# **TECHNICAL BROCHURE**

BVJ R1



#### **FEATURES**

**High Capacity:** Specifically designed to deliver water at high capacities.

**Easy to Service:** Can be taken apart for service by removal of four bolts. Pipes do not have to be disturbed when service is required.

**Powered for Continuous Operation:** Pump is designed for continuous operation. All ratings are within the motor manufacturer's recommended working limits.

**Corrosion-Resistant:** Electrocoat paint process is applied inside and out and then baked on.

Adjustable Automatic Pressure Control Valve: Guarantees maximum capacity at all times. By-pass check valve equalizes pressure in entire system and helps prevent loss of prime.

**Easy to Prime:** The VJ series incorporates a vent at the highest point of the casing, including the mechanical seal chamber, for a more thorough air purging, and fast, efficient priming.

**VJ** 60 HZ VERTICAL JET PUMPS DEEP WELL





# Goulds Water Technology

#### **APPLICATIONS**

Specifically designed for:

- Homes
- Farms
- Cottages

#### SPECIFICATIONS

#### Pump

- Pipe connection:
  - 1" NPT drive (pressure)
  - 1¼" NPT suction
- 1" NPT discharge.

Pressure switch: AS4, preset (30-50 PSI).

### Motor

- NEMA standard.
- 1/2-1 HP, 115/230 V, 60 Hz, capacitor start.
- Single phase, 3500 RPM.
- Built-in overload with automatic reset.
- Stainless steel shaft.
- Rotation: clockwise when viewed from motor end.

Maximum temperature: 140° F

### **REQUIRED SYSTEM COMPONENTS**

- Basic Pump Unit: Includes pump, motor, pressure switch, tubing, fittings, pressure gauge, bushing and pressure control valve (AV21).
- Deep Well Jet Assembly Package: Twin Pipe includes: Jet body, nozzle, venturi and foot valve. Packer includes: Jet body with built-in check valve, nozzle and venturi. See Performance Charts on following pages for Jet Assembly package order numbers.

## ADDITIONAL ACCESSORIES REQUIRED

For Packer: well casing adapter AWD2 (2") or AWD3 (3"). Must be ordered separately.

## AGENCY LISTINGS



Canadian Standards Association

Underwriters Laboratories (1)

| HP/Model<br>Well Casing<br>Min. I.D. (In.)                |          | ½ HP-VJ05     ¾ HP-VJ07     1HP-VJ10             |        |          |        |        |        |        |  |  |  |  |
|---|----------|--|--------|----------|--------|--------|--------|--------|--|--|--|--|
|   |          | 4  |        |          |        |        |        |        |  |  |  |  |
| Pressure Pipe   |          | 1  |        |          |        |        |        |        |  |  |  |  |
| Suction   | Size In. | 11⁄4   |        |          |        |        |        |        |  |  |  |  |
| Jet Asser<br>Package                                      |          | FT4-46   | FT4-08 | FT4-47   | FT4-46 | FT4-06 | FT4-14 | FT4-09 |  |  |  |  |
| Jet Body  | (only)   |  |        | ·        | AT4    | ·      |        |        |  |  |  |  |
| Nozzle  |          | AN014  | AN015  | AN013 AN |        | J014   | AN017  | AN015  |  |  |  |  |
| Venturi   |          | AD722  | AD720  | AD724    | AD722  | AD720  | AD729  | AD721  |  |  |  |  |
| Control Valve<br>Setting (PSI) ②                          |          | 23   |        | 34       |        | 40     | 34     | 36     |  |  |  |  |
|   | Feet     | Gallons per Minute 30-50 Pressure Switch Setting |        |          |        |        |        |        |  |  |  |  |
| et)   | 30       | 12.2   |        | 15.2     |        |        | 18.8   |        |  |  |  |  |
| 5 fe  | 40       | 11.7   |        | 13.2     |        |        | 16.7   |        |  |  |  |  |
| of !  | 50       | 10.0   |        | 11.7     |        |        | 15.0   |        |  |  |  |  |
| Depth to Jet Assembly<br>(based on submergence of 5 feet) | 60       | 8.2  | 8.3    | 9.7      | 10.0   |        | 12.7   |        |  |  |  |  |
|   | 70       |  | 5.8    |          | 8.3    |        | 10.0   |        |  |  |  |  |
|   | 80       |  | 5.0    |          | 7.1    |        | 7.9    |        |  |  |  |  |
|   | 90       |  | 3.8    |          | 5.8    | 5.8    | 5.3    | 5.8    |  |  |  |  |
|   | 100      |  |        |          |        | 5.0    |        | 5.0    |  |  |  |  |
|   | 110      |  |        |          |        | 3.8    |        | 4.6    |  |  |  |  |
|   | 120      |  |        |          |        |        |        | 3.3    |  |  |  |  |

