

# Davey Pump Guide

Pumps | Rainwater Harvesting | Fire Fighting | Water Transfer



Depend on Davey

**DAVEY**





**Depend on Davey**

**DAVEY**

For over 80 years Davey Water Products has provided innovative and dependable water solutions with the best service and advice wherever and whenever our customers need them.

# Contents

## PRESSURE SYSTEMS 4

- Selection Guide . . . . . 4
- Torium2 Controlled Systems . . . . . 5
- Silver Series Systems . . . . . 7
- Pressure Tanks . . . . . 8

## RAINWATER HARVESTING & TREATMENT 9

- RainBank . . . . . 9
- RainBankPRO, Aquashield . . . . . 10
- Steriflo . . . . . 11
- Filterpure . . . . . 12
- Water Softeners . . . . . 13

## FARM & WATER TRANSFER 14

- Shallow Well Jet Pumps . . . . . 14
- Deep Well Jet Pumps . . . . . 16
- Washdown & Small Irrigation Water Transfer Pumps . . . . . 18
- Dynaflo . . . . . 19
- Effluent Pumps . . . . . 19
- Horizontal Multistage Pumps, Spearpoint Pumps . . . . . 21

## WATER TRANSFER, FIRE & FLOOD FIGHTING 22

- Firefighter Pumps, Selection Guide . . . . . 22
- Fire Fighting Accessories, 2" Poly Pump . . . . . 25
- Deep Well Injector Kits, Floodfighter Pumps . . . . . 26

## COMMERCIAL, IRRIGATION & COMMUNITY 27

- 4" Submersible Borehole Pumps . . . . . 27
- 6" Submersible Borehole Pumps & Rewindable Motors . . . . . 29
- Vertical Multistage Pumps . . . . . 31
- Packaged Pump Sets . . . . . 34
- CS Series, ISOspec . . . . . 38
- Diesel Irrigation Packs . . . . . 41
- Wastewater Pumps Selection Guide . . . . . 42
- Wastewater Pumps . . . . . 43
- Pond Pumps . . . . . 47
- Circulator Pumps . . . . . 48

## USEFUL PUMPING INFORMATION 49

# Household Pressure Systems

**Davey are the benchmark for quality and reliability with market leading features.**

Davey offers you a vast choice of pressure systems operated by our unique Torrium2 controller to deliver you flawless performance no matter what the demand. 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 same 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.



## Household Pressure Systems Selection Guide



GUARANTEE  
2 Years



HP45-05T

## Davey HP with Torrium2

Whisper quiet operation. Strong even pressure, whether it's one shower or multiple outlets at once. Designed for average to large size and single storey homes.

Tested in compliance with  
**AS/NZS 4020**   
for use in contact with safe drinking water

GUARANTEE  
2 Years



HS60-08T

## Davey HS with Torrium2

Low power consumption and noise output. High pressure output to suit multi-storey homes or where the pump may be some distance from the dwelling.

Tested in compliance with  
**AS/NZS 4020**   
for use in contact with safe drinking water

GUARANTEE  
2 Years



NOW AVAILABLE WITH PLUG & PLAY

## Torrium2 Controller

Torrium2 is an intelligent controller designed to supply pressure boosted water with constant flow and even water pressure to domestic households. It incorporates several levels of pump protection.

Tested in compliance with  
**AS/NZS 4020**   
for use in contact with safe drinking water

GUARANTEE  
2 Years



HM160-15T

## Davey HM with Torrium2

All stainless steel high pressure system for large multi-level dwellings. Pressure tanks can be added if site conditions require additional draw off.

Tested in compliance with  
**AS/NZS 4020**   
for use in contact with safe drinking water

GUARANTEE  
2 Years



XJ50T

## Davey XP and XJ with Torrium2

Jet assisted centrifugal pressure system. Designed for smaller systems or larger systems with long suction lines or suction lift requirements.

Tested in compliance with  
**AS/NZS 4020**   
for use in contact with safe drinking water

### Constant Flow and Even Water Pressure

To prevent annoying fluctuations in water temperature during showers, Torrium2 uses its intelligence to provide households with constant flow to give even water pressure.

### Quick Cut-in for Even Pressure

To give you strong pressure right from the start, Torrium2 is designed to cut in quickly when it senses demand for water. It cuts in when the pressure has dropped to 80% of the previous top (shut-off) pressure.

### Greater Hydraulic Performance

For better hydraulic performance to supply more pressure with less wasted energy, Torrium2 has been designed with larger water pathways and no moving parts in the pathways. This performance versus loss equation is especially evident at higher flow rates.

### Dry Run Protection

To protect the pump from damage due to dry running, Torrium2 stops the pump when it detects a loss of prime (no water supply) situation.

### Auto Retry

Auto-retry in Torrium2 allows the system to reset itself after a loss of prime, thus helping reduce system downtime.

### Adaptive Starting

Torrium2 is clever enough to detect the difference between normal water demand and a small leak in the system, such as a dripping faucet or a leaking cistern. For very low flows, Torrium2 automatically adapts to reduce the cut-in pressure, which can be as low as 50% of its last shut-off pressure.

Torrium2 is available complete as part of a Davey Home Pressure System or can be purchased separately to upgrade an existing pump.



# Household Pressure Systems

Davey HP & HS HOME PRESSURE SYSTEMS												
Model	Motor kW		Type of Controller	Pressure Tank	Normal Operating Pressure kPa psi	Suction Lift in metres/feet					Pressure Switch Settings kPa	Connection Size BSP inlet /outlet
	Input (P1)	Output (P2)				0	1	3	5	6		
						0	3.3	9.8	16.4	19.7		
Output in litres/minute						gals/hour						
<b>HP45-05T</b> Average sized homes with modern appliances ▲▲▲▲▲	0.83	0.58	Torrium2	Not required	200/29	63/831	61/805	57/752	52/686	48/634	Adaptive	1 1/4" F/1" M
<b>HP65-06T</b> For larger families and homes ▲▲▲▲▲▲▲	0.90	0.60	Torrium2	Not required	200/29	85/1122	81/1069	75/990	66/871	62/818	Adaptive	1 1/4" F/1" M
<b>HP85-08T</b> For larger single storey homes and farms ▲▲▲▲▲▲▲▲▲	1.15	0.80	Torrium2	Not required	200/29	125/1650	121/1597	111/1465	98/1293	92/1214	Adaptive	1 1/4" F/1" M
<b>HS50-06T</b> Average sized homes with two storeys or long runs of plumbing ▲▲▲▲▲	0.89	0.60	Torrium2	Not required	290/42	48/634	46/647	42/554	39/515	37/488	Adaptive	1 1/4" F/1" M
<b>HS60-08T</b> Large double storey homes and garden watering ▲▲▲▲▲▲▲▲	1.10	0.76	Torrium2	Not required	290/42	68/897	66/897	61/805	56/739	54/713	Adaptive	1 1/4" F/1" M

HM Series HORIZONTAL MULTISTAGE PRESSURE SYSTEMS									
Model	Motor kW (P2)	Normal Operating Pressure kPa/psi	Suction Lift in metres/feet			Standard Adaptive Pressure Range (T models)	Pressure Settings (P models)	Inlet Size BSP(F)	
			0	3	5				
			0	9.8	16.4				
			Output in litres/minute			gals/hour			
<b>HM60-06T &amp; P</b> Average sized homes with modern appliances and double storeys ▲▲▲▲▲▲	0.58	280/41	60/793	54/713	N/R	370-460 kPa	250-400 kPa	1 1/4"	
<b>HM60-08T &amp; P</b> Average sized homes with modern appliances and double storeys ▲▲▲▲▲▲▲	0.72	360/52	58/767	52/686	N/R	450-570 kPa	300-500 kPa	1 1/4"	
<b>HM60-10T &amp; P</b> Multi level homes with modern appliances and long runs of piping ▲▲▲▲▲▲▲▲	0.94	430/62	60/793	54/713	N/R	550-690 kPa	350-620 kPa	1 1/4"	
<b>HM90-08T &amp; P</b> Large multi storey dwellings, livestock, irrigation and commercial use ▲▲▲▲▲▲▲▲	0.78	310/45	90/1188	77/1016	68/897	370-460 kPa	250-400 kPa	1 1/4"	
<b>HM90-11T &amp; P</b> Large two storey dwellings and garden water supply ▲▲▲▲▲▲▲▲	1.05	420/61	86/1135	75/990	66/871	460-580 kPa	300-500 kPa	1 1/4"	
<b>HM90-13T &amp; P</b> Large multi storey dwellings, livestock, irrigation and commercial use ▲▲▲▲▲▲▲▲	1.40	480/70	87/1148	79/1043	72/950	550-690 kPa	350-620 kPa	1 1/4"	
<b>HM160-15T &amp; P</b> Farm and garden water supply, irrigation and commercial use ▲▲▲▲▲▲▲▲▲	1.50	340/49	155/2046	137/1808	117/1544	370-460 kPa	250-400 kPa	1 1/2"	
<b>HM160-19T &amp; P</b> Farm and garden water supply etc., requiring higher pressure ▲▲▲▲▲▲▲▲▲	1.80	400/58	158/2085	144/1901	130/1716	480-600 kPa	300-500 kPa	1 1/2"	
<b>HM270-19P</b> Larger farm, irrigation and stock watering, caravan parks and small motels ▲▲▲▲▲▲	1.90	250/36	260/3432	210/2772	160/2112	N/A	200-300 kPa	2"	
<b>HM270-25P</b> Larger farm, irrigation and stock watering, caravan parks and small motels ▲▲▲▲▲▲	2.50	340/49	263/3471	225/2970	197/2600	N/A	250-400 kPa	2"	

All T models have 1" BSP(M) discharges. All P models have 1" BSP(F) discharges, except HM270-19P & HM270-25P which have 1 1/2" BSP(F) discharges.

Jet Pump HOME PRESSURE SYSTEMS												
Model	Motor kW		Type of Controller	Pressure Tank	Normal Operating Pressure kPa psi	Suction Lift in metres/feet					Pressure Switch Settings kPa	Connection Size BSP inlet /outlet
	Input (P1)	Output (P2)				0	1	3	5	6		
						0	3.3	9.8	16.4	19.7		
Output in litres/minute						gals/hour						
<b>XP25P8</b> Cottages & weekenders ▲▲	0.54	0.20	Pressure Switch	Top mounted 8 litre	140/20	25/330	24/316	18/238	15/189	13/172	140-280	1" F/1" M
<b>XP45T</b> <b>XP35P8</b> <b>XP45P8</b> Small to average homes ▲▲▲	0.65 0.62 0.65	0.31 0.31 0.31	Torrium2 Pressure Switch Pressure Switch	Not required Top mounted 8 litre Top mounted 8 litre	140/20 140/20 140/20	50/660 35/462 50/660	46/607 33/436 46/607	35/462 30/398 35/462	30/396 24/317 30/396	25/330 22/297 25/330	Adaptive 140-280 Adaptive	1" F/1" M 1" F/1" F 1" F/1" F
<b>Dynajet XJ50T</b> <b>Dynajet X50</b> <b>Dynajet XJ50P</b> Average sized homes with modern appliances ▲▲▲▲	0.84 0.84 0.84	0.58 0.58 0.58	Torrium2 Pressure Switch Pressure Switch	Not required Base mounted 40 litre Purchase separately	180/26 180/26 180/26	45/594 45/594 45/594	43/567 43/567 43/567	36/475 36/475 36/475	30/398 30/398 30/398	27/356 27/356 27/356	Adaptive 180-390 180-390	1" F/1" M 1" F/1" F 1" F/1" F
<b>Dynajet XJ70T</b> <b>Dynajet X70</b> <b>Dynajet XJ70P</b> For larger families and two storey homes ▲▲▲▲▲	1.15 1.15 1.15	0.80 0.80 0.80	Torrium2 Pressure Switch Pressure Switch	Not required Base mounted 40 litre Purchase separately	210/30 210/30 210/30	66/871 66/871 66/871	62/818 62/818 62/818	57/752 57/752 57/752	45/594 45/594 45/594	40/258 40/258 40/258	Adaptive 210-420 210-420	1" F/1" M 1 1/4" F/1" F 1" F/1" F
<b>Dynajet XJ90T</b> <b>Dynajet X90</b> <b>Dynajet XJ90P</b> For large double storey homes and farms ▲▲▲▲▲▲▲	1.40 1.40 1.40	1.10 1.10 1.10	Torrium2 Pressure Switch Pressure Switch	Not required Base mounted 40 litre Purchase separately	210/30 210/30 210/30	92/1214 92/1214 92/1214	90/1188 90/1188 90/1188	82/1082 82/1082 82/1082	68/898 68/898 68/898	58/766 58/766 58/766	Adaptive 210-350 210-350	1 1/4" F/1" M 1 1/2" F/1" F 1 1/2" F/1" F

GUARANTEE  
2 Year



## SilverSeries

### SJ35-04, SJ35-04PC & SJ60 - 08PC

The SJ35-04 pump models can supply a variety of garden watering applications, such as :-

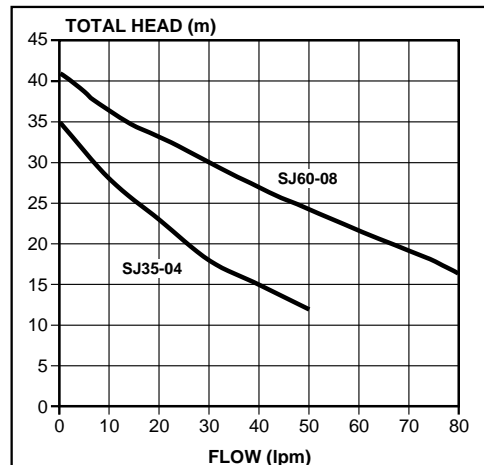
- > A garden hose with a spray nozzle fitted, or
- > A garden spray system with up to 25 microjet sprays, or
- > A garden dripper system with up to 200 garden drippers (4 litre per hour drippers), or
- > Two small impact sprinklers

### SJ35-04PC & SJ60-08PC

These are automatic models, suitable for connection permanently to a power supply and will start according to demand and stop according to flow demands. These models have anti-cycling controls; it is less likely to stop and start under low flow conditions. These models have both closed head protection (will stop on low or no flow) as well as loss of prime protection.

- > Low flow shut-down
- > 'No water' protection
- > Automatic

Tested in compliance with  
**AS/NZS 4020**  
for use in contact with safe drinking water



GUARANTEE  
2 Years



## Davey Dynajet

- Ideal for average to large sized, single and double storey homes
- Pressure switch operated with various tank options available
- Also great for domestic irrigation applications

GUARANTEE  
2 Years



## Davey Speedman Compact

- Variable speed constant pressure system
- Energy saving and compact
- Supplied with an 8P pressure tank



Tested in compliance with  
**AS/NZS 4020**  
for use in contact with safe drinking water

## AS/NZS4020 Certification

Davey's water pressure systems pumps (HP, HS, HM XJ, XP & VM) including Torrium2 have all been certified as AS/NZS4020 compliant.

The AS/NZS4020 Standard stipulates that products in contact with drinking water do not affect the taste or appearance of the water; do not support the growth of micro-organisms and do not release cytotoxic or mutagenic compounds or metals into the water.

# Supercell Pressure Tanks

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. The range includes high pressure models with replaceable diaphragms and composite tanks that are more durable in coastal or high humidity environments.

## Supercell Steel Tanks with Captive Diaphragms



## Supercell High Pressure Steel Tanks (2500kPa)



## Supercell Composite Tanks with Captive Diaphragms



STEEL TANKS						
New Davey Model	Description	Capacity (litres)	Pressure Rating (kPa)	Inlet Size	Position	Mounting Stand
24008P	Supercell 8P	8	1000	1" Male	Bottom	No
24018P	Supercell 18P	18	1000	1" Male	Bottom	No
24040P	Supercell 40P	40	1000	1" Male	Bottom	No
24060P	Supercell 60P	60	1000	1" Female	Bottom	Yes
24100P	Supercell 100P	100	1000	1" Female	Bottom	Yes
24200G	Supercell 200G	200	1000	1 1/4" Female	Bottom	Yes
24018PHP16	Supercell 18PHP16	18	1600	1" Female	Bottom	No
24080PHP16	Supercell 80PHP16	80	1600	1" Female	Bottom	Yes
24024HP25	Supercell 24HP25	24	2500	1" Male	Bottom	No
24100HP25	Supercell 100HP25	100	2500	1" Male	Bottom	Yes

COMPOSITE TANKS						
New Davey Model	Description	Capacity (litres)	Pressure Rating (kPa)	Inlet Size	Position	Mounting Stand
24060F	Supercell 60F	60	860	1" Male	Bottom	Yes
24080F	Supercell 80F	80	860	1" Male	Bottom	Yes
24100F	Supercell 100F	100	860	1" Male	Bottom	Yes
24130F	Supercell 130F	130	860	1" Male	Bottom	Yes
24200F	Supercell 200F	200	860	1 1/4" Male	Bottom	Yes
24250F	Supercell 250F	250	860	1 1/4" Male	Bottom	Yes





Save up to 40% of your mains water usage with Davey RainBank.

Select the right kit for your home

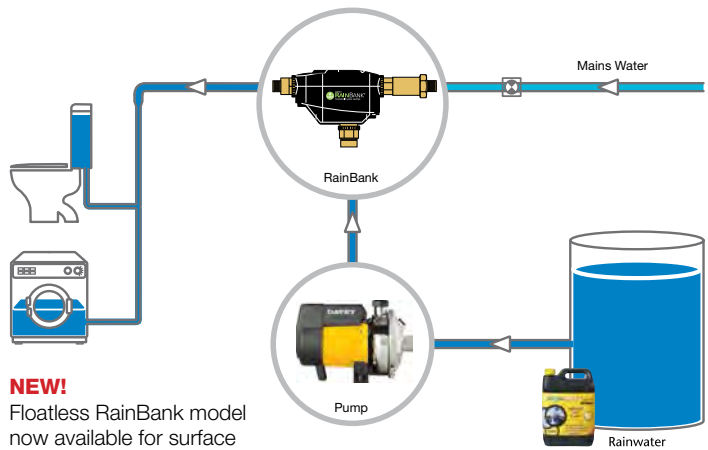
**NEW**  
FLOATLESS  
RAINBANK

**KIT SELECTION - HOME PRESSURE SYSTEMS**

<p><b>PRESSURE</b></p>	700kPa	Premium models for the luxury of high pressure with multi-level dwellings and long runs of piping.	KRB3	KRB3	KRB4		
	500kPa	Higher pressure for long runs of pipe and double storey buildings.	KRB2 KRBS2 KRB2NF	KRB2 KRBS2 KRB2NF	KRB3 KRBS2	KRB4	
	300kPa	Adequate pressure for most single storey buildings.	KRB1 KRBS1 KRBSA1 KRBX1 KRB1NF KRBX1NF	KRB1 KRBS1 KRB1NF	KRB2 KRBS2 KRB2NF	KRB3 KRBS2	KRB4
			25lpm	35lpm	50lpm	70lpm	90lpm
			<b>FLOW</b>				



**Pumps for RainBank**



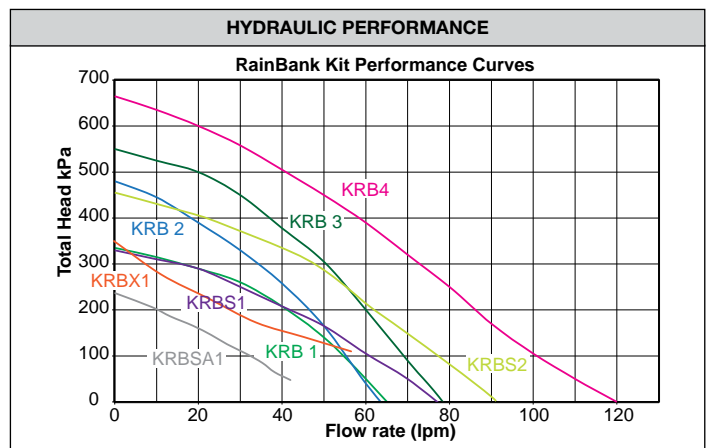
**NEW!**  
Floatless RainBank model now available for surface mounted applications.



RainBank is an automatic controller for rainwater harvesting. RainBank controls the water supply for toilet and laundry applications by automatically selecting the water source with rainwater being the priority and mains water the back-up.

RainBank can save up to 40 per cent of a household's drinking quality water which is normally used in these applications, helping conserve precious water reserves.

RainBank is available as a kit with a range of dependable Davey pumps to suit a wide range of homes and applications. 'S' kits have submersible pumps that are ideal for running in the tank to eliminate noise.



PRESSURE SYSTEMS  
RAINWATER HARVESTING & TREATMENT  
FARM & WATER TRANSFER  
WATER TRANSFER FIRE & FLOOD FIGHTING  
COMMERCIAL IRRIGATION & COMMUNITY  
USEFUL PUMPING INFORMATION

# RainBankPRO



## DAVEY RAINBANK PRO community water savings

The complete interconnection system for larger installations, such as schools, apartment buildings, warehouses, factories, motels, police stations, council buildings and fast food outlets. Includes controller, VM multistage pump, flow switch isolation valves, 24 litre high pressure Supercell tank and stainless steel manifold, all mounted on a stainless steel base.

Also available as a Variable Speed Option and Multiple Pump Option on a made to order basis.

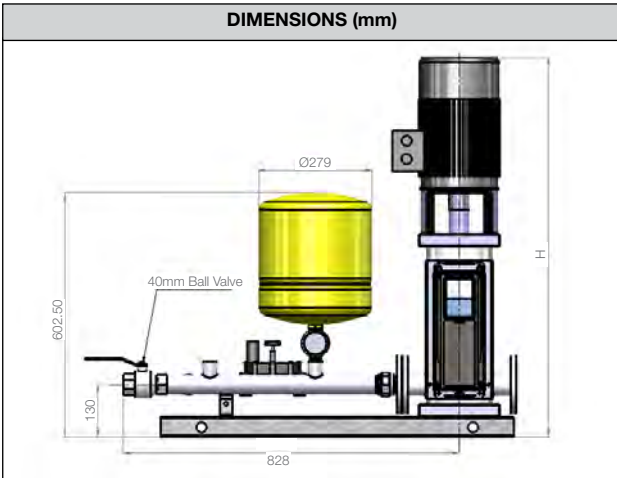
## Aquashield

### Pressure Boosting and Treatment Packages

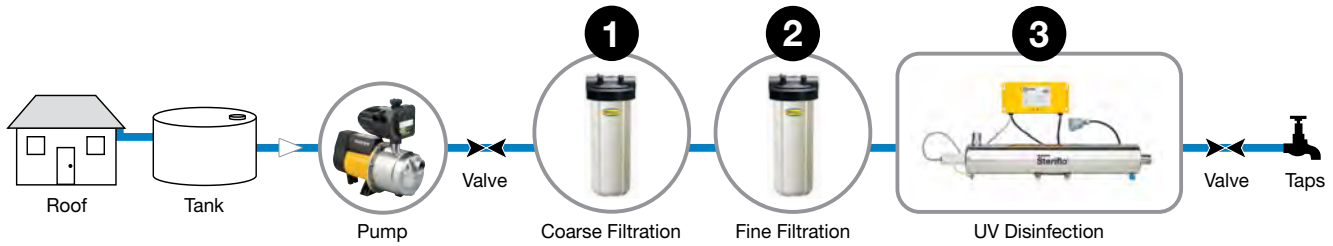
Davey's AquashieldMAX packaged systems provide pressure boosting and control, filtration and disinfection via Davey's proven three stage process, all in one factory assembled and tested package. Ideal for B&Bs, schools, restaurants, farms and homes.

### Proven 3 Stage Treatment Process:

- Automatic treatment of rain, bore and surface water
- Ready to install packages in weatherproof enclosures
- Factory matched and tested systems
- Flows up to 70 lpm
- 20 micron and 1 micron high capacity cartridge filters
- Includes gauge set and stop valves.



