

API 602 Forged Steel Check Valve: Lift, Ball and Swing Types

API 602 forged steel check valves prevent backflow on small-bore high-pressure lines. Lift (piston) and ball types give good sealing on lines with vibration and pulsation; swing types are preferred where low pressure drop is required.

Technical specifications

Size	½"–2" (DN15–DN50)
Pressure class	Class 800 and 1500 (API 602); Class 2500 to ASME B16.34
Type	Lift (piston), ball, swing
End connections	NPT, SW, BW, flanged
Materials	A105N, LF2, F11, F22, F316

Key features

- Compact forged body for high pressure
- Good sealing on vibrating lines
- Spring-loaded design options

Standards and construction

- **Design:** API 602 / ISO 15761, ASME B16.34
- **End connections:** socket weld (ASME B16.11), threaded NPT (ASME B1.20.1), butt weld (ASME B16.25), flanged (ASME B16.5)
- **Bonnet types:** bolted or welded cover (pressure seal in high classes, to ASME B16.34); piston, ball and swing internals
- **Port:** standard (reduced) or full port
- **Testing:** API 598

Material combinations

Combination	Body / bonnet	Trim	Typical service
A105 / F6a	A105	13Cr (F6a)	General hydrocarbon, water, air, steam
A105 / F6a + hardfacing	A105	13Cr + CoCr hardfaced seat	Steam, high temperature, abrasive service
LF2 / 304	A350 LF2	304	Low temperature (down to approximately –46 °C)
F11 / F6a + hardfacing	A182 F11	13Cr + CoCr hardfacing	Superheated steam, high temperature
F304 / 304	A182 F304	304	Corrosive service
F316 / 316	A182 F316	316	Corrosive and chemical service

Combination	Body / bonnet	Trim	Typical service
F51 / F51	A182 F51 (duplex)	F51	Chloride environments; seawater depending on conditions