

## ANDERSON GREENWOOD SERIES F29/F33K PRIMARY ISOLATION VALVES

Integrally forged, one piece double block and bleed Keyblok assemblies for primary isolation of pressure take-offs, where the valve is mounted directly to the vessel or process pipe



### FEATURES

- One-piece forged body combines a compact design with strength and reduced potential leak paths compared to conventional designs.
- Flanged inlet connections available in a choice of sizes and ratings to suit each application.
- Heavy duty needle type globe valve ensures bubble-tight shut-off on venting or isolation service.
- Outside screw and yoke (OS&Y) needle type globe valve with investment cast yoke and bolted bonnet provides high mechanical strength and reliability on primary isolation service.
- Bolt-on outlet option allows choice of connections for dual instrument mounting, welded connections and chemical injection.
- Firesafe design to meet API 607, BS6755 Part 2 (optional).

### GENERAL APPLICATION

Suitable for double block and bleed applications including pressure, level and flow measurement, sampling and chemical injection service. Instruments may be mounted directly to the valve outlet or remotely with gauge lines/impulse pipe work.

### TECHNICAL DATA

|                     |   |
|---------------------|---|
| Materials:          | CS, SS, Duplex and other exotic materials       |
| Seats:              | Metal   |
| Connections         |   |
| Inlet:              | ANSI flanged ½" to 2"<br>API flanged to 2 1/16" |
| Outlet:             | ½" NPT  |
| Pressure (max.):    | 10000 psig (690 barg)                           |
| Temperature (max.): | 1000°F (538°C)                                  |

# ANDERSON GREENWOOD SERIES F29/F33K PRIMARY ISOLATION VALVES

## PRODUCT OVERVIEW

### Keyblok F29

The F29 features two independently operable 0.2 inch [5 mm] 'HD' globe style needle valves for isolation service, with an intermediate 'HD' globe style needle valve for venting service. Metal seating is standard on valves.

### Keyblok F33K

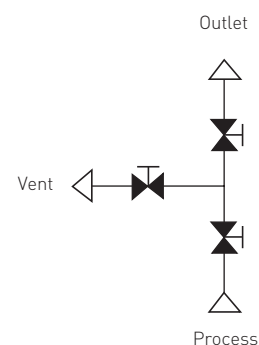
The F33K features two independently operable 0.2 inch [5 mm] bore outside screw and yoke bolted bonnet (OS&Y) valves for isolation service, with an OS&Y valve for venting service. Metal seating is standard on valves.

### General notes

Standard pressure testing to BS EN 12266-1.

Standard material traceability to EN 10204 3.1 (body only).

Material thickness to ANSI B16.34.



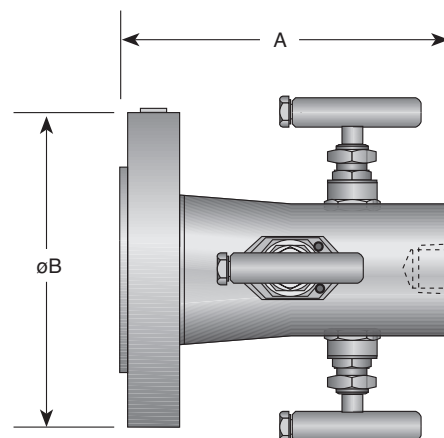
## VALVE BODY - MATERIAL CODES

| Description | C     | L        | S         | D        |
|-------------|-------|----------|-----------|----------|
| Valve body  | A105N | A350 LF2 | A182 F316 | A182 F51 |

