



2026 Buyer's Guide & Parts Price List

Featuring Expert Line® Products



Table of Contents – Finished Goods

Pricing effective September 8, 2025. Supersedes all price lists of prior dates. Please see Terms & Conditions of Sale, inside back cover.

NEW PRODUCT BROCHURE

OmniX®	
HeatPro® MCHX Series	
ColorLogic® Vinyl & Fiberglass Bubbler	
ProApp Remote Configuration Tool	
TracJet™ Pressure Cleaner	
3-Inch Valves	
ColorLogic® Landscape Lighting	
Sense Chemistry Automation	
HCF Commercial Sand Filters	
Hayward Commercial Aquatics	

RESIDENTIAL – FINISHED GOODS

PUMPS

Regulatory Updates	3
Guide to Non DOE-Compliant Pumps and Recommended Replacement Pumps	4
TriStar® XL	5
TriStar® VS 900/950	6
TriStar® VS 800 Series with OmniX®	7
TriStar®	8
Super Pump® VS 700	9
Super Pump® VS 600 Series with OmniX®	10
Super Pump®	11
MaxFlo® VS 500	12
MaxFlo® VS 400 Series with OmniX®	13
MaxFlo® XL	14
Booster Pump	15
PowerFlo® Matrix	16
PowerFlo® LX	17
Hydraulics	18–21

FILTERS

SwimClear™ Multi-Element	22
SwimClear™ Single-Element	23
StarClear Plus	24
StarClear	25
XStream®	26
ProGrid®	27
D.E. Separation Tank	28
Perflex®	29
Perflex® System	30
ProSeries™ Plus	31
ProSeries™ Top-Mount	32
ProSeries™ Side-Mount	33
ProSeries™	34
VL Series™	35
Filtration	36

HEATING

HeatPro® VS	38
HeatPro® MCHX Series	39
HeatPro®	40
Universal HC Series	41
Universal H-Series Low NOx	42
Adapter Kit	43
Universal H-Series Indoor Vent Kit Matrix	44–45
H-Series Heaters	46
Spa Heaters	47
Heater Selection Guide	48
Heater Technical Information	49

CLEANERS

TracVac®	50
The PoolCleaner	51
R110 and R130	52
TigerShark™	53

CLEANERS (cont.)

SharkVac™ XL	54
SharkVac™	55
Navigator® V-Flex®	56
Navigator® Pro	57
PoolVac® V-Flex™	58
PoolVac™ XL	59
AquaNaut® 250/450	60
Wanda The Whale®	61
Penguin	62
AquaBug	63
PowerVac™ & SuperVac™	64
Accessories	65–66
Automatic Cleaner Hose Guide	67

AUTOMATION

Omni® Smart Pool & Spa Control	68
OmniLogic®	69
OmniPL®	70
OmniHub®	71
Omni® Accessories	72
Omni® Remotes	73
OmniPL® RetroFit Kit	74
OmniX® Accessories	75
Valve Actuators	76
AquaSolar®	77
ProLogic®/OmniPL® Replacement	
Comparison	79

SANITIZATION

HydraPure®	80
AquaRite® S3 Omni®	81
AquaRite® S3	82
AquaRite® 900	83
AquaRite® 100	84
TurboCell® S3	85
TurboCell®	86
CCELL	87
Salt & Swim®	88
Sense and Dispense®	89
Chemical Feed Pumps	90
AquaTrol®	91
Chlorinator Cell	92
Salt Facts	93
Pool Chemistry	94

LIGHTING

Universal ColorLogic® 2.0	96
Universal CrystaLogic® 2.0	97
ColorLogic® 320	98
CrystaLogic® 320	99
ColorLogic® 80	100
SmartPower® Transformer	101
Junction Boxes & Transformers	102
ColorLogic® & CrystaLogic® Accessories	103
UCL Niches	104
ColorLogic® 4.0	105
AstroLite® 120V	106
Jiffy Niche® & DuraNiche™	107
VÜ Retro Lights	108
ColorSplash® LED Spa Lights	109
ColorSplash® SwimQuip LED Pool Lights	110
ColorSplash® LED Spa Lights	111
VÜ Lights	112
PureWhite® LED Spa Lights	113
PureWhite® LED Pool Lights	114–115
ColorSplash® LED Lamps	116
PureWhite® Lamps	117
ColorGlo®	118

LIGHTING (cont.)

Gaskets	119
ColorLogic® Light Controller	120
Low Voltage Transformers	121–122
Straight Bullet Lights	124
Modern Bullet Lights	125
Contemporary Bullet Lights	126
Down Lights	127
Straight Path Lights - Lamp Included	128
Straight Path Lights - Fixture Only	129
Traditional Path Lights	130
Dome Path Lights	131
Mushroom Path Lights	132
Adjustable Base Path Lights	133
90° Path Lights	134
Bollard Path Lights	135
Surface Mount Step Lights	136
Ledge Lights	137
Deck Post Lights	138
Hanging Lights	139
Mini Flood Lights	140
Par 36 Round Up Lights	141
In-Ground Lights	142
Well Lights	143
Underwater Pond and Fountain Lights	144
Sollos® ColorSplash® Lamps	145
Sollos® Accessories	146
Sollos® Kits	147
Sollos® Lamps	148–149

WATER FEATURES

LED Water Bowls	152
LED Sheers	153
ColorLogic® Bubbler	154
ColorLogic® Laminar	155
Deck Jet 500	156
Sheer 500	157

WHITE GOODS

RDX™ Drain	158
PSV 3" Valves	159
PSV 2" Valves	160
Ball Valves	161
SelectaFlo™ Valves	162
Slide Valves	163
VariFlo® Valves	164
Chemical Feeders	165
JetAir	166
JetAir III	167
Turbo-Boost	168
Auto-Skim	169
Wide Track Auto-Skim™	170
Dyna-Skim	171
SkimMaster®	172
Spa Skimmer	173
Spa Blowers	174
Suction Outlets	175–176
SDX2 High Flow Safety Drain	177
Connection Fittings and Unions	178–179
Fittings and Accessories	180–181

COMMERCIAL PRODUCTS

Commercial Aquatics Product Portfolio	183–294
---------------------------------------	---------

RESIDENTIAL – REPLACEMENT PARTS

See separate Table of Contents	295–480
--------------------------------	---------

The List Prices shown do not necessarily represent the prices that products are sold for to retail customers.

Abbreviations: FIP – Female Iron Pipe Size; SKT – Socket (Solvent Weld - Female) Connection; MIP – Male Iron Pipe Size; SLIP – Male Pipe Stub (Solvent Weld – Male) Connection



2026 New Products

Featuring Expert Line® Products





Explore our cutting-edge products, informative articles, and helpful resources—all in one place. Scan the QR code or visit www.hayward.com now and experience the Hayward difference firsthand.

EXPERT LINE*



NOT SOLD ONLINE



3+ YEAR PARTS & LABOR WARRANTIES*

*When sold by a Totally Hayward® Partner. Exclusions, other terms and conditions may apply—visit [hayward.com](https://www.hayward.com) for details.



WELCOME TO HAYWARD'S 2026 BUYER'S GUIDE.

Inside these pages, you'll discover what makes a Hayward pool a better pool—where innovation, reliability, and sustainability come together to elevate every aquatic experience.

Our full line of residential and commercial equipment includes energy-efficient pumps, advanced filtration systems, cutting-edge heating technology, cleaners, LED lighting, and water features. They are all designed to deliver you superior performance and long-term value.

And now, you can take control like never before with OmniX®, our all-in-one wireless automation system that brings intelligence and convenience to the aftermarket.

For commercial operations, our flagship products are engineered to help every pool perform at its absolute best. From industry-leading energy efficiency that reduces power consumption and extends equipment life, to intuitive chemistry control and sanitization systems—including salt and UV solutions—Hayward delivers optimal water quality, safety, and peace of mind.

At the heart of our products is a team of passionate professionals dedicated to helping pool pros deliver exceptional environments. Whether you're designing a backyard retreat or managing a large-scale aquatic facility, Hayward provides the technology and support to help you succeed.

With over a century of engineering excellence, Hayward continues to lead the way in pool innovation and smart outdoor living. Every product we offer is backed by our mission: to deliver superior performance, outstanding service, and cutting-edge technology that transforms the experience of water.

NEWEST INNOVATION FOR EXISTING POOLS.



LEARN MORE
OmniX App &
Accessories



AUTOMATION FOR THE AFTERMARKET.

OmniX brings seamless wireless automation to existing pools, putting control at your fingertips. Effortlessly manage your pool equipment, set schedules, monitor water temperature, and more—all from your smartphone.



Optional in-home Gateway connects pool equipment to the home network.



Enables away-from-home control and monitoring.



Powerful sub-GHz link provides robust connectivity.

CONTROL IT ALL WITH THE NEW OMNI X APP.



PERFECT DEGREE OF COMFORT.

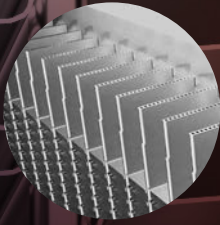
HEATPRO® MCHX SERIES: HEAT AND HEAT+CHILL PUMPS

Hayward continues its position as the industry leader in innovation with the introduction of the new HeatPro Series of electric heat pumps that utilize industry-first microchannel technology engineered to get your pool water to the perfect temperature.

If you are looking to warm your water to extend swim season, cool your water in warm or arid climate conditions, or chill your water down to 40°F for a cold plunge, we have the ideal lineup including three heat only options and three heat+chill options.

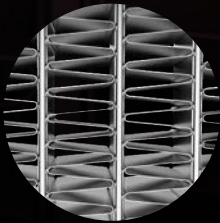


Scan the QR code
to learn more about
Better Heating



BEST-IN-CLASS CORROSION RESISTANCE.

TCP coating developed by Naval Air Command for durability in the harshest climates.



ROBUST COIL STRUCTURE.

Protects against fin damage during installation and outdoor impacts.



CHILLS DOWN TO 40°F FOR COLD PLUNGES

Chills to low temperatures so you can get all the benefits out of your next cold plunge.*



COOLS FOR PERFECT TEMPERATURE

Ideal for warm or desert climates with 30% increased cooling capacity compared to competitive technology.*



WARMS TO EXTEND SWIM SEASON

Extend swim season with improved heating capacity below 50°F using our patent pending defrost algorithm.

*Only available on Heat+Chill models.

UNWIND BETTER.

Scan the QR code
to learn more about
Better Water Features



COLORLOGIC® VINYL & FIBERGLASS BUBBLER: BUBBLING WITH FEATURES

ColorLogic Vinyl & Fiberglass Bubbler creates a cascading column of water and ensures the ultimate backyard ambiance when paired with Hayward's ColorLogic lighting. Simple to install with a minimal required foot-print and flush-to-surface design.

- » Compatible with Vinyl and Fiberglass applications.
- » Seamlessly integrates into the pool floor.
- » Multiple nozzles offer easily adjustable water heights and widths.
- » Multiple Color Trim Options Available (White, Light Gray & Dark Gray).



UNLOCK OMNI[®] FROM ANYWHERE.

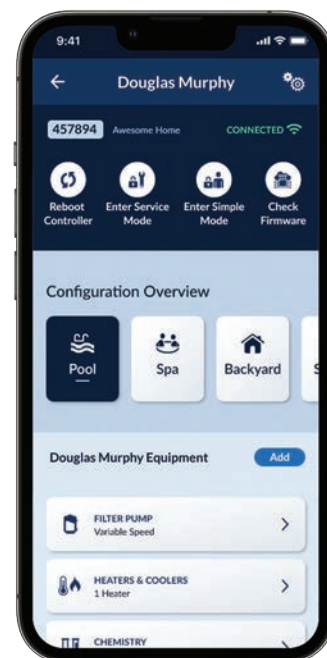
Scan the QR code
to learn more about
Hayward ProApp



PROAPP REMOTE CONFIGURATION TOOL

The ProApp is designed for pool professionals to support remote access to Omni systems. Take back hours each week by configuring controls, creating from saved templates and troubleshooting from **ANYWHERE**.

Long gone are the days of standing outside in the blistering heat to setup Omni Controls at a pool pad. The ProApp gives you the freedom to work from your truck, home, or office. Maximize your response time by servicing additional customers or enjoy more moments with your family. The ProApp is here to help you enhance your business!



Mobile phone not included.

PUT THE PRESSURE ON DEBRIS.



TRACJET™

PRESSURE POOL CLEANER

Powered by your pool's pressure port, the Hayward TracJet is engineered with features that will give your pool an intensive clean. Modernized design constructed with thoughtful updates, bigger tracks and an optimized navigation allow your cleaner to maneuver over tough obstacles in a shorter amount of time.

INDUSTRY-FIRST TRUE 3-INCH VALVE.

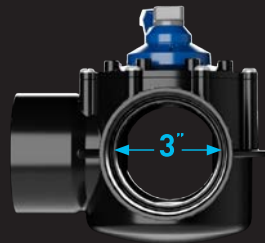
3-INCH VALVES: 3-WAY, 2-WAY & CHECK VALVES

Introducing the ultimate solution for efficient flow control. Engineered to minimize headloss while delivering impressive flow rates of up to 230 GPM, these valves are designed to set new standards in performance and reliability. This family of diverter valves delivers 3-way, 2-way, and check valve options for flexibility across projects.

- » Robust ergonomically-designed handle with adjustable common with clear closed port indication.
- » Eliminating couplings, it reduces cost along with the number of glue joints for less failure points and a cleaner installation overall.
- » All components are made of corrosion resistant materials allowing for proper function over an extended life.



Industry-first family
of 3" diverter valves to
cover all of your needs.



Lower Headloss
up to 230gpm vs.
Jandy at 170gpm*.



**Industrial, High-
Performance Seal**
for superior chemical
resistance for
long-term durability.



**Clear Closed
Port Indication**
for easy-to-identify
flow management.

*Based on independent third party testing data.



IT'S YOUR LANDSCAPE'S TIME TO SHINE.

COLORLOGIC® LANDSCAPE LIGHTING ENHANCE THE BEAUTY OF ANY OUTDOOR SPACE

Select Bullet and Pathway Landscape Lighting now features Hayward's advanced ColorLogic technology, delivering vivid, energy-efficient illumination to any outdoor space. Powered by 5-in-1 software, these fixtures seamlessly integrate with Hayward OmniDirect™ as well as other competitive control systems, offering unmatched flexibility. Highlight your best features and expand beyond the pool with ColorLogic Landscape lighting.



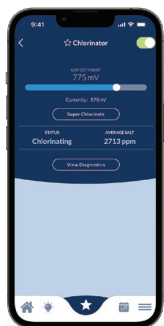


SmartPad™

BETTER
CHEMISTRY.

SENSE CHEMISTRY AUTOMATION

Maintaining proper water chemistry is essential to the longevity of your pool and equipment. Hayward Sense delivers continuous, real-time monitoring of pH and ORP levels, intelligently adjusting your salt system and pH dispense to maintain optimal conditions.



SENSE AND OMNI® HAVE GREAT CHEMISTRY.

Sense connects seamlessly to Hayward automation systems like Omni allowing homeowners to monitor chlorine levels right from the palm of their hand. For pool professionals using the Hayward Pro App, Sense delivers real-time water chemistry insights through one centralized dashboard to streamline setup, monitoring and service.

Mobile phone not included.



Scan the QR code
to learn more about
Better Commercial



HCF COMMERCIAL SAND FILTERS: HIGH-PERFORMANCE FILTRATION ENGINEERED TO STAND THE TEST OF TIME.

