We’re now Davey Water Products!

We believe Davey Water Products better reflects our total product range and business focus.

Davey Water Products manufactures and distributes a comprehensive range of water transfer, conservation and filtration products which have earned their stripes throughout the world over the past seventy years.

Our export markets now number more than 60 separate countries where Davey Water Products match or exceed the world’s best and achieve results in some of the toughest environmental and climatic conditions on the globe.

Over the past year Davey Water Products has made significant business acquisitions which add important new opportunities as well as rounding out our product range.

The business acquisitions include Spa-Quip, the New Zealand based manufacturer of spa pool products, which complements the range of Davey swimming pool and spa bath products.

Quite recently we have purchased Contamination Control, another New Zealand based company, whose range of water treatment products for domestic, rural, industrial and commercial water supply applications holds a dominant position in that market.

We have also maintained our significant commitment to research and development which has created innovative new products servicing specific and emerging market opportunities.

Many of these products have received multiple awards for innovation and product excellence and have directly led to our recent induction into the Manufacturing Hall of Fame for the State of Victoria.

Davey Water Products is a wholly owned subsidiary of GUD Holdings, a ‘Top 200’ Australian public company whose shares are listed on the Australian Stock Exchange.

Now more than ever “Depend on Davey Water Products” reflects a business culture of leadership, innovation, quality products and an accredited agent and reseller network committed to meeting the best expectations of our customers.
About this Booklet

This booklet has been designed to make your pump or pressure system selection easy. The information you require to make your selection will depend on the particular purpose for which your pump system is needed. However, the basic consideration of anyone selecting a pump is: how much water do you need to pump and at what head or pressure do you need to pump it?

Your local Davey dealer can advise you about which Davey product will best suit your needs.

All technical data in this guide is for 220-240 volt 50Hz single phase or 380-415 volt 50Hz three phase. For other voltages (eg 110 volt 60Hz) consult the appropriate Davey office as shown on the back of this guide.
Flow and Pressure

There is a Davey Home Pressure System to suit virtually every home and budget. Choosing the most appropriate model for your application depends on a number of factors:

- How much water will be required?
  This is often considered in terms of the number of taps or outlets that are likely to be on at the one time.

- How much pressure will be needed?
  Pumping through long runs of piping or to elevated places such as multi-storey buildings requires more pressure than flat sites or compact plumbing systems.

The following chart is a quick guide to selecting a Davey Home Pressure System to suit your flow and pressure requirements. Reference to the detailed product information on the following tables will enable you to select the type of pump and control system that best matches your particular situation.

**Control System**

Since Davey made constant flow devices popular, most consumers have chosen the comfort such a controller provides. Davey’s new Torrium® is the ultimate controller available today.

For consumers who want a more traditional system, Davey also offer a range of pressure switch controlled Home Pressure Systems.
The Torrium® delivers flow-on benefits

It’s not easy living with water pressure problems. Poor or inconsistent water pressure can result in a broad range of problems, especially where the pump is the sole source of pressure to the household. Plus, no-one wants their pump cycling overnight because of a drop in water pressure. That’s why Davey invented the extremely clever Torrium® Pressure System Controller. Five years in the making and thousands of hours of world-wide, in the field testing have culminated in a Pressure System Controller that can actually think for itself. The Torrium® can automatically adapt to changing conditions...because it has an in-built titanium mounted 'brain' that can out-smart everyday problems. It also means there are fewer installation and maintenance issues. This unique ability to respond to changing circumstances ensures a steady, reliable flow of water is virtually guaranteed day after day, year after year.

### CONSTANT FLOW

With a Torrium® system you’ll hardly notice the pump start. Better still, while you are using water, say in the shower, the pump doesn’t cycle, overcoming those annoying temperature and pressure changes.

### LOSS OF PRIME PROTECTION

If you run out of water, the last thing you need is a pump that continues to run without water. The Torrium® detects a loss of water supply (prime) and shuts the system down. What’s more it will Auto retry to re-establish prime if possible and Auto-restart on water flow return.

### ADAPTIVE PRESSURE SWITCH

Torrium® measures the system pressure and adapts the cut-in pressure according to circumstances, thus providing a more reliable system with improved comfort and convenience.

### SIMPLIFIED FAULT FINDING

Torrium® is equipped with a status indicator to make system fault finding quicker and more accurate. Torrium® can tell you if you have a slow filling toilet cistern, a loss of prime, a slow leak, low supply voltage, water over-temperature, even if someone has tried to override the Torrium® protection system.

### AUTO RETRY

Auto retry in Torrium® allows the system to reset itself after a loss of prime, thus helping reduce system downtime.

### LOW PRESSURE DROP

Torrium® has been designed to get the most from your pump, including pressure. The Torrium® has a very low water pressure loss through it, so that you can get the best performance at your outlets. Torrium® is available complete as part of a Davey Home Pressure System or can be purchased separately to upgrade an existing pump.
Davey Jet Pump Home Pressure Systems

For many years, Davey jet assisted centrifugal home pressure systems have been the benchmark for reliable household pressure. Jet Pumps are an excellent and robust choice, especially for smaller systems up to 35 litres per minute, or for larger systems with long suction lines or suction lifts.

Davey Jet Pumps have excellent wear resistance and air handling ability, contributing to their well earned reputation for reliability.

Customers prefer and trust a Davey Jet Pump for their home.

Aquamate

- For large double storey homes and farms
- Dynajet X90
- Dynajet X90P
  - For large double storey homes and farms
  - Also available with Loss of Prime pressure switch.

Dynajet X50

- For average sized homes with modern appliances
- Dynajet Ultra
- Pressure Switch Purchase separately
- XP350P
- XP350T
- XP350

Dynajet X70

- For smaller families and two storey homes
- Dynajet 50T
- Dynajet X70T
- Dynajet X70P
- Torrium Not required

Dynajet X90

- Small to average homes
- Dynajet X90P
- Torrium Not required

*Models with Pressure Switch Base mounted 35 litre

**Models with Pressure Switch In-built 0.25 litre

---

**Jet Pump Home Pressure Systems**

<table>
<thead>
<tr>
<th>Model</th>
<th>Type of Controller</th>
<th>Pressure Tank</th>
<th>Nominal Operating Pressure kPa</th>
<th>Suction Lift in metres</th>
<th>Pressure Switch Settings kPa</th>
<th>Output in litres/minute gals/hour</th>
</tr>
</thead>
<tbody>
<tr>
<td>Aquamate*</td>
<td>Pressure Switch</td>
<td>In-built 0.25 litre</td>
<td>140/20</td>
<td>0</td>
<td>140-280</td>
<td>12/149</td>
</tr>
<tr>
<td>XP350T</td>
<td>Torrium Pressure Switch</td>
<td>Not required Top-mounted 8 litre Purchase separately</td>
<td>140/20</td>
<td>0</td>
<td>140-280</td>
<td>12/149</td>
</tr>
<tr>
<td>XP350PC*</td>
<td>Torrium Pressure Switch</td>
<td>Not required Base-mounted 35 litre Purchase separately</td>
<td>180/26</td>
<td>0</td>
<td>180-390</td>
<td>12/149</td>
</tr>
<tr>
<td>XP350P</td>
<td>Torrium Pressure Switch</td>
<td>Not required Base-mounted 35 litre Purchase separately</td>
<td>210/30</td>
<td>0</td>
<td>210-420</td>
<td>12/149</td>
</tr>
<tr>
<td>Dynajet X50T</td>
<td>Torrium Pressure Switch</td>
<td>Not required Base-mounted 35 litre Purchase separately</td>
<td>210/30</td>
<td>0</td>
<td>210-420</td>
<td>12/149</td>
</tr>
<tr>
<td>Dynajet X50</td>
<td>Torrium Pressure Switch</td>
<td>Not required Base-mounted 35 litre Purchase separately</td>
<td>210/30</td>
<td>0</td>
<td>210-420</td>
<td>12/149</td>
</tr>
<tr>
<td>Dynajet X70T</td>
<td>Torrium Pressure Switch</td>
<td>Not required Base-mounted 35 litre Purchase separately</td>
<td>210/30</td>
<td>0</td>
<td>210-420</td>
<td>12/149</td>
</tr>
<tr>
<td>Dynajet X90T</td>
<td>Torrium Pressure Switch</td>
<td>Not required Base-mounted 35 litre Purchase separately</td>
<td>210/30</td>
<td>0</td>
<td>210-420</td>
<td>12/149</td>
</tr>
</tbody>
</table>

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*Also available with Loss of Prime pressure switch.
Davey HP Horizontal Multistage Systems with Torrium®

Davey’s latest and most compact systems really pack a performance punch. Utilising Davey’s patented floating neck ring system, the new HP models offer outstanding performance with whisper quiet operation.

Coupled to the NEW Torrium® controller, the complete system offers strong even pressure, whether it’s one shower or multiple outlets at once. These systems are easy to install with the convenience of the 360 degree rotatable Torrium® mounting flange and union. The new HP range will provide you with years of comfortable and dependable water pressure.

Davey HS Horizontal Multistage Systems with Torrium®

Davey’s HS systems have established a name for powerful yet quiet performance, and now they are available with the NEW Torrium® controller. HS models provide even higher pressures than the HP models, making them ideal for installation on multi-storey homes or where the pump may be some distance from the dwelling.

HS models feature specially designed pump end components to provide outstanding performance coupled with low power consumption and noise output.

<table>
<thead>
<tr>
<th>Model</th>
<th>Motor kW</th>
<th>Type of Controller</th>
<th>Pressure Tank</th>
<th>Nominal Operating Pressure kPa psi</th>
<th>Suction Lift in metres/feet</th>
<th>Pressure Switch Settings kPa</th>
<th>Commander Size BSP</th>
<th>Flow in litres/minute gals/hour</th>
</tr>
</thead>
<tbody>
<tr>
<td>HP45-05T</td>
<td>0.83 0.58</td>
<td>Torrium</td>
<td>Not required</td>
<td>200/29</td>
<td>68/631</td>
<td>61/605</td>
<td>Adaptive</td>
<td>1&quot;/1.5&quot;</td>
</tr>
<tr>
<td>HP56-06T</td>
<td>0.9 0.6</td>
<td>Torrium</td>
<td>Not required</td>
<td>200/29</td>
<td>85/1122</td>
<td>81/1069</td>
<td>Adaptive</td>
<td>1&quot;/1.5&quot;</td>
</tr>
<tr>
<td>HS85-08T</td>
<td>1.15 0.80</td>
<td>Torrium</td>
<td>Not required</td>
<td>200/29</td>
<td>125/1650</td>
<td>121/1597</td>
<td>Adaptive</td>
<td>1&quot;/1.5&quot;</td>
</tr>
<tr>
<td>Dynaflo HS50-05T</td>
<td>0.74 0.53</td>
<td>Torrium</td>
<td>Not required</td>
<td>210/20</td>
<td>48/634</td>
<td>47/620</td>
<td>Adaptive</td>
<td>1&quot;/1.5&quot;</td>
</tr>
<tr>
<td>Dynaflo HS50-06T</td>
<td>0.89 0.60</td>
<td>Torrium</td>
<td>Not required</td>
<td>290/42</td>
<td>48/634</td>
<td>46/647</td>
<td>Adaptive</td>
<td>1&quot;/1.5&quot;</td>
</tr>
<tr>
<td>Dynaflo HS50-06T</td>
<td>0.82 0.57</td>
<td>Torrium</td>
<td>Not required</td>
<td>210/20</td>
<td>68/897</td>
<td>65/858</td>
<td>Adaptive</td>
<td>1&quot;/1.5&quot;</td>
</tr>
<tr>
<td>Dynaflo HS50-06T</td>
<td>1.1 0.76</td>
<td>Torrium</td>
<td>Not required</td>
<td>290/42</td>
<td>68/897</td>
<td>66/871</td>
<td>Adaptive</td>
<td>1&quot;/1.5&quot;</td>
</tr>
</tbody>
</table>
Davey M Series Horizontal Multistage Pumps & Pressure Systems

For larger systems requiring higher flow or pressure, or where the preference is for all stainless steel pump components, inside and outside, Davey M Series pumps are the answer. A choice of control systems include a Torrium® controller for anti-cycling operation and protection against dry running, with extra tank requirement or as a standard pressure switch and tank operation. M Series can also be packaged with our Davey Monsoon 3C with up to 3 pumps operating (refer Packaged Pump Sets pg 41).

Note: Torrium® maximum flow rate up to 170lpm.

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### M SERIES HORIZONTAL MULTISTAGE PRESSURE SYSTEMS

<table>
<thead>
<tr>
<th>Model</th>
<th>Motor kW (P)</th>
<th>Nominal Operating Pressure kPa psi</th>
<th>Suction in metres/feet</th>
<th>Pressure Settings Range</th>
<th>Connection Size BSP inlet/outlet</th>
</tr>
</thead>
<tbody>
<tr>
<td>M3041</td>
<td>0.55</td>
<td>250</td>
<td>36</td>
<td>200 - 400 kPa</td>
<td>1&quot;F/1&quot;M</td>
</tr>
<tr>
<td>M3051</td>
<td>0.75</td>
<td>300</td>
<td>43</td>
<td>250 - 500 kPa</td>
<td>1&quot;F/1&quot;M</td>
</tr>
<tr>
<td>M3061</td>
<td>1.10</td>
<td>400</td>
<td>58</td>
<td>300 - 600 kPa</td>
<td>1&quot;F/1&quot;M</td>
</tr>
<tr>
<td>M6041</td>
<td>0.75</td>
<td>200</td>
<td>29</td>
<td>150 - 275 kPa</td>
<td>1/2&quot;F/1&quot;M</td>
</tr>
<tr>
<td>M6051</td>
<td>1.10</td>
<td>300</td>
<td>43</td>
<td>250 - 500 kPa</td>
<td>1/2&quot;F/1&quot;M</td>
</tr>
<tr>
<td>M6061</td>
<td>1.30</td>
<td>350</td>
<td>51</td>
<td>300 - 550 kPa</td>
<td>1/2&quot;F/1&quot;M</td>
</tr>
<tr>
<td>M8041</td>
<td>1.50</td>
<td>300</td>
<td>43</td>
<td>200 - 425 kPa</td>
<td>1/2&quot;F/1&quot;M</td>
</tr>
</tbody>
</table>
Davey Supercell Pressure Tanks are designed to provide many years of reliable service. These robust, hydro-pneumatic water pressure vessels are manufactured from the highest quality materials in compliance with the strict requirements of ISO 9001:2000 quality standards.

