



Basic Convertible Pump

# HSJ

MULTI-STAGE CONVERTIBLE JET PUMPS - 60 HZ



### FEATURES

**High Capacity and Pressure:** Specifically designed to deliver high capacities at greater pressures.

**Stainless Steel Pump Shaft:** Hex design provides positive drive for impellers and eliminates clearance adjustments.

**Easy to Service:** Can be taken apart for service by removing four bolts.

**Corrosion Resistant:** Glass filled thermoplastic impellers. Stainless steel wear rings and coverplates. Electrocoat paint process applied inside and out and then baked on.

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

**Convertible:** Designed for use on shallow or deep well applications using appropriate Goulds Water Technology fittings. See the performance charts on the following pages for fitting order numbers.

### AGENCY LISTINGS



Canadian Standards Association



Underwriters Laboratories<sup>®</sup>

## Residential Water Systems

### APPLICATIONS

Specifically designed for:

- Homes, Farms, Cottages, Booster service

### SPECIFICATIONS

#### Pump

- Pipe connections:  
1 ¼" NPT suction, 1" NPT discharge,  
1" NPT drive (pressure).
- Pressure switch:  
¾ - 1 ½ HP, AS4; 2 HP, AS10,  
both preset (30-50 PSI).

#### Motor

- NEMA standard
- ¾-1 ½ HP - 115/230 V
- 2 HP - 230 V only
- 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

### SYSTEM COMPONENTS

- Basic Pump Unit: Includes pump, motor, pressure switch, tubing, fittings, pressure gauge and bushing.
- Shallow Well Package: Includes adapter, nozzle, venturi, bolts, gasket and pipe plugs.
- 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.

Additional Accessories Required:

- Packer System - well casing adapter AWJ2 (2") and turned coupling 64655 or AWCJ3 (3").
- For Deep Well Systems - a pressure control valve such as an AV22KIT or AV22 plus a JDW tubing kit.



**AV22**

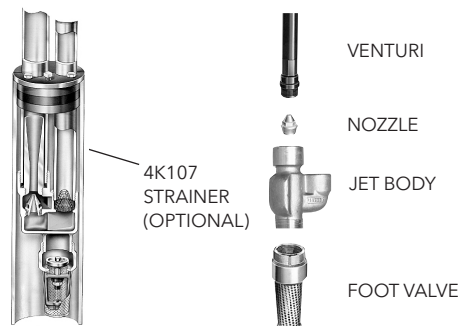
### MODEL INFORMATION

| CSA Listed Order No. | U.L. Listed (Indoor use) ① Order No. | HP  | Stages |
|----------------------|--------------------------------------|-----|--------|
| HSJ07N               | HSJ07NUL                             | ¾   | 2      |
| HSJ10N               | HSJ10NUL                             | 1   | 2      |
| HSJ15N               | HSJ15NUL                             | 1 ½ | 3      |
| HSJ20N               | HSJ20NUL                             | 2   | 3      |