SELECTING A SYSTEM			
Pressure	Outlets	Single Water Source With Torrium Controller	Dual Water Source With RainBank Controller
Standard Pressure Up to 500kPa	⌋⌋⌋⌋⌋ Up to 70 lpm	ASHS60-08T	ASHS60-08RB
Submersible	⌋⌋⌋⌋ Up to 50 lpm	N/A	ASD42AB-RB
Premium Pressure Up to 700kPa	⌋⌋⌋⌋⌋ Up to 70 lpm	ASHM60-10T	ASHM60-10RB
Submersible	⌋⌋⌋⌋ Up to 50 lpm	N/A	ASD53AB-RB



## Steriflo and Filterpure Kits

- Includes UV chamber and two stage filtration and housings. Optional pump lead included
- Supplied as individual components for installation flexibility
- Whole house systems offered in 50, 70 and 130 lpm options for medium to large homes and light commercial applications
- Lamp Replacements - Life of 9,000 hours, replace every 12 months

GUARANTEE  
1 Year



### Davey Steriflo

- Davey Steriflo is an economical means of managing bacteria and virus in drinking water supplies
- Davey recommend installing prefiltration to ensure the highest penetration of UV light
- A large range of models are available to suit most applications

GUARANTEE  
1 Year



### Aquashield Centurion UV System

- Proven three stage treatment process for rain tank water supplies with flows up to 70 lpm
- Preassembled wall mount unit including two stage Filterpure prefiltration down to 1 micron, followed by Davey Steriflo UV
- Flexibility to install with an existing pump or to a Davey home water pressure system
- Water flow left to right or right to left, for installation flexibility
- Provides 30mj/cm<sup>3</sup> at 90% or above UV Transmission (UVT)

GUARANTEE  
1 Year



### Davey Steriflo – High Flow

- Designed for economical disinfection of water for large scale water treatment such as farm washdown, irrigation and non-validated potable water supplies
- Supplied standard with an electropolished 316 stainless steel chamber, UV sensor and amalgam lamps
- Features a programmable LED display control panel with plug and play connections
- Web based remote access is available as an option on some models
- Flows up to 275 m<sup>3</sup>/hr

# Water Filtration & Purification

GUARANTEE  
1 Year



## Filterpure

- Davey's Filterpure housings are constructed from reinforced polypropylene for durability
- Supplied with mounting brackets and hardware for easy installation
- Pressure relief valve available on most models

### Filterpure PRODUCT SELECTOR

Element Style	Micron Rating	Washable & reusable	Pre-filtration	Sediment reduction	Taste reduction	Odour reduction	Cyst reduction	Cyst removal	Metal reduction	Chemical reduction	Chlorine reduction	Bacterio-static
PP	20 5	✓	✓	✓								
PS	20 5 1		✓	✓			✓					
AC	10 5 0.5			✓	✓	✓			✓	✓	✓	
AC with silver	0.5			✓	✓	✓		✓	✓	✓	✓	✓

### FLOW RATE GUIDE

Application	Outlets	Flow Range (lpm)	Housing
Drinking Tap		4	10" x ¼"
Point of Use		4 to 8	10" x ½"
Point of Use		4 to 30	10" x ¾"
Point of Entry		20 to 100	20" x ¾"
Point of Entry		20 to 75	10" Jumbo
Whole of House		40 to 120	20" Jumbo

GUARANTEE  
1 Year



## Filterpure Industrial Housings

- Constructed from 304SS, these industrial filters are durable and with their '7 around' design offers greater flow rates at reduced pressure loss
- Handling operating pressures up to 1000kPa these filters can be used in a wide range of applications
- Housing and filters sold separately
- Bag filters also available



## Acquasafe

- An environmentally safe, tasteless and odourless formula used for tankwater disinfection, lasting for up to 2 months
- Destroys virtually all bacteria and viruses and is non-toxic, breaking down into oxygen and water
- The key ingredient in Acquasafe is Sanosil, exclusively supplied to Davey for tankwater disinfection
- Regular monitoring with Acquasafe test strips is essential to ensure your tankwater remains safe



## Water Softeners

- Hard water is naturally occurring and contains excess levels of dissolved minerals such as calcium, magnesium, manganese and iron resulting in scale buildup
- Davey Kineticico Water Softeners are an easy solution, offering an uninterrupted supply of soft water to the home using their non-electric, twin tank system
- Using less salt than traditional electric timer systems, it uses soft water to regenerate only when the water demand has been met, not at a set time or day
- Model selection is based on a water test and the total daily demand required. Contact customer support for further information

Units supplied with number 4 metering disc. New Sumoll model does not require metering discs.

Type	Description	Max Iron (Ferrous)	Max. Hardness	Peak/Service Flow	Connections	Salt Included
KSUMO2	Single tank water softener	0 mg/l	850mg/l	45/35lpm	20mm BSPM	9 x 1.8kg block salt
KM2020CHF	Twin tank water softener – includes 20 micron prefilter and by-pass valve. (not suitable for iron removal)	0 mg/l	342mg/l	51/32 lpm	25mm	9 x 1.8kg block salt
KM2025S	Water softener for medium water hardness – includes 20 micron prefilter and by-pass valve	2 mg/l	428mg/l	45/30 lpm	25mm	1 x 25kg
KM2060S	Water softener for high water hardness – includes 20 micron prefilter and by-pass valve	6 mg/l	1129mg/l	68 / 44 lpm	32mm	5 x 25kg
KM2060SOD	High flow water softener for medium water hardness – includes 20 micron prefilter and by-pass valve	6 mg/l	513mg/l	114 / 78 lpm	32mm	5 x 25kg

## Questions to ask:



1. Has a chemical water test been obtained?
2. What is the peak and daily water demand?
3. What is the water source?
4. What will the water be used for?



## Davey ClearFlow – Capacitive Deionisation system

- Capable of removing salts and other charged molecules from brackish water supplies including bores, wells and ground water
- Creates acceptable water quality for domestic use or for use with crop irrigation and livestock
- Offers an easy and more cost effective method for water treatment when compared to water softeners or small to medium sized reverse osmosis systems without the need for complicated chemicals or controls
- Generates a 75 – 95% reduction of salts, hardness iron and even aerobic bacteria from incoming supplies
- Production output of 800 – 4000 L/day per unit
- ClearFlow is modular system that added and combined to reach required production
- ClearFlow custom range is capable of up to 72,000 L/day

PART NO.	MODELS	MAX INPUT CONDUCTIVITY (µS/cm)	SALT REMOVAL	TREATED WATER OUTPUT LITRES PER DAY	AEROBIC BACTERIA REMOVAL
CD800-75	ClearFlow 4G Delta DP1 Mini	2000	65 - 90%	800 - 2000	95%
CD1800-75	ClearFlow 4G Delta SP1	1200	65 - 95%	1800 - 2000	95%
CD3600-150	ClearFlow 4G Delta SP2	2000	65 - 95%	3600 - 4000	95%
CD1600-150	ClearFlow 4G Delta DP1	2000	65 - 95%	1600 - 2000	95%

# Shallow Well Jet Pumps

## For suction depths to 7.5 metres

Davey's shallow well jet pumps, complete with a pressure switch or Torrium2 controller, can draw water from rivers, creeks, dams and shallow bores down to 7.5 metres for farm water supply, stock-watering, small scale irrigation, garden sprinklers, washdown and tank filling.

These shallow well jet pumps are simple to use and highly durable. Plus, installation and servicing are easier as the pump is conveniently installed at ground level.

The 95S, 125S and 165S model's casing is constructed of high grade aluminium with a Rilsan lining to ensure extremely high corrosion and abrasion resistance for trouble free operation.

They also feature a Davey designed IP56, TEFC (Totally Enclosed Fan Cooled) motor which can handle an ambient temperature of 50°C and help exclude dust, water and vermin.

Top of the range is the powerful and rugged Prime Jet 240 pump which is capable of delivering flows up to 240lpm, or developing discharge pressures in excess of 66 metres.

GUARANTEE  
2 Years

Manual Pump  
Automatic System



165S  
**165 lpm**



GUARANTEE  
2 Years

GUARANTEE  
2 Years

095S1T  
**95 lpm**



Prime Jet 240  
**234 lpm**



### Davey Shallow Well with Torrium2

- Ideal for farm water supplies with varying water quality
- A combination of high pressure and constant flow
- High pressure models recently added to the range

### Shallow Well Jet Pumps

- Rugged single stage jet assisted pump fitted with pressure switch
- Suitable for drawing water from depths up to 7.5 metres
- Versatile with venturi options available to adjust to required duty

SHALLOW WELL PUMPS																							
Pump Model	Jet Kit No.	Total Suction Head m ft		Delivery Head in metres/feet												Maximum Shut-Off Pressure kPa psi	Pressure Switch Setting kPa psi						
				26	85	28	92	34	112	38	125	41	135	48	157			55	180	62	203	66	217
				Delivery Head in kPa/psi																			
				260	38	280	41	340	49	380	55	410	59	480	70			550	80	620	90	660	96
Output per minute in litres/gallons																							
<b>95S</b> 1ph 1.6kW *	22690*	0	0	95	20.8	91	20.0	60	13.1	42	9.2	29	6.3					480	70				
	Jet-Black	1.5	5	86	18.9	83	18.2	55	12.0	40	8.7	27	5.9					476	69				
	Venturi-Green	4.0	13	70	15.3	69	15.1	45	9.8	30	6.5	17	3.7					450	65				
		6.0	20	55	12.0	55	12.0	37	8.1	22	4.8	10	2.1					430	62				
1.1kW ◊	22691	0	0					65	14.2	53	11.6	46	10.1	31	6.8	19	4.1	680	98				
7.2A	Jet-Brown	1.5	5					60	13.1	50	10.9	43	9.4	29	6.3	17	3.7	670	97				
	Venturi-White	4.0	13					48	10.5	41	9.0	35	7.6	24	5.2	14	3.0	645	93				
		6.0	20					38	8.3	37	8.1	32	7.0	21	4.6	11	2.4	630	91				
		7.5	25					31	6.8	31	6.8	28	6.1	20	4.3	10	2.1	620	90				
<b>125S</b> 1ph 2.1kW *	22693*	0	0	126	27.7	126	27.7	100	21.9	72	15.8	51	11.2					482	70				
	Jet-Black	1.5	5	113	24.8	113	24.8	84	18.4	64	14.0	45	9.8					470	68				
	Venturi-Black	4.0	13	93	20.4	93	20.4	70	15.3	50	10.9	28	6.1					445	64				
		6.0	20	70	15.3	70	15.3	59	12.9	36	7.9	11	2.4					425	62				
1.4kW ◊	22694	0	0					90	19.7	78	17.1	67	14.7	47	10.3	28	6.1	660	96				
8.5A	Jet-Green	1.5	5					82	18.0	73	16.0	63	13.8	43	9.4	24	5.2	650	94				
	Venturi-Brown	4.0	13					67	14.7	66	14.5	56	12.3	37	8.1	19	4.1	630	91				
		6.0	20					53	11.6	53	11.6	52	11.4	34	7.4	16	3.5	615	89				
		7.5	25					44	9.6	44	9.6	44	9.6	33	7.2	15	3.2	605	88				
<b>165S</b> 1ph 2.4kW *	22697*	0	0	165	36.2	165	36.2	105	23.0	77	16.9	62	13.6					490	71				
	Jet-White	1.5	5	144	31.6	144	31.6	90	19.7	67	14.5	53	11.6					480	70				
	Venturi-Yellow	4.0	13	120	26.3	120	26.3	82	18.0	58	12.7	38	8.3					454	66				
		6.0	20	90	19.7	90	19.7	76	16.7	52	11.4	26	5.7					440	64				
1.8kW ◊	22698	0	0					112	24.6	88	19.3	76	16.7	51	11.2	26	5.7	630	91				
10.0A	Jet-Red	1.5	5					100	21.9	82	18.0	71	15.6	47	10.3	22	4.8	622	90				
3ph	Venturi-Red	4.0	13					88	19.3	75	16.4	64	14.0	41	9.0	16	3.5	598	87				
		6.0	20					70	15.3	64	14.0	57	12.5	32	7.0	8	1.7	572	83				
		7.5	25					54	11.8	54	11.8	50	10.9	26	5.7			552	80				
1.8kW ◊	22699	0	0											53	11.6	42	9.2	830	120				
4.2A	Jet-Red	1.5	5											50	10.9	39	8.5	823	119				
	Venturi-Green	4.0	13											48	10.5	36	7.9	805	117				
		6.0	20											43	9.4	34	7.4	795	115				
		7.5	25											34	7.6	21	4.6	778	113				
<b>Prime Jet 240</b> 1ph 3.2kW *	22680	0	0			228	50.1	164	36.0	130	28.5							470	68				
	Jet-P/No 6076-11	1.5	5			208	45.7	150	32.9	112	24.6							455	66				
	Venturi-P/No 6075-8	4.0	13			165	36.2	114	25.0	75	16.4							435	63				
		6.0	20			132	29.0	82	18.0	46	10.1							415	60				
2.5kW ◊	22681	0	0	234	51.5	192	42.2	178	39.1	157	34.5	128	28.1	78	17.1			570	83				
14.0A	Jet-P/No 6076-4	1.5	5			211	46.4	170	37.3	164	36.0	114	25.0	64	14.0			555	80				
3ph	Venturi-P/No 6075-5	4.0	13			167	36.7	134	29.4	127	27.9	118	25.9	88	19.3	45	9.8	535	78				
		6.0	20			133	29.3	108	23.7	104	22.8	98	21.5	74	16.2	34	7.4	515	75				
		7.5	25			108	23.7	86	18.9	86	18.9	86	18.9	66	14.5	22	4.8	500	73				
3.0kW *	22682	0	0									130	28.5	110	24.1	78	17.1	735	107				
5.1A	Jet-P/No 6076-7	1.5	5									117	25.7	98	21.5	66	14.5	710	103				
	Venturi-P/No 6075-9	4.0	13									94	20.6	81	17.8	48	10.5	670	97				
		6.0	20									75	16.4	68	14.9	36	7.9	635	92				
		7.5	25									62	13.6	58	12.7	28	6.1	610	88				
	22683	0	0									101	22.2	77	16.9	50	10.9	790	115				
	Jet-P/No 6076-8	1.5	5									90	19.7	74	16.2	46	10.1	770	112				
	Venturi-P/No 6075-10	4.0	13									72	18.8	58	12.7	34	7.4	740	107				
		6.0	20									57	12.5	48	10.5	26	5.7	720	104				
		7.5	25									45	7.4	45	9.8	21	4.6	700	102				

★ Input kW (P<sub>1</sub>)   ◊ Output kW (P<sub>2</sub>)

## Important Information

\* Denotes standard configuration. Models 95S, 125S & 165S may be converted to higher pressure by fitting relevant Jet & Venturi  
Specify Jet Kit No. when ordering Prime Jet 240

- Plumbing Connections: Inlet – 1 1/2" (38 mm) BSPP Female. Outlet – 1 1/4" (32mm) BSPP Female – all models
- Pumps are 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 165S and Prime Jet 240 only)

# Deep Well Jet Pumps

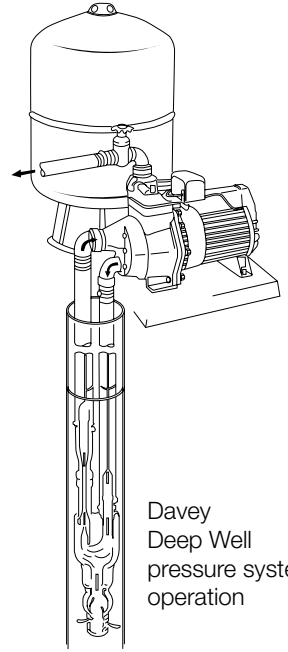
## For suction depths to 50 metres.

Davey's quality deep well jet pumps, complete with a pressure switch, are ideal for handling suction lifts beyond 7.5 metres.

By submerging the jet and venturi down the bore, the Davey's deep well jet pumps can draw water from as deep as 50 metres. They are also ideal for applications where the pump needs to be horizontally offset from the water supply and thus requires a long suction pipe.

Same as the shallow well pumps, Davey's deep well jet pumps come with aluminium casing with Rilsan lining, IP56, TEFC motor designed to give years of trouble free operation.

Top of the range Prime Jet 240 model is capable of retrieving water from depths of 50 metres and can produce flows up to 194 lpm from shallower depths.







DEEP WELL PUMPS																		
Pump Model	Injector Kit No.	*Max Shut Off Pressure	Outlet Pressure	Depth to water metres/feet														
				6	9	12	15	18	21	24	27	30	33	36	39	42	45	50
				20	30	39	49	59	69	79	89	98	108	118	128	138	148	164
				Output per minute in litres/gallons														
Bore Size	kPa	psi	kPa	psi														
<b>95D</b> 1ph 1.6kW * 1.1kW ☉ 7.2A	22469 (4") 100mm	550 80	140 20 280 40 420 60	85 18.6 57 12.5 21 4.6	73 16.0 49 10.7 16 3.5	64 14.0 40 8.7 11 2.4	55 12.0 32 7.0 25 5.4	46 10.1										
	22470 (4") 100mm	645 93	140 20 280 40 420 60		49 10.7 34 7.4 16 3.5	43 9.4 29 6.3 12 2.8	39 8.5 27 5.9 12 2.6	30 6.5 21 4.6 9 1.9	26 5.7 18 3.9 16 3.5	23 5.0 16 3.5 13 2.8	18 3.9							
	22471 (4") 100mm	575 83	210 30 280 40 420 60	96 21.1 77 16.9 34 7.4	85 18.6 65 14.2 26 5.7	73 16.0 57 12.5 20 4.3	60 13.1 47 10.3 14 3.0	51 11.2 39 8.5										
<b>125D</b> 1ph 2.1kW * 1.4kW ☉ 8.5A	22472 (4") 100mm	660 96	210 30 350 50 480 70	63 13.8 39 8.5 19 4.1	55 12.0 34 7.4 16 3.5	49 10.7 29 6.3 12 2.6	42 9.2 21 4.6 10 2.1	36 7.9 21 4.6 18 3.9	29 6.3 18 3.9 14 3.0	25 5.4 14 3.0 11 2.4	22 4.8							
	22570 (5") 125mm	650 94	210 30 350 50 480 70	87 19.1 56 12.3 29 6.3	80 17.5 51 11.2 26 5.7	70 15.3 43 9.4 21 4.6	61 13.4 37 8.1 17 3.7	53 11.6 33 7.2 13 2.8	45 9.8 23 5.0 19 4.1	37 8.1 19 4.1 15 3.2	32 7.0 15 3.2 11 2.4	27 5.9 21 4.6						
	22473 (4") 100mm	620 90	210 30 350 50 480 70	107 23.5 60 13.1 27 5.9	93 20.4 50 10.9 20 4.3	83 18.2 42 9.2 14 3.0	71 15.6 35 7.6 10 2.1	59 12.9 29 6.3 23 5.0	48 10.5 29 6.3 23 5.0									
<b>165D</b> 1ph 2.4kW * 1.8kW ☉ 10.0A 3ph 2.3kW * 1.8kW ☉ 4.2A	22474 (4") 100mm	635 92	210 30 350 50 480 70		63 13.8 40 8.7 19 4.1	54 11.8 34 7.4 14 3.0	46 10.1 28 6.1 10 2.1	40 8.7 24 5.2 20 4.3	35 7.6 20 4.3 16 3.5	27 5.9 16 3.5 12 2.6	24 5.2 12 2.6							
	22475 (4") 100mm	750 109	210 30 350 50 480 70						25 5.4 19 4.1 12 2.6	24 5.2 18 3.9 11 2.4	21 4.6 16 3.5 10 2.1	19 4.1 14 3.0 13 2.8	17 3.7 11 2.4 9 1.9	15 3.2 12 2.6 9 1.9				
	22571 (5") 125mm	590 86	210 30 350 50 480 70	122 26.8 74 16.2 27 5.9	111 24.4 62 13.6 18 3.9	98 21.5 51 11.2 11 2.4	87 19.1 40 8.7 29 6.3	70 15.3 29 6.3 20 4.3	56 12.3 20 4.3									
<b>Prime Jet 240</b> 1ph 3.2kW * 2.5kW ☉ 14.0A 3ph 3.0kW * 2.3kW ☉ 5.1A	22572 (5") 125mm	630 91	210 30 350 50 480 70				64 14.0 38 8.3 18 3.9	57 12.5 33 7.2 14 3.0	49 10.7 28 6.1 10 2.1	42 9.2 24 5.2 20 4.3	37 8.1 20 4.3 15 3.2	31 6.8 15 3.2						
	22573 (5") 125mm	540 78	210 30 280 40 350 50						37 8.1 30 6.5 21 4.6	30 6.5 27 5.9 17 3.7	27 5.9 22 4.8 13 2.8	21 4.6 18 3.9 10 2.1	17 3.7 14 3.0 10 2.1	12 2.6 10 2.1				
	22427 (4") 100mm	550 80	210 30 350 50 480 70	165 36.2 104 22.8 32 7.0	134 29.4 80 17.5 16 3.5	110 24.1 62 13.6 45 9.8	81 17.8 45 9.8 39 8.5	59 12.9										
<b>Prime Jet 240</b> 1ph 3.2kW * 2.5kW ☉ 14.0A 3ph 3.0kW * 2.3kW ☉ 5.1A	22428 (4") 100mm	815 118	210 30 350 50 480 70		81 17.8 75 16.4 53 11.6 27 5.9	77 16.9 67 14.7 45 9.8 21 4.6	72 15.8 57 12.5 37 8.1 15 3.2	60 13.0 47 10.3 30 6.5 9 1.9	48 10.5 37 8.1 16 3.5 9 1.9	40 8.7 29 6.3 9 1.9	32 7.0 22 4.8							
	22566 (5") 125mm	525 76	210 30 350 50 480 70	194 42.6 116 25.5 30 6.5	166 36.5 96 21.1 10 2.1	132 29.0 72 15.8	104 22.8 58 12.7											
	22567 (5") 125mm	560 81	210 30 350 50 480 70			158 34.7 98 21.5 33 7.2	130 28.5 84 18.4 20 4.3	108 23.7 64 14.0 48 10.5	84 18.4 64 14.0 28 6.1	64 14.0								
<b>Prime Jet 240</b> 1ph 3.2kW * 2.5kW ☉ 14.0A 3ph 3.0kW * 2.3kW ☉ 5.1A	22568/22468 (5") 125mm (4") 100mm	830 120	210 30 350 50 480 70 620 90		101 22.2 96 21.1 69 15.1 35 7.6	95 20.8 86 18.9 61 13.4 29 6.3	88 19.3 73 16.0 51 11.2 21 4.6	82 18.0 64 14.0 41 9.0 15 3.2	71 15.6 54 11.8 33 7.2 9 1.9	62 13.6 45 9.8 26 5.7 9 1.9	51 11.2 37 8.1 19 4.1 12 2.6	41 9.0 29 6.3						
	22569 (5") 125mm	830 120	210 30 350 50 480 70 620 90						52 11.4 45 9.8 34 7.4 18 3.9	49 10.7 42 9.2 30 6.5 15 3.2	47 10.3 39 8.5 25 5.4 11 2.4	46 10.1 34 7.4 21 4.6	42 9.2 31 6.8 18 3.9	40 8.7 30 6.5 16 3.5	37 8.1 26 5.7 13 2.8	35 7.8 23 5.1 10 2.2	32 7.1 20 4.4	

★ Input kW (P<sub>i</sub>) ☉ Output kW (P<sub>o</sub>)

## Important Information

- Pump outlet: 1 1/4" (32 mm) BSPP Female. 'Automatic Demand Response' valve fitted as standard on all models
- Suction pipe sizes: 1 1/2" and 1 1/4" I.D imperial poly pipe for injector kit nos 22469 – 22475 and 22427 – 22428. 2" and 1 1/2" I.D Imperial poly pipe for injector kit nos 22570 – 22573 and 22566 – 22569. 2" and 1 1/4" I.D Imperial poly pipe 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 12m
- All pipe fittings and hose clips are included with deep well injectors
- For offset applications, performance will be reduced if suction pipe lengths exceed depths indicated for borehole installations
- Consult your Davey dealer for recommendations on pipe sizes
- Pumps are supplied with pressure switches connected, suitable for automatic pressure system operation in conjunction with Davey Supercell tanks
- To convert litres/min 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 10amp (Prime Jet 240, 15amp) 220/250 volt 50Hz operation. Prime Jet 240 only may be re-connected for use on nominal 480 volt 50Hz single phase supply
- 3 phase 415 volt available in models 165D and Prime Jet 240 only – specify when ordering

# Washdown & Small Irrigation



XF192



X201



HP45-05

## HP Series

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

## XF Series

The XF Series pumps offer high efficiency and longer operating life. Stainless steel pump shaft, corrosion resistant polycarbonate impellers and IP55 TEFC Motors.

Applications include; general water transfer, desalinated water, dairy cooling towers, hydroponic systems, spearpoints, water circulation, aquaculture applications.

Special XF171S and XF192S models are ideal for pumping sea water or water with dissolved solids. They incorporate silicon carbide seals and thermal protection, which automatically stops the pump if the water temperature in the pump casing exceeds 85°.