All models (except Supercell 24HP+) are of the captive diaphragm design, and all tanks feature heavy duty butyl diaphragms that comply with international standards for potable water applications. Supercell 24HP+ tanks have replaceable diaphragms with high quality stainless steel closing flanges.

Not only do they look good from the outside but, inside, the tank shell is protected from corrosion by a safe potable grade epoxy coating. For added peace of mind, each tank is individually tested to guarantee its reliability.

These dependable tanks are available in a variety of sizes and in three pressure ratings. They can be used for a variety of accumulator functions, such as:

- Household, farm or industrial pressure systems
- Hydronic heating system expansion tanks
- Water hammer arrestor systems

### NOMINAL DRAW-OFF CAPACITY IN LITRES

<table>
<thead>
<tr>
<th>Tank Model</th>
<th>Tank Capacity (litres)</th>
<th>Max Pressure Rating (kPa)</th>
<th>Pressure Switch Range kPa (psi)</th>
<th>Diameter (mm)</th>
<th>Height (mm)</th>
<th>Size (BSP male)</th>
<th>Position</th>
</tr>
</thead>
<tbody>
<tr>
<td>Supercell 8C</td>
<td>8 700</td>
<td>2.2 3.0 2.4 3.3 3.4</td>
<td>150-250 (22-36)</td>
<td>200-400 (29-58)</td>
<td>250-500 (36-73)</td>
<td>300-600 (44-88)</td>
<td>500-1000 (73-145)</td>
</tr>
<tr>
<td>Supercell 18C</td>
<td>18 700</td>
<td>5.0 6.7 7.2 7.4 7.6</td>
<td>N/A</td>
<td>N/A</td>
<td>N/A</td>
<td>214</td>
<td>360</td>
</tr>
<tr>
<td>Supercell 35C</td>
<td>35 700</td>
<td>10.0 13.3 14.0 14.6 14.7</td>
<td>N/A</td>
<td>N/A</td>
<td>N/A</td>
<td>274</td>
<td>360</td>
</tr>
<tr>
<td>Supercell 50C</td>
<td>50 700</td>
<td>14.3 18.8 20.0 20.8 21.0</td>
<td>N/A</td>
<td>N/A</td>
<td>N/A</td>
<td>380</td>
<td>400</td>
</tr>
<tr>
<td>Supercell 105C</td>
<td>105 700</td>
<td>30.0 39.4 42.0 31.5 43.7</td>
<td>44.1</td>
<td>N/A</td>
<td>N/A</td>
<td>550</td>
<td>680</td>
</tr>
<tr>
<td>Supercell 24HP+</td>
<td>24 1600</td>
<td>6.3 8.3 9.0 9.4 10.3</td>
<td>10.5 9.1 8.4</td>
<td>270</td>
<td>485</td>
<td>1”</td>
<td>Bottom</td>
</tr>
<tr>
<td>Supercell HP105C</td>
<td>105 1050</td>
<td>30.0 39.4 42.0</td>
<td>31.5 43.7 44.1</td>
<td>47.7</td>
<td>N/A</td>
<td>N/A</td>
<td>500</td>
</tr>
</tbody>
</table>

**Supercell Pressure Tanks**

For the best performance from your pressure system Davey recommend you check the air pressure in the tank every six months. For further details see your Installation and Operating Instructions or consult your Davey dealer.
Filterpure® and Steriflo®
Peace of Mind

Water is essential for life, a healthy lifestyle is promoted with water free from contamination and impurities.

For clean, safe and fresh tasting water in unlimited volumes right in your home, a simple three process system will ensure a reliable supply, for your peace of mind.

**Filtration**

Water can be discoloured and tainted by particles such as: dust, rust, sediment, hair, algae, and parasitic cysts (Giardia & Cryptosporidium). Water is swiftly cleared of these particles once passed through an appropriate Filterpure cartridge, rejuvenating the sparkle in truly clean water. Ideally, a coarse and then a fine cartridge will be installed together.

**Disinfection**

Microscopic living organisms can thrive in water such as: bacteria, mould, viruses, yeast, and parasitic cysts (Giardia & Cryptosporidium). Exposure to Ultra Violet light is a safe and effective way to neutralise these unhealthy organisms in your water. Davey Steriflo® UV units are ideal for domestic water disinfection.

**Purification**

Dissolved impurities that affect the taste, odour and safety of your water can include: chlorine, pesticides, herbicides, and solvents. Filterpure cartridges containing activated carbon absorption media are an effective tool to purify water of these unwanted substances. Purification is most effective at the point of use, like the kitchen tap. Bacteriostatic cartridges inhibit the growth of organisms within the element fabric.
Davey Filterpure® & Steriflo® systems offer clean, safe and healthy water, without using chemicals for one tap or for the entire house. Wherever you get your water, be it mains water, rainwater, bore or even dam water, there is a Davey Filterpure and Steriflo system for you.

**Design of your Water Process**

The size of housing is determined simply by how many taps or appliances you want to provide water to. For a single tap, regular 10” is needed. For anything larger than a single tap, use 20” or 25” housing. A clever installation will have two jumbo 10” or 20” cartridge filters installed on the main cold water line. Whether it is mains water, rainwater, bore or dam water, there is a Davey Filterpure or Steriflo system for you. Drinking and cooking taps are then protected with a standard 10” purification filter.

The ideal sequence of elements would start with a coarse 20 micron PP cleanable element to remove large particles and increase the life of secondary elements. A second, finer PS element of 1 or 5 micron as stage two will really start to produce clear water. For individual outlets such as kitchen taps, a smaller purification filter with activated carbon and a bacteriostatic media will ensure that you have great water and peace of mind.

**Cartridge Element Types**

**Pleated Polyester (PP series)**

Pleated polyester cartridges offer reduced operating costs for many applications as the pleated construction allows them to be rinsed clean and reused. In addition, the cartridges have a high surface area and can handle higher flows than disposable depth cartridges.

The availability of jumbo-sized PP cartridges means that high flows can be economically filtered. The 20 micron is an outstanding prefilter, easy to clean with a high dirt holding and flow capacity.

**Spun Polypropylene (PS series)**

These are pure polypropylene with no fillers, binders, adhesives or surfactants, so are ideal for food and drinking water use and any applications where high purity is important. The melt blown fibres give a graduated pore structure allowing for depth capture in the matrix. Generally used as a second stage for finer micron filtration.

**Purification Cartridges**

Activated Carbon purification cartridges are typically for the removal of taste, odour, chlorine, pesticides, and other organic chemicals. They are best used at the final point of use stage in your water process.

Filterpure cartridges need to be replaced and/or cleaned at regular intervals to ensure they are performing correctly.

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### CARTRIDGE ELEMENT TYPES

<table>
<thead>
<tr>
<th>Filtration Cartridges Polypropylene Spun Melt</th>
<th>Part No.</th>
<th>Micron Size</th>
<th>Max. Flow Rate</th>
<th>Part No.</th>
<th>Micron Size</th>
<th>Max. Flow Rate</th>
<th>Part No.</th>
<th>Micron Size</th>
<th>Max. Flow Rate</th>
</tr>
</thead>
<tbody>
<tr>
<td>Filtration Cartridges Polyester Pleated (cleanable)</td>
<td>SPF10</td>
<td>10</td>
<td>20 lpm</td>
<td>SPF10</td>
<td>10</td>
<td>30 lpm</td>
<td>SPF10</td>
<td>10</td>
<td>50 lpm</td>
</tr>
<tr>
<td>Filtration Cartridges Polypropylene Spun Melt</td>
<td>SPF10</td>
<td>15</td>
<td>15 lpm</td>
<td>SPF10</td>
<td>15</td>
<td>30 lpm</td>
<td>SPF10</td>
<td>15</td>
<td>50 lpm</td>
</tr>
<tr>
<td>Filtration Cartridges Activated Carbon</td>
<td>SPF10</td>
<td>20</td>
<td>20 lpm</td>
<td>SPF10</td>
<td>20</td>
<td>40 lpm</td>
<td>SPF10</td>
<td>20</td>
<td>60 lpm</td>
</tr>
</tbody>
</table>

**Note:** Cartridges marked * are suitable for cyst reduction, cartridges marked # are suitable for cyst removal. Davey recommend UV disinfection as part of a water treatment programme.

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### UV DISINFECTION

Steriflo® Models

<table>
<thead>
<tr>
<th>Model No.</th>
<th>Max. Flow* Inlet/Outlet</th>
<th>UV40-20 40 lpm</th>
<th>UV75-25 75 lpm</th>
<th>UV130-40 130 lpm</th>
</tr>
</thead>
<tbody>
<tr>
<td>1/2” BSP(M)</td>
<td>UV40-20 40 lpm</td>
<td>UV75-25 75 lpm</td>
<td>UV130-40 130 lpm</td>
<td></td>
</tr>
</tbody>
</table>

*Maximum flow is for clean and clear water - prefiltration and post filtration may be required depending on installation.
Surface Mounted Shallow Well Pumps

For depths to 7.5 metres
The Davey range of quality Australian-made shallow well pumps and pressure systems is ideal for supplying high pressure water for garden sprinklers, through to stock watering and washdown applications.

The 95S, 125S and 165S models feature a unique pump casing, cast in strong marine grade aluminium with a Rilsan® lining. This ensures extremely high corrosion and abrasion resistance for simple, trouble-free operation in the years to come.

They also feature IP56 Rated TEFC (Totally Enclosed Fan Cooled) motors to help exclude dust, water and vermin.
Top of the range is the powerful and rugged Prime Jet 240 pump, capable of delivering flows to 240 lpm, or developing discharge pressures in excess of 66 metres.

Shallow well pumps offer versatility of performance. Simply by changing the jet and venturi, the performance of the pump can be altered to compensate for alterations to pipework systems, trough elevations or other specific needs.

Davey’s shallow well pumps and systems can be mounted on the surface close to the water source and can handle suction lifts down to 7.5 metres.
They come as both a pump only for manual operation or, alternatively, can be converted to an automatic pressure system by combining with a free standing Supercell 50C or Supercell 105C tank. Davey also has smaller Supercell tanks available for mounting on top of the pump, where applicable (refer page 9).
### Farm & Commercial Systems

#### Pump Kit Specifications

<table>
<thead>
<tr>
<th>Model</th>
<th>Jet Kit No.</th>
<th>Total Head</th>
<th>BHP</th>
<th>Delivery Head in kph (gpm)</th>
<th>Pressure Switches</th>
<th>Maximum Shut-Off Pressure</th>
<th>Pressure Switch Setting (psi)</th>
</tr>
</thead>
<tbody>
<tr>
<td>2269*</td>
<td>0 0 0</td>
<td>95</td>
<td>20.8</td>
<td>9.1</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1.5</td>
<td>0.5</td>
<td>86</td>
<td>18.9</td>
<td>8.3</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2.5</td>
<td>1.5</td>
<td>70</td>
<td>15.5</td>
<td>6.6</td>
<td></td>
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<td></td>
</tr>
<tr>
<td>5.5</td>
<td>2.0</td>
<td>13</td>
<td>2.5</td>
<td>4.2</td>
<td></td>
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</tr>
</tbody>
</table>

#### Jet Kit Specifications

<table>
<thead>
<tr>
<th>Model</th>
<th>Jet Kit No.</th>
<th>Total Head</th>
<th>BHP</th>
<th>Delivery Head in kph (gpm)</th>
<th>Pressure Switches</th>
<th>Maximum Shut-Off Pressure</th>
<th>Pressure Switch Setting (psi)</th>
</tr>
</thead>
<tbody>
<tr>
<td>2269*</td>
<td>0 0 0</td>
<td>126</td>
<td>27.3</td>
<td>165</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1.5</td>
<td>0.5</td>
<td>113</td>
<td>24.8</td>
<td>144</td>
<td></td>
<td></td>
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</tr>
<tr>
<td>2.5</td>
<td>1.5</td>
<td>109</td>
<td>21.6</td>
<td>134</td>
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<td></td>
<td></td>
</tr>
<tr>
<td>5.5</td>
<td>2.0</td>
<td>102</td>
<td>18.5</td>
<td>108</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

#### Input kW (P1) and Output kW (P2)

<table>
<thead>
<tr>
<th>Model</th>
<th>Jet Kit No.</th>
<th>Total Head</th>
<th>BHP</th>
<th>Delivery Head in kph (gpm)</th>
<th>Pressure Switches</th>
<th>Maximum Shut-Off Pressure</th>
<th>Pressure Switch Setting (psi)</th>
</tr>
</thead>
<tbody>
<tr>
<td>2269*</td>
<td>0 0 0</td>
<td>95</td>
<td>20.8</td>
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<tr>
<td>1.5</td>
<td>0.5</td>
<td>86</td>
<td>18.9</td>
<td>8.3</td>
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<td>1.5</td>
<td>70</td>
<td>15.5</td>
<td>6.6</td>
<td></td>
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<td>13</td>
<td>2.5</td>
<td>4.2</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

#### Important Information

- **Input kW (P1)**
- **Output kW (P2)**

**Note:** Denotes standard configuration. Models 955, 1255 & 1655 are converted to higher pressure by fitting relevant Jet & Venturi. Specify Jet Kit No. when ordering Prime jet 240.

