# Davey Pump Guide

Pumps | Rainwater Harvesting | Fire Fighting | Water Transfer


**Experts in water.**

DAVEY

australian owned

celebrating 80 YEARS

**Experts in water.**

DAVEY

For 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.

Davey manufactures and distributes a comprehensive range of products for water transfer, conservation, treatment and filtration.

A market leader in Australia and New Zealand we also export to over 50 countries internationally where our products perform in some of the world's toughest environments.

With a strong engineering capability Davey develops and markets leading water products for homes, businesses and farms, fire and flood protection, rainwater harvesting, swimming pool and community needs.

# Contents

# Household Pressure Systems and Mains Boosting

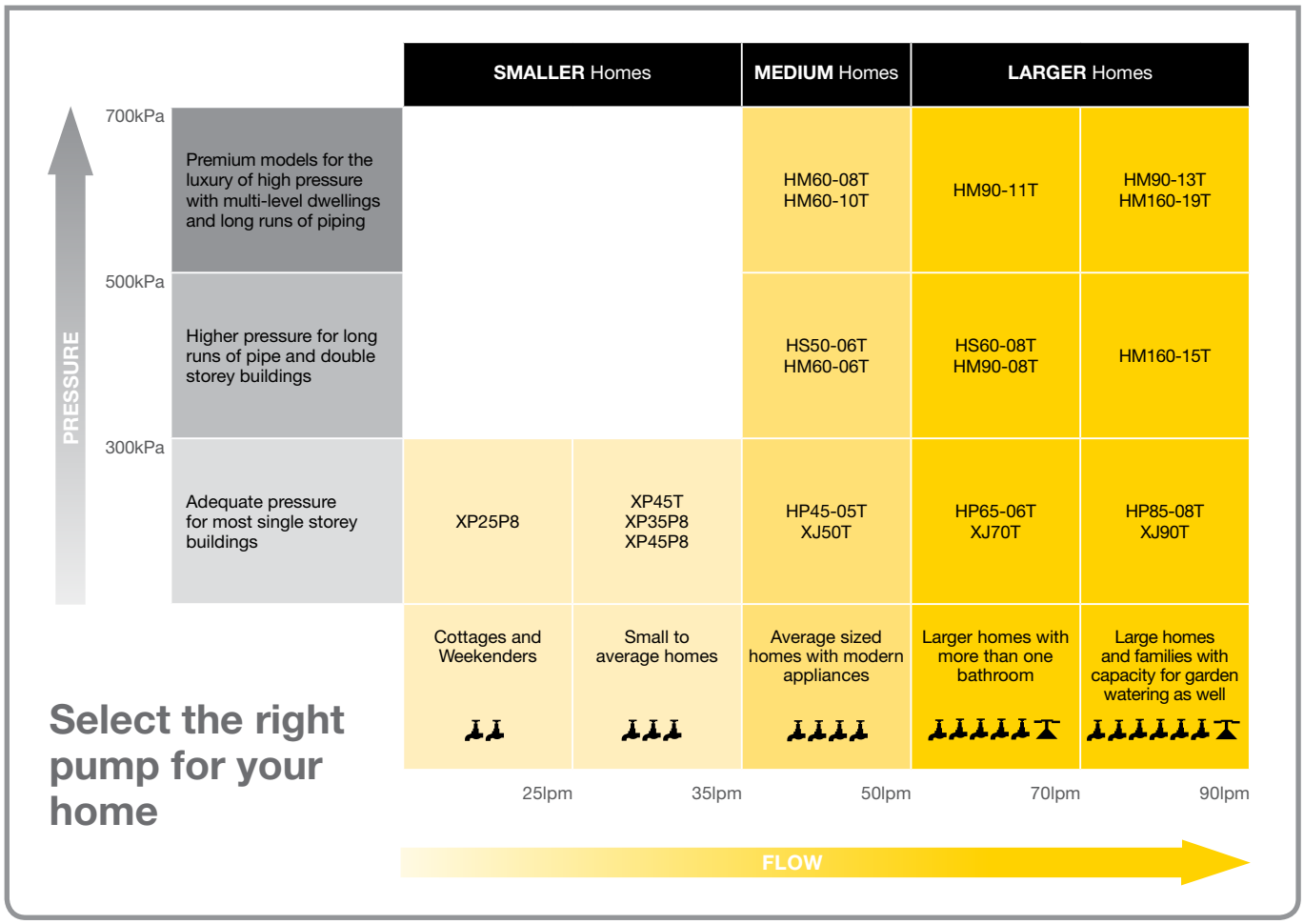
## Davey are the benchmark for quality and reliability with market leading features.

Davey offers you a vast choice of pressure systems operated by our unique Torrium®2 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.




## Select the right pump for your home

HP45-05T

GUARANTEE 2 Year

## **Davey®** HP with **Torrium® 2**

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

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

HS60-08T

GUARANTEE 2 Year

## **Davey®** HS with **Torrium® 2**

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

HM160-15T

GUARANTEE 2 Year

## **Davey®** HM with **Torrium® 2**

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

XJ50T

GUARANTEE 2 Year

## **Davey®** XP and XJ with **Torrium® 2**

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

GUARANTEE 2 Year

## **Torrium® 2** Controller

Torrium®2 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

**Constant Flow and Even Water Pressure**
To prevent annoying fluctuations in water temperature during showers, Torrium®2 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, Torrium®2 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, Torrium®2 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, Torrium®2 stops the pump when it detects a loss of prime (no water supply) situation.

**Auto Retry**
Auto-retry in Torrium®2 allows the system to reset itself after a loss of prime, thus helping reduce system downtime.

**Adaptive Starting**
Torrium®2 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, Torrium®2 automatically adapts to reduce the cut-in pressure, which can be as low as 50% of its last shut-off pressure.

Torrium®2 is available complete as part of a Davey Home Pressure System or can be purchased separately to upgrade an existing pump.

## Davey® HP & HS HOME PRESSURE SYSTEMS

| Model | Motor kW Input (P1) | Motor kW Output (P2) | Type of Controller | Pressure Tank | Normal Operating Pressure **kPa** psi | Suction Lift in metres/feet **0** 0 | **1** 3.3 | **3** 9.8 | **5** 16.4 | **6** 19.7 | Pressure Switch Settings kPa | Connection Size BSP inlet /outlet |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | Output in **litres/minute** gals/hour | | | | | | |
| **HP45-05T** 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 | 1¼"F/1"M |
| **HP65-06T** 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 | 1¼"F/1"M |
| **HP85-08T** 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 | 1¼"F/1"M |
| **HS50-06T** 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 | 1¼"F/1"M |
| **HS60-08T** 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 | 1¼"F/1"M |

## HM Series HORIZONTAL MULTISTAGE PRESSURE SYSTEMS

| Model | Motor kW (P2) | Normal Operating Pressure **kPa**/psi | Suction Lift in metres/feet **0** 0 | **3** 9.8 | **5** 16.4 | Standard Adaptive Pressure Range (T models) | Pressure Settings (P models) | Inlet Size BSP(F) |
|---|---|---|---|---|---|---|---|---|
| | | | Output in **litres/minute** gals/hour | | | | | |
| **HM60-06T & P** 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 | 1¼" |
| **HM60-08T & P** 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 | 1¼" |
| **HM60-10T & P** 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 | 1¼" |
| **HM90-08T & P** 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 | 1¼" |
| **HM90-11T & P** Large two storey dwellings and garden water supply | 1.05 | **420**/61 | **86**/1135 | **75**/990 | **66**/871 | 460-580 kPa | 300-500 kPa | 1¼" |
| **HM90-13T & P** 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 | 1¼" |
| **HM160-15T & P** 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 | 1½" |
| **HM160-19T & P** 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 | 1½" |
| **HM270-19P** 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" |
| **HM270-25P** 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 1½" BSP(F) discharges.

## Jet Pump HOME PRESSURE SYSTEMS

| Model | Motor kW Input (P1) | Motor kW Output (P2) | Type of Controller | Pressure Tank | Normal Operating Pressure **kPa** psi | Suction Lift in metres/feet **0** 0 | **1** 3.3 | **3** 9.8 | **5** 16.4 | **6** 19.7 | Pressure Switch Settings kPa | Connection Size BSP inlet /outlet |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | Output in **litres/minute** gals/hour | | | | | | |
| **XP25P8** 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 |
| **XP45T** | 0.65 | 0.31 | Torrium2 | Not required | **140**/20 | **50**/660 | **46**/607 | **35**/462 | **30**/396 | **25**/330 | Adaptive | 1"F/1"M |
| **XP35P8** | 0.62 | 0.31 | Pressure Switch | Top mounted 8 litre | **140**/20 | **35**/462 | **33**/436 | **30**/398 | **24**/317 | **22**/297 | 140-280 | 1"F/1"F |
| **XP45P8** Small to average homes | 0.65 | 0.31 | Pressure Switch | Top mounted 8 litre | **140**/20 | **50**/660 | **46**/607 | **35**/462 | **30**/396 | **25**/330 | Adaptive | 1"F/1"F |
| **Dynajet XJ50T** | 0.84 | 0.58 | Torrium2 | Not required | **180**/26 | **45**/594 | **43**/567 | **36**/475 | **30**/398 | **27**/356 | Adaptive | 1"F/1"M |
| **Dynajet X50** | 0.84 | 0.58 | Pressure Switch | Base mounted 40 litre | **180**/26 | **45**/594 | **43**/567 | **36**/475 | **30**/398 | **27**/356 | 180-390 | 1"F/1"F |
| **Dynajet XJ50P** Average sized homes with modern appliances | 0.84 | 0.58 | Pressure Switch | Purchase separately | **180**/26 | **45**/594 | **43**/567 | **36**/475 | **30**/398 | **27**/356 | 180-390 | 1"F/1"F |
| **Dynajet XJ70T** | 1.15 | 0.80 | Torrium2 | Not required | **210**/30 | **66**/871 | **62**/818 | **57**/752 | **45**/594 | **40**/258 | Adaptive | 1"F/1"M |
| **Dynajet X70** | 1.15 | 0.80 | Pressure Switch | Base mounted 40 litre | **210**/30 | **66**/871 | **62**/818 | **57**/752 | **45**/594 | **40**/258 | 210-420 | 1¼"F/1"F |
| **Dynajet XJ70P** For larger families and two storey homes | 1.15 | 0.80 | Pressure Switch | Purchase separately | **210**/30 | **66**/871 | **62**/818 | **57**/752 | **45**/594 | **40**/258 | 210-420 | 1"F/1"F |
| **Dynajet XJ90T** | 1.40 | 1.10 | Torrium2 | Not required | **210**/30 | **92**/1214 | **90**/1188 | **82**/1082 | **68**/898 | **58**/766 | Adaptive | 1¼"F/1"M |
| **Dynajet X90** | 1.40 | 1.10 | Pressure Switch | Base mounted 40 litre | **210**/30 | **92**/1214 | **90**/1188 | **82**/1082 | **68**/898 | **58**/766 | 210-350 | 1¼"F/1"F |
| **Dynajet XJ90P** For large double storey homes and farms | 1.40 | 1.10 | Pressure Switch | Purchase separately | **210**/30 | **92**/1214 | **90**/1188 | **82**/1082 | **68**/898 | **58**/766 | 210-350 | 1¼"F/1"F |

GUARANTEE
2 Year

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

## Davey® SilverSeries® SJ35-04, SJ35-04PC & SJ60-08PC

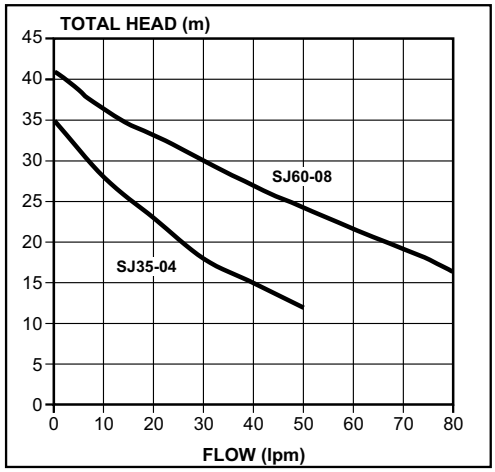
The SJ35-04 pump models can supply a variety of garden watering applications, such as :-

> 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




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 Torrium®2 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 of 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.

# Davey® 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 | 1¼" 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 | 1¼" Male | Bottom | Yes |
| **24250F** | Supercell 250F | 250 | 860 | 1¼" Male | Bottom | Yes |

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

## Select the right kit for your home

**KIT SELECTION – HOME PRESSURE SYSTEMS**

NEW FLOATLESS RAINBANK®

| PRESSURE | 25lpm | 35lpm | 50lpm | 70lpm | 90lpm |
|---|---|---|---|---|---|
| 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<br>KRBS2<br>KRB2NF | KRB2<br>KRBS2<br>KRB2NF | KRB3<br>KRBS2 | KRB4 | |
| 300kPa – Adequate pressure for most single storey buildings. | KRB1<br>KRBS1<br>KRBSA1<br>KRBX1<br>KRB1NF | KRB1<br>KRBS1<br>KRB1NF | KRB2<br>KRBS2<br>KRB2NF | KRB3<br>KRBS2 | KRB4 |
| DAVEY RAINBANK® household water savings | 1x | 2x | 3x | 2x<br>5x | Up to 15 toilets or large irrigation systems |

FLOW

Pumps for RainBank®

SJ35-04 (KRBX1) | HP45-05 (KRB1) | HS50-06 (KRB2) | HM60-08 (KRB3) | HM90-13 (KRB4) | D23A/B (KRBSA1) | D42A/B (KRBS1) | D53A/B (KRBS2

KRB1

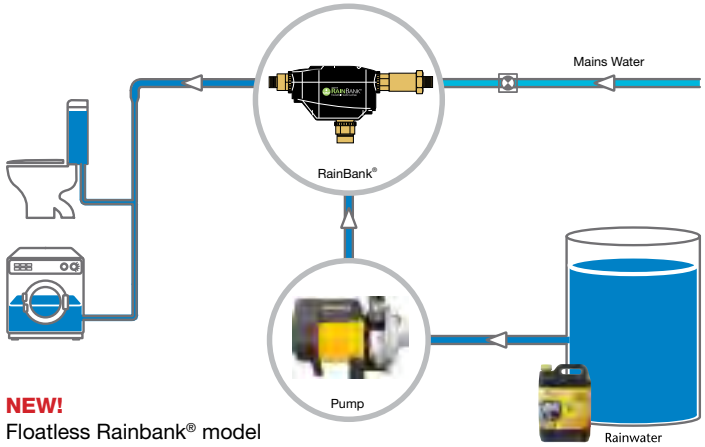
DAVEY RAINBANK® household water savings

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.

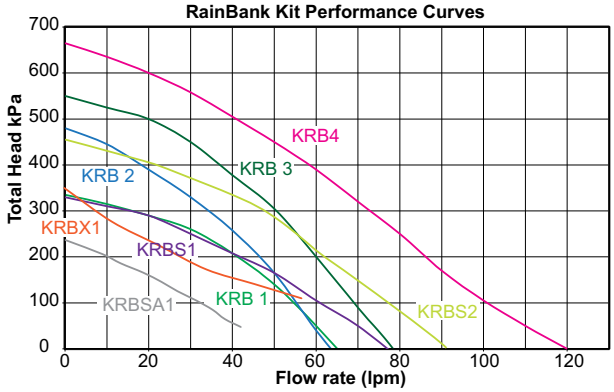
RainBank® is available as a kit with a range of dependable Davey pumps to suit a wide range of homes and applications. 'S' kits have submersible pumps that are ideal for running in the tank to eliminate noise.

KRBCAB1F




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

**HYDRAULIC PERFORMANCE**

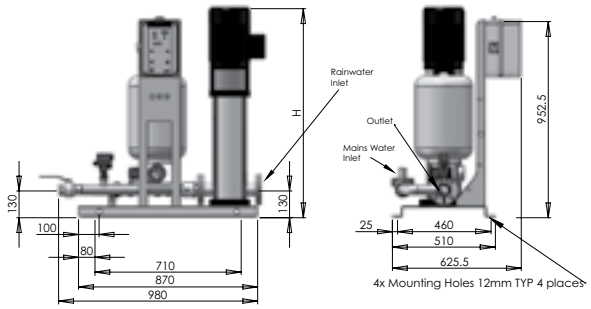


DAVEY RAINBANK® community water savings PRO

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.

