

# Rising Plug Valves

## NR Series

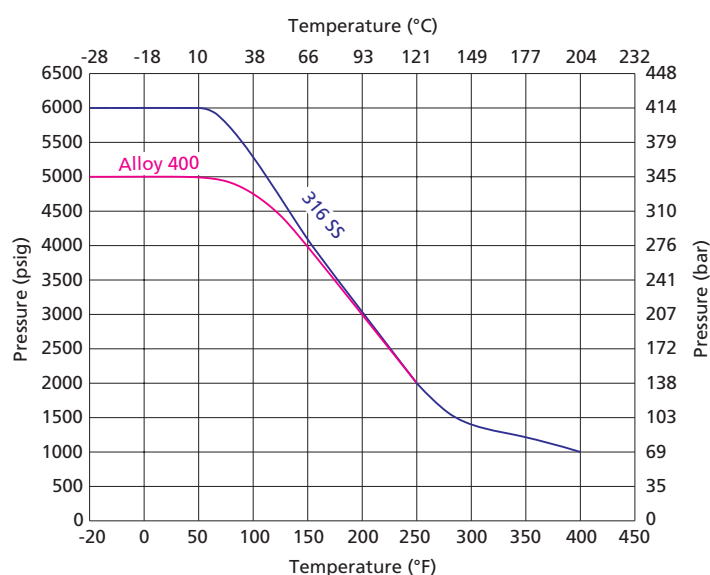
## NRG (with gauge port) Series

### Features

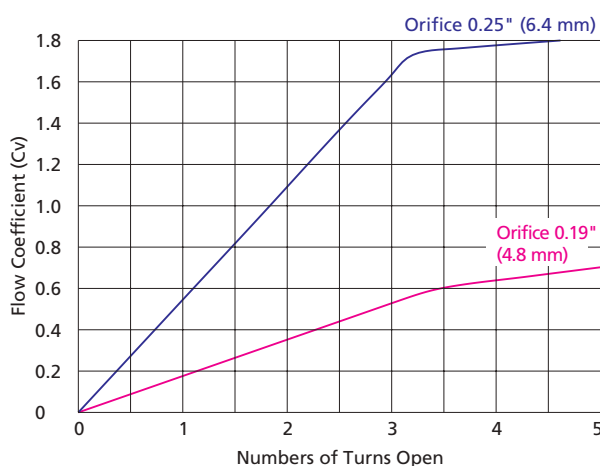
- ⦿ Cold drawn square bar as body material
- ⦿ Nonrotating stem for longer seat life
- ⦿ Roddable, straight through flow path for maximum flow with minimum pressure drop
- ⦿ Stem thread lubricant isolated from system media
- ⦿ Replaceable seat and stem tip design
- ⦿ Stem thread protected from outside 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)



### Pressure vs. Temperature

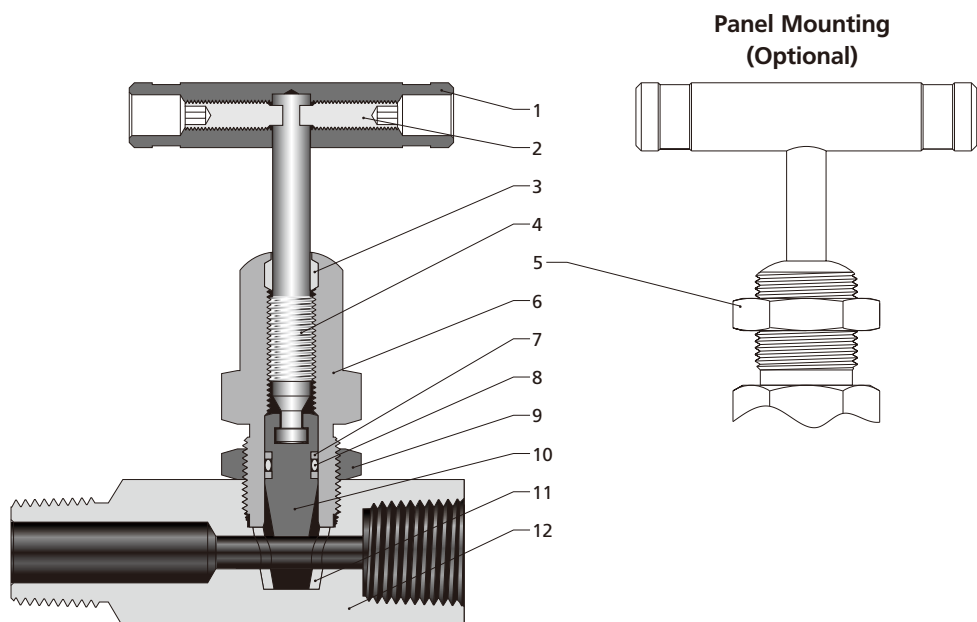


### Flow Data at 100°F (38°C)



1. Graphs are based on PEEK seat and Fluorocarbon(FKM) O-ring.
2. Contact FITOK Group or our authorized distributors for curve graph of other materials.

