



# Needle Valve



*Seamless flow. Effortless control*

ANHUI HONGJI INSTRUMENT & VALVE MANUFACTURING CO., LTD.

THIS PAGE HAS INTENTIONALLY BEEN LEFT BLANK





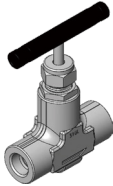
# Contents



## Screwed Bonnet Needle Valves

HJZF1 Series

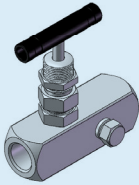
02



## Forged Body Needle Valves

HJZF2 Series and HJZF2H Series

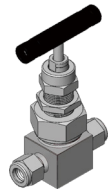
07



## Rising Plug Valves

HJZF3 Series and HJZF3G (with gauge port) Series

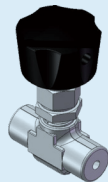
13



## Union Bonnet Needle Valves

HJZF4 Series and HJZF4H Series

17



## Nonrotating-stem Needle Valves

HJZF5 Series and HJZF5H Series

23



## Integral Bonnet Needle Valves

HJZF6 Series and HJZF6H Series

27

## Screwed Bonnet Needle Valves

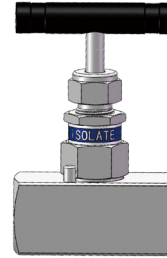
- Packing may need to be adjusted during valve use.
- For better maintenance, Hongji instrumentation needle valves should be stored in the half-open position.

# Screwed Bonnet Needle Valves

HJZF1 Series: Working pressure up to 6000 psig

## Features

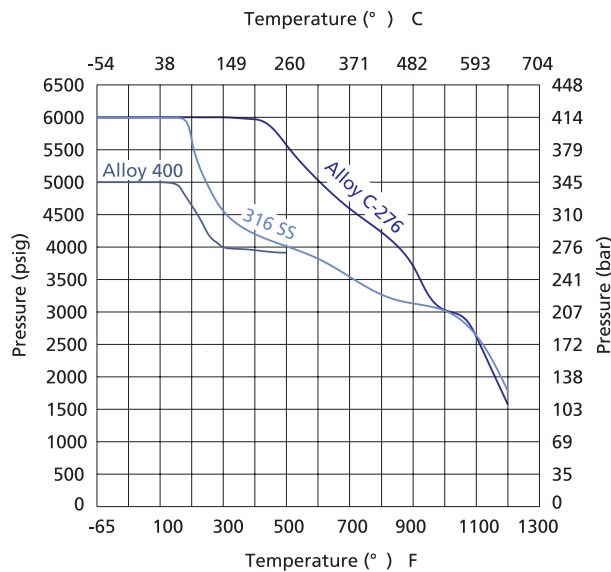
- Cold-drawn-Bar body
- Two-piece stem design: Upper stem threads cold rolled and lower stem hardened for high strength and smooth operation
- Upper stem thread lubricant isolated from system media
- Safety back seating seal in fully open position
- Panel mounting available
- Steady and durable fastening of the handle by double lock-pins
- Handles of different colors available
- Every valve leak tested with Nitrogen or compressed air at the maximum allowable working pressure



- Working pressure up to:
  - Stainless steel: 6000 psig (414 bar)
  - Alloy C-276: 6000 psig (414 bar)
  - Alloy 400: 5000 psig (345 bar)
- Working temperature:
  - PTFE: -65°F to 450°F (-54°C to 232°C)
  - Graphite: -65°F to 1200°F (-54°C to 649°C)

## Pressure vs. Temperature

HJZF1 Series

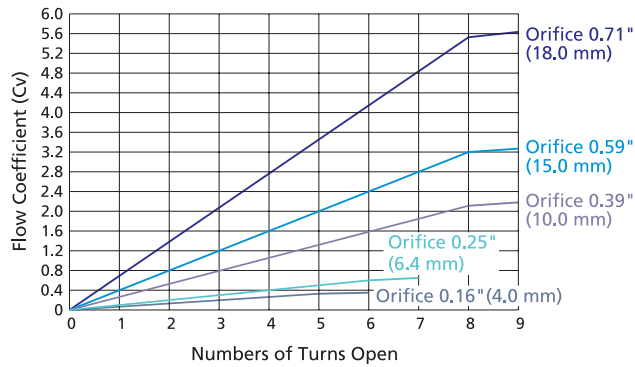


1. Graphs are based on graphite packing.
2. Temperature rating is limited to 200°F (93°C) max. with PCTFE stem tip (soft tip).

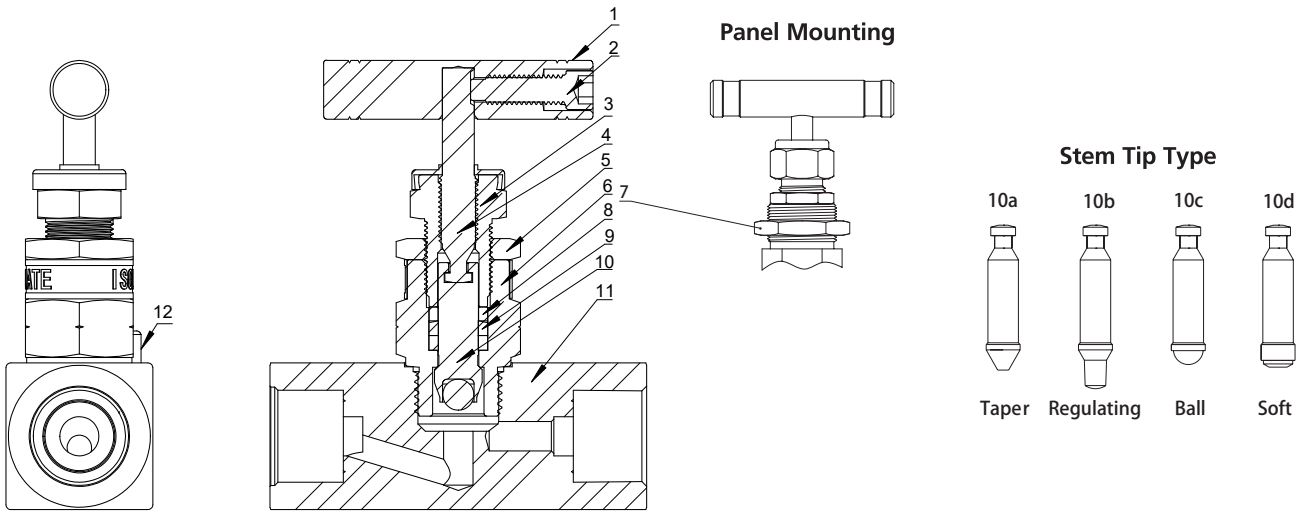


## Flow Data at 100° F (38° C)

Regulating Stem Tip



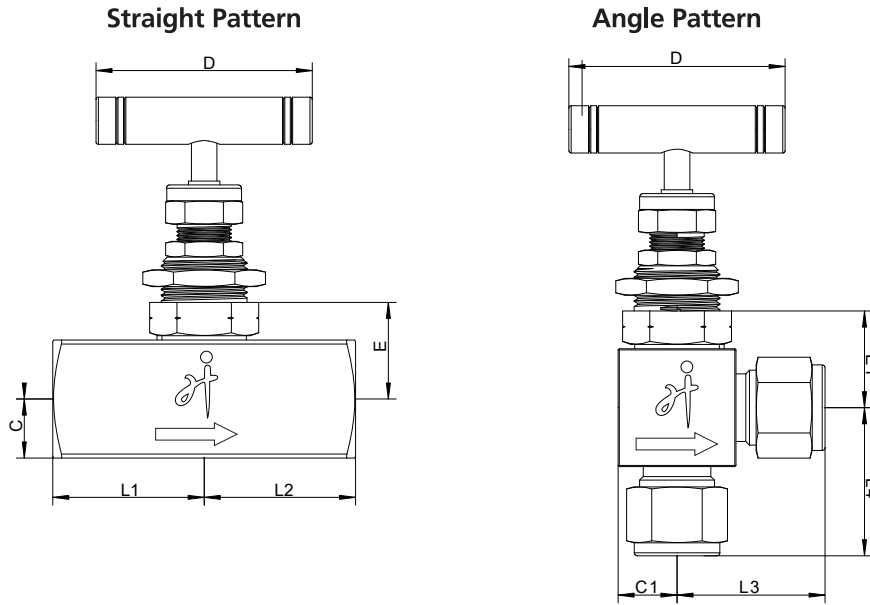
## Standard Materials of Construction



| Item                              | Component    | Valve Body Material                                  |                |                  |
|-----------------------------------|--------------|--|----------------|------------------|
|                                   |              | 316 SS   | Alloy 400      | Alloy C-276      |
| Material Grade/ASTM Specification |              |  |                |                  |
| 1                                 | Handle       | Anodized aluminum or stainless steel or black knob   |                |                  |
| 2                                 | Set Screw    | Galvanized carbon steel                              |                |                  |
| 3                                 | Packing Bolt | 304 SS/A479  |                |                  |
| 4                                 | Upper Stem   | 316 SS/A479  |                |                  |
| 5                                 | Lock Nut     | Stainless steel                                      |                |                  |
| 6                                 | Bonnet       | 316 SS/A479  | Alloy 400/B164 | Alloy C-276/B574 |
| 7                                 | Panel Nut    | Stainless steel                                      |                |                  |
| 8                                 | Gland        | 316 SS/A479  |                |                  |
| 9                                 | Packing      | PTFE or graphite                                     |                |                  |
| 10a<br>10b<br>10c                 | Lower Stem   | Hardened<br>316 SS/A479                              | Alloy 400/B164 | Alloy C-276/B574 |
| 10d                               | Stem         | 316 SS/A479  | Alloy 400/B164 | Alloy C-276/B574 |
|                                   | Stem Tip     |  | PTFE or PCTFE  |                  |
| 11                                | Body         | 316 SS/A479  | Alloy 400/B164 | Alloy C-276/B574 |
|                                   | Seat         |  | Same as body   |                  |
| 12                                | Lock Pin     | Stainless steel                                      |                |                  |
|                                   | Lubricant    | Molybdenum disulfide-based / PTFE Lubricating Grease |                |                  |



## Dimensions



HJZF1 Series Needle Valves are standard without panel mounting. To order valves with panel mounting as illustrated, add **-Y** to the ordering number.

Example: **HJZF1-FNPT2-7-Y-SS**

## Dimensions of HJZF1 Series

| Basic Ordering Number | Connection Type and Size     | Orifice in.(mm) | Cv             | Connection Pressure at 100°F (38°C) bar(psig) | Dimensions, in.(mm) |                |                |                |                |                |                |                |                |                |                |                |
|-----------------------|------------------------------|-----------------|----------------|---|---------------------|----------------|----------------|----------------|----------------|----------------|----------------|----------------|----------------|----------------|----------------|----------------|
|                       |                              |                 |                |   | Inlet/Outlet        | 316 SS         | L1             | L2             | L3             | L4             | C              | C1             | D              | E              | E1             |                |
| HJZF1-FNPT2-7-        | 1/8 Female NPT               | 0.16<br>(4.0)   | 0.35           | 316 SS  | 1.00<br>(25.4)      | 1.00<br>(25.4) | 1.00<br>(25.4) | 0.56<br>(14.3) | 0.50<br>(12.7) | 0.50<br>(12.7) | 2.17<br>(55)   | 0.84<br>(21.4) | 0.82<br>(20.9) |                |                |                |
| HJZF1-FNPT4-7-        | 1/4 Female NPT               |                 |                |   | 1.06<br>(26.9)      | 1.06<br>(26.9) |                |                |                |                |                |                |                |                |                |                |
| HJZF1-MNPT4-7-        | 1/4 Male NPT                 |                 |                |   | 1.03<br>(26.2)      | 1.03<br>(26.2) | 1.06<br>(26.9) | 1.06<br>(26.9) |                |                |                |                |                |                |                |                |
| HJZF1-MNPT6-7-        | 3/8 Male NPT                 |                 |                |   | 1.19<br>(30.2)      | 1.19<br>(30.2) |                |                |                |                |                |                |                |                |                |                |
| HJZF1-YZ4-7-          | 1/4" Fractional Tube Fitting |                 |                |   | 0.25<br>(6.4)       | 0.85           | 414(6000)      | 1.20<br>(30.5) |                |                |                |                |                | 1.20<br>(30.5) | 1.20<br>(30.5) | 1.20<br>(30.5) |
| HJZF1-GZ6-7-          | 6mm Metric Tube Fitting      |                 |                |   |                     |                |                | 1.12<br>(28.6) |                |                |                |                |                | 1.12<br>(28.6) | 1.12<br>(28.6) | 0.63<br>(15.9) |
| HJZF1-GZ8-7-          | 8mm Metric Tube Fitting      |                 |                |   |                     |                |                |                |                |                |                |                |                |                |                |                |
| HJZF1-FNPT4-8-        | 1/4 Female NPT               | 0.56<br>(14.3)  | 0.56<br>(14.3) | 2.50<br>(63.5)                                |                     |                |                | 0.89<br>(22.5) | 0.89<br>(22.5) |                |                |                |                |                |                |                |
| HJZF1-FNPT6-8-        | 3/8 Female NPT               |                 |                |   |                     |                |                |                |                | 1.41<br>(35.8) | 1.41<br>(35.8) | 1.32<br>(33.6) | 1.32<br>(33.6) |                |                |                |
| HJZF1-MNPT6-8-        | 3/8 Male NPT                 |                 |                |   |                     |                |                |                |                | 1.52<br>(38.6) | 1.52<br>(38.6) | 1.42<br>(36.1) | 1.42<br>(36.1) |                |                |                |
| HJZF1-YZ6-8-          | 3/8" Fractional Tube Fitting |                 |                |   |                     |                |                |                |                | 1.42<br>(36.1) | 1.42<br>(36.1) | 1.33<br>(33.8) | 1.33<br>(33.8) |                |                |                |
| HJZF1-YZ8-8-          | 1/2" Fractional Tube Fitting |                 |                |   | 1.52<br>(38.6)      | 1.52<br>(38.6) | 1.42<br>(36.1) |                |                | 1.42<br>(36.1) |                |                |                |                |                |                |
| HJZF1-GZ10-8-         | 10mm Metric Tube Fitting     |                 |                |   | 1.42<br>(36.1)      | 1.42<br>(36.1) | 1.33<br>(33.8) |                |                | 1.33<br>(33.8) |                |                |                |                |                |                |
| HJZF1-GZ12-8-         | 12mm Metric Tube Fitting     |                 |                |   | 1.52<br>(38.6)      | 1.52<br>(38.6) | 1.42<br>(36.1) |                |                | 1.42<br>(36.1) |                |                |                |                |                |                |
| HJZF1-GZ14-8-         | 14mm Metric Tube Fitting     | 1.56<br>(39.7)  | 1.56<br>(39.7) | 1.42<br>(36.1)                                | 1.42<br>(36.1)      |                |                |                |                |                |                |                |                |                |                |                |

