60	8.18	6.50	3.97	5.02	2.12
190 200	3.36 3.52	.769 .846	2.34 2.46	.321 .353	1.33 1.41	.082 .091					20.6 21.7	64.4 70.5	14.4 15.1	26.6 29.3	9.20 9.70	9.05 9.96	6.85 7.22	4.39 4.84	5.30 5.58	2.35 2.58
220	3.88	1.01	2.71	.421	1.55	.108					23.9	84.1	16.7	34.9	10.6	11.9	7.94	5.78	6.14	3.08
240 260	4.23 4.58	1.18 1.37	2.96 3.20	.484 .573	1.69 1.83	.126 .147					26.1 28.3	98.7 115	18.2 19.7	41.0 47.5	11.6 12.6	13.9 16.2	8.66 9.38	6.77 7.85	6.70 7.26	3.62 4.19
280	4.94	1.57	3.45	.658	1.97	.168							21.2	54.5	13.5	18.6	10.1	9.02	7.82	4.79
300 320	5.29 5.64	1.79 2.01	3.69 3.94	.747 .841	2.11 2.24	.191 .215							22.7 24.2	62.0 69.9	14.4 15.5	21.1 23.7	10.8 11.5	10.2 11.5	8.38 8.94	5.45 6.16
340	5.99	2.26	4.19	.940	2.39	.240							25.8	78.2	16.3	26.6	12.3	12.9	9.50	6.91
360 380	6.35 6.70	2.51 2.77	4.43 4.68	1.05 1.16	2.64 2.68	.261 .295							27.2 28.8	86.9 96.1	17.4 18.6	29.5 32.6	13.0 13.7	14.3 15.8	10.0 10.6	7.66 8.46
400	7.05	3.05	4.93	1.27	2.81	.325							30.3	106	19.4	35.9	14.4	17.4	11.2	9.31
450 500	7.95 8.82	3.79 4.61	5.54 6.16	1.58 1.92	3.16 3.51	.404 .493									21.8 23.2	44.6 54.1	16.2 18.1	21.6 26.3	12.5 14.0	11.6 14.1
550	9.70	5.50	6.77	2.29	3.86	.587									26.5	64.9	19.9	31.4	15.3	16.8
600 650	10.6 11.5	6.44 7.47	7.39 8.00	2.69 3.12	4.22 4.57	.686 .799									29.1	76.1	21.7 23.5	36.9 42.8	16.7 18.1	19.7 22.9
700	12.3	8.60	8.63	3.58	4.92	.916											25.3	48.9	19.5	26.2
750 800	13.2 14.1	9.77 11.0	9.24 9.85	4.07 4.58	5.27 5.62	1.04 1.17											27.1 28.9	55.9 61.6	20.9 22.3	29.8 33.6
B50	15.0	12.3	10.5	5.12	5.97	1.31											30.7	70.5	23.7	37.6
900 950	15.9 16.7	13.7 15.1	11.1 11.7	5.69 6.29	6.32 6.67	1.46 1.61													25.1	41.8
000	17.6	16.6	12.3	6.91	7.03	1.77														
100	19.4 21.1	19.8 23.3	13.5 14.8	8.27 9.73	7.83 8.43	2.11 2.48														
300					9.13	2.87														
400 500					9.83 10.5	3.30 3.75														
600					11.2	4.23														
B00 D00					12.6 14.1	5.26 6.39														
200					15.5	7.80														
400					16.9	8.93														
400					16.9	8.93														

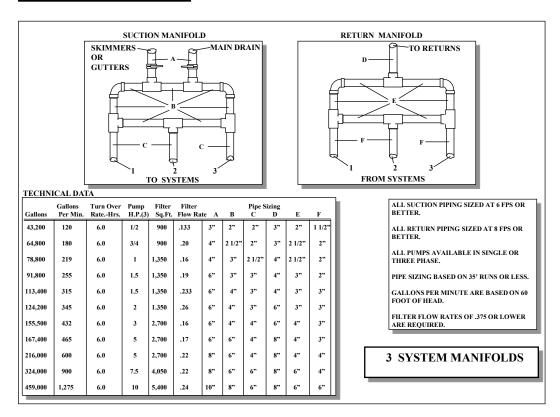
^{*} Data shown is calculated from Williams and Hazen Formula H = $\frac{3.023}{C \ 1.852}$ $\frac{V \ 1.852}{D \ 1.167}$ using C-150

For water at 60° F. Where H = head loss, V = fluid velocity ft./sec., D = diameter of pipe, ft.

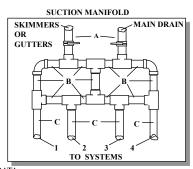
C = coefficient representing roughness of pipe interior surface.

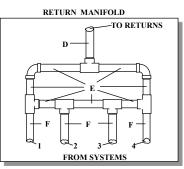
2 AND 3 SYSTEM MANIFOLDS

3 SYSTEM MANIFOLDS



3 SYSTEM MANIFOLDS

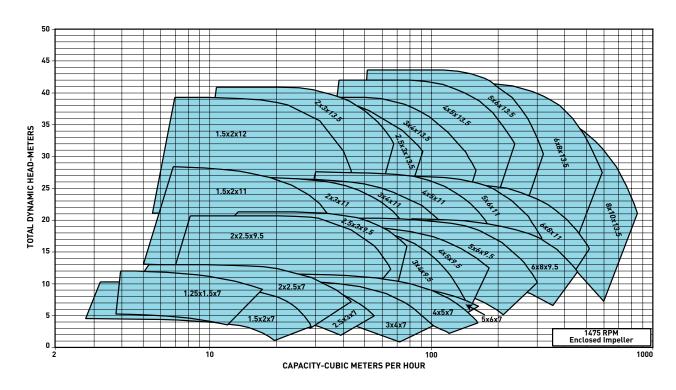




Gallons	Gallons Per Min.	Turn Over RateHrs.	Pump H.P.(4)	Filter Sq.Ft.	Filter Flow Rate	A	В	Pipe S C	izing D	E	F
57,600	160	6.0	1/2	1,200	.133	4"	2"	2"	3"	2"	2"
86,400	240	6.0	3/4	1,200	.20	4"	2 1/2"	2"	3"	3"	2"
105,120	292	6.0	1	1,800	.16	6"	3"	2 1/2"	4"	3"	2"
122,400	340	6.0	1.5	1,800	.19	6"	3"	2 1/2"	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.

AURORA 3801 SERIES PUMP SELECTIONS



For assistance in selecting the proper pump, please contact our commercial sales team or technical support.

CONVERSION REFERENCE CHARTS

- 1 U.S. Gallon/Minute = 0.22712470704 Cubic Meter/Hour
- 1 U.S. Gallon/Minute = 0.83267418463 UK Gallon/Minute
- 1 Foot of Water/Head = 0.30487804878 Meter of Water/Head
- 1 Foot of Water/Head = 0.43352750193 Pound/Square Inch

Pressure	to Head Conve	ersion
Feet of Water	Meters of Water	PSI
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

Volumetric Flow Rate Conversion										
US Gallons per Minute	Cubic Meters per Hour	British Gallons per Minute								
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								
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