XF171D is especially designed for dog spas and is capable of successfully pumping aromatic hydrocarbons common in many animal wash products.

## Dynaprime X201 Self Priming Pump

Manufactured from corrosion resistant materials and featuring a 0.63kW IP55 TEFC motor, this versatile pump suits 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

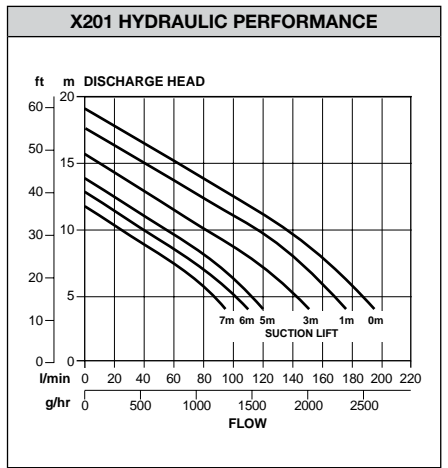
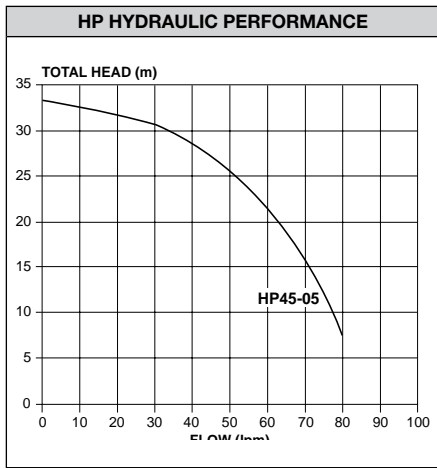
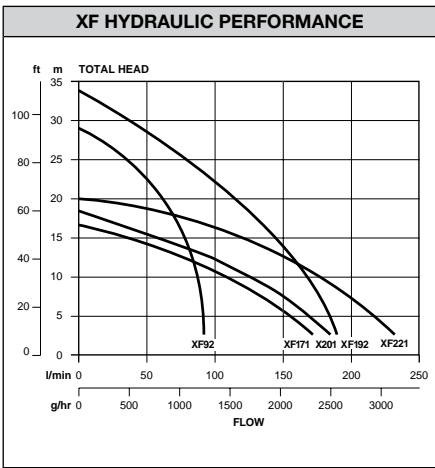
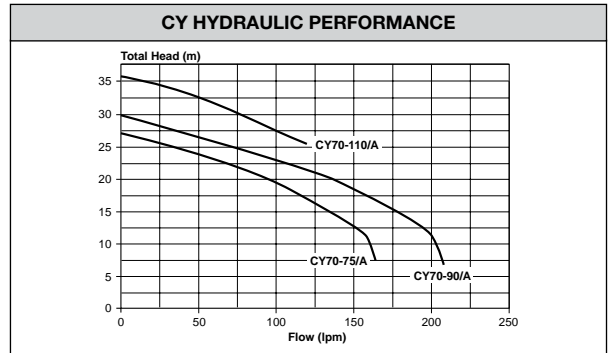
Motor kW output – (P2) 0.63

## CY70 Series

Robust and compact, single-stage all stainless steel centrifugal pumps, driven by a TEFC motor. Designed for total head duties to 36m and flows to 215lpm. Able to handle hot water up to 80°C for vat cleaning.



CY70



PERFORMANCE										
Model	Motor (kW)		Max Total Head (m)	Total Head (metres)						Connection Inlet/Outlet BSSPP
	Input (P1)	Output (P2)		5	10	15	20	25	30	
	Capacity in (litres/minute)									
XF171	0.78	0.53	16	155	110	40				1" F/1" M
XF221	1.1	0.78	20	220	175	120	0			1" F/1" M
XF92	0.84	0.58	28	90	80	75	65	40		1" F/1" F
XF192	1.15	0.80	33	180	170	145	120	80	40	1" F/1" F
HP45-05	0.77	0.55	33		78	70	62	50	35	1 1/2" F/1" F
X201	0.92	0.63	19	190	140	60				1 1/2" F/1 1/2" F
CY70-75/A		0.75	27		160	135	90	35		1 1/2" F/1" F
CY70-90/A		0.90	30		205	175	135	75	0	1 1/2" F/1" F
CY70-110/A		1.10	36		220	210	170	125	75	1 1/2" F/1" F

## Dynafluo 6000 & SS Series

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

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

Dynafluo models are built to last and come complete with performance matched IP56 TEFC (Totally Enclosed Fan Cooled) Davey motors. Davey 6200 and 6210 Dynafluo pumps utilise a highly corrosion resistant Noryl pump body. 6220 and 6230 Dynafluo 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.

The Dynafluo 6220 and 6230 models are also available with extra heavy duty cast 316 stainless steel casings and hard faced silicon carbide mechanical seals. These pumps, with suffix "SS", are ideal for brackish or sea water, offering the same dependable performance as the standard models, but with the added surety of high grade stainless steel casings and hard wearing seals. The Dynafluo SS range is excellent for applications in Aquaculture, Marine, Hydroponics, etc.



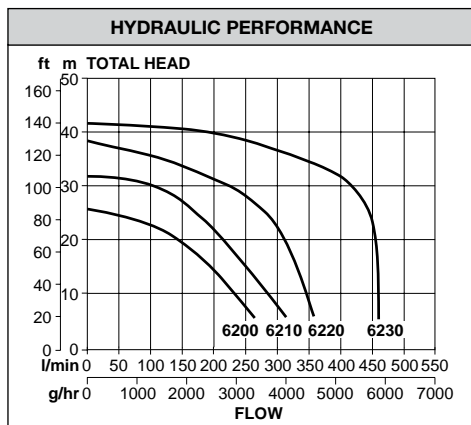
6200 / 6210



6220 / 6230



6220SS / 6230SS



Model	Motor (kW) In (P1) Out (P2)	Max Total Head (m)	Total Head metres/feet												Connection Inlet/Outlet BSP												
			5	10	15	20	25	30	35	40	16.4		32.8			49.2		65.6		82.0		98.4		114.3		131.2	
			Capacity in litres/minute, gallons/hour																								
6200	1.57	1.0	25.5	269	3550	233	3075	193	2547	142	1874	24	317											1 1/2" F / 1 1/2" F			
6210	2.1	1.6	31.6	314	4144	283	3735	248	3273	212	2798	167	2204	100	1320									1 1/2" F / 1 1/2" F			
6220	3.2	2.4	38.7	356	4699	344	4540	327	4316	309	4079	280	3696	212	2798	115	1518							2" F / 1 1/2" F			
6230	3.9	3.0	41.2	457	6032	457	6032	457	6032	454	5992	442	5834	407	5372	323	4263	176	2323					2" F / 1 1/2" F			

6200 available in single phase only, 6210/6220 available in single phase or 3 phase, 6230 available in 3 phase only.

## Effluent Pumps

Davey Effluent pumps are single stage open vane, semi vortex self priming centrifugal pumps driven by single or three phase TEFC motors. They are ideal for pumping effluent water or water containing soft solids in suspension, such as dairy or piggery waste, liquid food transfer and general water transfer.



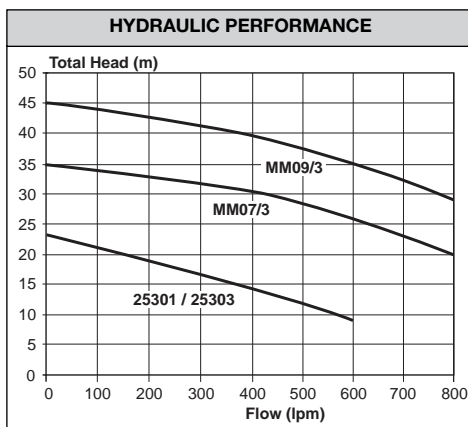
25301 / 25303



MM07/3  
MM09/3

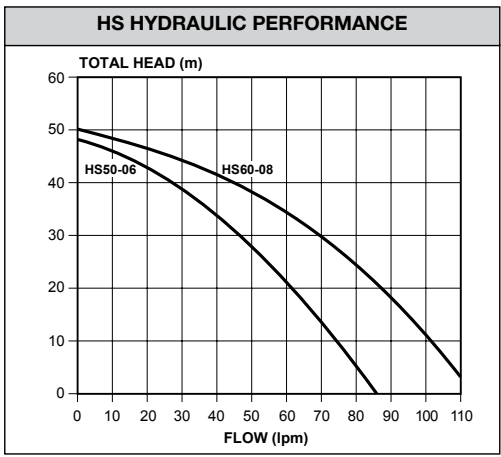
### Mukmova

- 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 pump performance in 25301 and 25303 models
- Can be installed outside pit
- Totally enclosed fan cooled motor
- 25301 is available with single phase (240/480V) while all other models are three phase (415V)



ELECTRICAL DATA				
	25301	25303	MM07/3	MM09/3
Supply Voltage	240V	480V	415V	
Phase	Single		Three	
Output Power	2.1kW	2.0kW	7.5kw	9.2kw

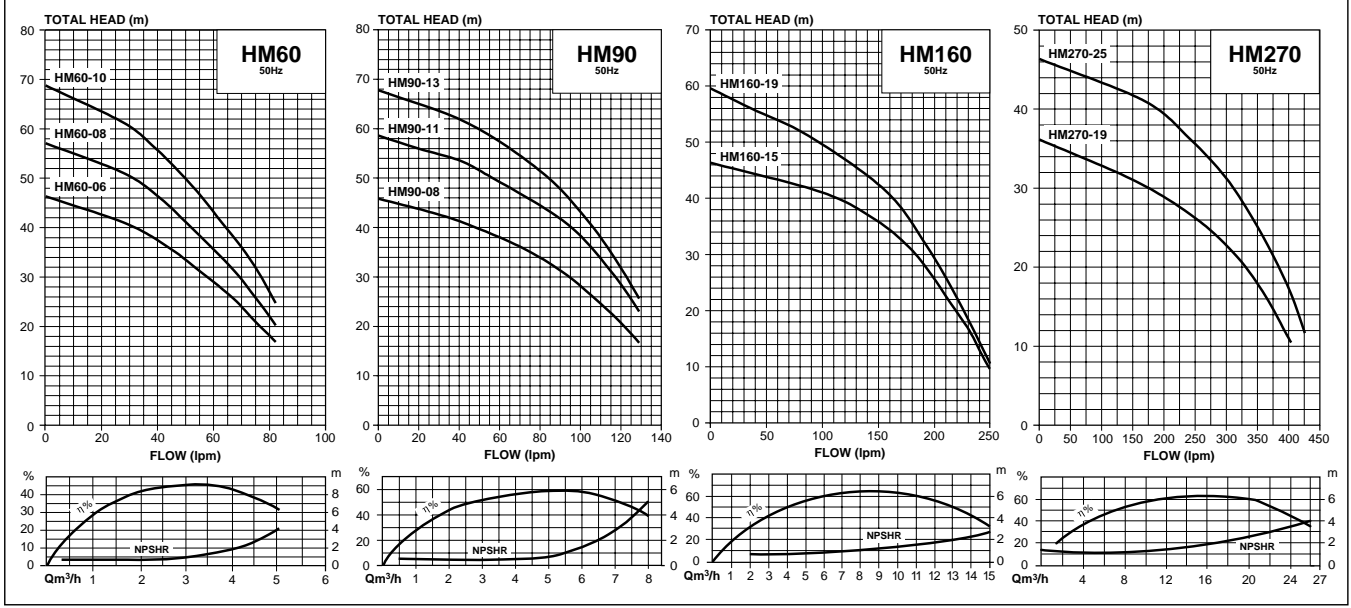
# Single Stage & Transfer Pumps



## DynaFlo HS SERIES PERFORMANCE

Model (220-240V 1phase 50Hz)	Motor kW		Stages	Connections BSP(F)	
	Input (P <sub>1</sub> )	Output (P <sub>2</sub> )		Inlet	Outlet
HS50-06	0.89	0.60	4	1 1/4"	1"
HS60-08	1.1	0.76	4	1 1/4"	1"

## HM HYDRAULIC PERFORMANCE



## HM SERIES PERFORMANCE

Model - 1phase	Model - 3phase	Stages	Flow (lpm) @ BEP	kW (P <sub>2</sub> )	Inlet	Outlet
HM60-06		4	60	0.58	1"	1"
HM60-08		5	60	0.72	1"	1"
HM60-10		6	60	0.94	1"	1"
HM90-08		4	90	0.78	1 1/4"	1"
HM90-11		5	90	1.05	1 1/4"	1"
HM90-13		6	90	1.4	1 1/4"	1"
HM160-15	HM160-15/3	4	160	1.5	1 1/2"	1 1/4"
HM160-19	HM160-19/3	5	160	1.8	1 1/2"	1 1/4"
HM270-19	HM270-19/3	3	270	1.9	2"	1 1/2"
HM270-25	HM270-25/3	4	270	2.5	2"	1 1/2"



HM Series with TEFC Motor

HM Series with Pressure Switch

HM Series with Torrium2



Dynafluo HS

Dynafluo HS with Torrium2

## HM Series

The Davey HM Series range of all Stainless Steel Horizontal Multistage Pumps features TEFC IP54 rated motors. These premium quality pumps are designed to give high performance and long operating life.

The HM Series pumps are able to handle liquid temperatures from -15°C to 105°C. This range is ideal for high head water transfer, irrigation systems, beverage and food industries, dairy vat washing and fire services pressure boosting.

## Dynafluo HS

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

Available in four stage models with pressures up to 50 metres and flows up to 110 lpm, the Dynafluo 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
- Home pressure systems

## Spearpoint Pumps



XJ70

## XJ Series

Economical, compact 50, 70 and 90 lpm single stage jet assisted centrifugal pumps.

- Ideal for domestic irrigation from shallow wells or sand spears
- Overhead or high tank filling
- Pressure boosting
- Water transfer

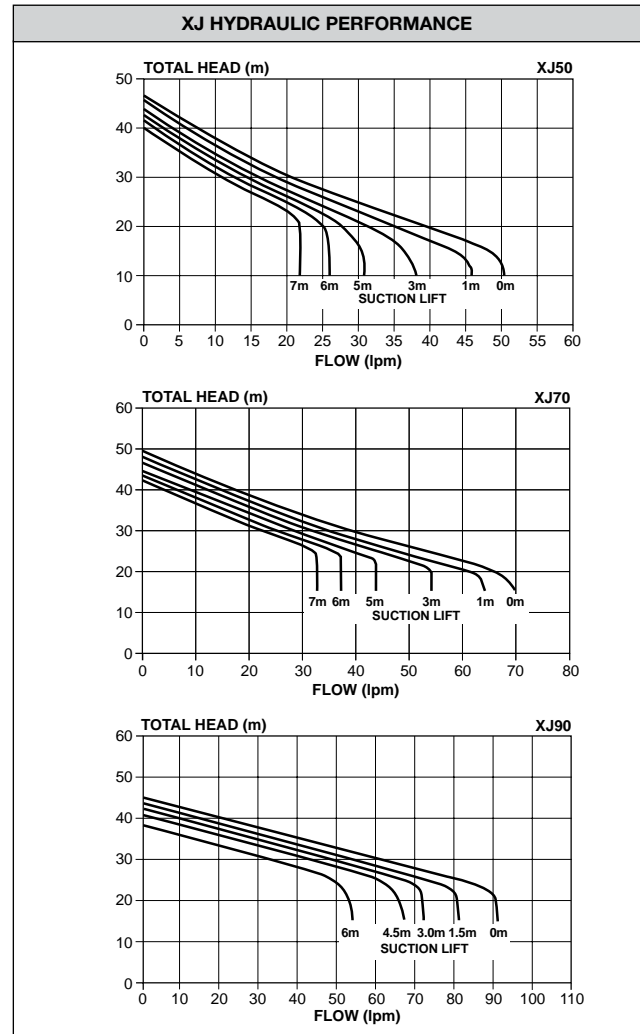
### PUMP

Single stage jet assisted centrifugal with closed vane impeller.  
Brass pump shaft sleeve.  
Mechanical shaft seal.

### MOTOR

Davey manufactured  
2 pole, 2850rpm, 50Hz  
TEFC with IP55 enclosure  
Class F insulation  
Permanently split capacitor design  
Double contact sealed C3-HTG rated ball bearings  
Protected against both high operating temperatures and high current by a built-in automatically resetting thermal overload  
All models supplied with 2m long power lead fitted with Australian 3 pin plug

- Manufactured from highest quality corrosion resistant materials
- Compact foot print for quick and easy installation
- TEFC motor - corrosion resistant and excludes dust and dirt
- Motor and pump designed for frequent starts
- Every unit individually tested to guarantee reliable operation
- Low maintenance
- Easy to service if required
- Reliable and proven performance



# Firefighter Pumps

## No.1 in Australia.

With an option to suit any application the performance of Davey's Firefighter range is driven by a number of patented features:

- Unique clamped impeller design provides smoother waterways for increased performance and suction ability, as well as easy servicing to clear occasional impeller blockages
- Independently floating neck rings to ensure optimal performance is maintained even after long periods of use
- Thrust balance drum and equalisation holes in the impeller reduce thrust forces to extend engine and seal life

**Our range has an option to suit any application including firefighting, boom spraying, sheep jetting, deep well applications using a jet pump and general water transfer.**

- Single and twin stage models for higher and lower performance needs
- Honda or Briggs & Stratton petrol and Yanmar diesel engine options
- Hand (recoil) and electric start
- Viton seals as an option for extended life in spraying applications
- Choice of suction sizes (1.5" and 2")
- Bayonet style priming and drain ports for fast and easy access
- A choice of engine and auto controls available for all diesel models



**All Davey spark ignition (petrol) engines in this guide meet the proposed Australian Emissions Standards as well as the existing European and US emissions regulations.**

## DAVEY Firefighter

### Single & Twin Stage Firefighter Models

4 way discharge = 2 x 1½" and 2 x 1" outlets

3 way discharge = 1 x 2" and 2 x 1" outlets

All threads are BSP

All petrol models feature low oil level protection as standard

All electric start models do not include battery or leads



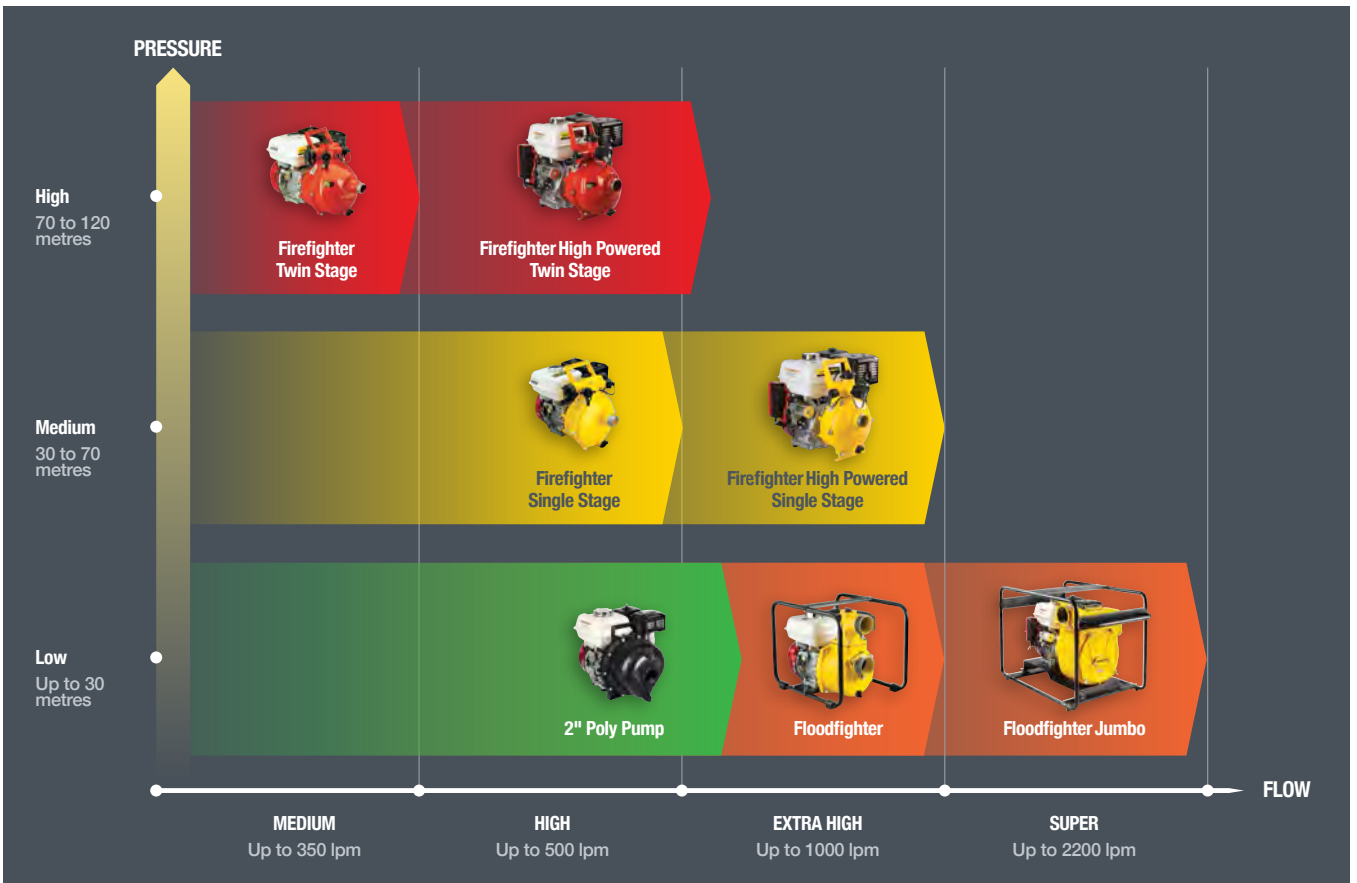
5155H with Honda GX160 Engine

5255H with Honda GX160 Engine

5150P Bare Shaft Single Stage

5250P Bare Shaft Twin Stage

## Davey Engine Driven Pump Selection Guide



# Firefighter Pumps

DAVEY

## Single Stage Models

Single Stage models provide the versatility of high flow rates with strong pressure.

## Twin Stage Models

Twin Stage models provide greater pressure which enables them to throw water further so you can stand further away when fighting a fire.

## Superior Suction Lift

Excellent suction lift capability with the ability to self prime from 6 metres (5 metres on diesel models) for more versatile installation options.

## Discharge Port Options

Choice of 3 or 4 way discharge port (dependent upon Firefighter model chosen) for easy installation with a choice of pipe sizes.

## Improved Pump Efficiency

Patented floating castellated impeller neckrings front and back provide improved pumping efficiency, especially with gritty water, extended seal life and dramatically reduced engine wear.

## Reduced Engine Wear

Trust balanced impeller design reduces axial loads on the engine for extended engine life.

## Excellent Corrosion Resistance

Pump casing, diffusers and impellers are manufactured from quality corrosion resistant grade aluminium with polyester coated pump casing interior for added corrosion resistance.

## Large Priming and Drain Ports

For easy case priming and draining after use the priming and drain plugs are a quick release bayonet design where no tools are required. They incorporate a safety release mechanism to avoid releasing them when the pump is pressurised.

## Easy Maintenance

Heavy duty wide vane impeller for longer life, improved performance and easier cleaning in the case of a blockage.

## Herbicide/Insecticide Spraying

"V" models come with Viton seal, orings, gaskets and caps fitted for improved chemical resistance. Please seek specialist advice from your chemical supplier if pumping chemicals. Use of aggressive chemicals may void warranty.

## Quality Engines

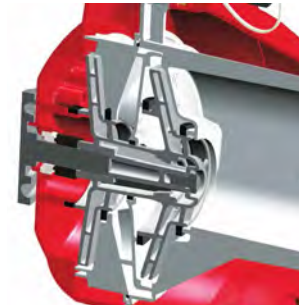
Davey Firefighter pumps come fitted with quality Honda, Briggs & Stratton petrol engines or Yanmar diesel engines.

## Hand or Electric Start

Firefighters are available in hand (recoil) or electric start models. All electric start models (12V, 30Amp hour battery and leads required) come fitted with hand start mechanism so they can be started in the case of a flat battery.

## Low Oil Protection

All petrol models have low oil protection. The engine will not start or run if the oil level is inadequate.