**DIMENSIONS (mm)**




## Aquashield®

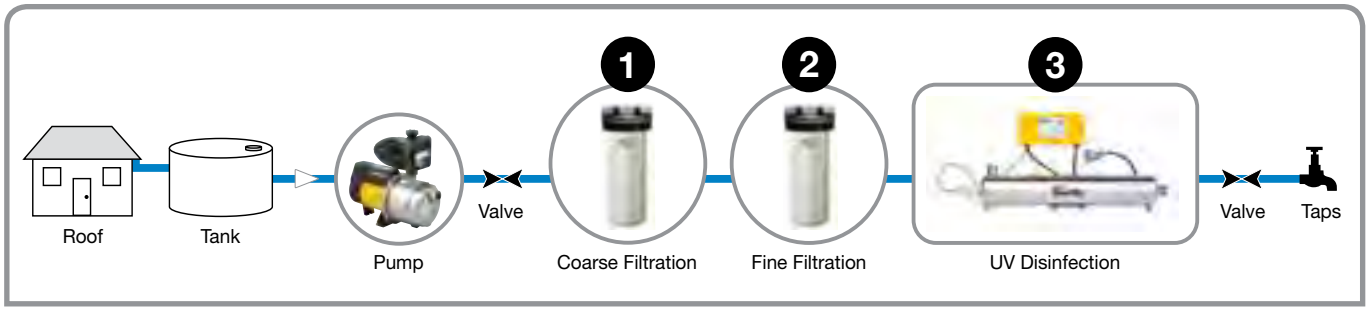
**Pressure Boosting and Treatment Packages**

Davey's Aquashield® MAX 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

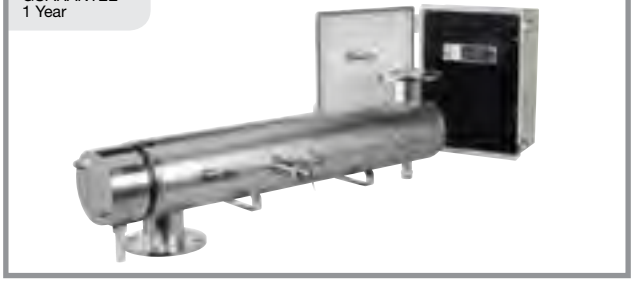
- Includes UV chamber and two stage filtration and housings. Optional pump lead included.
- Supplied as individual components for installation flexibility
- Whole house systems offered in 50, 70 and 130 lpm options for medium to large homes and light commercial applications
- Lamp Replacements - Life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


### 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


### Davey Steriflo® UVS

- All in one UV system incorporating integrated control with LED countdown display and system lights
- System powers down when not in use to extend lamp life
- Standard models to suit flows up to 50 and 70 lpm. UV sensor incorporated into the 120 lpm model for high flow or light commercial applications.
- Watermark approved models available on request. Price on application.




### 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 programable 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 $m^3$/hr

GUARANTEE
1 Year

20”Jumbo 10”Jumbo 10”

## 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<br>5 | ✓<br>✓ | ✓ | ✓<br>✓ | | | | | | | | |
| PS | 20<br>5<br>1 | | ✓ | ✓<br>✓<br>✓ | | | ✓ | | | | | |
| AC | 10<br>5<br>0.5 | | | ✓<br>✓<br>✓ | ✓<br>✓<br>✓ | ✓<br>✓<br>✓ | | ✓ | ✓<br>✓<br>✓ | ✓<br>✓<br>✓ | ✓<br>✓<br>✓ | |
| 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 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


## 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

# Shallow Well Jet Pumps

## For suction depths to 7.5 metres.

Davey's shallow well jet pumps, complete with a pressure switch or Torrium®2 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

165S
**165 lpm**

165S with
Pressure Tank
**165 lpm**

### 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

GUARANTEE
2 Years

095S1T
**95 lpm**

### Davey® Shallow Well with Torrium®2

- 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

GUARANTEE
2 Years

Prime Jet 240
**234 lpm**

### 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 / Delivery Head in **kPa**/psi / Output per minute in **litres**/gallons | | | | | | | | | | | | | | | | | | 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 | | | | |
| | | | | **260** | 38 | **280** | 41 | **340** | 49 | **380** | 55 | **410** | 59 | **480** | 70 | **550** | 80 | **620** | 90 | **660** | 96 | | | | |
| **95S** 1ph 1.6kW * 1.1kW ✪ 7.2A | 22690* Jet-Black Venturi-Green | **0** | 0 | **95** | 20.8 | **91** | 20.0 | **60** | 13.1 | **42** | 9.2 | **29** | 6.3 | | | | | | | | | **480** | 70 | | |
| | | **1.5** | 5 | **86** | 18.9 | **83** | 18.2 | **55** | 12.0 | **40** | 8.7 | **27** | 5.9 | | | | | | | | | **476** | 69 | **260** | 38 |
| | | **4.0** | 13 | **70** | 15.3 | **69** | 15.1 | **45** | 9.8 | **30** | 6.5 | **17** | 3.7 | | | | | | | | | **450** | 65 | **to** | to |
| | | **6.0** | 20 | **55** | 12.0 | **55** | 12.0 | **37** | 8.1 | **22** | 4.8 | **10** | 2.1 | | | | | | | | | **430** | 62 | **380** | 55 |
| | | **7.5** | 25 | **42** | 9.2 | **42** | 9.2 | **34** | 7.4 | **15** | 3.2 | | | | | | | | | | | **412** | 60 | | |
| | 22691 Jet-Brown Venturi-White | **0** | 0 | | | | | **65** | 14.2 | **53** | 11.6 | **46** | 10.1 | **31** | 6.8 | **19** | 4.1 | | | | | **680** | 98 | | |
| | | **1.5** | 5 | | | | | **60** | 13.1 | **50** | 10.9 | **43** | 9.4 | **29** | 6.3 | **17** | 3.7 | | | | | **670** | 97 | **340** | 49 |
| | | **4.0** | 13 | | | | | **48** | 10.5 | **41** | 9.0 | **35** | 7.6 | **24** | 5.2 | **14** | 3.0 | | | | | **645** | 93 | **to** | to |
| | | **6.0** | 20 | | | | | **38** | 8.3 | **37** | 8.1 | **32** | 7.0 | **21** | 4.6 | **11** | 2.4 | | | | | **630** | 91 | **510** | 74 |
| | | **7.5** | 25 | | | | | **31** | 6.8 | **31** | 6.8 | **28** | 6.1 | **20** | 4.3 | **10** | 2.1 | | | | | **620** | 90 | | |
| **125S** 1ph 2.1kW * 1.4kW ✪ 8.5A | 22693* Jet-Black Venturi-Black | **0** | 0 | **126** | 27.7 | **126** | 27.7 | **100** | 21.9 | **72** | 15.8 | **51** | 11.2 | | | | | | | | | **482** | 70 | | |
| | | **1.5** | 5 | **113** | 24.8 | **113** | 24.8 | **84** | 18.4 | **64** | 14.0 | **45** | 9.8 | | | | | | | | | **470** | 68 | **260** | 38 |
| | | **4.0** | 13 | **93** | 20.4 | **93** | 20.4 | **70** | 15.3 | **50** | 10.9 | **28** | 6.1 | | | | | | | | | **445** | 64 | **to** | to |
| | | **6.0** | 20 | **70** | 15.3 | **70** | 15.3 | **59** | 12.9 | **36** | 7.9 | **11** | 2.4 | | | | | | | | | **425** | 62 | **380** | 55 |
| | | **7.5** | 25 | **57** | 12.5 | **57** | 12.5 | **43** | 9.4 | **18** | 3.9 | | | | | | | | | | | **400** | 58 | | |
| | 22694 Jet-Green Venturi-Brown | **0** | 0 | | | | | **90** | 19.7 | **78** | 17.1 | **67** | 14.7 | **47** | 10.3 | **28** | 6.1 | | | | | **660** | 96 | | |
| | | **1.5** | 5 | | | | | **82** | 18.0 | **73** | 16.0 | **63** | 13.8 | **43** | 9.4 | **24** | 5.2 | | | | | **650** | 94 | **340** | 49 |
| | | **4.0** | 13 | | | | | **67** | 14.7 | **66** | 14.5 | **56** | 12.3 | **37** | 8.1 | **19** | 4.1 | | | | | **630** | 91 | **to** | to |
| | | **6.0** | 20 | | | | | **53** | 11.6 | **53** | 11.6 | **52** | 11.4 | **34** | 7.4 | **16** | 3.5 | | | | | **615** | 89 | **510** | 74 |
| | | **7.5** | 25 | | | | | **44** | 9.6 | **44** | 9.6 | **44** | 9.6 | **33** | 7.2 | **15** | 3.2 | | | | | **605** | 88 | | |
| | 22695 Jet-Yellow Venturi-White | **0** | 0 | | | | | | | | | **60** | 13.1 | **45** | 9.8 | **31** | 6.8 | **20** | 4.3 | | | **780** | 113 | | |
| | | **1.5** | 5 | | | | | | | | | **54** | 11.8 | **39** | 8.5 | **28** | 6.1 | **17** | 3.7 | | | **750** | 109 | **410** | 59 |
| | | **4.0** | 13 | | | | | | | | | **48** | 10.5 | **36** | 7.9 | **25** | 5.4 | **15** | 3.2 | | | **730** | 106 | **to** | to |
| | | **6.0** | 20 | | | | | | | | | **38** | 8.3 | **33** | 7.2 | **23** | 5.0 | **13** | 2.8 | | | **710** | 103 | **590** | 86 |
| | | **7.5** | 25 | | | | | | | | | **31** | 6.8 | **28** | 6.1 | **19** | 4.1 | **10** | 2.1 | | | **690** | 100 | | |
| **165S** 1ph 2.4kW * 1.8kW ✪ 10.0A 3ph 2.3kW * 1.8kW ✪ 4.2A | 22697* Jet-White Venturi-Yellow | **0** | 0 | **165** | 36.2 | **165** | 36.2 | **105** | 23.0 | **77** | 16.9 | **62** | 13.6 | | | | | | | | | **490** | 71 | | |
| | | **1.5** | 5 | **144** | 31.6 | **144** | 31.6 | **90** | 19.7 | **67** | 14.5 | **53** | 11.6 | | | | | | | | | **480** | 70 | **260** | 38 |
| | | **4.0** | 13 | **120** | 26.3 | **120** | 26.3 | **82** | 18.0 | **58** | 12.7 | **38** | 8.3 | | | | | | | | | **454** | 66 | **to** | to |
| | | **6.0** | 20 | **90** | 19.7 | **90** | 19.7 | **76** | 16.7 | **52** | 11.4 | **26** | 5.7 | | | | | | | | | **440** | 64 | **380** | 55 |
| | | **7.5** | 25 | **70** | 15.3 | **70** | 15.3 | **60** | 13.1 | **32** | 7.0 | | | | | | | | | | | **415** | 60 | | |
| | 22698 Jet-Red Venturi-Red | **0** | 0 | | | | | **112** | 24.6 | **88** | 19.3 | **76** | 16.7 | **51** | 11.2 | **26** | 5.7 | | | | | **630** | 91 | | |
| | | **1.5** | 5 | | | | | **100** | 21.9 | **82** | 18.0 | **71** | 15.6 | **47** | 10.3 | **22** | 4.8 | | | | | **622** | 90 | **340** | 49 |
| | | **4.0** | 13 | | | | | **88** | 19.3 | **75** | 16.4 | **64** | 14.0 | **41** | 9.0 | **16** | 3.5 | | | | | **598** | 87 | **to** | to |
| | | **6.0** | 20 | | | | | **70** | 15.3 | **64** | 14.0 | **57** | 12.5 | **32** | 7.0 | **8** | 1.7 | | | | | **572** | 83 | **510** | 74 |
| | | **7.5** | 25 | | | | | **54** | 11.8 | **54** | 11.8 | **50** | 10.9 | **26** | 5.7 | | | | | | | **552** | 80 | | |
| | 22699 Jet-Red Venturi-Green | **0** | 0 | | | | | | | | | | | **53** | 11.6 | **42** | 9.2 | **30** | 6.5 | **24** | 5.3 | **830** | 120 | | |
| | | **1.5** | 5 | | | | | | | | | | | **50** | 10.9 | **39** | 8.5 | **28** | 6.1 | **22** | 4.8 | **823** | 119 | **480** | 70 |
| | | **4.0** | 13 | | | | | | | | | | | **48** | 10.5 | **36** | 7.9 | **25** | 5.4 | **20** | 4.4 | **805** | 117 | **to** | to |
| | | **6.0** | 20 | | | | | | | | | | | **43** | 9.4 | **34** | 7.4 | **23** | 5.0 | **17** | 3.7 | **795** | 115 | **660** | 96 |
| | | **7.5** | 25 | | | | | | | | | | | **34** | 7.6 | **32** | 7.0 | **21** | 4.6 | **16** | 3.5 | **778** | 113 | | |
| **Prime Jet 240** 1ph 3.2kW * 2.5kW ✪ 14.0A 3ph 3.0kW * 2.3kW ✪ 5.1A | 22680 Jet- P/No 6076-11 Venturi- P/No 6075-8 | **0** | 0 | | | **228** | 50.1 | **164** | 36.0 | **130** | 28.5 | | | | | | | | | | | **470** | 68 | | |
| | | **1.5** | 5 | | | **208** | 45.7 | **150** | 32.9 | **112** | 24.6 | | | | | | | | | | | **455** | 66 | **240** | 35 |
| | | **4.0** | 13 | | | **165** | 36.2 | **114** | 25.0 | **75** | 16.4 | | | | | | | | | | | **435** | 63 | **to** | to |
| | | **6.0** | 20 | | | **132** | 29.0 | **82** | 18.0 | **46** | 10.1 | | | | | | | | | | | **415** | 60 | **370** | 54 |
| | | **7.5** | 25 | | | **108** | 23.7 | **64** | 14.0 | **31** | 6.8 | | | | | | | | | | | **405** | 59 | | |
| | 22681 Jet- P/No 6076-4 Venturi- P/No 6075-5 | **0** | 0 | **234** | 51.5 | **192** | 42.2 | **178** | 39.1 | **157** | 34.5 | **128** | 28.1 | **78** | 17.1 | | | | | | | **570** | 83 | | |
| | | **1.5** | 5 | **211** | 46.4 | **170** | 37.3 | **164** | 36.0 | **146** | 32.1 | **114** | 25.0 | **64** | 14.0 | | | | | | | **555** | 80 | **300** | 44 |
| | | **4.0** | 13 | **167** | 36.7 | **134** | 29.4 | **127** | 27.9 | **118** | 25.9 | **88** | 19.3 | **45** | 9.8 | | | | | | | **535** | 78 | **to** | to |
| | | **6.0** | 20 | **133** | 29.3 | **108** | 23.7 | **104** | 22.8 | **98** | 21.5 | **74** | 16.2 | **34** | 7.4 | | | | | | | **515** | 75 | **470** | 68 |
| | | **7.5** | 25 | **108** | 23.7 | **86** | 18.9 | **86** | 18.9 | **86** | 18.9 | **66** | 14.5 | **22** | 4.8 | | | | | | | **500** | 73 | | |
| | 22682 Jet- P/No 6076-7 Venturi- P/No 6075-9 | **0** | 0 | | | | | | | | | **130** | 28.5 | **110** | 24.1 | **78** | 17.1 | **46** | 10.1 | | | **735** | 107 | | |
| | | **1.5** | 5 | | | | | | | | | **117** | 25.7 | **98** | 21.5 | **66** | 14.5 | **36** | 7.9 | | | **710** | 103 | **400** | 58 |
| | | **4.0** | 13 | | | | | | | | | **94** | 20.6 | **81** | 17.8 | **48** | 10.5 | **19** | 4.1 | | | **670** | 97 | **to** | to |
| | | **6.0** | 20 | | | | | | | | | **75** | 16.4 | **68** | 14.9 | **36** | 7.9 | **6** | 1.3 | | | **635** | 92 | **590** | 86 |
| | | **7.5** | 25 | | | | | | | | | **62** | 13.6 | **58** | 12.7 | **28** | 6.1 | | | | | **610** | 88 | | |
| | 22683 Jet- P/No 6076-8 Venturi- P/No 6075-10 | **0** | 0 | | | | | | | | | | | **101** | 22.2 | **77** | 16.9 | **50** | 10.9 | **41** | 9.1 | **790** | 115 | | |
| | | **1.5** | 5 | | | | | | | | | | | **90** | 19.7 | **74** | 16.2 | **46** | 10.1 | **35** | 7.8 | **770** | 112 | **500** | 73 |
| | | **4.0** | 13 | | | | | | | | | | | **72** | 18.8 | **58** | 12.7 | **34** | 7.4 | **25** | 5.6 | **740** | 107 | **to** | to |
| | | **6.0** | 20 | | | | | | | | | | | **57** | 12.5 | **48** | 10.5 | **26** | 5.7 | **18** | 4.0 | **720** | 104 | **690** | 100 |
| | | **7.5** | 25 | | | | | | | | | | | **34** | 7.4 | **45** | 9.8 | **21** | 4.6 | **13** | 2.9 | **700** | 102 | | |

★ Input kW ($P_1$) ✪ Output kW ($P_2$)

## 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 – 1½" (38 mm) BSPP Female. Outlet – 1¼" (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, IP 56, 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 194lpm from shallower depths.