## Standard Materials of Construction

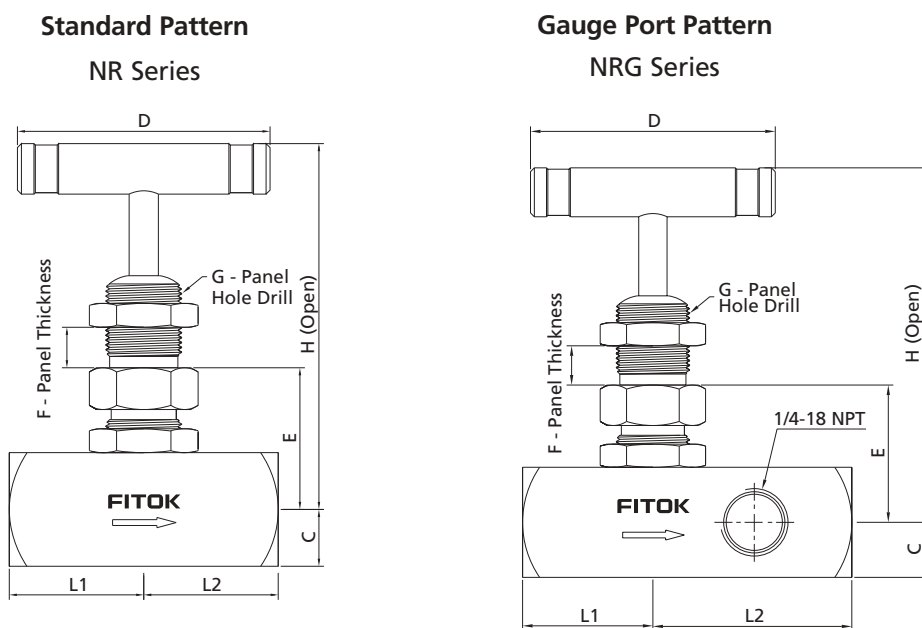


| Item | Component                         | Valve Body Material <sup>a</sup>                                                                       |             |             |                |
|------|-----------------------------------|--------------------------------------------------------------------------------------------------------|-------------|------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

Note: a. Contact FITOK Group or our authorized distributors for other materials.

b. The panel nut is only compatible with valves configured for panel mounting. Applicable valve part numbers have the suffix "Y", for example: NRSS-FNS4-7-Y.

## Dimensions



☉ NR Series Needle Valves are standard without panel mounting. To order needle valves with panel mounting as illustrated, add -Y to the ordering number. Example: NR55-FNS4-7-Y

### Dimensions of NR and NRG Series

| Basic Ordering Number | Connection Type and Size |                | Orifice<br>in.(mm) | Cv   | Dimensions, in.(mm) |                |                |                |                |                |                |                |                |
|-----------------------|--------------------------|----------------|--------------------|------|---------------------|----------------|----------------|----------------|----------------|----------------|----------------|----------------|----------------|
|                       | Inlet                    | Outlet         |                    |      | L1                  | L2             | C              | D              | E              | F              | G              | H              |                |
| NR□□-FNS4-7           | 1/4 Female NPT           | 1/4 Female NPT | 0.19<br>(4.8)      | 0.63 | 1.12<br>(28.4)      | 1.12<br>(28.4) | 0.44<br>(11.1) | 2.17<br>(55.0) | 1.28<br>(32.5) | 0.38<br>(9.7)  | 0.77<br>(19.6) | 3.77<br>(95.8) |                |
| NR□□-NS4-FNS4-7       | 1/4 Male NPT             | 1/4 Female NPT |                    |      | 1.78<br>(45.2)      |                | 0.50<br>(12.7) |                | 1.34<br>(34.0) |                |                |                |                |
| NR□□-NS8-FNS4-7       | 1/2 Male NPT             | 1/4 Female NPT |                    |      | 1.89<br>(48.0)      |                |                |                |                |                |                |                |                |
| NRG□□-FNS4-7          | 1/4 Female NPT           | 1/4 Female NPT |                    |      | 1.12<br>(28.4)      | 1.75<br>(44.4) | 0.56<br>(14.3) |                | 2.50<br>(63.5) | 1.40<br>(35.5) | 0.38<br>(9.7)  | 0.77<br>(19.6) | 3.83<br>(97.3) |
| NRG□□-NS8-FNS4-7      | 1/2 Male NPT             | 1/4 Female NPT |                    |      | 3.12<br>(79.2)      |                |                |                |                |                |                |                |                |
| NR□□-FNS8-8           | 1/2 Female NPT           | 1/2 Female NPT | 0.25<br>(6.4)      | 1.80 | 1.33<br>(33.8)      | 1.33<br>(33.8) | 0.56<br>(14.3) | 2.50<br>(63.5) | 1.40<br>(35.5) | 0.38<br>(9.7)  | 0.77<br>(19.6) | 3.83<br>(97.3) |                |
| NR□□-NS8-FNS8-8       | 1/2 Male NPT             | 1/2 Female NPT |                    |      | 2.16<br>(54.9)      |                |                |                |                |                |                |                |                |
| NR□□-NS12-FNS8-8      | 3/4 Male NPT             | 1/2 Female NPT |                    |      | 3.33<br>(84.6)      |                |                |                |                |                |                |                | 2.25<br>(57.2) |
| NRG□□-FNS8-8          | 1/2 Female NPT           | 1/2 Female NPT |                    |      |                     |                |                |                |                |                |                |                |                |
| NRG□□-NS12-FNS8-8     | 3/4 Male NPT             | 1/2 Female NPT |                    |      |                     |                |                |                |                |                |                |                |                |