**Note:** carbon steel valve bodies are zinc plated and passivated as standard.

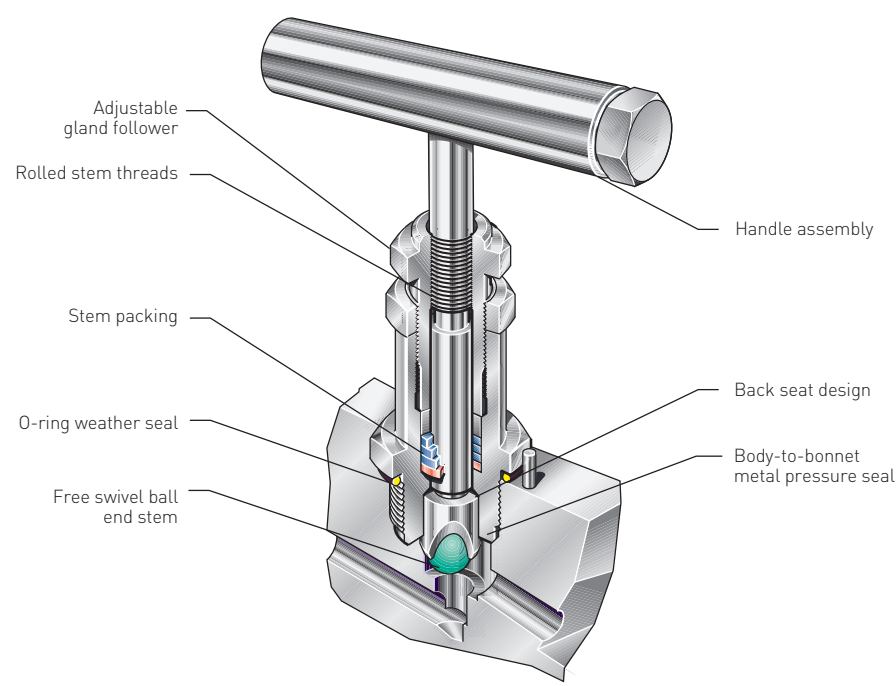
## F29 AND F33K SERIES FLANGED X THREADED

| Size in | Rating lb | Dimensions, inches [mm] |           |           |  | Weight |        |
|---------|-----------|-------------------------|-----------|-----------|--|--------|--------|
|         |           | A - RF                  | A - RTJ   | B         |  | lb     | [kg]   |
| 1/2     | 150       | 6.3 [161]               | - -       | 3.5 [89]  |  | 7.9    | [3.6]  |
| 1/2     | 300       | 6.3 [161]               | 6.4 [163] | 3.8 [96]  |  | 8.6    | [3.9]  |
| 1/2     | 600       | 6.5 [166]               | 6.5 [165] | 3.8 [96]  |  | 8.8    | [4.0]  |
| 1/2     | 900/1500  | 7.2 [184]               | 7.2 [184] | 4.8 [121] |  | 11.9   | [5.4]  |
| 1/2     | 2500      | 7.2 [184]               | 7.2 [184] | 5.3 [134] |  | 15.2   | [6.9]  |
| 3/4     | 150       | 6.3 [161]               | - -       | 3.9 [99]  |  | 8.6    | [3.9]  |
| 3/4     | 300       | 6.3 [161]               | 6.5 [165] | 4.6 [118] |  | 10.1   | [4.6]  |
| 3/4     | 600       | 6.5 [166]               | 6.5 [165] | 4.6 [118] |  | 10.4   | [4.7]  |
| 3/4     | 900/1500  | 7.2 [184]               | 7.2 [184] | 5.1 [130] |  | 13.9   | [6.3]  |
| 3/4     | 2500      | 7.2 [184]               | 7.2 [184] | 5.5 [140] |  | 16.5   | [7.5]  |
| 1       | 150       | 6.1 [156]               | 6.3 [161] | 4.3 [108] |  | 8.8    | [4.0]  |
| 1       | 300       | 6.3 [159]               | 6.5 [164] | 4.9 [124] |  | 10.1   | [4.6]  |
| 1       | 600       | 6.3 [159]               | 6.5 [166] | 4.9 [124] |  | 10.4   | [4.7]  |
| 1       | 900/1500  | 6.7 [169]               | 7.0 [177] | 5.9 [150] |  | 15.4   | [7.0]  |
| 1       | 2500      | 7.2 [183]               | 7.2 [183] | 6.3 [159] |  | 19.0   | [8.6]  |
| 1 1/2   | 150       | 6.3 [159]               | 6.5 [164] | 5.0 [127] |  | 10.1   | [4.6]  |
| 1 1/2   | 300       | 6.3 [162]               | 6.6 [167] | 6.1 [156] |  | 13.2   | [6.0]  |
| 1 1/2   | 600       | 6.7 [170]               | 6.7 [170] | 6.1 [156] |  | 14.3   | [6.5]  |
| 1 1/2   | 900/1500  | 7.1 [180]               | 7.1 [180] | 7.0 [178] |  | 20.7   | [9.4]  |
| 1 1/2   | 2500      | 7.6 [193]               | 7.6 [194] | 8.0 [203] |  | 35.1   | [15.9] |
| 2       | 150       | 6.3 [161]               | 6.5 [166] | 6.0 [153] |  | 14.6   | [6.6]  |
| 2       | 300       | 6.5 [164]               | 6.7 [170] | 6.5 [165] |  | 17.6   | [8.0]  |
| 2       | 600       | 6.8 [173]               | 6.9 [175] | 6.5 [165] |  | 18.3   | [8.3]  |
| 2       | 900/1500  | 7.3 [186]               | 7.4 [188] | 8.5 [216] |  | 32.8   | [15.0] |
| 2       | 2500      | 7.8 [199]               | 7.9 [201] | 9.3 [235] |  | 48.5   | [22.0] |