### PERFORMANCE RATINGS - SHALLOW WELL SYSTEM

| HP/Model                  | ¾ HP - HSJ07N      |      |      |     |                     | 1 HP - HSJ10N      |      |      |      |                     | 1½ HP - HSJ15N           |      |      |      |      | 2 HP - HSJ20N      |                     |      |      |      |      |      |      |                     |
|---------------------------|--------------------|------|------|-----|---------------------|--------------------|------|------|------|---------------------|--------------------------|------|------|------|------|--------------------|---------------------|------|------|------|------|------|------|---------------------|
| Shallow Well Package      | FHSJ07             |      |      |     |                     | FHSJ10             |      |      |      |                     | FHSJ15                   |      |      |      |      | FHSJ20             |                     |      |      |      |      |      |      |                     |
| Adapter                   | 4K62               |      |      |     |                     |                    |      |      |      |                     | 4K62                     |      |      |      |      |                    |                     |      |      |      |      |      |      |                     |
| Nozzle                    | ANO12              |      |      |     |                     | ANO12              |      |      |      |                     | ANO12                    |      |      |      |      | ANO12              |                     |      |      |      |      |      |      |                     |
| Venturi                   | AD3432             |      |      |     |                     | AD3437             |      |      |      |                     | AD3439                   |      |      |      |      | AD3448             |                     |      |      |      |      |      |      |                     |
| Discharge Pressure - PSI  |                    |      |      |     |                     |                    |      |      |      |                     | Discharge Pressure - PSI |      |      |      |      |                    |                     |      |      |      |      |      |      |                     |
| Total Suction Lift (feet) | 30                 | 40   | 50   | 60  | Max. Shut off (PSI) | 30                 | 40   | 50   | 60   | Max. Shut off (PSI) | 30                       | 40   | 50   | 60   | 70   | 80                 | Max. Shut off (PSI) | 30   | 40   | 50   | 60   | 70   | 80   | Max. Shut off (PSI) |
|                           | Gallons per minute |      |      |     |                     | Gallons per minute |      |      |      |                     | Gallons per minute       |      |      |      |      | Gallons per minute |                     |      |      |      |      |      |      |                     |
| 5'                        | 18.5               | 18.3 | 14.6 | 8.0 | 76                  | 22.8               | 22.7 | 19.8 | 12.2 | 79                  | 22.8                     | 22.8 | 22.8 | 21.7 | 17.0 | 11.2               | 104                 | 28.2 | 28.0 | 25.8 | 22.7 | 21.2 | 16.2 | 105                 |
| 10'                       | 15.9               | 15.8 | 12.7 | 6.7 | 74                  | 20.7               | 20.3 | 17.5 | 10.3 | 77                  | 20.7                     | 20.7 | 20.7 | 20.0 | 16.3 | 9.0                | 102                 | 24.8 | 24.7 | 24.2 | 23.3 | 18.7 | 13.7 | 103                 |
| 15'                       | 13.8               | 13.8 | 11.0 | 5.6 | 71                  | 18.0               | 17.8 | 15.2 | 9.2  | 74                  | 18.0                     | 18.0 | 18.0 | 17.7 | 14.2 | -                  | 99                  | 21.3 | 21.3 | 20.8 | 20.7 | 18.7 | 13.7 | 101                 |
| 20'                       | 13.8               | 11.3 | 9.2  | -   | 68                  | 14.5               | 14.3 | 12.8 | -    | 71                  | 15.0                     | 15.0 | 15.0 | 15.0 | 12.0 | -                  | 97                  | 18.0 | 17.7 | 17.5 | 17.0 | 16.2 | 10.8 | 98                  |
| 25'                       | 8.6                | 8.6  | 5.7  | -   | 65                  | 11.5               | 11.4 | 8.3  | -    | 68                  | 11.2                     | 11.2 | 11.2 | 11.0 | -    | -                  | 95                  | 12.3 | 12.0 | 11.9 | 11.7 | 10.5 | -    | 95                  |