Built for efficiency and durability, our commercial sand filters are available in two finishes and seven different sizes.

Laminated Sand Filters are available in 30-, 34- and 36-inch options and feature UV-protected gel coat. Bobbin Wound Sand Filters are available in 42-, 48-, 55- and 63-inch options and are manufactured from heavy-duty filament wound fiberglass. Hayward commercial filters are backed by a powerful 5-year warranty.



LAMINATED

BOBBIN WOUND



INNOVATION MADE EASY.

Hayward Commercial Aquatics offers a full range of industry-leading innovative products designed to work together as one total system to help every commercial pool perform at its absolute best. Our products set the technological standard while providing unmatched performance, efficiency, reliability, versatility and ease of operation.

To see our innovation in action, look no further than the superior energy efficiency of a number of our flagship products that reduces power consumption, extend operational lifespan and delivers significant savings for your commercial operation. Or, consider our leading chemistry control and sanitization systems with intuitive salt and UV secondary and supplemental sanitization solutions that provide optimal water quality and safety for pools of all shapes and sizes—and optimal peace of mind for those who manage them.

Our innovative products are delivered to you with speed and ease, backed by industry leading warranties and a top-tier support team. Our Commercial Aquatics team is dedicated to providing builders, servicers and pool designers with the tools and personalized support they need to stay at the forefront of commercial pool technology.

INDUSTRY'S MOST ADVANCED AUTOMATED WATER QUALITY SOLUTION.

The absolute best water quality solution is the combination of the HydroRite® UV, the Saline C® series salt chlorine generator and the CAT 5500® controller. The combination will not only provide the most efficient, cleanest and safest pool water, it will reduce operational costs and make operating a commercial pool as maintenance free as possible.



HYDRORITE® UV



SALINE C® 2.0



CAT 5500®

BUILDING BETTER SINCE 1925.

» hayward.com » 1-800-HAYWARD

Pumps » Filters » Heaters » Sanitization » Automation » Lighting » Water Features » Cleaners » White Goods

Hayward, Hayward & Design, the H logo, Expert Line, Totally Hayward, Hayward We Build Better, CAT 5500, ColorLogic, HeatPro, HydroRite, Omni, OmniDirect, OmniX, Saline C, TracJet and We Build Better. are registered trademarks of Hayward Industries, Inc. All other trademarks not owned by Hayward are the property of their respective owners. Hayward is not in any way affiliated with or endorsed by those third parties. ©2025 Hayward Industries, Inc.

LITNP26



2026 FINISHED GOODS

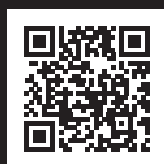


FLEXES BETTER.

The TriStar® XL is a game changer for large residential pools, feature-rich pools or complex pool pad configurations. Engineered for performance and versatility, the TriStar XL delivers increased flow from extra-large 2.5" × 3" unions, the removable strainer housing allows for more adaptable pump configurations, and the oversized strainer basket reduces cleaning and maintenance.

POWERFUL DESIGN. VERSATILE PERFORMANCE.

TRISTAR XL® HIGH PERFORMANCE
VARIABLE-SPEED PUMP



Scan QR code
to learn more.



Hayward, Hayward & Design, the H logo, TriStar, Hayward We Build Better, and We Build Better, are registered trademarks of Hayward Industries, Inc. ENERGY STAR is a registered mark owned by the U.S. government. ©2025 Hayward Industries, Inc.

 **HAYWARD®**
We Build Better.®

UPCOMING DOE REGULATORY CHANGES – “MOTOR RULE”(2025/2027) FAQs FOR POOL PROFESSIONALS

Q: WHAT IS THE DEDICATED PURPOSE POOL PUMP MOTOR RULE (DPPPM)?

A: The DPPPM rule, which was published in September 2023, is an upcoming Department of Energy regulation that applies to dedicated pool pump motors which specifies performance and/or design requirements based on Total Horsepower (THP) thresholds.

Q: DOES THE DPPPM RULE JUST AFFECT SPARE MOTORS OR DOES IT AFFECT COMPLETE PUMP ASSEMBLIES TOO?

A: The DPPPM Rule affects BOTH spare motors AND complete pumps.

Q: WHAT ARE THE TOTAL HORSEPOWER THRESHOLDS AND DESIGN REQUIREMENTS?

A: The DOE DPPPM Rule defines the requirements for the following THP classes:

Motor THP	Design Requirement
THP less than 0.5	69% Full-load efficiency (single or variable speed)
$0.5 \leq \text{THP} < 1.15$	Must have variable speed motor control
$1.15 \leq \text{THP} \leq 5$	Must have variable speed motor control

Q: WHEN DOES THIS NEW DPPM MOTOR RULE TAKE EFFECT?

A: The new rule takes effect in two phases based on THP:

DOE DPPPM Phase	Motor THP	DOE DPPPM Effectivity Date
Phase 1	THP less than 0.5 $1.15 \leq \text{THP} \leq 5$	September 29, 2025
Phase 2	$0.5 \leq \text{THP} < 1.15$	September 28, 2027

Q: CAN I SELL AND/OR INSTALL PUMPS AND MOTORS AFTER THE EFFECTIVE DATE IF THEY WERE MANUFACTURED BEFORE IT?

A: Yes, the new DOE regulations only affect products **manufactured** on or after the effective dates (September 29, 2025/September 28, 2027). Pool builders, pool servicers and pool stores may still sell and install pumps and motors which do not meet the new rule as long as they were manufactured prior to the effective date.

Q: WHAT ABOUT PUMPS AND MOTORS I HAVE PREVIOUSLY SOLD OR INSTALLED?

A: Previously sold or installed pumps and motors are not subject to the new DOE regulations. Equipment already in service does not need to be replaced to meet the new rule.

Q: WHAT ELSE DO I NEED TO KNOW ABOUT THE NEW DOE REGULATIONS?

A: While non-compliant pumps or motors can no longer be manufactured after their respective effectivity dates, there are already plenty of compliant models that ensure you can continue business as usual:

- " All Hayward Variable Speed and XE Ultra-High Efficiency pumps are **compliant beyond 2027**
- " Includes all VS & XE power-ends which can be used to replace worn out single-speed motors
- " Many Hayward high efficiency single-speed pumps are **still compliant though September 28th, 2027**:
 - " 1.1 THP and smaller Hayward Super Pump® models
 - " 1.1 THP and smaller Hayward MaxFlo® XL models
 - " 1.1 THP TriStar®
- " Most above-ground pumps and pressure cleaner booster pumps will remain single-speed

GUIDE TO NON DOE-COMPLIANT PUMPS AND RECOMMENDED REPLACEMENT PUMPS

EFFECTIVE JULY 19, 2021

The U.S. Department of Energy (DOE) has developed new energy-efficiency standards for pool pumps manufactured on or after July 19, 2021. For more information, visit hayward.com/regulations. Below is a list of SKUs that will not meet the DOE requirements and their recommended replacement. Recommendations are based on the closest match of performance (flow) where possible and may not match exactly.*

NON DOE-COMPLIANT PUMPS		RECOMMENDED DOE-COMPLIANT REPLACEMENTS	
PUMP NAME	NON COMPLIANT SKU	COMPLIANT SKU	PUMP NAME
MaxFlo® XL	SP2310X15	VSP23415	MaxFlo® VS 400 Series
	SP2310X152		
	SP2315X20	VSP23420	
	SP2315X202		
Super Pump®	SP2610X15	VSP26615	Super Pump® VS 600 Series
	SP2610X152S		
	SP2670010X15		
	SP2615X20	VSP26620	
	SP2615X202S		
	SP2621X25		
Super II	SP3005X7AZ	SP3200X10	TriStar®
	SP3007EECA		
	SP3007X10AZ		
	SP3007X10AZ2		
	SP3010EEAZ	VSP32810	TriStar® VS 800 Series
	SP3010X152AZ		
	SP3010X15AZ		
	SP3015EEAZ	VSP32815	
	SP3015X202AZ		
	SP3015X20AZ		
	SP3020EEAZ	VSP32820	
	SP3020X25AZ		
	SP3025EEAZ	SP32950VSP	TriStar® VS
	SP3025X30AZ		
TriStar®	SP3205X7	SP3200X10	TriStar®
	SP3207EE	VSP32810	TriStar® VS 800 Series
	SP3207X10		
	SP32102EE		
	SP3210EE	VSP32815	
	SP3210X15		
	SP3210X152		
	SP32152EE	VSP32820	
	SP3215EE		
	SP3215X20		
	SP3215X202	SP32950VSP	TriStar® VS
	SP32202EE		
	SP3220EE		
	SP3220X25		
	SP3220X252	SP3250EE	TriStar®
	SP3225X30		
	SP3230EE		

*List subject to change. All models may not be listed.
For more information, contact your Hayward sales rep.

Hayward, Hayward & Design, the H logo, MaxFlo, MaxFlo VS, Super Pump, TriStar, Hayward We Build Better. and We Build Better. are registered trademarks and Super II is a trademark of Hayward Industries, Inc. ©2025 Hayward Industries, Inc.

Powerful Design. Versatile Performance. The TriStar XL is a game changer for large residential pools, feature-rich pools or complex pool pad configurations. Engineered for performance and versatility, the TriStar XL delivers increased flow from extra-large 3" unions, the removable strainer housing allows for more adaptable pump configurations, and the oversized strainer basket reduces cleaning and maintenance.

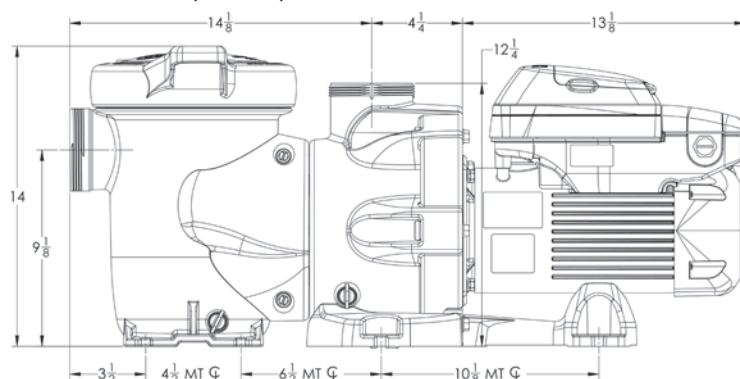
Features and Benefits

- Versatile strainer housing and motor can be plumbed separate for complex pool pad configurations (Flange Kit sold separately)
- Removable, oversized strainer basket for reduced cleaning and maintenance
- Increased flow from included 3" unions
- 2.5" x 3" unions for easy drop-in replacement
- WEF 9.9 rating that blows the competition out of the water
- Easy pump control from digital touchscreen interface
- Remote pump control with Omni® automation to manage speed, scheduling and more
- Digital control interface that can be rotated or wall-mounted
- Totally enclosed fan-cooled (TEFC) motor maximizes energy efficiency
- Chemical-resistant Viton® seal for long-term durability
- ENERGY STAR approved – may be eligible for local utility rebates
- 4-year warranty

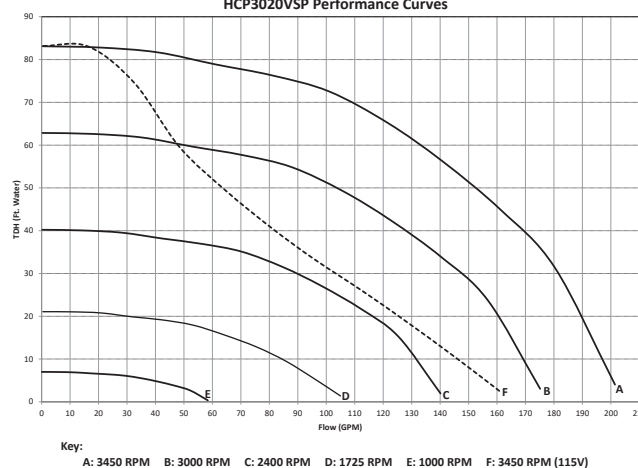


HCP3020VSP

Overall Dimensions (inches)



HCP3020VSP Performance Curves



Specifications

SKU	DOE Compliant	Motor Type	Amp Rating	Plumbing Connection	Total HP	Voltage at 60 Hz	WEF	Ctn. Weight (lbs.)
HCP3020VSP	Yes	TEFC	10.2 / 12.2	2-1/2" x 3" Union	2.7	230/115	7.2 / 10.0	75

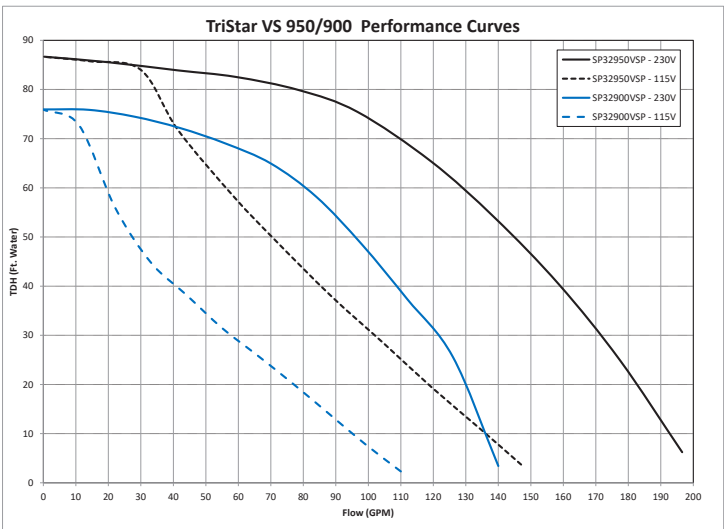
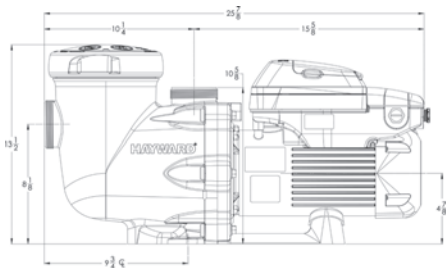
TriStar® VS 900/950

Pumps



HL32900VSP

Overall Dimensions (inches)



Hayward® TriStar VS ultra-high efficiency pool pumps are the most efficient pumps in their class. The 900 and 950 models go even further, offering unique features such as a Viton® pump seal and extended warranties. Tests prove they can save pool owners up to 90% on energy costs compared to single-speed pumps. Hayward® TriStar VS ultra-high efficiency pool pumps are the most efficient pumps in their class. The 900 and 950 models go even further, offering unique features such as a Viton® pump seal and extended warranties. Tests prove they can save pool owners up to 90% on energy costs compared to single-speed pumps. TriStar VS 900 & 950 can be purchased as stand alone pumps or bundled with a Hayward OmniHub controller, see below for model numbers.

Features and Benefits

- Extended-life Viton pump seal for improved resistance against chemical imbalances
- Best-in-class energy efficiency via industry leading hydraulic design plus super-efficient permanent magnet motor saves up to \$1,500* in energy costs year after year
- Easily installed in all applications: in standalone mode, with Hayward automation systems or with competitors' systems via relay control
- Fully programmable and rotatable digital interface with up to 8 custom timer functions
- Second base included to align with Pentair® WhisperFlo® for simple retrofit upgrades
- A separate base is also available (SPX3200SR) to align with Sta-Rite®, Max-E-Pro®, Max-E-Glas® or Dura-Glas®
- Speed Range: 600-3450 RPM

NOTE: *Savings compared to a single speed pump running 12 hours per day, on a 20,000 gallon pool, at an average electrical rate of \$0.15/kWh. Actual savings may vary based on comparison pump model, hours of operation, electrical rate and other hydraulic aspects such as plumbing size and length.

