DAVEY

RainBank® PRO

RAINWATER HARVESTING

RAINWATER HARVESTING PUMP SET

APPLICATION

Ideal for rainwater harvesting on metropolitan buildings with large roof areas such as: schools, apartment buildings, warehouses and factories, motels, police stations, council buildings and fast food outlets.

FEATURES & BENEFITS

Models with flow rates up to 200 lpm and single phase supply.

A rainwater / mains water interconnection pump set specifically designed to source rainwater for high flow applications with seamless switching to mains water for back up.

Why choose THE Davey FLOATLESS RainBank CONTROLLER KIT?

- Now without the need for an external float, Floatless RainBank makes installation easy for plumbers everywhere
- Ideal for surface mounted installations and supplied with the renowned reliability of Davey's HP or HS pressure pump
- Correctly installed, Davey's new Floatless RainBank system will reprime, every time!
- Easily retro-fittable to other floatless systems on the market
- With the option to easily connect an external float if the installations needs it
- Using rainwater all year round, eliminates the need for large tanks, taking up valuable space in your yard
- Built-in backflow protection valve (dual check valve) in compliance with the requirements of AS/NZS 3500-1-2003 for added safety and assured protection of your mains water supply.

RainBank seamlessly delivers rainwater to your toilets, laundry and gardens with automatic mains water back-up.

- Davey pioneered rainwater harvesting products of this kind
- Market-leading design, flow rates and pressures
- Intelligence 'built-in'
- Unrivalled dependability and innovation keeps coming with Davey

Unlike other systems that always pump mains to the tank, RainBank is a true interconnection device only pumping rainwater present in the tank, allowing mains to seamlessly flow through when needed. Save on unnecessary pump wear and tear and electricity costs that can soon add up.

RainBank provides water even when:-

- Rainwater has been exhausted
- There is no power to run the pump
- Mains water is unavailable

Rainwater Harvesting

PLEASE NOTE: For underground or partially buried rainwater tanks, a dual, testable check valve (RPZ) will need to be installed.* Please consult your plumber for purchase and installation.

* Because interpretation and application of the AS/NZS plumbing standards and guidelines may vary across regulatory areas, check with your local regulator regarding backflow requirements.

Easy System Monitoring

For easy system monitoring and maintenance, the control box indicator lights show which water source is being used and the status of the system.

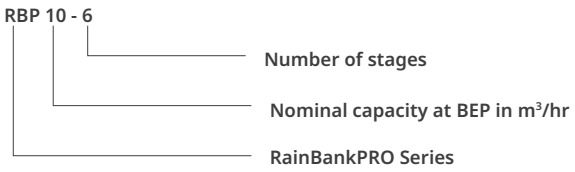
Ease of Installation

For quick and easy installation, RainBankPRO comes fully assembled on a galvanised base and is suitable for both new and existing building installations.

OPERATING LIMITS	
Maximum flow rate (pump)	367 lpm
Maximum mains water pressure (unrestricted)	900 kPa
Maximum pump casing pressure	1600kPa
Maximum water temperature	50°C
Level switch voltage	12 volts DC
Maximum water temperature continuous	50°C
Minimum water temperature	1°C
Maximum ambient temperature	45°C

NOTE: For three phase power supply options, see Monsoon Compact 1V variable speed pump set.

IDENTIFICATION OF THE PUMPSET



MATERIALS OF CONSTRUCTION	
PART	MATERIAL
Pump attachment base	Cast iron
Suction & discharge casing	304 stainless steel
Motor support lantern	Cast iron
Impellers	304 stainless steel
Stages (casing)	304 stainless steel
Outside sleeve	304 stainless steel
Pump shaft	316L stainless steel
Intermediate bearing	Tungsten carbide
Mechanical seal	Silicon carbide/carbon/EPDM
O-rings (casing)	EPDM
Plugs (drainage & priming)	316L stainless steel
Impeller neck rings	Teflon
Pump Set Base	Galvanised steel
Manifold	304 stainless steel

* Special version with 316L stainless steel & viton orings on request

NOTE: 304 stainless steel, (Z6 CN 18.9) and 316L stainless steel (Z2 CND 17.12) are recommended materials that are highly resistant to corrosion. Suitable for pumping clean, clear, non-viscous liquids, containing no fibres or solids. Maximum sand/silica concentration 40 g/m³.