### Deep Well Twin Pipe System



#### PERFORMANCE RATINGS – TWIN PIPE SYSTEMS - 4" WELL

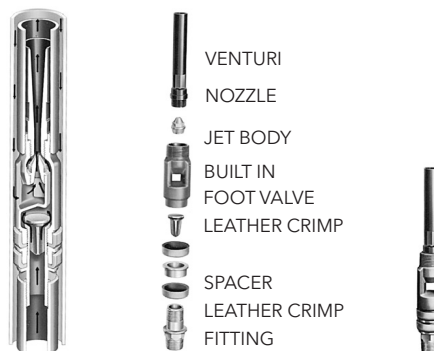
| HP/Model  | ¾ HP - HSJ07N   |  |        | 1 HP - HSJ10N |        |        | 1½ HP - HSJ15N |        |        | 2 HP - HSJ20N |        |        |     |
|---|-----------------|--|--------|---------------|--------|--------|----------------|--------|--------|---------------|--------|--------|-----|
| Jet Assembly Package ①                                    | FT4-48          | FT4-47   | FT4-06 | FT4-47        | FT4-24 | FT4-08 | FT4-45         | FT4-30 | FT4-29 | FT4-45        | FT4-30 | FT4-29 |     |
| Pressure Suction  | Pipe Size (in.) |  |        |               |        |        |                |        |        |               |        |        |     |
|   | 1"              |  |        |               |        |        | 1¼"            |        |        |               |        |        |     |
| Nozzle  | AN012           | AN013  | AN014  | AN013         | AN015  |        | AN013          |        |        |               |        |        |     |
| Venturi   | AD727           | AD724  | AD720  | AD724         |        | AD720  | AD726          | AD722  | AD719  | AD726         | AD722  | AD719  |     |
| Pressure Control Valve Setting (PSI) ②                    | 37              | 40   |        |               | 43     |        | 62             | 65     | 67     | 76            | 78     | 80     |     |
| Depth to Jet Assembly<br>(based on submergence of 5 feet) | Feet            | Gallons Per Minute (GPM) 30-50 Pressure Switch Setting |        |               |        |        |                |        |        |               |        |        |     |
|   | 30              | 15.1   |        |               | 16.0   |        |                | 13.0   |        |               | 13.0   |        |     |
|   | 40              | 13.5   |        |               | 15.2   |        |                | 13.0   |        |               | 13.0   |        |     |
|   | 50              | 11.8   |        |               | 14.7   |        |                | 13.0   |        |               | 13.0   |        |     |
|   | 60              | 10.7   |        |               | 13.7   |        |                | 12.8   |        |               | 12.8   |        |     |
|   | 70              | 8.5  | 9.0    |               | 11.7   | 11.7   |                | 12.2   |        |               | 12.8   |        |     |
|   | 80              |  | 7.5    |               |        | 10.5   |                | 10.6   |        |               | 12.0   |        |     |
|   | 90              |  | 6.2    | 6.2           |        | 9.0    |                | 9.2    | 9.3    |               | 11.3   |        |     |
|   | 100             |  |        | 5.8           |        | 7.5    |                |        | 9.0    |               | 9.5    | 9.5    |     |
|   | 110             |  |        | 5.0           |        | 6.3    | 6.0            |        | 8.0    |               |        | 9.4    |     |
|   | 120             |  |        | 4.6           |        |        | 5.0            |        | 7.0    |               |        | 8.5    |     |
|   | 130             |  |        | 4.0           |        |        | 4.3            |        | 6.2    | 5.8           |        | 7.7    |     |
|   | 140             |  |        |               |        |        | 4.0            |        |        | 5.6           |        | 6.8    |     |
|   | 150             |  |        |               |        |        | 3.5            |        |        | 5.2           |        | 6.0    | 5.7 |
|   | 160             |  |        |               |        |        |                |        |        | 4.7           |        |        | 5.5 |
|   | 170             |  |        |               |        |        |                |        |        | 4.2           |        |        | 5.3 |
| 180   |                 |  |        |               |        |        |                |        | 3.7    |               |        | 5.0    |     |
| 190   |                 |  |        |               |        |        |                |        | 3.2    |               |        | 4.5    |     |
| 200   |                 |  |        |               |        |        |                |        |        |               |        | 3.8    |     |

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

① 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. On pumps with low control valve settings, up to 40 psi, a simple ball valve or AV15 will work. On systems with control valve settings of 40 - 80 psi an AV22, AV22KIT or AV21 is required. They measure the pressure on the outbound side so that the high pressure does not open the 30-50 psi switch and turn the pump off.