Specifications

SKU	DOE Compliant	Motor Type	Amp Rating	Plumbing Connection	Total HP	Voltage at 60 Hz	WEF	Ctn. Weight (lbs.)
HL32900VSP	Yes	TEFC	7.4 / 7.2	2"x 2-1/2" Union	1.85	230/115	8.3 / 12.9	62
HL32950VSP	Yes	TEFC	10.2 / 12.2	2"x 2-1/2" Union	2.7	230/115	7.3 / 10.1	77
SP32900VSP	Yes	TEFC	7.4 / 7.2	2"x 2-1/2" Union	1.85	230/115	8.3 / 12.9	56
SP32950VSP	Yes	TEFC	10.2 / 12.2	2"x 2-1/2" Union	2.7	230/115	7.3 / 10.1	62

TriStar® VS 800 Series with OmniX®

Hayward continues its position as the industry-leader in innovation with the introduction of the Hayward 800, 600, and 400 VS Series pumps with on-board automation using the all new Hayward OmniX mobile app. This lineup is the best drop-in replacement with an elevated experience through improved feature set and usability.

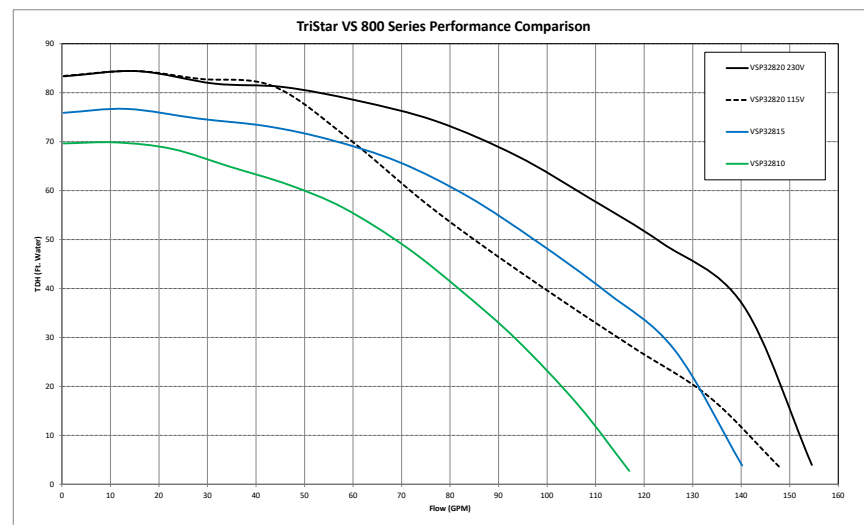
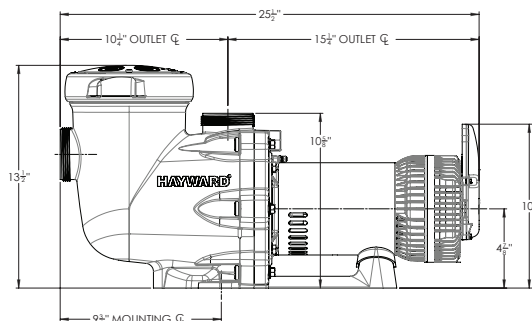
Features and Benefits

- Simple and intuitive wireless connectivity for complete control
- Fully configurable including time-of-day based schedules, true variable speed operation, and water temperature monitoring
- Control from anywhere when used with the optional OmniX Gateway accessory (sold separately)
- OmniX equipment ecosystem connects compatible devices seamlessly without a centralized controller
- Convenient user & account management tools built into the OmniX app for homeowners and pool professionals
- Backed by a 3-year warranty
- Agency listings include: ENERGY STAR, Department of Energy, NSF and UL



VSP32810

Overall Dimensions (inches)



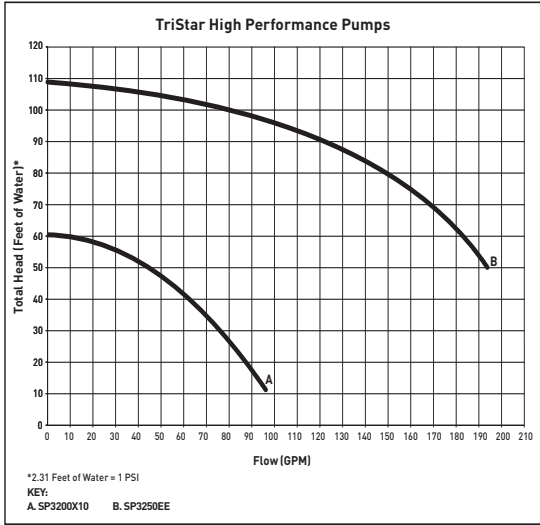
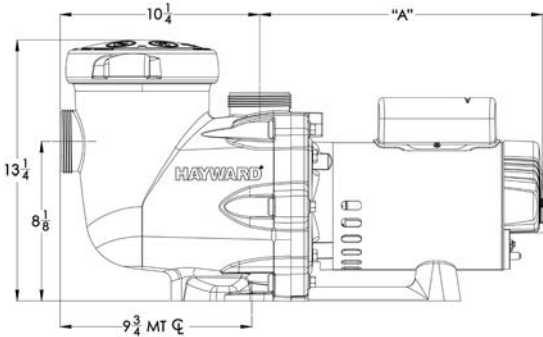
Specifications

SKU	DOE Compliant	Motor Type	Amp Rating	Plumbing Connection	Total HP	Voltage at 60 Hz	WEF	Ctn. Weight (lbs.)
VSP32810	Yes	ODP	8.7 / 15.2	2" x 2-1/2" Union	1.25	230/115	9.1 / 9.1	41
VSP32815	Yes	ODP	10.9 / 19.9	2" x 2-1/2" Union	1.85	230/115	8.5 / 8.5	41
VSP32820	Yes	ODP	14.2 / 19.9	2" x 2-1/2" Union	2.25	230/115	9.0 / 7.4	41



SP3200X10

Overall Dimensions (inches)



The TriStar Pump from Hayward® features the industry’s most energy efficient hydraulics. Easy to install, service and maintain, TriStar outperforms the competition when it comes to flow, efficiency and value. It’s the first to feature a large, no-rib strainer basket design that’s quick and easy to clean.

Features and Benefits

- Higher flow rates can allow for stepping down in pump horsepower compared to less efficient pump models
- 2"x 2 1/2" union connections make installation and servicing fast and easy
- No-rib basket design insures easy debris removal. Extra leaf-holding capacity extends time between cleanings
- Pressure testable to 50 psi maximum
- Self-priming up to 10' above water level

Specifications

SKU	DOE Compliant	Motor Type	Amp Rating	Plumbing Connection	Total HP	Voltage at 60 Hz	WEF	Ctn. Weight (lbs.)
SP3200X10	Yes	ODP	6.5-6.0 / 12	2"x 2-1/2" Union	1.1	208-230/115	4.0	48
SP3250EE	N/A	ODP	23.2 - 21.8	2"x 2-1/2" Union	5.1	208/230	1.7	67

Super Pump® VS 700

Super Pump® VS 700 is a simple drop-in upgrade for Super Pump single-speed pumps up to 1.5 HP. Built with dual voltage capability, it offers the savings of a VS pump without requiring costly rewiring. Built with a chemical-resistant Viton® seal and accompanied by a 3-year extended warranty, Super Pump VS 700 offers powerful protection for years of reliable performance.

Hayward® VS Omni ultra-high efficiency pumps provide next generation energy efficiency plus smart control of the entire pad including pumps, heaters, lighting, salt systems, cleaners, water features, and spa settings. Each model is supplied with everything needed to install smart pool control: VS Control Pad, Hub, and a Smart Relay. Up to two additional Smart Relays can be purchased for even more control.

Features and Benefits

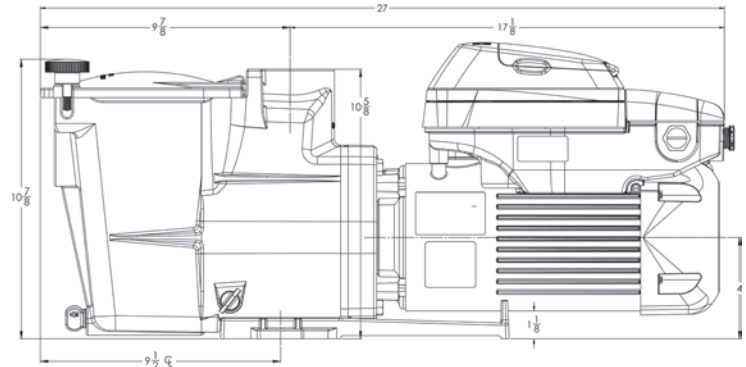
- Delivers up to 80% energy savings*
- Fast and easy installation for both existing and new pools
- Dual-voltage motor drive maintains optimal operating efficiency for long-lasting performance
- Advanced, chemical-resistant Viton seal enhances durability in all environments
- VS Omni model provides smartphone control for the entire pad
- Up to two additional Smart Relays (HLH485RELAY) can be added for even more control options
- Speed Range: 600-3450 RPM

NOTE: *Actual savings may vary based on comparison pump model, hours of operation, electrical rate and other hydraulic aspects such as plumbing size and length.

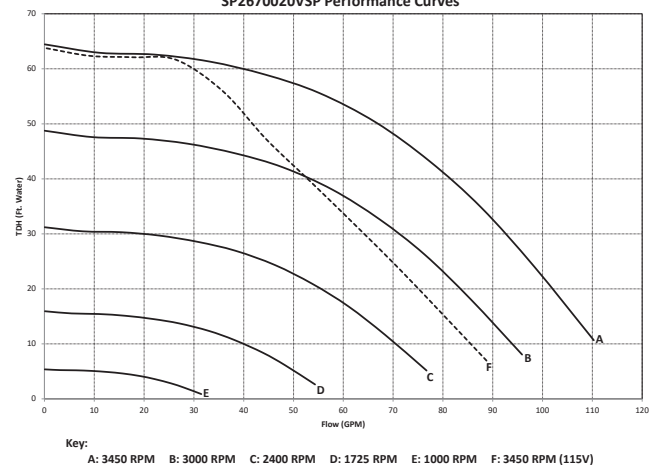


HL2670020VSP

Overall Dimensions (inches)



SP2670020VSP Performance Curves



Specifications

SKU	DOE Compliant	Motor Type	Amp Rating	Plumbing Connection	Total HP	Voltage at 60 Hz	WEF	Ctn. Weight (lbs.)
HL2670020VSP	Yes	TEFC	6.5 / 7.2	2" NPT(F)	1.65	230/115	8.6 / 11.7	62
SP2670020VSP	Yes	TEFC	6.5 / 7.2	2" NPT(F)	1.65	230/115	8.6 / 11.7	56

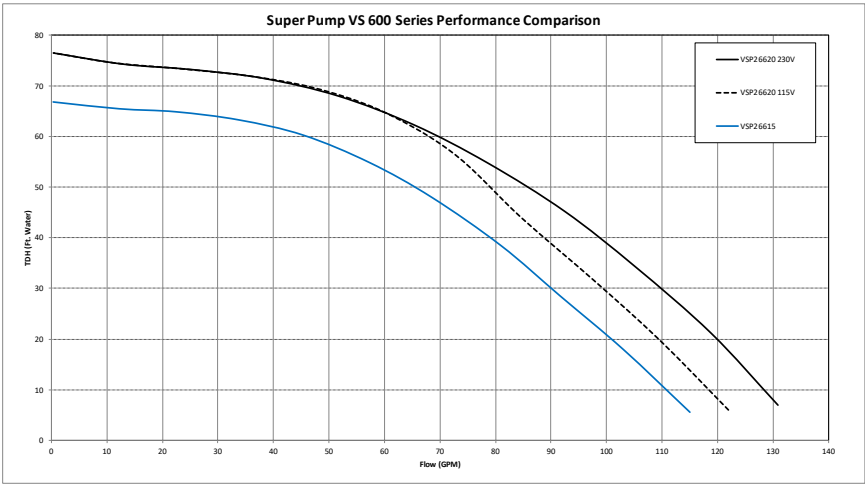
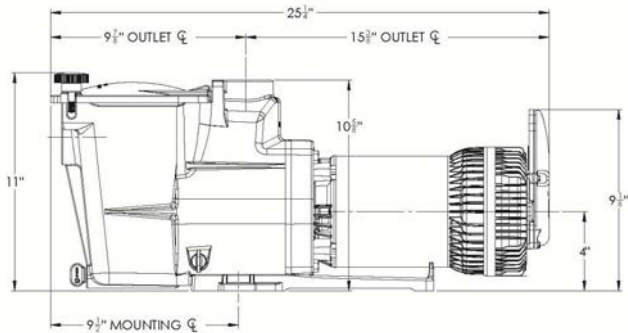
Super Pump® VS 600 Series with OmniX®

Pumps



VSP26615

Overall Dimensions (inches)



Hayward continues its position as the industry-leader in innovation with the introduction of the Hayward 800, 600, and 400 VS Series pumps with on-board automation using the all new Hayward OmniX mobile app. This lineup is the best drop-in replacement with an elevated experience through improved feature set and usability.

Features and Benefits

- Simple and intuitive wireless connectivity for complete control
- Fully configurable including time-of-day based schedules, true variable speed operation, and water temperature monitoring
- Control from anywhere when used with the optional OmniX Gateway accessory (sold separately)
- OmniX equipment ecosystem connects compatible devices seamlessly without a centralized controller
- Convenient user & account management tools built into the OmniX app for homeowners and pool professionals
- Backed by Hayward's 3-year warranty
- Agency listings include: Department of Energy, NSF and UL

Specifications

SKU	DOE Compliant	Motor Type	Amp Rating	Plumbing Connection	Total HP	Voltage at 60 Hz	WEF	Ctn. Weight (lbs.)
VSP26615	Yes	ODP	10 / 19.9	2" NPT(F)	1.65	230/115	8.5 / 8.5	34
VSP26620	Yes	ODP	14.2 / 19.9	2" NPT(F)	2.25	230/115	7.7 / 7.7	34

The Super Pump has all the quality features you expect from Hayward® – Efficient, Dependable and Proven. For aftermarket and new pool installations, the Super Pump sets the standard of excellence and value.