**Plumbing Connections:** Inlet - 1/" (32mm) BSP Female. Outlet - 1/" (32mm) BSP Female - all models.

**Pumps supplied with pressure switches connected, suitable for automatic pressure system operation.**

**To convert litres/minute to gallons/hour multiply by 13.2. All imperial data is an approximation of metric figures.**

Specifications subject to change without notice.

**All single phase models supplied with plug and lead for 220/250 volt 50Hz operation. Prime Jet 240 only may be re-connected for use on nominal 480 volt 50Hz single phase supply. For 3 phase nominal 415 volt, specify when ordering (available for 3685 & Prime Jet 240 only).**
Surface Mounted Deep Well Pumps

For depths to 50 metres
The Davey range of quality Australian-made deep well pumps and pressure systems is ideal for handling suction lifts beyond 7.5 metres.

By submerging the jet and venturi down the bore, flows can be provided from as deep as 50 metres. To make installation and servicing easier, the pump is conveniently installed at ground level.

The 95D, 125D, 165D and Prime Jet 240 are able to retrieve water from depths to 50 metres and can produce flows up to 194 lpm from shallower depths.

The 95D, 125D, 165D models feature a unique pump casing cast in marine grade aluminium, lined with a strong engineering plastic to ensure extremely high corrosion resistance and the ability to withstand the harsh operating conditions often encountered in pumping water from bores, wells, etc. The powerful Prime Jet 240 is made of cast iron to cater for the higher operating pressures.

Davey deep well pumps are fitted with the Davey automatic demand response (ADR) valve to ensure peak performance at all times and help protect against loss of prime.

Davey deep well systems can also be installed in horizontally offset situations to draw water from distant dams, rivers, etc. This allows the pump to be mounted away from the source of water to gain access to power, or in places where there is the possibility of flooding.

All Davey deep well pumps feature IP56 Rated TEFC (Totally Enclosed Fan Cooled) Motors to help exclude dust, water and vermin.

Where electric power is not available, a Davey engine driven pump can be combined with a deep well injector to deliver water from deep bores. For fitting configurations refer page 25.
**Far** & Commercial Systems**

<table>
<thead>
<tr>
<th>Pump Model</th>
<th>Inlet ID (Nominal Bore Size)</th>
<th>Max. Shut-off Pressure (kPa)</th>
<th>Outlet Pressure (psi)</th>
<th>Depth to water metres (ft)</th>
<th>Output per minute (litres/gallons)</th>
</tr>
</thead>
<tbody>
<tr>
<td>95D 1.0kW</td>
<td>22469 (4&quot;) 100mm</td>
<td>550</td>
<td>80</td>
<td>140</td>
<td>240</td>
</tr>
<tr>
<td></td>
<td>22470 (6&quot;) 100mm</td>
<td>645</td>
<td>93</td>
<td>240</td>
<td>240</td>
</tr>
<tr>
<td></td>
<td>22471 (6&quot;) 100mm</td>
<td>575</td>
<td>83</td>
<td>240</td>
<td>240</td>
</tr>
<tr>
<td>125D 1.0kW</td>
<td>22472 (4&quot;) 100mm</td>
<td>660</td>
<td>96</td>
<td>240</td>
<td>240</td>
</tr>
<tr>
<td></td>
<td>22570 (5&quot;) 125mm</td>
<td>650</td>
<td>94</td>
<td>240</td>
<td>240</td>
</tr>
<tr>
<td></td>
<td>22571 (5&quot;) 125mm</td>
<td>590</td>
<td>86</td>
<td>240</td>
<td>240</td>
</tr>
<tr>
<td>160D 1.0kW</td>
<td>22473 (6&quot;) 100mm</td>
<td>620</td>
<td>92</td>
<td>240</td>
<td>240</td>
</tr>
<tr>
<td></td>
<td>22474 (6&quot;) 100mm</td>
<td>620</td>
<td>92</td>
<td>240</td>
<td>240</td>
</tr>
<tr>
<td></td>
<td>22475 (6&quot;) 100mm</td>
<td>750</td>
<td>109</td>
<td>240</td>
<td>240</td>
</tr>
<tr>
<td>180D 1.0kW</td>
<td>22572 (5&quot;) 125mm</td>
<td>630</td>
<td>91</td>
<td>240</td>
<td>240</td>
</tr>
<tr>
<td></td>
<td>22573 (5&quot;) 125mm</td>
<td>540</td>
<td>78</td>
<td>240</td>
<td>240</td>
</tr>
<tr>
<td>Prime 240</td>
<td>22427 (6&quot;) 100mm</td>
<td>550</td>
<td>80</td>
<td>240</td>
<td>240</td>
</tr>
<tr>
<td>Jet 240</td>
<td>22428 (6&quot;) 100mm</td>
<td>815</td>
<td>118</td>
<td>240</td>
<td>240</td>
</tr>
<tr>
<td>3.2kW 2.5kW</td>
<td>22566 (5&quot;) 125mm</td>
<td>525</td>
<td>76</td>
<td>240</td>
<td>240</td>
</tr>
<tr>
<td>3.5kW 2.5kW</td>
<td>22567 (5&quot;) 125mm</td>
<td>560</td>
<td>81</td>
<td>240</td>
<td>240</td>
</tr>
<tr>
<td>5.1kW 3.0kW</td>
<td>22568 (5&quot;) 125mm (4&quot;) 100mm</td>
<td>830</td>
<td>120</td>
<td>240</td>
<td>240</td>
</tr>
<tr>
<td>5.5kW 3.0kW</td>
<td>22569 (5&quot;) 125mm</td>
<td>830</td>
<td>120</td>
<td>240</td>
<td>240</td>
</tr>
</tbody>
</table>

**Important Information**

- **Pump outlet**: 1/4" (32 mm) BSP Female. ‘Automatic Demand Response’ fitted as standard on all models.
- **Suction pipe sizes**: 1/4" and 1/2". 1.0D imperial polypipe for injector kit nos 22469 - 22472 and 22427 - 22428. 2" and 1-1/4" 1.0D Imperial polypipe for injector kit no. 22468.
- **Max. shut-off pressures** are at shallowest depth to water for each injector. Reduce by 10kPa for every 1 metre of extra depth to water.
- **All performances** are with injector submergence of 3m and minimum pipe length of 1.2m.
- **All pipe fittings and hose clips** are included with deep well injectors.
- **Offset applications**, performance will be reduced if suction pipe lengths exceed depths indicated for borehole installations.
- **Input kW (P.)**
- **Output kW (P.)**
SEAMLESS AND CONVENIENT

RainBank® does the thinking for you by automatically switching the water source from the domestic mains to the rainwater supply stored in the tank whenever a toilet is flushed or a washing machine used. If the rainwater supply is depleted at any time or in the case of a power failure, RainBank® automatically supplies mains water as the back up.

ENVIRONMENTALLY FRIENDLY

RainBank® only operates the pump to pressurise the rainwater when required. Energy costs are minimised as there is no double handling or re-pressurising of the mains water. Daily power consumption figures for a pump and RainBank® system supplying toilet cisterns in a three person dwelling is the equivalent to the operation of a reverse cycle 2,400W air conditioner for 3 minutes a day.

EASY TO INSTALL

RainBank® can be incorporated into the design of new homes or retrofitted to existing properties. RainBank® is available in kit form with a selection of three pumps.

SAFE

RainBank® has achieved the requirements of Standards Australia’s draft Technical Specification ATS 5200.466—2004, for Rainwater tank connection devices. RainBank® also complies with AS3500, AS4020 and features Water Mark approval license number IPC20009, for connection to a drinking water supply.
**XF Series**

The XF Series pumps offer high efficiency and longer operating life. Manufactured to the highest standards from quality tested materials including stainless steel pump shaft, corrosion resistant polycarbonate impellers and IP55 TEFC Motors.

From the XF range of pumps you can choose a pump for such applications as:
- General water transfer
- Sea water pumping
- Hydroponic systems
- Water circulation
- Desalinated water
- Aquaculture applications
- Dairy cooling towers
- Spearpoints

Special XF171S and XF192S models are available which have silicon carbide seals and Thermotection®. Thermotection automatically stops the pump if the water in the casing exceeds 85°C, to avoid damage from closed head running. Thermotection automatically resets when the temperature falls below 65°C.

**HP45-05**

The HP45-05 offers outstanding pump performance and extra quiet operation all packed in a compact, easily installed package.

**Dynaprive® X201 Self Priming Pump**

Manufactured from corrosion resistant materials and featuring a 0.63kW IP55 TEFC motor, this versatile pump finds a variety of applications. With an ‘open’ impeller – giving it the ability to handle soft solids to 10mm and self prime down to 7m – the X201 is ideal for sump emptying, septic effluent disposal and water supply from spearpoints. Motor kW input – (P1) 0.92 Motor kW output – (P2) 0.63

**XF & HP Series Performance**

<table>
<thead>
<tr>
<th>Model</th>
<th>Motor (kW)</th>
<th>Max Total Head (m)</th>
<th>Total Head metres/feet</th>
<th>Connection Inlet Outlet BSPP</th>
</tr>
</thead>
<tbody>
<tr>
<td>XF192</td>
<td>0.84</td>
<td>0.65</td>
<td>35</td>
<td>2” / 1”F</td>
</tr>
<tr>
<td>XF221</td>
<td>1.1</td>
<td>0.78</td>
<td>35</td>
<td>2” / 1”F</td>
</tr>
<tr>
<td>HP45-05</td>
<td>0.77</td>
<td>0.55</td>
<td>40</td>
<td>3/4” / 2”F</td>
</tr>
<tr>
<td>XF171</td>
<td>0.64</td>
<td>0.45</td>
<td>35</td>
<td>1” / 1”F</td>
</tr>
<tr>
<td>XF192</td>
<td>0.84</td>
<td>0.58</td>
<td>35</td>
<td>1” / 1”F</td>
</tr>
<tr>
<td>HP45-05</td>
<td>0.77</td>
<td>0.55</td>
<td>40</td>
<td>3/4” / 2”F</td>
</tr>
</tbody>
</table>

![Electric Transfer Pumps](image)
Stainless Steel Transfer Pumps
The NEW XF111SS and XF211SS single stage centrifugal pumps feature simplicity of design coupled with an all stainless steel pump end. Teflon neck rings provide long lasting performance and excellent suction capability. The NEW XF92SS, XF192SS and XF242SS twin impeller centrifugal multistage pumps add that extra pressure you often need in a high efficiency package. These super quiet pumps feature all stainless steel impellers and casings with Davey’s unique patented floating neck ring arrangement for outstanding performance.

The new single and two stage models are ideal for pumping cold and even hot water* for a variety of applications: • Domestic water supply • Washing systems • Irrigation • Pressure boosting • Water Transfer • Heat exchanges

*Up to 85ºC dependent upon model. Refer datasheets for full details.

Stainless Steel Jet Pumps
The NEW compact JY single stage jet assisted centrifugal pumps are ideal pumps for a variety of consumer applications, like: • Transferring water to elevated storage tanks • Boosting low pressure mains water supplies • Providing pressure for domestic water usage in homes • Operating small scale irrigation systems

The NEW JY models feature high quality 304 stainless steel pump casing and impeller for long reliable life.

**XFSS & JY SERIES PERFORMANCE**

<table>
<thead>
<tr>
<th>Model</th>
<th>Motor (kW)</th>
<th>Impellers (stages)</th>
<th>Total Head metres, Feet</th>
<th>Capacity in litres/minute, gallons/hour</th>
</tr>
</thead>
<tbody>
<tr>
<td>XF111SS</td>
<td>1.1</td>
<td>0.75</td>
<td>1</td>
<td>161, 35.4, 134, 29.5, 94, 20.7, 31, 6.8</td>
</tr>
<tr>
<td>XF211SS</td>
<td>1.1</td>
<td>0.75</td>
<td>2</td>
<td>203, 44.7, 176, 38.7, 136, 29.9, 72, 15.8</td>
</tr>
<tr>
<td>XF92SS</td>
<td>0.75</td>
<td>0.54</td>
<td>2</td>
<td>103, 22.7, 83, 16.3, 62, 13.6, 34, 7.5</td>
</tr>
<tr>
<td>XF192SS</td>
<td>1.1</td>
<td>0.78</td>
<td>2</td>
<td>170, 37.4, 143, 31.5, 116, 25.5, 86, 18.9</td>
</tr>
<tr>
<td>XF242SS</td>
<td>1.44</td>
<td>1.00</td>
<td>2</td>
<td>211, 46.4, 183, 40.3, 155, 34.1, 125, 27.5</td>
</tr>
<tr>
<td>JY350</td>
<td>0.78</td>
<td>0.53</td>
<td>1 jet assisted</td>
<td>37, 8.1, 26, 5.7, 15, 3.3, 8, 1.8, 2, 0.4</td>
</tr>
<tr>
<td>JY450</td>
<td>1.00</td>
<td>0.7</td>
<td>1 jet assisted</td>
<td>43, 9.5, 36, 7.9, 26, 5.7, 26, 4.0, 12, 2.6, 6, 1.3</td>
</tr>
</tbody>
</table>
### Dynaflo® HS Stainless Steel Horizontal Multistage Pumps

For applications requiring higher pressure with quiet and reliable operation, the Dynaflo HS Series offers the proven advantages of Davey quality coupled with Davey innovation.