Needle Valve



| Basic Ordering Number | Connection Type and Size<br>Inlet/Outlet | Orifice in.(mm) | Cv   | Connection Pressure at 100°F (38°C) bar(psig) | Dimensions, in.(mm) |                |                |                |                |                |                |                |                 |
|-----------------------|--|-----------------|------|---|---------------------|----------------|----------------|----------------|----------------|----------------|----------------|----------------|-----------------|
|                       |  |                 |      |   | 316 SS              | L1             | L2             | L3             | L4             | C              | C1             | D              | E               |
| HJZF1-TS6-8-G-        | 3/8" Fractional Tube Socket Weld         | 0.25<br>(6.4)   | 0.85 | 414(6000)                                     | 1.13<br>(28.6)      | 1.13<br>(28.6) | 1.13<br>(28.6) | 1.13<br>(28.6) | 0.56<br>(14.3) | 0.56<br>(14.3) | 2.50<br>(63.5) | 0.89<br>(22.5) | 0.89<br>(22.5)  |
| HJZF1-TS8-8-G-        | 1/2" Fractional Tube Socket Weld         |                 |      |   |                     |                |                |                |                |                |                |                |                 |
| HJZF1-GS12-8-G-       | 12 mm Metric Tube Socket Weld            |                 |      |   |                     |                |                |                |                |                |                |                |                 |
| HJZF1-GS14-8-G-       | 14 mm Metric Tube Socket Weld            |                 |      |   |                     |                |                |                |                |                |                |                |                 |
| HJZF1-GS16-8-G-       | 16 mm Metric Tube Socket Weld            |                 |      |   |                     |                |                |                |                |                |                |                |                 |
| HJZF1-GDH14-8-G-      | 14 mm Metric Tube Butt Weld              |                 |      |   | 1.50<br>(38.1)      | 1.50<br>(38.1) | 1.50<br>(38.1) | 1.50<br>(38.1) | 0.88<br>(22.2) | 0.77<br>(19.5) | 3.50<br>(88.9) | 1.38<br>(34.9) | 1.25<br>(31.75) |
| HJZF1-GDH16-8-G-      | 16 mm Metric Tube Butt Weld              |                 |      |   |                     |                |                |                |                |                |                |                |                 |
| HJZF1-GDHJ14-8-       | 14 mm Rotatable Metric Tube Butt Weld    |                 |      |   | 2.92<br>(74.1)      | 2.92<br>(74.1) | —              | —              | —              | —              | —              | —              | —               |
| HJZF1-GDHJ16-8-       | 16 mm Rotatable Metric Tube Butt Weld    |                 |      |   |                     |                |                |                |                |                |                |                |                 |
| HJZF1-MS20-8-         | M20 x 1.5 Male Metric Thread (for RG-M)  |                 |      |   | 1.50<br>(38.1)      | 1.50<br>(38.1) | —              | —              | —              | —              | —              | —              | —               |
| HJZF1-MS22-8-         | M22 x 1.5 Male Metric Thread (for RG-M)  |                 |      |   |                     |                |                |                |                |                |                |                |                 |
| HJZF1-FNPT8-9-        | 1/2 Female NPT                           | 0.39<br>(10.0)  | 2.18 | 400(5800)                                     | 1.75<br>(44.5)      | 1.75<br>(44.5) | 1.63<br>(41.3) | 1.50<br>(38.1) | 0.88<br>(22.2) | 0.77<br>(19.5) | 3.50<br>(88.9) | 1.38<br>(34.9) | 1.25<br>(31.75) |
| HJZF1-FNPT12-9-       | 3/4 Female NPT                           |                 |      |   |                     |                |                |                |                |                |                |                |                 |
| HJZF1-MNPT12-9-       | 3/4 Male NPT                             |                 |      |   |                     |                |                |                |                |                |                |                |                 |
| HJZF1-YZ12-9-         | 3/4" Fractional Tube Fitting             |                 |      |   | 1.97<br>(50.0)      | 1.97<br>(50.0) | 1.61<br>(41.0) | 1.61<br>(41.0) | —              | —              | —              | —              | —               |
| HJZF1-GZ14-9-         | 14 mm Metric Tube Fitting                |                 |      |   |                     |                |                |                |                |                |                |                |                 |
| HJZF1-GZ16-9-         | 16 mm Metric Tube Fitting                |                 |      |   | 1.75<br>(44.5)      | 1.75<br>(44.5) | —              | —              | —              | —              | —              | —              | —               |
| HJZF1-GZ18-9-         | 18 mm Metric Tube Fitting                |                 |      |   |                     |                |                |                |                |                |                |                |                 |
| HJZF1-GS14-9-G-       | 14 mm Metric Tube Socket Weld            |                 |      |   | 1.75<br>(44.5)      | 1.75<br>(44.5) | —              | —              | —              | —              | —              | —              | —               |
| HJZF1-GS16-9-G-       | 16 mm Metric Tube Socket Weld            |                 |      |   |                     |                |                |                |                |                |                |                |                 |
| HJZF1-TS12-9-G-       | 3/4" Fractional Tube Socket Weld         |                 |      |   |                     |                |                |                |                |                |                |                |                 |
| HJZF1-GDHJ14-9-       | 14 mm Rotatable Metric Tube Butt Weld    |                 |      |   |                     |                |                |                |                |                |                |                |                 |
| HJZF1-FNPT12-6-       | 3/4 Female NPT                           | 0.59<br>(15.0)  | 3.27 | 398(5770)                                     | 1.75<br>(44.5)      | 1.75<br>(44.5) | 1.75<br>(44.5) | 1.75<br>(44.5) | 1.14<br>(29.0) | 0.88<br>(22.2) | 5.00<br>(127)  | 1.70<br>(43.2) | 1.43<br>(36.4)  |
| HJZF1-TS16-6-G-       | 1" Fractional Tube Socket Weld           |                 |      |   |                     |                |                |                |                |                |                |                |                 |
| HJZF1-GS25-6-G-       | 25 mm Metric Tube Socket Weld            |                 |      |   |                     |                |                |                |                |                |                |                |                 |
| HJZF1-PS12-6-G-       | 3/4" Pipe Socket Weld                    |                 |      |   |                     |                |                |                |                |                |                |                |                 |
| HJZF1-FNPT16-G-       | 1 Female NPT                             | 0.71<br>(18.0)  | 5.65 | 414(6000)                                     | 1.97<br>(50.0)      | 1.97<br>(50.0) | —              | —              | 1.24<br>(31.5) | —              | 5.00<br>(127)  | —              | —               |
| HJZF1-GS25-0-G-       | 25 mm Metric Tube Socket Weld            |                 |      |   |                     |                |                |                |                |                |                |                |                 |
| HJZF1-TS16-0-G-       | 1" Fractional Tube Socket Weld           |                 |      |   |                     |                |                |                |                |                |                |                |                 |
| HJZF1-PS12-0-G-       | 3/4" Pipe Socket Weld                    |                 |      |   |                     |                |                |                |                |                |                |                |                 |
| HJZF1-PS16-0-G-       | 1" Pipe Socket Weld                      |                 |      |   |                     |                |                |                |                |                |                |                |                 |

## Ordering Number Description

| HJZF1 Series | GZ Inlet Type                            | 8 Inlet Size                    |        | YZ 12 Outlet Type                                    | 8 Orifice Size    | SIC Stem Tip Material    | B Stem Tip Type  | G Packing Material | Y Panel Mounting | S Handle             | A Flow Pattern | SS Body Material |
|--------------|--|---------------------------------|--------|--|-------------------|--------------------------|------------------|--------------------|------------------|----------------------|----------------|------------------|
|              |  | 2 1/8"                          | 4 1/4" |  |                   |                          |                  |                    |                  |                      |                |                  |
| HJZF1        | FNPT Female NPT                          | 2 1/8"                          |        | Same as Inlet  | 7 0.16" (4.0 mm)  | Same as Body             | Taper            | PTFE               | No               | Black Aluminum Bar   | Straight       | SS 316 SS        |
|              | MNPT Male NPT                            | 4 1/4"                          |        | Specify in the same way as inlet Type and inlet Size | 8 0.25" (6.0 mm)  | W Stellite               | T Regulating     | G Graphite         | Y Yes            | Red Aluminum F Bar   | A Angle        | SL 316L SS       |
|              | FRT Female BSPT                          | 3/8" or 6 mm                    |        |  | 9 0.39" (10.0 mm) | INC6 Alloy 600           | B Ball           |                    |                  | Green Q Aluminum Bar |                | S4 304 SS        |
|              | RT Male BSPT                             | 1/2" or 8 mm                    |        |  | 6 0.59" (15.0 mm) | HC Alloy C-276           | K Soft Tip-PCTFE |                    |                  | Blue L Aluminum Bar  |                | S4L 304L SS      |
|              | Female Metric Thread (for RG-M)          | 10 10 mm                        |        |  | 0 0.71" (18.0 mm) | Silicon carbide ceramics |                  |                    |                  | Stainless Steel Bar  |                | S21 321 SS       |
|              | MS Male Metric Thread (for RG-M)         | 3/4" or 12 mm                   |        |  |                   |                          |                  |                    |                  | H Black Knob         |                | D22 Duplex 2205  |
|              | FRP Female BSPP (for RP)                 | 14 14 mm or M14 x 1.5           |        |  |                   |                          |                  |                    |                  |                      |                | M4 Alloy 400     |
|              | BP Male BSPP (for RG)                    | 16 1" or 16 mm                  |        |  |                   |                          |                  |                    |                  |                      |                | INC6 Alloy 600   |
|              | TS Fractional Tube Socket Weld           | 18 18 mm                        |        |  |                   |                          |                  |                    |                  |                      |                | HC C-276         |
|              | GS Metric Tube Socket Weld               | 1 1/4" or 20 20 mm or M20 x 1.5 |        |  |                   |                          |                  |                    |                  |                      |                | CS Carbon Steel  |
|              | YDH Fractional Tube Butt Weld            | 22 22 mm or M22 x 1.5"          |        |  |                   |                          |                  |                    |                  |                      |                |                  |
|              | GDH Metric Tube Butt Weld                | 24 24 x 1.5                     |        |  |                   |                          |                  |                    |                  |                      |                |                  |
|              | PS Pipe Socket Weld                      | 25 25 mm                        |        |  |                   |                          |                  |                    |                  |                      |                |                  |
|              | PB Pipe Butt Weld                        |                                 |        |  |                   |                          |                  |                    |                  |                      |                |                  |
|              | YZ Fractional Tube Fitting               |                                 |        |  |                   |                          |                  |                    |                  |                      |                |                  |
|              | GZ Metric Tube Fitting                   |                                 |        |  |                   |                          |                  |                    |                  |                      |                |                  |
|              | YDHJ Rotatable Fractional Tube Butt Weld |                                 |        |  |                   |                          |                  |                    |                  |                      |                |                  |
|              | GDHJ Rotatable Metric Tube Butt Weld     |                                 |        |  |                   |                          |                  |                    |                  |                      |                |                  |

- Standard thread pitch for metric threads are as follows:  
M10 and below: 1 mm  
M12 to M24: 1.5 mm
- If a connection size larger than 25mm is required, or if valves of different materials are needed, please contact the Hongji sales personnel.





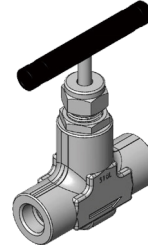
# Forged Body Needle Valves

HJZF2 Series: Working pressure up to 6000 psig

HJZF2H Series: Working pressure up to 10000 psig

## Features

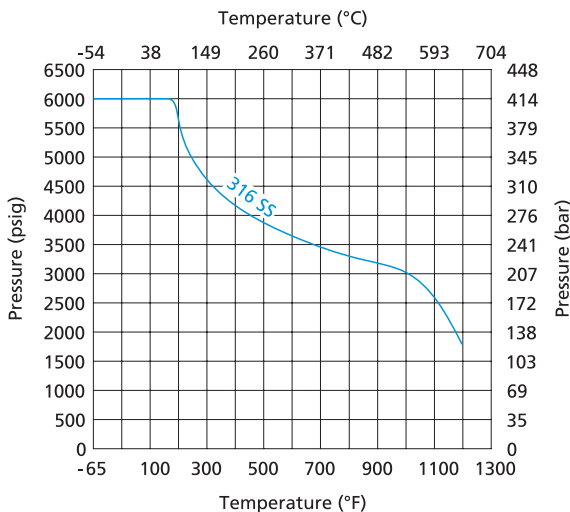
- One-piece forged body
- Two-piece stem design: Upper stem threads cold rolled and lower stem hardened for high strength and smooth operation
- Upper stem thread lubricant isolated from system media
- Panel mounting available
- Steady and durable fastening of the handle by double lock-pins
- Handles of different colors available
- Every valve leak tested with Nitrogen or compressed air (HJZF2 Series) at the maximum allowable working pressure or with water (HJZF2H Series) at 11 times the maximum allowable working pressure



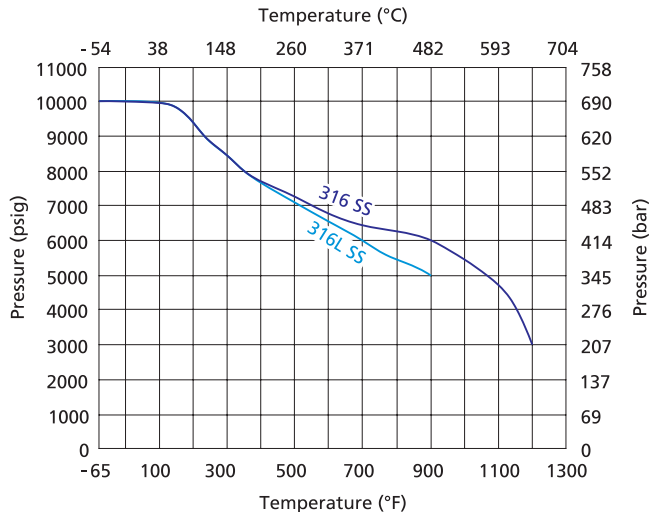
- Working pressure up to:
  - HJZF2 Series — Stainless steel: 6000 psig (414 bar)
  - Alloy C-276: 6000 psig (414 bar)
  - Alloy 400: 5000 psig (345 bar)
  - HJZF2H Series — Stainless steel: 10000 psig (690 bar)
- Working temperature:
  - PTFE: -65°F to 450°F (-54°C to 232°C)
  - Graphite: -65°F to 1200°F (-54°C to 649°C)

## Pressure vs. Temperature

HJZF2 Series



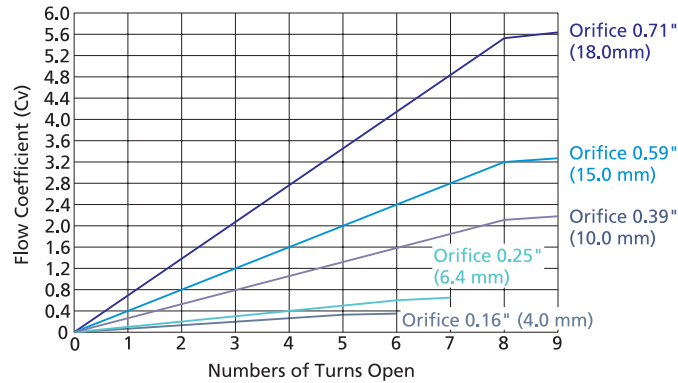
HJZF2H Series



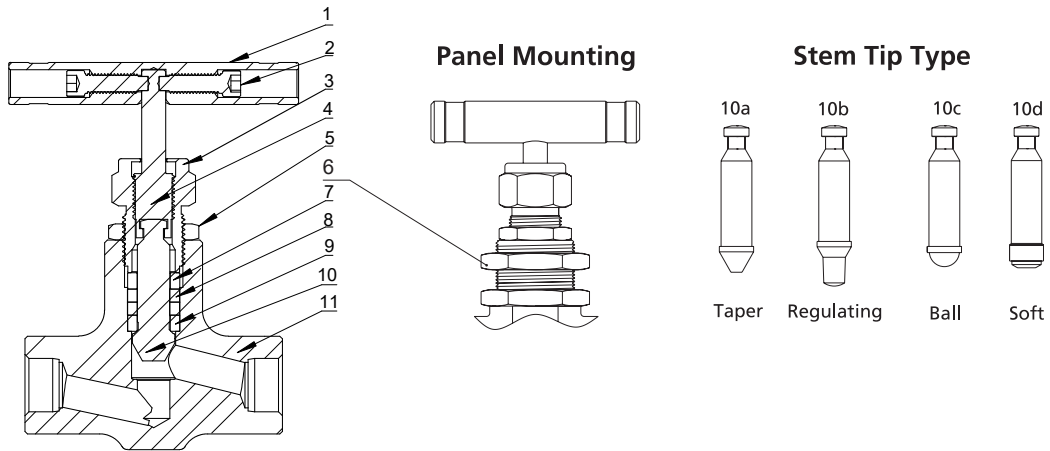
1. Graphs are based on graphite packing.
2. Soft tips are for HJZF2 Series only. Temperature rating is limited to 200°F (93°C) max. with PCTFE stem tip (soft tip).