165D

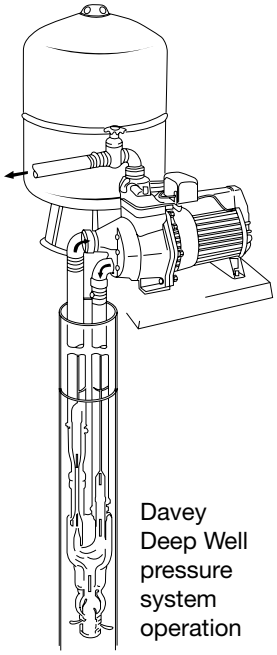
**122 lpm**

Prime Jet 240

**194 lpm**

165D with Pressure Tank

**122 lpm**



Davey Deep Well pressure system operation

## DEEP WELL PUMPS

| Pump Model | Injector Kit No. / Nominal Bore Size | *Max Shut Off Pressure kPa | psi | Outlet Pressure kPa | psi | 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 | | | | | | | | | | | | | | |
| **95D** 1ph 1.6kW ★ 1.1kW ✪ 7.2A | 22469 (4") 100mm | 550 | 80 | 140 280 420 | 20 40 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 | 46 10.1 25 5.4 | | | | | | | | | | |
| | 22470 (4") 100mm | 645 | 93 | 140 280 420 | 20 40 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 | 23 5.0 16 3.5 | 18 3.9 13 2.8 | | | | | | |
| **125D** 1ph 2.1kW ★ 1.4kW ✪ 8.5A | 22471 (4") 100mm | 575 | 83 | 210 280 420 | 30 40 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 | | | | | | | | | | |
| | 22472 (4") 100mm | 660 | 96 | 210 350 480 | 30 50 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 24 5.2 10 2.1 | 36 7.9 21 4.6 | 29 6.3 18 3.9 | 25 5.4 14 3.0 | 22 4.8 11 2.4 | | | | | | |
| | 22570 (5") 125mm | 650 | 94 | 210 350 480 | 30 50 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 | 37 8.1 19 4.1 | 32 7.0 15 3.2 | 27 5.9 11 2.4 | 21 4.6 | | | | |
| **165D** 1ph 2.4kW ★ 1.8kW ✪ 10.0A 3ph 2.3kW ★ 1.8kW ✪ 4.2A | 22473 (4") 100mm | 620 | 90 | 210 350 480 | 30 50 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 | 48 10.5 23 5.0 | | | | | | | | | |
| | 22474 (4") 100mm | 635 | 92 | 210 350 480 | 30 50 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 | 35 7.6 20 4.3 | 27 5.9 16 3.5 | 24 5.2 12 2.6 | | | | | | |
| | 22475 (4") 100mm | 750 | 109 | 210 350 480 | 30 50 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 | 17 3.7 13 2.8 | 15 3.2 11 2.4 | 12 2.6 9 1.9 | | |
| | 22571 (5") 125mm | 590 | 86 | 210 350 480 | 30 50 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 | 70 15.3 29 6.3 | 56 12.3 20 4.3 | | | | | | | | | |
| | 22572 (5") 125mm | 630 | 91 | 210 350 480 | 30 50 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 | 37 8.1 20 4.3 | 31 6.8 15 3.2 | | | | | |
| | 22573 (5") 125mm | 540 | 78 | 210 280 350 | 30 40 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 | 12 2.6 10 2.1 | | |
| **Prime Jet 240** 1ph 3.2kW ★ 2.5kW ✪ 14.0A 3ph 3.0kW ★ 2.3kW ✪ 5.1A | 22427 (4") 100mm | 550 | 80 | 210 350 480 | 30 50 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 | 81 17.8 45 9.8 | 59 12.9 39 8.5 | | | | | | | | | | |
| | 22428 (4") 100mm | 815 | 118 | 210 350 480 | 30 50 70 | | 53 11.6 27 5.9 | 81 17.8 75 16.4 45 9.8 21 4.6 | 77 16.9 67 14.7 37 8.1 15 3.2 | 72 15.8 57 12.5 30 6.5 9 1.9 | 60 13.0 47 10.3 22 4.8 | 48 10.5 37 8.1 16 3.5 | 40 8.7 29 6.3 9 1.9 | 32 7.0 22 4.8 | | | | | | |
| | 22566 (5") 125mm | 525 | 76 | 210 350 480 | 30 50 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 | 210 350 480 | 30 50 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 | 84 18.4 48 10.5 | 64 14.0 28 6.1 | | | | | | | | |
| | 22568/22468 (5") 125mm (4") 100mm | 830 | 120 | 210 350 480 620 | 30 50 70 90 | | 69 15.1 35 7.6 | 101 22.2 96 21.1 61 13.4 29 6.3 | 95 20.8 86 18.9 51 11.2 21 4.6 | 88 19.3 73 16.0 41 9.0 15 3.2 | 82 18.0 64 14.0 33 7.2 9 1.9 | 71 15.6 54 11.8 26 5.7 | 62 13.6 45 9.8 19 4.1 | 51 11.2 37 8.1 12 2.6 | 41 9.0 29 6.3 | | | | | |
| | 22569 (5") 125mm | 830 | 120 | 210 350 480 620 | 30 50 70 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 ($P_1$) ✪ Output kW ($P_2$)

## Important Information

- Pump outlet: 1¼" (32 mm) BSPP Female. 'Automatic Demand Response' valve fitted as standard on all models.
- Suction pipe sizes: 1½" and 1¼" I.D imperial polypipe for injector kit nos 22469 – 22475 and 22427 – 22428. 2" and 1½" I.D Imperial polypipe for injector kit nos 22570 – 22573 and 22566 – 22569. 2" and 1¼" I.D Imperial polypipe for injector kit no. 22468.
- Max. shut-off pressures are at shallowest depth to water for each injector. Reduce by 10kPa for every 1 metre of extra depth to water.
- All performances are with injector submergence of 3m and minimum pipe length of 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 Water Transfer Pumps

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


XF192

## **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°.


HP45-05

## **HP** Series

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


CY70

## **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 80ºC for vat cleaning.


X201

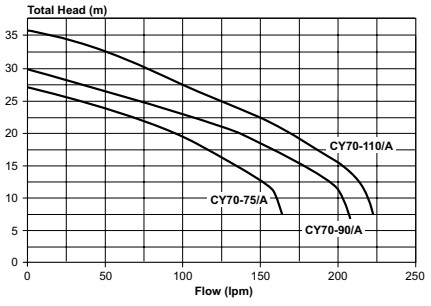
## **Dynaprime**® X201 Self Priming Pump

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.

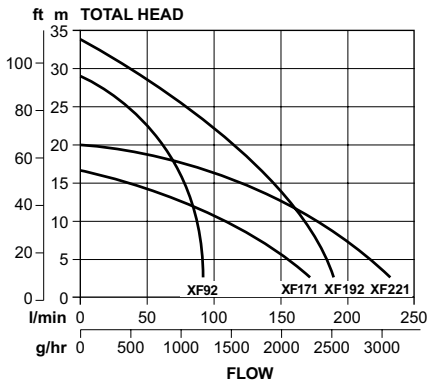
Motor kW input – (P1) 0.92

Motor kW output – (P2) 0.63

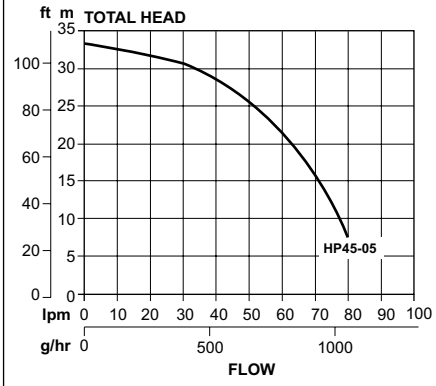
**CY HYDRAULIC PERFORMANCE**



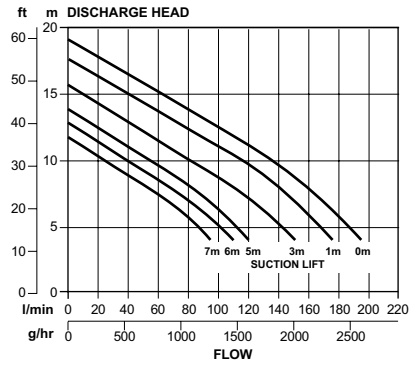

**XF HYDRAULIC PERFORMANCE**




**HP HYDRAULIC PERFORMANCE**




**X201 HYDRAULIC PERFORMANCE**




**PERFORMANCE**

| Model | Motor (kW) Input (P1) | Motor (kW) Output (P2) | Max Total Head (m) | Total Head (metres) 5 | 10 | 15 | 20 | 25 | 30 | Connection Inlet/Outlet BSPP |
|---|---|---|---|---|---|---|---|---|---|---|
| | | | | 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 | 1¼"F/1"F |
| **X201** | 0.92 | 0.63 | 19 | 190 | 140 | 60 | | | | 1¼"F/1¼"F |
| **CY70-75/A** | | 0.75 | 27 | | 160 | 135 | 90 | 35 | | 1¼"F/1"F |
| **CY70-90/A** | | 0.90 | 30 | | 205 | 175 | 135 | 75 | 0 | 1¼"F/1"F |
| **CY70-110/A** | | 1.10 | 36 | | 220 | 210 | 170 | 125 | 75 | 1¼"F/1"F |

6200 / 6210

6220 / 6230

## Dynaflo® 6000 & SS Series

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

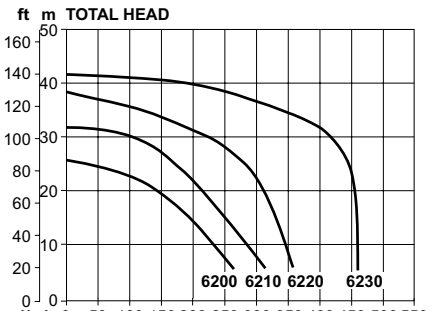
Manufactured to the highest standards, Davey Dynaflo pumps provide high capacity, efficient and reliable water supply for applications which demand flows up to 457 litres/min, or heads up to 41metres.

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

6220SS / 6230SS

The Dynaflo 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 Dynaflo SS range is excellent for applications in Aquaculture, Marine, Hydroponics, etc.

### HYDRAULIC PERFORMANCE




### Dynaflo® PERFORMANCE

| Model | Motor (kW) In (P1) | Motor (kW) Out P2) | Max Total Head m) | Total Head **metres**/feet | | | | | | | | | | | | | | Connection Inlet/Outlet BSP |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | **5** 16.4 | **10** 32.8 | **15** 49.2 | **20** 65.6 | **25** 82.0 | **30** 98.4 | **35** 114.3 | **40** 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 | | | | | | | | | | 1¹/₂"F/1¹/₄"F |
| **6210** | 2.1 | 1.6 | 31.6 | **314** 4144 | **283** 3735 | **248** 3273 | **212** 2798 | **167** 2204 | **100** 1320 | | | | | | | | | 1¹/₂"F/1¹/₄"F |
| **6220** | 3.2 | 2.4 | 38.7 | **356** 4699 | **344** 4540 | **327** 4316 | **309** 4079 | **280** 3696 | **212** 2798 | **115** 1518 | | | | | | | | 2"F/1¹/₂"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/1¹/₂"F |

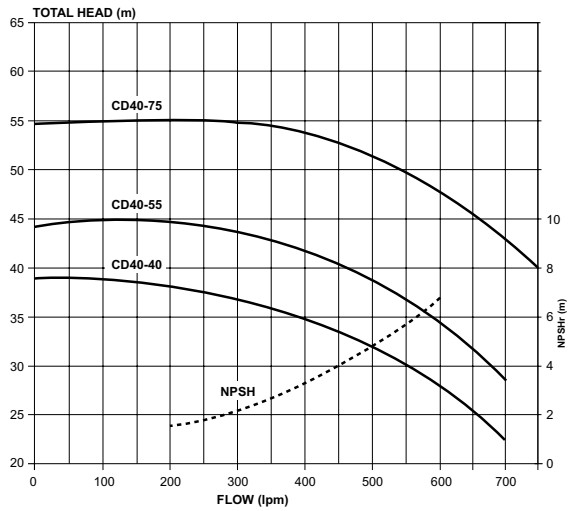
6200 available in single phase only, 6210/6220 available in single phase or 3 phrase, 6230 available in 3 phase only.

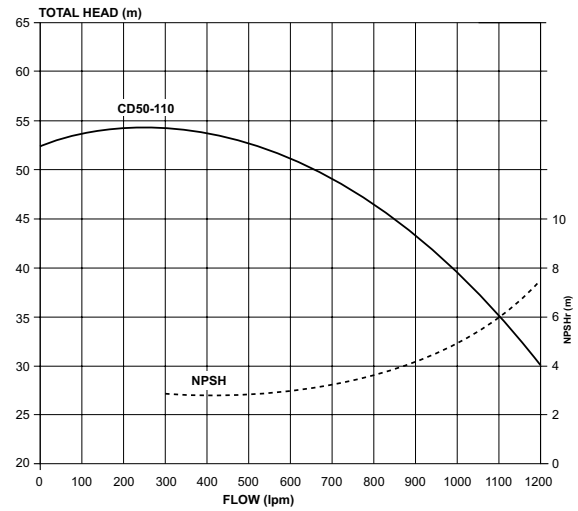
GUARANTEE
1 Year

## CD Washdown Pumps

- Cast iron single stage centrifugal pumps up to 600 lpm.
- Pumping of clean, non-aggressive liquids typically in agricultural and industrial applications

### HYDRAULIC PERFORMANCE



# 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.

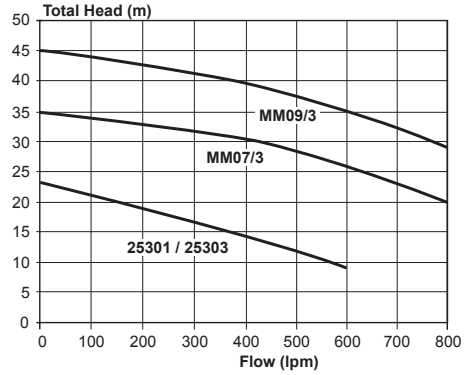
25301 / 25303


MM04/3
MM05/3
MM07/3

## 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).

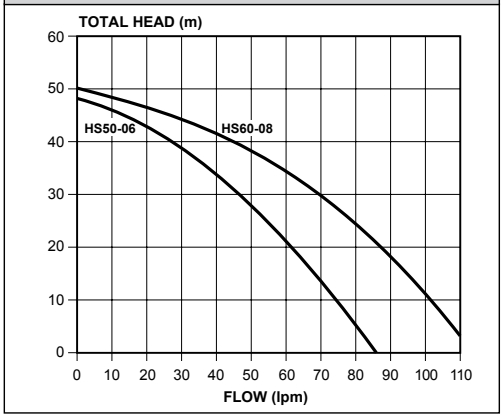
**HYDRAULIC PERFORMANCE**




**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 |

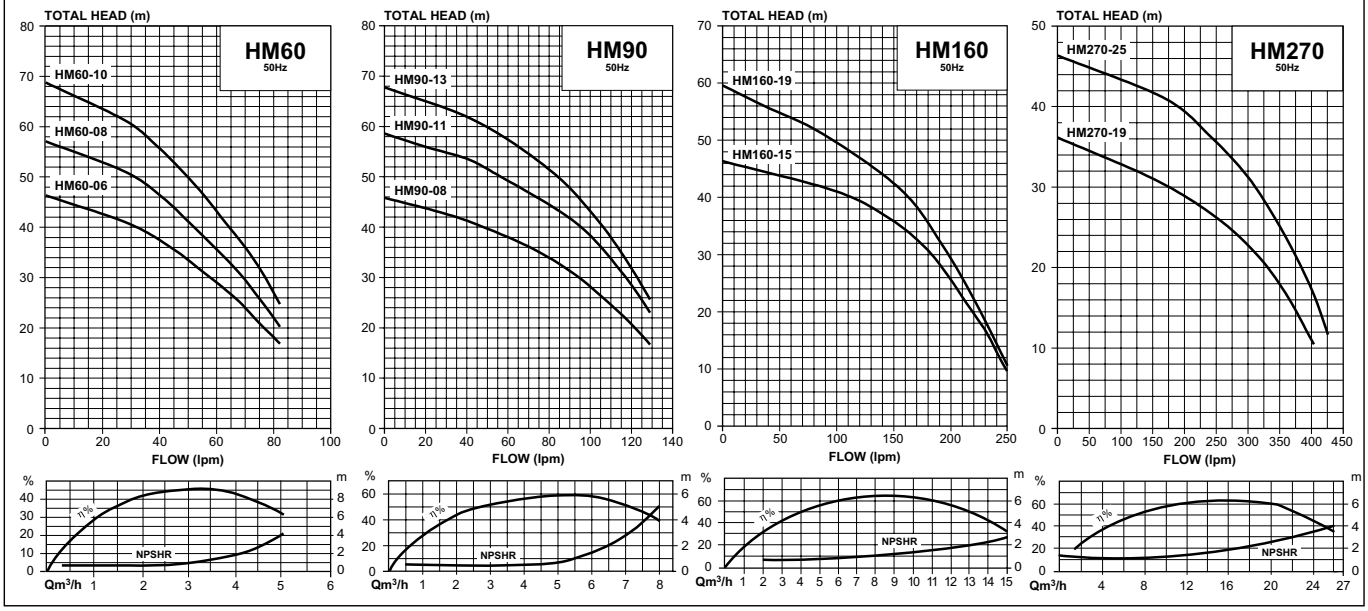
## HS HYDRAULIC PERFORMANCE




## Dynaflo® HS SERIES PERFORMANCE

| Model (220-240V 1phase 50Hz) | Motor kW Input ($P_1$) | Motor kW Output ($P_2$) | Stages | Connections BSP(F) Inlet | Connections BSP(F) Outlet |
|---|---|---|---|---|---|
| HS50-06 | 0.89 | 0.60 | 4 | 1¼" | 1" |
| HS60-08 | 1.1 | 0.76 | 4 | 1¼" | 1" |