Available in three and four stage models with pressures up to 50 metres, and flows up to 100 lpm, the Dynaflo HS models are ideal for a wide range of applications including:
- High tank filling
- Sprinkler system supply
- Mains boosting (subject to local regulations)
- Industrial water supply
- Household pressure systems - refer page 7 for details

### HS Performance

<table>
<thead>
<tr>
<th>Model</th>
<th>Motor (kW)</th>
<th>Impellers (Stages)</th>
<th>Total Head metres</th>
<th>Capacity in litres/minute</th>
<th>Gallons per hour</th>
<th>BSPP</th>
</tr>
</thead>
<tbody>
<tr>
<td>H50-05L</td>
<td>0.74</td>
<td>0.53 3</td>
<td>69 51 49 27 10</td>
<td>5.9 4.0 3.3 2.7 0.9</td>
<td>0.9 0.7 0.5 0.4 0.2</td>
<td>1/4 1/2</td>
</tr>
<tr>
<td>H50-06L</td>
<td>0.80</td>
<td>0.60 4</td>
<td>74 61 53 46 37</td>
<td>5.9 4.0 3.3 2.7 0.9</td>
<td>0.9 0.7 0.5 0.4 0.2</td>
<td>1/4 1/2</td>
</tr>
<tr>
<td>H50-06L</td>
<td>0.82</td>
<td>0.57 3</td>
<td>96 75 60 43 18</td>
<td>9.5 6.0 4.5 3.0 1.5</td>
<td>6.0 3.7 2.3 1.5 0.9</td>
<td>3/4 1/2</td>
</tr>
<tr>
<td>H50-08L</td>
<td>1.1</td>
<td>0.76 4</td>
<td>101 87 77 58 44</td>
<td>9.7 6.0 4.5 3.0 1.5</td>
<td>6.0 3.7 2.3 1.5 0.9</td>
<td>3/4 1/2</td>
</tr>
</tbody>
</table>

### Dynaflo® 6000 Series Models

Designed for medium flow applications, Davey Dynaflo pumps are ideal for such applications as dairy washdown, spearpoints, small irrigation systems and general water transfer.

Manufactured to the highest standards, Davey Dynaflo pumps provide high capacity, efficient and reliable water supply for applications which demand flows up to 457 litres/min, or heads up to 41 metres.

Dynaflo models are built to last and come complete with performance matched IP56 TEFC (Totally Enclosed Fan Cooled) Davey Motors. Davey 6200 and 6210 Dynaflo pumps utilise a highly corrosion resistant Noryl pump body. 6220 and 6230 Dynaflo models utilise the strength of cast iron to handle even higher pressure duties, with a special internal and external powdercoat finish for added corrosion protection.

#### DYNAFLOW® PERFORMANCE

<table>
<thead>
<tr>
<th>Model</th>
<th>Motor (kW)</th>
<th>Max Total Head (m)</th>
<th>Total Head metres</th>
<th>Capacity in litres/minute</th>
<th>Gallons per hour</th>
<th>BSPP</th>
</tr>
</thead>
<tbody>
<tr>
<td>6200</td>
<td>1.57</td>
<td>25.5</td>
<td>269 193 142 24</td>
<td>317</td>
<td>174 120 24 60</td>
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<td>6210</td>
<td>2.1</td>
<td>35.6</td>
<td>314 252 167 26</td>
<td>220 130 40 60</td>
<td>130 70 40 60</td>
<td>1/2 1/2</td>
</tr>
<tr>
<td>6220</td>
<td>3.2</td>
<td>38.7</td>
<td>356 327 200 30</td>
<td>479 220 40 60</td>
<td>270 130 40 60</td>
<td>2/3 2/3</td>
</tr>
<tr>
<td>6230</td>
<td>3.9</td>
<td>41.2</td>
<td>457 454 407 44</td>
<td>599 283 40 60</td>
<td>333 176 40 60</td>
<td>3/4 3/4</td>
</tr>
</tbody>
</table>

6200 available in 1 phase only, 6210/6220 available in 1 phase or 3 phase, 6230 available in 3 phase only.
Peripheral Turbine Pumps

Davey’s compact ES500 peripheral turbine pumps have been designed for specific uses in commercial and industrial applications such as:

- Pressure boosting
- Dishwashers
- Boiler feed
- Jacking pump, etc.

Economical and quiet, these pumps provide high pressure at temperatures up to 90˚C. Solid brass liquid ends and quiet TEFC motors (rated IP44) give long and reliable operating life.

Motor kW input - (P1) 0.57
Motor kW output - (P2) 0.37

Dynapond Pond Pumps

Davey’s Dynapond Pond Pumps are specially designed for fully submerged, 24 hour a day, 7 day a week operation.

The Dynapond is ideal for large domestic and commercial fountains and waterfalls, Koi and fish ponds, as well as recirculation applications in freshwater aquaculture.

The pump can be installed with the outlet facing vertically or horizontally, making it easier to install and conceal in your water feature.

Dynapond models feature:
- Open impeller allowing the passage of small soft solids
- Adjustable inlet strainer holes (10mm or 5mm) to control what goes through the pump
- Oil free motor, so they are safe for fishponds
- Maximum submergence of up to 3 metres
- 1½” BSP female outlet and discharge elbow for hose connection
The Davey range of engine driven self priming pumps offers you versatility for a variety of applications:

- Firefighting
- Water transfer
- Irrigation
- Boom spraying
- Agricultural spraying such as sheep jetting
- Deep well jet pump applications

Depending on the required flow and pressure, you can select which type of pump in the engine driven self priming pump range suits your needs:

<table>
<thead>
<tr>
<th>PRESSURE</th>
<th>FIREFIGHTER® PLUS Twin Impeller</th>
<th>FIREFIGHTER® PLUS 9hp+ Twin Impeller</th>
<th>FIREFIGHTER® 9hp+ Single Impeller</th>
</tr>
</thead>
<tbody>
<tr>
<td>Extra High Head</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Over 70 metres</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>High Head</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>30 to 70 metres</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Medium Head</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Less than 30 metres</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

For easy identification, all single stage Firefighter models have YELLOW casings. Firefighter Plus two stage models have RED casings.

NEW

5 Series Firefighter® and Firefighter Plus

Depend on Davey to take yet another quantum leap forward with their NEW 5 Series Firefighter® range. These new pumps offer a host of new features to make installation, operation and maintenance easier, quicker and more dependable.

Designed with the needs of the end user in mind, the NEW 5 Series single and twin impeller models set new standards for convenience and durability.

The NEW 5 Series range also offer class leading performance and not just in the workshop. The NEW models provide superior self priming and performance at suction lifts, providing you with confidence when lifting water from a river or dam!

The NEW 5 Series also includes a larger capacity single impeller range of Firefighter® 9hp+ models.
ENGINE DRIVEN SELF PRIMING PUMPS

SUCTION CONFIGURATION

The pump inlet is incorporated into a compact suction housing, with easy access to the suction flap valve and the other pump internals.

CHOICE OF SUCTION SIZES

The suction housing comes standard as 1 1/2” BSP, but is available as 2” for larger horsepower models, and in NPT threads for selected markets.

LARGER CAPACITY TWIN IMPELLER CASINGS

To ensure the fastest self priming times, the new twin impeller models feature a larger suction housing.

LARGER PRIMING AND DRAIN PORTS

Not only does this make it easier to fill your pump for priming, but also makes it easier to drain and flush the pump out after use.

BAYONET STYLE PRIMING AND DRAIN PLUGS

Incorporating a decompression function and a safety retention system, these new plugs make it easy to safely access the priming and drain ports. With no tools required, a simple 90 degree twist of the wrist and the plug can be released.

INTEGRAL HANDLE

Conveniently positioned and comfortable to grip, the new handle saves on weight without compromising strength.

FOUR-WAY DISCHARGE

Allows for easy installation and more connection options with 2 x 1 1/2” and 2 x 1” outlets. Standard on all single and twin impeller models up to 7hp.

THREE-WAY DISCHARGE

Allows for easy installation and more connection options with 1 x 2” and 2 x 1” outlets, plus a huge 1 1/2” priming port which can also be used as a discharge port. This discharge is standard on all 9hp, 10hp and 13hp models.

DUAL FLOATING NECK RINGS

Patented independently floating neck rings are fitted both front and rear of the impeller to ensure optimal pump performance is maintained, even after weeks of abuse.

THRUST BALANCE

All centrifugal pumps are capable of subjecting axial (parallel to the shaft) thrust to the engine. The higher the pressure the greater thrust potentially created, which can shorten engine life. The NEW 5 Series Firefighter® range incorporate a thrust balance drum and pressure equalization holes in the impeller. This special design helps extend engine life.

PATENTED CLAMPED IMPELLERS

Davey’s unique clamped impeller design allows for optimum impeller shape and internal surface finish for increased performance. Amazingly this patented feature also makes it possible to quickly disassemble the impeller/s, making cleaning accidental obstructions easier.

HIGH QUALITY EPOXY POWDER COATED CASINGS

Not only do the NEW 5 Series Firefighter® pumps feature the high quality Davey powder coat finish on the outside, they also have the same high quality finish on the inside! This resilient finish helps to extend the life of your NEW Davey pump.
## Engine Driven Self Priming Pumps

### Firefighter® Single Impeller 5.5 to 6.5 hp Performance

- **Engine Models:**
  - Vanguard 5100H, 5105H, 5110Y, 5110YE
  - Honda 5160B, 5165H, 5170Y, 5170YE

#### Performance Parameters

<table>
<thead>
<tr>
<th>Model</th>
<th>Max Flow (lpm)</th>
<th>Total Suction Lift</th>
<th>Suction Head Limitations on Output</th>
</tr>
</thead>
<tbody>
<tr>
<td>5100H</td>
<td>182</td>
<td>400</td>
<td>Yes</td>
</tr>
<tr>
<td>5105H</td>
<td>182</td>
<td>400</td>
<td>Yes</td>
</tr>
<tr>
<td>5110Y</td>
<td>182</td>
<td>400</td>
<td>Yes</td>
</tr>
<tr>
<td>5110YE</td>
<td>182</td>
<td>400</td>
<td>Yes</td>
</tr>
</tbody>
</table>

#### Sound Levels (dB)

- **Max Engine Speed:**
  - 4200 rpm
  - 3800 rpm

- **Fuel Consumption (liters):**
  - 4
  - 6
  - 7.9

#### Running Time per Tank

- **Full Load @ 3600 rpm:**
  - 1.93 hours
  - 1.9 hours
  - 1.7 hours

#### Low Oil Protection

- Yes

#### Exhaust Spark Arrestor

- Yes

### Firefighter® Plus Single Impeller 9 to 13 hp Performance

- **Engine Models:**
  - Vanguard 5113BE, 5113HE
  - Honda 5190BE, 5190HE

#### Performance Parameters

<table>
<thead>
<tr>
<th>Model</th>
<th>Max Flow (lpm)</th>
<th>Total Suction Lift</th>
<th>Suction Head Limitations on Output</th>
</tr>
</thead>
<tbody>
<tr>
<td>5113BE</td>
<td>431</td>
<td>3000</td>
<td>Yes</td>
</tr>
<tr>
<td>5113HE</td>
<td>431</td>
<td>3000</td>
<td>Yes</td>
</tr>
<tr>
<td>5190BE</td>
<td>305</td>
<td>2800</td>
<td>Yes</td>
</tr>
<tr>
<td>5190HE</td>
<td>305</td>
<td>2800</td>
<td>Yes</td>
</tr>
</tbody>
</table>

#### Sound Levels (dB)

- **Max Engine Speed:**
  - 4200 rpm
  - 3800 rpm

#### Fuel Consumption (liters): 6.5

### Firefighter® Plus Twin Impeller 5.5 to 6.5 hp Performance

- **Engine Models:**
  - Vanguard 5209BE, 5209HE
  - Honda 5213BE, 5213HE

#### Performance Parameters

<table>
<thead>
<tr>
<th>Model</th>
<th>Max Flow (lpm)</th>
<th>Total Suction Lift</th>
<th>Suction Head Limitations on Output</th>
</tr>
</thead>
<tbody>
<tr>
<td>5209BE</td>
<td>182</td>
<td>400</td>
<td>Yes</td>
</tr>
<tr>
<td>5209HE</td>
<td>182</td>
<td>400</td>
<td>Yes</td>
</tr>
<tr>
<td>5213BE</td>
<td>182</td>
<td>400</td>
<td>Yes</td>
</tr>
<tr>
<td>5213HE</td>
<td>182</td>
<td>400</td>
<td>Yes</td>
</tr>
</tbody>
</table>

#### Sound Levels (dB)

- **Max Engine Speed:**
  - 4200 rpm
  - 3800 rpm

#### Fuel Consumption (liters): 4

### Firefighter® Plus Twin Impeller 9 to 13 hp Performance

- **Engine Models:**
  - Honda 5290BE, 5290HE

#### Performance Parameters

<table>
<thead>
<tr>
<th>Model</th>
<th>Max Flow (lpm)</th>
<th>Total Suction Lift</th>
<th>Suction Head Limitations on Output</th>
</tr>
</thead>
<tbody>
<tr>
<td>5290BE</td>
<td>431</td>
<td>3000</td>
<td>Yes</td>
</tr>
<tr>
<td>5290HE</td>
<td>431</td>
<td>3000</td>
<td>Yes</td>
</tr>
<tr>
<td>5213BE</td>
<td>431</td>
<td>3000</td>
<td>Yes</td>
</tr>
<tr>
<td>5213HE</td>
<td>431</td>
<td>3000</td>
<td>Yes</td>
</tr>
</tbody>
</table>

#### Sound Levels (dB)

- **Max Engine Speed:**
  - 4200 rpm
  - 3800 rpm

#### Fuel Consumption (liters): 6

### Overhead Valve Petrol Engine Options

<table>
<thead>
<tr>
<th>Model</th>
<th>OverHead Valve</th>
<th>6hp</th>
<th>9hp</th>
<th>13hp</th>
<th>5.5hp</th>
<th>6.5hp</th>
<th>9hp</th>
<th>13hp</th>
<th>7hp</th>
<th>10hp</th>
</tr>
</thead>
<tbody>
<tr>
<td>Vanguard</td>
<td>B&amp;S</td>
<td>5160B</td>
<td>5190BE</td>
<td>5113BE</td>
<td>5155H</td>
<td>5165H</td>
<td>5190HE</td>
<td>5113HE</td>
<td>5170Y</td>
<td>5170YE</td>
</tr>
<tr>
<td>Honda</td>
<td>B&amp;S</td>
<td>5260B</td>
<td>5290BE</td>
<td>5213BE</td>
<td>5255H</td>
<td>5265H</td>
<td>5290HE</td>
<td>5213HE</td>
<td>5270Y</td>
<td>5270YE</td>
</tr>
<tr>
<td>Yanmar</td>
<td>B&amp;S</td>
<td>5155H</td>
<td>5165H</td>
<td>5190HE</td>
<td>5113HE</td>
<td>5170Y</td>
<td>5170YE</td>
<td>5170Y</td>
<td>5170YE</td>
<td>5170Y</td>
</tr>
</tbody>
</table>