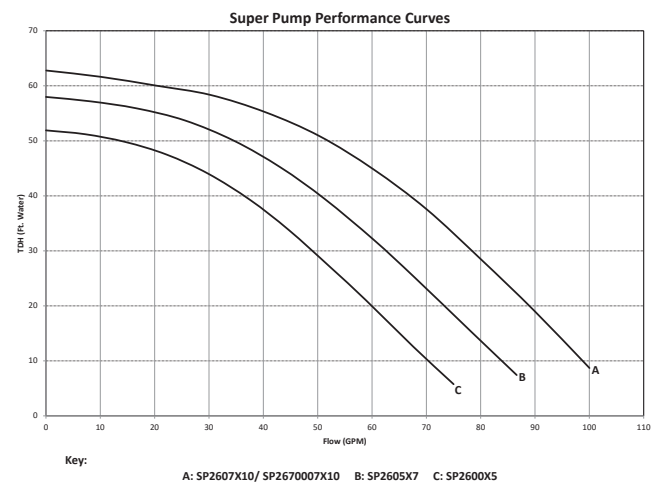
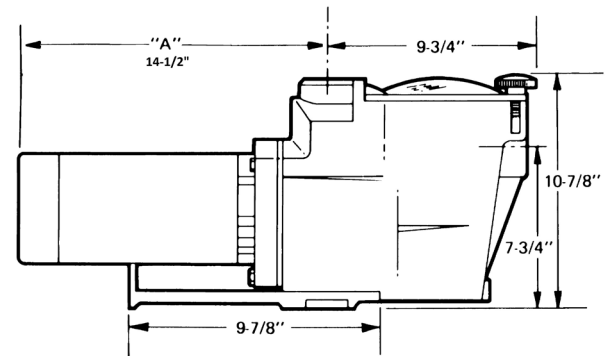
Features and Benefits

- Heavy-duty, high-performance motor for quieter, cooler operation
- Exclusive swing-away hand knobs for easier strainer cover removal: no tools required, no loose parts, no clamps
- 110-cubic-inch basket has extra leaf-holding capacity; load-extender ribbing ensures free flowing operation
- See-through strainer cover lets you see when the basket needs to be cleaned



SP2605X7

Overall Dimensions (inches)



Specifications

SKU	DOE Compliant	Motor Type	Amp Rating	Plumbing Connection	Total HP	Voltage at 60 Hz	WEF	Ctn. Weight (lbs.)
SP2605X7	Yes	ODP	4.3-4.2 / 8.4	2" NPT(F)	0.85	208-230/115	3.9	32
SP2607X10	Yes	ODP	5.6-5.1 / 10.2	2" NPT(F)	1.1	208-230/115	3.4	36

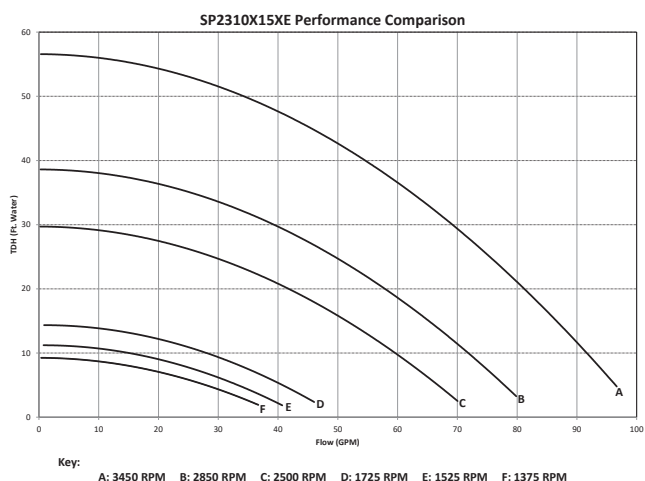
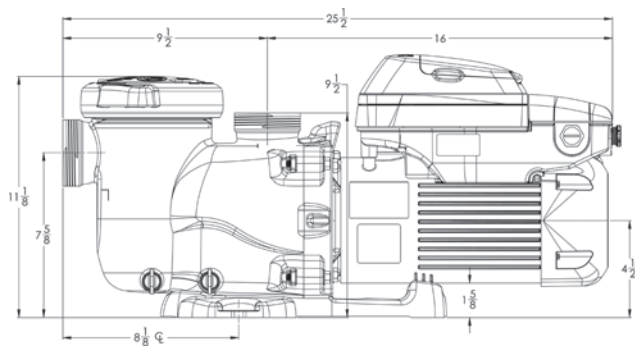
For replacement parts see pages 307–308.

MaxFlo® VS 500



HL2350020VSP

Overall Dimensions (inches)



MaxFlo VS 500 is a simple drop-in upgrade for MaxFlo models up to 1.5 H.P. It features an upgraded dual voltage motor drive that delivers significantly quieter high-speed operation while maintaining optimal operating efficiency with increased reliability and product longevity. Also, a Viton® seal for long-lasting performance.

Hayward® VS Omni ultra-high efficiency pumps provide next generation energy efficiency plus smart control of the entire pad including pumps, heaters, lighting, salt systems, cleaners, water features, and spa settings. Each model is supplied with everything needed to install smart pool control: VS Control Pad, Hub, and a Smart Relay. Up to two additional Smart Relays can be purchased for even more control.

Features and Benefits

- Delivers up to 80% energy savings*
- Dual-voltage motor drive maintains optimal operating efficiency for long-lasting performance
- Advanced, chemical-resistant Viton seal enhances durability in all environments
- VS Omni model provides smartphone control for the entire pad
- Up to two additional Smart Relays (HLH485RELAY) can be added for even more control options
- Speed Range: 600-3450 RPM

NOTE: *Actual savings may vary based on comparison pump model, hours of operation, electrical rate and other hydraulic aspects such as plumbing size and length.

Specifications

SKU	DOE Compliant	Motor Type	Amp Rating	Plumbing Connection	Total HP	Voltage at 60 Hz	WEF	Ctn. Weight (lbs.)
HL2350020VSP	Yes	TEFC	6.5 / 7.2	1-1/2"x 2" Union	1.65	230/115	10.2/10.7	63
SP23520VSP	Yes	TEFC	6.5 / 7.2	1-1/2"x 2" Union	1.65	230/115	10.2/10.7	51

MaxFlo® VS 400 Series with OmniX®

Hayward continues its position as the industry-leader in innovation with the introduction of the Hayward 800, 600, and 400 VS Series pumps with on-board automation using the all new Hayward OmniX mobile app. This lineup is the best drop-in replacement with an elevated experience through improved feature set and usability.

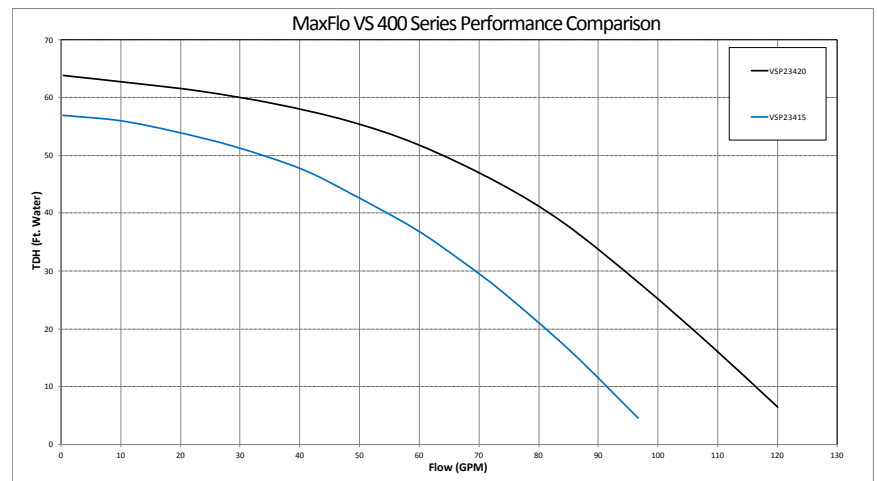
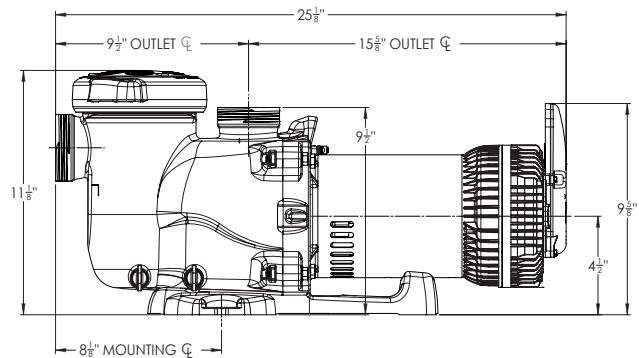
Features and Benefits

- Simple and intuitive wireless connectivity for complete control
- Fully configurable including time-of-day based schedules, true variable speed operation, and water temperature monitoring
- Control from anywhere when used with the optional OmniX Gateway accessory (sold separately)
- OmniX equipment ecosystem connects compatible devices seamlessly without a centralized controller
- Convenient user & account management tools built into the OmniX app for homeowners and pool professionals
- Backed by Hayward's 3-year warranty
- Agency listings include: Department of Energy, NSF and UL



VSP23415

Overall Dimensions (inches)



Specifications

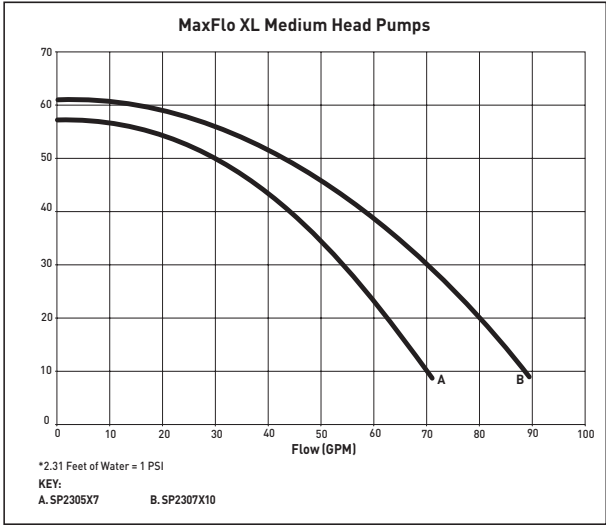
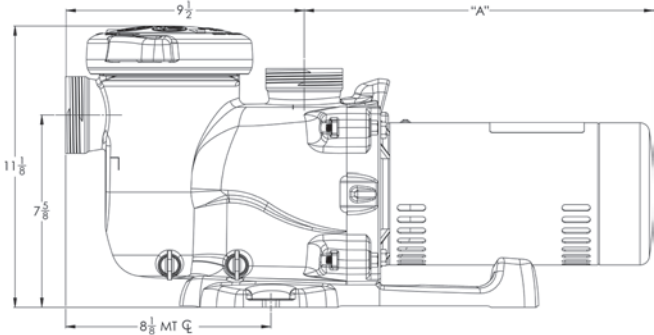
SKU	DOE Compliant	Motor Type	Amp Rating	Plumbing Connection	Total HP	Voltage at 60 Hz	WEF	Ctn. Weight (lbs.)
VSP23415	Yes	ODP	10 / 19.9	1-1/2"x 2" Union	1.65	230/115	9.6 / 9.6	34
VSP23420	Yes	ODP	14.2 / 19.9	1-1/2"x 2" Union	2.25	230/115	8.6 / 8.6	34

For replacement parts see page 311.



SP2305X7

Overall Dimensions (inches)



MaxFlo XL is the most energy efficient pump in its class, combining incredible economy and performance. MaxFlo XL physically aligns with the entire MaxFlo family of pumps for seamless retrofit installations. Features such as union connections and a high efficiency hydraulic design make MaxFlo XL an outstanding choice for both new pool and aftermarket installations.

Features and Benefits

- Superior pump efficiency meets Department of Energy (DOE) regulations
- Advanced hydraulics for increased energy efficiency and priming ability
- Heavy-duty motor provides performance you can trust
- Easy 4-bolt access makes servicing simple
- Clear strainer cover seals with less than a ¼ turn and lets you see when the basket needs cleaning
- 1½" x 2" union connections in all models
- Optional riser base (SPX2300GR) provides alignment with Sta-Rite® Dyna-Pro®

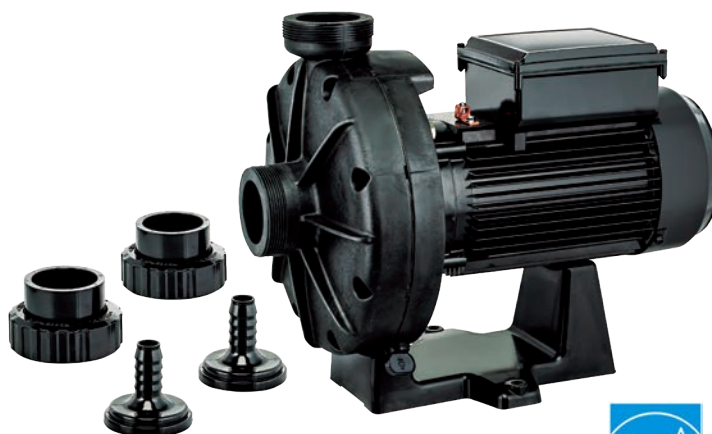
Specifications

SKU	DOE Compliant	Motor Type	Amp Rating	Plumbing Connection	Total HP	Voltage at 60 Hz	WEF	Ctn. Weight (lbs.)
SP2305X7	Yes	ODP	6.0-5.0 / 10	1-1/2"x 2" Union	0.95	115/208-230	4.3	32.5
SP2307X10	Yes	ODP	6.9-6.8 / 13.3	1-1/2"x 2" Union	1.25	115/208-230	3.8	37

Engineered to provide the same quiet operation and reduced electricity requirements as our standard Booster Pump, the Booster Pump 300 also comes with a totally enclosed fan-cooled (TEFC) motor, hose kit, and a 2-year extended warranty for increased peace of mind.

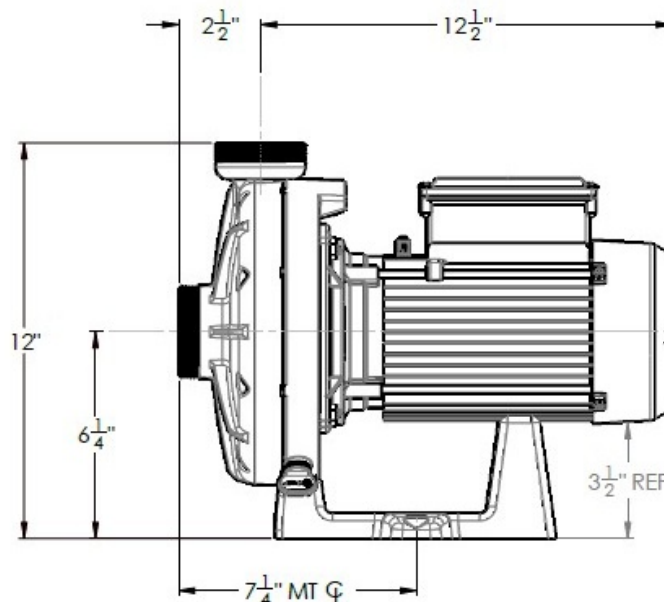
Features and Benefits

- Suitable for all pressure cleaners requiring a booster pump
- TEFC motor delivers added reliability and easily accessible top-mount wiring compartment
- 3/4" retrofit hose kit included
- 3/4" hose barb union adapters allow for easy retrofit to existing installations using flexible hose for booster pump connections
- 1 1/2" plumbing union fittings improve performance and allows easy installation and removal



HSP30060

Overall Dimensions (inches)



Specifications

SKU	DOE Compliant	Motor Type	Amp Rating	Plumbing Connection	Total HP	Voltage at 60 Hz	WEF	Ctn. Weight (lbs.)
HSP30060	Yes	TEFC	5.2/ 10.0	1-1/2" Socket	1.1	208-230/115	0.6	31

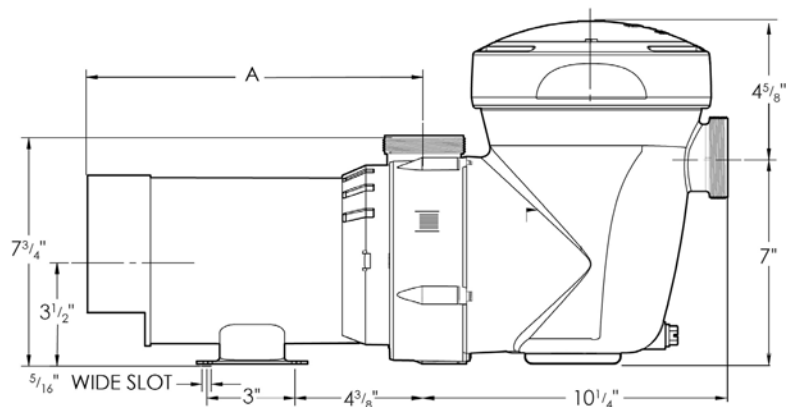
For replacement parts see page 316.