## HM HYDRAULIC PERFORMANCE




## HM SERIES PERFORMANCE

| Model – 1phase | Model – 3phase | Stages | Flow (lpm) @ BEP | kW ($P_2$) | Inlet | Outlet |
|---|---|---|---|---|---|---|
| **HM60-06** | **HM60-06/3** | 4 | 60 | 0.58 | 1" | 1" |
| **HM60-08** | **HM60-08/3** | 5 | 60 | 0.72 | 1" | 1" |
| **HM60-10** | **HM60-10/3** | 6 | 60 | 0.94 | 1" | 1" |
| **HM90-08** | **HM90-08/3** | 4 | 90 | 0.78 | 1¼" | 1" |
| **HM90-11** | **HM90-11/3** | 5 | 90 | 1.05 | 1¼" | 1" |
| **HM90-13** | **HM90-13/3** | 6 | 90 | 1.4 | 1¼" | 1" |
| **HM160-15** | **HM160-15/3** | 4 | 160 | 1.5 | 1½" | 1¼" |
| **HM160-19** | **HM160-19/3** | 5 | 160 | 1.8 | 1½" | 1¼" |
| **HM270-19** | **HM270-19/3** | 3 | 270 | 1.9 | 2" | 1½" |
| **HM270-25** | **HM270-25/3** | 4 | 270 | 2.5 | 2" | 1½" |

# Horizontal Multistage Pumps

Dynaflo® HS

Dynaflo® HS with Torrium®2

## Dynaflo® HS

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

Available in four stage models with pressures up to 50 metres, and flows up to 110 lpm, the Dynaflo® HS models are ideal for a wide range of applications including:

- High tank filling
- Sprinkler system supply
- Mains boosting (subject to local regulations)
- Industrial water supply
- Home pressure systems

HM Series with TEFC Motor

HM Series with Pressure Switch

HM Series with Torrium®2

## 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.

# Spearpoint Pumps

XJ70

## XJ Series

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

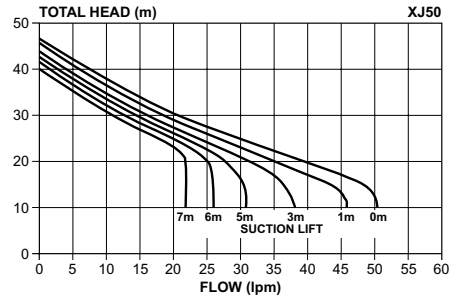
- Ideal for domestic irrigation from shallow wells or sand spears
- Overhead or high tank filling
- Pressure boosting
- Water transfer

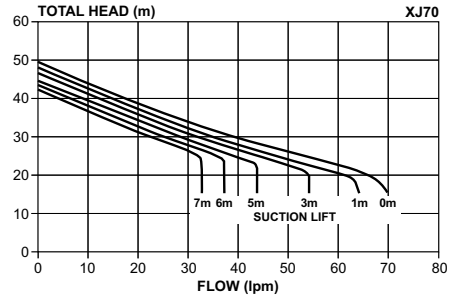
**PUMP**
Single stage jet assisted centrifugal with closed vane impeller.
Brass pump shaft sleeve.
Mechanical shaft seal.

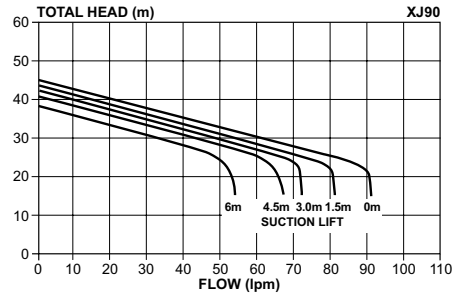
**MOTOR**
Davey manufactured.
2 pole, 2850rpm, 50Hz.
TEFC with IP55 enclosure.
Class F insulation.
Permanently split capacitor design.
Double contact sealed C3-HTG rated ball bearings.
Protected against both high operating temperatures and high current by a built-in automatically resetting thermal overload.
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.

**XJ HYDRAULIC 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.

5155H with Honda GX160 Engine

5255H with Honda GX160 Engine

5150P Bare Shaft Single Stage

5250P Bare Shaft Twin Stage

**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.

## Davey Firefighter®/Floodfighter®/Poly Pump Selection Guide

**FOR EASY IDENTIFICATION:**
- **Twin Stage Firefighter®** models have **Red** casings
- **Single Stage Firefighter®** models have **Yellow** casings

PRESSURE

| | | | | |
|---|---|---|---|---|
| **High Pressure** 70 to 120 metres | Firefighter® Twin Stage | Firefighter® High Powered Twin Stage | | |
| **Medium Pressure** 30 to 70 metres | | Firefighter® Single Stage | Firefighter® High Powered Single Stage | |
| **Low Pressure** Up to 30 metres | | | Floodfighter® | Floodfighter® Jumbo |
| | NEW 2" Poly Pump | | | |
| | **MEDIUM FLOW** up to 350 lpm | **HIGH FLOW** up to 500 lpm | **EXTRA HIGH FLOW** up to 1000 lpm | **SUPER FLOW** up to 2200 lpm |

FLOW

**Select the right pump for your property**

**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.

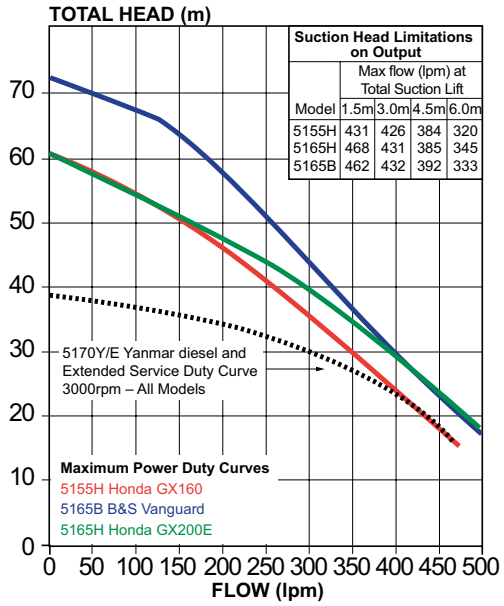
**Hand or Electric Start**
Firefighters® are available in hand (recoil) or electric start models. All electric start models (12V, 30Amp hour battery and leads required) come fitted with hand start mechanism so they can be started in the case of a flat battery.

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



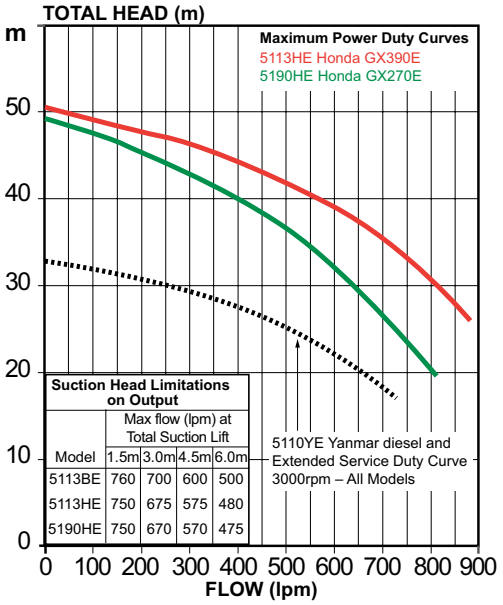



## Firefighter® SINGLE STAGE PERFORMANCE



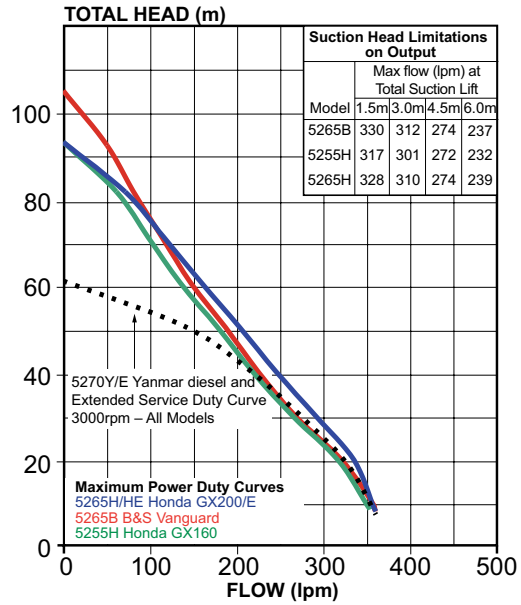

| Suction Head Limitations on Output | Max flow (lpm) at Total Suction Lift | | | |
|---|---|---|---|---|
| Model | 1.5m | 3.0m | 4.5m | 6.0m |
| 5155H | 431 | 426 | 384 | 320 |
| 5165H | 468 | 431 | 385 | 345 |
| 5165B | 462 | 432 | 392 | 333 |

## Firefighter® SINGLE STAGE PERFORMANCE



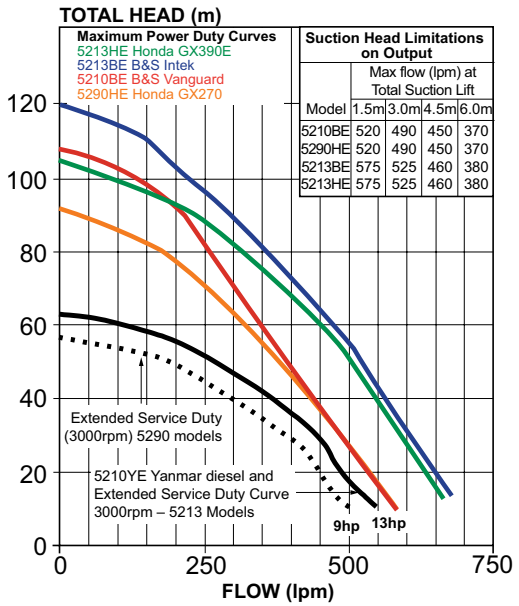

| Suction Head Limitations on Output | Max flow (lpm) at Total Suction Lift | | | |
|---|---|---|---|---|
| Model | 1.5m | 3.0m | 4.5m | 6.0m |
| 5113BE | 760 | 700 | 600 | 500 |
| 5113HE | 750 | 675 | 575 | 480 |
| 5190HE | 750 | 670 | 570 | 475 |

## Firefighter® TWIN STAGE PERFORMANCE




| Suction Head Limitations on Output | Max flow (lpm) at Total Suction Lift | | | |
|---|---|---|---|---|
| Model | 1.5m | 3.0m | 4.5m | 6.0m |
| 5265B | 330 | 312 | 274 | 237 |
| 5255H | 317 | 301 | 272 | 232 |
| 5265H | 328 | 310 | 274 | 239 |

## Firefighter® TWIN STAGE PERFORMANCE

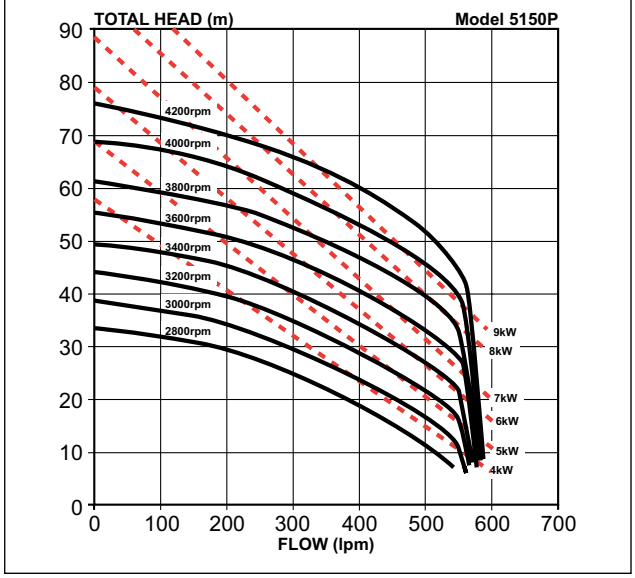



| Suction Head Limitations on Output | Max flow (lpm) at Total Suction Lift | | | |
|---|---|---|---|---|
| Model | 1.5m | 3.0m | 4.5m | 6.0m |
| 5210BE | 520 | 490 | 450 | 370 |
| 5290HE | 520 | 490 | 450 | 370 |
| 5213BE | 575 | 525 | 460 | 380 |
| 5213HE | 575 | 525 | 460 | 380 |

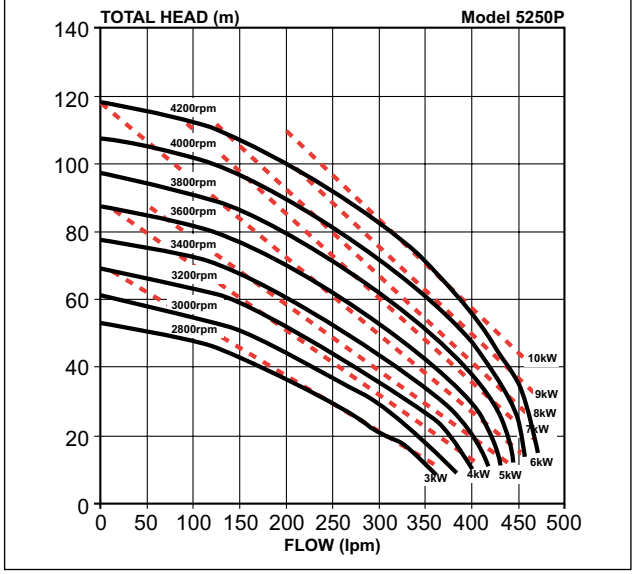
## ENGINE OPTIONS

| Model | Petrol Engine Options | | | | | | | Diesel Engine Options | |
|---|---|---|---|---|---|---|---|---|---|
| | Honda | | | | Briggs & Stratton | | | | |
| | GX160 | GX200 | GX270 | GX390 | Vanguard | Vanguard | Intek | L70N | L100N |
| **Firefighter® Single Stage** | 5155H<br>5155H23W | 5165H<br>5165HV13W<br>5165H23W<br>5165HV3<br>5165HE | 5190HE | 5113HE | 5165B | – | – | 5170Y<br>5170YE | 5110YE |
| **Firefighter® Twin Stage** | 5255H<br>5255H23W | 5265H<br>5265HV13W<br>5265H23W<br>5265HV3<br>5265HE | 5290HE | 5213HE | 5260B | 5210BE | 5213BE | 5270Y<br>5270YE | 5210YE<br>5210YE/HP |
| **Displacement (cc)** | 163 | 196 | 270 | 389 | 182 | 296 | 391 | 296 | 406 |
| **"Out of box" governed max engine speed @ no load** | 3800 rpm | | | | 4200 rpm | | | 3000 rpm | |
| **Fuel tank (litres)** | 3.6 | 3.6 | 6 | 6.5 | 4 | 6 | 7.9 | 3.5 | 5.5 |
| **Running time per tank @ full load @ 3600 rpm** | 1.73 hrs | 2.05 hrs | 1.9 hrs | 2 hrs | 1.93 hrs | 1.9 hrs | 1.7 hrs | 1.6 hrs | 2.5 hrs |
| **Low oil protection** | YES | | | | | | | NO | |
| **Exhaust spark arrestor YES/NO** – optional from engine dealers | YES | | | | | | | NO | |
| **dBa @ 3600 rpm @ full load** | 85 @ 4m | 86 @ 4m | 79 @ 7m | 78 @ 7m | 75 @ 4m | 79 @ 4m | 81.5 @ 4m | 80.5 @ 7m | 82.5 @ 7m |