ANDERSON GREENWOOD SERIES F29/F33K PRIMARY ISOLATION VALVES

'HD' NEEDLE-TYPE GLOBE VALVE

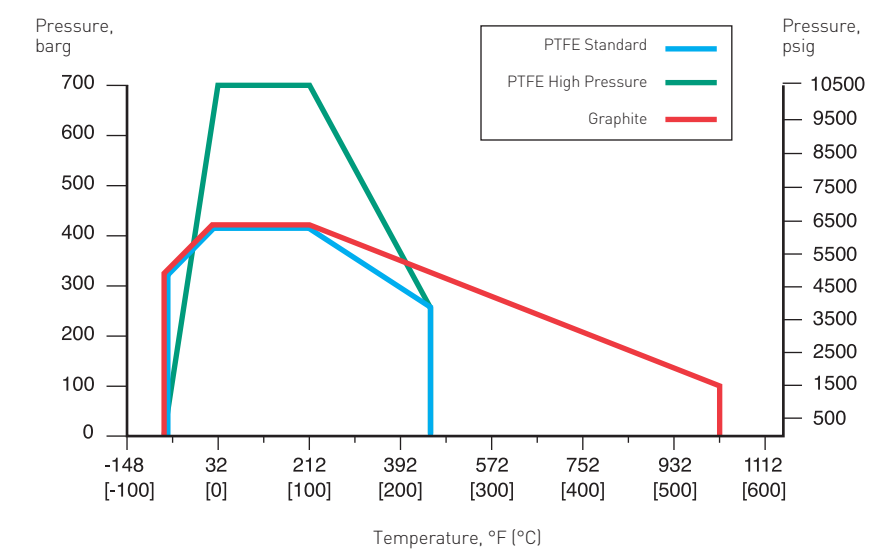


The HD needle-type globe valve has a rotating stem with a free-swivel ball-end seat for repetitive bubble-tight shut-off and rolled threads for low operating torque, located above the spindle packing and isolated from the process. The stem seal is with either graphite or PTFE rings and a backseat design provides secondary stem sealing and prevents stem blowout. A body-to-bonnet metal pressure seal below the threads prevents corrosion and ensures the bonnet threads are in loaded compression for additional strength and an O-ring weather seal protects bonnet retention threads from harsh environments. An adjustable gland follower allows easy access to adjust the packing gland and the valve features a T-bar handle with locking bolt to secure it firmly on the stem.

- Pressure rating: up to 10000 psig (680 barg).
- Temperature rating: -71°F to 1000°F (-57°C to +538°C).