## Flow Data at 100° F (38° C)

Regulating Stem Tip



## Standard Materials of Construction

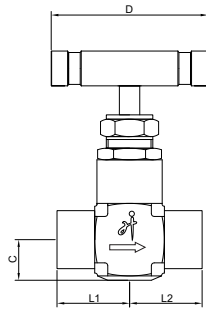


| Item              | Component      | Valve Body Material                                  |  |
|-------------------|----------------|--|--|
|                   |                | 316 SS   |  |
|                   |                | Material Grade/ASTM Specification                    |  |
| 1                 | Handle         | Anodized aluminum or stainless steel or black knob   |  |
| 2                 | Set Screw      | 304 SS/A479  |  |
| 3                 | Packing Bolt   | 304 SS/A479  |  |
| 4                 | Upper Stem     | 316 SS/A479  |  |
| 5                 | Lock Nut       | Stainless steel                                      |  |
| 6                 | Panel Nut      | Stainless steel                                      |  |
| 7                 | Gland          | 316 SS/A479  |  |
| 8                 | Packing        | PTFE or graphite                                     |  |
| 9                 | Packing Washer | 316 SS/A479  |  |
| 10a<br>10b<br>10c | Lower Stem     | Hardened<br>316 SS/A479                              |  |
| 10d               | Stem           | 316 SS/A479  |  |
|                   | Stem Tip       | PTFE or PCTFE  |  |
| 11                | Body           | 316 SS/A182  |  |
|                   | Seat           | Same as body   |  |
|                   | Lubricant      | Molybdenum disulfide-based / PTFE Lubricating Grease |  |

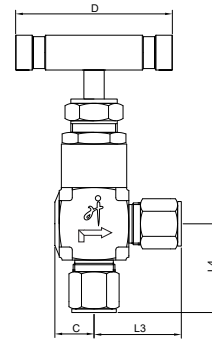


## Dimensions

### Straight Pattern



### Angle Pattern



HJZF2 Series Needle Valves are standard without panel mounting. To order needle valves with panel mounting as illustrated, add **-Y** to the ordering number. Example: **HJZF2-FNS2-7-Y-SS**

## Dimensions of HJZF2 Series

| Basic Ordering Number | Connection Type and Size<br>Inlet/Outlet | Orifice<br>in. (mm) | Cv   | Connection Pressure at<br>100°F (38°C)<br>bar (psig) | Dimensions, in. (mm) |                 |                |                |                |
|-----------------------|--|---------------------|------|--|----------------------|-----------------|----------------|----------------|----------------|
|                       |  |                     |      |  | 316 SS               | L1              | L2             | D              | C              |
| HJZF2-FNPT2-7-        | 1/8 Female NPT                           | 0.16<br>(4.0)       | 0.35 | 316 SS   | 1.00<br>(25.4)       | 1.00<br>(25.4)  | 2.17<br>(55)   | 0.49<br>(12.5) | 0.71<br>(18.0) |
| HJZF2-FNPT4-7-        | 1/4 Female NPT                           |                     |      |  | 1.03<br>(26.2)       | 1.03<br>(26.2)  |                |                |                |
| HJZF2-YZ4-7-          | 1/4" Fractional Tube Fitting             |                     |      |  | 1.22<br>(30.9)       | 1.22<br>(30.9)  |                |                |                |
| HJZF2-GZ6-7-          | 6 mm Metric Tube Fitting                 |                     |      |  | 1.25<br>(31.75)      | 1.25<br>(31.75) |                |                |                |
| HJZF2-GZ8-7-          | 8 mm Metric Tube Fitting                 |                     |      |  | 1.03<br>(26.2)       | 1.03<br>(26.2)  |                |                |                |
| HJZF2-MNPT4-7-        | 1/4 Male NPT                             |                     |      |  | 1.13<br>(28.6)       | 1.13<br>(28.6)  |                |                |                |
| HJZF2-MNPT6-7-        | 3/8 Male NPT                             |                     |      |  | 1.13<br>(28.6)       | 1.13<br>(28.6)  |                |                |                |
| HJZF2-FNPT4-8-        | 1/4 Female NPT                           | 0.25<br>(6.4)       | 0.85 | 414(6000)  | 1.13<br>(28.6)       | 1.13<br>(28.6)  | 2.50<br>(63.5) | 0.76<br>(19.4) | 0.87<br>(22.0) |
| HJZF2-FNPT6-8-        | 3/8 Female NPT                           |                     |      |  | 1.42<br>(36.1)       | 1.42<br>(36.1)  |                |                |                |
| HJZF2-MNPT6-8-        | 3/8 Male NPT                             |                     |      |  | 1.44<br>(36.5)       | 1.44<br>(36.5)  |                |                |                |
| HJZF2-YZ6-8-          | 3/8" Fractional Tube Fitting             |                     |      |  | 1.53<br>(38.9)       | 1.53<br>(38.9)  |                |                |                |
| HJZF2-GZ10-8-         | 10 mm Metric Tube Fitting                |                     |      |  | 1.56<br>(39.7)       | 1.56<br>(39.7)  |                |                |                |
| HJZF2-GZ12-8-         | 12 mm Metric Tube Fitting                |                     |      |  | 1.26<br>(32.0)       | 1.26<br>(32.0)  |                |                |                |
| HJZF2-GZ14-8-         | 14 mm Metric Tube Fitting                |                     |      |  | 1.50<br>(38.1)       | 1.50<br>(38.1)  |                |                |                |
| HJZF2-FNPT8-8-        | 1/2 Female NPT                           |                     |      |  | 1.53<br>(38.9)       | 1.53<br>(38.9)  |                |                |                |
| HJZF2-MNPT8-8-        | 1/2 Male NPT                             |                     |      |  | 1.13<br>(28.6)       | 1.13<br>(28.6)  |                |                |                |
| HJZF2-YZ8-8-          | 1/2" Fractional Tube Fitting             |                     |      |  |                      |                 |                |                |                |
| HJZF2-TS6-8-G-        | 3/8" Fractional Tube Socket Weld         |                     |      |  |                      |                 |                |                |                |
| HJZF2-TS8-8-G-        | 1/2" Fractional Tube Socket Weld         |                     |      |  |                      |                 |                |                |                |
| HJZF2-GS12-8-G-       | 12 mm Metric Tube Socket Weld            |                     |      |  |                      |                 |                |                |                |
| HJZF2-GS14-8-G-       | 14 mm Metric Tube Socket Weld            |                     |      |  |                      |                 |                |                |                |
| HJZF2-GS16-8-G-       | 16 mm Metric Tube Socket Weld            |                     |      |  |                      |                 |                |                |                |

Needle Valve

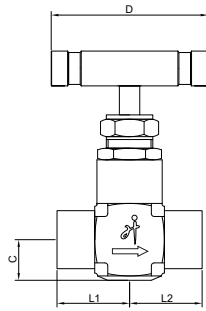


| Basic Ordering Number | Connection Type and Size<br>Inlet/Outlet | Orifice in.(mm) | Cv   | Connection Pressure at 100°F (38°C) bar(psig)<br>316 SS | Dimensions, in.(mm) |                |                |                |                |                |                |
|-----------------------|--|-----------------|------|---|---------------------|----------------|----------------|----------------|----------------|----------------|----------------|
|                       |  |                 |      |   | L1                  | L2             | D              | C              | E              |                |                |
| HJZF2-GDH14-8-G-      | 14 mm Metric Tube Butt Weld              | 0.25<br>(6.4)   | 0.85 | 414(6000)   | 1.50<br>(38.1)      | 1.50<br>(38.1) | 2.50<br>(63.5) | 0.62<br>(15.8) | 0.87<br>(22.0) |                |                |
| HJZF2-GDH16-8-G-      | 16 mm Metric Tube Butt Weld              |                 |      |   | 1.50<br>(38.1)      | 1.50<br>(38.1) |                |                |                |                |                |
| HJZF2-GDHJ14-8-       | 14 mm Rotatable Metric Tube Butt Weld    |                 |      |   | 2.92<br>(74.1)      | 2.92<br>(74.1) |                |                |                |                |                |
| HJZF2-GDHJ16-8-       | 16 mm Rotatable Metric Tube Butt Weld    |                 |      |   | 1.50<br>(38.1)      | 1.50<br>(38.1) |                |                |                |                |                |
| HJZF2-MS20-8-         | M20 x 1.5 Male Metric Thread (for RG-M)  |                 |      |   |                     |                |                |                |                |                |                |
| HJZF2-MS22-8-         | M22 x 1.5 Male Metric Thread (for RG-M)  |                 |      |   |                     |                |                |                |                |                |                |
| HJZF2-FNPT8-9-        | 1/2 Female NPT                           | 0.39<br>(10.0)  | 2.18 | 414(6000)   | 1.56<br>(39.7)      | 1.56<br>(39.7) | 3.50<br>(88.9) | 0.80<br>(20.4) | 1.10<br>(28.3) |                |                |
| HJZF2-MNPT12-9-       | 3/4 Male NPT                             |                 |      |   |                     |                |                |                |                |                |                |
| HJZF2-YZ12-9-         | 3/4" Fractional Tube Fitting             |                 |      |   |                     |                |                |                |                |                |                |
| HJZF2-GZ14-9-         | 14 mm Metric Tube Fitting                |                 |      |   |                     |                |                |                |                |                |                |
| HJZF2-GZ16-9-         | 16 mm Metric Tube Fitting                |                 |      |   | 1.97<br>(50.0)      | 1.97<br>(50.0) |                | 0.76<br>(19.4) |                |                |                |
| HJZF2-GZ18-9-         | 18 mm Metric Tube Fitting                |                 |      |   |                     |                |                |                |                |                |                |
| HJZF2-GZ20-9-         | 20 mm Metric Tube Fitting                |                 |      |   |                     |                |                |                |                |                |                |
| HJZF2-GS14-9-G-       | 14 mm Metric Tube Socket Weld            |                 |      |   |                     |                |                |                |                |                |                |
| HJZF2-GS16-9-G-       | 16 mm Metric Tube Socket Weld            |                 |      |   |                     |                |                |                |                |                |                |
| HJZF2-GS18-9-G-       | 18 mm Metric Tube Socket Weld            |                 |      |   |                     |                |                |                |                |                |                |
| HJZF2-TS12-9-G-       | 3/4" Fractional Tube Socket Weld         |                 |      |   |                     |                |                |                |                |                |                |
| HJZF2-PS8-9-G-        | 1/2 Pipe Socket Weld                     |                 |      |   |                     |                |                |                |                |                |                |
| HJZF2-GDH16-9-G-      | 16 mm Metric Tube Butt Weld              |                 |      |   |                     |                |                |                |                |                |                |
| HJZF2-GDHJ14-9-       | 14 mm Rotatable Metric Tube Butt Weld    |                 |      |   |                     |                |                | 2.98<br>(75.7) |                | 2.98<br>(75.7) | 0.76<br>(19.4) |
| HJZF2-GDHJ16-9-       | 16 mm Rotatable Metric Tube Butt Weld    |                 |      |   |                     |                |                |                |                |                |                |
| HJZF2-FNPT12-6-       | 3/4 Female NPT                           |                 |      |   | 0.59<br>(15.0)      | 3.27           |                | 414(6000)      |                | 1.97<br>(50.0) | 1.97<br>(50.0) |
| HJZF2-TS16-6-G-       | 1" Fractional Tube Socket Weld           |                 |      |   |                     |                |                |                |                |                |                |
| HJZF2-GS25-6-G-       | 25 mm Metric Tube Socket Weld            |                 |      |   |                     |                |                |                |                |                |                |
| HJZF2-PS12-6-G-       | 3/4 Pipe Socket Weld                     |                 |      |   |                     |                |                |                |                |                |                |
| HJZF2-PB12-6-G-       | 3/4 Pipe Butt Weld                       |                 |      |   |                     |                |                |                |                |                |                |
| HJZF2-YZ12-6-         | 3/4" Fractional Tube Fitting             |                 |      |   |                     |                |                |                |                |                |                |
| HJZF2-GZ20-6-         | 20 mm Metric Tube Fitting                |                 |      |   |                     |                |                |                |                |                |                |
| HJZF2-TS16-0-G-       | 1" Fractional Tube Socket Weld           |                 |      |   |                     |                |                |                |                |                |                |
| HJZF2-GS25-0-G-       | 25 mm Metric Tube Socket Weld            | 0.71<br>(18.0)  | 5.65 | 414(6000)   | 1.97<br>(50.0)      | 1.97<br>(50.0) | 5.00<br>(127)  | 1.08<br>(27.5) | 1.61<br>(41.0) |                |                |
| HJZF2-PS12-0-G-       | 3/4 Pipe Socket Weld                     |                 |      |   |                     |                |                |                |                |                |                |
| HJZF2-PB16-0-G-       | 1 Pipe Butt Weld                         |                 |      |   |                     |                |                |                |                |                |                |

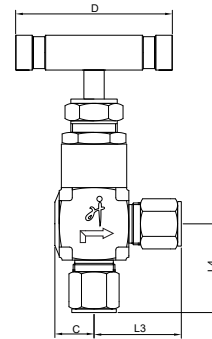
Needle Valve



**Straight Pattern**



**Angle Pattern**



HJZF2H Series Needle Valves are standard without panel mounting. To order valves with panel mounting as illustrated, add **-Y** to the ordering number. Example: **HJZF2H-FNPT2-7-Y-SS**

## Dimensions of HJZF2H Series

| Basic Ordering Number | Connection Type and Size<br>Inlet/Outlet | Orifice<br>in.(mm) | Cv   | Connection<br>Pressure at<br>100°F (38°C)<br>bar(psig) | Dimensions, in.(mm) |                |                |                |                |
|-----------------------|--|--------------------|------|--|---------------------|----------------|----------------|----------------|----------------|
|                       |  |                    |      |  | 316 SS              | L1             | L2             | D              | C              |
| HJZF2H-YZ4-7-         | 1/4" Fractional Tube Fitting             | 0.16<br>(4.0)      | 0.35 | 690(10000)   | 1.41<br>(35.8)      | 1.41<br>(35.8) | 2.17<br>(55)   | 0.62<br>(15.8) | 0.76<br>(19.4) |
| HJZF2H-FNPT2-7-       | 1/8 Female NPT                           |                    |      |  | 1.00<br>(25.4)      | 1.00<br>(25.4) |                |                |                |
| HJZF2H-FNPT4-7-       | 1/4 Female NPT                           |                    |      |  | 1.06<br>(26.2)      | 1.06<br>(26.2) |                |                |                |
| HJZF2H-MNPT4-7-       | 1/4 Male NPT                             |                    |      |  | 1.22<br>(30.9)      | 1.22<br>(30.9) |                |                |                |
| HJZF2H-FNPT4-MNPT4-7- | 1/4 Female NPT                           |                    |      |  | 1.06<br>(26.2)      | 1.22<br>(30.9) |                |                |                |
| HJZF2H-TS4-7-G-       | 1/4" Fractional Tube Socket Weld         |                    |      |  | 1.06<br>(26.2)      | 1.06<br>(26.2) |                |                |                |
| HJZF2H-FNPT4-8-       | 1/4 Female NPT                           | 0.25<br>(6.4)      | 0.85 | 620(9000)  | 1.12<br>(28.6)      | 1.12<br>(28.6) | 2.50<br>(63.5) | 0.76<br>(19.4) | 0.87<br>(22.0) |
| HJZF2H-FNPT6-8-       | 3/8 Female NPT                           |                    |      |  | 1.50<br>(38.1)      | 1.50<br>(38.1) |                |                |                |
| HJZF2H-MNPT6-8-       | 3/8 Male NPT                             |                    |      |  |                     |                |                |                |                |
| HJZF2H-TS8-9-G-       | 1/2" Fractional Tube Socket Weld         | 0.39<br>(10.0)     | 2.18 | 690(10000)   |                     |                | 3.50<br>(88.9) | 0.76<br>(19.4) | 1.10<br>(28.3) |
| HJZF2H-GS16-9-G-      | 16 mm Metric Tube Socket Weld            |                    |      |  |                     |                |                | 0.80<br>(20.4) |                |
| HJZF2H-GDH25-9-G-     | 25mm Metric Tube Butt Weld               |                    |      |  |                     |                |                |                |                |
| HJZF2H-FNPT8-9-       | 1/2 Female NPT                           |                    |      |  |                     |                |                | 0.88<br>(22.2) |                |

## Ordering Number Description

| HJZF2  | Series | TS                                  | 16                              | GS   | 25          | 6              | W                        | T                 | G                | Y              | S                    | A            | SS             |
|--------|--------|-------------------------------------|---------------------------------|--|-------------|----------------|--------------------------|-------------------|------------------|----------------|----------------------|--------------|----------------|
|        |        | Inlet Type                          | Inlet Size                      | Outlet Type  | Outlet Size | Orifice Size   | Stem Tip Material        | Stem Tip Type     | Packing Material | Panel Mounting | Handle               | Flow Pattern | Body Material  |
| HJZF2  | FNPT   | Female NPT                          | 2 1/8"                          | Same as Inlet  | 7           | 0.16" (4.0 mm) | Same as Body             | Taper             | PTFE             | No             | Black Aluminum Bar   | Straight     | SS 316 SS      |
| HJZF2H | MNPT   | Male NPT                            | 4 1/4"                          | Specify in the same way as inlet Type and inlet Size | 8           | 0.25" (6.4 mm) | W Stellite               | T Regulating      | G Graphite       | Y Yes          | Red Aluminum F Bar   | A Angle      | SL 316L SS     |
|        | FRT    | Female BSPT                         | 3/8" or 6 mm                    |  | 9           | 0.39" (10 mm)  | IN66 Alloy 600           | B Ball            |                  |                | Green Q Aluminum Bar |              | S4 304 SS      |
|        | RT     | Male BSPT                           | 1/2" or 8 mm                    |  | 6           | 0.59" (15 mm)  | HC Alloy C-276           | K Soft Tip-PC/TFE |                  |                | Blue L Aluminum Bar  |              | S4L 304L SS    |
|        | FMS    | Female Metric Thread (for RG-M)     | 10 10 mm                        |  | 0           | 0.71" (18 mm)  | Silicon carbide ceramics |                   |                  |                | Stainless Steel Bar  |              | S21 321 SS     |
|        | MS     | Male Metric Thread (for RG-M)       | 3/4" or 12 mm                   |  |             |                |                          |                   |                  |                | H Black Knob         |              | D22 2205       |
|        | FRP    | Female BSPP (for RP)                | 14 14 mm or M14 x 1.5           |  |             |                |                          |                   |                  |                |                      |              | M4 Alloy 400   |
|        | BP     | Male BSPP (for RG)                  | 1" or 16 mm                     |  |             |                |                          |                   |                  |                |                      |              | IN66 Alloy 600 |
|        | TS     | Fractional Tube Socket Weld         | 18 18 mm                        |  |             |                |                          |                   |                  |                |                      |              | HC C-276       |
|        | GS     | Metric Tube Socket Weld             | 1 1/4" or 20 20 mm or M20 x 1.5 |  |             |                |                          |                   |                  |                |                      |              | Carbon Steel   |
|        | YDH    | Fractional Tube Butt Weld           | 22 22 mm or M22 x 1.5           |  |             |                |                          |                   |                  |                |                      |              | Alloy C-276    |
|        | GDH    | Metric Tube Butt Weld               | 24 24 mm or M24 x 1.5           |  |             |                |                          |                   |                  |                |                      |              | Alloy C-276    |
|        | PS     | Pipe Socket Weld                    | 25 25 mm                        |  |             |                |                          |                   |                  |                |                      |              | Carbon Steel   |
|        | PB     | Pipe Butt Weld                      |                                 |  |             |                |                          |                   |                  |                |                      |              | CS             |
|        | YZ     | Fractional Tube Fitting             |                                 |  |             |                |                          |                   |                  |                |                      |              | HC             |
|        | GZ     | Metric Tube Fitting                 |                                 |  |             |                |                          |                   |                  |                |                      |              | Alloy C-276    |
|        | YDHJ   | Rotatable Fractional Tube Butt Weld |                                 |  |             |                |                          |                   |                  |                |                      |              | CS             |
|        | GDHJ   | Rotatable Metric Tube Butt Weld     |                                 |  |             |                |                          |                   |                  |                |                      |              | Carbon Steel   |

1. Standard thread pitch for metric threads are as follows:  
M10 and below: 1 mm  
M12 to M24: 1

2. Ball-end hard sealing

3. If a connection size larger than 25mm is required, or for different material other than listed, please contact the Hongji sales personnel.