NOTE: An offset of 50 feet will result in a decrease of about 25% from ratings as shown.

0 Jet assembly package includes jet body (AT4), venturi, nozzle and foot valve.

② Deep well jet pumps require a pressure control device on the discharge to provide back pressure to the jet assembly. Failure to control the amount of discharge by adjusting the back pressure (pressure control valve setting) will cause the pump to lose prime. The AV21 measures the pressure on the outbound side so that the high pressure does not open the 30-50 psi switch and turn the pump off.

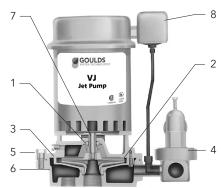
### **PERFORMANCE RATINGS - TWIN PIPE SYSTEMS**

# Goulds Water Technology

# **Residential Water Systems**

#### COMPONENTS

| Item No. | Description            |  |  |  |  |  |  |
|----------|------------------------|--|--|--|--|--|--|
| 1        | Mechanical seal        |  |  |  |  |  |  |
| 2        | Impeller               |  |  |  |  |  |  |
| 3        | Diffuser (Guidevane)   |  |  |  |  |  |  |
| 4        | Pressure control valve |  |  |  |  |  |  |
| 5        | Motor adapter          |  |  |  |  |  |  |
| 6        | Casing                 |  |  |  |  |  |  |
| 7        | Stainless steel shaft  |  |  |  |  |  |  |
| 8        | Pressure switch        |  |  |  |  |  |  |



#### **DIMENSIONS AND WEIGHTS**

| HP/Model | 1⁄2-VJ05 | ¾-VJ07 | 1-VJ10 |  |  |  |  |  |  |
|----------|----------|--------|--------|--|--|--|--|--|--|
| Weight   | 50       | 53     | 56     |  |  |  |  |  |  |
| Length   | 12¾      |        |        |  |  |  |  |  |  |
| Width    | 12¾      |        |        |  |  |  |  |  |  |
| Height   | 13½      | 14¼    | 14¾    |  |  |  |  |  |  |

Pressure control valve not included in dimensions. (All dimensions are in inches and weights in lbs. Do not use for construction purposes.)

#### **MODEL INFORMATION**

| CSA Listed<br>Order No. | U.L. Listed (Indoor use) <sup>①</sup><br>Order No. | HP  |  |  |
|-------------------------|--|-----|--|--|
| VJ05                    | VJ05UL   | 1/2 |  |  |
| VJ07                    | VJ07UL   | 3⁄4 |  |  |
| VJ10                    | VJ10UL   | 1   |  |  |

