

## API 602 Forged Steel Gate Valve: ½"-2", Class 800 and 1500

API 602 forged steel gate valves are used on small-bore (typically ½"-2") high-pressure lines for drain, vent, sampling and instrument connections. The forged body is compact and robust; Class 800 is the industry standard class for small threaded and socket-weld valves.

### Technical specifications

|                 |                                                                                           |
|-----------------|-------------------------------------------------------------------------------------------|
| Size            | ½"-2" (DN15–DN50); up to DN100 within the scope of API 602                                |
| Pressure class  | Class 800 and 1500 (API 602); Class 2500 to ASME B16.34; Class 150–1500 for flanged types |
| End connections | NPT threaded, socket-weld (ASME B16.11), butt-weld, flanged                               |
| Bonnet          | Bolted, welded (API 602); pressure seal to ASME B16.34                                    |
| Materials       | A105N, LF2, F11, F22, F304, F316, F51                                                     |
| Trim            | 13Cr, Stellite hard-faced seats, 316; by API trim number                                  |

### Key features

- Compact, robust forged body
- Full port or standard port option
- Welded bonnet to reduce leakage risk
- Threaded, SW, BW and flanged end 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 bonnet (OS&Y), welded bonnet; pressure seal designs to ASME B16.34
- **Port:** standard (reduced) or full port
- **Testing:** API 598; on request, packing type-tested for low emissions (ISO 15848-1 / API 624)

### 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            |

| Combination | Body / bonnet        | Trim | Typical service                                         |
|-------------|----------------------|------|---------------------------------------------------------|
| F304 / 304  | A182 F304            | 304  | Corrosive service                                       |
| F316 / 316  | A182 F316            | 316  | Corrosive and chemical service                          |
| F51 / F51   | A182 F51<br>(duplex) | F51  | Chloride environments; seawater depending on conditions |