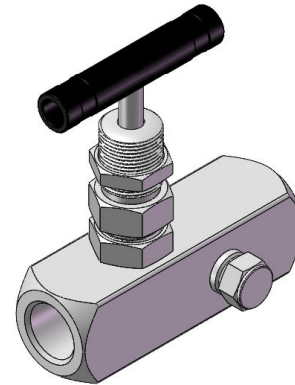
# Rising Plug Valves

## HJZF3 Series

## HJZF3G (with gauge port) Series

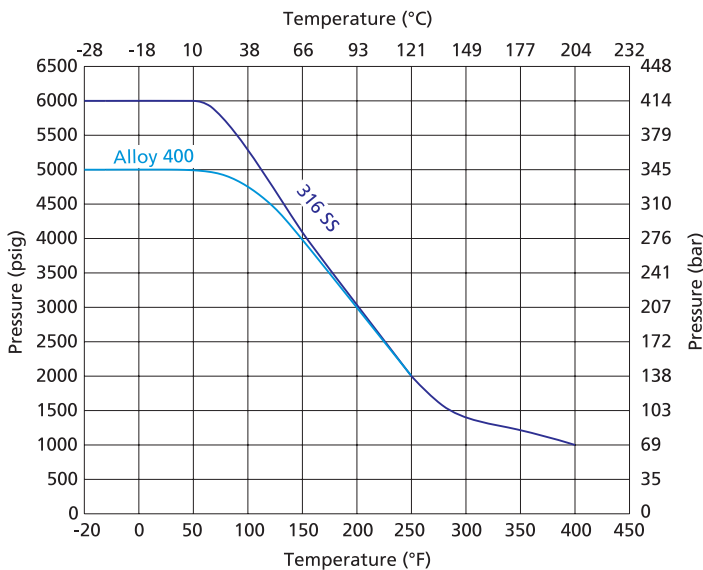
### Features

- Cold drawn square bar as body material
- Nonrotating stem for longer seat life
- Roddable, straight through flow path for maximum flow with minimum pressure drop
- Stem thread lubricant isolated from system media
- Replaceable seat and stem tip design
- Stem thread protected from outside contamination by PTFE ring in the gland
- Panel mounting available
- Handles of different colors available
- Every valve leak tested with Nitrogen or compressed air at the maximum allowable working pressure
- Working pressure up to:
  - Stainless steel: 6000 psig (414 bar)
  - Alloy 400: 5000 psig (345 bar)
- Working temperature with seat:
  - Acetal: -20°F to 250°F (-28°C to 121°C)
  - PEEK: -20°F to 450°F (-28°C to 232°C)
- Working temperature with O-ring:
  - Fluorocarbon Rubber (FKM): -20°F to 400°F (-28°C to 204°C)
  - Nitrile Butadiene Rubber (NBR): -20°F to 212°F (-28°C to 100°C)
  - Ethylene Propylene Diene Rubber (EPDM): -20°F to 300°F (-28°C to 148°C)

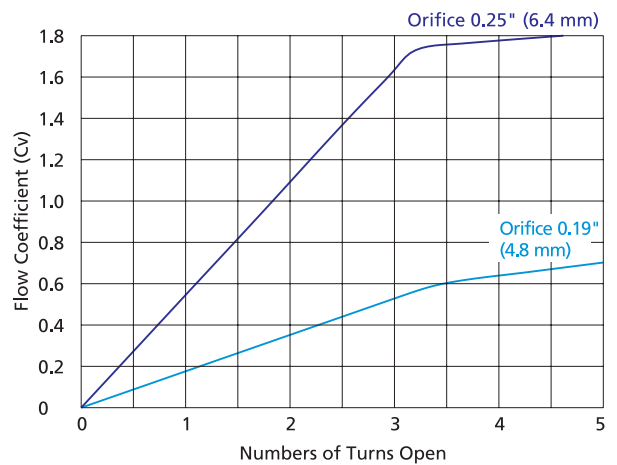


Needle Valve

### Pressure vs. Temperature



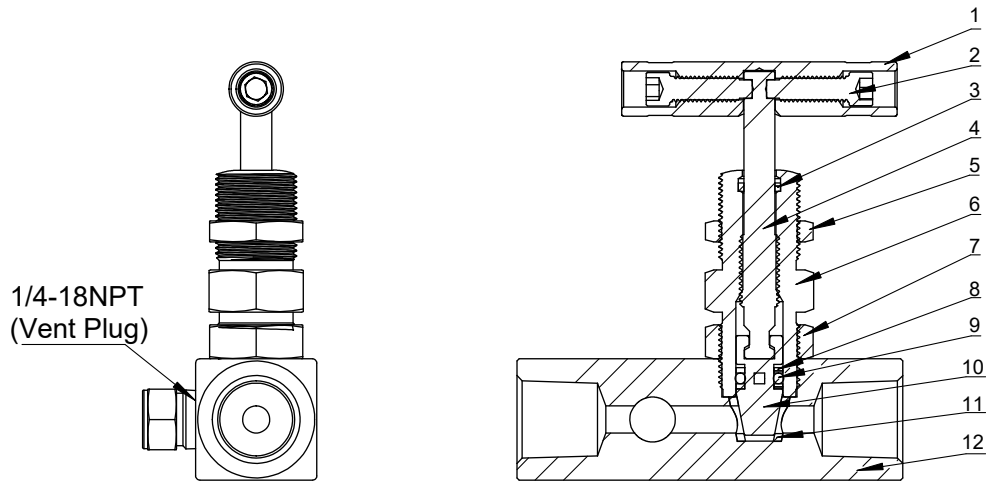
### Flow Data at 100°F (38°C)



1. Graphs are based on PEEK seat and Fluorocarbon(FKM) O-ring.



## Standard Materials of Construction

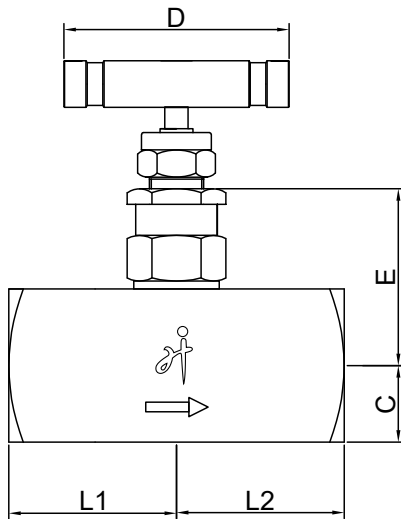


| Item | Component   | Valve Body Material   |             |                |
|------|-------------|---|-------------|----------------|
|      |             | 316 SS  | 321 SS      | Alloy 400      |
|      |             | Material Grade/ASTM Specification   |             |                |
| 1    | Handle      | Anodized aluminum or stainless steel or black knob  |             |                |
| 2    | Set Screw   | 304 SS/A479   |             |                |
| 3    | Wiper Ring  | PTFE  |             |                |
| 4    | Upper Stem  | 316 SS/A479   |             | Alloy 400/B164 |
| 5    | Panel Nut   | Stainless steel   |             |                |
| 6    | Bonnet      | 316 SS/A479   | 321 SS/A479 | Alloy 400/B164 |
| 8    | O-ring      | Fluorocarbon Rubber (FKM), Nitrile Butadiene Rubber (NBR) or Ethylene Propylene Diene Rubber (EPDM) |             |                |
| 9    | Lock Nut    | Stainless steel   |             |                |
| 7    | Backup Ring | PTFE/D1710  |             |                |
| 10   | Stem Tip    | 316 SS/A479   | 321 SS/A479 | Alloy 400/B164 |
| 11   | Seat        | Acetal or PEEK  |             |                |
| 12   | Body        | 316 SS/A479   | 321 SS/A479 | Alloy 400/B164 |
|      | Lubricant   | Molybdenum disulfide-based / PTFE Lubricating Grease  |             |                |

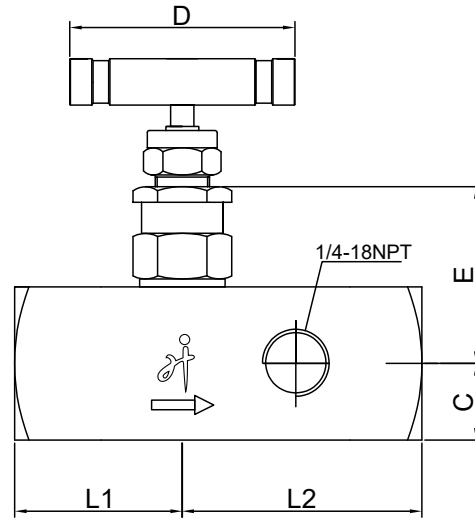


## Dimensions

Standard Pattern  
HJZF3 Series



Gauge Port Pattern  
HJZF3G



HJZF3 Series Needle Valves are standard without panel mounting. To order valves with panel mounting as illustrated, add-Y to the ordering number. Example: **HJZF3-FNPT4-7-Y-SS**

## Dimensions of HJZF3 and HJZF3G Series

| Basic Ordering Number  | Connection Type and Size |                | Orifice in.(mm) | Cv             | Connection Pressure at 100°F (38°C) bar(psig) | Dimensions, in.(mm) |                |                |                |                |
|------------------------|--------------------------|----------------|-----------------|----------------|---|---------------------|----------------|----------------|----------------|----------------|
|                        | Inlet                    | Outlet         |                 |                |   | L1                  | L2             | D              | E              |                |
| HJZF3-FNPT4-7-         | 1/4 Female NPT           |                | 0.19<br>(4.8)   | 0.63           | 316 SS  | 1.12<br>(28.4)      | 1.12<br>(28.4) | 2.17<br>(55.0) | 1.28<br>(32.5) |                |
| HJZF3-MNPT4-FNPT4-7-   | 1/4 Male NPT             | 1/4 Female NPT |                 |                |   | 1.78<br>(45.2)      |                |                | 1.34<br>(34.0) |                |
| HJZF3-MNPT8-FNPT4-7-   | 1/2 Male NPT             | 1/4 Female NPT |                 |                |   | 1.89<br>(48.0)      |                |                |                |                |
| HJZF3G-FNPT4-7-        | 1/4 Female NPT           |                |                 |                |   | 1.12<br>(28.4)      |                |                |                |                |
| HJZF3G-MNPT8-FNPT4-7-  | 1/2 Male NPT             | 1/4 Female NPT | 3.12<br>(79.2)  | 1.75<br>(44.4) |   | 414(6000)           | 2.56<br>(65.0) | 1.40<br>(35.5) |                |                |
| HJZF3-FNPT8-8-         | 1/2 Female NPT           |                | 0.25<br>(6.4)   | 0.85           |   |                     |                |                | 1.33<br>(33.8) | 2.25<br>(57.2) |
| HJZF3-MNPT8-FNPT8-8-   | 1/2 Male NPT             | 1/2 Female NPT |                 |                |   |                     |                |                |                |                |
| HJZF3-MNPT12-FNPT8-8-  | 3/4 Male NPT             | 1/2 Female NPT |                 |                |   |                     |                |                |                |                |
| HJZF3G-FNPT8-8-        | 1/2 Female NPT           |                |                 |                |   |                     |                |                |                |                |
| HJZF3G-MNPT12-FNPT8-8- | 3/4 Male NPT             | 1/2 Female NPT |                 |                |   |                     |                |                |                |                |

Sizes and types listed are standard. Other sizes and types are available upon request.



## Ordering Number Description

| HJZF3 | Series | FNPT | Inlet Type                      | Inlet Size    | 8 | MNPT | 8 | Outlet Type  | Outlet Size | 8 | Seat Material | Orifice Size    | 8 | D                                      | O-ring Material | Y   | Panel Mounting | S | Handle              | SS              | Body Material  |  |
|-------|--------|------|---------------------------------|---------------|---|------|---|--|-------------|---|---------------|-----------------|---|--|-----------------|-----|----------------|---|---------------------|-----------------|----------------|--|
| HJZF3 | HJZF3G | FNPT | Female NPT                      | 4 1/4"        |   |      |   | Same as Inlet  |             |   | Acetal        | 7 0.19"(4.8 mm) |   | Fluorocarbon Rubber (FKM)              | No              | No  |                |   | Black Aluminum Bar  | SS 316 SS       |                |  |
|       |        | MNPT | Male NPT                        | 3/8" or 6 mm  |   |      |   | Specify in the same way as Inlet Type and Inlet Size |             |   | P PEEK        | 8 0.25"(6.4 mm) |   | Nitrile Butadiene Rubber (NBR)         | Y               | Yes |                |   | Red Aluminum Bar    | SL 316L SS      |                |  |
|       |        | FRT  | Female BSPT                     | 1/2" or 8 mm  |   |      |   |  |             |   |               |                 |   | Ethylene Propylene Diene Rubber (EPDM) |                 |     |                |   | Green Aluminum Bar  | S4 304 SS       |                |  |
|       |        | RT   | Male BSPT                       | 10 10 mm      |   |      |   |  |             |   |               |                 |   |  |                 |     |                |   | Blue Aluminum Bar   | S4L 304L SS     |                |  |
|       |        | FMS  | Female Metric Thread (for RG-M) | 3/4" or 12 mm |   |      |   |  |             |   |               |                 |   |  |                 |     |                |   | Stainless Steel Bar | S21 321 SS      |                |  |
|       |        | MS   | Male Metric Thread (for RG-M)   |               |   |      |   |  |             |   |               |                 |   |  |                 |     |                |   | H Black Knob        | D22 Duplex 2205 |                |  |
|       |        | FRP  | Female BSPP (for RP)            |               |   |      |   |  |             |   |               |                 |   |  |                 |     |                |   |                     | M4 Alloy 400    |                |  |
|       |        | BP   | Male BSPP (for RG)              |               |   |      |   |  |             |   |               |                 |   |  |                 |     |                |   |                     | INC6 Alloy 600  |                |  |
|       |        |      |                                 |               |   |      |   |  |             |   |               |                 |   |  |                 |     |                |   |                     |                 | HC Alloy C-276 |  |

1.