PowerFlo® Matrix



SP1592

Overall Dimensions (inches)



Performance Data

Model Number	Pump Output (GPM) vs. Total Resistance to Flow (Feet of Head)					
	10 ft	20 ft	30 ft	40 ft	50 ft	60 ft
SP1592	86	86	75	58	27	—
SP1593	91	91	80	62	32	—

The PowerFlo Matrix has been engineered as a uniquely superior above-ground pool pump. With a single push of a button, this truly versatile pump changes from a vertical to a horizontal discharge and back again. Its large profile and integrated styling makes the PowerFlo Matrix an above-ground pool pump like no other.

Features and Benefits

- On/Off switch
- Massive size strainer basket for large debris collection with minimal maintenance
- Simply converts from vertical to horizontal discharge orientation with the press of a button
- Quick disconnect intake and discharge pipe connection
- C-Clip Connector allows for easy disengagement of strainer housing in a matter of seconds for hassle-free maintenance
- High flow impeller with wide openings to prevent clogging by leaves and debris
- Integral drain plug for easy winterization of pump

Specifications

SKU	DOE Compliant	Motor Type	Amp Rating	Plumbing Connection	Total HP	Voltage at 60 Hz	WEF	Ctn. Weight (lbs.)
SP1592	Yes	ODP	12.0	1-1/2" NPT(F)	0.85	115	3.4	26
SP15922S	Yes	ODP	2.9 / 11.0	1-1/2" NPT(F)	0.85	115	5.7	32
SP1592TL	Yes	ODP	12.0	1-1/2" NPT(F)	0.85	115	3.4	27
SP1593	Yes	ODP	15.0	1-1/2" NPT(F)	1.1	115	3.5	31
SP15932S	Yes	ODP	2.9 / 11.0	1-1/2" NPT(F)	1.1	115	5.7	32
SP1593TL	Yes	ODP	15.0	1-1/2" NPT(F)	1.1	115	3.5	32

The PowerFlo LX pump series is designed for the rigors of above-ground and on-ground type swimming pools. Combining durable construction with advanced features and with proven features, PowerFlo LX sets the standard for value and performance.

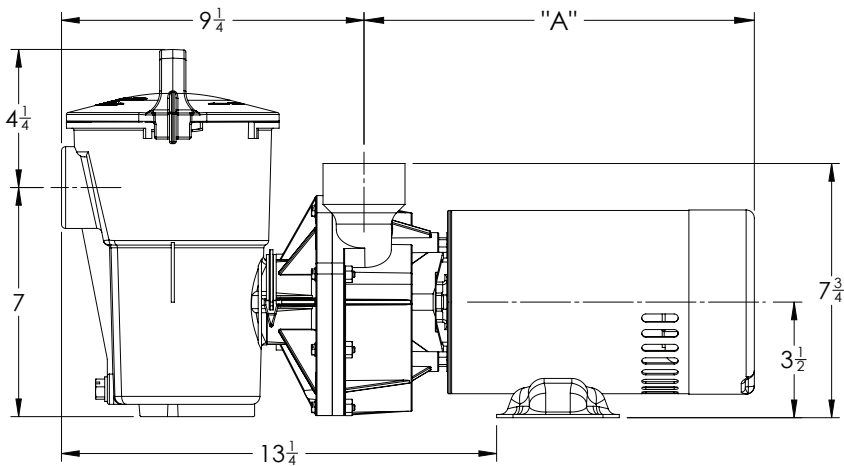
Features and Benefits

- Durable housing for all-weather performance and quiet operation
- Clear cover lets you see when basket needs cleaning
- Drain plug for easy maintenance of pump
- On certain SKUs, the Side discharge allows for mounting in tighter areas



SP1580

Overall Dimensions (inches)



Performance Data

Model Number	Pump Output (GPM) vs. Total Resistance To Flow (Feet of Head)				
	10 ft	20 ft	30 ft	40 ft	50 ft
SP1580	86	86	75	58	27
SP1580X15	91	91	80	62	32

Specifications

SKU	DOE Compliant	Motor Type	Amp Rating	Plumbing Connection	Total HP	Voltage at 60 Hz	WEF	Ctn. Weight (lbs.)
SP1580	Yes	ODP	11.0	1-1/2" NPT(F)	0.85	115	3.8	23
SP1580H	Yes	ODP	11.0	1-1/2" NPT(F)	0.85	115	3.8	23
SP1580X15	Yes	ODP	12.0	1-1/2" NPT(F)	1.1	115	3.9	25
SP1580X15HTL	Yes	ODP	12.0	1-1/2" NPT(F)	1.1	115	3.9	25
SP1580X15TL	Yes	ODP	12.0	1-1/2" NPT(F)	1.1	115	3.9	25

Hydraulics

THE BASICS OF PUMP/FILTER SIZING

Hydraulics is the study and understanding of the behavior of liquids at rest and in motion. We are concerned with water, and the following characteristics of our application:

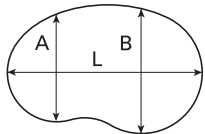
1. How much water do we have (Pool Capacity)?
2. How fast can we safely move the water (Turnover Rate and Water Velocity)?
3. How much resistance will this water meet while moving through the system (Friction Loss)?
4. How will we overcome this resistance (Pump/Filter Sizing)?

Following are step-by-step instructions to answer these four questions and ultimately determine the proper size pump or filter for virtually any installation. Below each step is a calculation based on the following example: 16 ft by 32 ft rectangular pool, 3 ft to 8 ft deep, 2" suction side and return side plumbing. Existing 1 H.P. pump; filter gauge reads 10 PSI (clean).

1. Pool Capacity

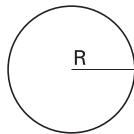
To determine total gallons, we must first calculate the surface area of the pool in square feet:

1A. Surface Area

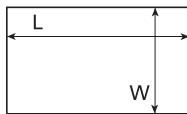


$$\text{Area} = (A+B) \times L \times .45$$

_____ ft²
(surface area)



$$\text{Area} = R \times R \times 3.14$$



$$\text{Area} = L \times W$$

Surface Area: 16 ft × 32 ft = 512 ft²

Next, multiply the surface area by the average *depth* to determine the appropriate *volume* of the pool.

1B. Average Depth

$$\left(\frac{\text{_____ ft} + \text{_____ ft}}{2} \right) = \text{_____ ft}$$

(depth, shallow end) (depth, deep end) (average depth)

Average Depth = (3 ft + 8 ft) ÷ 2 = 5.5 ft

1C. Volume

$$\text{_____ ft}^2 \times \text{_____ ft} = \text{_____ ft}^3$$

(surface area) (average depth) (volume)

Volume = 512 ft² × 5.5 ft = 2,816 ft³

Next, multiply the pool's volume in ft³ by 7.5 to get the pool capacity in gallons:

1D. Pool Capacity

$$\frac{\text{_____ ft}^3}{\text{(volume)}} \times 7.5 \text{ gallons/ft}^3 = \frac{\text{_____ gallons}}{\text{(pool capacity)}}$$

Pool Capacity = 2,816 ft³ × 7.5 gallons/ft³ = 21,120 gallons

Some of the more common pool sizes are:

Above-Ground Size	Gallons*
15 ft Round	5,293
18 ft Round	7,622
21 ft Round	10,374
24 ft Round	13,550
12 ft × 24 ft Rectangle	8,626
27 ft Round	17,149
*Average Depth: 4 ft	

In-Ground Size	Gallons*
12 ft × 24 ft Rectangle	11,861
16 ft × 32 ft Rectangle	21,086
18 ft × 36 ft Rectangle	26,687
20 ft × 40 ft Rectangle	32,947
*Average Depth: 5.5 ft	

2. Flow Rate

While the actual flow rate of a pump is based on the total resistance of the system as described below, the desired flow rate must be calculated to verify it will satisfy Turnover Rate and Water Velocity requirements.

2A. Turnover Rate

The turnover rate for a swimming pool is the amount of time required to circulate the entire volume of water through the system once to meet reasonably clean, safe water standards. Check with local regulations for the minimum required turnover rate.

Based on the pool's capacity and the desired turnover rate, the *minimum* rate at which the water must be circulated in Gallons Per Minute (GPM) is calculated as follows:

A. Minimum Flow in Gallons per Hour (GPH)

$$\frac{\text{_____ gallons}}{\text{(pool capacity)}} \div \frac{\text{_____ hours}}{\text{(desired turnover rate)}} = \frac{\text{_____ GPH}}{\text{(minimum flow, gallons per hour)}}$$

Minimum Flow: 21,120 gallons ÷ 10 hours (assumed) = 2,112 gallons per hour

B. Minimum Flow in Gallons per Minute (GPM)

$$\frac{\text{_____ gallons per hour}}{\text{(minimum flow, gallons per hour)}} \div 60 \text{ minutes per hour} = \frac{\text{_____ gpm}}{\text{(minimum flow, gallons per minute)}}$$

Minimum Flow: 2,112 gallons per hour ÷ 60 minutes per hour = 35 gallons per minute

2B. Water Velocity

The *maximum* recommended water velocity is six (6) or eight (8) feet per second for suction lines and ten (10) feet per second for return lines. Check with local regulations for the maximum water velocity for suction and return lines. The table below lists the maximum flow ingpm based on plumbing size and water velocity.

Pipe Size	Maximum Flow		
	6.0 ft/sec	8.0 ft/sec	10.0 ft/sec
1 1/2"	38gpm	51gpm	63gpm
2"	63gpm	84gpm	105gpm
2 1/2"	90gpm	119gpm	149gpm
3"	138gpm	184gpm	230gpm

**Maximum Flow: 2" suction side plumbing at
6.0 ft/sec = 63 gallons per minute**

2C. Desired Flow

The desired flow rate must be between the minimum flow based on the Turnover Rate and the maximum flow based on the Water Velocity. Note that if higher flow rates are needed, such as for water features, the maximum possible flow would have to be increased by using larger size plumbing (e.g. increase from 2" to 2 1/2" plumbing). The use of branch (parallel) plumbing can also be used to reduce the flow and therefore plumbing size. Check with local regulations for proper plumbing sizing.

It is recommended to select a flow that is higher than the minimum to account for decrease in flow that naturally occurs as the filter is loaded with dirt and debris.

Minimum Flow (Turnover Rate): 35gpm

Maximum Flow (Water Velocity): 63gpm

Desired Flow: 50gpm

3. Friction Loss (Head Loss)

Everything that the water must pass through within the circulation system — plumbing and equipment — creates resistance or Friction Loss (also referred to as Head Loss). The friction loss for standard plumbing supplies such as pipe, elbows, fittings, etc. can be found using published reference tables. Friction loss for equipment such as filters, heaters, and chlorination systems can be found in charts and/or curves provided by the manufacturer. The sum of all the resistance is called Total Dynamic Head (TDH) and is typically measured in Feet of Water or Feet of Head.

A properly sized pump will have the ability to overcome the Total Dynamic Head of the system while, at the same time, providing flow that will satisfy Turnover Rate and Water Velocity requirements.

For new installations, it is possible to calculate TDH by using reference tables and manufacturer's data to determine the friction loss associated with every component in the circulation system.

For existing installations, we are often unable to determine the total amount of pipe and fittings . . . it's underground. Therefore, what follows is a simplified "rule-of-thumb" means of determining Total Dynamic Head.

We will need to add the resistance from the vacuum (suction) side of the existing pump to the resistance of the pressure side of the pump. Note this assumes the Static Suction Lift (i.e. vertical distance from the center of the pump's impeller to the surface of the water) is offset by the water returning to the pool.

3A. Friction Loss (Vacuum)

_____ inches of mercury × 1.13 ft of water = _____ ft of water
(vacuum reading) (total resistance, vacuum)

Typically, however, a vacuum reading will not be available, therefore, the table below provides Common Head Loss Factors for today's high-efficiency pumps.

Pump Size	Head Loss Factor*
3/4 H.P.	4.5 to 5.5 ft of water
1 H.P.	7 to 9 ft of water
1 1/2 H.P.	10 to 12.5 ft of water
2 H.P.	13.5 to 16 ft of water

*Assumes 2" suction line, not to exceed 40 ft long, minimal fittings, one (1) 2" valve and full-rated pumps.

Total Resistance (Vacuum): 9 ft of water (existing 1 H.P. pump)

3B. Friction Loss (Pressure)

_____ PSI × 2.31 ft of water / PSI = _____ ft of water
(filter pressure, clean) (total resistance, pressure)

**Total Resistance (Pressure): 10 PSI × 2.31 ft of water /
PSI = 23 ft of water**

3C. Total Dynamic Head

_____ ft of water + _____ ft of water = _____ ft of water
(total resistance, vacuum) (total resistance, pressure) (total dynamic head)

Total Dynamic Head: 9 ft of water + 23 ft of water = 32 ft of water

4. Pump Sizing

We now have all the information necessary to select the proper size pump and/or filter and then proceed based on new vs. existing installations.

A pump's performance data is provided ingpm (output) vs. Feet of Head (resistance). The specific performance data for Hayward® pumps can be found in the Pump Section of this Buyer's Guide.

4A. Pump Sizing, New Installations

For new installations, use the desired flow rate and Total Dynamic Head calculated from tables and manufacturer's data:

Desired Flow = _____ gpm

Total Dynamic Head = _____ ft of water

Using Hayward Pump Performance Curves or Tables, identify which pump's performance comes closest to matching the point where the Desired Flow intersects with the Total Dynamic Head.

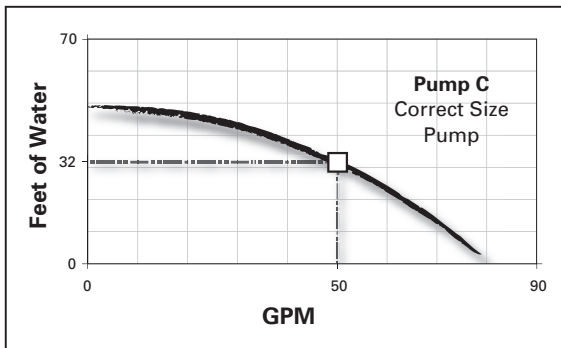
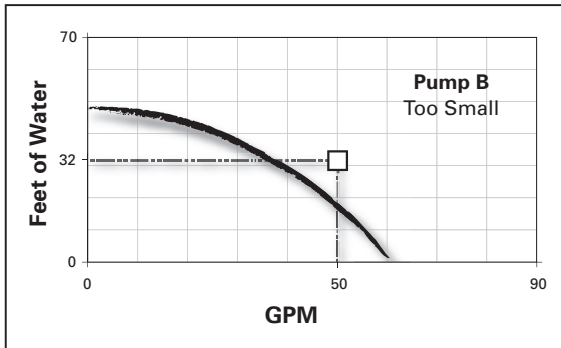
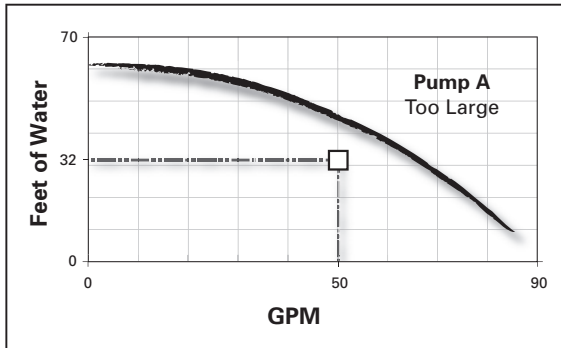
Hydraulics

THE BASICS OF PUMP/FILTER SIZING (continued)

Desired Flow: 50gpm

Total Dynamic Head: 32 ft of water (assume to be the same as previously determined from Friction Loss calculations)

4B. Pump Sizing



Existing Installations

For existing installations, use the Total Dynamic Head calculated from the Friction Loss on the Vacuum and Pressure side of the pump.

