

OVERVIEW

As regulatory agencies implement stringent restrictions on fugitive emissions control, many industries have mandated compliance to API 608 and API 641 for the flow control equipment used within their facilities. End users are being regulated to show compliance to emissions control through LDAR programs using Method 21 monitoring. To meet this growing industry demand, the Series F15, F30, RF15 and RF30 has been extended to offer broad industry-standard compliance in one design through its API 608 trim.

INDUSTRIES & APPLICATIONS

- > Chemical
- > Petrochemical
- > Oil & Gas
- > Refining
- > Agrichemical
- > Tight Shutoff
- > Fire Safe
- > Low-Emission

SPECIFICATIONS

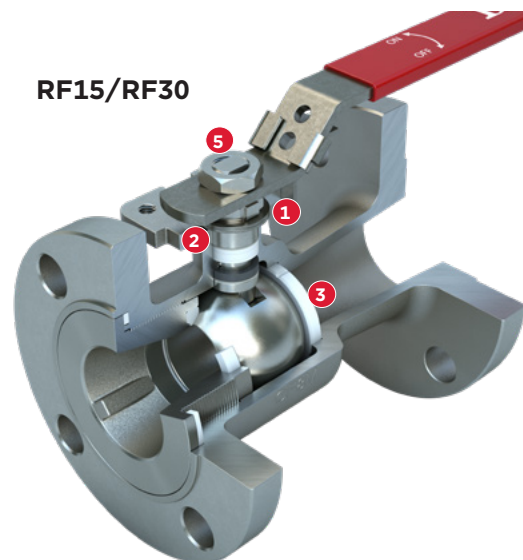
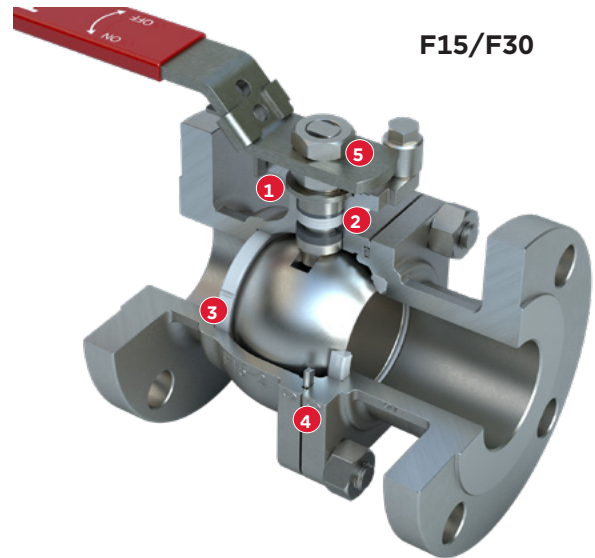
Size Range	F15: NPS ½ to 8 (DN15 to 200) F30: NPS ½ to 8 (DN15 to 200) RF15: NPS 1 to 10 (DN25 to 250) RF30: NPS ½ to 8 (DN15 to 200)
Temperature Range¹	Stainless Steel: -50°F to 450°F -46°C to 232°C Carbon Steel: -20°F to 450°F -29°C to 232°C
Pressure Rating	ASME Class 150 & 300 PN 10, 16, 25, & 40
Body Style	1-Piece Standard Port 2-piece Full Port
End Connections	Flanged
Shutoff Rating	Zero Leakage, Bidirectional

NOTE:

1 Temperature range is subject to seat material and operating pressure.

FEATURES

- 1 LIVE-LOADED STEM SEALING:** The live-loaded, self-adjusting stem seal automatically adjusts to compensate for temperature fluctuations and high-cycle wear, providing a reliable seal and reduced maintenance.
- 2 COMBINATION PACKING:** The unique combination packing provides a stem seal that is Fugitive Emissions qualified per API 641 and Fire Safe certified per API 607. The TFM v-rings provide the primary stem sealing for fugitive emissions control, while the graphite packing ring provides a secondary seal for fire safety.
- 3 BIDIRECTIONAL SEAT SEALING:** The seat design ensures bi-directional, bubble-tight sealing with low operating torque. Resilient seats feature relief slots or O.D. clearance to relieve pressure past the upstream seat. The seats are preloaded between the ball and body during assembly to ensure sealing against low-pressure and vacuum service.
- 4 FIRE SAFE SEALS:** The body joint is sealed with a spiral wound gasket, consisting of a chemically inert inner seal, to aid in emissions control during temperature fluctuations. The spiral wound body gasket and graphite stem seal ring provide a qualified and field proven fire safe design.
- 5 ROBUST STEM DESIGN:** With compliance to API 608, the stem design offers operational peace of mind with a minimum of 2x safety factor over the break torque. The stem is offered in a one-piece, blowout proof design with spring loaded anti-static devices to prevent static discharge created by ball-to-seat friction.
- 6 SIMPLIFIED INVENTORY:** The API 608 compliant trim provides broad industry-standard compliance in one design to simplify inventory and provide inventory flexibility.



DESIGN STANDARDS

Valve Design	API 608 ASME B16.34 NACE MR0175 ¹ NACE MR0103 ¹
Seat Tightness	Zero Leakage, API 598, Bidirectional Zero Leakage, MSS SP-72, Bidirectional
End Connections	ASME B16.5 DIN EN 1092-1
Face-to-Face	ASME B16.10 Long Pattern ² ASME B16.10 Short Pattern ³
Flange Drilling	ASME Class 150 & 300 PN 10, 16, 25, 40
Top Flange	ISO 5211

CERTIFICATIONS & APPROVALS

Certifications	SIL IEC 61508 SC 3 CRN CSA 3.16 PED 2014/68/EU PE(S)R UKCA S.I. 2016:1105 ATEX 2014/34/EU
Fire Test	API 607
Fugitive Emissions	API 641 ISO 15848-1

MATERIAL OPTIONS

Body	ASTM A216 Gr WCB Carbon Steel ASTM A351 Gr CF8M Stainless Steel Special Alloys ⁴
Body Seal	Spiral Wound (316 SS/Graphite) ⁵
Ball	CF8M Stainless Steel Special Alloys ⁴
Seat	TFM 1600 (standard) RPTFE Tek-Fil
Stem	Duplex UNS S31803 17-4PH
Stem Packing	Combination Packing (TFM / Graphite)

NOTE:

1. Materials in compliance with NACE for non-buried, non-insulated service.
2. Long Pattern: F15/F30, NPS ½ to 8 (DN 15 to 200)
3. Short Pattern: F15, NPS ½ to 4 (DN 15 to 100) and F30, NPS ½ to 6 (DN15 to 150) RF15, NPS1 to 10 (DN25 to 250) and RF30 NPS1 to 8 (DN25 to 200)
4. Special alloy body and ball material available upon request.
5. F15/F30 only