**Firefighter® SINGLE IMPELLER BARE SHAFT PUMP PERFORMANCE**




**Firefighter® TWIN IMPELLER BARE SHAFT PUMP PERFORMANCE**




# 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

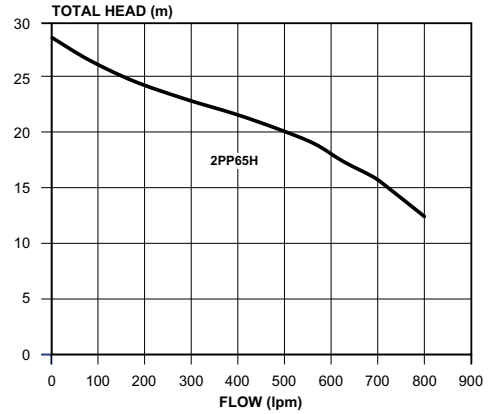
# 2" Poly Pump

NEW

## 2" Poly Pump

- Constructed of strong 30% glass filled polyester component s 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

**HYDRAULIC PERFORMANCE**

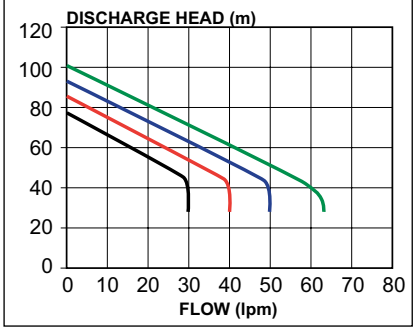


# Firefighter® with Deep Well Injector Kits

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

Recommended min. Deep Well Firefighter® Pipe Sizes

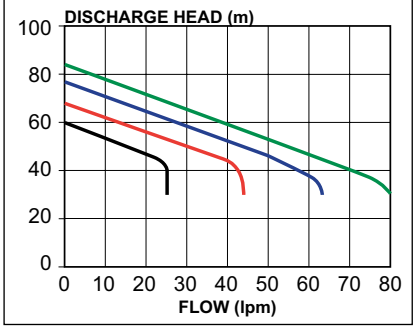
| Model Injector | Injector Body No. | Drive Pipe | Suction Pipe |
|---|---|---|---|
| 29429 | 23300 | 1¼" Class B poly or 40mm PN6 poly | 1½" Class B poly or 50mm PN6 poly |




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

Recommended min. Deep Well Firefighter® Pipe Sizes

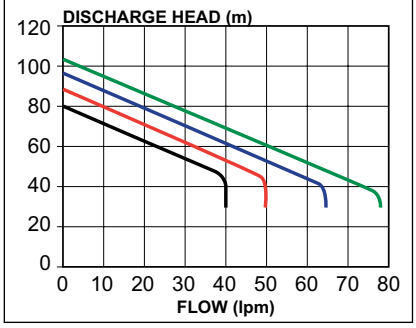
| Model Injector | Injector Body No. | Drive Pipe | Suction Pipe |
|---|---|---|---|
| 29468 | 23300 | 1¼" Class B poly or 40mm PN6 poly | 2" Class B poly or 63mm PN6 poly |




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

Recommended min. Deep Well Firefighter® Pipe Sizes

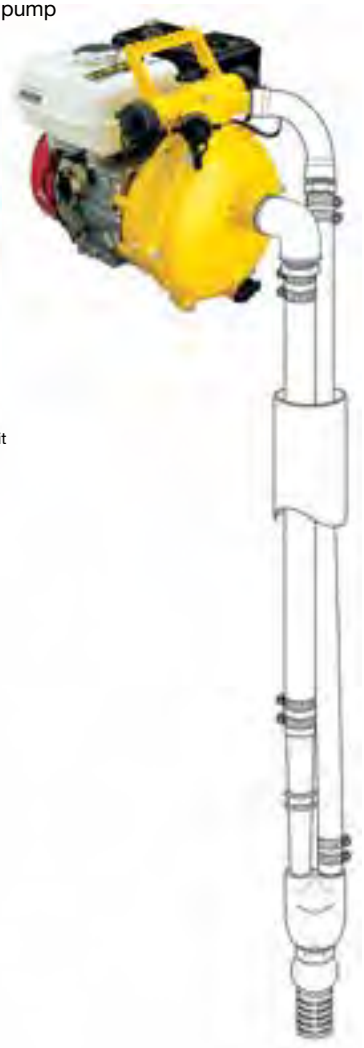
| Model Injector | Injector Body No. | Drive Pipe | Suction Pipe |
|---|---|---|---|
| 29569 | 23301 | 1½" Class B poly or 50mm PN6 poly | 2" Class B poly or 63mm PN6 poly |




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

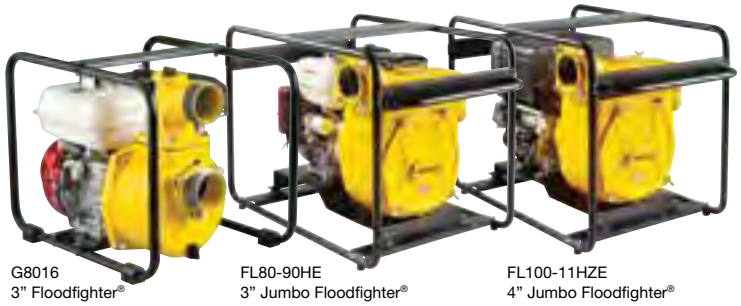

## Portable Deep Well Kits

• Turn your Firefighter® into a portable deep well pump

Davey Deep Well Firefighter®

# Floodfighter™ Pumps



G8016
3" Floodfighter®

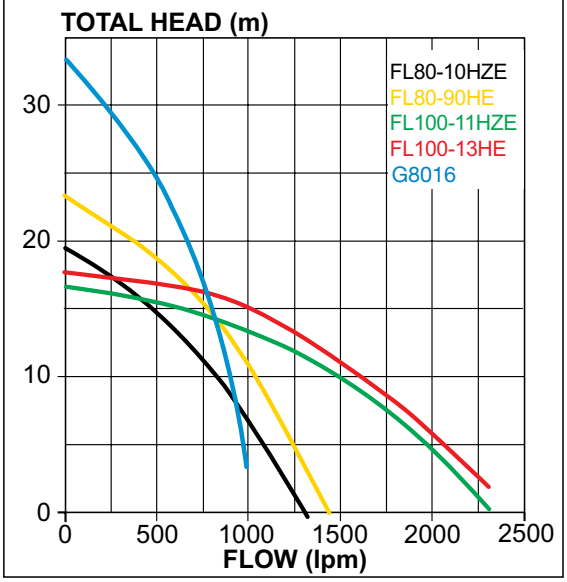
FL80-90HE
3" Jumbo Floodfighter®

FL100-11HZE
4" Jumbo Floodfighter®

**Floodfighter**

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

**Jumbo Floodfighter® PERFORMANCE**



# 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.

These pumps applications include domestic water supply, turf watering, irrigation, stock watering and dewatering.

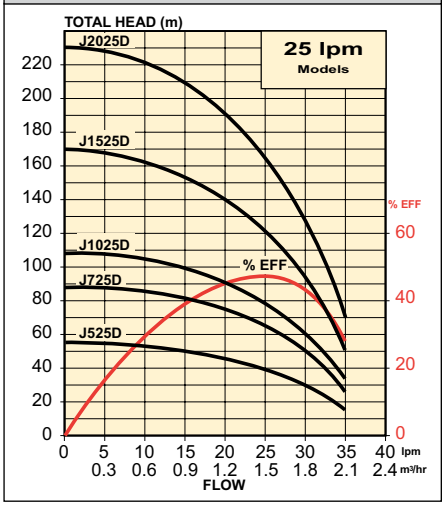
**Features**
- Precision stainless steel outer (2mm thick).
- Stainless steel thrust rings, lead guard and suction screen.
- Standard 2 pole speed motor (2850 rpm).
- Abrasive resistant internal shaft bearings.
- Cast stainless steel discharge head with in-built check valve.

**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.

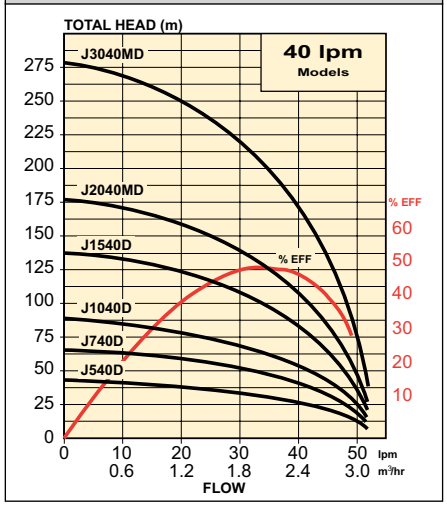
**COMPLETE KIT COMPONENT GUIDE FOR 100mm (4") J SERIES BOREHOLE PUMPS**

| | Davey Rewindable Motors | | | | Davey Encapsulated Motors | | | | Cable Splice Kit | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Motor kW ($P_2$) | 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 |

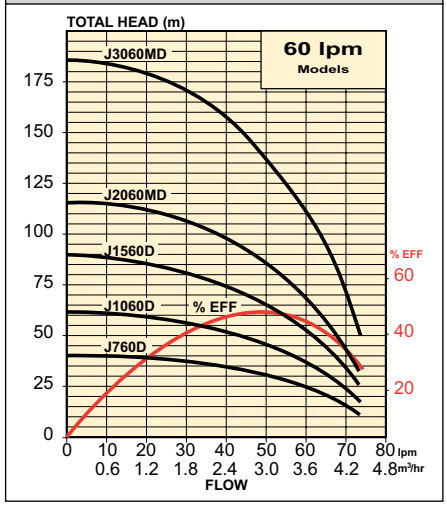
## J Series – 25lpm PERFORMANCE



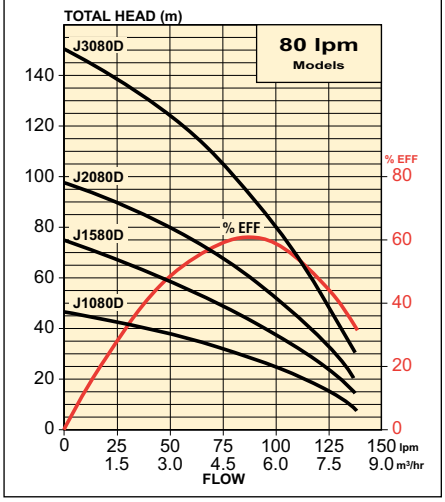

## J Series – 40lpm PERFORMANCE



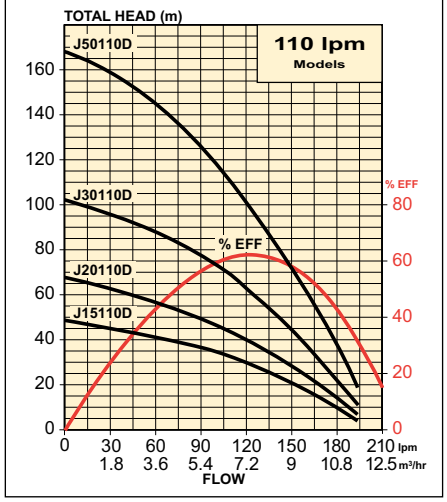

## J Series – 60lpm PERFORMANCE



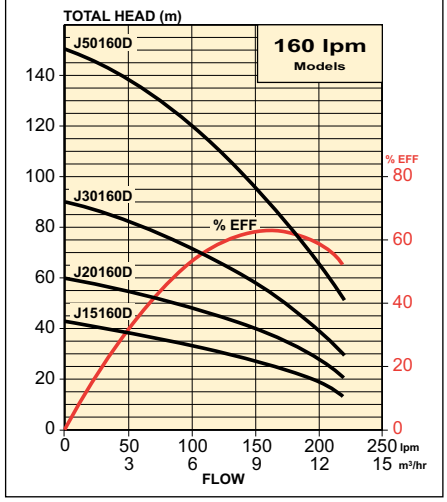

## J Series – 80lpm PERFORMANCE



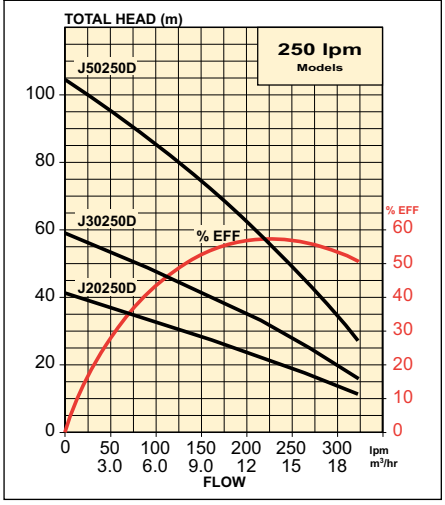

## J Series – 110lpm PERFORMANCE




## J Series – 160lpm PERFORMANCE




## J Series – 250lpm PERFORMANCE



# 6" Submersible Borehole Pumps

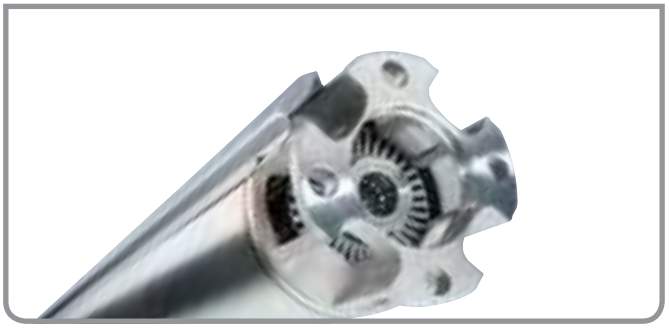
Advanced, laser welding, stainless steel manufacturing technology results in state of the art 6" submersible borehole pumps.

Close coupled to NEMA standard submersible electric motors, they are designed for flow rates up to 80m³/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 30m³/hr models and axial flow impellers for 46 & 65m³/hr models for increased performance
- Excellent sand handling capacity at 100g/m³ 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 80m³/hr
- Heads to 210m
- Coupling with NEMA standard motors
- Water temperature up to 50°C
- Maximum sand handling 100g/m³



# Rewindable Motors

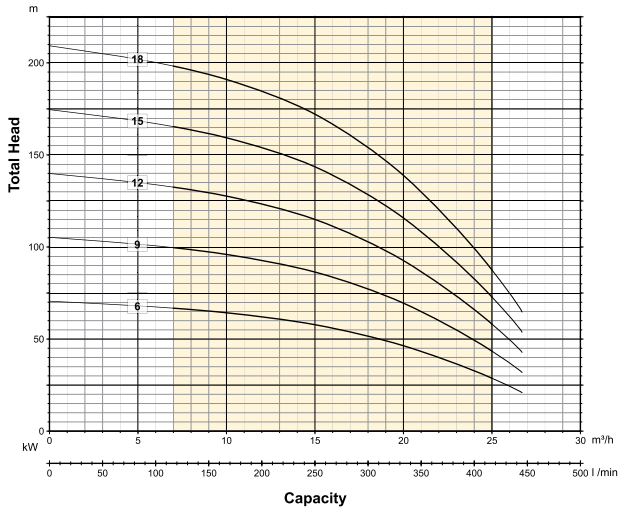
**4" Rewindable Motors (suit 6" pumps with adaptor)**

| Motor kW ($P_2$) | Davey Rewindable Motor Only | Davey Encapsulated Motor Only |
|---|---|---|
| 4.0 | DM3400 | DME3400 |
| 5.5 | DM3550 | DME3550 |
| 7.5 | DM3750 | |

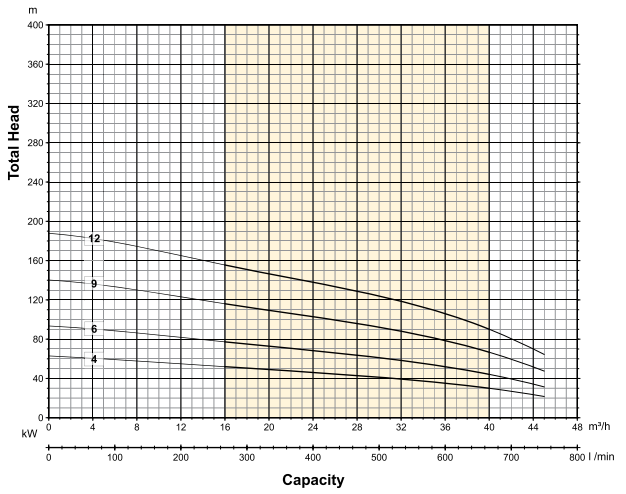
**6" Rewindable Motors**
- Rewindable (DM) motors to suit 6" borehole pumps
- Sturdy construction with 304 stainless steel casing and internals with a 316 stainless steel upper bracket for excellent corrosion resistance
- Comes standard with a hard face mechanical seal (SiC/Al) for increased motor life
- 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 ($P_2$) | Davey Rewindable Motor Only |
|---|---|
| 9.3 | DM6093 |
| 11.0 | DM6110 |
| 15.0 | DM6150 |
| 18.0 | DM6185 |
| 22.0 | DM6220 |