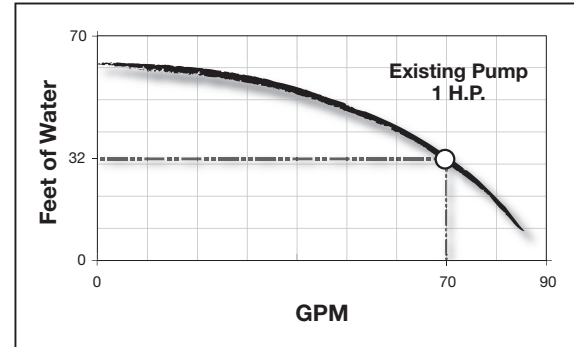
Total Dynamic Head = _____ ft of water

Using the manufacturer's performance curve for the existing pump, find the flow that corresponds to the Total Dynamic Head. This is the actual flow at which the pump is currently operating, which may or may not meet Turnover Rate and Water Velocity requirements. Verify the actual flow rate is between the minimum flow based on the Turnover Rate and the maximum flow based on the Water Velocity.

Total Dynamic Head: 32 ft of water

If the actual flow rate does not meet the Turnover Rate and Water Velocity requirements, you must either modify the system to add or remove restrictions (e.g. use less restrictive plumbing fittings and/or equipment) or vary the flow by changing size of the pump.

In the example below, the flow (70gpm) that corresponds to 32 ft of water for the given pump exceeds the maximum flow based on the water velocity. The pump should be re-sized.



Important: if you increase or decrease the flow for any reason (e.g. change pump size), Friction Loss will increase or decrease respectively. *You should not read horizontally across the curve at the same Total Dynamic Head to choose another pump.* You must create a system curve based on the following relationship:

$$\frac{\text{_____ ft of water} \times (\text{_____ gpm} \div \text{_____ gpm})^2}{\text{(current friction loss)} \quad \text{(new flow rate)} \quad \text{(current flow rate)}} = \text{_____ ft of water} \quad \text{(new friction loss)}$$

Choose the minimum and maximum flow rates based on Turnover Rate and Water Velocity and calculate the corresponding friction loss using the formula above. Plot each combination of friction loss and flow to create the system curve.

Current Flow: 70gpm (from chart for existing 1 H.P. pump shown above)

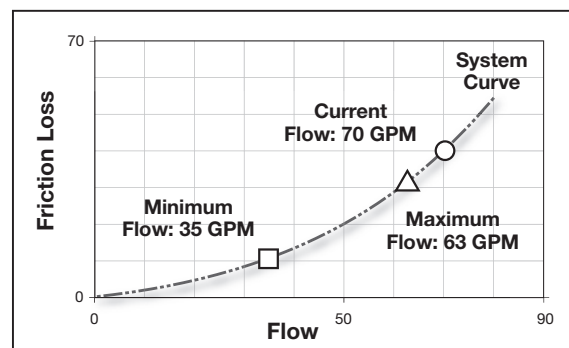
Current Friction Loss: 32 ft of water

Flow Rate per Turnover Requirement = 35gpm

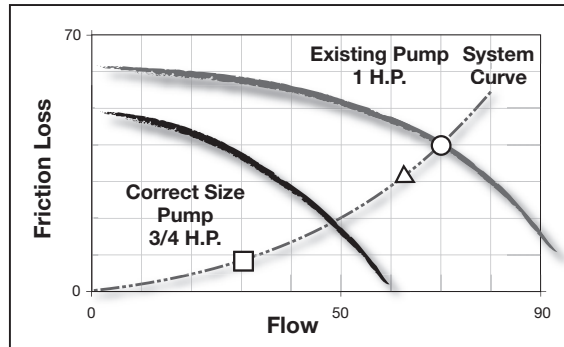
Friction Loss = (32 ft of water) × (35gpm ÷ 70gpm)² = 8 ft of water

Flow Rate per Water Velocity Requirement = 63gpm

Friction Loss = (32 ft of water) × (63gpm ÷ 70gpm)² = 26 ft of water



The point where the performance curve for a particular pump intersects the system curve determines the flow and Total Dynamic Head where that pump will operate.



In this example, the flow for the 3/4 H.P. pump is between the minimum and maximum flow and is therefore properly sized for the application.

Saving Money by Saving Energy

Depending upon utility rates, pool characteristics, and equipment selected, the energy and dollar savings from an energy efficient single, two, or variable speed pump compared to a standard single speed pump can be quite significant.

For example, a system featuring an energy efficient high performance pump drawing 5.34 amps at 230 volts where the local utility rate is \$0.12 per kWh will cost you approximately \$1.78 over a 12 hour period per day. A standard pump drawing 7.0 amps will cost you approximately \$2.32 per day or an extra \$197 annually!

Use this worksheet to help determine your energy savings:

A. Motor Amp Rating	A
B. Voltage (e.g. 115 volts or 230 volts)	B
C. Local Energy Rate (\$ per kWh)*	C
D. Approximate Power Usage (Watts) = $A \times B^{**}$	D
E. Kilowatts = $D / 1000$	E
F. \$ per hour = $E \times C$	F
G. Hours of Operation	G
H. Cost per Day = $F \times G$	H
J. Monthly Cost = $H \times 30$	J
K. Yearly Cost = $H \times \text{number of months pool is in operation}$	K

NOTES: *Refer to your utility bill to determine local rate

**Estimated. It is recommended to use a wattmeter to determine the actual power consumption.

Visit <https://hayward.com> and learn more about energy efficient pump solutions.

4C. Filter Sizing

A filter, be it DE, sand, or cartridge, has a Design Flow Rate ingpm as well as a Turnover Capacity in Gallons. See the table below for example. The specific performance data for Hayward® filters is provided in the Filter Section of this Buyer's Guide.

Select a filter that meets or exceeds *both* the desired flow rate and turnover capacity in gallons. Filtration is a category where truly "bigger is better" as a larger size will hold more debris and extend the time between cleaning.

Model Number	Effective Filtration Rate Area	Design Flow	Turnover Capacity (Gallons)	
			8 Hours	10 Hours
S180T	1.75 ft ²	35gpm	16,800	21,000
S210T	2.20 ft ²	44gpm	21,120	26,400
S220T/T2	2.64 ft ²	52gpm	24,960	31,200
S244T/T2	3.14 ft ²	62gpm	29,760	37,200
S270T/T2	3.70 ft ²	74gpm	35,520	44,400
S310T2	4.91 ft ²	98gpm	47,040	58,800
S360SX	6.50 ft ²	130gpm	62,400	78,000

Desired Flow: 50gpm

Turnover 21,120 gallons in 10 hours

Select S220T (minimum to meet Desired Flow and Turnover)

One additional factor to consider in filter sizing is bather load. Busier pools require larger filters. Also, larger filters provide longer cycles, reducing everyday maintenance required by the consumer during the pool season.

Summary

Using the information calculated above, you can properly size the pump, filter, and corresponding equipment, assuring you meet Turnover Rate and Water Velocity requirements while eliminating the electrical waste and potential damage to other system components associated with a needlessly oversized pump.

SwimClear® Multi-Element



C2030

Performance Data – Public and APSP-15

Model Number	Effective Filtration Area	Public Design Flow Rate	Turnover (In Gallons)	
			8 Hours	10 Hours
C2030	225 ft. ²	84gpm	40,320	50,400
C3030	325 ft. ²	122gpm	58,560	73,200
C4030	425 ft. ²	150gpm	72,000	90,000
C5030	525 ft. ²	150gpm	72,000	90,000
HCF7030C	700 ft. ²	150gpm	72,000	90,000

Public and APSP-15 Design Flow Rate based on .375gpm/ft.²

*Determined by pump size and piping system hydraulics.

2" piping is recommended for flow rates above 90gpm.

Refer to "Friction Loss" in Hydraulics section, page 19.

Utilizing a cluster of reusable cartridge elements, SwimClear filters offer a choice of 225, 325, 425, 525, or 725 square feet of heavy-duty dirt-holding capacity for extra-long filter cycles, up to an entire season without cleaning. SwimClear filters will provide years of trouble-free operation and crystal clear, sparkling water

Features and Benefits

- High capacity, rapid release manual air relief valve bleeds air with a quick quarter turn of the lever.
- Filter tanks made from durable glass reinforced co-polymer to meet the demands of the toughest applications and environmental conditions, including in-floor cleaning systems.
- Self-aligned tank top and bottom make access to serving the Quad-Cluster™ cartridge elements fast and simple
- Heavy-duty, tamper-proof, one-piece clamp securely fastens tank top and bottom. Allows quick access to all internal components without disturbing piping or connections
- Top manifold configuration provides excellent filtration and hydraulic performance
- Non-corrosive top closure plate prevents elements from lifting and allowing unfiltered water to by-pass into pool or spa during operation
- Quad-Cluster of high-quality polyester cartridge elements provide 225, 325, 425, 525, or 725 square feet of filter area for extra dirt-holding capacity and long filter cycles
- 2" full-flow internal piping and plumbing for less resistance to flow and maximum performance.
- PVC union coupling connection accepts 2" or 2 1/2" piping for plumbing versatility and hydraulic efficiency.
- Full size 1 1/2" integral drain allows for quicker and easier flushing of tank

Specifications

SKU	Effective Filtration Area	Clearance for Head Removal	Plumbing Connection	Product Dimensions	Ctn. Weight (lbs.)
C2030	225 ft. ²	15"	2" x 2 1/2" Union	32.5" x 24" x 24"	68
C3030	325 ft. ²	16"	2" x 2 1/2" Union	34.5" x 24" x 24"	75
C4030	425 ft. ²	18"	2" x 2 1/2" Union	40.5" x 24" x 24"	83
C5030	525 ft. ²	22"	2" x 2 1/2" Union	46.5" x 24" x 24"	92
HCF7030C	700 ft. ²	28"	2" x 2 1/2" Union	52.5" x 24" x 24"	107

SwimClear® Single-Element

The newest addition to the SwimClear family is simply the most efficient single element cartridge filter ever produced. It captures more dirt for superior water clarity while the industry's lowest head loss can increase energy savings. SwimClear is the easiest to service: the Easy-Lok™ ring design, comfort grip handles, and lowest lift height provide fast element cleaning and replacement. For energy savings, reliable performance, and the ultimate in service ease, the choice is crystal clear: SwimClear.

Features and Benefits

- Captures more dirt for superior water clarity without the need of any supplemental media
- Industry-leading hydraulic efficiency allows the pump to run at a lower speed or less time, which increases energy savings
- Easy-Lok ring design allows quick access to internal components for quick and simple maintenance
- Ergonomic grip handles provide multiple handling locations without touching fiberglass for easy installation and maintenance
- Lowest body height to lift elements for convenient and quick cleaning and replacement
- Recessed pressure gauge and manual air relief enables user to place head assembly upside down on pool pad, protecting the seal from contamination
- 2" x 2 1/2" union connections makes installation and servicing fast and easy



C100S

Performance Data – Residential

Model Number	Effective Filtration Area	Design Flow Rate	Turnover (In Gallons)	
			8 Hours	10 Hours
C100S	100 ft. ²	100gpm	48,000	60,000
C150S	150 ft. ²	120gpm	57,600	72,000
C200S	200 ft. ²	120gpm	57,600	72,000

Residential Design Flow Rate based on 1gpm/ft.²

Performance Data – Public and APSP-15

Model Number	Effective Filtration Area	Design Flow Rate	Turnover (In Gallons)	
			8 Hours	10 Hours
C100S	100 ft. ²	38gpm	18,240	22,800
C150S	150 ft. ²	56gpm	26,880	33,600
C200S	200 ft. ²	75gpm	36,000	45,000

Public and APSP-15 Design Flow Rate based on .375gpm/ft.²

Specifications

SKU	Effective Filtration Area	Clearance for Head Removal	Plumbing Connection	Product Dimensions	Ctn. Weight (lbs.)
C100S	100 ft. ²	12"	2" x 2 1/2" Union	30.5" x 18.25" x 18.25"	33
C150S	150 ft. ²	15"	2" x 2 1/2" Union	33.25" x 18.25" x 18.25"	35
C200S	200 ft. ²	18"	2" x 2 1/2" Union	38.75" x 18.25" x 18.25"	40

For replacement parts see pages 324–325.

StarClear Plus

Filters



StarClear Plus filters offer quality, value and convenience in cartridge filtration. Because of their durable construction, they can handle the most demanding applications and environmental conditions. The precision engineered core provides extra strength and maximum flow. StarClear Plus filters deliver proven performance and value.

Features and Benefits

- Filter tanks made from durable glass reinforced co-polymer material to meet the demands of the toughest applications and environmental conditions, including in-floor cleaning systems
- Single piece injection-molded base and body provides added strength for reliable, corrosion-free performance
- Single locking knob securely fastens head to filter tank, eliminating bolts or clamps
- Extra-large cartridge element with precision engineered core provides extra-strength and maximum flow
- Elevated, filtered water collector and debris sump prevents accidental by-pass of heavy debris to pool when cartridge is removed for cleaning
- 2" FIP connections for plumbing versatility
- 1/2" FIP filter drain for fast draining. Also accepts a standard spigot valve

C12002

Performance Data – Residential

Model Number	Effective Filtration Area	Design Flow Rate*	Turnover (In Gallons)	
			8 Hours	10 Hours
C9002	90 ft. ²	90gpm	43,200	54,000
C12002	120 ft. ²	120gpm	57,600	72,000
C17502	175 ft. ²	120gpm	57,600	72,000

Residential Design Flow Rate based on 1gpm/ft.²

Performance Data – APSP-15

Model Number	Effective Filtration Area	Design Flow Rate*	Turnover (In Gallons)	
			8 Hours	10 Hours
C9002	90 ft. ²	34gpm	16,200	20,250
C12002	120 ft. ²	45gpm	21,600	27,000
C17502	175 ft. ²	66gpm	31,680	39,600

APSP-15 Design Flow Rate based on .375gpm/ft.²

*Determined by pump size and piping system hydraulics.

2" piping is recommended for flow rates above 90gpm.

Refer to "Friction Loss" in Hydraulics section, page 19.

Specifications

SKU	Effective Filtration Area	Clearance for Head Removal	Plumbing Connection	Product Dimensions	Ctn. Weight (lbs.)
C12002	120 Ft. ²	25	2" NPT(F)	36" × 13.375" × 13.375"	30
C17502	175 Ft. ²	30	2" NPT(F)	42" × 13.375" × 13.375"	36
C9002	90 Ft. ²	19	2" NPT(F)	30" × 13.375" × 13.375"	26

StarClear cartridge filters provide crystal clear water and have extra cleaning capacity to accommodate pools and spas of all types and sizes. For replacement or new pool installations, StarClear sets the standard of excellence and value.