ALTITUDE & TEMPERATURE VS LOSS OF SUCTION ABILITY			
Altitude	Loss	Temperature	Loss
0m	0m	20°C	0.20m
500m	0.60m	30°C	0.40m
1000m	1.15m	40°C	0.70m
1500m	1.70m	50°C	1.20m
2000m	2.20m	60°C	1.90m
2500m	2.65m	70°C	3.10m
3000m	3.20m	80°C	4.70m
		90°C	7.10m
		100°C	10.30m

RainBankPRO Sizing Guide

Flow

Although there will be many applications for RainBankPRO and we cannot give a sizing guide for all applications, the table below is a guide to flow rates of toilets, basins, sinks and hose outlets.

Fixture	Flow Rate l/s	Flow Rate, lpm
Water closet cistern	0.10	6
Basin (standard outlet)	0.10	6
Sink (standard tap)	0.12	7
Sink (aerated tap)	0.10	6
Hose tap (20 nom. size)	0.30	18
Hose tap (15 nom. size)	0.20	12

Source: AS/NZS 3500.1.2003 Plumbing and Drainage, Part 1: Water services.

When sizing for toilets please see the rough guide below. It is highly unlikely that all toilets will be flushed at once so a pump can be sized to accommodate the typical flow rather than peak flow.
This means a smaller size pump can be chosen to adequately supply the typical flow.

No. of Toilets	Design Flow Rate
1-2	100%
3-6	75%
7 or more	50%

In some situations, such as schools or theatres, where there are high intensity periods of use such as morning and afternoon tea breaks or an intermission period, the table above does not apply. For these applications, the design flow rate needs to be closer to the maximum notional flow if all toilets were to be flushed at once.

Head

Most systems, especially toilets, will operate acceptably with as little as 300kPa pressure (30 metres of head) at the outlet. To estimate the required operating pressure (total head), allow for the maximum vertical height from the pump to the highest outlet, plus 10% to allow for pipe-work losses, plus at least 300kPa (30 metres) operating pressure at the outlet.

NOTE: for irrigation sprinklers or wash-down hoses, higher operating pressure may apply and should be included in the calculations.

MOTOR TECHNICAL SPECIFICATIONS								
Motor 1Ø	Frame	IP Rating	FLC 240 V	Start/ LRC Ratio	RPM	Eff %	Bearings	
							Drive End	Non-D/End
0.75	80 V18	IP55	4.38	5.83	2815	72	6204-ZZ	6204-ZZ
1.1	80 V18	IP55	6.38	5.65	2830	75	6204-ZZ	6204-ZZ
1.5	90 V18	IP55	8.08	5.57	2850	76	6205-ZZ	6205-ZZ
2.2	90 V18	IP55	12.0	4.59	2830	77	6205-ZZ	6205-ZZ

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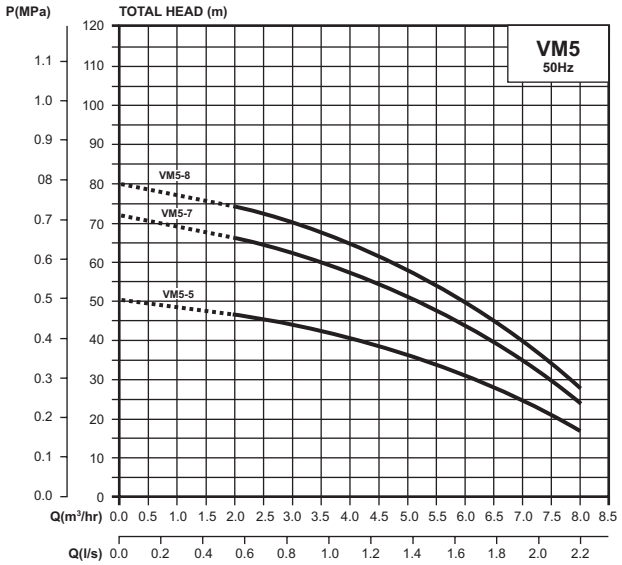
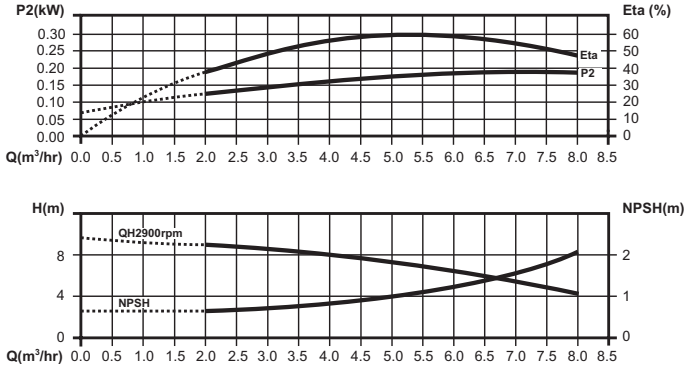
CONTROLLER ELECTRICAL DATA	
Supply voltage	220-250V
Supply frequency	50Hz
Max. full load current	10A
Enclosure class	IP55
Power supply lead – incoming	2m
Level switch lead length: Side entry Top entry	 5m 9m