### Key Features

- **Max Rated HP @ 3600 rpm:**
  - 6
  - 9
  - 13

- **Displacement (cc):**
  - 60
  - 90
  - 130

- **“Out of box” governed max engine speed @ no load:**
  - 4200 rpm
  - 3800 rpm

- **Running time per tank @ full load @ 3600 rpm:**
  - 1.93 hours
  - 1.9 hours
  - 1.7 hours

- **Exhaust spark arrestor:**
  - Yes
  - No - optional from engine dealers

- **dBa @ 3600 rpm @ full load:**
  - 75 @ 4m
  - 79 @ 4m
  - 81.5 @ 4m
  - 85 @ 4m
  - 86 @ 4m
  - 79 @ 7m
  - 78 @ 7m
  - 80.5 @ 7m
  - 82.5 @ 7m
Engine Driven Self Priming Pumps

3” Water Mover models
Davey’s 3” Water Mover models are designed to handle those high volume pumping jobs with ease. Featuring heavy duty close grain cast iron impellers and diffusers, with large open vanes, these robust pumps can even handle soft solids in suspension. They suit applications such as:
- Water harvesting
- Drainage
- Tanker filling and emptying
- Grey or septic water disposal

![G8016 - Honda 6.5hp GX200](image)

Bare Shaft Pumps
The Davey range of bare shaft pumps feature the new twin impeller high pressure model 5250P and the single impeller model 5150P. These self priming pumps can be direct coupled or belt driven by petrol or diesel engines, an electric motor or a stationary tractor. All models feature high grade aluminium casings and stainless steel shafts for high corrosion resistance. These units are ideal for tank filling, irrigation, firefighting and more.

![5150P Bare Shaft Single Stage](image)

![5250P Bare Shaft Single Stage](image)

**Single Stage Bare Shaft Pump Performance**

<table>
<thead>
<tr>
<th>Model 5150P</th>
</tr>
</thead>
<tbody>
<tr>
<td>10m</td>
</tr>
<tr>
<td>1000 l/min</td>
</tr>
</tbody>
</table>

**Twin Stage Bare Shaft Pump Performance**

<table>
<thead>
<tr>
<th>Model 5250P</th>
</tr>
</thead>
<tbody>
<tr>
<td>10m</td>
</tr>
<tr>
<td>1000 l/min</td>
</tr>
</tbody>
</table>
Borehole Applications
Firefighter® and Firefighter® Plus models can be fitted with a deep well injector to draw water from bores where no electrical power is available.
Three different jet/venturi kits are available for use with either a 4” or 5” injector body kit.
The performance shown is indicative for a 5155H at full speed or a 5255H at 3000rpm throttle setting.

Jet/Venturi Kit No. 29429 &
4 Inch Injector Body No. 23300

Jet/Venturi Kit No. 29468 &
4 Inch Injector Body No. 23300

Jet/Venturi Kit No. 29569 &
5 Inch Injector Body No. 23301

Recommended Minimum Deep Well Firefighter Pipe Sizes

<table>
<thead>
<tr>
<th>Model</th>
<th>Injector</th>
<th>Injector Body</th>
<th>Drive Pipe</th>
<th>Suction Pipe</th>
</tr>
</thead>
<tbody>
<tr>
<td>29429</td>
<td>23300</td>
<td>1 1/2” Class B poly or 40mm PN6 poly</td>
<td>1 1/2” Class B poly or 50mm PN6 poly</td>
<td></td>
</tr>
<tr>
<td>2948</td>
<td>23300</td>
<td>2” Class B poly or 63mm PN6 poly</td>
<td></td>
<td></td>
</tr>
<tr>
<td>29569</td>
<td>23301</td>
<td>1 1/2” Class B poly or 50mm PN6 poly</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

If used in difficult installations consult your Davey dealer for technical advice and assistance.
Circulator Pumps
Davey circulator pumps are ideal for domestic heating applications, secondary hot water services, air conditioning or cooling systems.

The advanced multi-speed, canned motor, provides long, reliable operating life. The pump has a maximum operating temperature of 120°C and a maximum service pressure of 1000 kPa.

To make it easier to install, Davey offers five different sizes, as well as including the unions and gaskets with each pump.*

*Mukmova - Effluent Pump
Features:
- Thick section cast iron pump body
- Fast self priming capability
- Can be made automatic with float switch
- Large inspection port with quick release toggles
- Shims fitted on inspection port for optimising suction capabilities
- Can be installed outside pit
- Totally enclosed fan cooled motor
- Two models available with single phase (240/480v) or three phase (415v) motor

**Note:** Pump output capacities are based on clean water. Performance may be lower when pumping dirty water.
**4” Submersible Borehole Pumps**

**Submersible J & SR Series**

Slimline submersible borehole pumps suitable for 4” or larger boreholes. Manufactured from corrosion and abrasion resistant materials. Close coupled to a submersible electric motor.

**Applications**
- Domestic water supply
- Turf watering
- Irrigation
- Stock watering
- De-watering

**Features**
- Precision stainless steel outer (2mm thick)
- Stainless steel thrust rings, lead guard and suction screen
- Standard 2 pole speed motor (2850 rpm)
- Abrasive resistant internal shaft bearings
- Cast stainless steel discharge head with in-built check valve

**Benefits**
- Proven and reliable design for Australian conditions
- Standard speed operation for long life
- Manufactured from high quality corrosion resistant materials
- Teflon impregnated polyester staging, in models up to 60 lpm, allows the J Series to handle low yielding bores and sandy well conditions
- 25, 40 & 60 lpm models feature independently floating centrifugal impellers to provide easy starting and trouble free long life, automatically adjusting to the pumping conditions of each application
- 80, 110, 160, 250 & 300 lpm models feature locked stack partial mixed flow polycarbonate impellers with open waterways to provide trouble free starting and longer operating life
### 4" Submersible Borehole Pumps

#### Specifications

<table>
<thead>
<tr>
<th>Flow Rate (lpm)</th>
<th>Motor kW (P1)</th>
<th>Model</th>
</tr>
</thead>
<tbody>
<tr>
<td>25</td>
<td>0.37 0.56 0.75 1.1 1.5</td>
<td>J525D J725D J1025D J1525D J2025D</td>
</tr>
<tr>
<td>40</td>
<td>0.37 0.56 0.75 1.1 1.5 2.2</td>
<td>J540D J740D J1040D J1540D J2040D J3040D</td>
</tr>
<tr>
<td>60</td>
<td>0.56 0.75 1.1 1.5 2.2</td>
<td>J760D J1060D J1560D J2060D J3060D</td>
</tr>
<tr>
<td>80</td>
<td>0.75 1.1 1.5 2.2</td>
<td>J1080D J1380D J2080D J3080D</td>
</tr>
<tr>
<td>110</td>
<td>1.1 1.5 2.2 3.7</td>
<td>J15110D J20110D J30110D J50110D</td>
</tr>
<tr>
<td>160</td>
<td>1.1 1.5 2.2 3.7</td>
<td>J15160D J20160D J30160D J50160D</td>
</tr>
<tr>
<td>250</td>
<td>1.5 2.2 3.7</td>
<td>J20250D J30250D J50250D</td>
</tr>
<tr>
<td>300</td>
<td>5.5 7.5</td>
<td>SR250-550 SR250-750</td>
</tr>
</tbody>
</table>

#### Total Head vs Flow Graphs

- **160 lpm Models**
- **250 lpm Models**
- **300 lpm Models**
**6” SUBMERSIBLE BOREHOLE PUMPS**

**SS 6” Series**
Advanced stainless steel manufacturing technology results in state of the art 6” submersible pumps.

**Applications**
- Water supply - domestic, rural & industrial
- Turf watering & irrigation
- Mining applications
- Firefighting systems
- Agricultural & farming

**Features**
- Full 316 stainless steel construction
- Unique sand handling design
- Easy to install and service
- Fluted SiC/Nitrile bearings and floating PTFE neck rings
- Check valve assembly incorporated into discharge head
- Lifting lugs in-built to pump head

**Benefits**
- Full 316SS construction for excellent corrosion & abrasion resistance
- Floating teflon neck ring allows abrasive handling & wear resistance
- Simple hydraulic design ensures all parts are easily dismantled minimising down time
- Pump can work continuously both vertically and horizontally
- Flexible design allows removal of impellers to match duty requirements
- High efficiency impeller designs incorporating radial flow impellers for models SS18 & SS27 and axial flow impellers for models SS45 & SS60, providing maximum efficiency, reducing power consumption and overall running costs.

**Specifications**
- Capacities up to 80m³/hr
- Heads to 450m
- Coupling with NEMA standard motors
- Water temperature up to 90ºC*
- Maximum sand handling 50 grams/m³

* For use with 6” Franklin HI-Temp motor range.
6” Submersible Borehole Pumps

Unless stated, all motor frames are to suit Nema 6” motor. *Units are fitted with 4” motor adaptor to suit 4” Nema framed motors.

### Pump Stages / Motor Power kW (P.)

<table>
<thead>
<tr>
<th>Model</th>
<th>4</th>
<th>5.5</th>
<th>7.5</th>
<th>11</th>
<th>15</th>
<th>18.5</th>
<th>22</th>
<th>30</th>
<th>37</th>
</tr>
</thead>
<tbody>
<tr>
<td>SS18 Series</td>
<td>6*</td>
<td>9*</td>
<td>12</td>
<td>15/18</td>
<td>22/24</td>
<td>28/30</td>
<td>33/36</td>
<td>39/42</td>
<td></td>
</tr>
<tr>
<td>SS27 Series</td>
<td>-</td>
<td>5*</td>
<td>7</td>
<td>11</td>
<td>15</td>
<td>19</td>
<td>23</td>
<td>27/31</td>
<td>33/36</td>
</tr>
<tr>
<td>SS45 Series</td>
<td>-</td>
<td>3*</td>
<td>5</td>
<td>7</td>
<td>10</td>
<td>12</td>
<td>15</td>
<td>18/20</td>
<td>25</td>
</tr>
<tr>
<td>SS60 Series</td>
<td>-</td>
<td>3*</td>
<td>5</td>
<td>7</td>
<td>10</td>
<td>12</td>
<td>14</td>
<td>18</td>
<td>24</td>
</tr>
</tbody>
</table>
SS 8” Series
Advanced stainless steel manufacturing technology results in state of the art 8” submersible pumps.

Applications
• Water supply - domestic, rural & industrial
• Turf watering & irrigation
• Mining applications
• Firefighting systems
• Agricultural & farming

Features
• Full stainless steel construction
• Unique sand handling design
• Easy to install and service
• Fluted SiC/Nitrile bearings and floating PTFE neck rings
• Check valve assembly incorporated into discharge head

Benefits
• Full 316SS construction for excellent corrosion & abrasion resistance
• Floating neck ring allows abrasive handling & wear resistance
• Simple hydraulic design ensures all parts are easily dismantled minimising down time
• Pump can work continuously both vertically and horizontally
• Flexible design allows removal of impellers to match duty requirements

Specifications
• Capacities up to 120m³/hr
• Heads to 500m
• Coupling with NEMA standard motors
• Water temperature up to 50°C
• Maximum sand handling 50 grams/m³
### SUMP PUMPS

<table>
<thead>
<tr>
<th></th>
<th></th>
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</tr>
</thead>
<tbody>
<tr>
<td>Removal of clean nuisance water</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
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<td>✓</td>
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<tr>
<td>Light duty fountains</td>
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<td>✓</td>
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<tr>
<td>Continuous fountain usage</td>
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<td>✓</td>
<td>✓</td>
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<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
</tr>
<tr>
<td>Grey Water with oil or few soft solids e.g. septic tank pumps</td>
<td>✗</td>
<td>✓</td>
<td>✓</td>
<td>✗</td>
<td>✓</td>
<td>✓</td>
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<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
</tr>
<tr>
<td>Dirty Water with less than 1% small hard solids – some wear should be expected</td>
<td>✗</td>
<td>✓</td>
<td>✓</td>
<td>✗</td>
<td>✓</td>
<td>✓</td>
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</tr>
<tr>
<td>Water with up to 10% soft solids in suspension – sized 80% of discharge</td>
<td>✗</td>
<td>✗</td>
<td>✗</td>
<td>✗</td>
<td>✗</td>
<td>✓</td>
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<td>✓</td>
<td>✓</td>
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</tr>
<tr>
<td>Water with medium volumes of hair in suspension</td>
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<td>✗</td>
<td>✗</td>
<td>✗</td>
<td>✗</td>
<td>✓</td>
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<td>✓</td>
<td>✓</td>
<td>✓</td>
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</tr>
<tr>
<td>Water with stringy materials in suspension</td>
<td>✗</td>
<td>✗</td>
<td>✗</td>
<td>✗</td>
<td>✗</td>
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<td>✓</td>
<td>✓</td>
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</tr>
<tr>
<td>Semi-screened sewage</td>
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<td>✗</td>
<td>✗</td>
<td>✗</td>
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<tr>
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<td>✗</td>
<td>✓</td>
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<td>✓</td>
<td>✓</td>
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#### Models available - kW Rating

<table>
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<th>0.1</th>
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<th>0.35</th>
<th>0.75</th>
<th>0.75</th>
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<tr>
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<td>✓</td>
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<td>✓</td>
<td>✓</td>
<td>✓</td>
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<td>✓</td>
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<tr>
<td>Manual Single Phase 220/240 V</td>
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<td>✓</td>
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<tr>
<td>Manual Three Phase 415 V</td>
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<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
</tr>
</tbody>
</table>

*Suitable Selection  XX Not Recommended

Note: All single phase models: up to and including 0.6kW come complete with a 10amp 3 pin plug.