PRESSURE SYSTEMS

RAINWATER HARVESTING & TREATMENT

FARM & WATER TRANSFER

WATER TRANSFER, FIRE & FLOOD FIGHTING

COMMERCIAL, IRRIGATION & COMMUNITY

USEFUL PUMPING INFORMATION

# Firefighter Pumps

PRESSURE SYSTEMS

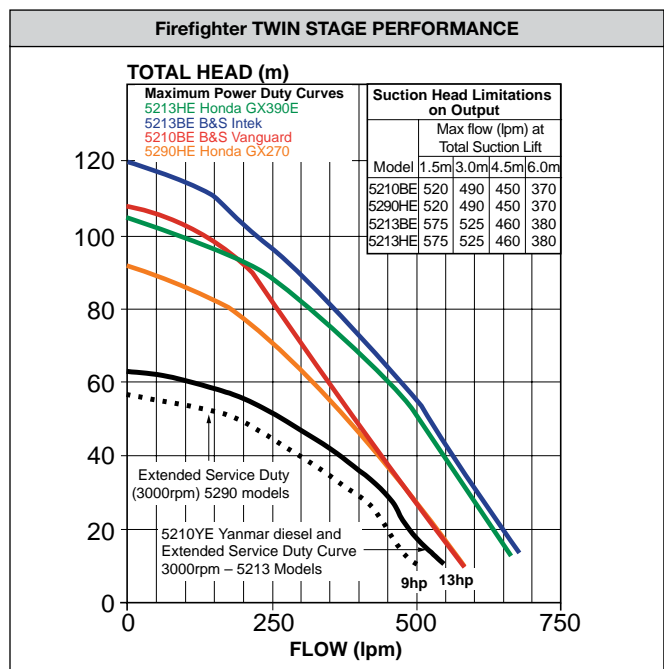
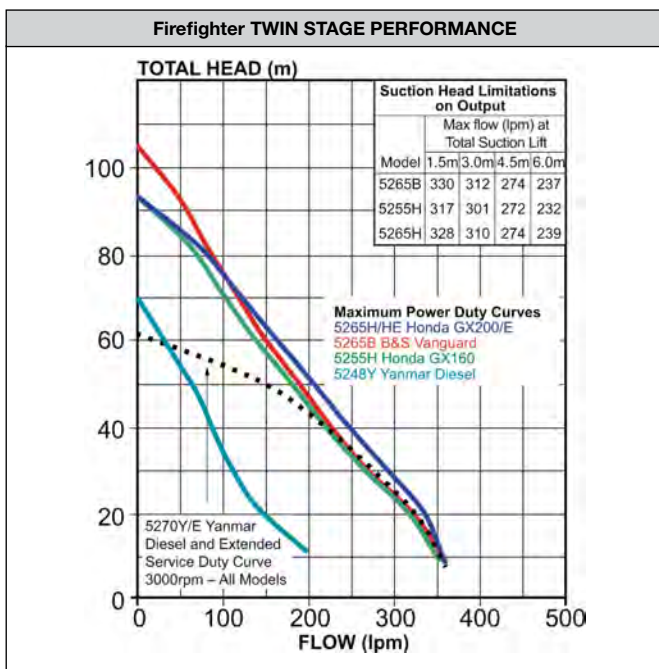
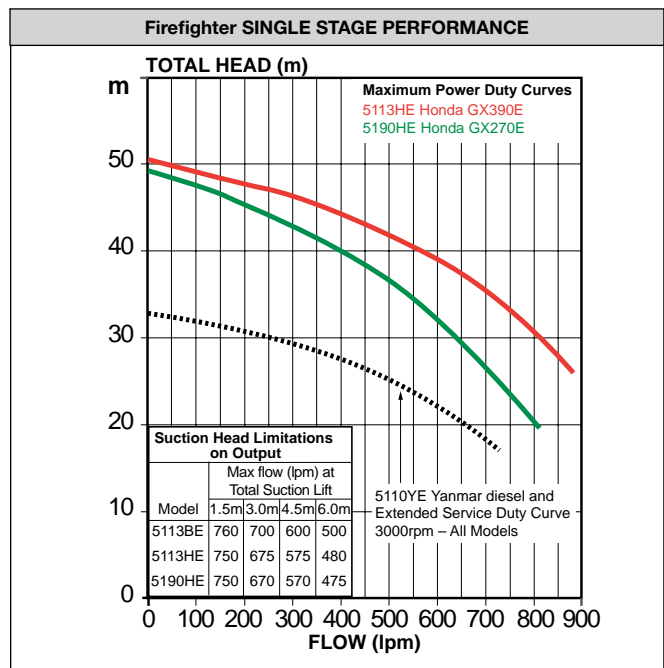
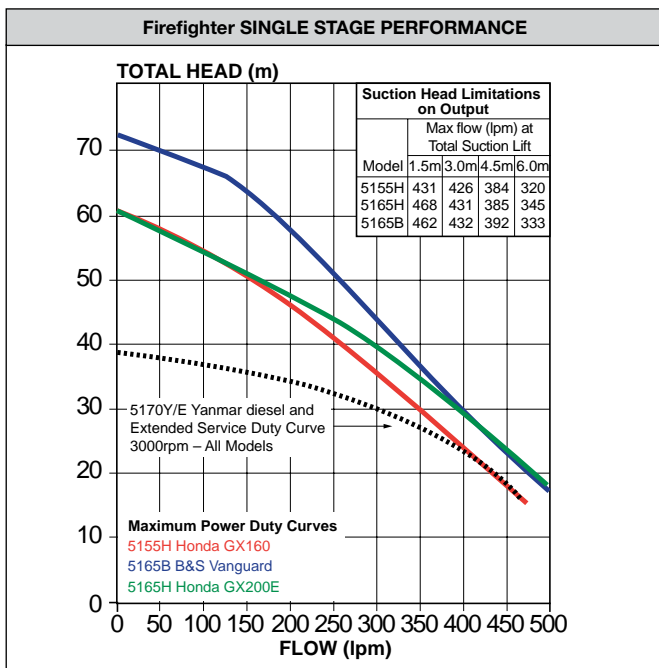
RAINWATER HARVESTING & TREATMENT

FARM & WATER TRANSFER

WATER TRANSFER, FIRE & FLOOD FIGHTING

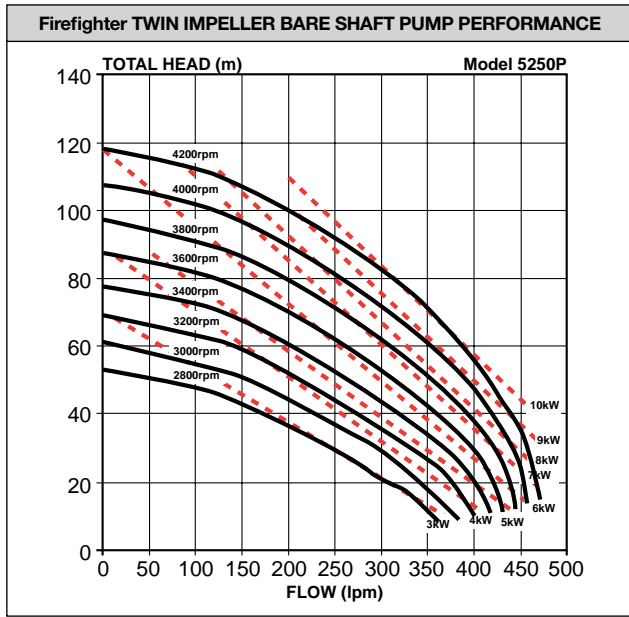
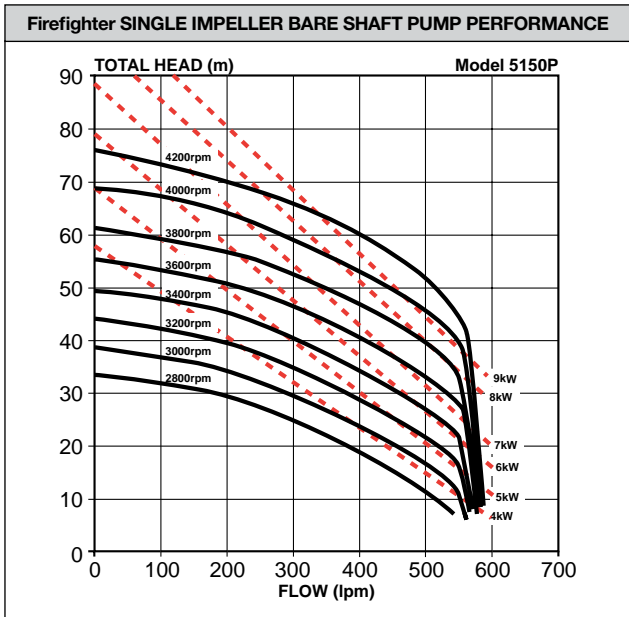
COMMERCIAL, IRRIGATION & COMMUNITY

USEFUL PUMPING INFORMATION



Description	Overhead Valve Petrol Engine Options								Yanmar Diesel Engine Options		
	Briggs & Stratton			Honda							
	205cc Vanguard	305cc Vanguard	420cc 2100 Series	163cc GX160	196cc GX200	270cc GX270	389cc GX390	219cc L48	320cc L70A/E	435cc L100A/E	
Firefighter Single Stage Models	5165B	–	–	5155H	5165H 5165HE	5190HE	5113HE		5170Y 5170YE	5110YE	
Firefighter Twin Stage Models	5265B	5210BE	5213BE	5255H	5265H 5265HE	5290HE	5213HE	5248Y	5270Y 5270YE	5210YE	
“Out of box” governed max engine speed @ no load	4200 rpm			3800 rpm				3600rpm	3000 rpm		
Fuel tank (litres)	4	6	6	3.6	3.6	6	6.5	2.4	3.5	5.5	
Running time per tank @ full load @ 3600 rpm	1.93 hrs	1.9 hrs	1.7 hrs	2.08 hrs	2.05 hrs	1.9 hrs	2 hrs	1.7 hrs	1.6 hrs	2.5 hrs	
Low oil protection	YES							No	NO		
Exhaust spark arrestor YES NO – optional from engine dealers	YES							No	NO		
dBa @ 3600 rpm @ full load	75 @ 4m	79 @ 4m	81.5 @ 4m	85 @ 4m	86 @ 4m	79 @ 7m	78 @ 7m	79.5 @ 7m	80.5 @ 7m	82.5 @ 7m	





## Fire Fighting Accessories

Twin Stage Diesel Firefighter with Roll Frame



### Roll Frames

Attractive baked enamel roll frame with anti-vibration mounts for ease of transportation and installation.



FFHK/01

### Hose Kits

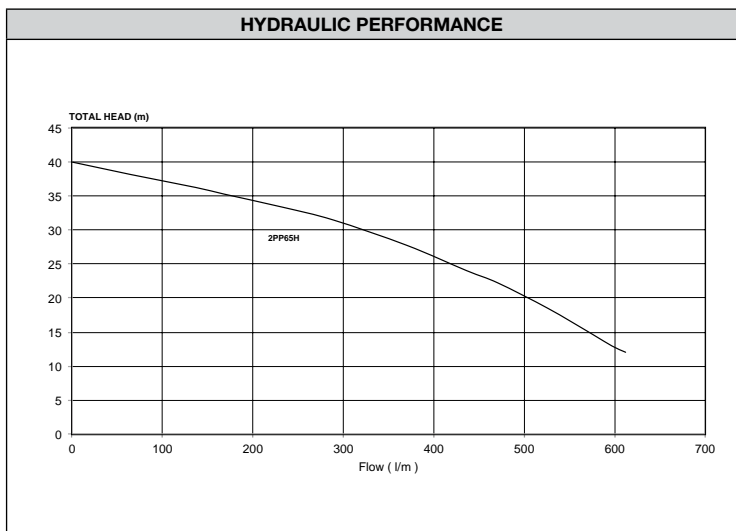
Hose Kit includes 6m suction hose and 20m discharge hose with nozzle, nuts and tails

## 2" Poly Pump



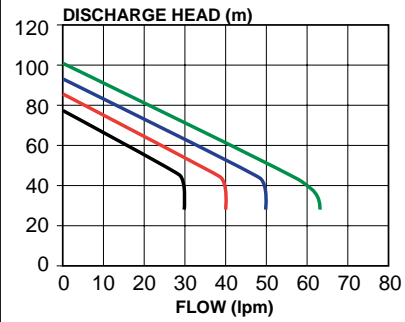
### 2" Poly Pump

- Constructed of strong 30% glass filled polyester components and EPDM elastomers to pump most agricultural fertiliser chemicals
- Provides high flow rates up to 800 lpm
- Lightweight with an integrated carry handle makes it easily portable
- Powered by a genuine Honda GX200 engine for superb performance and proven reliability
- Also available with Viton elastomers



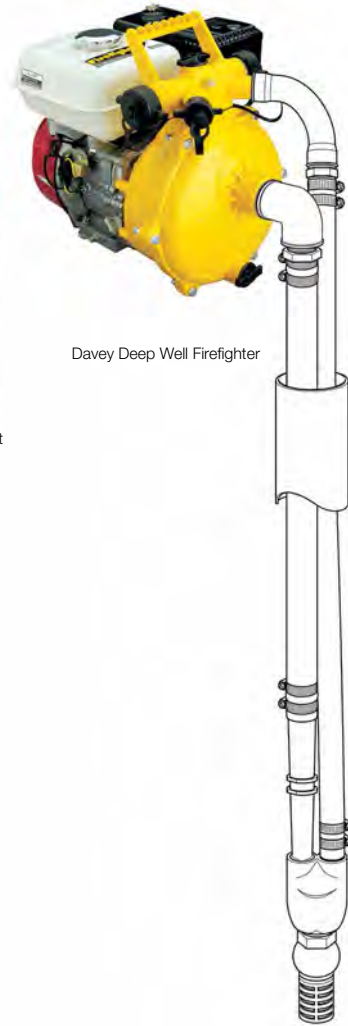
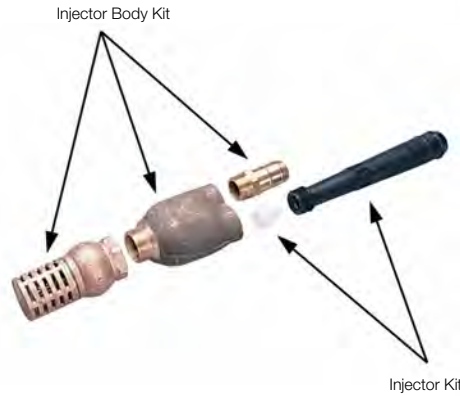
# Firefighter with Deep Well Injector Kits

Jet/Venturi Kit No. 29429 & 4 inch Injector Body No. 23300*			
Recommended min. Deep Well Firefighter Pipe Sizes			
Model Injector	Injector Body No.	Drive Pipe	Suction Pipe
29429	23300	1 1/4" Class B poly or 40mm PN6 poly	1 1/2" Class B poly or 50mm PN6 poly

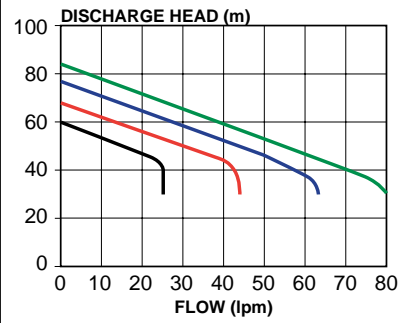


## Portable Deep Well Kits

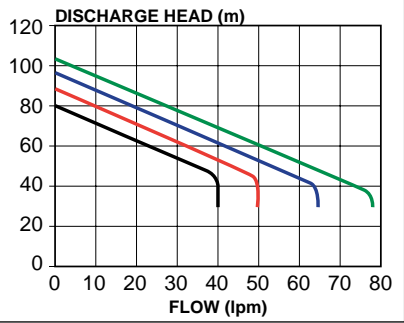
- Turn your Firefighter into a portable deep well pump



Jet/Venturi Kit No. 29468 & 4 inch Injector Body No. 23300*			
Recommended min. Deep Well Firefighter Pipe Sizes			
Model Injector	Injector Body No.	Drive Pipe	Suction Pipe
29468	23300	1 1/4" Class B poly or 40mm PN6 poly	2" Class B poly or 63mm PN6 poly



Jet/Venturi Kit No. 29569 & 5 inch Injector Body No. 23301*			
Recommended min. Deep Well Firefighter Pipe Sizes			
Model Injector	Injector Body No.	Drive Pipe	Suction Pipe
29569	23301	1 1/2" Class B poly or 50mm PN6 poly	2" Class B poly or 63mm PN6 poly



\*If used in difficult installations consult your Davey dealer for technical advice and assistance.

<span style="color: green;">—</span> 12M DEPTH TO WATER	<span style="color: blue;">—</span> 21M DEPTH TO WATER
<span style="color: red;">—</span> 30M DEPTH TO WATER	<span style="color: black;">—</span> 40M DEPTH TO WATER

# Floodfighter Pumps

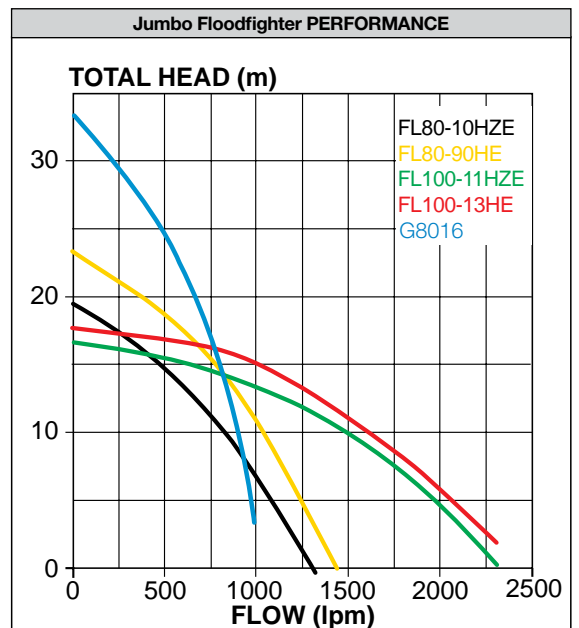
Rugged self priming pumps designed to pump high volumes of dirty water with some solid content.



G8016  
3" Floodfighter

FL80-90HE  
3" Jumbo Floodfighter

FL100-11HZE  
4" Jumbo Floodfighter



# 4" Submersible Borehole Pumps



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

Applications include domestic water supply, turf watering, irrigation, stock watering and dewatering.

### 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 arduous 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 lpm models feature locked stack partial mixed flow polycarbonate impellers with open waterways to provide trouble free starting and longer operating life



## COMPLETE KIT COMPONENT GUIDE FOR 100mm (4") J SERIES BOREHOLE PUMPS

Motor kW (P <sub>2</sub> )	Davey Rewindable Motors				Davey Encapsulated Motors				Cable Splice Kit		
	2 wire 1 phase	3 wire 1 phase	Starter (3 wire)	3 phase	2 wire 1 phase	3 wire 1 phase	Starter (3 wire)	3 phase	2 wire 1 phase	3 wire 1 phase	3 phase
0.37	DM1037W2	DM1037	14020015	DM3037	DME1037W2	DME1037	20200070	DME3037	31264	31263	31263
0.55	DM1055W2	DM1055	14020035	DM3055	DME1055W2	DME1055	20200080	DME3055	31264	31263	31263
0.75	DM1075W2	DM1075	14020055	DM3075	DME1075W2	DME1075	20200090	DME3075	31264	31263	31263
1.1	DM1110W2	DM1110	14020075	DM3110		DME1110	20200100	DME3110	31264	31263	31263
1.5		DM1150	14020090	DM3150		DME1150	20200115	DME3150		31263	31263
2.2		DM1220	14020095	DM3220		DME1220	20200130	DME3220		31263	31263
3.7		DM1370	20200060			DME1370	20200060			31263	31263
4.0				DM3400				DME3400			31263
5.5				DM3550				DME3550			31263
7.5				DM3750							31263

# 4" Submersible Borehole Pumps

PRESSURE SYSTEMS

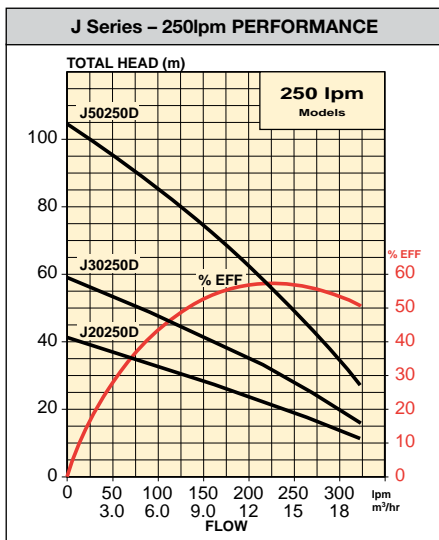
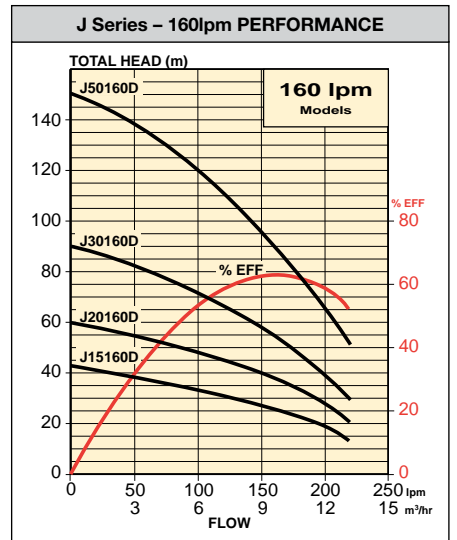
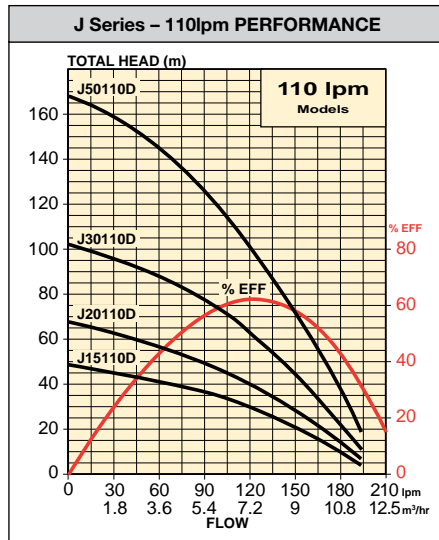
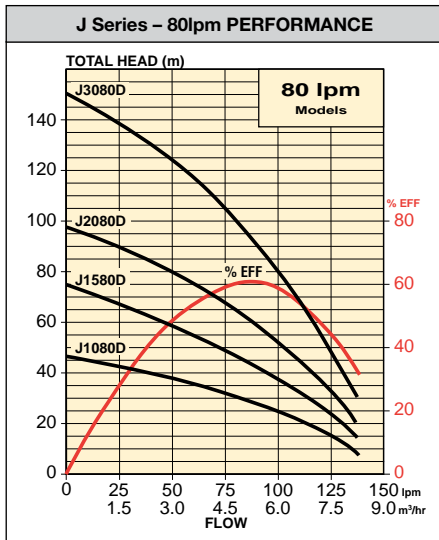
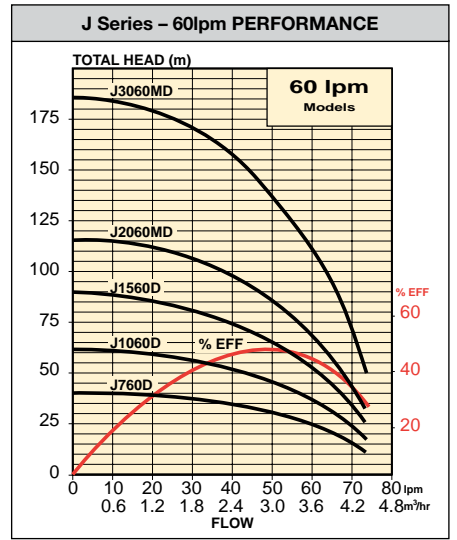
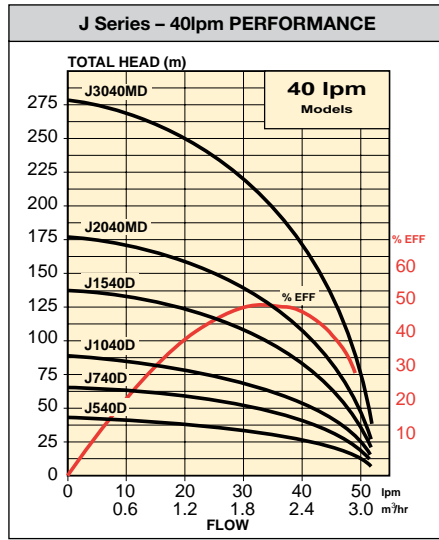
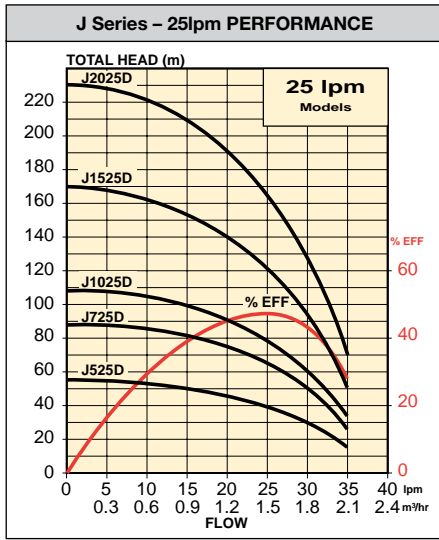
RAINWATER HARVESTING & TREATMENT

FARM & WATER TRANSFER

WATER TRANSFER, FIRE & FLOOD FIGHTING

COMMERCIAL, IRRIGATION & COMMUNITY

USEFUL PUMPING INFORMATION



# 6" Submersible Borehole Pumps



Advanced, laser welding, stainless steel manufacturing technology results in state of the art 6" submersible borehole pumps.

