RVM SERIES
PACKAGED WATER PRESSURE SYSTEMS
UP TO 40m³/hr

PRODUCT DESCRIPTION
RVM pumpsets are a single pump packaged system that comes in three versions.
1. RVM Water Pressure System
2. RVM Water Pressure System with LOP Control Box
3. RVM Remote Start/LOP Pump Set

APPLICATIONS
Automatic water pressure system for:
- Irrigation & turf watering
- Stock watering
- Water supply, boosting & transfer
- Industrial applications
- Water treatment

OPERATING LIMITS
- Capacities to 11 l/s (40m³/hr)
- Pressure heads to 160 m
- Maximum liquid temperature +70 °C (tank)
- Maximum ambient temperature +40 °C
- Maximum inlet pressure limited by max. operating pressure
- Maximum operating pressure with 105C Tank 105m/1050kPa
- Maximum operating pressure with HP105C Tank 160m/1600kPa

Suitable Fluids
Clean, clear, non-corrosive, non-flammable liquids with no fibres and little sand/silica or abrasives (maximum concentration 40g/m³).

Specific dimensions for each model available on request. Davey reserves the right to change dimensions and configurations without notice.

This literature is not a complete guide to product usage. Further information is available from your Davey dealer, Davey Customer Service Centre and from the relevant product Installation and Operating Instructions. This data sheet must be read in conjunction with the relevant product Installation and Operating Instructions and all applicable statutory requirements. Product specifications may change without notice.

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**TECHNICAL SPECIFICATIONS**

**RVW Water Pressure System**
The packaged water pressure version consists of a Davey VM vertical multipurpose pump, with the choice of either a 240V or 105 litre pressure tank, manifold, adjustable pressure switch, liquid filled pressure gauge, check and isolation valves all mounted on a common base plate. (Note: the 105 litre tank is free standing).

**RVW Water Pressure System with Loss-of-Prime Protection**
The loss-of-prime version uses all of the components of the water pressure version and adds a control box and flow switch. This provides the benefit of protecting the pump in no-flow situations, such as loss-of- prime and dead head.

The control box offers Auto, Off and Manual control. Manual control will automatically switch over to Automatic control after 2.5 minutes in order to ensure pump protection.

The control box provides indicators such as Power On, Pump Run, Low Flow Alarm and Pump Overload. In a fault condition, the control box provides a light and audible alarm. The audible alarm occurs after 5 minutes.

**RVW Remote Start/LOP Pump Set**
The remote start/LOP version includes a Davey VM vertical multipurpose pump, manifold, liquid filled pressure gauge, remote start control box, flow switch, check and isolation valves all mounted on a common base.

The pump is turned on and off by a 24VAC signal to the control box, which is ideal for use with irrigation controllers and external sensors. The control box provides pump protection in no-flow situations, such as loss of prime or stuck closed irrigation valve.

**HYDRAULIC PERFORMANCE**

**VM3, 2 POLE 50Hz**

**VM16, 2 POLE 50Hz**

**VM5, 2 POLE 50Hz**

**NOTE:** Curve tolerance in conformity with ISO9906 Appendix A.

**MATERIALS OF CONSTRUCTION**

<table>
<thead>
<tr>
<th>Part</th>
<th>Material</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pump attachment base</td>
<td>Cast iron</td>
</tr>
<tr>
<td>Suction &amp; discharge casting</td>
<td>304 stainless steel</td>
</tr>
<tr>
<td>Motor support casing</td>
<td>Cast iron</td>
</tr>
<tr>
<td>Impellers</td>
<td>304 stainless steel</td>
</tr>
<tr>
<td>Sleeve (bearing)</td>
<td>304 stainless steel</td>
</tr>
<tr>
<td>Outside sieve</td>
<td>304 stainless steel</td>
</tr>
<tr>
<td>Pump shaft</td>
<td>316 stainless steel</td>
</tr>
<tr>
<td>Intermediate bearing</td>
<td>Tungsten carbide</td>
</tr>
<tr>
<td>Mechanical and liquid/vacuum lifter</td>
<td>EPDM</td>
</tr>
<tr>
<td>Gland (liftn)</td>
<td>LDHM</td>
</tr>
<tr>
<td>Rags (liftn &amp; priming)</td>
<td>FBI stainless steel</td>
</tr>
<tr>
<td>Impeller neck ring</td>
<td>Teflon</td>
</tr>
</tbody>
</table>