PRESSURE AND TEMPERATURE RATINGS

'HD' NEEDLE TYPE GLOBE VALVE



'HD' NEEDLE TYPE GLOBE VALVE COMPONENTS - TRIM CODES

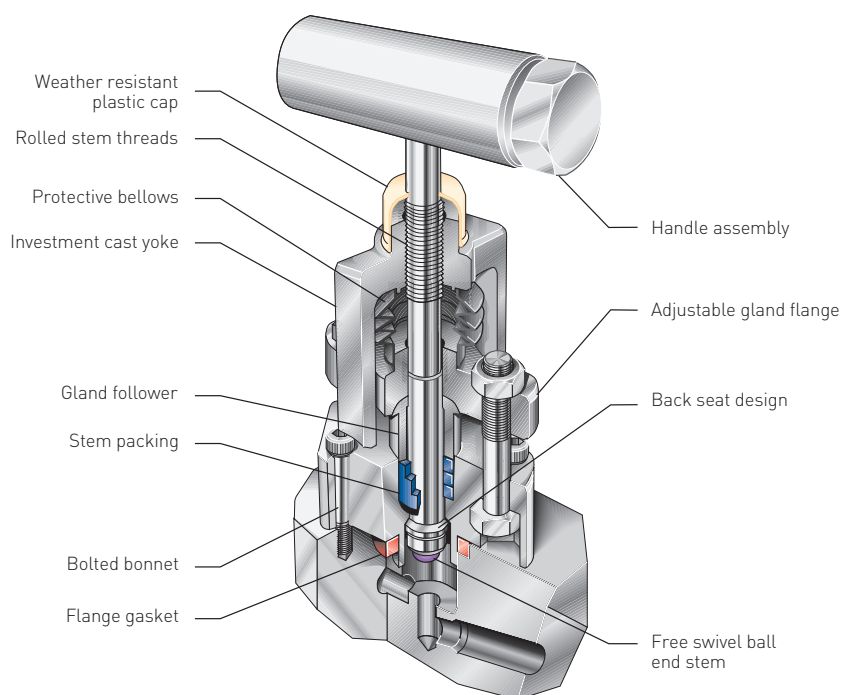
| Item | Description         | S                | D                |
|------|---------------------|------------------|------------------|
| 1    | Gland follower      | Austenitic SS    | A276-31803       |
| 2    | Stem                | A479-316         | A47931803        |
| 3    | Locknut             | Austenitic SS    | Austenitic SS    |
| 4    | Stem packing        | PTFE or graphite | PTFE or graphite |
| 5    | O-ring weather seal | Buna-N Nitrile   | Buna-N Nitrile   |
| 6    | Ball (stem tip)     | 316 SS           | Ceramic          |
| 7    | Bonnet locking pin  | Austenitic SS    | Austenitic SS    |
| 8    | Handle assembly     | Austenitic SS    | Austenitic SS    |

STANDARD TRIM COMBINATIONS

| Body | Trim |
|------|------|
| C    | S    |
| L    | S    |
| S    | S    |
| D    | D    |