Features and Benefits

- Single locking knob securely fastens head to filter tank, eliminating bolts or clamps
- Attractive, durable filter head may be rotated to conveniently position pressure gauge and manual air relief
- Injection-molded filter tank for dependable, corrosion-free performance
- Extra-large cartridge element with precision engineered core provides extra-strength and maximum flow
- Elevated, filtered water collector and debris sump prevents accidental by-pass of heavy debris to pool or spa when cartridge is removed for cleaning
- 1 1/2" or 2" FIP, or 2" SKT connections for plumbing versatility
- 1/2" FIP filter drain for fast draining of elevated spas and tubs. Also accepts a standard spigot valve



C225

Performance Data – Residential

Model Number	Effective Filtration Area	Design Flow Rate	Turnover (In Gallons)	
			8 Hours	10 Hours
C250	25 ft. ²	25gpm	12,000	15,000
C500	50 ft. ²	50gpm	24,000	30,000

Performance Data – Public

Model Number	Effective Filtration Area	Design Flow Rate	Turnover (In Gallons)	
			8 Hours	10 Hours
C250	25 ft. ²	9gpm	4,500	5,625
C500	50 ft. ²	18gpm	9,000	11,250

Public Design Flow Rate based on .375gpm/ft.²

*Determined by pump size and piping system hydraulics.

2" piping is recommended for flow rates above 90gpm.

Refer to "Friction Loss" in Hydraulics section, pages 19.

Specifications

SKU	Effective Filtration Area	Clearance for Head Removal	Plumbing Connection	Product Dimensions	Ctn. Weight (lbs.)
C225	25 Ft. ²	18	1-1/2" × 2" Union	17.875" × 10.5" × 7.25"	5
C250	25 Ft. ²	18	1-1/2" NPT(F)	19.5" × 10.5" × 10.5"	12
C500	50 Ft. ²	28	1-1/2" NPT(F)	29.5" × 10.5" × 10.5"	16



CC10080S

Performance Data

Filter	Effective Filtration Area	Design Flow Rate	Turnover (In Gallons)	
			8 Hours	10 Hours
CC1000	100 ft. ²	80gpm	38,400	48,000
CC1500	150 ft. ²	120gpm	57,600	72,000

XStream size for an XStream clean. Once you see the XStream filtration from Hayward, you'll be hooked. Its massive size and incredible performance mean years of trouble-free filtration. It has an extra large capacity for dirt and debris and a quick-release, high-capacity air relief valve.

Features and Benefits

- Designed specifically for the rigors of above-ground filtration
- Longer, more efficient filtering life
- Larger filter body ensures an equal distribution of dirt and debris throughout the filtering element
- Engineered for easy use with flexible or rigid plumbing
- Quick release, high capacity air relief valve
- Durable filter tank will provide years of trouble-free operation
- Easy-Lok™ ring design allows quick access to all internal components in a single turn
- Unique safety catch prevents over-tightening of the lid and efficiently secures the filter for high performance operation

Specifications

SKU	Filter	Filter Size	Effective Filtration Area	Product Dimensions	Pump	Total HP	DOE Compliant	Ctn. Weight (lbs.)
CC10080S	XStream	N/A	100 Ft. ²	30.8" × 21.5" × 28.5"	PowerFlo LX	1	Yes	67
CC10092S	XStream	N/A	100 Ft. ²	30.8" × 21.5" × 29.5"	PowerFlo Matrix	1	Yes	67
CC10092STL	XStream	N/A	100 Ft. ²	30.8" × 21.5" × 29.5"	PowerFlo Matrix	1	Yes	66
CC15080X5S	XStream	N/A	150 Ft. ²	37.5" × 21.5" × 24.5"	PowerFlo LX	1.50	Yes	45
CC150932S	XStream	N/A	150 Ft. ²	37" × 21.5" × 29.5"	PowerFlo Matrix	1.50	Yes	75
CC15093S	XStream	N/A	150 Ft. ²	37.3" × 21.6" × 29.6"	PowerFlo Matrix	1.50	Yes	75
CC15093STL	XStream	N/A	150 Ft. ²	37" × 21.5" × 29.5"	PowerFlo Matrix	1.50	Yes	75

ProGrid vertical grid D.E. filters provide superior water clarity, efficient flow and large cleaning capacity for pools and spas of all types and sizes. ProGrid combines high-technology features and "service-ease" design for an unparalleled filtration value for both new pool and aftermarket installations.

Features and Benefits

- High capacity, rapid release manual air relief valve bleeds air with a quick quarter turn of the lever
- Filter tanks made from durable glass reinforced co-polymer to meet the demands of the toughest applications and environmental conditions, including in-floor cleaning systems
- Self-aligned tank top and bottom make access to servicing the grid elements fast and simple
- Heavy-duty, tamper-proof, one piece flange clamp securely fastens tank top and bottom. Allows quick access to all internal components without disturbing piping or connections
- High impact grid elements designed for up-flow filtration and top-down backwashing for maximum efficiency
- Integral lift handles and uniform low-profile base make removal of grid nest fast and simple
- Inlet diffuser elbow distributes flow of unfiltered water evenly to all filter elements and provides even distribution of D.E. to grids
- Convenient valve and plumbing options allow for customized control
- 2" full-flow internal piping and plumbing for less resistance to flow and maximum performance
- 72 ft² filter allows for both commercial and large residential applications and years of noncorrosive, trouble-free performance



DE3620

Performance Data – Filter

Model Number	Effective Filtration Area	Public Design Flow Rate*	Turnover (In Gallons)		Residential Design Flow Rate**	Turnover (In Gallons)	
			8 Hours	10 Hours		8 Hours	10 Hours
DE3620	36 ft. ²	72gpm	34,560	43,200	90gpm	43,200	54,000
DE4820	48 ft. ²	96gpm	46,080	57,600	120gpm	57,600	72,000
DE6020	60 ft. ²	120gpm	57,600	72,000	150gpm	72,000	90,000
DE7220	72 ft. ²	144gpm	69,120	86,400	150gpm	72,000	90,000

NOTES: *Based on 2gpm/ft.² (maximum allowable NSF rating).

**Based on 2.5gpm/ft.² (maximum allowable NSF rating).

Performance Data – Valve Positions

Model Number	Filter	Backwash	Waste	Recirculate	Rinse	Closed
SP0425	•	•	•	•	—	—
SP0740DE	•	•	•	•	—	—
SP0710XR50	•	•	•	•	•	•
SP0715XR50	•	•	•	•	•	•
SP0410X502S	•	•	—	—	—	—
DE2400PAK2CS	•	—	—	—	—	—

Specifications

SKU	Effective Filtration Area	Valve Included	Clearance for Head Removal	Plumbing Connection	Product Dimensions	D.E. Capacity	Ctn. Weight (lbs.)
DE3620	36 Ft. ²	Not Included	16	2" × 2 1/2" Union	34.5" × 24" × 24"	4.50	66
DE4820	48 Ft. ²	Not Included	18	2" × 2 1/2" Union	40.5" × 24" × 24"	6	75
DE6020	60 Ft. ²	Not Included	22	2" × 2 1/2" Union	46.5" × 24" × 24"	7.50	83
DE7220	72 Ft. ²	Not Included	25	2" × 2 1/2" Union	52.5" × 24" × 24"	9	93

D.E. Separation Tank

Filters



C9002SEP

Designed for D.E. filters with up to 100 square feet of filtration area, Hayward® D.E. separation tanks are ideal for water conservation and savings during backwashing by returning chemically treated backwash water to the pool. Hayward D.E. separation tanks hold up to 10 lbs. of used D.E. filter powder and compliment both new and existing D.E. filter installations.

Features and Benefits

- Rugged, reusable polypropylene containment bag holds up to 10 lbs. of used D.E. filter powder
- For pleated element D.E. filters with up to 100 ft.² of filtration area
- For vertical grid D.E. filters with up to 80 ft.² of filtration area
- Comes complete with 2" FIP or 2" SKT connections for full-flow performance
- Single locking knob for easy access

Specifications

SKU	Effective Filtration Area	Valve Included	Clearance for Head Removal	Plumbing Connection	Product Dimensions	D.E. Capacity	Ctn. Weight (lbs.)
C9002SEP	80 Ft. ²	N/A	19	2" NPT(F)	30" x 13.375" x 13.375"	10	23

Perflex Extended-Cycle D.E. filters provide crystal clear, sparkling water at an economical price. Proven over many years, Perflex has set the standard in swimming pool filtration by incorporating the patented Flex-Tube™ design in combination with D.E., the most effective filter media available. The result is superior water clarity, extended filter cleaning cycles — and no backwashing required.

Features and Benefits

- Easy access clamp assembly
- Cleans pools fast — removes even the smallest particles the first time through
- Uses D.E. (diatomaceous earth), the most effective filter media available
- Patented Flex-Tube system efficiently reuses D.E. powder and dirt mixture to form fresh cleaning surfaces
- Exclusive bump handle activates the Flex-Tubes, causing them to instantly purge themselves of dirt and powder
- Uniquely designed to expel any air that may be present in the system through the filtered water returning to the pool
- Combination diffuser and lower mixing chamber specifically designed to produce a uniformed coating of D.E. on the Flex-Tubes



EC40AC

Performance Data

Model Number	Effective Filtration Area	Design Flow Rate	Turnover (In Gallons)	
			8 Hours	10 Hours
EC40AC	20 ft. ²	40gpm	19,200	24,000
EC50AC	25 ft. ²	50gpm	24,000	30,000

Specifications

SKU	Effective Filtration Area	Valve Included	Clearance for Head Removal	Plumbing Connection	Product Dimensions	D.E. Capacity	Ctn. Weight (lbs.)
EC40AC	20 Ft. ²	N/A	0	1-1/2" NPT(F)	26.5" × 16" × 16"	4	29
EC50AC	25 Ft. ²	N/A	0	1-1/2" NPT(F)	31.375" × 13.5" × 16"	5	32
EC65A	27 Ft. ²	N/A	0	1-1/2" NPT(F)	31" × 21" × 21"	6.50	45
EC75A	40 Ft. ²	N/A	0	1-1/2" NPT(F)	31" × 21" × 21"	7.50	45

Perflex® System



Perflex filters are performance matched with our above-ground pump series to ensure a system that maximizes its filtration ability. These advanced filtration systems are designed to operate with less resistance than conventional units, thus producing more filtered water with less pump horsepower. Quality, value, dependability, and sparkling clear pool water are the Perflex system trademarks.

Features and Benefits

- Pump-to-filter union connection provides simple installation and winterization
- Modular platform base accepts optional chlorine feeder

EC40C80S

Performance Data

Model Number	Effective Filtration Area	Public Design Flow Rate*	Residential Design Flow Rate**	Turnover (In Gallons)	
				8 Hours	10 Hours
EC65A	27 ft. ²	54gpm	—	25,920	40,200
EC75A	40 ft. ²	80gpm	—	38,400	48,000
EC65A	—	—	67gpm	32,200	90,250
EC75A	—	—	100gpm	48,000	60,000

NOTES: *Based on 2gpm/ft.² (maximum allowable NSF rating).

**Based on 2.5gpm/ft.² (maximum allowable NSF rating).

Specifications

SKU	Filter	Filter Size	Effective Filtration Area	Product Dimensions	Pump	Total HP	DOE Compliant	Ctn. Weight (lbs.)
EC40C80S	Perflex	N/A	19 Ft. ²	28.9" × 16.4" × 25.9"	PowerFlo LX	1	Yes	59
EC40C80STL	Perflex	N/A	20 Ft. ²	28.9" × 16.4" × 25.9"	PowerFlo LX	1	Yes	59
EC40C92S	Perflex	N/A	21 Ft. ²	28.9" × 16.4" × 25.9"	PowerFlo Matrix	1	Yes	63
EC50C80X5S	Perflex	N/A	25 Ft. ²	33" × 15.6" × 25.8"	PowerFlo LX	1.50	Yes	63
EC50C80X5STL	Perflex	N/A	25 Ft. ²	33" × 15.6" × 25.8"	PowerFlo LX	1.50	Yes	63
EC50C92STL	Perflex	N/A	25 Ft. ²	33" × 15.6" × 25.8"	PowerFlo Matrix	1	Yes	55
EC50C93S	Perflex	N/A	25 Ft. ²	33" × 15.6" × 25.8"	PowerFlo Matrix	1.50	Yes	55

Incorporating the many advanced features of ProSeries top-mount and side mount sand filters, the ProSeries Plus satisfies the requirements of the most demanding installations, including pools installed with in-floor cleaning systems, spas, fountains or solar heating systems.

Features and Benefits

- Durable, flanged inspection cover provides convenient access to top of side mount filters
- Flange clamp design allows 360° rotation of valve to simplify plumbing
- Top diffuser ensures even distribution of water over the top of the sand media bed. All internal piping is 2" to give smooth, free-flowing performance
- Large pressure sand/water drain for rapid winterizing or servicing
- Unitized, corrosion-proof, spherical filter tank molded of rugged, colorfast polymeric material for maximum strength and longer life
- Optional valve and coupling selections for plumbing ease and versatility. Choose from 6-position VariFlo® valve, 2-position slide valve or 1 1/2" SKT × 2" SLIP connectors for multiple (tandem) filter installations
- Precision engineered umbrella-fold self cleaning laterals for balanced flow and backwashing, plus easy serviceability



S311SXV

Performance Data – Filter

Model Number	Effective Filtration Area	Design Flow Rate*	Turnover (In Gallons)	
			8 Hours	10 Hours
S311SXV	4.95 ft. ²	99gpm	47,520	59,400
S360SX	6.50 ft. ²	130gpm	62,400	78,000
S360T2	6.50 ft. ²	130gpm	62,400	78,000

*Based on 20gpm/ft.² (maximum allowable NSF rating).

Performance Data – Valve Positions

Model Number	Filter	Backwash	Waste	Recirculate	Rinse	Closed
SP0710X62	•	•	•	•	•	•
SP0715X62	•	•	•	•	•	•
SP071621	•	•	•	•	•	•
SP0410X602S	•	•	—	—	—	—
DE2400PAK2CS	•	—	—	—	—	—

Specifications

SKU	Effective Filtration Area	Plumbing Connection	Product Dimensions	Sand Capacity	Valve Included	Ctn. Weight (lbs.)
S311SXV	4.95 Ft. ²	2" Socket	38.625" × 31" × 31"	350 lbs.	2" Slide Valve	84
S360SX	6.5 Ft. ²	2" Flange	46" × 36" × 36"	700 lbs.	Not Included	124
S360T2	6.5 Ft. ²	2" NPT(F)	53" × 36" × 36"	700 lbs.	2" VariFlo	158

ProSeries™ Top-Mount



ProSeries high-rate sand filters are molded of durable, corrosion-proof material for long-lasting performance. They feature attractive, unitized tank construction for years of trouble-free operation with only minimal care. ProSeries sets the standard for performance, value and dependability.

Features and Benefits

- Flange clamp design allows 360° rotation of valve to simplify plumbing
- Integral top diffuser ensures even distribution of water over the top of the sand media bed. Full-size internal piping provides smooth, free-flowing performance
- Large pressure sand/water drain for rapid winterizing or servicing
- Unitized, corrosion-proof filter tank molded of rugged, colorfast polymeric material for dependable, all-weather performance
- 6- or 7-position Hayward® 2" VariFlo® control valve with easy-to-use lever-action handle lets you dial any of the valve/filter functions. Integral sight glass lets you see when backwash cycle is completed
- Precision engineered umbrella-fold self cleaning laterals for balanced flow and backwashing, plus easy serviceability

S166T

Performance Data – Filter

Model Number	Effective Filtration Area	Design Flow Rate*	Turnover (In Gallons)	
			8 Hours	10 Hours
S220T/T2	2.64 ft. ²	52gpm	24,960	31,200
S244T/T2	3.14 ft. ²	62gpm	29,760	37,200
S270T/T2	3.70 ft. ²	74gpm	35,520	44,400
S310T2	4.91 ft. ²	98gpm	47,040	58,800

*Based on 20gpm/ft.² (maximum allowable NSF rating).