**NOTE:** 304 stainless steel (EN 1.4301) and 316 stainless steel (EN 1.4404) are recognized materials that are highly resistant to corrosion. Suitable for pumping liquids that contain inorganic, low concentration salt. Maximum sodium chloride concentration 4%.
The Davey VM pumps and supercell tanks have proven themselves around the world. All VM vertical multistage pumps comply with the high efficiency MEPS (Minimum Energy Performance Standards) requirements. The Davey VM multistage pump, manifold, liquid filled pressure switch, check and isolation valves are manufactured from 304 stainless steel, providing corrosion protection.

The Davey VM multistage pump is designed to provide continuing though dependable service to the irrigation system, with the remote start/LOP version including a Davey VM vertical multistage pump, manifold, liquid filled pressure switch, check and isolation valves all mounted on a common base. (Note: the 105 litre tank is free standing).

The control box offers Auto, Off and Manual control. Manual control will automatically switch over to Automatic control after 2.5 minutes in order to ensure pump protection. The control box provides indicators such as Power On, Pump Run, Low Flow Alarm and Pump Overload. In a fault condition, the control box provides a light and audible alarm. The audible alarm ceases 5 minutes after the system is restarted.

Because the system is started by pressure and stopped on flow, it is able to provide continuing, though partial, automatic operation in situations where the pump is unable to make the cut-out pressure point. For example, where some rubbish has been sucked into the suction line to cause partial restriction. While the alarm will be activated, the pump will restart as long as there is some flow demand.

The pump is turned on and off by a 24/16V signal to the control box, which is ideal for use with irrigation controllers and external sensors. The control box provides pump protection in no-flow situations, such as loss of prime or stuck closed irrigation valve.

**TECHNICAL SPECIFICATIONS**

<table>
<thead>
<tr>
<th>Motor</th>
<th>Frame</th>
<th>IP Rating</th>
<th>50 Hz</th>
<th>FLC Start/LRC Bearings</th>
</tr>
</thead>
<tbody>
<tr>
<td>VM3</td>
<td>50Hz</td>
<td>50Hz</td>
<td></td>
<td></td>
</tr>
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<td></td>
<td></td>
<td></td>
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<tr>
<td>VM5</td>
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<td>50Hz</td>
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<td>VM10</td>
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</tr>
<tr>
<td>VM16</td>
<td>50Hz</td>
<td>50Hz</td>
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<tr>
<td></td>
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<td></td>
<td></td>
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</tr>
</tbody>
</table>

**MATERIALS OF CONSTRUCTION**

*NOTE: 304 stainless steel (Z6 CN 18.9) and 316L stainless steel (Z4 CN 18.9-10.5) are recommended materials that are highly resistant to corrosion. Suitable for pumping waste that is not very toxic or highly corrosive. Maximum sand/silica concentration 40g/l*
RHM Water Pressure System
The packaged water pressure version consists of a Davey VM vertical multistage pump, with the choice of either 240 V or 110 V line pressure tank, manifold, adjustable pressure switch, liquid filled pressure gauge, check and isolation valves all mounted on a common base plate. (Note: the 110 V line is free standing).

RVM Water Pressure System with Loss-of-Prime Protection
The loss-of-prime version uses all of the components of the water pressure version and adds a control box and flow switch. This provides the benefit of protecting the in-no-flow situations, such as loss-of- prime and dead head.

The control box offers Auto, Off and Manual control. Manual control will automatically switch over to Automatic control after 2.5 minutes in order to ensure pump protection.

The control box provides indicators such as Power On, Pump Run, Low Flow Alarm and Pump Overload. In a fault condition, the control box provides a light and audible alarm. The audible alarm ceases 5 minutes after.

Because the system is started by pressure and stopped on flow, it is able to provide continuing, though partial, automatic operation in situations where the pump is unable to make the cut-out pressure point. For example, where some sand has been sucked into the suction line to cause partial restriction. While the alarm will be activated, the pump will restart as long as there is some flow demand.