## ANDERSON GREENWOOD SERIES F29/F33K PRIMARY ISOLATION VALVES

### OS&Y NEEDLE-TYPE GLOBE VALVE

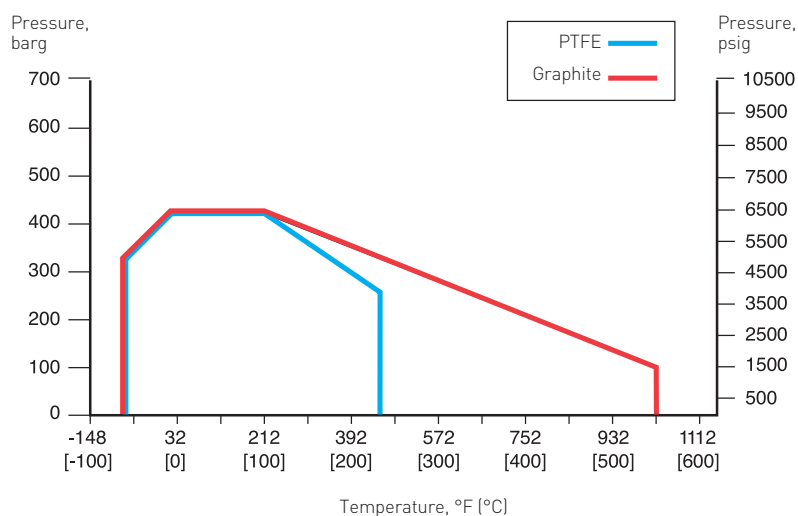


The OS&Y needle-type globe valve has a bolted bonnet for strength and reliability and a precision cast yoke which assures perfect stem alignment. The rotating stem has a free-swivel ball-end for repetitive bubble-tight shut-off and rolled threads to prevent galling that are completely isolated from the process with protective bellows that protect against atmospheric contamination. The stem seal is either graphite or PTFE rings and a backseat design provides secondary sealing and prevents blowout. A flange gasket ring ensures a bubble-tight body-to bonnet seal and an adjustable gland flange/follower allows easy access to the packing gland. A weather-resistant plastic bonnet cap prevents stem lubricant contamination and the valve features a T-bar handle.

- Pressure rating: up to 6000 psig (414 barg).
- Temperature rating: -71°F to 1000°F (-57°C to +538°C).

### PRESSURE AND TEMPERATURE RATINGS

#### OS&Y NEEDLE TYPE GLOBE VALVE



#### 'OS&Y' NEEDLE TYPE GLOBE VALVE COMPONENTS - TRIM CODES

| Item | Description          | S                 | D                |
|------|----------------------|-------------------|------------------|
| 1    | Cap                  | Plastic           | Plastic          |
| 2    | Stem                 | A479-316          | A479-31803       |
| 3    | Protective bellows   | Polyurethane      | Polyurethane     |
| 4    | Yoke                 | A351-CF8M         | A890-4A          |
| 5    | Gland follower       | B783-SS-316-N2-33 | A276-31803       |
| 6    | Stem packing         | PTFE or Graphite  | PTFE or Graphite |
| 7    | Body/bonnet - bolts  | ASTM A453         | ASTM A453        |
| 8    | Flange gasket        | Graphite          | Graphite         |
| 9    | Ball (stem tip)      | 316 SS            | Ceramic          |
| 10   | Gland flange - bolts | Austenetic SS     | Austenetic SS    |
| 11   | Handle assembly      | Austenetic SS     | Austenetic SS    |
| 12   | Gland flange         | A351 CF8M         | A351 CF8M        |