---

**Double Cased Stainless Steel Sump Pump**

The new DCS40 models are ideally suited to operate in partially submerged installations for long periods. The double case design forces all the pumped water past the motor, thus ensuring cool operation.

The high quality, stainless steel shell retains its good looks and function for added satisfaction.
Davey offers a wide selection of submersible Sump Pump models to suit commercial, rural and domestic applications. Davey Sump Pumps are tough suckers, with robust designs for long service life, featuring:

- High grade stainless steel and cast iron construction for long life
- Compliance with Australian and International Electrical Requirements for peace of mind
- In-built thermal overload protection to safeguard the motor
- Multiple level shaft seals for more security and endurance
- All models have a first stage lip seal to reduce the ingress of abrasives to the main shaft seal/s, plus:
  - 100 & 150 watt models have single Silicon Carbide hard-face seals in an oil bath.
  - All other models have double mechanical seals with Silicon Carbide hard-face seals pump side and Carbon/Ceramic seals motor side, running in a large volume oil bath.

Davey offers a range of controls to make installation easier. Automatic float switches are available on models up to 750 watt single phase. Selected single phase models are also available as manual switched models. Manual switched models can be fitted with a variety of control systems, including multiple pump controllers - ask your Davey dealer which model suits your application best.

Davey Slide Rail kits make installation and removal for servicing easier. Davey slide rail kits are available to suit Vortex, Single Channel, Cutter and Grinder models. The rail kits allow simple connection or disconnection to permanent pipework in the pit or well. A slide rail system is highly recommended in commercial, grey water or black water installations as it can save time and overcome some OH&S concerns during routine maintenance.
VERTICAL MULTISTAGE PUMPS

V3 / 6 / 8 Series
Vertically mounted in-line multistage centrifugal pumps with all stainless steel hydraulic parts, available from 5 up to 20 stages

Applications
- Water supply – domestic, rural & industrial
- Pressure boosting
- Agriculture and farming
- Turf watering and irrigation
- Commercial - high pressure washing
- Water treatment
- Boiler feed

Features & Benefits
- All hydraulic parts, made from stainless steel, for corrosion resistance and longer pump life
- Thick impeller sealing rings between stages ensure insensitivity to thermal expansion and eliminates risk of seizing up
- Vertical axis with in-line suction and discharge ports, enabling easy installation with minimum floor space required
- Cast iron pump head providing rigid, motor mounting assembly
- In-built, oversized thrust bearing for longer motor bearing life - no upthrust transferred to the motor and enabling easier assembly
- IP55 motor rating for outdoor applications (standard motors without modification)
- Raised lower bearing for longer life
- Larger shaft diameter minimising deflection
- Tungsten carbide intermediate bearing to control and eliminate vibration and stabilise the rotor with a large number of stages
- O-ring case gaskets for ease of disassembly and re-assembly, preventing downtime whilst performing maintenance
VERTICAL MULTISTAGE PUMPS

V18 / 36 / 54 Series
Vertical mounted in-line multistage centrifugal pumps with stainless steel hydraulic parts, available from 2 up to 14 stages

Applications
- Water supply - domestic, rural & industrial
- Pressure boosting
- Agriculture and farming
- Turf watering and irrigation
- Commercial - high pressure washing and water treatment
- Boiler feed

Features & Benefits
- Major hydraulic parts, made from stainless steel, for corrosion resistance and longer pump life
- Thick impeller sealing rings between stages ensure insensitivity to thermal expansion and eliminate risk of seizing up
- Vertical axis with in-line cast iron suction and discharge housing, enabling easy installation with minimum floor space required
- Cast iron pump head providing rigid, motor mounting assembly
- In-built, oversized thrust bearing for longer motor bearing life - no upthrust transferred to the motor and enabling easier assembly
- IP54 motor rating for outdoor applications (standard motors without modification)
- Raised lower bearing for longer life
- Larger shaft diameter minimising deflection
- Tungsten carbide intermediate bearing to control and eliminate vibration and stabilise the rotor with a large number of stages
- O-ring case gaskets for ease of disassembly and re-assembly, preventing downtime whilst performing maintenance
Davey ISOspec® CF Series bareshaft pump range has been designed to international standard 
ISO2858 ensuring a sturdy & reliable, long lasting high performing product that consumers have 
come to depend on from Davey. ISOspec® Series pumps are interchangeable with other similar 
pumps, conforming to the same standards.

Operating Conditions
- Maximum flow: 900m³/hr
- Maximum total heads: 160m
- Liquid temperature: -15 to 140°C

Bronze wear rings - fitted as standard, replaceable front & rear wear rings with optional materials, for a trouble free lifecycle.

Bronze impeller - in a closed design is fitted as standard. This helps to prevent corrosion in stationary or inactive situations. Cast 304SS or 316SS are available on request. The use of 3-D solid model (CAD) Computer Aided Design and (CFD) Computational Fluid Dynamics ensures high efficiencies, reducing overall running costs. Impeller diameters can be trimmed to suit specified performance.

Pump casing - high efficiency cast iron volute casings, with flanges rated to PN1.6MPa (16bar), drilled to AS2129, Table E. Material: 316SS.

Casing o-ring - re-usable o-rings in Nitrile for ease of re-assembly (optional materials available).

Back pull-out design - allowing for easy removal of rotating element without disturbing the pipe work, lagging, motor or pump volute casing. This is proven to reduce downtime whilst performing routine maintenance.

Enlarged shaft - reduces shaft deflection. Standard in 420SS and as an option in 316SS. Tapered & keyed shaft design allowing ease of removal in maintenance & positive locking whilst in operation.

Shaft seal - single, high quality John Crane or approved equivalent mechanical seal with carbon vs ceramic fitted as standard with other options such as silicone vs silicone or high temp also available.

Tappings - convenient suction & discharge pressure gauge tappings plus volute drain, fitted as standard to all ISOspec® Series pumps.

Bearings - heavy duty SKF or approved equivalent, greased for life, reducing maintenance. Housed within removable bearing cap cover assembly, protected by a quality manufactured lip seal reducing ingress of moisture or foreign matter.

Bearing housing - Robust / heavy duty, manufactured in high strength cast iron providing trouble free life cycle.
Davey ISOspec® CM Series motor pump range has been designed to international standard ISO2858 ensuring a sturdy & reliable, long lasting high performing product that consumers have come to depend on from Davey. ISOspec® Series pumps are interchangeable with other similar pumps, conforming to the same standards.

All standard motors are MEPS compliant ensuring minimum efficiency requirements to AS/NZS 1359.5.2000.

**Operating Conditions**
- Maximum flow: 375m³/hr
- Liquid temperature: -15 to 140°C
- Maximum total heads: 160m
- Operating pressure: 16 Bar

**Bronze wear rings** - fitted as standard, replaceable front & rear wear rings with optional materials, for a trouble free lifecycle.

**Bronze impeller** - in a closed design is fitted as standard. This helps to prevent corrosion in stationary or inactive situations. Cast 304SS or 316SS are available on request. The use of 3-D solid model (CAD) Computer Aided Design and (CFD) Computational Fluid Dynamics ensures high efficiencies, reducing overall running costs. Impellers are dynamically balanced preventing premature bearing failure and diameters can be trimmed to suit specified performance.

**Pump casing** - high efficiency cast iron volute casings, with flanges rated to PN1.6MPa (16bar), drilled to AS2129, Table E. Material options: Cast Iron, Bronze, 304SS or 316SS.

**Casing o-ring** - re-usable o-rings in Nitrile for ease of re-assembly (optional materials available).

**Back pull-out design** - allowing for easy removal of rotating element without disturbing the pipe work, lagging or pump volute casing. This is proven to reduce downtime whilst performing routine maintenance.

**Adaptor housing** - heavy duty, flanged to IEC accepting AS 1359 standard designed motors.

**Stub shaft** - standard in 316SS, attached via a heavy duty muff coupling assembly. Tapered & keyed shaft design allowing ease of removal in maintenance & positive locking whilst in operation.

**Shaft seal** - single, high quality John Crane or approved equivalent mechanical seal with carbon vs ceramic fitted as standard with other options such as silicone vs silicone or high temp also available.

**Tappings** - convenient suction & discharge pressure gauge tappings plus volute drain, fitted as standard to all ISOspec® Series pumps.

**Bearings** - heavy duty SKF or approved equivalent, greased for life, reducing maintenance. Protected by a quality manufactured lip seal reducing ingress of moisture or foreign matter.

**Suitable Applications for ISOspec® Pumps**

**Water Supply**
- Commercial irrigation, booster stations, municipal water supply, flood irrigation, general transfer.

**Industry**
- Cooling tower transfer, refrigeration systems, commercial fountains, condensate recovery, dairy wash down packages.

**Environmental**
- Dust suppression in mining & quarry applications, fume scrubbers for odour control, water treatment transfer & filtration.

**Leisure**
- Water circulation in large aquatic centres, backwash filtration in commercial pools, water features & commercial fountains.

**Building Services**
- Commercial heating, air conditioning systems, pressure boosting, cooling tower & fire service applications.

**Pumped Liquids**
- Non aggressive & non combustible liquids. Clean low viscous liquids free of fibres or particles.
High quality, fully packaged diesel driven ISOspec® pumpset.

Operating Limits
Flow to 450m³/hr
Maximum total head 160m
Liquid temperature 1 to 95°C
Operating pressure 16 Bar

Applications
• Irrigation
• Water supply
• Dewatering

Features & Benefits
• Driven via Yanmar Diesel engine, fully mounted on a purpose built, heavy duty steel skid base allowing easy on site installation.
• Easy to view control panel and engine protection kit incorporating :-
  - Rev tachometer
  - Low oil pressure
  - High water temperature
  - Low radiator fluid level
  - 24 hour timer
  - Pump high/low liquid level switch - loss of prime
• Manual variable engine speed controller providing total pump performance control.
For individual CF or CM Series performance curves, please consult your local Davey dealer or download from www.davey.com.au
Packaged water pressure system consisting of a Davey stainless steel vertical multistage pump with pressure tank, adjustable pressure switch, liquid filled pressure gauge, all mounted on a common base plate.

**Operating Limits**
- Flow to: 250lpm / 15m³/hr
- Pressure heads to: 98m
- Maximum liquid temperature: +70°C (tank)
- Maximum ambient temperature: +40°C

**Applications**
- Household & commercial applications
- Multi-dwelling water supply system
- Turf watering & irrigation
- Water supply, boosting & transfer
- Water treatment

**Features & Benefits**
- Davey vertical multistage centrifugal pump with superior hydraulic design. Powered by Davey’s renowned Australian manufactured IP56 TEFC motor suitable for some of the most harsh conditions.
- All hydraulic parts manufactured in stainless steel, providing corrosion protection.
- Compact in-line suction & discharge for ease of installation.
- Utilising the Davey Supercell range of captive diaphragm pressure tanks which feature a long lasting, bacteria resistant, crease free Butyl rubber diaphragm.
- Completely assembled on a galvanised common Davey base plate for easy mounting.
- Discharge manifold assembly in copper and brass, complete with isolation gate valve with an easy to read quality liquid filled pressure gauge.
- Pressure adjustment is made simple with a fully adjustable pressure switch, providing a smooth on/off operation.
Packaged Pump Sets

Davey Monsoon packaged pump systems offer the choice and flexibility to best suit your application. An extensive choice of standard configurations is complimented by tailor made options. Monsoon systems can be supplied utilising V Series vertical multistage pumps, M Series horizontal multistage, Dynaflo, ISOspec® end suction centrifugal pumps, Davey Sump Pumps and even borehole submersible models.

Flexibility of system design can allow the best combination of pumps to be chosen to ensure maximum operating range & high efficiencies are met, thereby reducing overall running costs.

Davey Monsoon systems can be built to suit your needs from one pump up to six pumps. Monsoon systems can be operated via pressure, level or temperature. They can include constant speed controls or variable frequency drives. Monsoon systems are easy to operate, allowing full system status at the press of a button.

All Davey manifolding is manufactured using stainless steel as standard, providing high corrosion properties with options of either screwed or flanged connections.

Monsoon systems are designed and assembled with the accreditation of ISO9001, giving the peace of mind you have come to expect from an all Australian company that has pioneered pumping solutions since 1934.

Monsoon 3C

System
Up to three pumps

Operation
Automatically controlled depending on system duty. Pumps can be automatically rotated to ensure equal operating hours for each pump.

Pumps
Up to three same or hydraulically similar pumps, maximum 110kW each pump

System includes
• Microprocessor controlled pump system with electronic pressure sensing
• All pumps operate on same pressure points to maximise performance from each pump
• Easy access menus to enable adjustment to suit any operation
• Adjustable parameters include cut-in pressure, cut-out pressure, low pressure cut-out, high pressure cut-out & minimum run timer
• Status display includes system pressure, calculated flow rate, calculated total flow, hours run per pump, start meter per pump & system starts last hour
• System protection includes low-pressure protection & high pressure protection with adjustable delay timer
• Adjustable timer allows the system to be easily tuned to suit any pumping system
• Selectable automatic or manual rotation of lead pump
• Additional inputs include system pause, individual pump protection plus 8 additional, programmable inputs
• System outputs include four configurable relays

Options
• Individual pump protection, system no flow & system pause
• Operation via switched inputs – floats, pressure switch
• Level or temperature control mode
Monsoon 3V

Operation
Monsoon 3V controller starts and stops pumps according to information collected from a pressure transducer and compares this to the reference set point. The controller maintains the system pressure at the set point by varying the speed of the VFD pump and switching other pumps ON and OFF. When the system detects NO flow it will shut down until the pressure drops below a restart point. The controller displays real pumping intelligence and offers very high running cost savings for variable flow reticulations.