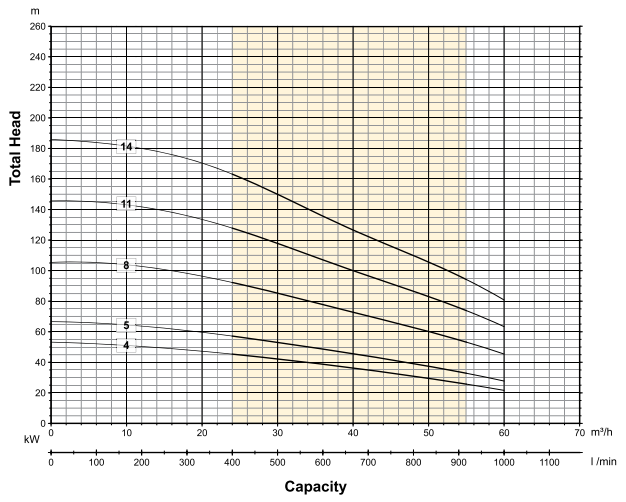
## SS19 Series PERFORMANCE



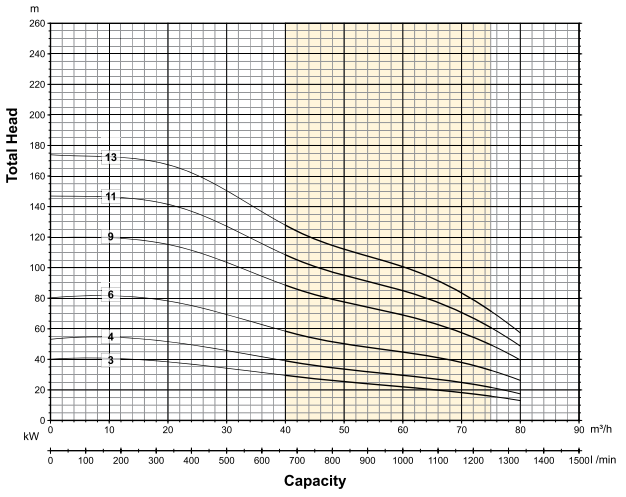

## SS30 Series PERFORMANCE




## SS46 Series PERFORMANCE




## SS65 Series PERFORMANCE



# Vertical Multistage Pumps

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 0.4m³/hr to 80m³/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.


**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 -15ºC to +70ºC.

**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 ($P_2$) | | |
| 0.75 | 1.1 | 1.5 |
| 15 | 17-21 | 23-25 |

| VM3 Series | | | | |
|---|---|---|---|---|
| Motor kW ($P_2$) | | | | |
| 0.75 | 1.1 | 1.5 | 2.2 | 3.0 |
| 8 | 12 | 15-17 | 19-23 | 29 |

| VM5 Series | | | | | |
|---|---|---|---|---|---|
| Motor kW ($P_2$) | | | | | |
| 1.1 | 1.5 | 2.2 | 3.0 | 4.0 | 5.5 |
| 5 | 7-8 | 10 | 12-16 | 19 | 22 |

| VM10 Series | | | | | |
|---|---|---|---|---|---|
| Motor kW ($P_2$) | | | | | |
| 1.5 | 2.2 | 3.0 | 4.0 | 5.5 | 7.5 |
| 4 | 5-6 | 7-8 | 9-12 | 14-16 | 18 |

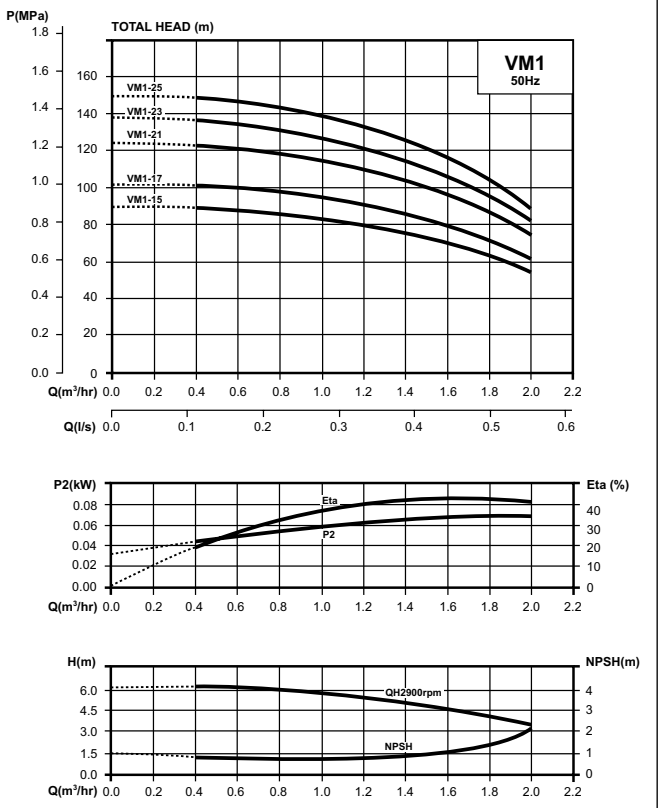
| VM16 Series | | | | | | |
|---|---|---|---|---|---|---|
| Motor kW ($P_2$) | | | | | | |
| 2.2 | 3.0 | 4.0 | 5.5 | 7.5 | 11.0 | 15.0 |
| 2 | 3 | 4 | 5-6 | 8 | 11 | 14 |

| VM32 Series | | | | | | |
|---|---|---|---|---|---|---|
| Motor kW ($P_2$) | | | | | | |
| 3.0 | 5.5 | 7.5 | 11.0 | 15.0 | 18.5 | 22.0 |
| 2A | 3 | 4 | 5-6 | 8 | 10 | 12 |

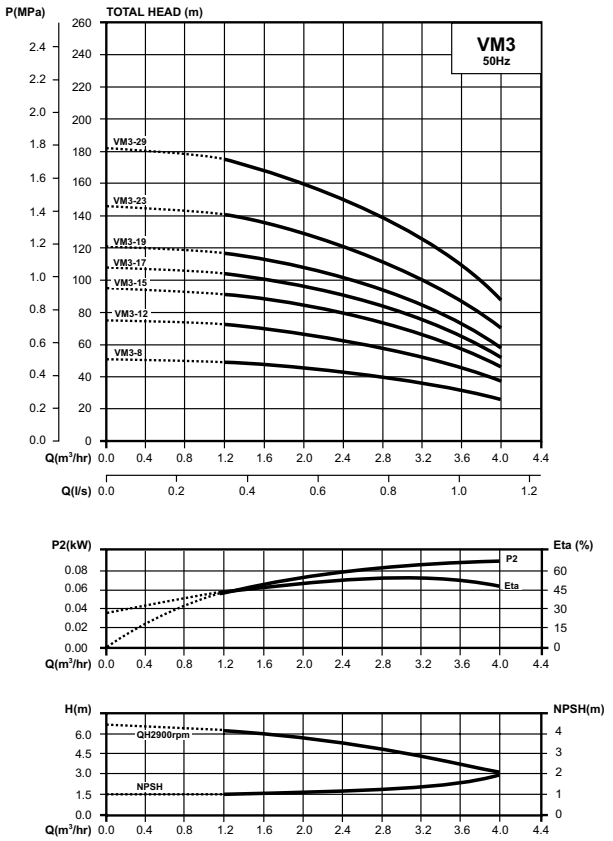
| VM65 Series | | | | | |
|---|---|---|---|---|---|
| Motor kW ($P_2$) | | | | | |
| 7.5 | 11.0 | 15.0 | 18.5 | 22.0 | 30.0 |
| 2A | 2 | 3A | 4B | 4 | 5A-6B |

| VM90 Series | | | | | |
|---|---|---|---|---|---|
| Motor kW ($P_2$) | | | | | |
| 15.0 | 18.5 | 22.0 | 30.0 | 37.0 | 45.0 |
| 2 | 3A | 3 | 4-4A | 5 | 6 |