- Sizes and types listed are standard. Other sizes and types are available upon request.
- For dimensions not shown above, please contact FITOK Group or our authorized distributors.

## Ordering Number Description

**NRSS - NS8 - FNS8 - P8 - BYM - SF2**

| Series | Body Material   | Inlet Type                          | Inlet Size       | Outlet Type   | Outlet Size                                            | Seat Material | Orifice Size     | O-ring Material                          | Panel Mounting | Handle                | Special Application | Cleaning and Packaging |
|--------|-----------------|-------------------------------------|------------------|---------------|--------------------------------------------------------|---------------|------------------|------------------------------------------|----------------|-----------------------|---------------------|------------------------|
| NR     | SS 316 SS       | FNS Female NPT                      | 2 1/8"           | Same as Inlet | Specified in the same way as inlet type and inlet size | Acetal        | 7 0.19" (4.8 mm) | Fluorocarbon Rubber (FKM)                | No             | Black Aluminum Bar    | No                  | FC-01                  |
| NRG    | 6L 316L SS      | NS Male NPT                         | 4 1/4"           |               |                                                        | P PEEK        | 8 0.25" (6.4 mm) | B Nitrile Butadiene Rubber (NBR)         | Y Yes          | I Red Aluminum Bar    | S NACE MR0175       | F2 FC-02               |
|        | S4 304 SS       | FRT Female BSPT                     | 6 3/8" or 6 mm   |               |                                                        |               |                  | E Ethylene Propylene Diene Rubber (EPDM) |                | GR Green Aluminum Bar |                     |                        |
|        | 4L 304L SS      | RT Male BSPT                        | 8 1/2" or 8 mm   |               |                                                        |               |                  |                                          |                | J Blue Aluminum Bar   |                     |                        |
|        | S1 321 SS       | FMS Female Metric Thread (for RG-M) | 10 10 mm         |               |                                                        |               |                  |                                          |                | M Stainless Steel Bar |                     |                        |
|        | D5 Duplex 2205  | MS Male Metric Thread (for RG-M)    | 12 3/4" or 12 mm |               |                                                        |               |                  |                                          |                |                       |                     |                        |
|        | TI Titanium     | FRP Female BSPP (for RP)            |                  |               |                                                        |               |                  |                                          |                |                       |                     |                        |
|        | A20 Alloy 20    | BP Male BSPP (for RG)               |                  |               |                                                        |               |                  |                                          |                |                       |                     |                        |
|        | M Alloy 400     |                                     |                  |               |                                                        |               |                  |                                          |                |                       |                     |                        |
|        | INC Alloy 600   |                                     |                  |               |                                                        |               |                  |                                          |                |                       |                     |                        |
|        | HC Alloy C-276  |                                     |                  |               |                                                        |               |                  |                                          |                |                       |                     |                        |
|        | B Brass         |                                     |                  |               |                                                        |               |                  |                                          |                |                       |                     |                        |
|        | CS Carbon Steel |                                     |                  |               |                                                        |               |                  |                                          |                |                       |                     |                        |
|        | 904L 904L SS    |                                     |                  |               |                                                        |               |                  |                                          |                |                       |                     |                        |

Note: "Ordering Number Description" is a reference to understand the combination rules of FITOK product part number. Not all combinations are available.

### 1. Cleaning and Packaging:

FC-01: Standard cleaning and packaging for general industrial procedures.

FC-02: Special cleaning and packaging for wetted system components to ensure compliance with product cleanliness requirement of ASTM G93 Level C.