# ANDERSON GREENWOOD SERIES F29/F33K PRIMARY ISOLATION VALVES

## ORDERING INFORMATION

### SELECTION GUIDE

| Example:                       |   |   |           | F29                                       | V  | S | S | 061L | 047B | QV |
|--------------------------------|---|---|-----------|---|--|---|---|------|------|----|
| <b>Globe needle valve type</b> |   |   |           |   |  |   |   |      |      |    |
| F29                            | Flanged x threaded double block and bleed                           |   |           |   |  |   |   |      |      |    |
| F291                           | Flanged x threaded double block and bleed - 10000 psi (PTFE packed) |   |           |   |  |   |   |      |      |    |
| F33K                           | Flanged x threaded double block and bleed                           |   |           |   |  |   |   |      |      |    |
| <b>Needle valve packing</b>    |   |   |           |   |  |   |   |      |      |    |
| V                              | PTFE  |   |           |   |  |   |   |      |      |    |
| H                              | Graphite  |   |           |   |  |   |   |      |      |    |
| <b>Body material</b>           |   |   |           |   |  |   |   |      |      |    |
| C                              | A105N   | S | A182 F316 |   |  |   |   |      |      |    |
| L                              | A350 LF2  | D | A182 F51  |   |  |   |   |      |      |    |
| <b>Trim material</b>           |   |   |           |   |  |   |   |      |      |    |
| S                              | SS 316  |   |           | <b>Standard trim combinations</b>         |  |   |   |      |      |    |
| D                              | Duplex UNS S31803   |   |           | C, L and S Body = S Trim, D Body = D Trim |  |   |   |      |      |    |
| <b>Inlet connection</b>        |   |   |           |   |  |   |   |      |      |    |
| 04                             | 1/2"  | 1 | RF        | A   | 150 lb (ANSI B16.5)  |   |   |      |      |    |
| 06                             | 3/4"  | 3 | RTJ       | J   | 300 lb (ANSI B16.5)  |   |   |      |      |    |
| 08                             | 1"  | 4 | BX        | K   | 600 lb (ANSI B16.5)  |   |   |      |      |    |
| 12                             | 1 1/2"  | 5 | RX        | T   | 900 lb (ANSI B16.5)  |   |   |      |      |    |
| 16                             | 2"  | 6 | R         | L   | 1500 lb (ANSI B16.5)   |   |   |      |      |    |
| 17                             | 1 13/16"  | 8 | Hub       | M   | 2500 lb (ANSI B16.5)   |   |   |      |      |    |
| 18                             | 2 1/16"   |   |           | N   | 5000 lb (API 6A)   |   |   |      |      |    |
| 24                             | 3"  |   |           | P   | 10000 lb (API 6A)  |   |   |      |      |    |
|                                |   |   |           | V   | 3000 lb (API 6A)   |   |   |      |      |    |
| <b>Outlet connection</b>       |   |   |           |   |  |   |   |      |      |    |
| 04                             | 1/2"  | 2 | Male      | B   | NPT  |   |   |      |      |    |
| 06                             | 3/4"  | 7 | Female    | C   | Butt Weld (XXS)  |   |   |      |      |    |
| 08                             | 1"  |   |           | D   | Socket Weld (XXS)  |   |   |      |      |    |
|                                |   |   |           | E   | G 1/2"   |   |   |      |      |    |
| <b>Options</b>                 |   |   |           |   |  |   |   |      |      |    |
| MP04                           | Multiport outlet 1/2" NPT   |   |           | LAT                                       | Lockable tamper-proof bonnet (HD type).                        |   |   |      |      |    |
| ICV                            | Integral check valve (injection)                                    |   |           | PD  | Padlock for - LAT  |   |   |      |      |    |
| KFGTX                          | Kidney flange adaptor   |   |           | QV  | 1/4" NPT (f) Vent  |   |   |      |      |    |
| IQ(- -)                        | Integral quill (required length)                                    |   |           | PO  | Plugged outlet   |   |   |      |      |    |
| PV                             | Plugged vent  |   |           | SS  | Full 316 SS trim   |   |   |      |      |    |
| LH                             | Lockable ball valve handles (specify number required)               |   |           | VO  | Vent option (please specify compression fittings, if required) |   |   |      |      |    |
| AT                             | Anti-tamper (HD type only)  |   |           | CB  | Ceramic ball tip   |   |   |      |      |    |
| SG                             | NACE MR0175 latest revision   |   |           | ST  | Stellite ball tip  |   |   |      |      |    |

Neither Emerson, Emerson Automation Solutions, nor any of their affiliated entities assumes responsibility for the selection, use or maintenance of any product. Responsibility for proper selection, use, and maintenance of any product remains solely with the purchaser and end user.

Anderson Greenwood is a mark owned by one of the companies in the Emerson Automation Solutions business unit of Emerson Electric Co. Emerson Automation Solutions, Emerson and the Emerson logo are trademarks and service marks of Emerson Electric Co. All other marks are the property of their respective owners.

The contents of this publication are presented for informational purposes only, and while every effort has been made to ensure their accuracy, they are not to be construed as warranties or guarantees, express or implied, regarding the products or services described herein or their use or applicability. All sales are governed by our terms and conditions, which are available upon request. We reserve the right to modify or improve the designs or specifications of such products at any time without notice.

[Emerson.com/FinalControl](https://emerson.com/FinalControl)

---