Close coupled to NEMA standard submersible electric motors, they are designed for flow rates up to 80m<sup>3</sup>/hr (1333lpm) form standard 6" bores.

Ideal for rural and industrial water supply, turf watering, agricultural irrigation, mine dewatering and firefighting systems.

- Manufactured from corrosion and abrasion resistant 304 stainless steel for a longer pump life
- High efficiency impeller design with radial flow impellers for 19 and 30m<sup>3</sup>/hr models and axial flow impellers for 46 & 65m<sup>3</sup>/hr models for increased performance
- Excellent sand handling capacity at 100g/m<sup>3</sup> for improved performance and reduced pump wear in sandy bores
- Pump can operate continuously both vertically and horizontally
- Stainless steel impeller neck ring and floating Teflon neck ring allows abrasive handling and wear resistance
- Up-thrust bearing located at the bottom of the pump to reduce the risk of dry running failing to lubricate the bearing appropriately
- Upper journal sleeve made of tungsten-carbide to increase wear resistance

### Specificaitons

- Capacities up to 80m<sup>3</sup>/hr
- Heads to 210m
- Coupling with NEMA standard motors
- Water temperature up to 50°C
- Maximum sand handling 100g/m<sup>3</sup>



## Rewindable Motors

### 4" Rewindable Motors (suit 6" pumps with adaptor)

Motor kW (P <sub>2</sub> )	Davey Rewindable Motor Only	Davey Encapsulated Motor Only
4.0	DM3400	DME3400
5.5	DM3550	DME3550
7.5	DM3750	

### 6" Rewindable Motors

- Rewindable (DM) motors to suit 6" borehole pumps
- Sturdy construction with 304 stainless steel casing and internals with a 316 stainless steel upper bracket for excellent corrosion resistance
- Comes standard with a hard face mechanical seal (SiC/Al) for increased motor life
- Oversized compensation diaphragm to handle the heating a cooling cycles of the motor for greater reliability
- Sand slinger protection to help inhibit sand from entering the motor for increased reliability
- Removable cable connector for easy maintenance
- Horizontal mounting is permissible up to 15kW
- 6" NEMA standard coupling dimensions for easy assembly to all 6" borehole pumps

Motor kW (P <sub>2</sub> )	Davey Rewindable Motor Only
9.3	DM6093
11.0	DM6110
15.0	DM6150
18.0	DM6185
22.0	DM6220



PRESSURE SYSTEMS

RAINWATER HARVESTING & TREATMENT

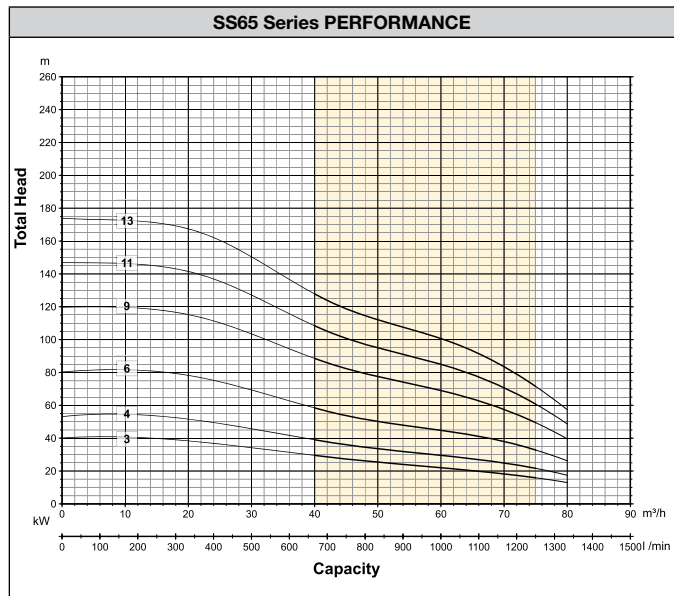
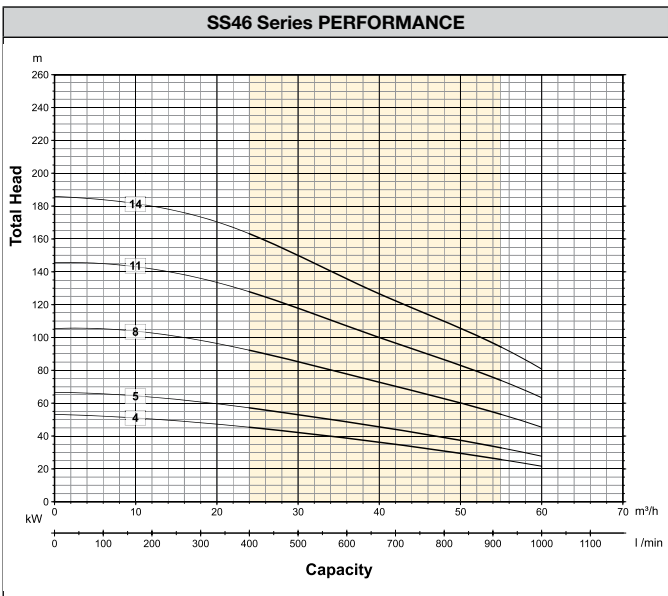
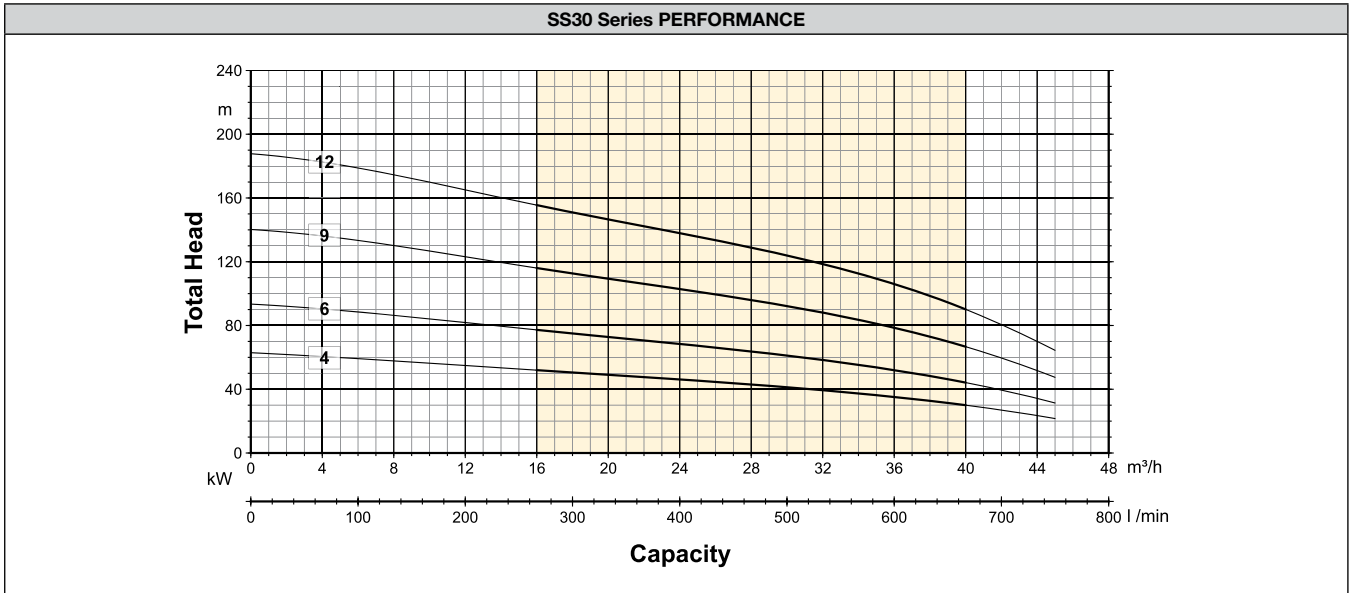
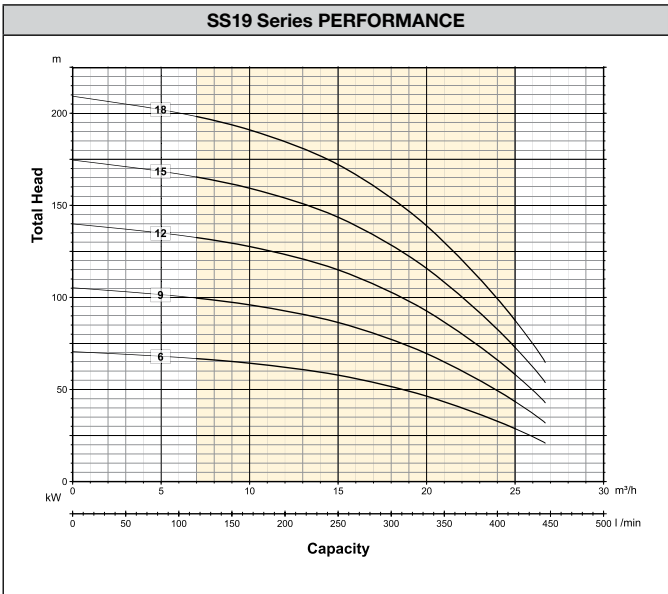
FARM & WATER TRANSFER

WATER TRANSFER FIRE & FLOOD FIGHTING

COMMERCIAL, IRRIGATION & COMMUNITY

USEFUL PUMPING INFORMATION

# 6" Submersible Borehole Pumps



# Vertical Multistage Pumps

**DAVEY**

The VM Series offers a full range of vertical multistage centrifugal pumps with all stainless steel hydraulic parts. The 56 models provide flow rates from 0.4m<sup>3</sup>/hr to 80m<sup>3</sup>/hr and pressures up to 230 metres to suit a full range of domestic, farm and industrial applications. Standard range is 50Hz. 60Hz models available, made to order.

Vertical Multistage pumps are useful for a range of applications including agriculture and farming, turf watering and irrigation, pressure boosting, water supply – domestic, rural and industrial, commercial – high pressure washing and water treatment, boiler feed and jacking pumps.

Tested in compliance with  
**AS/NZS 4020**  
for use in contact with safe drinking water



## All Stainless Steel Pump Ends

All hydraulic parts are made from 304SS with the shafts being made from 316SS to provide higher corrosion and abrasion resistance for a longer pump life.

## Stainless Steel Companion Flanges

Threaded 304SS companion flanges with gaskets, nuts, bolts and washers are included with every pump for easier installation.

## Mechanical Seals

Hard face mechanical seals provide a longer life. VM16 models and above feature cartridge seals for faster changeover.

## MEPS Compliant

All 3 phase motors are MEPS (Minimum Energy Performance Standards) compliant meaning greater energy efficiencies and reduced running costs.

## Rotating Elements

Replacing all moving hydraulic parts as a single unit ensures minimal maintenance downtime.

## Teflon Neck Rings

Provide reduced vibration, noise and sensitivity to thermal expansion, maintaining high efficiency.

## Raised Bottom Bearings

Raising this bearing reduces the risk of damage from sediments, increasing bearing life.

## High Temperature

Pumps can operate in temperatures from -15°C to +70°C.

## High IP Rating

VM motors are IP55 compliant and are suitable for outdoor applications.

## Large Single Phase Motors

Available up to 4.0kW

VM1 Series		
Motor kW (P <sub>2</sub> )		
0.75	1.1	1.5
15	17	21-25

VM3 Series				
Motor kW (P <sub>2</sub> )				
0.75	1.1	1.5	2.2	3.0
8	12	15-17	19-23	29

VM5 Series					
Motor kW (P <sub>2</sub> )					
1.1	1.5	2.2	3.0	4.0	5.5
5	7-8	10	12-16	19	22

VM10 Series					
Motor kW (P <sub>2</sub> )					
1.5	2.2	3.0	4.0	5.5	7.5
4	5-6	7-8	9-10	12-14	16-20

VM16 Series						
Motor kW (P <sub>2</sub> )						
2.2	3.0	4.0	5.5	7.5	11.0	15.0
2	3	4	5-6	8	11-12	14

VM32 Series						
Motor kW (P <sub>2</sub> )						
3.0	5.5	7.5	11.0	15.0	18.5	22.0
2A	3	4	5-6	8	10	12

VM65 Series					
Motor kW (P <sub>2</sub> )					
7.5	11.0	15.0	18.5	22.0	30.0
2A	2	3A	4B	4	5A-6B

VM90 Series				
Motor kW (P <sub>2</sub> )				
18.5	22.0	30.0	37.0	45.0
3A	3	4-4A	5	6

PRESSURE SYSTEMS

RAINWATER HARVESTING & TREATMENT

FARM & WATER TRANSFER

WATER TRANSFER FIRE & FLOOD FIGHTING

COMMERCIAL IRRIGATION & COMMUNITY

USEFUL PUMPING INFORMATION

# Vertical Multistage Pumps

PRESSURE SYSTEMS

RAINWATER HARVESTING & TREATMENT

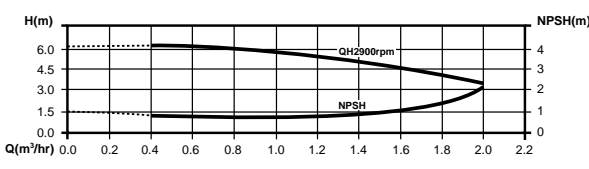
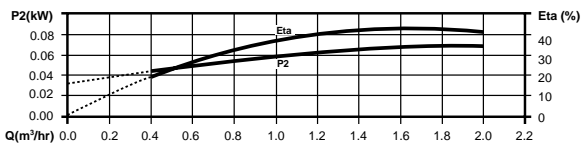
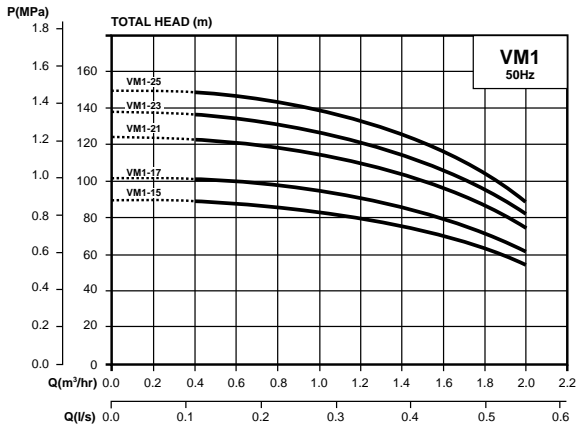
FARM & WATER TRANSFER

WATER TRANSFER, FIRE & FLOOD FIGHTING

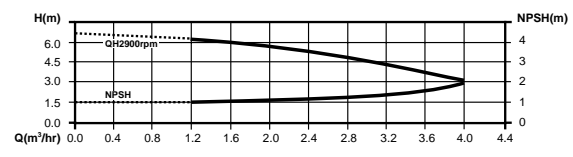
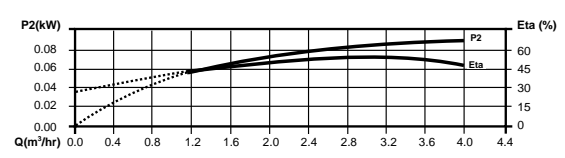
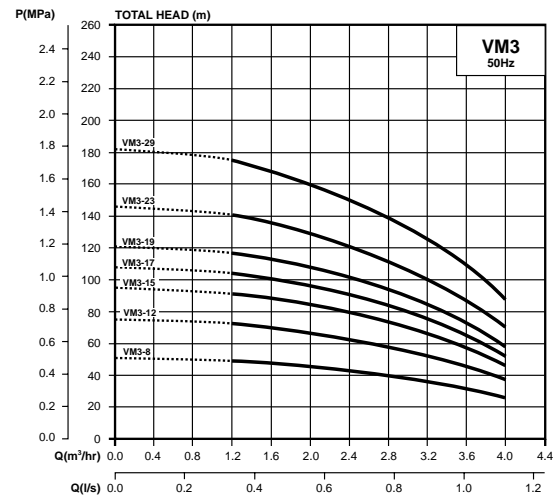
COMMERCIAL, IRRIGATION & COMMUNITY

USEFUL PUMPING INFORMATION

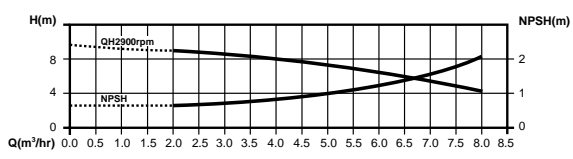
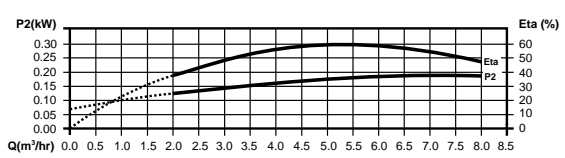
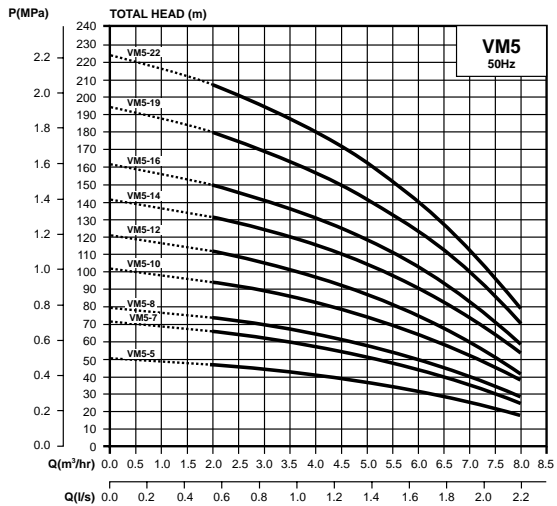
## VM1 PERFORMANCE



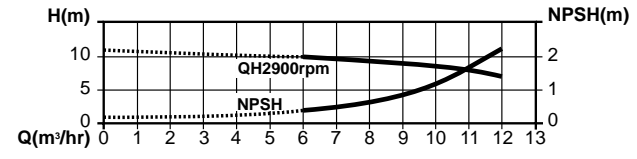
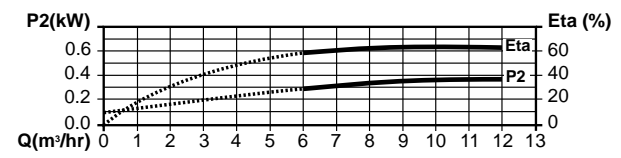
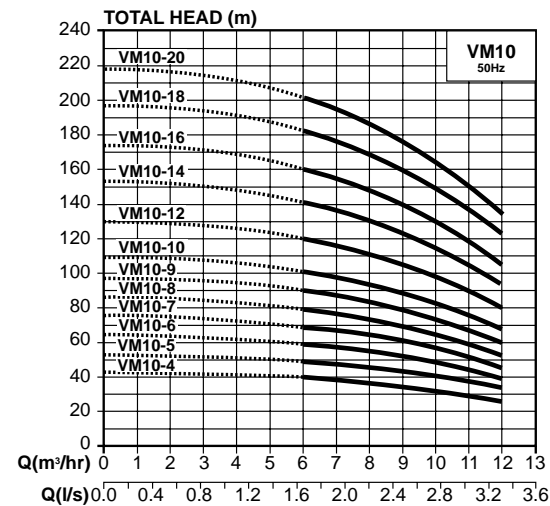
## VM3 PERFORMANCE



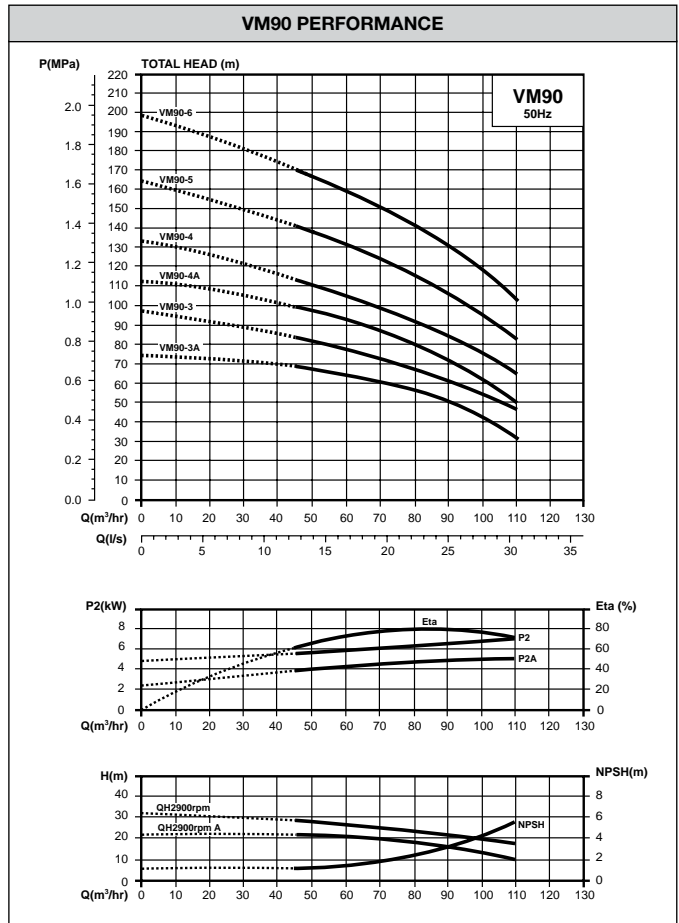
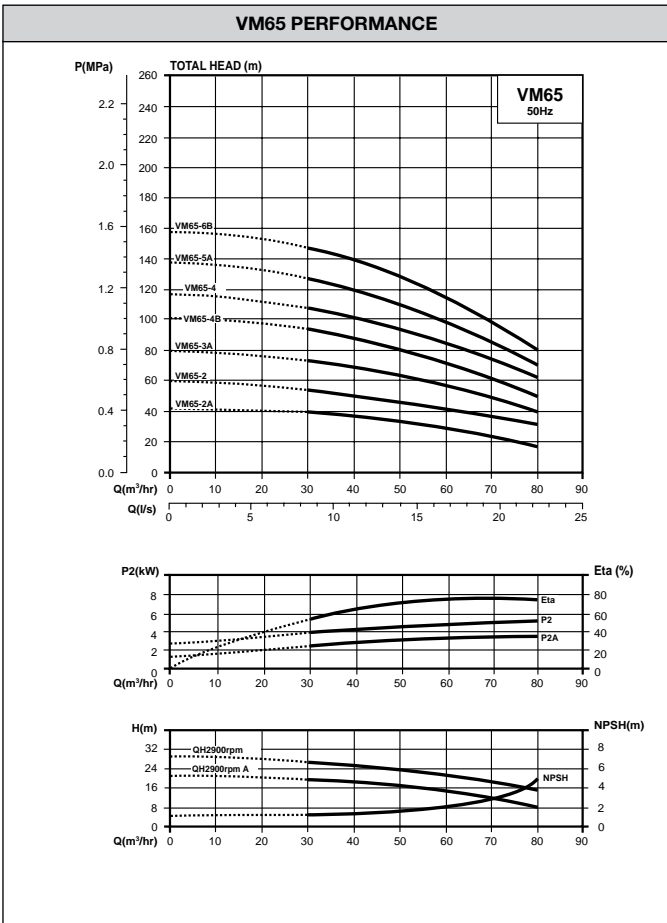
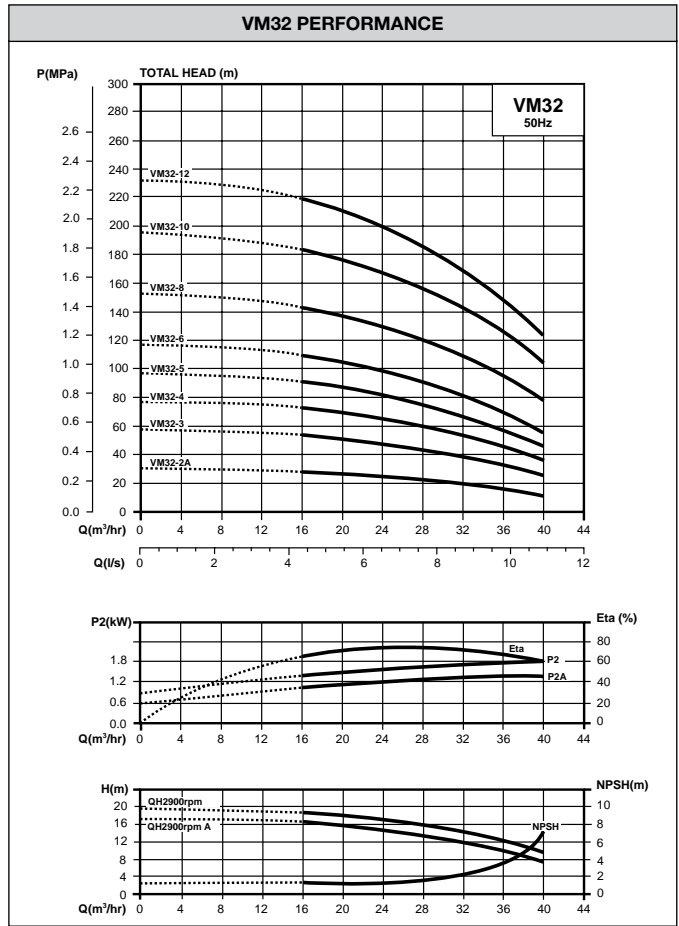
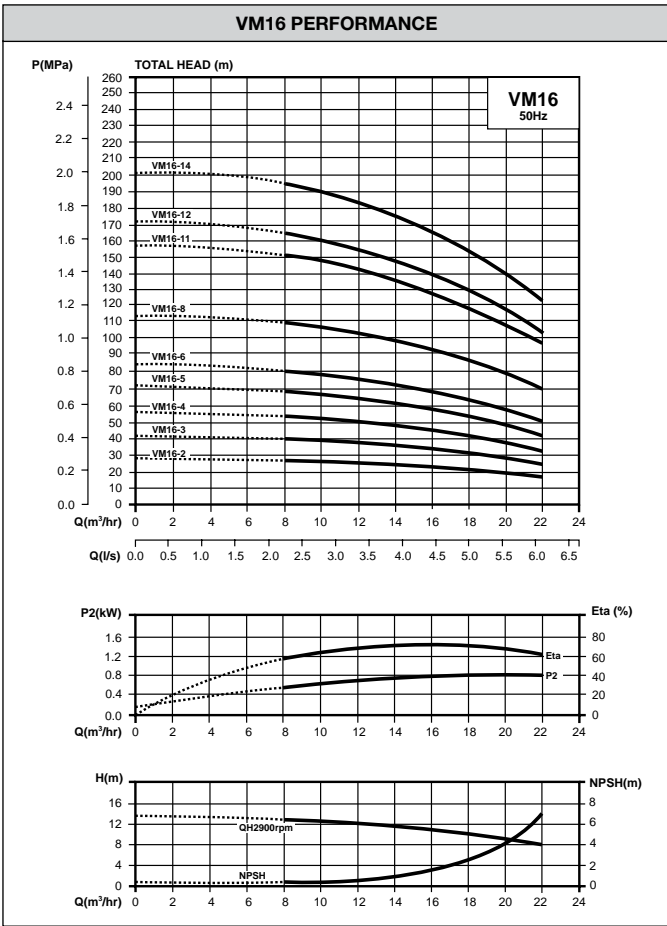
## VM5 PERFORMANCE