Performance Data – Valve Positions

Model Number	Filter	Backwash	Waste	Recirculate	Rinse	Closed	Winter
SP0714T	•	•	•	•	•	•	•
SP071621	•	•	•	•	•	•	—

Specifications

SKU	Effective Filtration Area	Plumbing Connection	Product Dimensions	Sand Capacity	Valve Included	Ctn. Weight (lbs.)
S166T	1.4 Ft. ²	1-1/2" NPT(F)	33" × 16.5" × 16.5"	100 lbs.	1 1/2" VariFlo	25
S180T	1.75 Ft. ²	1-1/2" NPT(F)	35" × 18.5" × 18.5"	150 lbs.	1 1/2" VariFlo	29
S210T	2.2 Ft. ²	1-1/2" NPT(F)	38" × 20.5" × 20.5"	200 lbs.	1 1/2" VariFlo	37
S220T	2.64 Ft. ²	1-1/2" NPT(F)	41" × 22.5" × 22.5"	250lbs.	1 1/2" VariFlo	44
S220T2	2.64 Ft. ²	2" NPT(F)	41" × 22.5" × 22.5"	250lbs.	2" VariFlo	45
S244T	3.14 Ft. ²	1-1/2" NPT(F)	42" × 24.5" × 24.5"	300 lbs.	1 1/2" VariFlo	47
S244T2	3.14 Ft. ²	2" NPT(F)	42" × 24.5" × 24.5"	300 lbs.	2" VariFlo	50
S270T	3.7 Ft. ²	1-1/2" NPT(F)	43" × 27" × 27.5"	350 lbs.	1 1/2" VariFlo	64
S270T2	3.7 Ft. ²	2" NPT(F)	43" × 27" × 27.5"	350 lbs.	2" VariFlo	64
S310T2	4.91 Ft. ²	2" NPT(F)	48" × 30.5" × 30.5"	500 lbs.	2" VariFlo	109.60

ProSeries™ Side-Mount

ProSeries high-rate sand filters are molded of durable, corrosion-proof material for long-lasting performance. They feature an advanced, self-cleaning lateral under-drain system for smooth, efficient flow and totally balanced backwashing. For crystal clear water with minimal care, pool professionals choose ProSeries.

Features and Benefits

- Durable, flanged inspection cover provides convenient access to top of filter
- Top diffuser ensures even distribution of water over the top of the sand media bed
- Automatic air relief purges any trapped air during operation of the filter system
- Unitized, corrosion-proof filter tank molded of rugged, colorfast polymeric material for dependable, all weather performance
- Large pressure sand/water drain for rapid winterizing or servicing
- 6-position Hayward® VariFlo® control valve with easy-to-use lever-action handle lets you dial any of the 6 valve/filter functions
- Integral sight glass lets you see when backwash cycle is completed
- Precision engineered umbrella-fold self cleaning laterals for balanced flow and backwashing, plus easy serviceability



S244S

Performance Data – Filter

Model Number	Effective Filtration Area	Design Flow Rate*	Turnover (In Gallons)	
			8 Hours	10 Hours
S244S	3.14 ft. ²	62gpm	29,760	37,200
S310S	4.91 ft. ²	98gpm	47,040	58,800

*Based on 20gpm/ft.² (maximum allowable NSF rating).

Performance Data – Valve Positions

Model Number	Filter	Backwash	Waste	Recirculate	Rinse	Closed
SP0710X62	•	•	•	•	•	•
SP0715X62	•	•	•	•	•	•
SP0410X602S	•	•	—	—	—	—
DE2400PAK2CS	•	—	—	—	—	—

Specifications

SKU	Effective Filtration Area	Plumbing Connection	Product Dimensions	Sand Capacity	Valve Included	Ctn. Weight (lbs.)
S244S	3.14 Ft. ²	1-1/2" NPT(F)	36" x 24.5" x 24.5"	300 lbs.	1 1/2" VariFlo	62
S244SLV	3.14 Ft. ²	2" Socket	36" x 24.5" x 24.5"	300 lbs.	Not Included	56
S244SV	3.14 Ft. ²	2" Flange	36" x 24.5" x 24.5"	300 lbs.	2" Slide Valve	62
S310S	4.91 Ft. ²	2" Flange	40" x 30.5" x 30.5"	500 lbs.	Not Included	83

For replacement parts see pages 348–349.



S166T1580S

ProSeries sand systems are designed and equipped to offer the ideal combination of energy efficiency and outstanding water clarity. A broad selection of filter sizes, pumps, and accessories allows you to choose and merchandise the system(s) that best suit your above-ground pool program.

Features and Benefits

- Systems are designed for quick assembly and precise alignment of components
- Pumps and filters are performance-matched to provide maximum flow and energy efficiency
- 7-position VariFlo™ valve provides maximum flow at low pressure drop
- Durable filter bases for long-lasting, all-weather performance

Specifications

SKU	Filter	Filter Size	Effective Filtration Area	Product Dimensions	Pump	Total HP	DOE Compliant	Ctn. Weight (lbs.)
S166T1580S	ProSeries	16"	1.4 Ft. ²	27.4" × 18.9" × 30.1"	PowerFlo LX	1	Yes	55
S166T92S	ProSeries	16"	1.4 Ft. ²	27.5" × 19" × 30"	PowerFlo Matrix	1	Yes	59
S166T92STL	ProSeries	16"	1.4 Ft. ²	27.5" × 19" × 30"	PowerFlo Matrix	1	Yes	59
S166TPAKS	ProSeries	16"	1.4 Ft. ²	29" × 16.3" × 16.3"	N/A	0	N/A	29
S180T1580S	ProSeries	18"	1.75 Ft. ²	30" × 19" × 31"	PowerFlo LX	1	Yes	58
S180T1580X15S	ProSeries	18"	1.75 Ft. ²	30" × 19" × 31"	PowerFlo LX	1.50	Yes	60
S180T1585STL	ProSeries	18"	1.75 Ft. ²	30" × 19" × 31"	PowerFlo LX	1.50	Yes	61
S180T92S	ProSeries	18"	1.75 Ft. ²	30" × 19.1" × 30.1"	PowerFlo Matrix	1	Yes	63
S180T92STL	ProSeries	18"	1.75 Ft. ²	30" × 19" × 31"	PowerFlo Matrix	1	Yes	66
S180T932S	ProSeries	18"	1.75 Ft. ²	30" × 19" × 31"	PowerFlo Matrix	1.50	Yes	67
S180T93S	ProSeries	18"	1.75 Ft. ²	30" × 19.1" × 30.1"	PowerFlo Matrix	1.50	Yes	68
S180T93STL	ProSeries	18"	1.75 Ft. ²	30" × 19" × 31"	PowerFlo Matrix	1.50	Yes	68
S210T1580X15S	ProSeries	21"	2.2 Ft. ²	30.5" × 20.5" × 32"	PowerFlo LX	1.50	Yes	67
S210T932S	ProSeries	21"	2.2 Ft. ²	30.5" × 20.5" × 32"	PowerFlo Matrix	1.50	Yes	77
S210T93S	ProSeries	21"	2.2 Ft. ²	30.8" × 21.1" × 32.1"	PowerFlo Matrix	1.50	Yes	73
S230T1580X15S	ProSeries	23"	2.64 Ft. ²	33.5" × 23.5" × 34.5"	PowerFlo LX	1.50	Yes	78
S230T932S	ProSeries	23"	2.64 Ft. ²	33.5" × 23.5" × 34.5"	PowerFlo Matrix	1.50	Yes	84
S230T93S	ProSeries	23"	2.64 Ft. ²	33.5" × 23.5" × 34.5"	PowerFlo Matrix	1.50	Yes	82

VL Series above-ground systems offer the performance and reliability expected from the world's leading provider of above-ground equipment., The VL 40 series system is easy to assemble with an integrated pump base, an incredibly quiet pump and proven sand filter technology for trouble-free operation.

Features and Benefits

- VL 40 series is designed for pools up to 10,000 gallons
- Designed for quick assembly and precise alignment of components
- Pumps and filters are performance-matched to provide maximum flow and energy efficiency
- Multi-position valve provides maximum flow at low pressure drop
- Durable filter bases for long-lasting, all-weather performance
- Includes 13" Polymeric Tank, 4-Position Filter Valve, 30gpm Pump, Integrated Pump Base, and 1 1/4" and 1 1/2" Hose Adapters



VL40T32

Filters

Specifications

SKU	Filter Control Valve	Pump	H.P.	Sand Capacity	Ctn. Weight (lbs.)	DOE Compliant
VL40T32	4 Position	VL 40 Series	30gpm	42 lbs.	26	Yes

For replacement parts see pages 362–363.

Filtration

The importance of proper swimming pool or spa filtration can not be overstated. The reasons for filtration are obvious — clear water not only looks beautiful, but it is also necessary for health and safety reasons. Much of the material suspended in the water, derived from plant and animal sources, provides food for bacteria and algae. It is these materials that must be removed if a pool or spa is to be maintained in a safe and sanitary condition. The three most popular types of filtration currently in use in residential pools and spas are high-rate sand, cartridge and diatomaceous earth (D.E.). Each method of filtration is explained below.

High-Rate Sand

The oldest and most popular method of filtration is sand. Sand filters share two things in common: 1) When in the filtration mode, water always flows from top to bottom; 2) They all have some sort of lateral or underdrain with slots to hold back sand while allowing clean, filtered water to pass through.

High-rate sand filters use a special filter sand, normally .45 to .55 mm

(also known as pool-grade #20 silica sand), because it has sharp edges that serve to separate particles, allowing filtration to take place. They operate on the basis of "depth" filtration; dirt is driven through the sand bed and trapped in the minute spaces between the particles of sand. Initially, a clean sand bed will remove larger particles, and then, as the bed starts to load up, it will remove finer particles.

Cleaning of the media, or sand bed, is accomplished through reversing the flow through the filter, to the "waste" line. This is known as backwashing.

Cartridge

Cartridge filtration has been available for a relatively long time, but only recently has it begun to enjoy rapid growth and acceptance.

When water passes through a cartridge filter, dirt is screened out at the surface of the cartridge element. When clean, the element will trap larger particles, with finer particles being filtered out as the pores of the element become clogged by the larger debris.

The cartridge element can be removed and cleaned by pressure washing inside and out with a garden hose.

A key benefit of cartridge filtration is that it does not require a backwash valve. This reduces head loss which, in turn, improves the efficiency of the overall system.

Diatomaceous Earth (D.E.)

Many pool professionals consider D.E. filtration to be the finest, because it is capable of removing smaller particles than either sand or cartridge.

Diatomaceous earth is a porous powder with microscopic openings, that, when magnified, look like tiny sponges. Clear water can pass through these openings, but particles, as small as five microns, are trapped the first pass through the media.

All D.E. filters have internal elements that become coated with D.E. It is this "filter cake" that strains dirt, dust, algae and some forms of bacteria from the water.

Similar to sand filters, when a D.E. filter becomes dirty, it is cleaned either by backwashing the clogged D.E. to the "waste" line or regenerating and draining. To restore filtration, a fresh "charge" of D.E. is added to the filter.

Water Chemistry

Whatever method of filtration is selected, it is important to remember that filtration alone does not keep water looking its best. Proper water chemistry must also be maintained for safe, clean water. Most pool owner complaints are directly related to water chemistry or improper sizing of filters and pumps rather than equipment failures.

Technical Data – Filtration

Filtration Method	Suggested Filtration Rate		Approximate Filtration Range (Microns)
	Residential (GPM/ft. ²)	Commercial (GPM/ft. ²)	
High-Rate Sand	20	20	20 to 40
Cartridge	1*	.375	10 to 20
Diatomaceous Earth	2.5	2	5

NOTE: *Use Commercial Filtration Rate (.375gpm/ft²) to meet APSP-15

Sources: (1) NSPI. Basic Pool & Spa Technology (2/88 Edition; Section 1.4: Filters)

(2) Hayward Pool Products Technical Bulletin TMF-12.

For proper filter sizing techniques, please see "Filter Sizing" section 4C on page 21.



High-Rate Sand Filter



Cartridge Filter



Vertical Grid Diatomaceous Earth (D.E.) Filter

THE FUTURE BELONGS TO MICROCHANNEL

When your customers want the perfect temperature for their pool and spa, the right equipment can make all the difference. Using industry-first microchannel heat exchanger (MCHX) technology from Hayward, the HeatPro® Series of Heat+Chill Heat Pumps will ensure the optimal temperature year-round.



CHILLS DOWN TO 40°F FOR COLD PLUNGES

Chills to low temperatures so you can get all the benefits out of your next cold plunge.*



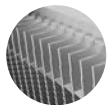
COOLS FOR PERFECT TEMPERATURE

Ideal for warm or desert climates with 30% increased cooling capacity compared to competitive technology.*



WARMS TO EXTEND SWIM SEASON

Extend swim season with improved heating capacity below 50°F using our patent defrost algorithm.



BEST-IN-CLASS CORROSION RESISTANCE.

TCP coating developed by Naval Air Command for durability in the harshest climates.



ROBUST COIL STRUCTURE.

Protects against fin damage during installation and outdoor impacts.



Learn More About
Microchannel



ADD OMNI® AUTOMATION FOR A NEW DEGREE OF CONTROL.

The industry-best HeatPro gets even better when you pair it with top-rated Omni automation offering advanced management of temperature, runtime and a whole lot more.

* Heat+Chill models only.

Hayward, Hayward & Design, the H logo, HeatPro, Omni, and We Build Better. are registered trademarks of Hayward Industries, Inc. ©2025 Hayward Industries, Inc

HeatPro® VS



HP51202T

Engineered to be just as high-performing as our industry-leading HeatPro heat and cool pump, the HeatPro VS heat pump leverages variable-speed technology to maximize energy and cost savings while minimizing operational noise. As the first AHRI-certified inverter-driven variable-speed heat and cool pump in North America, it features a vertical discharge fan that allows for easy installation in any in-ground pool pad. With efficient operation in even the coldest ambient temperatures, it's the smartest way for any pool owner to get more out of their investment.

Features and Benefits

- Inverter-driven variable-speed technology features best-in-class part-load COP and incredibly quiet operation
- Intuitive control panel provides a seamless user experience via touchscreen digital display
- Vertical discharge fan allows for versatile installation in any in-ground pool pad
- Heat and Cool. This heat and cool heat pump, together with low ambient temperature feature, will extend the swimming season
- Soft Start driven by inverter technology, it gives customers no excessive inrush current during the starting process
- Titanium heat exchanger offers superior corrosion resistance to fight against damage and premature failure caused by unbalanced water chemistry
- AHRI certification means independent lab testing confirms product performance and value

Specifications

SKU	BTU/COP: 80.6°F Air/80°F Water/80% RH	BTU/COP: 80.6°F Air/80°F Water/63% RH	BTU/ COP: 50°F Air/80°F Water/63% RH	Min. Operating Temperature	Voltage/Hertz/ Phase	MIN Circuit Protection	Size: WxDxH	Weight (lbs.): Unit & Ship
HP51202T	120,000/5.8	112,000/5.5	65,000/4.0	40	220-240/60/1	45A	33.8" x 36.2" x 44.2"	286 x 381