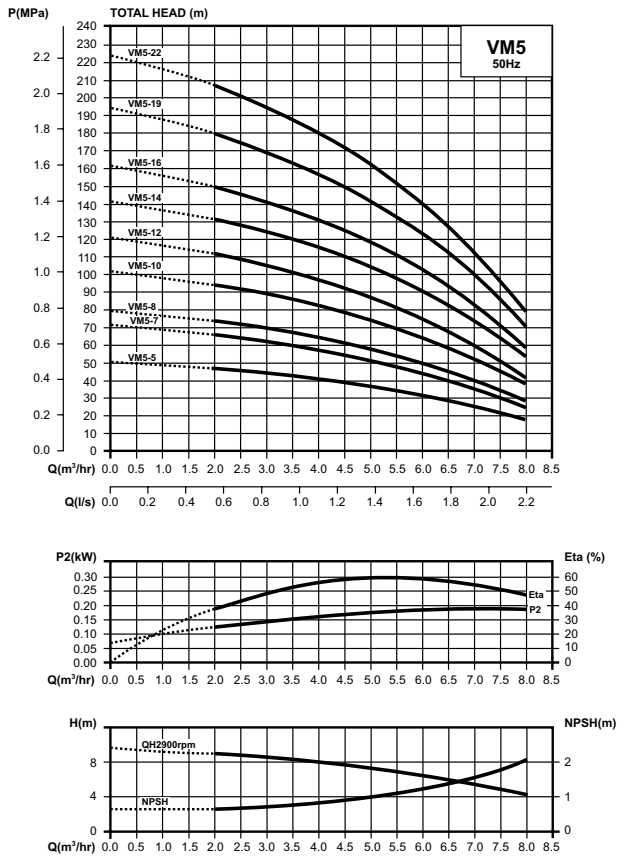
## VM1 PERFORMANCE



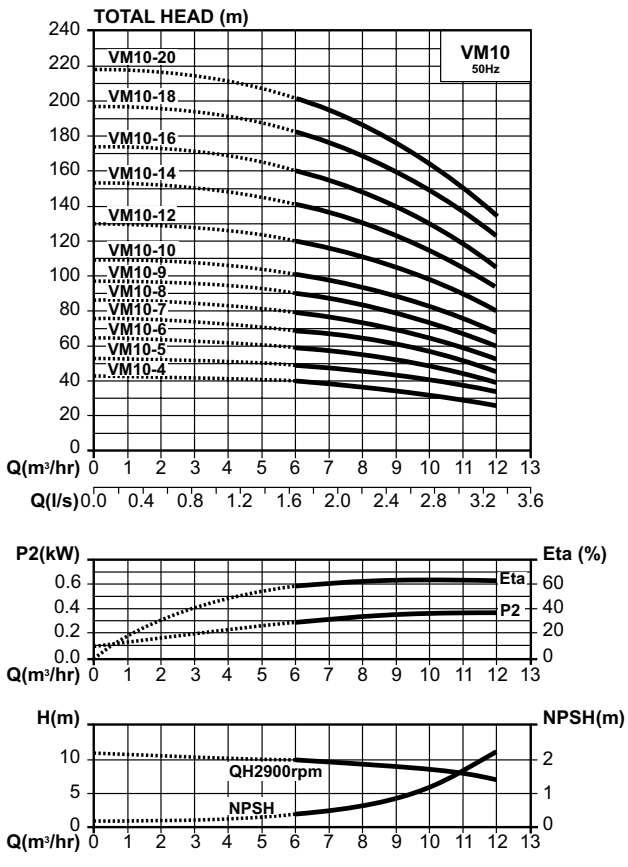

## VM3 PERFORMANCE



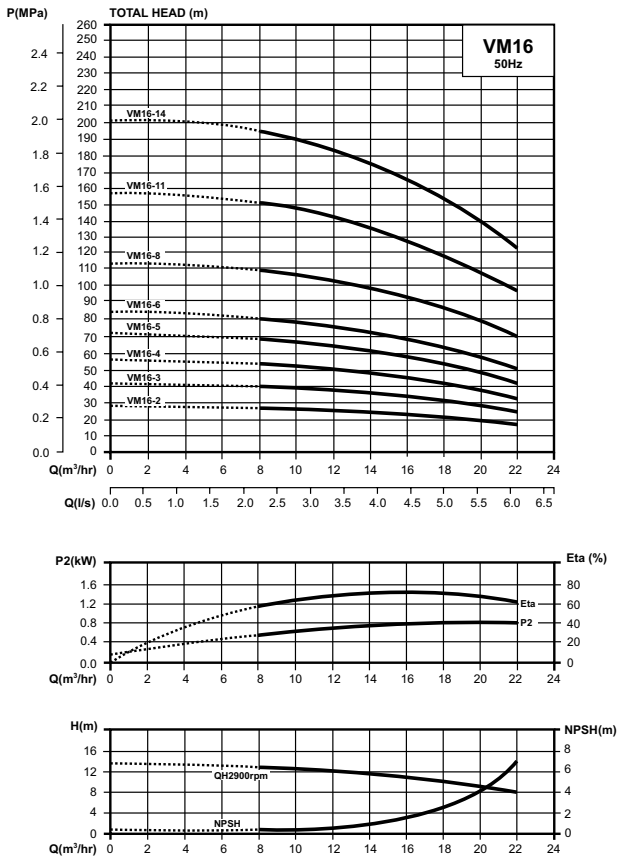

## VM5 PERFORMANCE



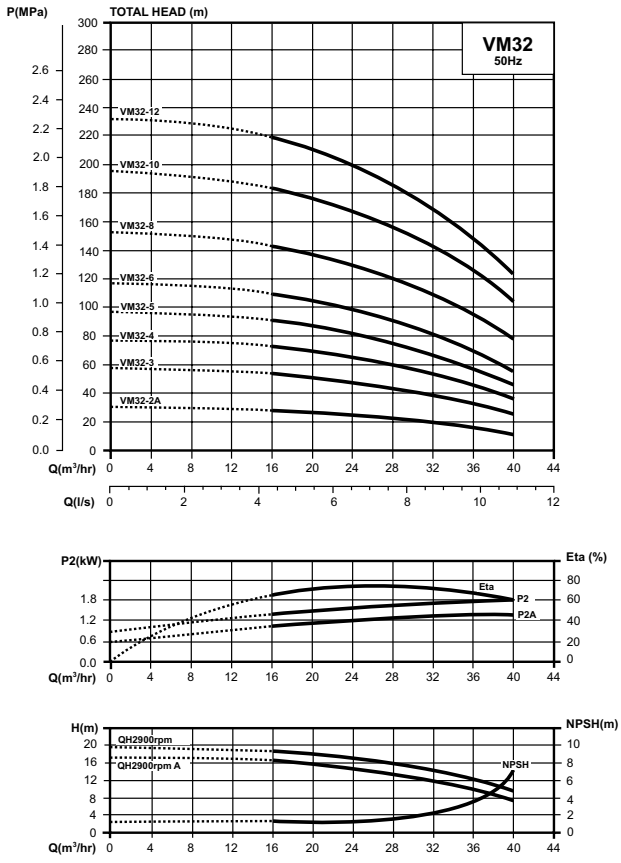

## VM10 PERFORMANCE



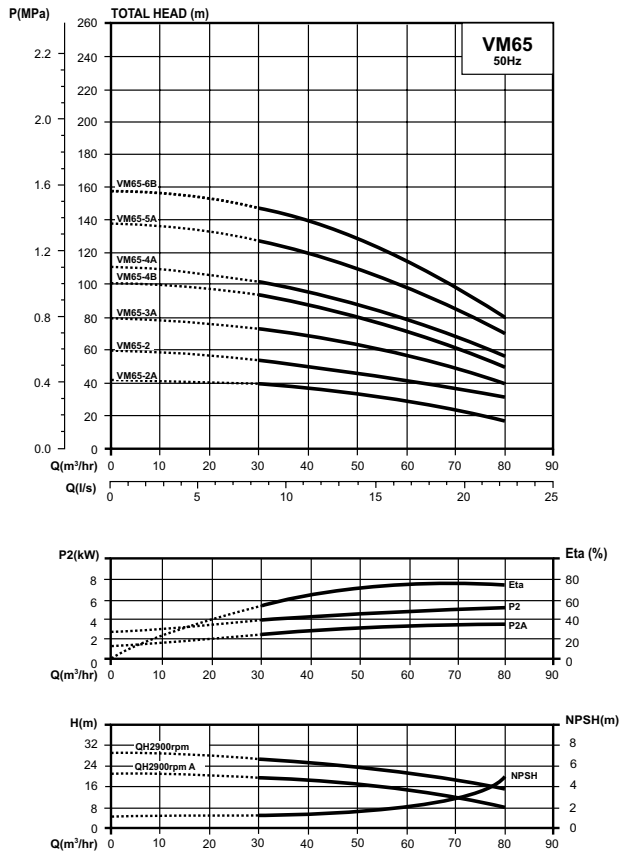
## VM16 PERFORMANCE



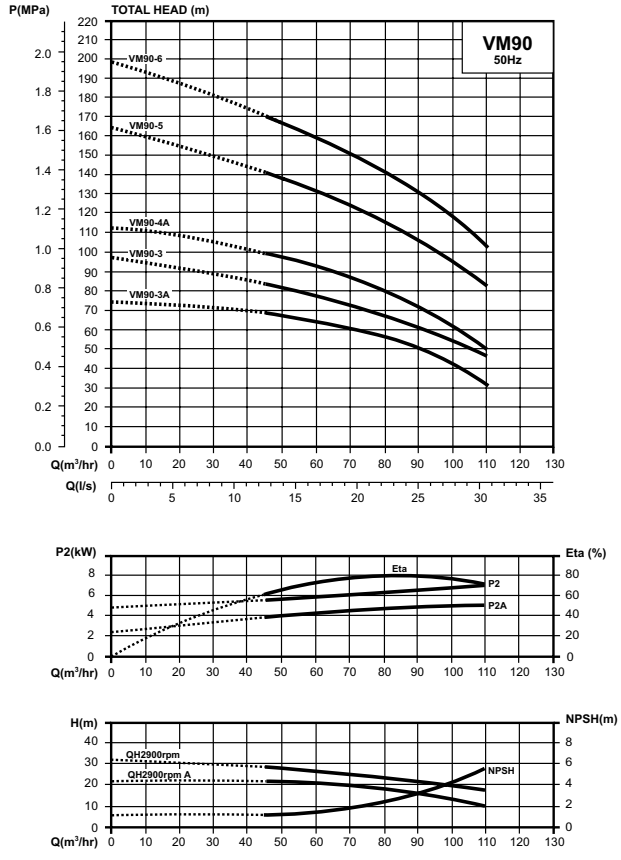

## VM32 PERFORMANCE




## VM65 PERFORMANCE




## VM90 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**

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.

VM Water Pressure System

**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.

RVM with Loss-of-Prime protection

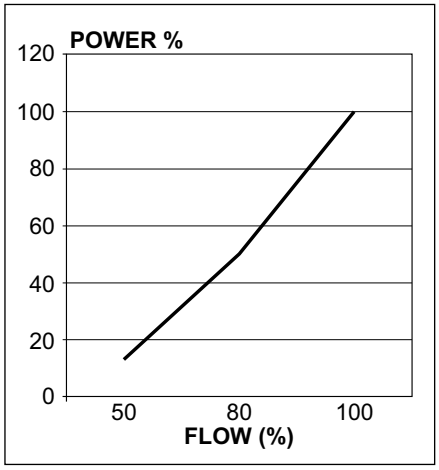
- Flow rates from 1.2m³/hr to 22m³/hr
- Heads from 50m to 120m
- Maximum ambient temperature +40ºC
- Maximum liquid temperature +70ºC.
- Single phase VM pumps up to 4.0kW
- Three phase VM pumps up to 7.5kW
- Soft starter option available with 5.5kW and 7.5kW loss-of-prime control boxes

# Packaged Pump Sets

## 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 the Monsoon 1V is ideal and for up to six pumps the Monsoon 6V is preferable.

**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** Pump Sets

Monsoon 1V is a single pump system 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.

**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

VM Series Triple Pump Set with Monsoon 6C Controller

## **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 5.5kW.
- 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.

# Packaged Pump Sets

## **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**

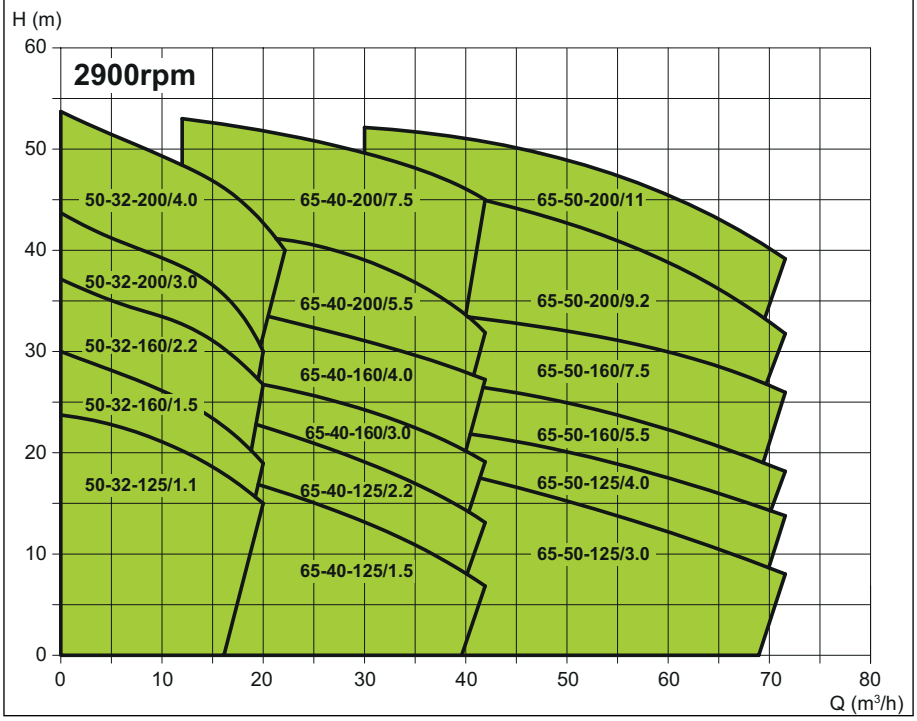
- Provides automatic constant pressure control via variable speed technology by means of electronic pressure sensing.
- Controls up to 6 hydraulically similar pumps of any type up to a maximum of 110kW plus a jockey pump for low flow applications.
- Able to maintain a constant pressure point even in 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.

# 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 70m³/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

**2900rpm PERFORMANCE**




## 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 | 900m³/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 | 375m³/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. Stainless steel 316 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.

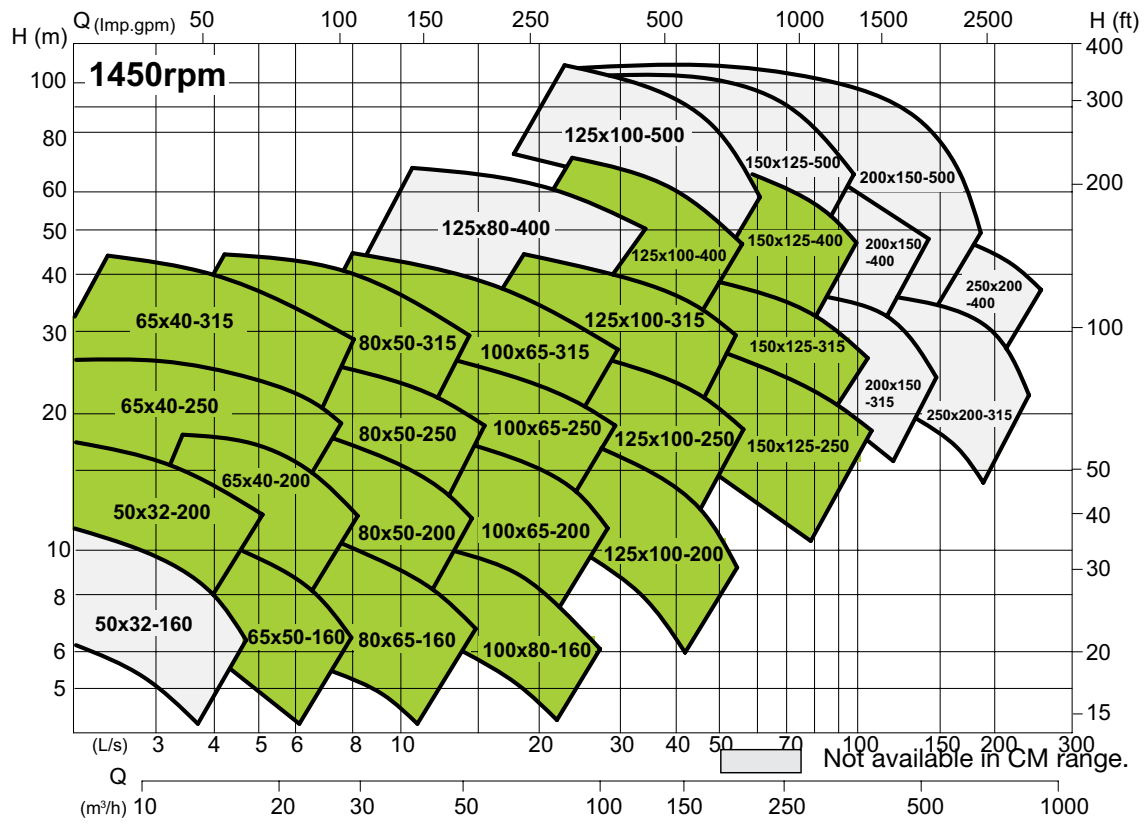
**Back Pull-out Design**
Back pull-out design allows for easy removal of rotating element without disturbing the pipe work, lagging, motor or pump volute casing. This is proven to reduce downtime whilst performing routine maintenance.

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

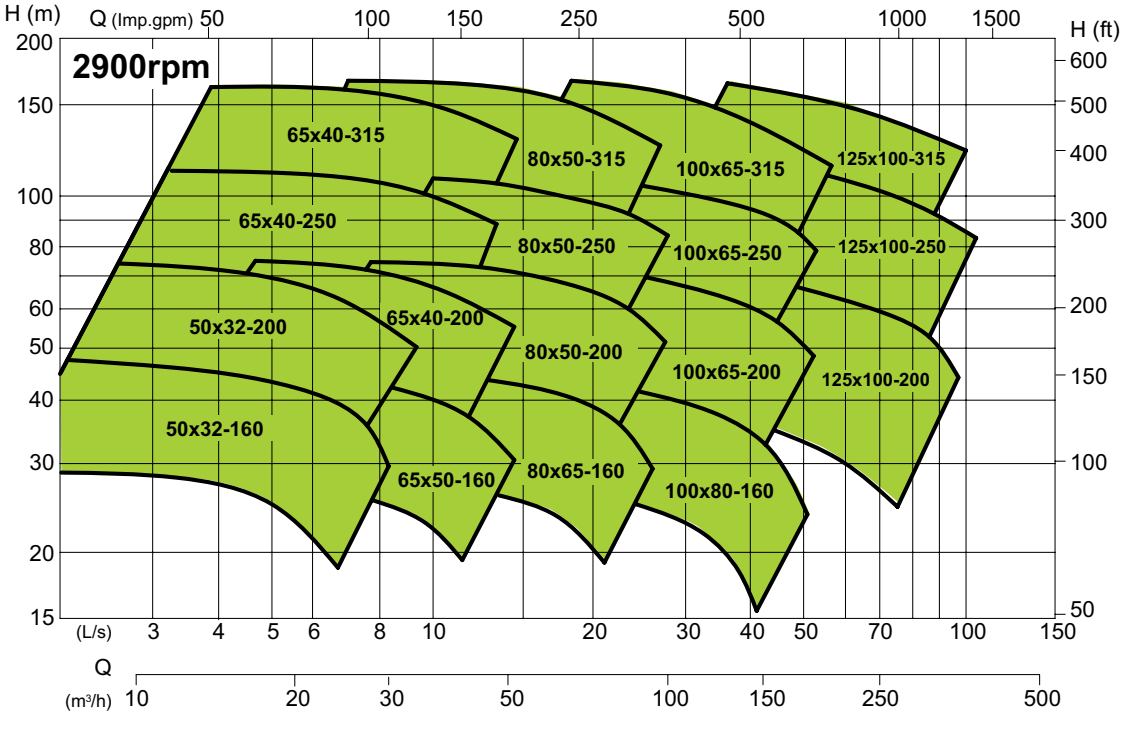
DAVEY

ISO DAVEY spec®

## 1450rpm PERFORMANCE




## 2900rpm PERFORMANCE



# Diesel Irrigation Packs

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** | ✗ | ✗ | ✗ | ✓ | - | - | - | - | - | - | - |
| **Rainwater** (eg. tank to garden or home) | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | - | ✓ | - | - | - |
| **Stormwater and surface run off water** | ✗ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✗ | ✗ | ✓ |
| **Greywater with nil or few small soft solids** (eg. Septic tank pumpouts) | ✗ | ✗ | ✗ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ |
| **Dirty water with less than 1% small hard solids - some wear can be expected** (eg. site dewatering, swimming pool drainage, stormwater pumping) | ✗ | ✗ | ✗ | ✓ | ✓ | ✓ | ✓ | ✓ | ✗ | ✗ | ✓ |
| **Water with up to 10% soft solids in suspension - maximum particle size is 80% of pump outlet** (eg. Semi screened raw sewage, stock effluent) | ✗ | ✗ | ✗ | ✗ | ✗ | ✗ | ✓ | ✓ | ✓ | ✓ | ✓ |
| **Water with medium volumes of hair in suspension** (eg greywater, abboitour wash down, dog washing, animal washing) | ✗ | ✗ | ✗ | ✗ | ✗ | ✗ | ✗ | ✓ | ✓ | ✗ | ✗ |
| **Water with stringy materials in suspension** (eg laundrymats, cotton & woolen mills, food factories) | ✗ | ✗ | ✗ | ✗ | ✗ | ✗ | ✗ | ✗ | ✓ | ✓ | ✗ |
| **Raw sewage including sanitary products** | ✗ | ✗ | ✗ | ✗ | ✗ | ✗ | ✗ | ✗ | ✗ | ✓ | ✗ |
| **Slurries with up to 35mm particles in suspension up to 70% by weight** (eg sand and slurries, building site water, mine site water) | ✗ | ✗ | ✗ | ✗ | ✗ | ✗ | ✗ | ✗ | ✗ | ✗ | ✓ |

✓ Suitable Selection ✖ Not Recommended

# Wastewater Pumps

## 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 equalize 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.

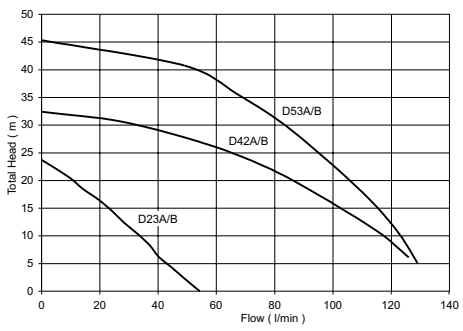
**Entry level SumpMaster Mini now available.**

D23A/B

## Rainwater Harvesting Pumps

Able to pump clean water of neutral pH (ie. rainwater).

**PERFORMANCE – Rainwater Harvesting Models**




Selected models available in 316SS.

DCS40M

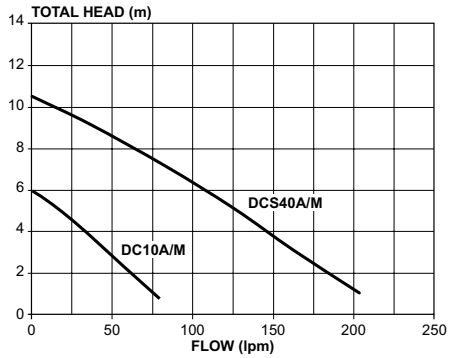
## Double Case Pumps

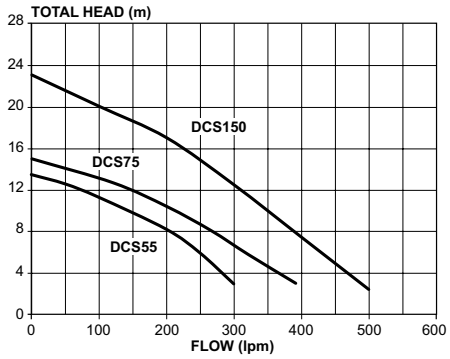
The double case design allows for safe operation in a partially submerged condition. DC10 models are able to pump clean or filtered grey water of neutral pH containing up to 10% of small soft organic solids (<10mm OD). Some accelerated wear should be expected while pumping hard solids in suspension.

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.