## VM10 PERFORMANCE







# Packaged Pump Sets

Packaged Pump Sets are useful for a range of applications including household and commercial applications, turf watering, irrigation and stock watering, water supply, boosting and transfer and water treatment.

Davey offer a choice of both fixed speed and variable speed in simple pump through to six pump systems.

## VM & RVM Pump Sets

VM and RVM pump sets are a single pump, packaged system, that is available in two versions.



VM Water Pressure System

### VM

Automatic water pressure system (WPS) controlled by a pressure switch.

The VM-WPS configuration consists of a single VM vertical multistage pump, 18 litre or 100 litre pressure tank, adjustable pressure switch, liquid filled pressure gauge and isolating valve, all mounted on a common galvanised steel base with the exception of the 100 litre pressure tank, which is free standing.



RVM with Loss-of-Prime protection

### RVM

Loss-of-prime control box to protect the pump in no flow situations.

The RVM models include a flow switch and loss-of-prime control box which protects the pump in no-flow conditions such as loss-of-prime and dead head. The loss-of-prime control box allows the user to start the pump in auto or manual mode. After running for 2.5 minutes in manual mode the control box automatically switches over to auto mode. The control box includes both visual and audible alarms.

- Flow rates from 1.2m<sup>3</sup>/hr to 22m<sup>3</sup>/hr
- Heads from 50m to 120m
- Maximum ambient temperature +40°C
- Maximum liquid temperature +70°C

- Single phase VM pumps up to 4.0kW
- Three phase VM pumps up to 7.5kW
- Soft starter option available with 5.5kW and 7.5kW loss-of-prime control boxes



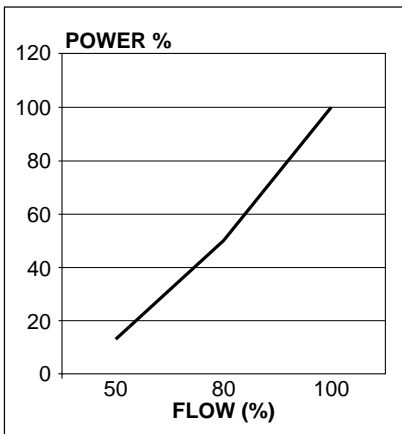
## Variable Speed Pump Controllers

Variable frequency drives (VFD) are used to vary the speed of a pump and change its performance so that a constant pressure point can be maintained under varying demand conditions. For VFD applications for a single pump with single phase supply, the Monsoon 1V is ideal and for single pump with three phase supply, Davey have the Monsoon Compact.



### VFD Cost Savings

A pump driven at a slower speed uses significantly less power thus reducing running costs. When flow drops to 80%, power consumption drops to 50%. When flow drops to 50%, power consumption drops to 13%. This means that if demand varies significantly the initial capital cost of the VFD can be recouped in about 12-18 months.



## Monsoon 1V & Monsoon Compact Pump Sets

Monsoon 1V & Monsoon Compact single pump systems with variable speed drive either mounted on the common base or able to have the drive remote wall mounted (allowing the removal of the drive controls from possible environmental hazards).

The standard packaged pump set includes Davey VM pumps, Davey Supercell tank, Speedman controller, inlet and discharge manifolds, isolating and non-return valves for each pump, all mounted on a stainless steel base. Monsoon Compact is also available as pumps with drive or as a flat pack system for on site assembly.

### Features & Benefits

- Provides constant pressure via VFD control for one pump up to a maximum of 110kW
- Simple operator adjustable controls, On-Off switch and dial adjustment of set point
- Rugged, compact design
- In-built system high and low pressure and no flow protection with adjustable delay timers to suit individual applications
- Automatic calculation of “no flow” condition
- Automatic adjustment of system protection with the change of set point
- LED display for pump operation, status and fault conditions.
- Remote start/stop operation
- Configurable output relays for external communications.



# Packaged Pump Sets

## Monsoon 2C & 6C Pump Sets

Monsoon 2C and 6C pump sets are multi-pump fixed speed systems using a common control system to provide progressive pump operation within set pressure parameters.

### Monsoon 2C & 6C – Fixed Speed Cascading Control

The versatile Monsoon fixed speed cascading pump set controllers can operate up to six hydraulically similar pumps. Operating the pumps at a fixed speed and cascading them for higher flow rates is a lower capital cost solution, ideal where demand is reasonably stable.

The Monsoon packaged pump set gives the choice and flexibility of various, although hydraulically similar, pumps and control options to best suit your application. While most pump sets will use VM series vertical multistage pumps, these fixed speed systems can use HM, Dynaflo and even ISOspec pumps.

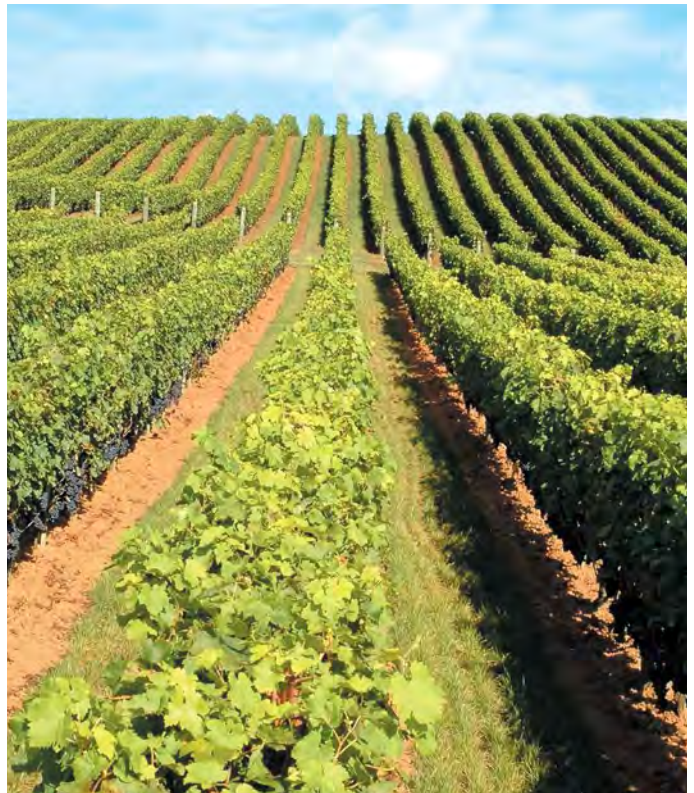
### Packaged Pump Sets

The standard packaged pump set includes VM pumps, Supercell tank, Monsoon 2C and 6C controller, 304SS inlet and discharge manifolds, isolating and non-return valves for each pump, all mounted on a stainless steel base. The pump set is fully assembled, wired and tested before it leaves Davey's premises to ensure trouble free site commissioning and operation.

### Monsoon 2C & 6C Controllers Features & Benefits

- Provides automatic fixed speed cascading control via electronic pressure sensing to ensure maximum operating efficiency
- Monsoon 2C controller controls up to 2 hydraulically similar pumps up to 55kW
- Monsoon 6C controller controls up to 6 hydraulically similar pumps up to 110kW
- All pumps operate on the same pressure points to maximise the performance of each pump
- Pumps can be automatically rotated to ensure equal operating hours for each pump to maximise pump life
- User programmable menus in plain English enable easy adjustment to suit any operation
- Adjustable parameters include cut-in and cut-out pressure, high and low pressure shut down with adjustable timer delays to eliminate cycling and pressure surges
- System status LCD display includes system pressure, calculated flow (instantaneous and totalised flows), hours run per pump, starts meter for each pump, system starts for the last hour
- System protection includes adjustable low and high pressure protection with adjustable timer delays
- Pumps can be operated in either manual or automatic mode
- System protection alarms and fault resets can be accessed on site via the display screen or via external telecommunications
- Controller can accommodate up to 8 additional programmable inputs and 4 configurable output relays

VM Series Triple Pump Set with Monsoon 6C Controller





## Monsoon 3V Pump Sets

Monsoon 3V pump sets are high quality entry level multi-pump variable speed systems using a common control system to provide progressive pump operation for constant pressure within set parameters. Standard models include cascading pump operation with lead pump VFD and lag pumps DOL up to 4kW and soft start at 5.5kW and 7.5kW.

### Monsoon 3V Controller

Under conditions of varying flow demand, the Monsoon 3V, variable speed controller, can vary the speed of pumps to deliver constant pressure. With variable speed control, the cost savings resulting from running pumps at a slower speed when demand drops can be substantial, offsetting the higher initial capital cost.

### Features & Benefits

- Provides fully automatic variable speed pump control and protection via electronic pressure sensing
- Able to maintain a constant pressure point in conditions of varying flow demand via the use of variable speed technology and electronic pressure sensing
- Standard models include cascading pump operation with a permanently set lead VFD pump and lag DOL pumps up to 4kW and soft start for 5.5 and 7.5kW lag pumps
- Can control up to 3 hydraulically similar pumps, maximum of 7.5kW each pump
- Optional full VFD operation on all pump models up to 7.5kW, featuring auto-rotation of lead pump, are also available
- Programmable, security access code protected, plain English menus enable quick and easy parameter adjustment to suit individual site conditions
- Adjustable parameters include set point pressure, cut-in pressure, pressure boosting parameters and delay timers
- System Status LCD display includes system pressure, calculated flow (instantaneous and totalised flows), hour run per pump, number of starts meter for each pump, system starts for the last hour
- System Protection includes adjustable high and low pressure shutdown settings with adjustable delay timers in order to protect pumps
- System Protection Alarms and fault resets can be accessed on site via the display screen, or via external communications
- Pipe-fill mode can be enabled for automatic slow filling of system in order to avoid water hammer and pipe damage
- Pumps can be operated in manual mode for system commissioning and fault finding
- 12 programmable inputs allow for external sensing functions, or remote control
- 4 programmable outputs to communicate with external sources such as telemetry and building management systems
- Soft starts pumps via VFD or soft starters for 5.5 and 7.5kW motors to avoid large in-rush currents
- Integrated RS485 Modbus communications is compatible with most SCADA systems

VM Series Dual Pump Set with Monsoon 6V Controller



## Monsoon 6V Pump Sets

Monsoon 6V pump sets are high quality fully featured multi-pump variable speed systems using a common control system to provide progressive pump operation for constant pressure within set parameters. Standard models include cascading pump operation with lead pump VFD and lag pumps DOL up to 4kW and soft start at 5.5kW and above.

Features include: Auto rotate, manual over-ride, multiple programmable inputs and outputs, full RS485 Modbus for most SCADA systems and many more features included as standard.

### Packaged Pump Sets

The standard packaged pump set includes multiple VM series pumps, Monsoon 6V controller, Supercell tank, 304SS inlet and discharge manifolds, isolating and non-return valves for each pump, all mounted on a stainless steel base. Although most pump sets will use VM vertical multistage pumps, other pumps, such as the ISOspec end suction pumps can be controlled by the Monsoon 6V controller.

The pump set is fully assembled, wired and tested before it leaves Davey's premises to ensure trouble free site commissioning and operation.

### Monsoon 6V Controller Features & Benefits

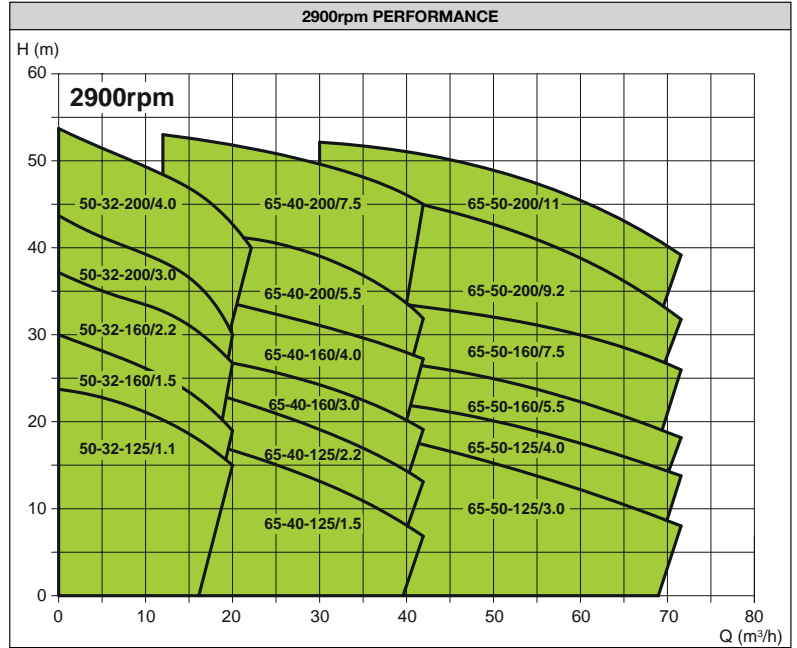
- Provides automatic constant pressure control via variable speed technology by means of electronic pressure sensing
- Controls up to 6 hydraulically similar pumps of any type up to a maximum of 110kW plus a jockey pump for low flow applications
- Able to maintain a constant pressure point even in conditions of varying demand
- Available in VFD Cascading, VFD Lead Lag Auto-rotate and one VFD per pump configurations
- In the case of VFD failure the system automatically converts to a fixed speed system to maintain function
- Security access code protected, plain English, user programmable menu system enables easy parameter adjustment to suit any operation
- Adjustable parameters include cut-in and cut-out pressure, high and low pressure shut down with adjustable timer delays to eliminate cycling and pressure surges
- System status LCD display includes system pressure, calculated flow (instantaneous and total flows), hours run per pump, starts meter for each pump, system starts for the last hour and data log
- System protection includes adjustable low and high pressure protection with adjustable timer delays to protect pumps
- Pumps can be operated in either manual or automatic mode
- System protection alarms and fault resets can be accessed and reset either on site via the display screen, or via external telecommunications
- Controller can accommodate up to 12 additional programmable inputs and 4 configurable output relays

# End Suction Pumps

## CS Series

- Davey CS Series are a 304 pressed stainless design, close coupled to a standard frame and mounted on a stainless base
- Ideal for clean water applications up to 110 °C with heads to 58 metres and flow rates up to 70m<sup>3</sup>/hr
- The back pull out design allows for easy servicing without the need to disconnect pipework
- All pumps include stainless steel screwed counter flanges with gaskets, bolts and washers
- Single phase motors up to 2.2kW are 240V and incorporate thermal overload

GUARANTEE  
1 Year



## ISOspec

ISOspec end-suction centrifugal pumps have been designed to international standard ISO2858 ensuring a sturdy and reliable, long lasting high performing pump suitable for a wide range of pumping applications. ISOspec pumps are dimensionally and operationally interchangeable with other similar pumps that conform to this standard.

ISOspec pumps are useful for a range of applications such as rural irrigation including centre pivot and travelling irrigators, dairy wash down, municipal and industrial water supply, commercial heating and air conditioning, pressure boosting, fire services, commercial pools and also commercial fountains and water features.

### CF Series Bare Shaft Pumps



HYDRAULIC CAPABILITIES	
Maximum flow	900m <sup>3</sup> /hr
Maximum head	160m
Liquid temperature	-15 to 110°C*
Maximum casing pressure	16 Bar

\*Please refer to Mechanical Seal section for further information

### CM Series Motor Pumps



HYDRAULIC CAPABILITIES	
Maximum flow	375m <sup>3</sup> /hr
Maximum head	160m
Liquid temperature	-15 to 110°C*
Maximum casing pressure	16 Bar

\*Please refer to Mechanical Seal section for further information

### Long Coupled ISOspec CF Pumps



- Davey offers ISOspec CF bareshaft pumps long coupled to an electric motor using spacer coupling
- Allows for pump maintenance and removal of rotating components without the time consuming task of removing and refitting pipe connections or motor re-alignment
- Available as painted steel base and guard, galvanised base and guard and with condensation trays

## ISOspec

### Pump Casing

The pump casing is constructed of cast iron and rated to a maximum pressure of 1600 kPa (16bar). Flanges are drilled to Table E (Australian Standard AS2129). 316 stainless steel casings are available upon request.

### LG2 Bronze Impeller

LG2 (potable grade) bronze impellers are fitted as standard. LG2 bronze provides high tensile strength, corrosion resistance and wear resistance for a longer life. 316 stainless steel impellers are available upon request.

ISOspec impellers are a closed vane design with balance holes to maximise hydraulic performance and efficiency.

Impeller diameters can be trimmed in 1mm increments to suit specified performance characteristics.

### Enlarged Shaft

Heavy duty enlarged shaft reduces deflections at high speeds. Shafts come standard in heavy duty 420 stainless steel. 316 stainless steel shafts are optional.

### Mechanical Seal

ISOspec pumps come standard with a high quality John Crane 2100 Series mechanical seal with carbon vs ceramic hard faces. Silicone carbide vs silicone carbide hard face seals are available on request.

Seal operating temperatures are as follows:

- Standard Carbon/Carbon/Nitrile seal – 60°C
- Standard Carbon/Carbon/Nitrile seal with seal flushing kit – 80°C
- Optional hard face Silicon Carbide/Silicon Carbide/Viton seal – 60°C
- Optional hard face Silicon Carbide/Silicon Carbide/Viton seal with seal flushing kit – 110°C

### Bronze Wear Rings

Replaceable front and back LG2 (potable grade) bronze wear rings allow impeller clearances to be maintained to ensure optimum pump performance and full bearing life.

### Casing Orings

High quality reusable Nitrile orings are used for ease of reassembly.

### MEPS Compliant

All motors are MEPS (Minimum Energy Performance Standards) compliant, meeting minimum energy efficiency standards as mandated in Australian Standard AS/NZS1359.5.2000.

### Bearings

The robust / heavy duty bearing housing is manufactured in high strength cast iron providing trouble free operation.

### Bearing Housing

ISOspec use heavy duty SKF greased-for-life bearings to reduce maintenance. Re-greaseable bearings are available on some models.

### Back Pull-out Design

Back pull-out design allows 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.

### Tappings

Convenient suction & discharge pressure gauge tappings plus a volute drain are fitted as standard to all ISOspec pumps.