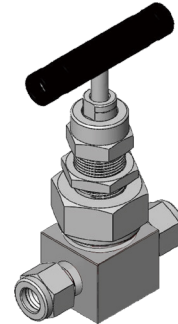
# Union Bonnet Needle Valves

HJZF4 Series: Working pressure up to 6000 psig

HJZF4H Series: Working pressure up to 10000 psig

## Features

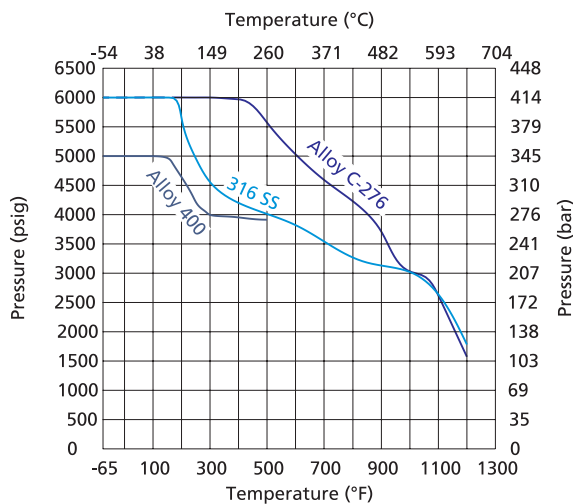
- One-piece forged body
- Two-piece stem design: Upper stem threads cold rolled and lower stem hardened for high strength and smooth operation
- Accidental valve disassembly disabled by union bonnet construction Upper stem thread lubricant isolated from system media Linear instead of rotary movement of the rising, non-rotating stem minimizes packing abrasion and reduces the friction between the seat and the tip
- Safety back seating seal in fully open position
- Panel mounting available
- Steady and durable fastening of the handle by double lock-pins
- Handles of different colors available
- Every valve leak tested with Nitrogen or compressed air (HJZF4 Series) at the maximum allowable working pressure or with water (HJZF4H Series) at 1.1 times the maximum allowable pressure



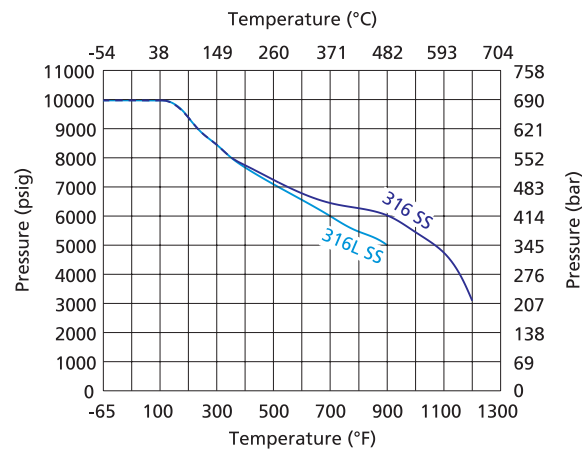
- Working pressure up to:
  - HJZF4 Series—Stainless steel: 6000 psig (414 bar)
  - Alloy C-276: 6000 psig (414 bar)
  - Alloy 400: 5000 psig (345 bar)
  - HJZF4H Series—Stainless steel: 10000 psig (690 bar)
- Working temperature:
  - PTFE: -65°F to 450°F (-54°C to 232°C)
  - PEEK: -65°F to 500°F (-54°C to 260°C)
  - Graphite: -65°F to 1200°F (-54°C to 649°C)

## Pressure vs. Temperature

HJZF4 Series



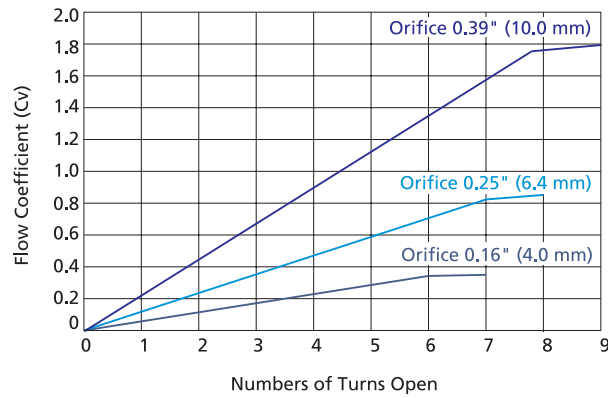
HJZF4H Series



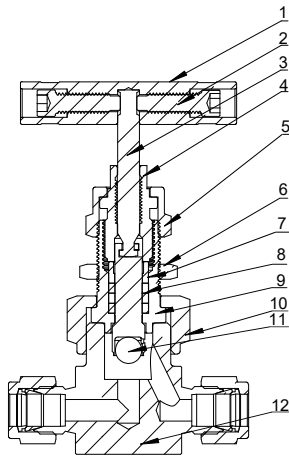
1. Graphs are based on graphite packing.
2. Soft tips are for HJZF4 Series only. Temperature rating is limited to 200°F (93°C) max. with PCTFE stem tip (soft tip).

## Flow Data at 100° F (37° C)

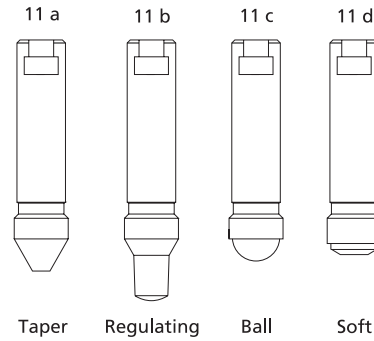
Regulating Stem



## Standard Materials of Construction



### Stem Type

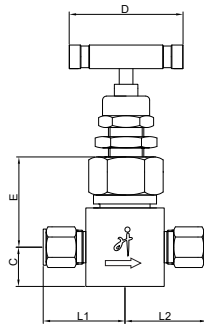


| Item              | Component    | Valve Body Material                                 |                              |                  |
|-------------------|--------------|---|------------------------------|------------------|
|                   |              | 316 SS  | Alloy 400                    | Alloy C-276      |
|                   |              | Material Grade/ASTM Specification                   |                              |                  |
| 1                 | Handle       | Anodized aluminium or stainless steel or black knob |                              |                  |
| 2                 | Set Screw    | 316 SS/A479   |                              |                  |
| 3                 | Upper Stem   | 316 SS/A479   |                              |                  |
| 4                 | Packing Bolt | 304 SS/A479   |                              |                  |
| 5                 | Lock Nut     | 316 SS/A479   |                              |                  |
| 6                 | Panel Nut    | Stainless steel                                     |                              |                  |
| 7                 | Gland        | 316 SS/A479   |                              |                  |
| 8                 | Packing      | PTFE or PEEK or graphite                            |                              |                  |
| 9                 | Bonnet       | 316 SS/A479   | Alloy 400/B164               | Alloy C-276/B574 |
| 10                | Union Nut    | 316 SS/A479   |                              |                  |
| 11a<br>11b<br>11c | Lower Stem   | Hardened<br>316 SS/A479                             | Alloy 400/B164               | Alloy C-276/B574 |
| 11d               | Stem         | 316 SS/A479   | Alloy 400/B164               | Alloy C-276/B574 |
|                   | Stem Tip     | PTFE or PCTFE                                       |                              |                  |
| 12                | Body         | 316 SS/A182   | Alloy 400/B164,<br>B127,B564 | Alloy C-276/B564 |
|                   | Seat         | Same as Body  |                              |                  |
|                   | Lubricant    | Molybdenum disulfide-based                          |                              |                  |

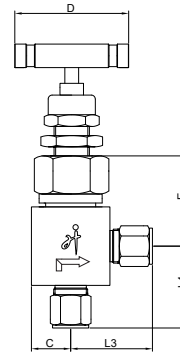


## Dimensions

### Straight Pattern



### Angle Pattern



## Dimensions of HJZF4 Series

| Basic Ordering Number | Connection Type and Size<br>Inlet/Outlet | Orifice in.(mm) | Cv             | Connection Pressure at 100°F (38°C) bar(psig) | Dimensions, in.(mm) |                |                |                |                |                |                |                |                |
|-----------------------|--|-----------------|----------------|---|---------------------|----------------|----------------|----------------|----------------|----------------|----------------|----------------|----------------|
|                       |  |                 |                |   | 316 SS              | L1             | L2             | L3             | L4             | C              | D              | E              |                |
| HJZF4-FNPT2-7-        | 1/8 Female NPT                           | 0.16<br>(4.0)   | 0.35           | 414(6000)                                     | 1.00<br>(25.4)      | 1.00<br>(25.4) |                |                |                |                |                |                |                |
| HJZF4-FNPT4-7-        | 1/4 Female NPT                           |                 |                |   | 1.03<br>(26.2)      | 1.03<br>(26.2) | 0.89<br>(22.6) |                |                |                |                |                |                |
| HJZF4-MNPT4-FNPT4-7-  | 1/4 Male NPT                             |                 |                |   | 1.00<br>(25.4)      | 1.03<br>(26.2) |                |                |                |                |                |                |                |
| HJZF4-MNPT4-7-        | 1/4 Male NPT                             |                 |                |   | 1.00<br>(25.4)      | 1.00<br>(25.4) | 1.00<br>(25.4) | 1.00<br>(25.4) |                |                |                |                |                |
| HJZF4-MNPT6-7-        | 3/8 Male NPT                             |                 |                |   | 1.03<br>(26.2)      | 1.03<br>(26.2) | 0.89<br>(22.6) |                |                |                | 1.75<br>(44.5) | 0.39<br>(9.9)  | 1.09<br>(27.7) |
| HJZF4-FRP4-7-         | 1/4 Female BSPP                          |                 |                |   | 1.00<br>(25.4)      | 1.22<br>(30.9) |                |                |                |                |                |                |                |
| HJZF4-MNPT4-YZ4-7-    | 1/4 Male NPT                             |                 |                |   | 1.03<br>(26.2)      | 1.22<br>(30.9) | 1.14<br>(29.0) |                |                |                |                |                |                |
| HJZF4-FNPT4-YZ4-7-    | 1/4 Female NPT                           |                 |                |   | 1.22<br>(30.9)      | 1.22<br>(30.9) | 1.15<br>(29.2) | 1.22<br>(30.9) |                |                |                |                |                |
| HJZF4-YZ4-7-          | 1/4" Fractional Tube Fitting             |                 |                |   | 1.00<br>(25.4)      | 1.00<br>(25.4) | 0.85<br>(21.6) | 1.00<br>(25.4) |                |                |                |                |                |
| HJZF4-GZ6-7-          | 6 mm Metric Tube Fitting                 |                 |                |   | 1.13<br>(28.6)      | 1.13<br>(28.6) | 1.00<br>(25.4) | 1.13<br>(28.6) |                |                |                |                |                |
| HJZF4-GZ8-7-          | 8 mm Metric Tube Fitting                 |                 |                |   | 1.06<br>(26.9)      |                |                |                |                |                | 2.50<br>(63.5) | 0.50<br>(12.7) | 1.34<br>(34.0) |
| HJZF4-TS4-7-G-        | 1/4" Fractional Tube Socket Weld         |                 |                |   | 1.41<br>(35.9)      | 1.41<br>(35.9) | 1.28<br>(32.5) | 1.47<br>(37.3) |                |                |                |                |                |
| HJZF4-FNPT4-8-        | 1/4 Female NPT                           |                 |                |   | 1.52<br>(38.6)      | 1.52<br>(38.6) | 1.40<br>(35.6) | 1.58<br>(40.1) |                |                |                |                |                |
| HJZF4-FNPT6-8-        | 3/8 Female NPT                           |                 |                |   | 1.42<br>(36.1)      | 1.42<br>(36.1) | 1.30<br>(33.0) | 1.48<br>(37.6) |                |                |                |                |                |
| HJZF4-MNPT6-8-        | 3/8 Male NPT                             | 1.52<br>(38.6)  | 1.52<br>(38.6) | 1.40<br>(35.6)                                | 1.58<br>(40.1)      |                |                | 2.50<br>(63.5) | 0.50<br>(12.7) | 1.34<br>(34.0) |                |                |                |
| HJZF4-YZ6-8-          | 3/8" Fractional Tube Fitting             | 1.42<br>(36.1)  | 1.42<br>(36.1) | 1.30<br>(33.0)                                | 1.48<br>(37.6)      |                |                |                |                |                |                |                |                |
| HJZF4-YZ8-8-          | 1/2" Fractional Tube Fitting             | 1.52<br>(38.6)  | 1.52<br>(38.6) | 1.40<br>(35.6)                                | 1.58<br>(40.1)      |                |                |                |                |                |                |                |                |
| NUDD-GZ10-8-          | 10 mm Metric Tube Fitting                | 1.52<br>(38.6)  | 1.52<br>(38.6) | 1.40<br>(35.6)                                | 1.58<br>(40.1)      |                |                | 2.50<br>(63.5) | 0.50<br>(12.7) | 1.34<br>(34.0) |                |                |                |
| HJZF4-GZ12-8-         | 12 mm Metric Tube Fitting                |                 |                |   |                     |                |                |                |                |                |                |                |                |
| HJZF4-GZ14-8-         | 14 mm Metric Tube Fitting                |                 |                |   |                     |                |                |                |                |                |                |                |                |

Needle Valve

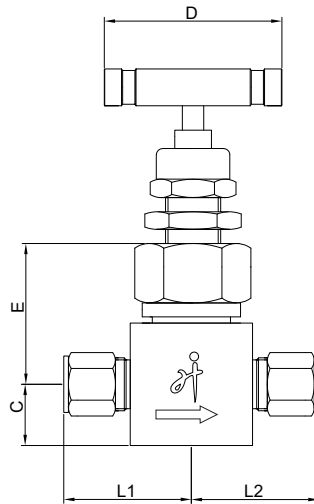


| Basic Ordering Number | Connection Type and Size                | Orifice in.(mm) | Cv   | Connection Pressure at 100°F (38°C) bar(psig) | Dimensions, in.(mm) |                |                |                |                |                |                |                |                |                |
|-----------------------|---|-----------------|------|---|---------------------|----------------|----------------|----------------|----------------|----------------|----------------|----------------|----------------|----------------|
|                       |   |                 |      | 316 SS  | L1                  | L2             | L3             | L4             | C              | D              | E              |                |                |                |
|                       | Inlet/Outlet                            |                 |      |   |                     |                |                |                |                |                |                |                |                |                |
| HJZF4-GZ16-8-         | 16 mm Metric Tube Fitting               | 0.25<br>(6.4)   | 0.86 | 400(5800)                                     | 1.52<br>(38.6)      | 1.52<br>(38.6) | 1.40<br>(35.6) | 1.58<br>(40.1) | 2.50<br>(63.5) | 0.50<br>(12.7) | 1.34<br>(34.0) |                |                |                |
| HJZF4-TS6-8-G-        | 3/8" Fractional Tube Socket Weld        |                 |      |   |                     |                |                |                |                |                |                |                |                |                |
| HJZF4-TS8-8-G-        | 1/2" Fractional Tube Socket Weld        |                 |      |   |                     |                |                |                |                |                |                |                |                |                |
| HJZF4-PS4-8-G-        | 1/4 Pipe Socket Weld                    |                 |      |   |                     |                |                |                |                |                |                |                |                |                |
| HJZF4-GS12-8-G-       | 12 mm Metric Tube Socket Weld           |                 |      |   |                     |                |                |                |                |                |                |                |                |                |
| HJZF4-GS14-8-G-       | 14 mm Metric Tube Socket Weld           |                 |      |   |                     |                |                |                |                |                |                |                |                |                |
| HJZF4-GS16-8-G-       | 16 mm Metric Tube Socket Weld           |                 |      |   |                     |                |                |                |                |                |                |                |                |                |
| HJZF4-GDH14-8-G-      | 14 mm Metric Tube Butt Weld             |                 |      |   |                     |                |                |                |                |                |                |                |                |                |
| HJZF4-GDH16-8-G-      | 16 mm Metric Tube Butt Weld             |                 |      |   |                     |                |                |                |                |                |                |                |                |                |
| HJZF4-GDHJ14-8-       | 14 mm Rotatable Metric Tube Butt Weld   |                 |      |   |                     |                |                |                |                |                |                |                |                |                |
| NUDD-MS20-8-          | M20 x 1.5 Male Metric Thread (for RG-M) |                 |      |   |                     |                |                |                |                |                |                |                |                |                |
| HJZF4-MS22-8-         | M22 x 1.5 Male Metric Thread (for RG-M) |                 |      |   |                     |                |                |                |                |                |                |                |                |                |
| HJZF4-MNPT8-9-        | 1/2 Male NPT                            |                 |      | 0.39<br>(10.0)                                | 1.8                 |                | 1.56<br>(39.6) | 1.56<br>(39.6) |                |                |                | 1.56<br>(39.6) | 1.56<br>(39.6) | 3.50<br>(88.9) |
| HJZF4-FNPT8-9-        | 1/2 Female NPT                          |                 |      |   |                     |                |                |                |                | 0.87<br>(22.2) | 2.07<br>(52.6) |                |                |                |
| HJZF4-FNPT12-9-       | 3/4 Female NPT                          |                 |      |   |                     |                |                |                |                |                |                |                |                |                |
| HJZF4-MNPT12-9-       | 3/4 Male NPT                            |                 |      |   |                     |                |                |                |                |                |                |                |                |                |
| HJZF4-YZ8-9-          | 1/2" Fractional Tube Fitting            |                 |      |   |                     |                |                |                |                |                |                |                |                |                |
| HJZF4-YZ12-9-         | 3/4" Fractional Tube Fitting            |                 |      |   |                     | 400(5800)      |                |                |                |                |                |                |                |                |
| HJZF4-GZ14-9-         | 14 mm Metric Tube Fitting               |                 |      |   |                     | 414(6000)      |                |                |                |                |                |                |                |                |
| HJZF4-GZ16-9-         | 16 mm Metric Tube Fitting               |                 |      |   |                     | 400(5800)      | 1.97<br>(50.0) | 1.97<br>(50.0) | 1.68<br>(42.7) | 2.08<br>(52.8) |                |                |                |                |
| HJZF4-GZ18-9-         | 18 mm Metric Tube Fitting               |                 |      |   |                     | 370(5370)      |                |                |                |                |                |                |                |                |
| NUDD-GZ20-9-          | 20 mm Metric Tube Fitting               |                 |      |   |                     | 380(5510)      |                |                |                |                |                | 0.63<br>(16.0) | 1.82<br>(46.2) |                |
| HJZF4-GS14-9-G-       | 14 mm Metric Tube Socket Weld           |                 |      |   |                     |                |                |                |                |                |                |                |                |                |
| HJZF4-GS16-9-G-       | 16 mm Metric Tube Socket Weld           |                 |      |   |                     |                |                |                |                |                |                |                |                |                |
| HJZF4-TS8-9-G-        | 1/2" Fractional Tube Socket Weld        |                 |      |   |                     | 414(6000)      | 1.56<br>(39.7) | 1.56<br>(39.7) | 1.31<br>(33.3) | 1.69<br>(42.9) |                |                |                |                |
| HJZF4-TS12-9-G-       | 3/4" Fractional Tube Socket Weld        |                 |      |   |                     |                |                |                |                |                |                |                |                |                |
| HJZF4-GDH16-9-G-      | 16 mm Metric Tube Butt Weld             |                 |      |   |                     |                |                |                |                |                |                |                |                |                |
| HJZF4-GDHJ14-9-       | 14 mm Rotatable Metric Tube Butt Weld   |                 |      |   | 2.98<br>(75.7)      | 2.98<br>(75.7) | —              | —              |                |                |                |                |                |                |