### Deep Well Packer System



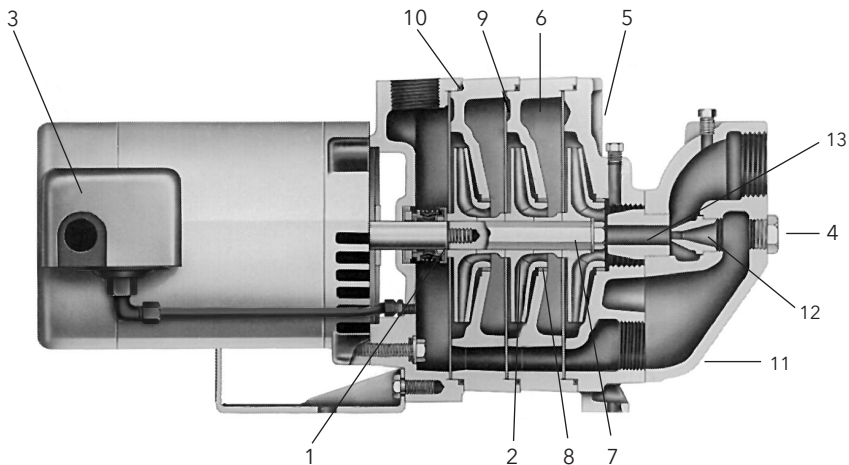
### PERFORMANCE RATINGS – PACKER SYSTEM

| HP/Model   | ¾ HP - HSJ07N |  |        |        |        | 1 HP - HSJ10N |        |        |        |        | 1½ HP - HSJ15N |        |        |        |        | 2 HP - HSJ20N |        |        |        |        |        |        |
|--|---------------|--|--------|--------|--------|---------------|--------|--------|--------|--------|----------------|--------|--------|--------|--------|---------------|--------|--------|--------|--------|--------|--------|
| Well Casing (in.)                                      | 2             |  | 3      |        |        | 2             |        | 3      |        |        | 2              |        | 3      |        |        | 2             |        | 3      |        |        |        |        |
| Suction Pipe Size (in.)                                | 1¼            |  | 1½     |        |        | 1¼            |        | 1½     |        |        | 1¼             |        | 1½     |        |        | 1¼            |        | 1½     |        |        |        |        |
| Jet Assembly Package ①                                 | FP2-51        | FP2-50   | FP2-06 | FP3-40 | FP3-42 | FP2-50        | FP2-07 | FP2-08 | FP3-40 | FP3-49 | FP2-49         | FP2-30 | FP2-29 | FP3-47 | FP3-46 | FP3-34        | FP2-49 | FP2-30 | FP2-29 | FP3-47 | FP3-46 | FP3-34 |
| Jet Body (Only)  | AP2           |  | AP3    |        |        | AP2           |        | AP3    |        |        | AP2            |        | AP3    |        |        | AP2           |        | AP3    |        |        |        |        |
| Nozzle   | AN012         | AN013  | AN014  | AN013  | AN014  | AN013         | AN014  | AN015  | AN013  | AN015  | AN013          |        |        |        |        |               |        |        |        |        |        |        |
| Venturi  | AD727         | AD724  | AD720  | AD724  | AD722  | AD724         | AD720  | AD724  | AD723  | AD726  | AD722          | AD719  | AD727  | AD722  | AD719  | AD726         | AD722  | AD719  | AD727  | AD722  | AD719  |        |
| Pressure ② Control Valve Setting (PSI)                 | 40            |  | 36     | 40     |        | 45            |        | 40     | 43     | 62     | 65             | 67     | 62     | 64     | 66     | 76            | 78     | 80     | 75     | 78     | 80     |        |
| Depth to Jet Assembly (based on submergence of 5 feet) | Feet          | Gallons Per Minute (GPM) 30-50 Pressure Switch Setting |        |        |        |               |        |        |        |        |                |        |        |        |        |               |        |        |        |        |        |        |
|  | 30            | 14.9   |        |        | 15.3   |               | 15.8   |        |        | 16.3   |                | 13.0   |        |        | 14.7   |               |        | 13.0   |        |        | 14.7   |        |
|  | 40            | 13.1   |        |        | 13.5   |               | 14.0   |        |        | 16.0   |                | 13.0   |        |        | 14.5   |               |        | 13.0   |        |        | 14.7   |        |
|  | 50            | 11.6   |        |        | 12.5   |               | 12.5   |        |        | 15.5   |                | 12.9   |        |        | 14.3   |               |        | 13.0   |        |        | 14.7   |        |
|  | 60            | 10.5   |        |        | 12.2   |               | 11.2   | 11.3   |        | 14.2   |                | 12.7   |        |        | 14.3   |               |        | 13.0   |        |        | 14.5   |        |
|  | 70            | 8.4  | 8.8    |        | 11.8   |               |        | 10.0   |        | 12.5   |                | 11.8   |        |        | 14.2   |               |        | 12.8   |        |        | 14.5   |        |
|  | 80            |  | 7.6    |        | 10.2   | 8.5           |        | 8.7    |        | 10.0   |                | 10.2   |        |        | 12.2   |               |        | 11.8   |        |        | 13.5   |        |
|  | 90            |  | 6.0    | 6.2    |        | 7.8           |        | 7.3    |        | 8.3    | 9.0            | 8.3    | 9.1    |        | 10.0   |               |        | 10.5   |        |        | 12.7   |        |
|  | 100           |  |        | 5.7    |        | 6.9           |        | 5.5    |        |        | 8.2            |        | 8.3    |        | 7.8    | 9.1           |        | 8.5    | 9.1    |        | 10.5   |        |
|  | 110           |  |        | 4.3    |        | 6.0           |        | 4.2    | 4.8    |        | 7.3            |        | 7.3    |        |        | 8.8           |        |        | 8.9    |        | 8.3    | 9.1    |
|  | 120           |  |        | 3.8    |        | 5.3           |        |        | 4.0    |        | 6.7            |        | 6.2    |        |        | 7.6           |        |        | 7.9    |        |        | 9.1    |
|  | 130           |  |        | 2.2    |        | 4.5           |        |        | 3.5    |        | 5.8            |        | 5.4    | 5.6    |        | 6.9           |        |        | 6.9    |        |        | 8.8    |
|  | 140           |  |        |        |        |               |        |        | 3.0    |        | 4.8            |        |        | 5.3    |        | 6.2           |        |        | 6.0    |        |        | 8.2    |
|  | 150           |  |        |        |        |               |        |        | 2.4    |        | 4.1            |        |        | 4.8    | 5.4    | 5.6           |        | 5.2    | 5.6    |        |        | 7.3    |
|  | 160           |  |        |        |        |               |        |        |        |        |                |        |        | 4.3    |        | 5.5           |        |        | 5.4    |        |        | 6.5    |
| 170  |               |  |        |        |        |               |        |        |        |        |                |        | 3.6    |        | 5.0    |               |        | 4.9    |        |        | 5.7    |        |
| 180  |               |  |        |        |        |               |        |        |        |        |                |        | 3.0    |        | 4.7    |               |        | 4.3    |        |        | 5.6    |        |
| 190  |               |  |        |        |        |               |        |        |        |        |                |        |        |        | 4.3    |               |        | 3.8    |        |        | 5.5    |        |
| 200  |               |  |        |        |        |               |        |        |        |        |                |        |        |        | 3.8    |               |        | 3.3    |        |        | 5.3    |        |
| 210  |               |  |        |        |        |               |        |        |        |        |                |        |        |        | 3.3    |               |        |        |        |        | 4.8    |        |
| 220  |               |  |        |        |        |               |        |        |        |        |                |        |        |        |        |               |        |        |        |        | 4.5    |        |
| 230  |               |  |        |        |        |               |        |        |        |        |                |        |        |        |        |               |        |        |        |        | 4.0    |        |

