

# DATA SHEET

## VARI-NOZZLES



**Brass/304 Stainless  
Steel: Models:**

**7920 - 7970**



### FEATURES

- Easy push forward permits low pressure flow for chemical application or pull back for return to high pressure rinse.
- Smooth, easy right or left rotation adjusts spray angle from 0° to 60° for cleaning flexibility.
- Molded, insulated grip for comfortable operation and adjustment.
- Color coded I.D. plug for easy identification of nozzle.

### SPECIFICATIONS

|                     | U.S.           | Metric        |
|---------------------|----------------|---------------|
| Flow Range          | 1.5 – 6.6 gpm  | 5.7 – 25 lm   |
| Pressure Range      | 100 – 3650 psi | 6.9 – 252 bar |
| Maximum Temperature | 195° F         | 90° C         |
| Inlet Fitting       | 1/4" BSP(F)    | 1/4" BSP(F)   |
| Weight              | 5.1 oz.        | 0.144 kg      |
| Dimensions          | 4.50 x 1.79"   | 114 x 45.5 mm |

### SELECTION

The Vari-Nozzle easily adjusts from high to low pressure and is used with a downstream chemical injector to apply chemical at low pressure. Select the Vari-Nozzle most suitable to the flow and pressure of the system from the Vari-Nozzle Selection Chart.

### INSTALLATION

Install the Vari-Nozzle after the high pressure shut-off gun onto any 1/4" lance for easy accessibility to adjust from high to low pressure during operation.

### OPERATION

The Vari-Nozzle has two adjustments: pressure and spray angle. To adjust from high to low, simply grasp the black sleeve and push forward. To return to high pressure, pull back on the sleeve. Listen for a click to indicate the sleeve is in position. Do not place your hand over the end of the Vari-Nozzle sleeve.

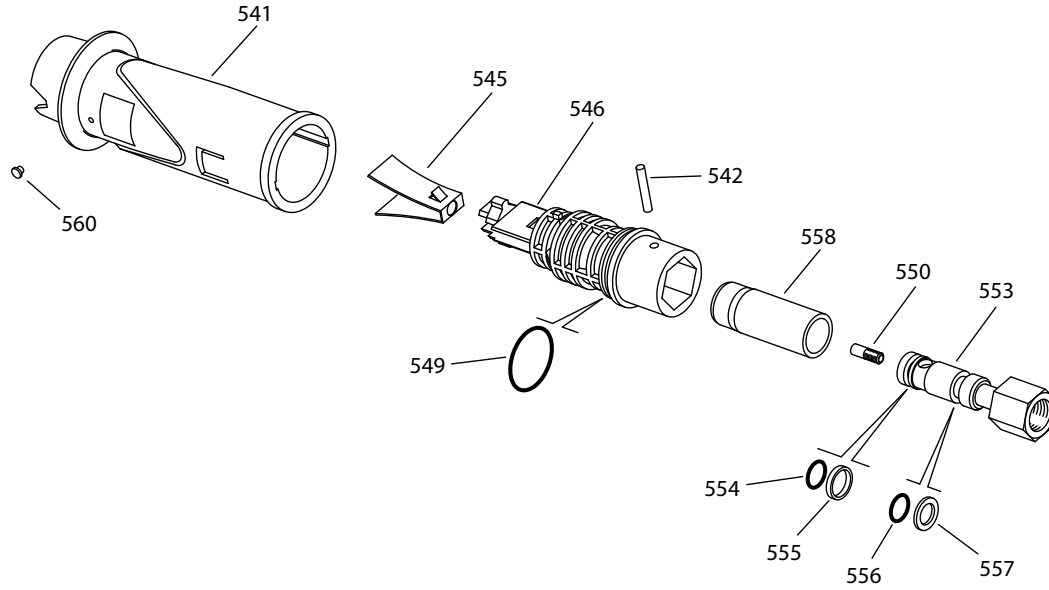
In either the low or High Pressure mode, the sleeve rotates right to left to change the spray angle from 0° to 60° (low pressure) and 0° to 30° (high pressure) to permit the desired intensity and coverage during cleaning.