Needle Valve



### Straight Pattern



### Dimensions of HJZG4H Series

| Basic Ordering Number | Connection Type and Size<br>Inlet/Outlet | Orifice<br>in.(mm) | Cv   | Connection<br>Pressure at<br>100°F (38°C)<br>bar(psig) | Dimensions, in.(mm) |                |                |                |                |
|-----------------------|--|--------------------|------|--|---------------------|----------------|----------------|----------------|----------------|
|                       |  |                    |      |  | 316 SS              | L1             | L2             | C              | D              |
| HJZF4H-YZ4-7-         | 1/4" Fractional Tube Fitting             |                    |      |  | 1.41<br>(35.8)      | 1.41<br>(35.8) |                |                |                |
| HJZF4H-FNPT2-7-       | 1/8 Female NPT                           |                    |      |  |                     |                |                |                |                |
| HJZF4H-FNPT4-7-       | 1/4 Female NPT                           |                    |      |  |                     |                |                |                |                |
| HJZF4H-MNPT4-FNPT4-7- | 1/4 Male NPT                             | 0.16<br>(4.0)      | 0.35 |  | 1.13<br>(28.6)      | 1.13<br>(28.6) | 2.50<br>(63.5) | 0.50<br>(12.7) | 1.35<br>(34.3) |
| HJZF4H-MNPT4-7-       | 1/4 Male NPT                             |                    |      |  |                     |                |                |                |                |
| HJZF4H-TS4-7-G-       | 1/4" Fractional Tube Socket Weld         |                    |      |  |                     |                |                |                |                |
| HJZF4H-FNPT4-8-       | 1/4 Female NPT                           |                    |      | 690(10000)   |                     |                |                |                |                |
| HJZF4H-MNPT8-8-       | 1/2 Male NPT                             | 0.25<br>(6.4)      | 0.86 |  | 1.56<br>(39.7)      | 1.56<br>(39.7) | 3.50<br>(88.9) | 0.63<br>(16.0) | 1.77<br>(45.0) |
| HJZF4H-TS8-8-G-       | 1/2" Fractional Tube Socket Weld         |                    |      |  |                     |                |                |                |                |
| HJZF4H-GS12-8-G-      | 12 mm Metric Tube Socket Weld            |                    |      |  |                     |                |                |                |                |
| HJZF4H-GS16-9-G-      | 16 mm Metric Tube Socket Weld            |                    |      |  | 1.75<br>(44.5)      | 1.75<br>(44.5) |                |                |                |
| HJZF4H-GDH22-9-G-     | 22 mm Metric Tube Butt Weld              | 0.39(10.0)         | 1.8  |  |                     |                | 3.50<br>(88.9) | 0.91<br>(23.0) | 2.29<br>(58.2) |
| HJZF4H-FNPT8-9-       | 1/2 Female NPT                           |                    |      |  | 1.56<br>(39.7)      | 1.56<br>(39.7) |                |                |                |

## Ordering Number Description

| HJZF4  | MNPT4                                    | 4                               | YZ            | 4  | 7                | SIC                      | T                 | G                  | S                  | A            | SS            |
|--------|--|---------------------------------|---------------|--|------------------|--------------------------|-------------------|--------------------|--------------------|--------------|---------------|
| Series | Inlet Type                               | Inlet Size                      | Outlet Type   | Outlet Size  | Orifice Size     | Stem Tip Material        | Stem Tip Type     | Packing Material   | Handle             | Flow Pattern | Body Material |
| HJZF4  | FNPT Female NPT                          | 2 1/8"                          | Same as Inlet | Specify in the same way as inlet Type and inlet Size | 7 0.16" (4.0 mm) | Same as Body             | Taper             | PTFE               | Black Aluminum Bar | Straight     | SS 316 SS     |
| HJZF4H | MNPT Male NPT                            | 4 1/4"                          |               |  | 8 0.25" (6.4 mm) | W Stellite               | T Regulating      |                    | G Graphite         |              |               |
|        | FRT Female BSPT                          | 6 3/8" or 6 mm                  |               |  | 9 0.39" (10 mm)  | INC6 Alloy 600           | B Ball            | Green Aluminum Bar |                    | S4 304 SS    |               |
|        | RT Male BSPT                             | 8 1/2" or 8 mm                  |               |  | HC Alloy C-276   | K Soft Tip-PCTFE         | Blue Aluminum Bar |                    |                    |              | S21 321 SS    |
|        | FMS Female Metric Thread (for RG-M)      | 10 10 mm                        |               |  |                  | Silicon carbide ceramics |                   |                    | H Black Knob       |              |               |
|        | MS Male Metric Thread (for RG-M)         | 12 3/4" or 12 mm                |               |  |                  |                          |                   |                    |                    |              |               |
|        | FRP Female BSPP (for RP)                 | 14 14 mm or M14 x 1.5           |               |  |                  |                          |                   |                    |                    |              |               |
|        | BP Male BSPP (for RG)                    | 16 1" or 16 mm                  |               |  |                  |                          |                   |                    |                    |              |               |
|        | TS Fractional Tube Socket Weld           | 18 18 mm                        |               |  |                  |                          |                   |                    |                    |              |               |
|        | GS Metric Tube Socket Weld               | 20 1 1/4" or 20 mm or M20 x 1.5 |               |  |                  |                          |                   |                    |                    |              |               |
|        | YDH Fractional Tube Butt Weld            | 22 22 mm or M22 x 1.5           |               |  |                  |                          |                   |                    |                    |              |               |
|        | GDH Metric Tube Butt Weld                | 24 M24 x 1.5                    |               |  |                  |                          |                   |                    |                    |              |               |
|        | PS Pipe Socket Weld                      | 25 25 mm                        |               |  |                  |                          |                   |                    |                    |              |               |
|        | PB Pipe Butt Weld                        |                                 |               |  |                  |                          |                   |                    |                    |              |               |
|        | YZ Fractional Tube Fitting               |                                 |               |  |                  |                          |                   |                    |                    |              |               |
|        | GZ Metric Tube Fitting                   |                                 |               |  |                  |                          |                   |                    |                    |              |               |
|        | YDHJ Rotatable Fractional Tube Butt Weld |                                 |               |  |                  |                          |                   |                    |                    |              |               |
|        | GDHJ Rotatable Metric Tube Butt Weld     |                                 |               |  |                  |                          |                   |                    |                    |              |               |

1. Standard thread pitch for metric threads are as follows:  
M10 and below: 1 mm  
M12 to M24: 1

2. Ball-end hard sealing

3. If a connection size larger than 25mm is required, or for different material other than listed, please contact the Hongji sales personnel.



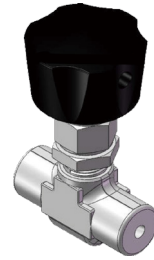


# Nonrotating-stem Needle Valves

HJZF5 Series: Working pressure up to 3000 psig

HJZF5H Series: Working pressure up to 5000 psig

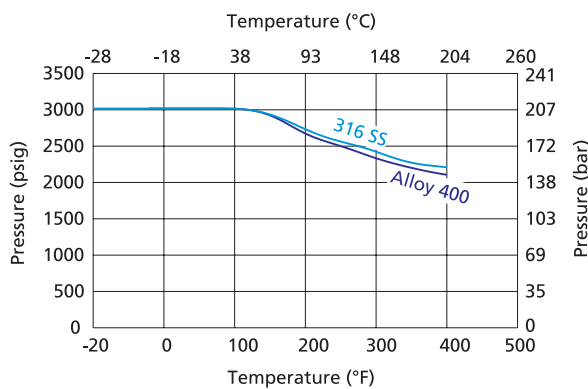
## Features



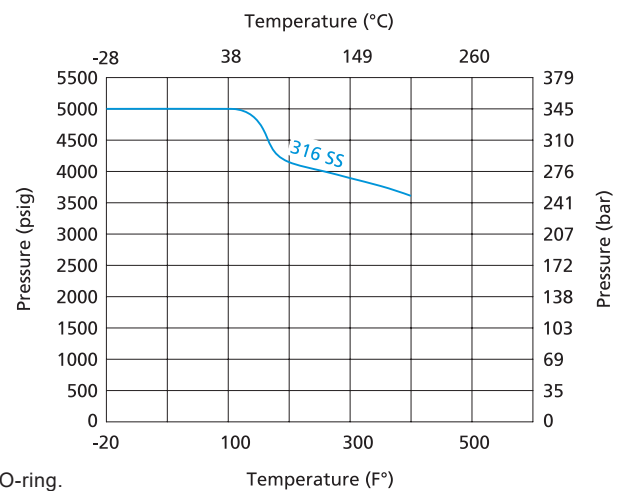
- One-piece forged body
- Straight and angle pattern
- Compact design
- Non-rotating stem
- Specially designed handle to stop contamination from entering into the valve
- Every valve leak tested with Nitrogen or compressed air at the maximum allowable working pressure
- Working pressure up to:
  - HJZF5—Stainless steel: 3000 psig (207 bar)
  - HJZF5H—Stainless steel: 5000 psig(345 bar)
- Working temperature with stem tip:
  - PCTFE stem tip: -20°F to 200°F(-28°C to 93°C)
  - PEEK stem tip: -20°F to 400°F(-28°C to 204°C)
- Working temperature with O-ring:
  - Fluorocarbon Rubber (FKM) : -20°F to 400°F (-28°C to 204°C)
  - Nitrile Butadiene Rubber (NBR) : -20°F to 212F (-28°C to 100°C)
  - Ethylene Propylene Diene Rubber (EPDM): -20°F to 300°F(-28°C to 148°C)

## Pressure vs. Temperature

HJZF5 Series

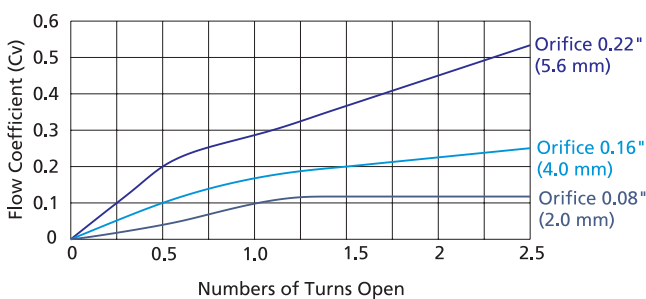


HJZF5H Series



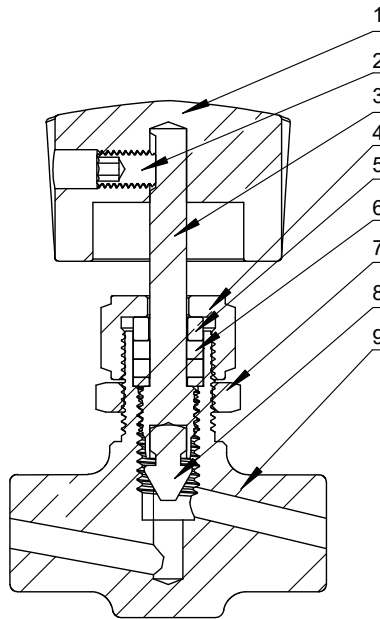
1.The graphs are based on PEEK stem tip and Fluorocarbon rubber (FKM) O-ring.

## Flow Data at 100°F (38°C)





## Standard Materials of Construction

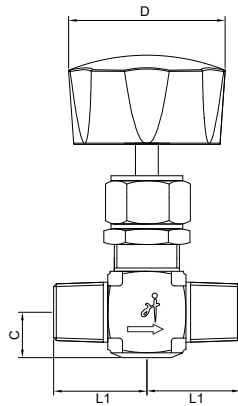


| Item | Component | Valve Body Material  |             |                |                |
|------|-----------|--|-------------|----------------|----------------|
|      |           | 316 SS   | 304 SS      | 321 SS         | Alloy 400      |
|      |           | Material Grade/ASTM Specification  |             |                |                |
| 1    | Handle    | 304 SS/A479  |             |                |                |
| 2    | Set Screw | 304 SS/A479  |             |                |                |
| 3    | Stem      | 316 SS/A479  |             | Alloy 400/B164 |                |
| 4    | Bonnet    | 316 SS/A479  |             | Alloy 400/B164 |                |
| 5    | Washer    | 316 SS/A479  |             | Alloy 400/B164 |                |
| 6    | Packing   | PTFE or Graphite   |             |                |                |
| 7    | Lock Nut  | 316 SS/A479  |             |                |                |
| 8    | Stem Tip  | PCTFE or PEEK  |             |                |                |
| 9    | Body      | 316 SS/A479  | 304 SS/A182 | 321 SS/A182    | Alloy 400/B564 |
|      | Lubricant | Molybdenum disulfide-based / Copper-based Grease/PTFE Lubricating Grease |             |                |                |