RVM Remote Start/LOP Pump Set
The remote start/LOP version includes a Davey VM vertical multistage pump, manifold, liquid filled pressure gauge, remote start control box, flow switch, check and isolation valves all mounted on a common base.

The pump is turned on and off by a 24VAC signal to the control box, which is ideal for use with irrigation controllers and external sensors. The control box provides pump protection in no-flow situations, such as loss of prime or stuck closed irrigation valve.

TECHNICAL SPECIFICATIONS
MOTOR TECHNICAL SPECIFICATIONS

<table>
<thead>
<tr>
<th>Motor</th>
<th>Frame</th>
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<th>240 V</th>
<th>Start/Run Ratio</th>
<th>RPM</th>
<th>Eff %</th>
<th>Service Factor</th>
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<tbody>
<tr>
<td>0.75</td>
<td>50 Y18</td>
<td>IP55</td>
<td>4.10</td>
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<td>1.1</td>
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<td>1.5</td>
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<tr>
<td>4.0</td>
<td>112 Y18</td>
<td>IP55</td>
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<td>2910</td>
<td>84</td>
<td>6204-22</td>
</tr>
</tbody>
</table>

*For ABW single phase operation multiply by 2.5

NOTE: CURVE TOLERANCE IN CONFORMITY WITH ISO9906 APPENDIX A.

HYDRAULIC PERFORMANCE

<table>
<thead>
<tr>
<th>VM10, 2 POLE 50Hz</th>
<th>VM10, 2 POLE 50Hz</th>
</tr>
</thead>
<tbody>
<tr>
<td>RPM (r/min)</td>
<td>RPM (r/min)</td>
</tr>
<tr>
<td>0.00</td>
<td>0.00</td>
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<tr>
<td>1.00</td>
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<tr>
<td>5.00</td>
<td>5.00</td>
</tr>
<tr>
<td>6.00</td>
<td>6.00</td>
</tr>
</tbody>
</table>

*Part of motor bearings fitted for thrust management

NOTE: MOTOR TECHNICAL SPECIFICATIONS

.Common Features & Benefits

Fully Assembled
Systems are supplied fully assembled for ease of mounting – Supercoll 10SC tanks are supplied free standing. Optional 304 stainless steel base plates are also available.

Extra Low Voltage Controls
All pressure and flow switches for LOP models are 5VDC for added safety and ease of maintenance.

Plug in and Pump
All 240V single phase units up to 2.2kW come completely pre-wired with power leads and three pin plug for connection to G.F.O. – no need for an electrician on site. Larger single phase and all three phase units simply require connection to power by an electrician.

DOL or Soft Start
All 5.5 and 7.5kW, three phase units are available in both DOL or Soft Start versions to satisfy the requirements of various power authorities.

Proven Dependability
The Davey VM pumps and supercoll tanks have proven themselves around the world. All VM vertical multistage pump hydraulic parts are manufactured from 304 stainless steel, providing corrosion protection.

High Efficiency
Powered by an IP55 motor suitable for some of the harshest operating conditions. All three phase motors

High Efficiency

Flange Pumps

Cast iron

304 stainless steel

316L stainless steel

Tungsten carbide

Teflon

304 stainless steel

316L stainless steel

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

Impeller neck rings

Orings (casing)

Impellers

Suction & discharge casing

Pump attachment base

Suction & discharge casing

Motor support standoffs

Impellers

Single (suction)

Single (discharge)

Outside sleeve

Pump shaft

Intermediate bearing

Tungsten carbide

Mechanical and

Ceramic/Ceramic or Teflon/EPDM

O rings (吸入)

O rings (压出)

Pump (discharge & pressure)

Pump (discharge & suction)

Teflon

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

NOTE: 304 stainless steel (ISO 9041 3.16) and 316L stainless steel (ISO 9041 3.17) are recognised materials that are highly resistant to corrosion. But some pumps are required for use in areas that contain low concentrations of chlorine. Maximum sanitization concentration 40 g/m3.
**PRODUCT DESCRIPTION**

RVM pumpsets are a single pump packaged system that comes in three versions.