System includes
- Constant pressure control system with electronic pressure sensing
- Easy access menus to enable adjustment to suit any operation
- Adjustable parameters include cut-in pressure, set point, low pressure cut-out, high pressure cut-out & minimum run timer
- Status display includes system pressure, calculated flow rate, calculated total flow, hours run per pump, start meter per pump & system starts last hour
- System protection includes low pressure protection & high pressure protection with adjustable delay timer
- Adjustable timer allows the system to be easily tuned to suit any pumping system
- Selectable automatic or manual rotation of lead pump
- Additional inputs include system pause, individual pump protection plus 8 additional inputs
- Four configurable output relays

Options
- Individual pump protection, system no flow & system pause
- Soft start manual back-up
- Soft start lag pumps
- Remote start / stop
- 7 day time clock

Pumps
Up to three same or hydraulically similar pumps, maximum 90kW each pump
**Packaged Pump Sets**

**Cascading VFD**

The Monsoon 3V cascade system starts the first pump via the VFD and continues to accelerate until the pump reaches full speed. If the system is not at the set point the controller then cycles the VFD to the next pump and switches the initial pump to full speed. This operation continues until the set point is reached or all pumps are running. The reverse occurs as the demand reduces. One VFD and bypass contactors are supplied for this option.

**Lead Lag**

The Monsoon 3V lead lag system starts the first pump via the VFD and continues to accelerate until the pump reaches full speed. If the system is not at the set point the controller starts a LAG pump to make up for the flow demand. This is typically via a soft starter. This operation continues until the set point is reached or all pumps are running. The reverse occurs as the demand reduces. One VFD and one backup soft starter per lag pump are supplied for this option.

**Lead Lag Autorotate**

The Monsoon 3V lead lag auto rotate system starts the first pump via the VFD and continues to accelerate until the pump reaches full speed. If the system is not at the set point the controller starts a LAG pump to make up for the flow demand. This is typically via a soft starter. This operation continues until the set point is reached or all pumps are running. The reverse occurs as the demand reduces. This option varies from the Lead Lag by rotating the lead pump each time the system restarts. One VFD and one backup soft starter per pump are supplied for this option.

**All VFD**

The Monsoon 3V VFD per pump system starts the first pump via the VFD and continues to accelerate until the pump reaches full speed. If the system is not at the set point the controller then cycles the VFD to the next pump and switches the initial pump to full speed. This operation continues until the set point is reached or all pumps are running. The reverse occurs as the demand reduces. One VFD per pump is supplied for this option.
Here are some common average water requirements

<table>
<thead>
<tr>
<th>Water Requirement</th>
<th>Flow</th>
<th>Pressure</th>
</tr>
</thead>
<tbody>
<tr>
<td>Shower</td>
<td>15lpm</td>
<td>140kPa</td>
</tr>
<tr>
<td>Lawn Sprinkler</td>
<td>15lpm</td>
<td>140kPa</td>
</tr>
<tr>
<td>1/4” hose &amp;</td>
<td>40lpm</td>
<td>210kPa</td>
</tr>
<tr>
<td>1” hose &amp;</td>
<td>75lpm</td>
<td>210kPa</td>
</tr>
<tr>
<td>1/4” nozzle</td>
<td>70lpm</td>
<td></td>
</tr>
<tr>
<td>Milking cows</td>
<td>55-60</td>
<td></td>
</tr>
<tr>
<td>Sheep</td>
<td>5-10</td>
<td>140kPa</td>
</tr>
<tr>
<td>1/4” nozzle</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Cattle</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Pigs</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

The average water requirements, shown above, may vary due to specific application concerns, and you are recommended to discuss these with your Davey Dealer. Daily requirements should be supplied within acceptable daily running times. This will vary according to the nature of the application.

**Suction Lift**

Pumps do not actually suck; rather, pumps create a partial vacuum into which atmospheric pressure pushes water via the suction pipework.

There are a number of factors which affect suction lift:

- **ALTITUDE**: As altitude increases, atmospheric pressure decreases, thus exerting less “push” on the water entering the pump suction.
- **PUMP SUCTION PERFORMANCE**: Generally, the higher the flow rate from a pump, the less the partial vacuum created by that pump.
- **WATER TEMPERATURE**: The higher the water temperature, the more likely it is to boil when exposed to a partial vacuum, thus reducing suction lift.
- **FRICTION LOSS**: Friction loss in the suction pipe reduces the vertical lift possible.

In practical terms, a maximum suction lift of 6.7 metres at sea level is common, but all of the items above will reduce this figure. Pump performance tables and the tables attached are a good guide. Your Davey Dealer can assist with assessment of suction lifts.

### Calculating Suction Lift

- **Hs** = **Pa** - **NPSHR** - **Pvap** - Safety
- **Hs** = Maximum suction lift including friction loss in suction pipe
- **Pa** = Absolute atmospheric pressure at site
- **NPSHR** = NPSH required by pump at specific flow rate
- **Pvap** = Vapour pressure of liquid with specific temperature

### Calculating Pump Power

- **Water Power (kW) = Flow (lpm) x Head (m) / 6122.4**
- **Pump Power (P2, kW) = Water Power / Pump Efficiency %**
- **Input Power (P1, kW) = Pump Power / Motor Efficiency %**

### Variable Speed Performance

Changing the speed of a pump changes the flow and pressure output of the pump as well as the power required by the pump to deliver the new duty point.

Flow (Q) changes directly proportional to speed (N) change

Head / pressure (H) changes proportional to speed change squared

Power changes (P) proportional to speed change cubed

\[
Q_1 / Q_2 = N_1 / N_2 \\
H_1 / H_2 = (N_1 / N_2)^2 \\
P_1 / P_2 = (N_1 / N_2)^3
\]

Where Q1 / H1 / P1 are current flow, head & power at speed N1

Q2 / H2 / P2 are the new flow, head & power at speed N2
Pipe Friction

Pipe friction is the resistance to flow caused by the pipe. As a general principle, it is better to use the largest practical pipe size to avoid losses in pump performance.

Note: Flow rates for which friction loss has not been calculated involve velocities which may cause water hammer.

### Flow In Friction Loss for Poly Pipe - 20mm to 63mm (m/100 metres of pipe)

<table>
<thead>
<tr>
<th>Flow Rate</th>
<th>PE80/PN8</th>
<th>PE80/PN10</th>
<th>PE80/PN12.5</th>
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</thead>
<tbody>
<tr>
<td>lps</td>
<td>m³/hr</td>
<td>m³/hr</td>
<td>m³/hr</td>
</tr>
<tr>
<td>0.2</td>
<td>0.32</td>
<td>0.32</td>
<td>0.32</td>
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<tr>
<td>0.5</td>
<td>0.32</td>
<td>0.32</td>
<td>0.32</td>
</tr>
<tr>
<td>0.8</td>
<td>0.32</td>
<td>0.32</td>
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</tr>
<tr>
<td>1.0</td>
<td>0.32</td>
<td>0.32</td>
<td>0.32</td>
</tr>
<tr>
<td>1.6</td>
<td>0.32</td>
<td>0.32</td>
<td>0.32</td>
</tr>
<tr>
<td>2.0</td>
<td>0.32</td>
<td>0.32</td>
<td>0.32</td>
</tr>
<tr>
<td>3.0</td>
<td>0.32</td>
<td>0.32</td>
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<td>4.0</td>
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<tr>
<td>5.0</td>
<td>0.32</td>
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<td>0.32</td>
</tr>
<tr>
<td>6.0</td>
<td>0.32</td>
<td>0.32</td>
<td>0.32</td>
</tr>
<tr>
<td>7.0</td>
<td>0.32</td>
<td>0.32</td>
<td>0.32</td>
</tr>
<tr>
<td>10.0</td>
<td>0.32</td>
<td>0.32</td>
<td>0.32</td>
</tr>
</tbody>
</table>

### Flow Friction Loss for Rubber Hose (m/100 metres of hose)

<table>
<thead>
<tr>
<th>Flow Rate</th>
<th>20mm O.D.</th>
<th>25mm O.D.</th>
<th>32mm O.D.</th>
<th>40mm O.D.</th>
</tr>
</thead>
<tbody>
<tr>
<td>lps</td>
<td>m³/hr</td>
<td>m³/hr</td>
<td>m³/hr</td>
<td>m³/hr</td>
</tr>
<tr>
<td>0.2</td>
<td>0.32</td>
<td>0.32</td>
<td>0.32</td>
<td></td>
</tr>
<tr>
<td>0.5</td>
<td>0.32</td>
<td>0.32</td>
<td>0.32</td>
<td></td>
</tr>
<tr>
<td>0.8</td>
<td>0.32</td>
<td>0.32</td>
<td>0.32</td>
<td></td>
</tr>
<tr>
<td>1.0</td>
<td>0.32</td>
<td>0.32</td>
<td>0.32</td>
<td></td>
</tr>
<tr>
<td>1.6</td>
<td>0.32</td>
<td>0.32</td>
<td>0.32</td>
<td></td>
</tr>
<tr>
<td>2.0</td>
<td>0.32</td>
<td>0.32</td>
<td>0.32</td>
<td></td>
</tr>
<tr>
<td>3.0</td>
<td>0.32</td>
<td>0.32</td>
<td>0.32</td>
<td></td>
</tr>
<tr>
<td>4.0</td>
<td>0.32</td>
<td>0.32</td>
<td>0.32</td>
<td></td>
</tr>
<tr>
<td>5.0</td>
<td>0.32</td>
<td>0.32</td>
<td>0.32</td>
<td></td>
</tr>
<tr>
<td>6.0</td>
<td>0.32</td>
<td>0.32</td>
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<td></td>
</tr>
<tr>
<td>7.0</td>
<td>0.32</td>
<td>0.32</td>
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<td></td>
</tr>
<tr>
<td>10.0</td>
<td>0.32</td>
<td>0.32</td>
<td>0.32</td>
<td></td>
</tr>
</tbody>
</table>

### Flow Friction Loss for PVC Pipe (m/100 metres of pipe)

<table>
<thead>
<tr>
<th>Flow Rate</th>
<th>20mm O.D.</th>
<th>PN 6.3</th>
<th>25mm O.D.</th>
<th>PN 6.3</th>
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</thead>
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<td>m³/hr</td>
<td>m³/hr</td>
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### Flow Loss for Poly Pipe - 20mm to 63mm (m/100 metres of pipe)

<table>
<thead>
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<th>Flow Rate</th>
<th>20mm O.D.</th>
<th>25mm O.D.</th>
<th>32mm O.D.</th>
<th>40mm O.D.</th>
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<td>m³/hr</td>
<td>m³/hr</td>
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</table>

### Flow Loss for Rubber Hose (m/100 metres of hose)

<table>
<thead>
<tr>
<th>Flow Rate</th>
<th>20mm O.D.</th>
<th>25mm O.D.</th>
<th>32mm O.D.</th>
<th>40mm O.D.</th>
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</thead>
<tbody>
<tr>
<td>lps</td>
<td>m³/hr</td>
<td>m³/hr</td>
<td>m³/hr</td>
<td>m³/hr</td>
</tr>
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<td>0.5</td>
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<tr>
<td>0.8</td>
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<tr>
<td>4.0</td>
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</tr>
</tbody>
</table>
Industry accepted standards for water quality in swimming pools recommend that filtration equipment is able to turn over the entire body of water within these time periods.

Swimming pool Domestic: 6 Hours
Swimming pool Commercial: 4 Hours
Spa pool Domestic: 1 Hour
Spa pool Commercial: ½ Hour with a 1 hour filtration cycle after bathing

Actual operating time per day is dependant on debris load, number of bathers and sanitation method.

Davey has made product selection easy by labelling their equipment with flow rates for average operating pressures, and converted these with domestic swimming pools turnover rates into a simple table.

To select the right equipment for your pool follow steps 1, 2, 3 & 4.

1. **Calculate Your Pool Volume**

<table>
<thead>
<tr>
<th>Pool Volume</th>
<th>Power Ace® CR</th>
<th>Power Master® Pumps</th>
<th>Crystal Clear® Sand Filters</th>
<th>Easy Clear® Cartridge Filters</th>
</tr>
</thead>
<tbody>
<tr>
<td>30,000 litres</td>
<td>PA CR 100</td>
<td>-</td>
<td>CC 120</td>
<td>EC 500</td>
</tr>
<tr>
<td>45,000 litres</td>
<td>PA CR 150</td>
<td>-</td>
<td>CC 190</td>
<td>EC 750</td>
</tr>
<tr>
<td>70,000 litres</td>
<td>PA CR 200</td>
<td>PM 200</td>
<td>CC 250</td>
<td>EC 1000</td>
</tr>
<tr>
<td>90,000 litres</td>
<td>PA CR 300</td>
<td>PM 350</td>
<td>CC 330</td>
<td>EC 1500</td>
</tr>
<tr>
<td>110,000 litres</td>
<td>PA CR 300</td>
<td>PM 350</td>
<td>CC 400</td>
<td>EC 1750</td>
</tr>
<tr>
<td>160,000+ litres</td>
<td>-</td>
<td>PM 450</td>
<td>-</td>
<td>2 x EC 1500</td>
</tr>
</tbody>
</table>

Note: It is possible to use larger size cartridge filters to minimise the element cleaning required.