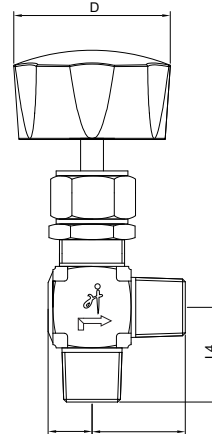


## Dimensions

### Straight Pattern



### Angle Pattern



## HJZF5 and HJZF5H Series

Needle Valve

| Basic Ordering Number | Connection Type and Size     |                              | Orifice in.(mm) | Cv     | Connection Pressure at 100°F (38°C) bar(psig) | Dimensions, in.(mm) |        |        |        |        |      |        |
|-----------------------|------------------------------|------------------------------|-----------------|--------|---|---------------------|--------|--------|--------|--------|------|--------|
|                       | Inlet                        | Outlet                       |                 |        |   | L1                  | L2     | C      | D      | E      |      |        |
| HJZF5-MNPT2-5-        | 1/8 Male NPT                 |                              | 0.08(2.0)       | 0.12   | 316 SS  | 0.81                | 0.81   | 0.32   | 1.06   | 1.28   |      |        |
| HJZF5-MNPT2-YZ2-5-    | 1/8 Male NPT                 | 1/8" Fractional Tube Fitting |                 |        |   | (20.6)              | (20.6) |        |        | (32.5) |      |        |
| HJZF5-YZ2-5-          | 1/8" Fractional Tube Fitting |                              |                 |        |   | 1.10                | 1.10   |        |        | 1.34   |      |        |
| HJZF5-GZ3-5-          | 3 mm Metric Tube Fitting     |                              | (27.9)          | (27.9) |   | (34.0)              |        |        |        |        |      |        |
| HJZF5 -MNPT4-7-       | 1/4 Male NPT                 |                              | 0.16(4.0)       | 0.27   |   | 207(3000)           | 0.98   | 0.98   | 0.39   | 1.13   | 1.13 |        |
| HJZF5-MNPT4-YZ4-7-    | 1/4 Male NPT                 | 1/4" Fractional Tube Fitting |                 |        |   |                     | (25.0) | (25.0) |        |        |      | (28.7) |
| HJZF5-YZ4-7-          | 1/4" Fractional Tube Fitting |                              |                 |        |   |                     | 1.13   | 1.13   |        |        |      | (28.7) |
| HJZF5-GZ6-7-          | 6 mm Metric Tube Fitting     |                              | (28.7)          | (28.7) |   |                     | (28.7) |        |        |        |      |        |
| HJZF5 -GZ8-7-         | 8 mm Metric Tube Fitting     |                              | 1.18            | 1.18   |   |                     | 0.49   | 1.22   | 1.40   |        |      |        |
| HJZF5-FNPT4-8-        | 1/4 Female NPT               |                              | (30.0)          | (30.0) |   |                     |        |        |        | (31.0) |      |        |
| HJZF5-MNPT6-8-        | 3/8 Male NPT                 |                              | 1.06            | 1.06   |   |                     |        |        |        | 1.40   |      |        |
| HJZF5-YZ6-8-          | 3/8" Fractional Tube Fitting | 1.12                         | 1.12            | 0.49   |   |                     | 1.22   | 1.22   |        |        |      |        |
| HJZF5-YZ8-8-          | 1/2" Fractional Tube Fitting | (28.6)                       | (28.6)          |        |   |                     |        |        | (31.0) |        |      |        |
| HJZF5-GZ10-8-         | 10 mm Metric Tube Fitting    | 1.29                         | 1.29            |        |   |                     |        |        | 0.49   | 1.22   | 1.22 |        |
| HJZF5-GZ12-8-         | 12 mm Metric Tube Fitting    | (32.8)                       | (32.8)          | (31.0) |   |                     |        |        |        |        |      |        |
| HJZF5H-MNPT2-5-       | 1/8 Male NPT                 |                              | 1.40            | 1.40   | 0.32  |                     | 1.06   | 1.06   |        |        |      |        |
| HJZF5H-YZ2-5-         | 1/8" Fractional Tube Fitting | (35.6)                       | (35.6)          | (31.0) |   |                     |        |        |        |        |      |        |
| HJZF5H-GZ3-5-         | 3 mm Metric Tube Fitting     |                              | 1.30            | 1.30   |   |                     |        |        | 0.39   | 1.13   | 1.13 |        |
| HJZF5H-MNPT4-7-       | 1/4 Male NPT                 |                              | (33.0)          | (33.0) | (28.7)  |                     |        |        |        |        |      |        |
| HJZF5H-YZ4-7-         | 1/4" Fractional Tube Fitting | 1.40                         | 1.40            | 0.39   | 1.13  | 1.13                |        |        |        |        |      |        |
| HJZF5H-GZ6-7-         | 6 mm Metric Tube Fitting     |                              | (35.6)          |        |   |                     | (35.6) | (28.7) |        |        |      |        |
| HJZF5H-MNPT4-7-       | 1/4 Male NPT                 |                              | 0.81            |        |   |                     | 0.81   | 0.32   | 1.06   | 1.06   |      |        |
| HJZF5H-YZ2-5-         | 1/8" Fractional Tube Fitting | (20.6)                       | (20.6)          | (31.0) |   |                     |        |        |        |        |      |        |
| HJZF5H-GZ3-5-         | 3 mm Metric Tube Fitting     |                              | 1.10            | 1.10   | 0.39  | 1.13                | 1.13   |        |        |        |      |        |
| HJZF5H-MNPT4-7-       | 1/4 Male NPT                 |                              | (27.9)          | (27.9) |   |                     |        | (28.7) |        |        |      |        |
| HJZF5H-YZ4-7-         | 1/4" Fractional Tube Fitting | 0.98                         | 0.98            | 0.39   |   |                     |        | 1.13   | 1.13   |        |      |        |
| HJZF5H-GZ6-7-         | 6 mm Metric Tube Fitting     |                              | (25.0)          |        | (25.0)  | (28.7)              |        |        |        |        |      |        |
| HJZF5H-MNPT4-7-       | 1/4 Male NPT                 |                              | 1.13            |        | 1.13  | 0.39                | 1.13   |        |        | 1.13   |      |        |
| HJZF5H-YZ4-7-         | 1/4" Fractional Tube Fitting | (28.7)                       | (28.7)          | (28.7) |   |                     |        |        |        |        |      |        |
| HJZF5H-GZ6-7-         | 6 mm Metric Tube Fitting     |                              | 0.98            | 0.98   | 0.39  |                     |        | 1.13   | 1.13   |        |      |        |
| HJZF5H-MNPT4-7-       | 1/4 Male NPT                 |                              | (25.0)          | (25.0) |   | (28.7)              |        |        |        |        |      |        |
| HJZF5H-YZ4-7-         | 1/4" Fractional Tube Fitting | 1.13                         | 1.13            | 0.39   |   | 1.13                | 1.13   |        |        |        |      |        |
| HJZF5H-GZ6-7-         | 6 mm Metric Tube Fitting     |                              | (28.7)          |        | (28.7)  |                     |        | (28.7) |        |        |      |        |

## Ordering Number Description

| HJZF5 Series    | MNPT                       | 4                    |  | YZ | 4      | 7                 | P  | D                         | A          | SS                               |
|-----------------|----------------------------|----------------------|--|----|--------|-------------------|--|---------------------------|------------|----------------------------------|
|                 |                            | Inlet Type           | Inlet Size   |    |        |                   |  |                           |            |                                  |
| HJZF5<br>HJZF5H | FNPT Female NPT            | 2 1/8"               | Same as Inlet  | 5  | PCTFE  | 0.08"<br>(2.0 mm) | PCTFE                                    | Fluorocarbon Rubber (FKM) | PTFE       | SS 316 SS                        |
|                 | MNPT Male NPT              | 4 1/4"               |  |    |        |                   |  |                           |            |                                  |
|                 | FRT Female BSPT            | 3/8"<br>6<br>or 6 mm | Specify in the same way as inlet Type and inlet Size | 7  | P PEEK | 0.16"<br>(4.0 mm) | D Nitrile Butadiene Rubber (NBR)         | G Graphite                | SL 316L SS |                                  |
|                 | RT Male BSPT               | 1/2"<br>8<br>or 8 mm |  |    |        |                   |  |                           |            |                                  |
|                 | YZ Fractional Tube Fitting | 10 10 mm             |  | 8  |        | 0.25"<br>(6.4 mm) | E Ethylene Propylene Diene Rubber (EPDM) |                           |            | S4 304 SS<br>S4L 304L SS         |
|                 | GZ Metric Tube Fitting     | 12 3/4"<br>or 12 mm  |  |    |        |                   |  |                           |            |                                  |
|                 |                            |                      |  |    |        |                   |  |                           |            |                                  |
|                 |                            |                      |  |    |        |                   |  |                           |            | M4 Alloy 400                     |
|                 |                            |                      |  |    |        |                   |  |                           |            | INC6 Alloy 600<br>HC Alloy C-276 |

Note: For those valves made of other type of material other than listed, please contact the Hongji sales personnel.





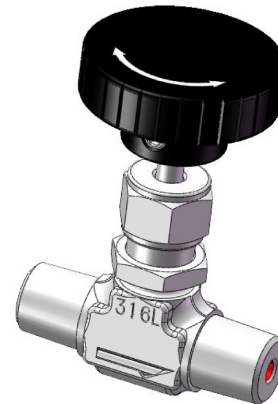
# Integral Bonnet Needle Valves

HJZF6 Series: Working pressure up to 3000 psig

HJZF6H Series: Working pressure up to 5000 psig

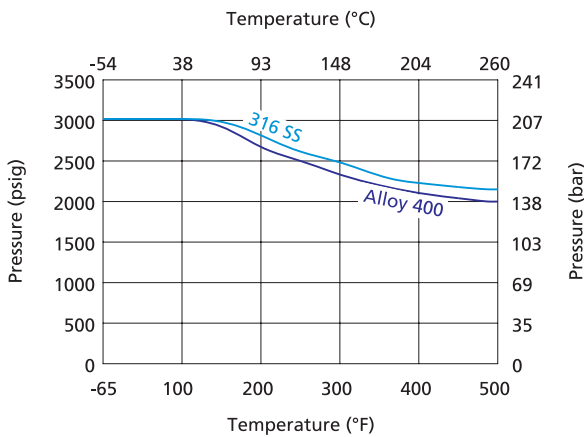
## Features

- One-piece forged body
- Easy external adjustments by packing nut
- Live-loaded packing system
- Handles of different colors available
- Compact design
- Panel mounting available
- Every valve leak tested with Nitrogen or compressed air at the maximum allowable working pressure
- Working pressure up to:
  - HJZF6 Series—Stainless steel, Alloy 400: 3000 psig (207 bar)
  - HJZF6H Series—Stainless steel: 5000 psig (345 bar)
- Working temperature:
  - PTFE: -65°F to 450°F (-54°C to 232°C)
  - PEEK: -65°F to 500°F (-54°C to 260°C)

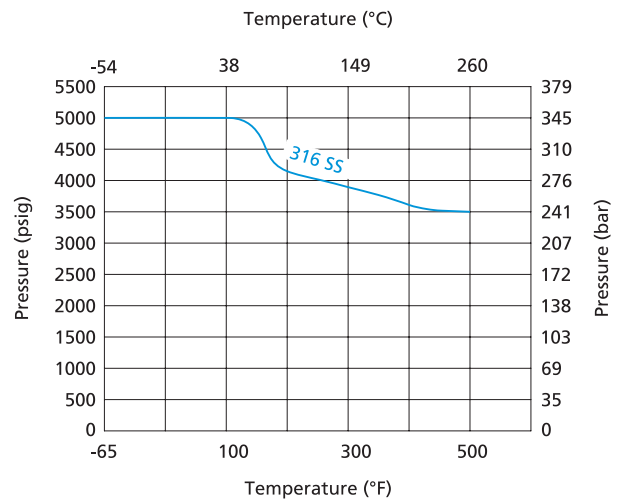


## Pressure vs. Temperature

HJZF6 Series



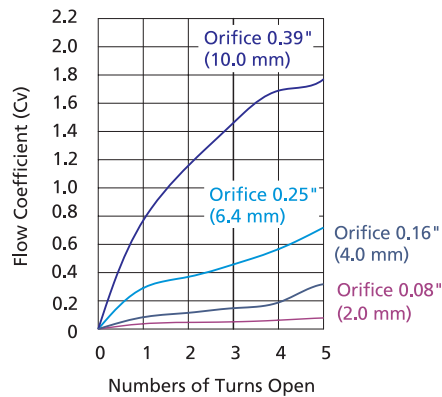
HJZF6H Series



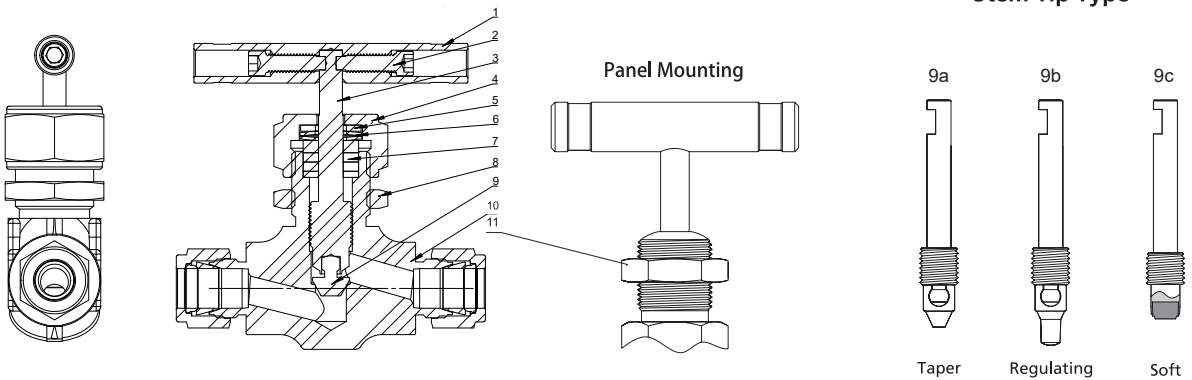
1. Graphs are based on PEEK packing.
2. Temperature rating is limited to 200°F (93°C) max with PCTFE stem tip (soft tip).

## Flow Data at 100°F (38°C)

### Regulating Stem Tip



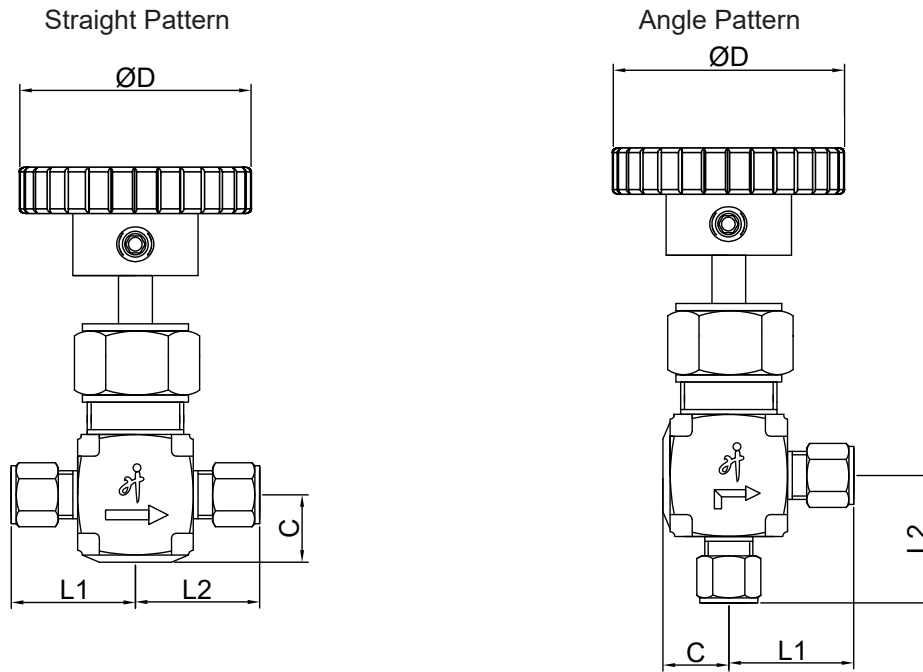
### Standard Materials of Construction



| Item | Component      | Valve Body Material   |                |
|------|----------------|---|----------------|
|      |                | 316 SS  | Alloy 400      |
|      |                | Material Grade/ASTM Specification   |                |
| 1    | Handle         | Black knob (aluminum or nylon with copper insert), aluminum alloy or stainless steel bar handle |                |
| 2    | Set Screw      | 304 SS/A479   |                |
| 3    | Stem           | 316 SS/A479   | Alloy 400/B164 |
| 4    | Packing Washer | 316 SS/A479   | Alloy 400/B164 |
| 5    | Washer         | 316 SS/A479   |                |
| 6    | Packing Spring | 316 SS/A479 or S17700/A693  |                |
| 7    | Packing Bolt   | PTFE/PEEK   |                |
| 8    | Lock Nut       | 316 SS/A479   |                |
| 9a   | Stem Tip       | Hardened 316 SS 479   | Alloy 400/B164 |
| 9b   |                |   |                |
| 9c   |                | PCTFE or PEEK   |                |
| 10   | Body           | 316 SS/A479   | Alloy 400/B164 |
| 11   | Panel Nut      | 316 SS/A479   |                |
|      | Lubricant      | Molybdenum disulfide-based / Copper-based Grease/PTFE Lubricating Grease                        |                |