**PERFORMANCE – Double Case Models**



# Wastewater Pumps

D42A/B

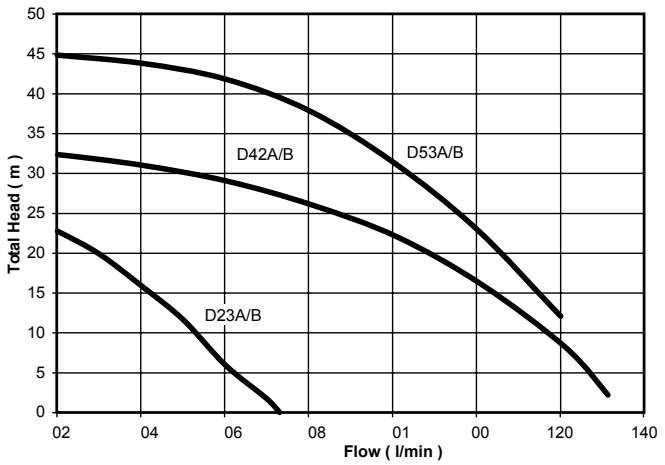
D53A/B

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.

**HYDRAULIC PERFORMANCE**

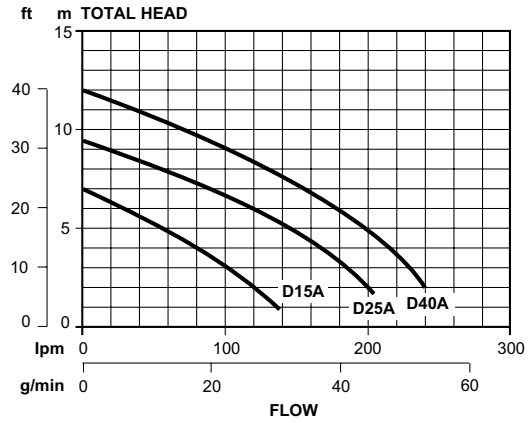


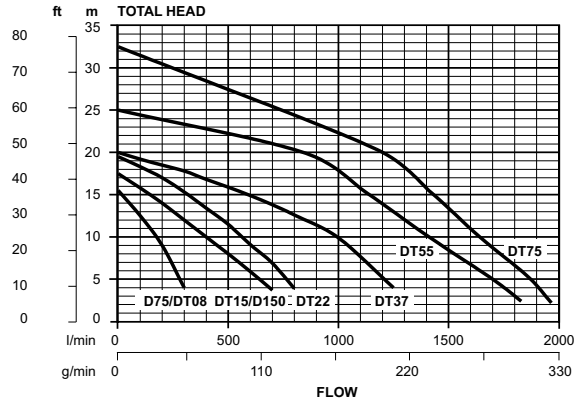

D15A

## 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.

**PERFORMANCE – General Purpose Dewatering Models**




D15VA

D15VAGMA

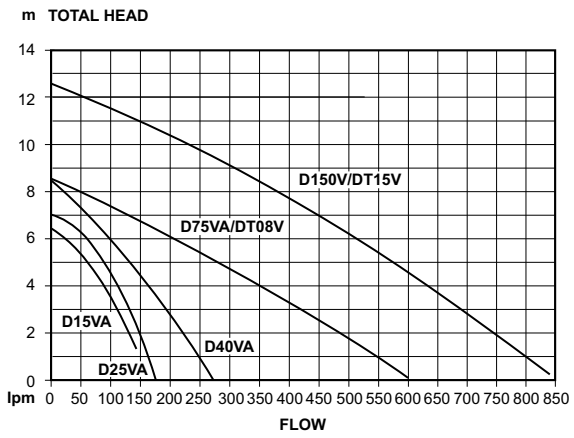
## Multi-purpose Vortex Pumps

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.

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

**PERFORMANCE – Vortex Models**



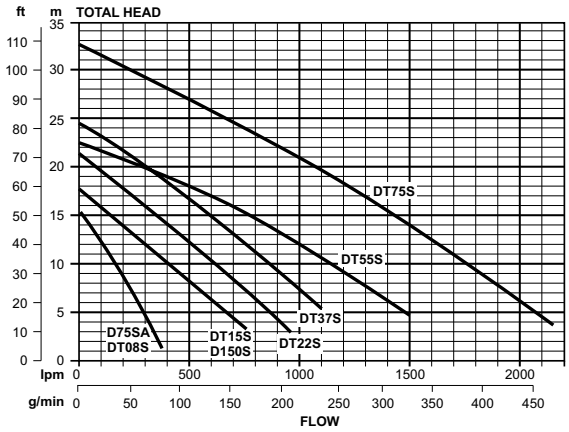
# Wastewater Pumps

D75SA

## 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.

**PERFORMANCE – Single Channel Impeller Models**



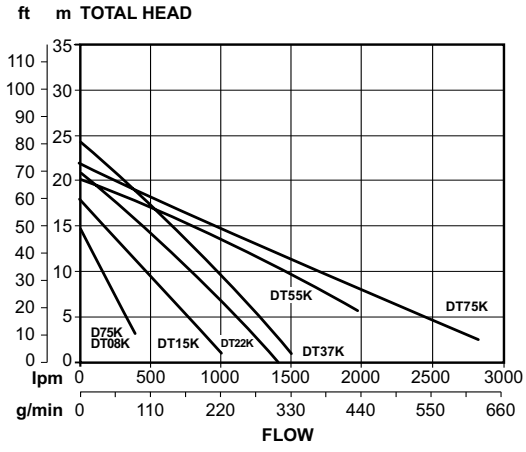

DT22K

## 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.

**PERFORMANCE – Cutter/Shredder Models**

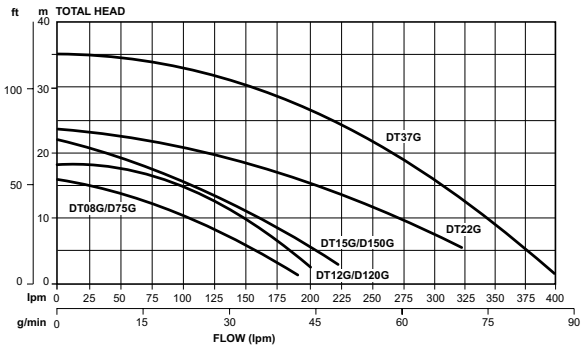



D120G

## Grinder Pumps

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

**PERFORMANCE – Grinder Models**




## 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.

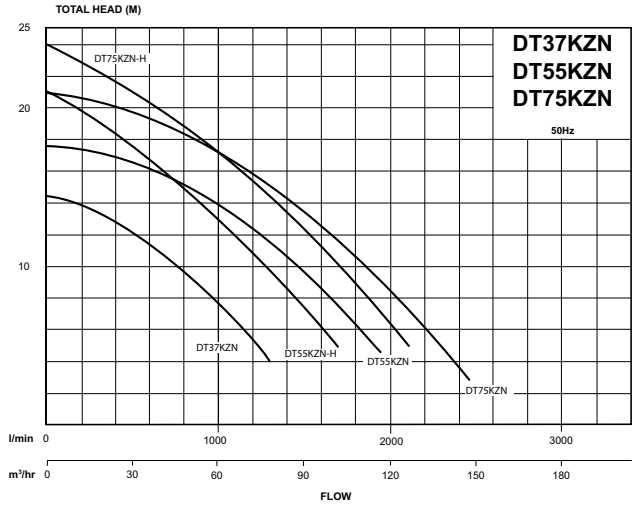
# Wastewater Pumps

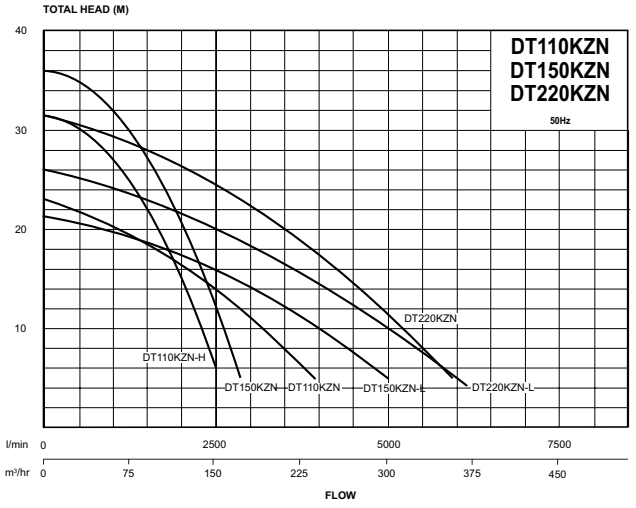
KZN

## 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**



# Pond Pumps

Vertical or horizontal installation

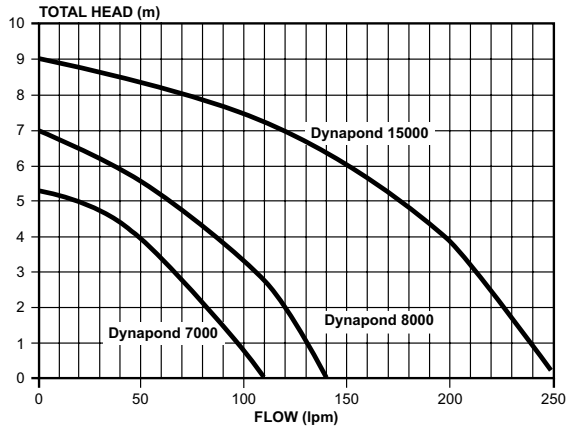
Davey's Dynapond Pond Pumps are specially designed for fully submerged operation, 24 hours a day, 7 days a week.

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:

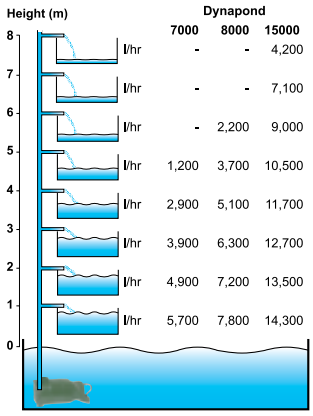
- Open impeller allowing the passage of small soft solids.
- Adjustable inlet strainer holes (10mm or 5mm) to control what goes through the pump.
- Oil free motor, so they are safe for fishponds.
- Maximum submergence of up to 3 metres.
- 1¼" BSP female outlet and discharge elbow for hose connection.

**HYDRAULIC PERFORMANCE**

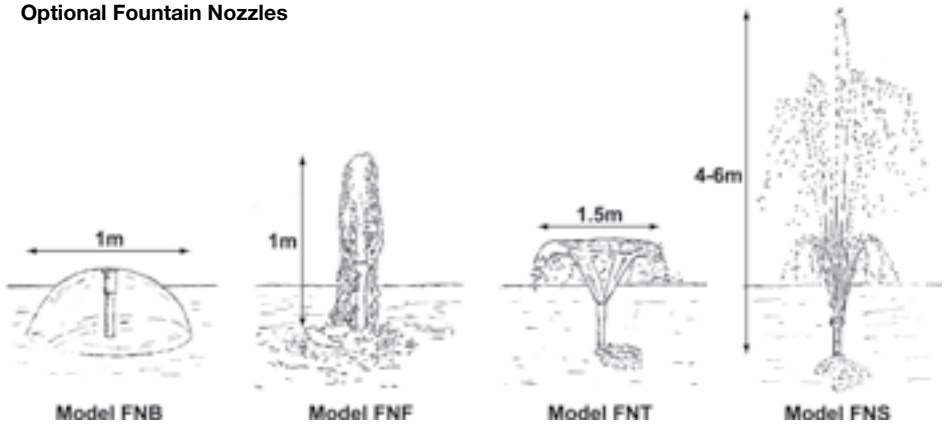



**FLOW REQUIRED PER METRE WIDTH OF WATERFALL**

| Depth of water at top of waterfall | FLOW (lpm) | FLOW (l/hr) |
|---|---|---|
| 5mm | 45 | 0.45 |
| 10mm | 100 | 0.78 |
| 15mm | 200 | 0.58 |
| 20mm | 300 | 0.80 |




**Optional Fountain Nozzles**



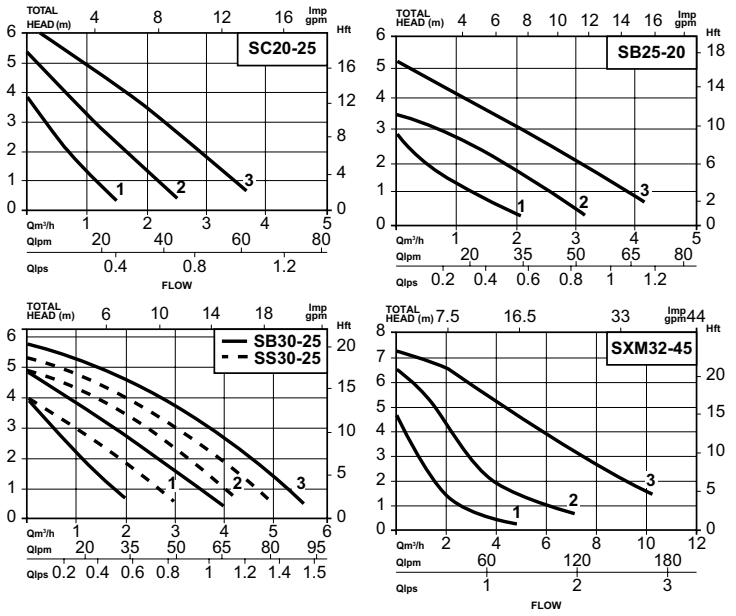
# Circulator Pumps

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.

**CIRCULATOR PUMP PERFORMANCE**



# 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** .....

**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** ..... m

**8 Pipe length to be run on delivery side of pump** ..... m

**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)

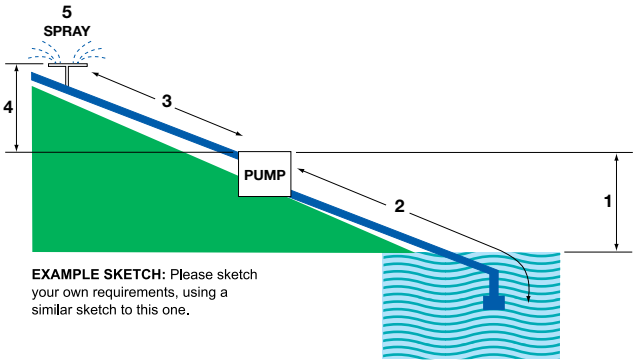
.....

**11 If electric pump, voltage of electricity supply is:**

1 phase – ☐ 240 volt OR ☐ 480 volt

3 phase – ☐ 415 volt

☐ Other, plese specify.....




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

## 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.

| | |
|---|---|
| **SHOWER:** 8lpm at 140kPa (20psi) | **CATTLE:** 30-55 litres/day |
| **LAWN SPRINKLER:** 15lpm at 140kPa (20psi) | **MILKING COWS:** 70 litres/day |
| **1/2" TAP:** 12-15lpm at 140kPa (20psi) | **SHEEP:** 5-10 litres/day |
| **3/4" HOSE & 1/4" NOZZLE:** 40lpm at 210kPa (30psi) | **PIGS:** 10 litres/day |
| **1" HOSE & 3/8" NOZZLE:** 75lpm at 210kPa (30psi) | **HORSES:** 55-60 litres/day |
| **100 CHICKENS:** 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 - Pvap - Safety | |
| Hs | Maximum suction lift including friction loss in suction pipe |
| Pa | Absolute atmospheric pressure at site |
| NPSHR | NPSH required by pump at specific flow rate |
| Pvap | Vapour pressure of liquid with specific temperature |
| Safety | Allow at least a 1m safety factor |

| Calculating Pump Power |
|---|
| **Water Power (kW)** = Flow (lpm) x Head (m) / 6122.4 |
| **Pump Power ($P_2$,kW)** = Water Power / Pump Efficiency % |
| **Input Power ($P_1$,kW)** = Pump Power / Motor Efficiency % |

## Variable Speed Performance

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

- Flow (Q) changes directly proportional to speed (N) change
- Head / pressure (H) changes proportional to speed change squared
- Power (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 | | | | |
|---|---|---|---|---|
| | | | Imperial | |
| lpm | lps | m³/hr | 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 | | | | |
|---|---|---|---|---|
| | | | feet | |
| metres | kPa | bar | 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.

**Friction Loss for Poly Pipe – 20mm to 63mm (m/100 metres of pipe)**

| Flow in | | Medium Density Polythene Pipe | | | | | | | | | | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| ltrs | ltrs | 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 | | | | | |
| sec. | min. | ¾" | 1" | 1¼" | 1½" | 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 | | | | | | | | | | | | | | | | | | |

**Friction Loss for Poly Pipe (m/100 metres of pipe)**

| 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 | |

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

| 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 |

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

| 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

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