#### **PERFORMANCE RATINGS - PACKER SYSTEM**

| HP/Model  |                  | 1⁄2 HP-VJ05                                      |        |        |        | 3⁄4 HP-VJ07 |        |        |        |        | 1HP-VJ10 |        |        |        |        |
|---|------------------|--|--------|--------|--------|-------------|--------|--------|--------|--------|----------|--------|--------|--------|--------|
| Well Casing (In.)   |                  | 2 3  |        | 3      | 2      |             |        | 3      |        | 2      |          |        | 3      |        |        |
| Suction   | Pipe<br>Size In. | 11⁄4 11⁄2  |        | 1⁄2    | 11⁄4   |             |        | 11⁄2   |        | 11⁄4   |          | 1½     |        |        |        |
| Jet Assembly<br>Package ①                                 |                  | FP2-38   | FP2-08 | FP3-42 | FP3-09 | FP2-50      | FP2-47 | FP2-09 | FP3-40 | FP3-43 | FP2-48   | FP2-43 | FP2-08 | FP3-40 | FP3-49 |
| Jet Body (only)   |                  | AP2 AP3  |        | AP2    |        | AP3         |        | AP2    |        | AP3    |          |        |        |        |        |
| Nozzle  |                  | AN014  | AN015  | AN014  | AN016  | AN013       | AN     | 015    | AN013  | AN014  | AN016    |        | AN015  |        |        |
| Venturi   |                  | AD722  | AD720  | AD722  | AD721  | AD724       | AD723  | AD721  | AD724  | AD721  | AD729    | AD725  | AD720  | AD724  | AD723  |
| Control Valve ②<br>Setting (PSI)                          |                  | 23   |        |        | 34     |             |        | 36     |        |        | 34       | 36     |        |        |        |
|   | Feet             | Gallons per Minute 30-50 Pressure Switch Setting |        |        |        |             |        |        |        |        |          |        |        |        |        |
| Depth to Jet Assembly<br>(based on submergence of 5 feet) | 30               | 12.2   |        | 12.5   |        | 15.2        |        |        | 15.8   |        | 18.8     |        |        | 18.8   |        |
|   | 40               | 10.8   |        | 11.3   |        | 13.2        |        |        | 13.7   |        | 16.7     |        |        | 16.7   |        |
|   | 50               | 9.0  |        | 10.0   |        | 11.3        |        |        | 11.7   |        | 14.2     |        |        | 15.0   |        |
|   | 60               | 7.5  | 7.7    | 8.2    | 8.3    | 9.3         | 10.3   |        | 10.0   | 10.3   | 11.7     | 11.0   |        | 12.5   |        |
|   | 70               |  | 5.5    |        | 6.8    |             | 8.7    |        |        | 9.6    |          | 9.3    |        | 10.0   |        |
|   | 80               |  | 4.6    |        | 5.8    |             | 6.8    |        |        | 8.2    |          | 7.7    |        | 8.3    |        |
|   | 90               |  | 3.4    |        | 4.3    |             | 5.3    |        |        | 6.7    |          | 5.7    |        | 6.3    | 6.5    |
|   | 100              |  |        |        | 3.5    |             | 4.0    | 4.2    |        | 5.4    |          | 4.6    | 4.6    |        | 5.8    |
|   | 110              |  |        |        |        |             |        | 3.3    |        | 4.3    |          |        | 3.3    |        | 5.0    |
|   | 120              |  |        |        |        |             |        | 2.3    |        | 3.3    |          |        | 2.9    |        | 4.2    |
|   | 130              |  |        |        |        |             |        |        |        | 2.9    |          |        |        |        | 3.3    |
|   | 140              |  |        |        |        |             |        |        |        |        |          |        |        |        | 2.9    |

NOTE: An offset of 50 feet will result in a decrease of about 25% from ratings as shown. Special turned (diameter) couplings are required on 2" packer systems, order no. 64655 in Jet and Sub price book.

① Jet Assembly Package includes jet body, AP2 or AP3; built-in check valve, nozzle and venturi.

② Deep well jet pumps require a pressure control device on the discharge to provide back pressure to the jet assembly. Failure to control the amount of discharge by adjusting the back pressure (pressure control valve setting) will cause the pump to lose prime. The AV21 measures the pressure on the outbound side so that the high pressure does not open the 30-50 psi switch and turn the pump off.

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