### VARI-NOZZLE SELECTION CHART

| PN   | Size | Nozzle Volume (gpm) at Various Pressures (psi) |      |      |      |      |
|------|------|--|------|------|------|------|
|      |      | 1000   | 1500 | 2000 | 3000 | 3500 |
| 7920 | 2.0  | 1.00   | 1.20 | 1.40 | 1.70 | 1.90 |
| 7930 | 3.0  | 1.50   | 1.85 | 2.10 | 2.60 | 2.85 |
| 7935 | 3.5  | 1.75   | 2.17 | 2.45 | 3.05 | 3.32 |
| 7940 | 4.0  | 2.00   | 2.50 | 2.80 | 3.50 | 3.80 |
| 7945 | 4.5  | 2.20   | 2.80 | 3.00 | 3.90 | 4.30 |
| 7950 | 5.0  | 2.50   | 3.10 | 3.40 | 4.40 | 4.70 |
| 7955 | 5.5  | 2.80   | 3.40 | 3.80 | 4.80 | 5.20 |
| 7960 | 6.0  | 3.00   | 3.70 | 4.20 | 5.20 | 5.60 |
| 7970 | 7.0  | 3.50   | 4.30 | 5.00 | 6.10 | 6.60 |

## EXPLODED VIEW

### Vari-Nozzle Models 7920-7970



### PARTS LIST

| ITEM | PN    | MATL | DESCRIPTION              | QTY   |
|------|-------|------|--------------------------|-------|
| 541  | —     | NY   | Sleeve, Black            | 1     |
| 542  | —     | S    | Pin (M3x19)              | 1     |
| 545  | —     | S    | Spring, Flat             | 1     |
| 546  | —     | NY   | Body                     | 1     |
| 549  | 43278 | NBR  | O-Ring, Body Nozzle      | 1     |
| 550  | —     | S    | Nozzles (2.0 - 7.0)      | 1     |
| 553  | —     | BB   | Stem                     | 1     |
| 554  | —     | NBR  | O-Ring, Stem, Front      | 1     |
| 555  | —     | PTFE | Gasket, Stem, Front      | 1     |
| 556  | —     | NBR  | O-Ring, Stem, Rear       | 1     |
| 557  | —     | PTFE | Back-up-Ring, Stem, Rear | 1     |
| 558  | —     | BB   | Bushing Nozzle           | 1     |
| 560  | —     | NY   | Plug, I.D. Light Green   | 2.0 1 |
|      | —     | NY   | Plug, I.D. White         | 3.0 1 |
|      | —     | NY   | Plug, I.D. Brown         | 3.5 1 |
|      | —     | NY   | Plug, I.D. Dark Yellow   | 4.0 1 |
|      | —     | NY   | Plug, I.D. Blue          | 4.5 1 |
|      | —     | NY   | Plug, I.D. Light Purple  | 5.0 1 |
|      | —     | NY   | Plug, I.D. Dark Red      | 5.5 1 |
|      | —     | NY   | Plug, I.D. Dark Green    | 6.0 1 |
|      | —     | NY   | Plug, I.D. Orange        | 7.0 1 |

Material Codes (Not Part of Part Number): BB=Brass,  
 NBR=Medium Nitrile (Buna-N) NY=Nylon PTFE=Pure Polyetrafluoroethylene  
 S=304SS

### TROUBLESHOOTING

| PROBLEM                | PROBABLE CAUSE              | SOLUTION  |
|------------------------|-----------------------------|---|
| Leaking                | • Worn O-Rings              | • Replace body, Stem, O-Rings, Back-up-Ring, Gasket.                        |
|                        | • Contaminated liquid       | • Check water supply.<br>• Clean or replace O-Rings.                        |
| Stays in high pressure | • Damaged or clogged nozzle | • Check water supply<br>• Replace nozzle.                                   |
| Leak at fitting        | • Cracked fitting           | • Replace fitting.<br>• Hand tighten onto lance to avoid damage to fitting. |

#### ⚠ CAUTIONS AND WARNINGS

All High Pressure Systems require a primary pressure regulating device (i.e. regulator, unloader) and a secondary pressure relief device (i.e. pop-off valve, relief valve). Failure to install such relief devices could result in personal injury or damage to pump or property. Cat Pumps does not assume any liability or responsibility for the operation of a customer's high pressure system. Read all CAUTIONS and WARNINGS before commencing service or operation of any high pressure system. The CAUTIONS and WARNINGS are included in each service manual and with each Accessory Data sheet. CAUTIONS and WARNINGS can also be viewed online at [www.catpumps.com/cautions-warnings](http://www.catpumps.com/cautions-warnings) or can be requested directly from Cat Pumps.

#### WARRANTY

View the Limited Warranty on-line at [www.catpumps.com/warranty](http://www.catpumps.com/warranty).