1. RVM Water Pressure System
2. RVM Water Pressure System with LOP Control Box
3. RVM Remote Start/LOP Pump Set

**APPLICATIONS**

Automatic water pressure system for:
- Irrigation & turf watering
- Stock watering
- Water supply, boosting & transfer
- Industrial applications
- Water treatment

**OPERATING LIMITS**

Capacities to 11 l/s (40m³/hr)
Pressure heads to 160 m
Maximum liquid temperature +70 °C (tank)
Maximum ambient temperature +40 °C
Maximum inlet limited by max. pressure operating pressure
Maximum operating pressure with 105C Tank 70m/700kPa
Maximum operating pressure with HP105C Tank 105m/1050kPa
Maximum operating pressure with HP24+ Tank 160m/1600kPa

Suitable fluids: Clean, clear, non-corrosive, non-flammable liquids with no fibres and little sand/silica or abrasives (maximum concentration 40g/m³).

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**TECHNICAL SPECIFICATIONS**

**RVM 3 - 8 A/3 - 24 - L**

- **Control Box**
  - L = LOP control box
  - LS = LOP control box with soft starter
  - LB = Remote start LOP control box
  - LSB = Remote start LOP control box with soft starter

- **Size of pressure tank**
  - 24 = HP24 + 24 litre tank
  - 105 = 105C or HP105C (when required) 105 litre tank
  - Blank = no tank (only with remote start models)

- **Motor Model**
  - Blank = Single phase
  - 3 = Three phase

- **Impeller variation**
  - A = manufacture turndown

- **Number of stages**

- **Nominal capacity at BEP in m³/hr**

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**WATER PRESSURE SYSTEM WITH 105 LITRE TANK**

**WATER PRESSURE SYSTEM WITH LOP CONTROL BOX AND 105 LITRE TANK**

**WATER PRESSURE SYSTEM WITH 24 LITRE TANK**

**REMOTE START/LOP PUMP SET**

Specific dimensions for each model available on request. Davey reserves the right to change dimensions and configurations without notice.

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Davey Water Products Pty Ltd
ABN 18 066 327 517

**WATER PRESSURE SYSTEM WITH 105 LITRE TANK**

**WATER PRESSURE SYSTEM WITH LOP CONTROL BOX AND 105 LITRE TANK**

**WATER PRESSURE SYSTEM WITH 24 LITRE TANK**

**REMOTE START/LOP PUMP SET**

Specific dimensions for each model available on request. Davey reserves the right to change dimensions and configurations without notice.
**IDENTIFICATION OF THE PUMP SET**

- **RVM 3 - B 1186x802**
  - Control Box
    - L = LOP control box
    - LSS = LOP control box with soft starter
    - LR = Remote start LOP control box
    - LSR = Remote start LOP control box with soft starter
  - Size of pressure tank
    - 24 = HP24 24 litre tank
    - 105 = HP105C (when required) 105 litre tank
    - Blank = no tank (only with remote start models)
  - Motor type
    - Blank = Single phase
    - S = Three phase
  - Impeller variation
    - A = manufacturer turndown
  - Number of stages
  - Nominal capacity of PUMP SET in m³/hr
  - RVM Pump set

**APPLICATIONS**
- Automatic water pressure system for:
  - Irrigation & turf watering
  - Stock watering
  - Water supply, boosting & transfer
  - Industrial applications
  - Water treatment

**OPERATING LIMITS**
- Capacities to 11 l/s (40 m³/hr)
- Pressure heads to 160 m
- Maximum liquid temperature +70°C (tank)
- Maximum ambient temperature +40°C
- Maximum inlet Limited by max. pressure operating pressure
- Maximum operating pressure with HP24 Tank 70m/700kPa
- Maximum operating pressure with HP105C Tank 105m/1050kPa
- Maximum operating pressure with HP24 Tank 160m/1600kPa

**Suitable Fluids**
- Clean, clear, non-corrosive, non-flammable liquids with no fibres and little sand/silica or abrasives (maximum concentration 40g/m³).

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**TECHNICAL SPECIFICATIONS**

**WATER PRESSURE SYSTEM WITH 105 LITRE TANK**

**WATER PRESSURE SYSTEM WITH LOP CONTROL BOX AND 105 LITRE TANK**

**WATER PRESSURE SYSTEM WITH 24 LITRE TANK**

**REMOTE START/LOP PUMP SET**

Specific dimensions for each model available on request. Davey reserves the right to change dimensions and configurations without notice.