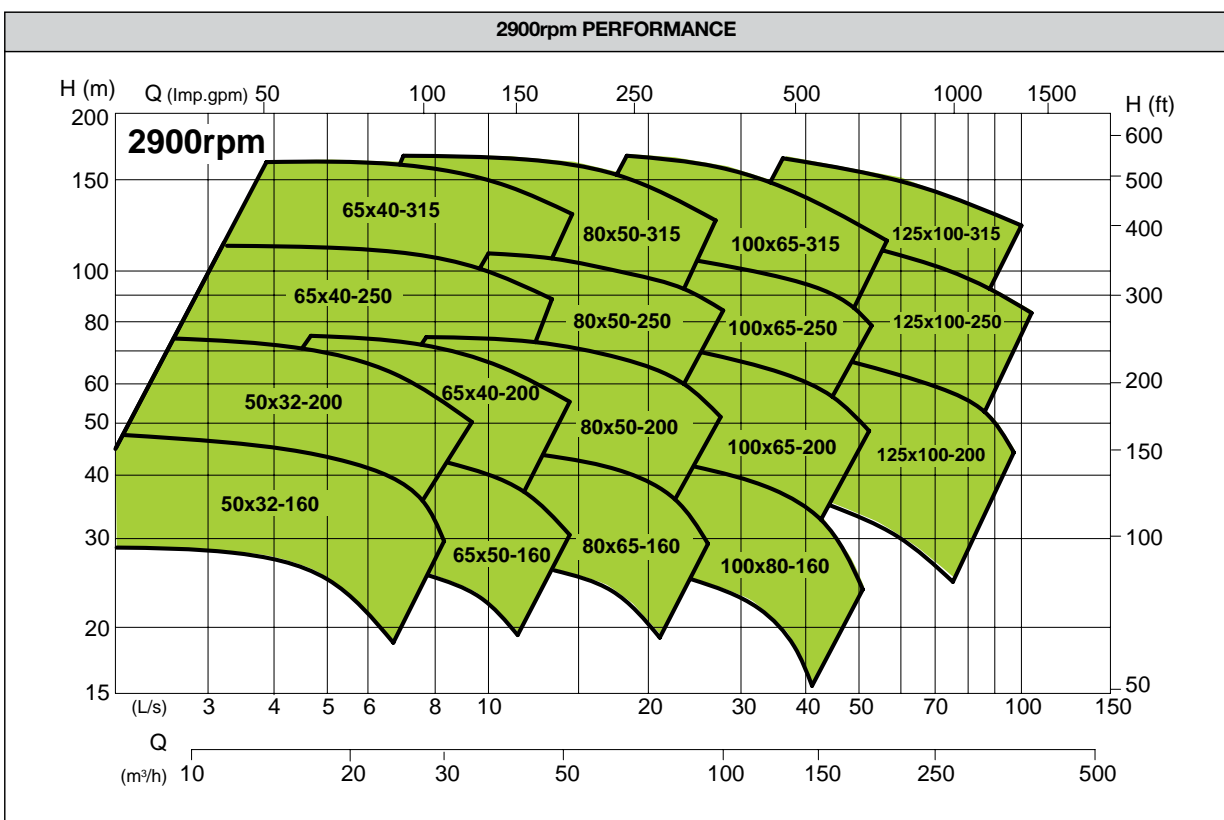
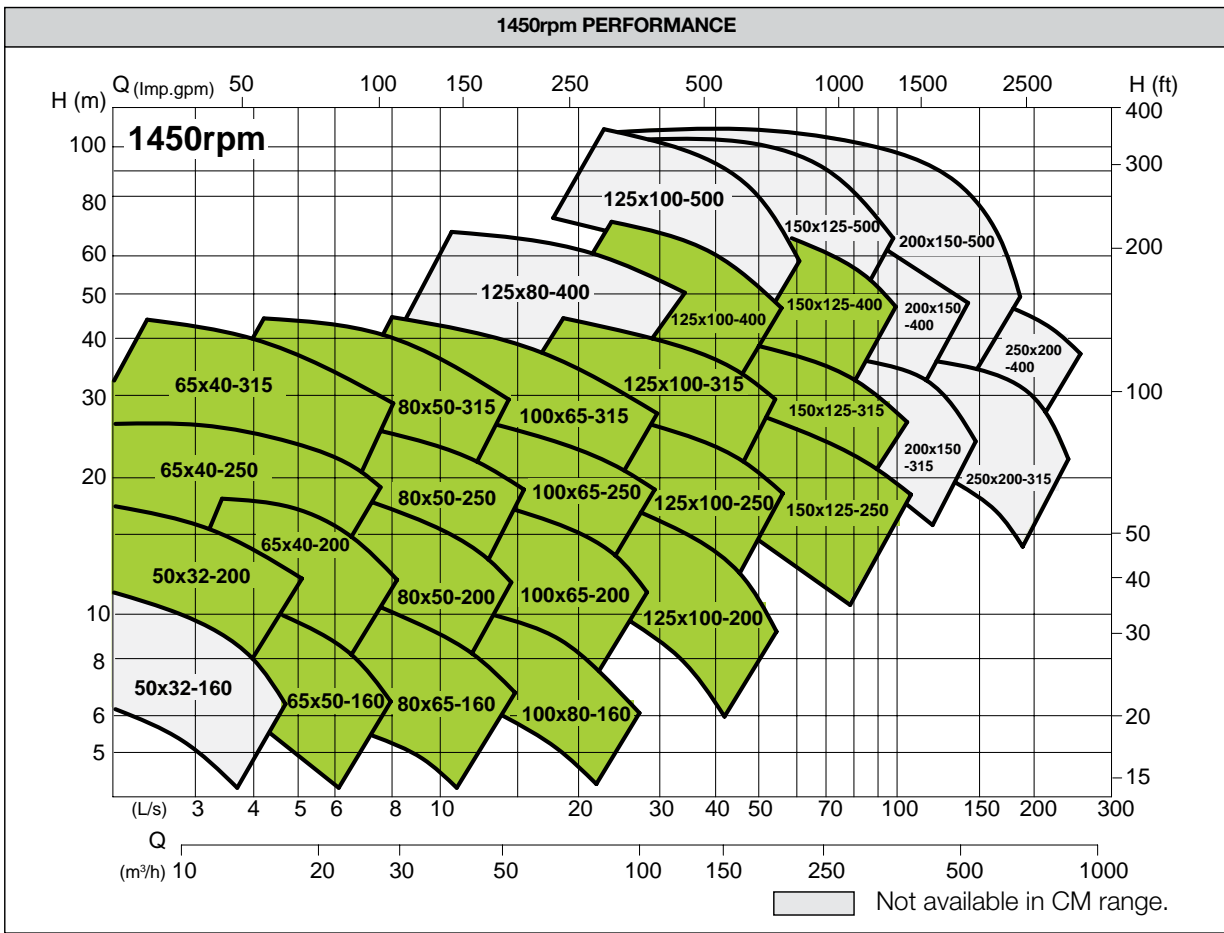


### Variable Speed Options

Davey Monsoon controllers, including the NEW Monsoon Compact, can be supplied with Davey CS model pumps as both single pumps and for multiple unit pumpsets - POA



## CF and CM Ranges





An ISOspec CF pump can be coupled to a diesel engine for applications where no electricity supply is available, or where non-electric back-up is required. Davey diesel pump sets come fully assembled with CF pump, diesel engine and a standard control panel, all mounted on a sturdy steel base.

## Applications

- Irrigation
- Frost Control
- Water Supply
- Dewatering
- Fire Services

## Diesel Engines

Diesel irrigation packs come with a choice of Yanmar diesel engines for power ratings between 8kW and 56kW, or JCB diesel engines for higher power requirements between 55kW and 102kW.

## Yanmar Engine Protection/Control Panels

### EC150 Engine Protection Controller (TNV / JCB Engines)

- Manual key start control panel with electronic tachometer
- "E" stop button
- Engine protection on the following conditions:
  - > Low oil pressure
  - > High water temperature
  - > Low radiator level
  - > Fan belt breakage
  - > Over-speed / under-speed
- Includes, start key, 99hr countdown timer, hour meter, first out indicator & battery voltage indicator
- 1 x spare input (e.g. float switch)
- Weatherproof cabinet with Deutsch connector

### ACP200 Automatic Control/Protection Controller (TNV / JCB Engines)

- Designed for fully automatic 24/7 start and stop control of the engine
- 7 day programmable timer for complete control
- Engine protection as per the EC150 control panel
- Two wire voltage free contact of start/stop operation
- Weatherproof cabinet with Deutsch connector



### K45 Electronic Engine Control/Protection Controller – JCB Electronic Engines

Ideally matched to the larger JCB models which have full electronic engine management systems, the K45 controller provides top level engine protection. While manual starting is a standard feature, the K45 has the ability to accept operational inputs from float, pressure or flow switches, pressure transducers, irrigation controllers, BMS, computers etc. The controller has inbuilt time-clock control as well as the ability to allow for constant pressure operation. The addition of SMS start / stop is also possible as an added option.

### Heavy Duty Steel Base

Diesel irrigation packs come complete, mounted on a purpose built, heavy duty steel skid base allowing easy on site installation.

Water Cooled Diesel Pump Sets								
Manuf.	Model/ Part no.	Description	Cylinders	Maximum Continuous Power (kW)	Maximum Continuous Power (hp)	Minimum Speed (rpm)	Maximum Speed (rpm)	Fuel Cons. @ 2200rpm approx. l/hr (100% load)
Yanmar	2TNV70-IP	2TNV70 Diesel Irrigation Pack	2	8.2	11.0	1500	3000	1.4
Yanmar	3TNV70-IP	3TNV70 Diesel Irrigation Pack	3	12.3	16.5	1500	3000	2
Yanmar	3TNV76-IP	3TNV76 Diesel Irrigation Pack	3	16.1	21.6	1500	3000	2.7
Yanmar	3TNV82-IP	3TNV82 Diesel Irrigation Pack	3	19.8	26.6	1500	3000	3
Yanmar	3TNV88-IP	3TNV88 Diesel Irrigation Pack	3	24.4	32.7	1500	3000	3.7
Yanmar	3TNV84T-IP	3TNV84T Diesel Irrigation Pack	3	27.8	37.3	1500	3000	4.5
Yanmar	4TNV88-IP	4TNV88 Diesel Irrigation Pack	4	31.9	42.8	1500	3000	4.9
Yanmar	4TNV84-T-IP	4TNV84T Diesel Irrigation Pack	4	37.1	49.8	1500	3000	5.5
Yanmar	4TNV98-IP	4TNV98 Diesel Irrigation Pack	4	46.0	61.7	1500	2500	8
Yanmar	4TNV98T-IP	4TNV98T Diesel Irrigation Pack	4	56.2	75.4	1500	2500	10
JCB	444-NA-IP	444-NA Diesel Irrigation Pack	4	54	73	1200	2200	15.1
JCB	444-TC-IP	444-TC Diesel Irrigation Pack	4	63	86	1200	2200	17.7
JCB	444-TCA1-IP	444-TCA1 Diesel Irrigation Pack	4	72	96	1200	2200	21.5
JCB	444-TCA2-IP	444-TCA2 Diesel Irrigation Pack	4	79	107	1200	2200	21.9
JCB	TCAE97	TCAE97 Diesel Irrigation Pack	4	82	110	1200	2200	23
JCB	TCAE108	TCAE108 Diesel Irrigation Pack	4	92	123	1200	2200	25.7
JCB	TCAE120	TCAE120 Diesel Irrigation Pack	4	102	137	1200	2200	28.8

# Wastewater Pumps

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.

Davey offers a range of controls to make installation easier. Automatic float switches are available on models up to 750w 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.

SEDIMENT / MURKINESS



Suitable Fluid	Rainwater	Drainage	Dirty Water / Greywater			Wastewater / Effluent / Sewage				Sludge & Slurries	
Pumps											
Fluids / Applications	D23A/B D42A/B & D53A/B	Small Double Cased Models DC10	Small Dewatering Models D10 & D15	Double Cased Models DCS40 & above	Dewatering Models D25 & larger	High Head Models D42	Single Channel Models (S)	Vortex Models (V)	Cutter Models (K)	Grinder Models (G)	Sludge & Slurry Models (KZN)
Fountains	X	X	X	✓	-	-	-	-	-	-	-
Rainwater (e.g. tank to garden or home)	✓	✓	✓	✓	✓	✓	-	✓	-	-	-
Stormwater and surface run off water	X	✓	✓	✓	✓	✓	✓	✓	X	X	✓
Greywater with nil or few small soft solids (e.g. Septic tank pumpouts)	X	X	X	✓	✓	✓	✓	✓	✓	✓	✓
Dirty water with less than 1% small hard solids - some wear can be expected (e.g. site dewatering, swimming pool drainage, stormwater pumping)	X	X	X	✓	✓	✓	✓	✓	X	X	✓
Water with up to 10% soft solids in suspension - maximum particle size is 80% of pump outlet (e.g. Semi screened raw sewage, stock effluent, grease traps)	X	X	X	X	X	X	✓	✓	✓	✓	✓
Water with medium volumes of hair in suspension (e.g. greywater, abattoir wash down, dog washing, animal washing)	X	X	X	X	X	X	X	✓	✓	X	X
Water with stringy materials in suspension (e.g. laundrymats, cotton & woolen mills, food factories)	X	X	X	X	X	X	X	X	✓	✓	X
Raw sewage including sanitary products	X	X	X	X	X	X	X	X	X	✓	X
Slurries with up to 35mm particles in suspension up to 70% by weight (e.g. sand and slurries, building site water, mine site water)	X	X	X	X	X	X	X	X	X	X	✓

✓ Suitable Selection

X Not Recommended



## SumpMaster Dual Sump Pump Controller for Float Switch Only Operation

Features include:

- System status via Pilot Light & display including pump run and fault indication lights
- IP65 enclosure
- Dual duty / duty standby operation
- Adjustable start & stop delays
- Automatic rotation of lead / duty pump to equalise hours run per pump
- Telemetry outputs for pump start/stop, system faults, pump status etc. (See full list)
- Options for additional pump protection and external communications. RS485 SCADA interface
- Low level and high level protection with selectable shutdown options
- Random starts selection to eliminate scum build-up within the supply tank

When water quality may be unsuitable for float switches, SumpMaster can be operated via submersible transducers.

High level alarms available also.

**Entry level SumpMaster Mini now available.**



DCS40M

## Double Case Pumps

The double case design allows for safe operation in a partially submerged condition. DC10 models are able to pump clean or filtered grey water of neutral pH containing up to 10% of small soft organic solids (<10mm OD). Some accelerated wear should be expected while pumping hard solids in suspension.

Suitable for fish ponds or aquaculture.

DCS40 models and above are able to pump stormwater or 'grey water' of neutral pH containing up to 10% of small soft organic solids (<10mm OD). Some accelerated wear should be expected while pumping hard solids in suspension.

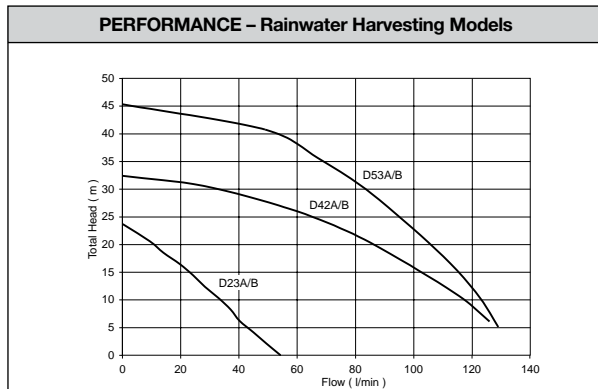


D42A/B

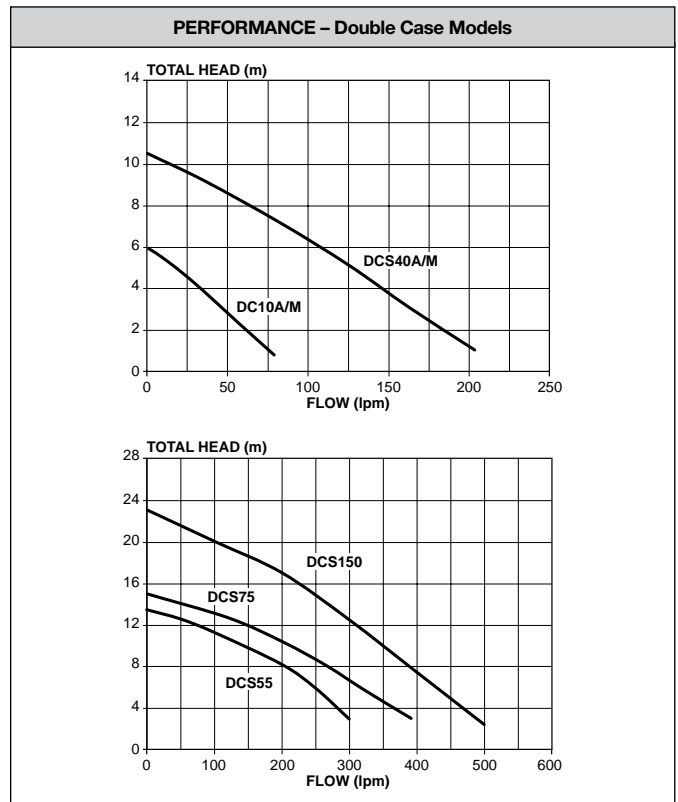
D53A/B

## Multistage Submersible Pumps

Specially designed for rainwater through to final stage septic treatment pumping for subsoil drip systems. Able to pump grey water of neutral pH containing up to 1% small solids. Some wear should be expected while pumping hard solids in suspension.



Selected models available in 316SS.



# Wastewater Pumps

D42A/B

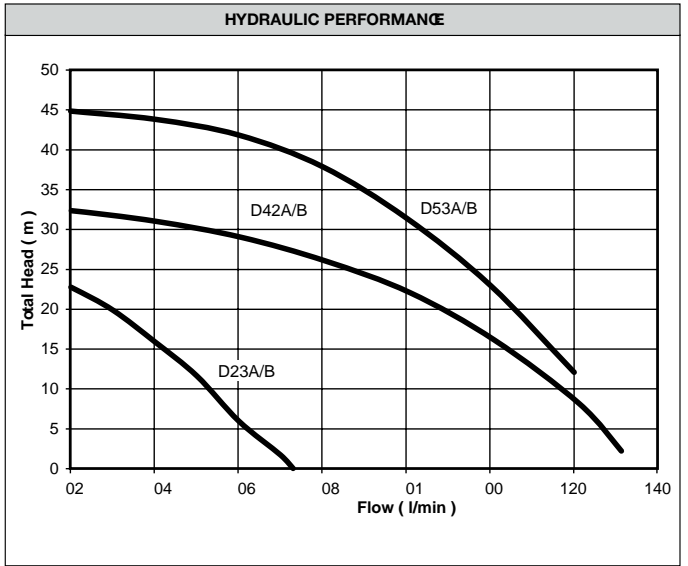
D53A/B

Selected models available in 316SS.



## Multistage Drainage Pumps

Specially designed for final stage septic treatment pumping for subsoil drip systems. Able to pump grey water of neutral pH containing up to 1% small solids. Some wear should be expected while pumping hard solids in suspension.



D15A

## General Purpose Dewatering Pumps

Suitable for filtered stormwater or water transfer. Able to pump grey water of neutral pH containing up to 10% small soft solids or 1% fine solids. Some accelerated wear should be expected while pumping hard solids in suspension.

Selected models also available in 316SS.

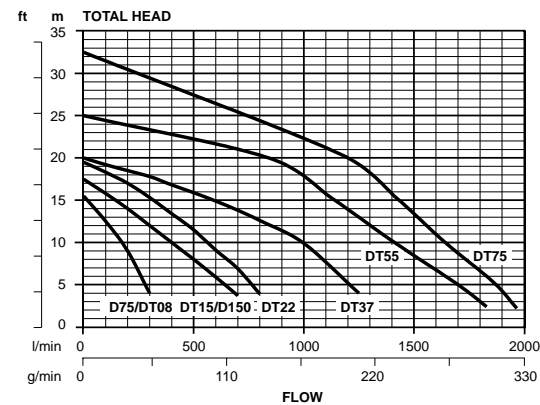
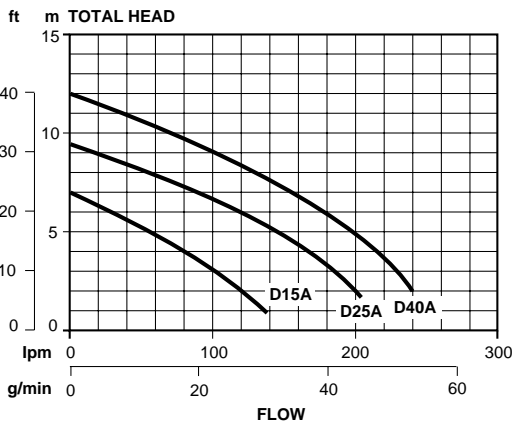


D15VA

D15VAGMA



PERFORMANCE – General Purpose Dewatering Models



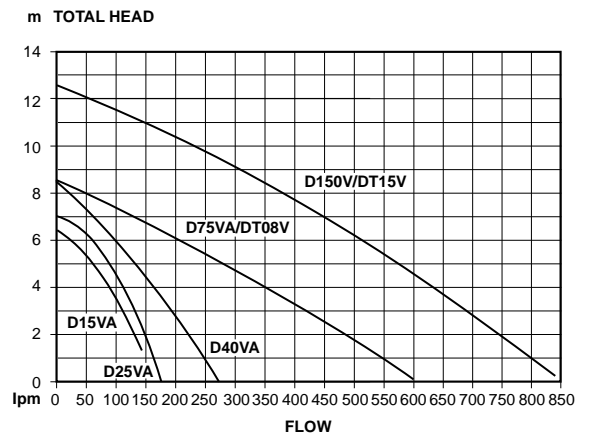
## Multi-purpose Vortex Pumps

Ideal for pumping grey water, final stage septic water and for larger models even raw sewage with soft solids up to 80% of the pump discharge size.

Able to pump clean or 'grey water' of neutral pH containing up to 20% small soft solids or 1% fine solids. Some wear should be expected while pumping hard solids in suspension.

D15VAGMA model supplied with vertical float to suit more confined spaces.

PERFORMANCE – Vortex Models





D75SA



DT22K

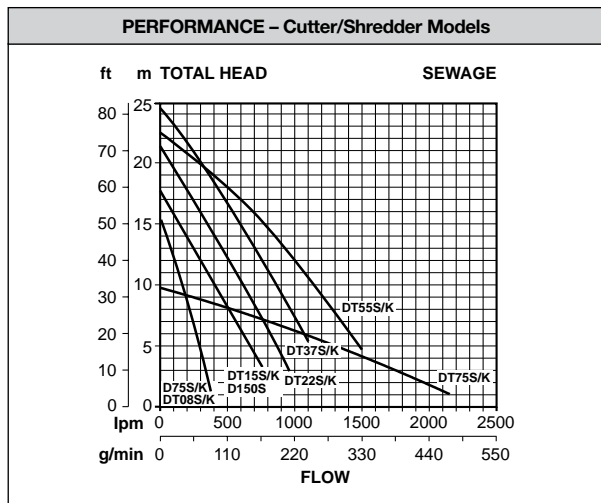
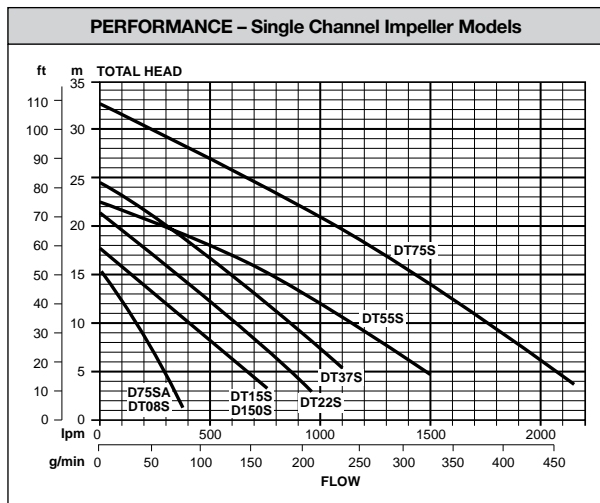
## Single Channel Impeller Pumps

Able to pump semi-screened or 'grey water' of neutral pH containing up to 20% soft solids or 1% fine solids and raw sewage up to 80% of the pump outlet diameter. Some wear should be expected while pumping hard solids in suspension. Also available in 316 stainless steel for sea water applications.

## Cutter / Shredder Pumps

Able to pump semi-screened or 'grey water' of neutral pH containing up to 20% soft solids or 1% string like solids. Some wear should be expected while pumping hard solids in suspension.

Cutter pumps are not suitable for sanitary products – use Grinder models.



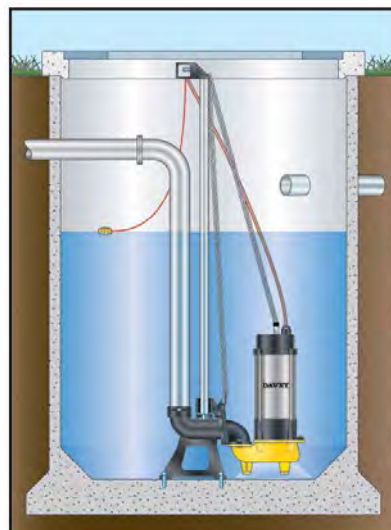
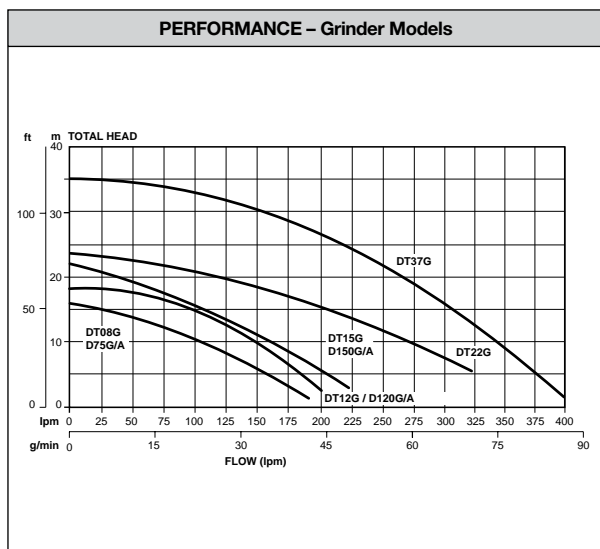
D120G

## Grinder Pumps

Able to pump soft organic solids, sanitary products and even some textiles in suspension, by shredding to a slurry.

## Slide Rail Kits

Davey Slide Rail Kits make installation and removal for servicing easier. These kits are available to suit Vortex, Single Channel, Cutter and Grinder models only. 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.