## Dimensions



## Dimensions of HJZF6 Series

| Basic Ordering Number | Connection Type and Size<br>Inlet/Outlet | Orifice<br>in.(mm) | Cv   | Connection<br>Pressure at<br>100°F (38°C)<br>bar(psig) | Dimensions, in.(mm) |                 |                |                |
|-----------------------|--|--------------------|------|--|---------------------|-----------------|----------------|----------------|
|                       |  |                    |      |  | L1                  | L2              | C              | D              |
| HJZF6-MNPT2-5-        | 1/8 Male NPT                             | 0.08<br>(2.0)      | 0.09 | 316 SS   | 0.75<br>(19.05)     | 0.75<br>(19.05) | 0.32<br>(8.2)  | 1.00<br>(25.4) |
| HJZF6-FNPT2-5-        | 1/8 Female NPT                           |                    |      |  | 0.81<br>(20.6)      | 0.81<br>(20.6)  |                |                |
| HJZF6-YZ2-5-          | 1/8" Fractional Tube Fitting             |                    |      |  | 0.98<br>(25.0)      | 0.98<br>(25.0)  |                |                |
| HJZF6-FNPT2-7-        | 1/8 Female NPT                           | 0.16<br>(4.0)      | 0.35 | 207(3000)  | 0.81<br>(20.6)      | 0.81<br>(20.6)  | 0.39<br>(10.0) | 1.38<br>(35.0) |
| HJZF6-MNPT4-7-        | 1/4 Male NPT                             |                    |      |  | 0.98<br>(25.0)      | 0.98<br>(25.0)  |                |                |
| HJZF6-YZ4-7-          | 1/4" Fractional Tube Fitting             |                    |      |  | 1.13<br>(28.7)      | 1.13<br>(28.7)  |                |                |
| HJZF6-GZ6-7-          | 6 mm Metric Tube Fitting                 |                    |      |  | 1.17<br>(29.7)      | 1.17<br>(29.7)  |                |                |
| HJZF6-GZ8-7-          | 8 mm Metric Tube Fitting                 |                    |      |  | 2.24<br>(57.0)      | 2.24<br>(57.0)  |                |                |
| HJZF6-GDHJ6-7-        | 6 mm Rotatable Metric Tube Butt Weld     |                    |      |  |                     |                 |                |                |
| HJZF6-FNPT4-8-        | 1/4 Female NPT                           | 0.25<br>(6.4)      | 0.70 |  | 1.06<br>(26.9)      | 1.06<br>(26.9)  | 0.49<br>(12.5) | 1.88<br>(47.8) |
| HJZF6-FNPT6-8-        | 3/8 Female NPT                           |                    |      |  |                     |                 | 0.62<br>(15.8) |                |
| HJZF6-MNPT6-8-        | 3/8 Male NPT                             |                    |      |  | 1.12<br>(28.4)      | 1.12<br>(28.4)  | 0.49<br>(12.5) |                |
| HJZF6-MNPT8-8-        | 1/2 Male NPT                             |                    |      |  | 1.50<br>(38.1)      | 1.50<br>(38.1)  | 0.62<br>(15.8) |                |
| HJZF6-YZ6-8-          | 3/8" Fractional Tube Fitting             |                    |      |  | 1.29<br>(32.8)      | 1.29<br>(32.8)  |                |                |
| HJZF6-YZ8-8-          | 1/2" Fractional Tube Fitting             |                    |      |  | 1.40<br>(35.6)      | 1.40<br>(35.6)  | 0.49<br>(12.5) |                |
| HJZF6-GZ10-8-         | 10 mm Metric Tube Fitting                |                    |      |  | 1.30<br>(33.0)      | 1.30<br>(33.0)  |                |                |

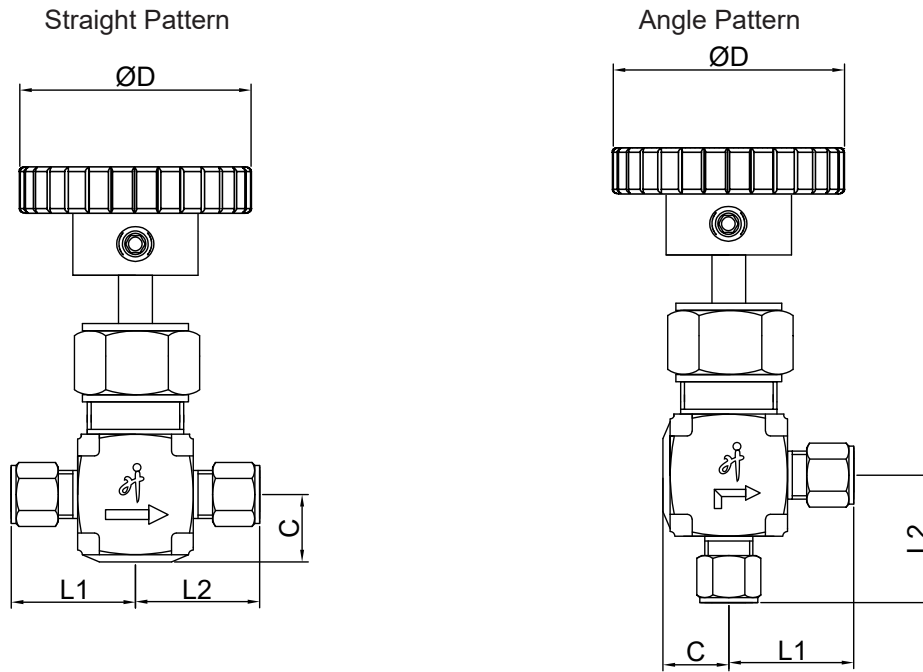


| Basic Ordering Number | Connection Type and Size<br>Inlet/Outlet | Orifice<br>in.(mm) | Cv   | Connection<br>Pressure at<br>100°F (38°C)<br>bar(psig) | Dimensions, in.(mm) |                |                |                |
|-----------------------|--|--------------------|------|--|---------------------|----------------|----------------|----------------|
|                       |  |                    |      |  | 316 SS              | L1             | L2             | C              |
| HJZF6-GZ12-8-         | 12 mm Metric Tube Fitting                | 0.25<br>(6.4)      | 0.70 | 207(3000)  | 1.40<br>(35.6)      | 1.40<br>(35.6) | 0.49<br>(12.5) | 1.88<br>(47.8) |
| HJZF6-GZ14-8-         | 14 mm Metric Tube Fitting                |                    |      |  | 1.56<br>(39.7)      | 1.56<br>(39.7) | 0.62<br>(15.8) |                |
| HJZF6-MS20-8-         | M20 x 1.5 Male Metric Thread (for RG-M)  |                    |      |  | 1.50<br>(38.1)      | 1.50<br>(38.1) |                |                |
| HJZF6-GDHJ10-8-       | 10 mm Rotatable Metric Tube Butt Weld    |                    |      |  | 2.60<br>(66.0)      | 2.60<br>(66.0) | 0.49<br>(12.5) |                |
| HJZF6-GDHJ14-8-       | 14 mm Rotatable Metric Tube Butt Weld    |                    |      |  |                     |                |                |                |
| HJZF6-FNPT8-9-S-      | 1/2 Female NPT                           | 0.39(10.0)         | 1.80 |  | 1.50<br>(38.1)      | 1.50<br>(38.1) | 0.76<br>(19.4) | 3.50<br>(88.9) |
| HJZF6-FNPT12-9-S-     | 3/4 Female NPT                           |                    |      |  | 1.56<br>(39.7)      | 1.56<br>(39.7) | 0.80<br>(20.4) |                |
| HJZF6-MNPT12-9-S-     | 3/4 Male NPT                             |                    |      |  | 1.56<br>(39.7)      | 1.56<br>(39.7) | 0.76<br>(19.4) |                |
| HJZF6-YZ8-9-S-        | 1/2" Fractional Tube Fitting             |                    |      |  |                     |                |                |                |
| HJZF6-YZ12-9-S-       | 3/4" Fractional Tube Fitting             |                    |      |  | 1.90<br>(48.3)      | 1.90<br>(48.3) | 0.76<br>(19.4) |                |
| HJZF6-GZ14-9-S-       | 14 mm Metric Tube Fitting                |                    |      |  |                     |                |                |                |

- Sizes and types listed are standard. Other sizes and types are available upon request.
- HJZF6 Series Needle Valves are standard without panel mounting.
- If you need to order a valve with a perforated plate structure, please add "-Y" after the basic order model, for example:

**HJZF6-MNPT2-5-Y-SS**

Needle Valve



## Dimensions of HJZF6H Series

| Basic Ordering Number | Connection Type and Size<br>Inlet/Outlet | Orifice in.(mm) | Cv   | Connection Pressure at 100°F (38°C) bar(psig) | Dimensions, in.(mm) |                 |                |                |
|-----------------------|--|-----------------|------|---|---------------------|-----------------|----------------|----------------|
|                       |  |                 |      |   | L1                  | L2              | C              | D              |
| HJZF6H-MNPT2-5-       | 1/8 Male NPT                             | 0.08<br>(2.0)   | 0.09 | 316 SS  | 0.75<br>(19.05)     | 0.75<br>(19.05) | 0.32<br>(8.2)  | 1.00<br>(25.4) |
| HJZF6H-FNPT2-5-       | 1/8 Female NPT                           |                 |      |   | 0.81<br>(20.6)      | 0.81<br>(20.6)  |                |                |
| HJZF6H-YZ2-5-         | 1/8" Fractional Tube Fitting             |                 |      |   | 0.98<br>(25.0)      | 0.98<br>(25.0)  |                |                |
| HJZF6H-FNPT2-7-       | 1/8 Female NPT                           | 0.16<br>(4.0)   | 0.35 | 345(5000)                                     | 0.81<br>(20.6)      | 0.81<br>(20.6)  | 0.39<br>(10.0) | 1.38<br>(35.0) |
| HJZF6H-MNPT4-7-       | 1/4 Male NPT                             |                 |      |   | 0.98<br>(25.0)      | 0.98<br>(25.0)  |                |                |
| HJZF6H-YZ4-7-         | 1/4" Fractional Tube Fitting             |                 |      |   | 1.13<br>(28.7)      | 1.13<br>(28.7)  |                |                |
| HJZF6H-GZ6-7-         | 6 mm Metric Tube Fitting                 | 0.25<br>(6.4)   | 0.70 | 345(5000)                                     | 1.17<br>(29.7)      | 1.17<br>(29.7)  | 0.49<br>(12.5) | 1.88<br>(47.8) |
| HJZF6H-GZ8-7-         | 8 mm Metric Tube Fitting                 |                 |      |   | 2.24<br>(57.0)      | 2.24<br>(57.0)  |                |                |
| HJZF6H-GDHJ6-7-       | 6 mm Rotatable Metric Tube Butt Weld     |                 |      |   | 1.06<br>(26.9)      | 1.06<br>(26.9)  |                |                |
| HJZF6H-FNPT4-8-       | 1/4 Female NPT                           | 0.25<br>(6.4)   | 0.70 | 345(5000)                                     | 1.12<br>(28.4)      | 1.12<br>(28.4)  | 0.62<br>(15.8) | 1.88<br>(47.8) |
| HJZF6H-FNPT6-8-       | 3/8 Female NPT                           |                 |      |   | 1.50<br>(38.1)      | 1.50<br>(38.1)  |                |                |
| HJZF6H-MNPT6-8-       | 3/8 Male NPT                             |                 |      |   | 1.29<br>(32.8)      | 1.29<br>(32.8)  |                |                |
| HJZF6H-MNPT8-8-       | 1/2 Male NPT                             | 0.25<br>(6.4)   | 0.70 | 345(5000)                                     | 1.40<br>(35.6)      | 1.40<br>(35.6)  | 0.49<br>(12.5) | 1.88<br>(47.8) |
| HJZF6H-YZ6-8-         | 3/8" Fractional Tube Fitting             |                 |      |   | 1.30<br>(33.0)      | 1.30<br>(33.0)  |                |                |
| HJZF6H-YZ8-8-         | 1/2" Fractional Tube Fitting             |                 |      |   | 1.40<br>(35.6)      | 1.40<br>(35.6)  |                |                |
| HJZF6H-GZ10-8-        | 10 mm Metric Tube Fitting                | 0.25<br>(6.4)   | 0.70 | 345(5000)                                     | 1.30<br>(33.0)      | 1.30<br>(33.0)  | 0.49<br>(12.5) | 1.88<br>(47.8) |
| HJZF6H-GZ12-8-        | 12 mm Metric Tube Fitting                |                 |      |   | 1.40<br>(35.6)      | 1.40<br>(35.6)  |                |                |



| Basic Ordering Number | Connection Type and Size<br>Inlet/Outlet | Orifice in.(mm) | Cv   | Connection Pressure at 100°F (38°C) bar(psig) | Dimensions, in.(mm) |                |                |                |
|-----------------------|--|-----------------|------|---|---------------------|----------------|----------------|----------------|
|                       |  |                 |      |   | 316 SS              | L1             | L2             | C              |
| HJZF6H-GZ14-8-        | 14 mm Metric Tube Fitting                | 0.25<br>(6.4)   | 0.70 | 345(5000)                                     | 1.56<br>(39.7)      | 1.56<br>(39.7) | 0.62<br>(15.8) | 1.88<br>(47.8) |
| HJZF6H-MS20-8-        | M20 x 1.5 Male Metric Thread (for RG-M)  |                 |      |   | 1.50<br>(38.1)      | 1.50<br>(38.1) |                |                |
| HJZF6H-GDHJ10-8-      | 10 mm Rotatable Metric Tube Butt Weld    |                 |      |   | 2.60<br>(66.0)      | 2.60<br>(66.0) | 0.49<br>(12.5) |                |
| HJZF6H-GDHJ14-8-      | 14 mm Rotatable Metric Tube Butt Weld    |                 |      |   |                     |                |                |                |
| HJZF6H-FNPT8-9-       | 1/2 Female NPT                           | 0.39<br>(10.0)  | 1.80 |   | 1.50<br>(38.1)      | 1.50<br>(38.1) | 0.76<br>(19.4) | 3.50<br>(88.9) |
| HJZF6HHH-MNPT12-9-    | 3/4 Male NPT                             |                 |      |   | 1.56<br>(39.7)      | 1.56<br>(39.7) |                |                |
| HJZF6H-YZ8-9-         | 1/2" Fractional Tube Fitting             |                 |      |   | 1.90<br>(48.3)      | 1.90<br>(48.3) |                |                |
| HJZF6H-YZ12-9-        | 3/4" Fractional Tube Fitting             |                 |      |   |                     |                |                |                |
| HJZF6H-GZ14-9-        | 14 mm Metric Tube Fitting                |                 |      |   |                     |                |                |                |

- Sizes and types listed are standard. Other sizes and types are available upon request.
- HJZF6H Series Needle Valves are standard without panel mounting.
- If you need to order a valve with a perforated plate structure, please add " -Y " after the basic order model, for example: **HJZF6H-MNPT2-5-Y-SS**



## Ordering Number Description

| HJZF6 Series | FNPT Inlet Type                      | 8 Inlet Size                    | YZ 8 Outlet Type | 8 Outlet Size  | 9 Orifice Size   | K Stem Tip Type  | P Packing Material | Y Panel Mounting | S Handle            | A Flow Pattern | HC Body Material |
|--------------|--------------------------------------|---------------------------------|------------------|--|------------------|------------------|--------------------|------------------|---------------------|----------------|------------------|
| HJZF6        | FNPT Female NPT                      | 2 1/8"                          |                  | Same as Inlet  | 5 0.08" (2.0 mm) | Taper            | PTFE               | No               | Black Aluminum Bar  | Straight       | SS 316 SS        |
| HJZF6H       | MNPT Male NPT                        | 4 1/4"                          |                  | Specify in the same way as inlet Type and inlet Size | 7 0.16" (4.0 mm) | T Regulating     | P PEEK             | Y Yes            | Red Aluminum Bar    | A Angle        | SL 316L SS       |
|              | FRT Female BSPT                      | 3/8" or 6 mm                    |                  |  | 8 0.25" (6.4 mm) | P Soft Tip-PEEK  |                    |                  | Green Aluminum Bar  |                | S4 304 SS        |
|              | RT Male BSPT                         | 1/2" or 8 mm                    |                  |  | 9 0.39" (10 mm)  | K Soft Tip-PCTFE |                    |                  | Blue Aluminum Bar   |                | S4L 304L SS      |
|              | FMS Female Metric Thread (for RG-M)  | 10 10 mm                        |                  |  |                  |                  |                    |                  | Stainless Steel Bar |                | S21 321 SS       |
|              | MS Male Metric Thread (for RG-M)     | 12 3/4" or 12 mm                |                  |  |                  |                  |                    |                  |                     |                | Duplex D22 2205  |
|              | FRP Female BSPP (for RP)             | 14 14 mm or M14 x 1.5           |                  |  |                  |                  |                    |                  | H Black Knob        |                | Alloy M4 400     |
|              | BP Male BSPP (for RG)                | 16 1" or 16 mm                  |                  |  |                  |                  |                    |                  |                     |                | Alloy INC6 600   |
|              | YZ Fractional Tube Fitting           | 18 18 mm                        |                  |  |                  |                  |                    |                  |                     |                | Alloy HC C-276   |
|              | GZ Metric Tube Fitting               | 1 1/4" or 20 20 mm or M20 x 1.5 |                  |  |                  |                  |                    |                  |                     |                |                  |
|              | GDHJ Rotatable Metric Tube Butt Weld | 22 22 mm or 22 M22 x 1.5        |                  |  |                  |                  |                    |                  |                     |                |                  |

1. Standard thread pitch for metric threads are as follows:  
M10 and below: 1 mm  
M12 to M24: 1



THIS PAGE HAS INTENTIONALLY BEEN LEFT BLANK

last updated 2023.04  
Copyright 2023.



**ANHUI HONGJI INSTRUMENT& VALVE MANUFACTURING CO.,LTD.**

Web: [www.hongjienterprise.com](http://www.hongjienterprise.com)

Mail: [sales@hongjienterprise.com](mailto:sales@hongjienterprise.com)

Add: No.77 Tiancha Rd.Tianchang,Anhui Province, China.