2. **Selecting the Right Size Pump or Filter**

### Circular above ground pools

- 3.7m x 0.9m (12’ x 3’) = 10,000 litres
- 4.5m x 0.9m (15’ x 3’) = 14,000 litres
- 4.5m x 1.2m (15’ x 4’) = 19,000 litres
- 6m x 1.2m (20’ x 4’) = 34,000 litres
- 6.7m x 1.2m (22’ x 4’) = 42,000 litres

### Rectangular in ground pools

- 6m x 3.7m x 1.4m (20’ x 12’ x 4’6”) = 31,000 litres
- 7.3m x 3.7m x 1.4m (24’ x 12’ x 4’6”) = 38,000 litres
- 9m x 3.7m x 1.4m (30’ x 12’ x 4’6”) = 47,000 litres
- 9m x 4.5m x 1.4m (30’ x 15’ x 4’6”) = 57,000 litres
- 12m x 4.5m x 1.4m (40’ x 15’ x 4’6”) = 76,000 litres
- 12m x 6m x 1.4m (40’ x 20’ x 4’6”) = 101,000 litres
- 15m x 7.5m x 1.4m (50’ x 25’ x 4’6”) = 158,000 litres
- 1.4m (4’6”) = average depth
3. Selecting the Right Filter Type

<table>
<thead>
<tr>
<th>Filtration Clarity</th>
<th>Sand Filter</th>
<th>Zebrite Filter</th>
<th>Cartridge Filter</th>
</tr>
</thead>
<tbody>
<tr>
<td>Smallest Particle Removal (micron)</td>
<td>15-20</td>
<td>3-5</td>
<td>3-10</td>
</tr>
<tr>
<td>Media Type</td>
<td>Granular media which is re-used for several years.</td>
<td>Mesh element which is regularly cleaned &amp; replaced after 3-5 yrs.</td>
<td></td>
</tr>
<tr>
<td>Cleaning Method</td>
<td>Backwash-Reverse flow of water through filter to flush out dirt.</td>
<td>Remove element and hose down. Acid wash once a year.</td>
<td></td>
</tr>
<tr>
<td>Loss of Pool Water</td>
<td>Yes, due to backwashing.</td>
<td>No, as backwashing not required.</td>
<td></td>
</tr>
<tr>
<td>Ease of Operation</td>
<td>Very simple as the media is not handled and is re-usable. Recharge Zebrite® once a year.</td>
<td>Requires more attention as the element should be removed and cleaned often.</td>
<td></td>
</tr>
<tr>
<td>Operating Cost</td>
<td>Low, as media is virtually permanent. Replace every 3 years.</td>
<td>High, as elements are relatively expensive to replace.</td>
<td></td>
</tr>
<tr>
<td>Initial Cost</td>
<td>Medium</td>
<td>Medium</td>
<td>Low</td>
</tr>
</tbody>
</table>

4. Selecting the Right Size Chlorinator

The appropriate chlorinator size for your pool is dependent on the local climate and the amount of use the pool gets. Note that chlorinator cell life can be increased with shorter running times during winter and lower output settings. Davey recommends that a chlorinator is run for between 6-8 hours a day during summer and between 2-4 hours during winter. A 24 hour super-chlorination after heavy use is also a good idea.

<table>
<thead>
<tr>
<th>Model</th>
<th>Chlorine Gas Production per hour</th>
<th>Calcium Hypochlorite Equivalent per hour</th>
<th>Maximum Pool Volume for Chlorinators</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Cool Climate per hour</td>
<td>Temperate per hour</td>
<td>Hot / Tropical per hour</td>
</tr>
<tr>
<td>D24T</td>
<td>24gm</td>
<td>37gm</td>
<td>144,000</td>
</tr>
<tr>
<td>D30T</td>
<td>30gm</td>
<td>46gm</td>
<td>180,000</td>
</tr>
<tr>
<td>D40T</td>
<td>40gm</td>
<td>62gm</td>
<td>240,000</td>
</tr>
</tbody>
</table>

Minimum Run Time
- Summer: 6 hrs
- Winter: 2 hrs
- 7 hrs
- 3 hrs
- 8 hrs
- 4 hrs

Correct water chemistry is important for the life of your equipment and your enjoyment of the pool, so be sure to have your water chemistry checked regularly by your local pool shop.
Aquaculture & Pool Pumps

Aquaculture Pumps
Built from corrosion resistant materials and engineered to give high water turnover rates, Davey pumps and filters are ideal for marine and freshwater aquaculture.

Power Master® Pumps
Davey’s premium range - robust and powerful, featuring Davey’s own manufactured TEFC motor with safe IP56 rating, massive front mounted fan for superior cooling and high performance C3 bearings. The range features carbon ceramic seals and stainless steel shafts, ideal for salt water applications.

Power Ace® CR Pumps
Compact, powerful and efficient, Davey’s Power Ace CR range features carbon ceramic seals, stainless steel shafts and Davey manufactured IP55 TEFC motors. An additional fan between the pump & motor keeps bearings cool for long life and protects vital motor components from moist air. Not suitable for seawater.

Power Chief® CR Pumps
Compact, powerful and efficient, Davey’s Power Chief CR range features are identical to the Power Ace® CR range. They are ideal for solar hot water boosters.

<table>
<thead>
<tr>
<th>Pump Model</th>
<th>Input (w)</th>
<th>Output (w)</th>
<th>Maximum Pressure (m)</th>
<th>5</th>
<th>10</th>
<th>15</th>
<th>20</th>
<th>Inlet / Outlet (mm)</th>
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</thead>
<tbody>
<tr>
<td>Power Master 200</td>
<td>1280</td>
<td>900</td>
<td>18</td>
<td>280</td>
<td>230</td>
<td>130</td>
<td>-</td>
<td>40 &amp; 50 / 40 &amp; 50</td>
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<tr>
<td>Power Master 250</td>
<td>1430</td>
<td>1050</td>
<td>19.5</td>
<td>380</td>
<td>310</td>
<td>200</td>
<td>-</td>
<td>40 &amp; 50 / 40 &amp; 50</td>
</tr>
<tr>
<td>Power Master 350</td>
<td>1670</td>
<td>1200</td>
<td>20</td>
<td>460</td>
<td>375</td>
<td>260</td>
<td>50</td>
<td>40 &amp; 50 / 40 &amp; 50</td>
</tr>
<tr>
<td>Power Master 450</td>
<td>2250</td>
<td>1700</td>
<td>22.5</td>
<td>60</td>
<td>480</td>
<td>370</td>
<td>190</td>
<td>50 / 50</td>
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<tr>
<td>Power Master 4503</td>
<td>2040</td>
<td>1750</td>
<td>22.5</td>
<td>560</td>
<td>480</td>
<td>370</td>
<td>190</td>
<td>50 / 50</td>
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</table>

<table>
<thead>
<tr>
<th>Pump Model</th>
<th>Input (w)</th>
<th>Output (w)</th>
<th>Maximum Pressure (m)</th>
<th>4</th>
<th>6</th>
<th>8</th>
<th>10</th>
<th>12</th>
<th>14</th>
<th>Inlet / Outlet (mm)</th>
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<tr>
<td>Power Ace CR100</td>
<td>760</td>
<td>530</td>
<td>16</td>
<td>215</td>
<td>190</td>
<td>165</td>
<td>140</td>
<td>105</td>
<td>60</td>
<td>406/50 / 406/50</td>
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<tr>
<td>Power Ace CR150</td>
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<td>230</td>
<td>200</td>
<td>160</td>
<td>110</td>
<td>406/50 / 406/50</td>
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<td>1060</td>
<td>790</td>
<td>19</td>
<td>315</td>
<td>295</td>
<td>265</td>
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<td>160</td>
<td>406/50 / 406/50</td>
</tr>
<tr>
<td>Power Ace CR300</td>
<td>1500</td>
<td>1170</td>
<td>20</td>
<td>385</td>
<td>365</td>
<td>340</td>
<td>305</td>
<td>260</td>
<td>220</td>
<td>406/50 / 406/50</td>
</tr>
<tr>
<td>Power Chief CR100</td>
<td>760</td>
<td>530</td>
<td>16</td>
<td>215</td>
<td>190</td>
<td>165</td>
<td>140</td>
<td>105</td>
<td>60</td>
<td>406/50 / 406/50</td>
</tr>
<tr>
<td>Power Chief CR150</td>
<td>1000</td>
<td>720</td>
<td>17</td>
<td>280</td>
<td>260</td>
<td>230</td>
<td>200</td>
<td>160</td>
<td>110</td>
<td>406/50 / 406/50</td>
</tr>
</tbody>
</table>
**Magnum Pool Pumps**
The Magnum range of pool pumps gives you strong pumping performance and quiet operation in a compact, convenient to install package.

**Magnum Booster Pool Pumps**
The Magnum Boosters are specifically designed to circulate swimming pool water for filtration and solar heating applications. They are ideal for above ground pools, water features and spa pools.

**Monster High Head Pool Pumps**
The Monster range is specifically designed to circulate swimming pool water for filtration and solar heating applications. They are ideal for automatic cleaners and heating systems.

**Standard Valves**
Two and three port full flow valves specially designed for use in the swimming pool and irrigation industries. They are non corrosive, made from injection moulded ABS to fit either 40mm or 50mm PVC pressure pipe. The handle is spring loaded and locks in position to ensure a positive no creep setting.

**Teflon Valves**
40 and 50mm full flow valves are available with ‘no lube’ Teflon seals - to ensure easy free rotation of the handle over the life of the valve. You can identify the Teflon seal version by the red handle, black lid and sticker.

**Check Valves**
A genuine full flow 40mm check valve with a see-through lid that is easily removed for servicing without disturbing the plumbing.

Every valve is pressure tested and guaranteed against manufacturing defects.

---

![Magnum Pool Pump](image1)

![Magnum Booster Pool Pump](image2)

![Monster High Head Pool Pump](image3)

![Standard Valves](image4)

![Teflon Valves](image5)
Crystal Clear® Filters
Tough, sea-water resistant polyethylene filter tank with Davey’s unique T-shaped laterals for high efficiency filtration and easy back-washing.

Easy Clear® Cartridge Filters
Depend on Davey Easy Clear® cartridge filters for the ideal choice for the filtration of spas, swim spas, hot tubs and swimming pools. Featuring a reinforced polyester element designed to maximise filtration area, Davey Easy Clear® filters ensure you’ll always have sparkling clear water. When the filter element needs cleaning, simply take it out, hose it down and you’re back in business within minutes. You can depend on years of service out of your Davey Easy Clear® filter as only the best in corrosion and U.V. resistant materials are used.

Zelbrite® Filter Media
More surface area than sand for finer filtration. Has ability to capture ammonium ions in fresh water for extra purity and healthier water.

Salt Water Chlorinators
Special Features
• World leading sanitisation technology
• Constructed of strong corrosion and U.V. resistant materials for long and reliable working life
• Easy to remove salt cell
• Complies with electrical standards for safe installation in the pool zone
• A.B.S. Quick connect couplings make installation simple
• Every unit is pressure and performance tested in factory to ensure quality and reliability
• Time clock included as standard for automatic operation of the filtration system
• Advanced self cleaning cell for low maintenance
• Super chlorinate function
• Huge digital display and touch pad controls for easy programming
• Automatic self cleaning cell reduces maintenance and extends cell life

### Filtration Performance & Media Required

<table>
<thead>
<tr>
<th>Model</th>
<th>Sand Required (kg)</th>
<th>Zeolite Required (kg)</th>
<th>Max Flow Rate (lpm)</th>
<th>Min Backwash Flow Rate</th>
<th>6 Hour Turnover (litres)</th>
<th>Filtration Area (sq metres)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Crystal Clear 120</td>
<td>60</td>
<td>45</td>
<td>120</td>
<td>100</td>
<td>43,200</td>
<td>0.166</td>
</tr>
<tr>
<td>Crystal Clear 190</td>
<td>90</td>
<td>60</td>
<td>180</td>
<td>135</td>
<td>64,800</td>
<td>0.223</td>
</tr>
<tr>
<td>Crystal Clear 250</td>
<td>140</td>
<td>105</td>
<td>240</td>
<td>180</td>
<td>86,400</td>
<td>0.292</td>
</tr>
<tr>
<td>Crystal Clear 330</td>
<td>200</td>
<td>150</td>
<td>330</td>
<td>240</td>
<td>116,000</td>
<td>0.397</td>
</tr>
<tr>
<td>Crystal Clear 400</td>
<td>280</td>
<td>210</td>
<td>400</td>
<td>300</td>
<td>144,000</td>
<td>0.507</td>
</tr>
</tbody>
</table>

### Operating Limits

| Maximum Water Temperature (degrees C) | 35 |
| Maximum Operating Pressure (kPa)     | 280 |
**Quiet:** 50% quieter than other pumps which provides a more enjoyable spa experience that will not disturb your well deserved relaxation.

**Powerful:** With pumps as large as 2 horsepower, and three unique patented features Celsior® pumps deliver greater water flow and pressure, enlivening your spa for a complete massaging effect.

**Smart:** Davey Heat Recovery technology maintains the temperature of your spa for longer by utilising waste energy which is otherwise lost when using traditional style spa pumps. Environmentally friendly & highly efficient with up to 97% effective energy usage. Lower running costs that delivers savings of up to 15% over older style spa bath pumps.

**Easy:** Quick and easy to install using the Davey Flexibrax. IP56 protective enclosures make Celsior® ideal for outdoor installation without the need for expensive covers. Designed to exceed standards for electrical safety and hygiene for your peace of mind.

### Operating Limits

<p>| | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Maximum Water Temperature*</td>
<td>50°C</td>
</tr>
<tr>
<td>Maximum Ambient Temperature*</td>
<td>55°C</td>
</tr>
<tr>
<td>Sound Power Levels</td>
<td>60 dBa</td>
</tr>
</tbody>
</table>

---

**Spa Bath Pumps**

**Celsior®**

New generation spa bath pumps
NOTE: This is not a complete guide to product usage or guarantee conditions. Further information is available from your Davey Dealer, and from the relevant product Installation and Operating Instructions.