# Wastewater Pumps

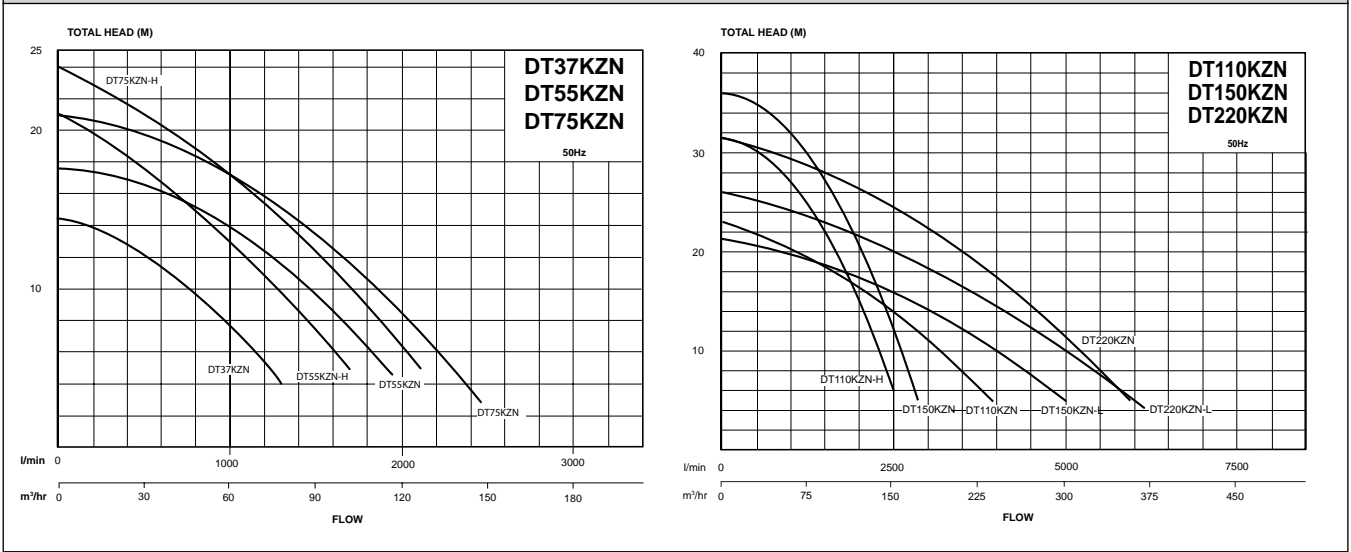


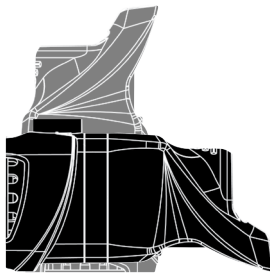
KZN

## Sludge / Slurry Pumps

Able to pump water containing solids in suspension, up to 70% by weight. Some wear should be expected with hard solid pumping. Not suitable for explosive or flammable materials or fluids.

PERFORMANCE – Sludge / Slurry Models





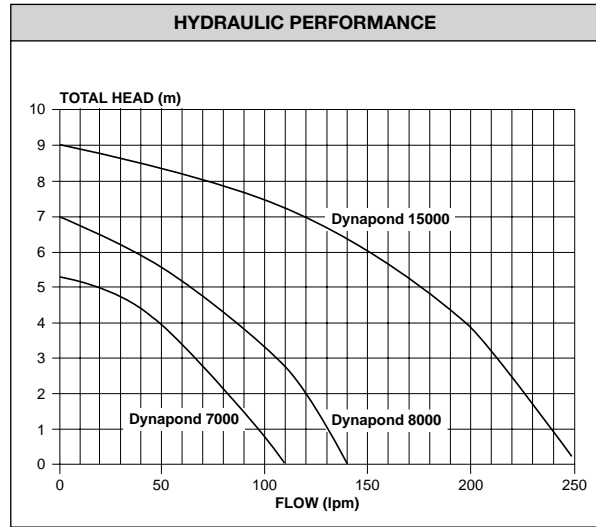
Vertical or horizontal installation

Davey's Dynapond Pond Pumps are specially designed for fully submerged operation, 24 hours a day, 7 days a week.

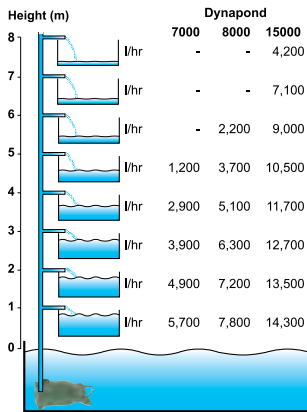
The Dynapond is ideal for large domestic, small commercial fountains, waterfalls, Koi (Japanese Carp) and fish ponds, as well as recirculation applications in freshwater aquaculture. Dynapond 8000 is suitable for sea water applications.

Dynapond models feature:

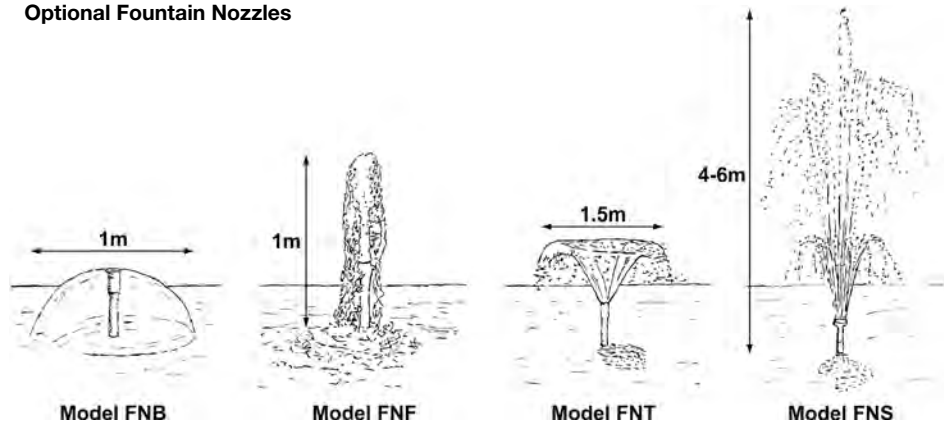
- Open impeller allowing the passage of small soft solids
- Adjustable inlet strainer holes (10mm or 5mm) to control what goes through the pump
- Oil free motor, so they are safe for fishponds
- Maximum submergence of up to 3 metres
- 1 1/4" BSP female outlet and discharge elbow for hose connection



FLOW REQUIRED PER METRE WIDTH OF WATERFALL			
Depth of water at top of waterfall	FLOW		
	(lpm)		(l/hr)
5mm	45		0.45
10mm	100		0.78
15mm	200		0.58
20mm	300		0.80



### Optional Fountain Nozzles



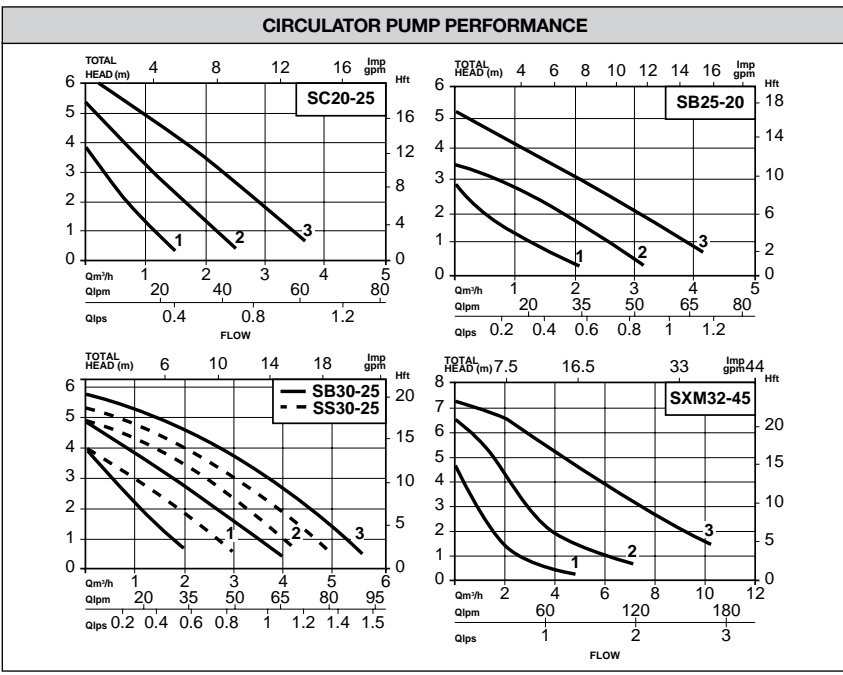
# Circulator Pumps



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.





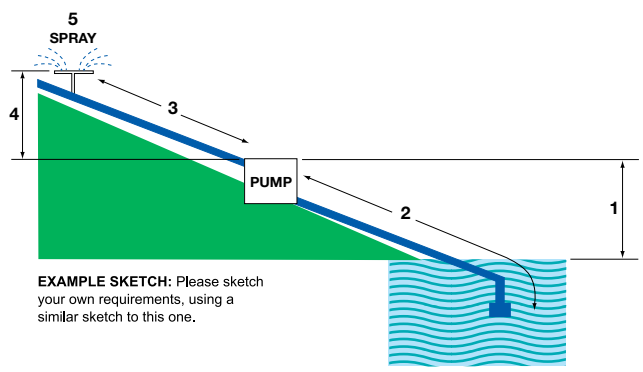
## Selecting the Right Pump for the Job

Your Davey Dealer is a water specialist with staff trained in the principles of pump operation and pump selection. When you visit your Davey Dealer seeking advice on a pump or water supply system, it will assist if you have taken a few minutes to gather some basic information on your requirements.

**Fill in the answers to the questions below in the spaces provided (tick boxes as appropriate).**

- 1 For what purposes do you require a water pump?**
  - Household water pressure
  - Garden watering/sprinklers
  - Irrigation
  - Stock water supply
  - Hosing down
  - Tank filling
  - Firefighting
  - Other (specify) .....
  
- 1a Operating pressure required (if known) .....kPa**
- 2 Total output required (if known) .....L/min OR  
Total no. of taps to be serviced at one time:.....**
- 3 From what source of supply is the water to be drawn?**
  - River, creek, channel
  - Dam
  - Rainwater tank (above ground)
  - Underground tank
  - Bore
  - Spear point
  - Other (specify).....
- 3a Water supply: clean, muddy or gritty?** .....
- 3b If bore, state inside diameter of casing .....m.  
Also depth.....m.**
- 3c If water is to be drawn from bore, state quantity of water bore will deliver.....L/min  
From what constant depth?.....m  
What is the standing water level in the bore?.....m**
- 4 Vertical suction lift from water supply level to the pump site?.....m**

- 5 Pipe length to be run on suction side of pump from applications other than a bore .....**
- 6 Diameter of suction pipe, if already laid.....mm and type of pipe e.g. polythene, galvanised iron, PVC, other (specify).....**
- 7 Vertical height from pump to highest point of delivery .....**
- 8 Pipe length to be run on delivery side of pump .....**
- 9 Diameter of delivery pipe, if already laid.....mm and type of pipe e.g. polythene, galvanised iron, PVC, other (specify).....**
- 10 Type of pump required:**
  - Automatic pressure system
  - Petrol Engine Driven pump
  - Manual Electric Pump
  - Diesel Engine Driven Pump
  - Other (specify) .....
- 11 If electric pump, voltage of electricity supply is:**
  - 1 phase –  240 volt OR  480 volt
  - 3 phase –  415 volt
  - Other, please specify.....



**EXAMPLE SKETCH:** Please sketch your own requirements, using a similar sketch to this one.

# Useful Pumping Information

## Common Average Water Requirements

The average water requirements, shown below, may vary due to specific application concerns. Water requirements should be supplied within acceptable daily running times. This time will vary according to the nature of the application.

<b>SHOWER:</b> 8lpm at 140kPa (20psi)	<b>CATTLE:</b> 30-55 litres/day
<b>LAWN SPRINKLER:</b> 15lpm at 140kPa (20psi)	<b>MILKING COWS:</b> 70 litres/day
<b>1/2" TAP:</b> 12-15lpm at 140kPa (20psi)	<b>SHEEP:</b> 5-10 litres/day
<b>3/4" HOSE &amp; 1/4" NOZZLE:</b> 40lpm at 210kPa (30psi)	<b>PIGS:</b> 10 litres/day
<b>1" HOSE &amp; 3/8" NOZZLE:</b> 75lpm at 210kPa (30psi)	<b>HORSES:</b> 55-60 litres/day
<b>100 CHICKENS:</b> 25 litres/day	

## 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.

Elevation	Maximum Practical Suction Lift	Absolute Atmospheric Pressure (cold water)
Sea Level	6.7m	10.35m
500m	6.1m	9.35m
750m	5.8m	9.46m
1000m	5.5m	9.19m
1500m	5.0m	8.64m
2000m	4.5m	8.13m

Water Temperature (°C)	Suction Lift Reduction (metres)
15	0
20	0.06
30	0.22
40	0.52
50	0.98
60	1.73
70	2.85
80	4.51

Calculating Suction Lift	
Hs = Pa - NPSHR - P <sub>vap</sub> - 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
P <sub>vap</sub>	Vapour pressure of liquid with specific temperature
Safety	Allow at least a 1m safety factor

Calculating Pump Power	
<b>Water Power (kW)</b> = Flow (lpm) x Head (m) / 6122.4	
<b>Pump Power (P<sub>2</sub>,kW)</b> = Water Power / Pump Efficiency %	
<b>Input Power (P<sub>1</sub>,kW)</b> = 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 (P) changes proportional to speed change cubed

$Q_1 / Q_2 = N_1 / N_2$
$H_1 / H_2 = (N_1 / N_2)^2$
$P_1 / P_2 = (N_1 / N_2)^3$
$Q_1 / H_1 / P_1$ are current flow, head & power at speed $N_1$
$Q_2 / H_2 / P_2$ are the new flow, head & power at speed $N_2$

## Useful Conversions

Flow Conversion				
lpm	lps	m <sup>3</sup> /hr	Imperial	
			gpm	gph
7.6	0.13	0.45	1.7	100
10	0.17	0.60	2.2	132
16.7	0.28	1	3.7	220
45.5	0.76	2.73	10	601
60	1	3.60	13.2	793
75.7	1.26	4.54	16.7	1000
83.3	1.39	5.00	18.3	1101

Pressure / Head Conversion				
metres	kPa	bar	feet head	psi
1	9.81	0.10	3.28	1.42
10	98.1	0.98	32.8	14.2
10.2	100	1	33.4	14.5
15.2	149.5	1.5	50	21.6
30.5	299	3.0	100	43.3
35.2	354.4	3.5	115.5	50
70.4	690.8	6.9	231	100
101.9	999.6	10	334.2	144.7

Volume Conversion				
litres	cubic metres	Imp. gallons	US gallons	cubic feet
1	0.001	0.22	0.264	0.0353
1000	1	220	264	35.3
4.546	0.0045	1	1.2	0.1605
3.785	0.0038	0.833	1	0.1337
28.32	0.0283	6.23	7.48	1

Length Conversion			
inches	feet	yards	metres
1	0.0833	0.027	0.0254
12	1	0.333	0.3048
36	3	1	0.9144
39.37	3.2808	1.0936	1



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

Flow in		Medium Density Polythene Pipe																												
Itrs sec.	Itrs min.	Rural Class B Pipe					PE80/PN8 = SDR17 Series 1					PE80/PN10 = SDR13.6 Series 1					PE80/PN12.5 = SDR11 Series 1					PE80/PN16 = SDR9 Series 1								
		3/4"	1"	1 1/4"	1 1/2"	2"	20	25	32	40	50	63	20	25	32	40	50	63	20	25	32	40	50	63	20	25	32	40	50	63
0.2	12	3.92	1.01	0.35	0.15	-	N/R	2.14	0.63	0.22	0.08	-	7.43	2.44	0.76	0.26	0.09	-	8.85	3	0.91	0.32	0.11	-	11.65	3.82	1.2	2.05	0.7	0.24
0.3	18	7.97	2.05	0.71	0.3	0.08		4.34	1.27	0.44	0.15	0.05	15.14	4.96	1.53	0.52	0.18	0.06	18.04	6.1	1.83	0.65	0.22	0.07	23.75	7.77	2.43	2.82	0.96	0.32
0.4	24	13.23	3.39	1.18	0.49	0.12		7.18	2.09	0.73	0.25	0.08		8.21	2.53	0.86	0.3	0.1		10.12	3.03	1.07	0.37	0.12		12.9	4.03	3.7	1.26	0.43
0.5	30		5.02	1.74	0.72	0.18		10.65	3.1	1.08	0.37	0.12		12.18	3.75	1.28	0.44	0.15		15	4.49	1.58	0.55	0.18			5.96	4.69	1.6	0.54
0.6	36		6.92	2.4	0.99	0.25		4.27	1.49	0.51	0.17			5.17	1.76	0.6	0.2				6.19	2.18	0.75	0.25			8.22	5.77	1.96	0.66
0.7	42		9.09	3.15	1.3	0.33		5.61	1.95	0.67	0.22			6.79	2.3	0.79	0.26				8.13	2.86	0.98	0.33			10.8	6.96	2.37	0.8
0.8	48		11.52	3.99	1.65	0.42		7.1	2.47	0.84	0.28			8.6	2.92	1	0.33				10.3	3.62	1.25	0.41			13.69	9.62	3.27	1.1
0.9	54		14.2	4.91	2.03	0.51		8.75	3.04	1.04	0.35			10.59	3.59	1.22	0.41				12.7	4.46	1.53	0.51				12.66	4.3	1.44
1	60			5.92	2.44	0.62		10.55	3.66	1.25	0.42				4.33	1.47	0.49					5.37	1.85	0.61				14.32	4.86	1.63
1.2	72			8.19	3.37	0.85			5.06	1.72	0.58				5.98	2.03	0.68					7.43	2.55	0.84					5.45	1.83
1.4	84			10.77	4.43	1.12			6.65	2.26	0.75				7.86	2.67	0.89					9.77	3.35	1.1					6.72	2.25
1.5	90			12.18	5.01	1.26			7.52	2.56	0.85				8.89	3.02	1.01					11.05	3.79	1.24					8.11	2.71
1.6	96			13.67	5.62	1.41			8.44	2.87	0.96				9.98	3.39	1.13					12.4	4.25	1.39					12.09	4.04
1.8	108				6.94	1.74			10.42	3.54	1.18				12.31	4.18	1.39					5.24	1.72						16.77	5.6
2	120				8.37	2.1				4.27	1.42					5.04	1.68						6.32	2.07						7.38
2.5	150				12.48	3.13				6.36	2.11					7.51	2.5						9.42	3.08						9.37
3	180					4.33				8.81	2.92					10.41	3.46						13.06	4.27						11.59
3.5	210					5.71				11.62	3.85						4.55						5.62							14.01
4	240					7.25					4.89						5.78						7.15							
4.5	270					8.96					6.04						7.14						8.83							
5	300					10.83					7.3						8.63						10.67							
5.5	330					12.86					8.66						10.25						12.67							
6	360										10.13																			

Flow Rate			25mm O.D.		32mm O.D.		40mm O.D.		50mm O.D.		63mm O.D.		75mm O.D.		90mm O.D.		110mm O.D.			
lps	lpm	m³/hr	PN 6.3	PN 12.5	PN 6.3	PN 12.5	PN 6.3	PN 12.5	PN 6.3	PN 12.5	PN 6.3	PN 12.5	PN 6.3	PN 12.5	PN 6.3	PN 12.5	PN 6.3	PN 12.5		
0.2	12	0.72	2.12	2.97	0.56	0.90	0.02	0.32												
0.5	30	1.80	10.53	14.83	2.78	4.45	0.86	1.58	0.27	0.55										
0.8	48	2.88	24.24	34.17	6.37	10.20	1.97	3.62	0.61	1.25										
1.0	60	3.60			9.46	15.17	2.92	5.38	0.91	1.85	0.33	0.61	0.14	0.26						
1.6	96	5.76			21.88		6.73	12.41	2.08	4.25	0.75	1.13	0.33	0.49						
2.0	120	7.20					10.02	18.50	3.10	6.33	1.11	2.07	0.48	0.89	0.20	0.37				
3.0	180	10.8							6.39	13.07	2.29	4.27	0.99	1.83	0.42	0.76	0.16	0.29		
4.0	240	14.4								10.70			3.82	7.15	1.65	3.05	0.69	1.27	0.27	0.49
5.0	300	18.0											5.70		2.46	4.55	1.03	1.89	0.40	0.72
6.0	360	21.6											7.92		3.42	6.32	1.43	2.63	0.55	1.00
7.0	420	25.2													4.51		1.88	3.46	0.72	1.32
9.0	540	32.4													7.09		2.96	5.45	1.14	2.07
10.0	600	36.0															3.58	6.59	1.37	2.50
15.0	900	54.0																	2.85	5.20
20.0	1200	72.0																	4.80	

Flow Rate			25mm		32mm		40mm		50mm		80mm		100mm		150mm	
lps	lpm	m³/hr	PN 9	PN 12	PN 9	PN 12	PN 9	PN 12	PN 9	PN 12	PN 9	PN 12	PN 9	PN 12	PN 9	PN 12
0.2	12	0.72	0.42	0.47	0.14	0.16	0.07	0.09	-	-	-	-	-	-	-	-
0.5	30	1.80	2.1	2.34	0.69	0.78	0.36	0.42	0.12	0.14	-	-	-	-	-	-
0.8	48	2.88	4.8	5.36	1.58	1.79	0.83	0.95	0.28	0.32	0.04	0.05	-	-	-	-
1.0	60	3.60	7.12	7.96	2.34	2.65	1.22	1.41	0.42	0.48	0.07	0.08	0.02	0.02	-	-
1.6	96	5.76	16.46	18.4	5.38	6.1	2.81	3.24	0.96	1.09	0.15	0.17	0.05	0.05	-	-
2.0	120	7.20			8.01	9.09	4.18	4.82	1.43	1.63	0.22	0.26	0.07	0.08	-	-
3.0	180	10.8			16.56	18.8	8.62	9.95	2.93	3.35	0.46	0.53	0.14	0.16	0.03	0.03
4.0	240	14.4					14.45	16.69	4.91	5.6	0.76	0.88	0.23	0.26	0.05	0.05
5.0	300	18.0							7.33	8.37	1.14	1.31	0.34	0.39	0.07	0.08
6.0	360	21.6							10.18	11.62	1.58	1.81	0.47	0.54	0.09	0.11
7.0	420	25.2							13.44	15.35	2.08	2.39	0.62	0.71	0.12	0.14
8.0	480	28.8									2.64	3.03	0.79	0.9	0.16	0.18
9.0	540	32.4									3.27	3.75	0.97	1.11	0.19	0.22
10.0	600	36.0									3.95	4.54	1.18	1.35	0.23	0.27
15.0	900	54.0									8.22	9.44	2.44	2.8	0.48	0.55
20.0	1200	72.0									15.56	17.9	4.57	5.24	0.88	1.01

Flow Rate			Friction Loss (m/100 metres of hose)				
lps	lpm	m³/hr	20mm	25mm	32mm	40mm	50mm
0.2	12	0.72	4.23	1.05	0.36	0.15	
0.5	30	1.80	22.51	5.44	1.83	0.76	0.19
1.0	60	3.60		19.49	6.45	2.63	0.65
2.0	120	7.20			23.41	9.43	2.28
3.0	180	10.8				20.15	4.81
4.0	240	14.4					8.22
4.5	270	16.2					10.25

# Davey Pump Guide

Available from:

## DAVEY

Davey Water Products Pty Ltd  
Member of the GUD Group  
ABN 18 066 327 517

**AUSTRALIA**  
**Head Office and Manufacturing**  
6 Lakeview Drive,  
Scoresby, Australia 3179  
Ph: +61 3 9730 9222  
Fax: +61 3 9753 4100  
Website: davey.com.au

**Davey Support Centre**  
Ph: 1300 369 100  
Fax: 1300 369 119  
E-mail: sales@davey.com.au

**NEW ZEALAND**  
7 Rockridge Avenue,  
Penrose, Auckland 1061  
Ph: +64 9 570 9135  
Fax: +64 9 527 7654  
E-mail: sales@daveynz.co.nz  
Website: daveynz.co.nz

**Davey Support Centre**  
Ph: 0800 654 333

**REST OF WORLD**  
6 Lakeview Drive,  
Scoresby, Australia 3179  
Ph: +61 3 9730 9121  
Fax: +61 3 9753 4248  
E-mail: export@davey.com.au  
Website: davey.com.au

Depend on Davey

## DAVEY



[davey.com.au](http://davey.com.au)

This literature is not a complete guide to product usage. Further information is available from your Davey Dealer, Davey Support Centre and from the relevant product Installation and Operating Instructions. Must be read in conjunction with the relevant product Installation and Operating Instructions and all applicable statutory requirements. Product specifications may change without notice. © Davey is a registered trademark of Davey Water Products Pty Ltd. © Davey Water Products Pty Ltd 2015.