**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. On pumps with low control valve settings, up to 40 psi, a simple ball valve or AV15 will work. On systems with control valve settings of 40 - 80 psi an AV22, AV22KIT or AV21 is required. They measure the pressure on the outbound side so that the high pressure does not open the 30-50 psi switch and turn the pump off.



**Shallow Well Model**

### COMPONENTS

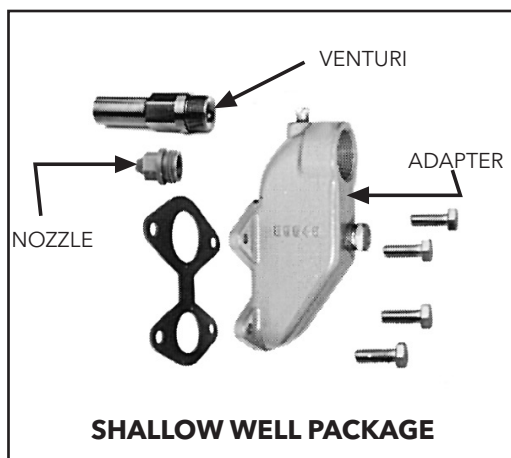
| Item # | Description          | Material                   |
|--------|----------------------|----------------------------|
| 1      | Mechanical Seal      | Carbon/Ceramic/<br>Buna/SS |
| 2      | Impeller             | Noryl                      |
| 3      | Pressure Switch      | Various                    |
| 4      | Plug                 | Carbon Steel               |
| 5      | Casing               | Cast Iron                  |
| 6      | Intermediate Stage   | Cast Iron                  |
| 7      | Hex Shaft Extension  | Stainless Steel            |
| 8      | Wear Ring            | Stainless Steel            |
| 9      | Cover Plate          | Stainless Steel            |
| 10     | O-Rings              | Buna-N                     |
| 11     | Shallow Well Adapter | Cast Iron                  |
| 12     | Nozzle               | Delrin                     |
| 13     | Venturi              | Polypropylene              |
| 14     | Motor Adapter        | Cast Iron                  |

### DIMENSIONS AND WEIGHTS

| HP/Model                   | ¾-HSJ07N | 1-HSJ10N | 1½-HSJ15N | 2-HSJ20N |
|----------------------------|----------|----------|-----------|----------|
| <b>Weight</b>              | 53       | 58       | 72        | 75       |
| <b>Length</b> <sup>①</sup> | 15       | 16       | 17        | 19       |
| <b>Width</b>               | 8        | 8        | 8         | 8        |
| <b>Height</b>              | 9        | 9        | 9         | 9        |

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

① Add 4" for shallow well adapter.



# Xylem |'zīləm|

- 1) The tissue in plants that brings water upward from the roots;
- 2) a leading global water technology company.

We're a global team unified in a common purpose: creating innovative solutions to meet our world's water needs. Developing new technologies that will improve the way water is used, conserved, and re-used in the future is central to our work. We move, treat, analyze, and return water to the environment, and we help people use water efficiently, in their homes, buildings, factories and farms. In more than 150 countries, we have strong, long-standing relationships with customers who know us for our powerful combination of leading product brands and applications expertise, backed by a legacy of innovation.

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