MOTOR ELECTRICAL DATA	
Maximum ambient temperature	45ºC
Minimum IP rating	IP55
Insulation class	Class F

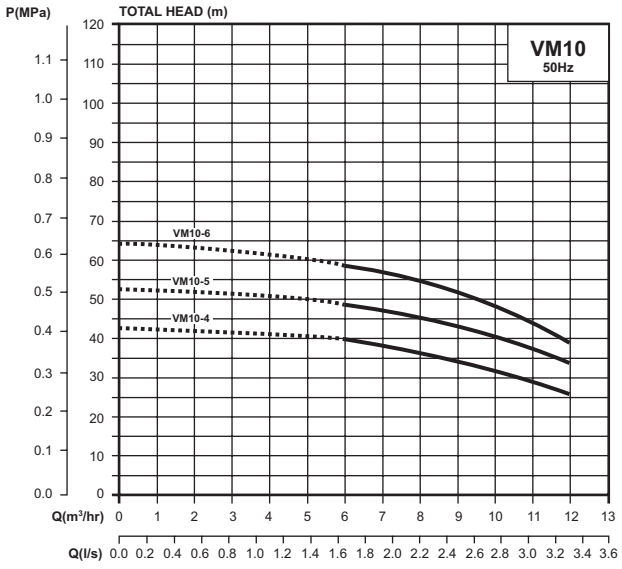
PRESSURE AND FLOW SWITCH IP RATINGS	
Pressure switch (XMP12)	IP54
Flow Switch (F25B)	IP56

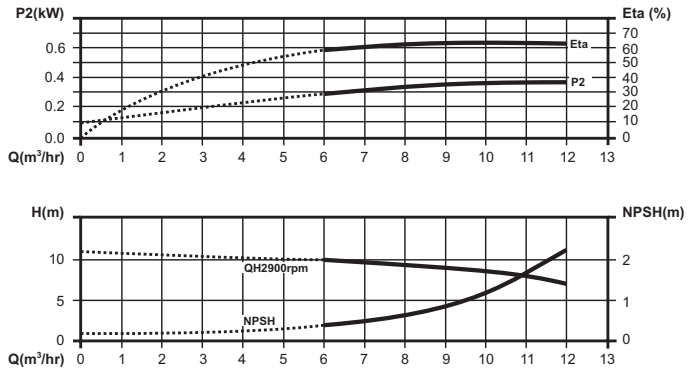
VM5 HYDRAULIC PERFORMANCE





VM10 HYDRAULIC PERFORMANCE





Rainwater Harvesting

DIMENSIONS (MM) RainBankPRO MODELS						
Part Number	**Description**	**kW**	**Phase**	**Mains Water Inlet Size (BSP – F)**	**Rainwater Inlet Size (BSP – F)**	**Outlet Size (BSP – F)**
RBP5-5	RainBank PRO 5-5, 1.1kW	1.1	1	40mm	32mm	32mm
RBP5-7	RainBank PRO 5-7, 1.5kW	1.5	1	40mm	32mm	32mm
RBP5-8	RainBank PRO 5-8, 1.5kW	1.5	1	40mm	32mm	32mm
RBP10-4	RainBank PRO 10-4, 1.5kW	1.5	1	40mm	40mm	40mm
RBP10-5	RainBank PRO 10-5, 2.2kW	2.2	1	40mm	40mm	40mm
RBP10-6	RainBank PRO 10-6, 2.2kW	2.2	1	40mm	40mm	40mm

Note: BSP pipe size (Imperial conversion): 32mm = 11/4", 40mm = 11/2", 50mm =2".