

Grooved Couplings or Fittings

Grooved couplings are used to join pipe and fittings in both wet and dry sprinkler systems. Unless otherwise noted, these couplings are intended to provide some flexibility in piping systems. Typical applications are in sprinkler risers, in feed mains passing through walls from one building area to another, in locations subject to earthquakes, in the discharge line from aboveground pump suction tanks, in new connections to existing feed mains and in air or water fire service lines subject to excessive vibration or difficult alignment.

Unless otherwise noted, these couplings are limited to use with rolled or cut groove-ended pipe, valves and fittings, at a minimum rated working pressure of 175 psi (1205 kPa) and are suitable for aboveground service. Higher rated pressures are noted in the text of the listing. Selection of pipe schedules for use with grooved pipe couplings should be made according to applicable FM Global Property Loss Prevention Data Sheets installation standards. These pipe schedules determine system pressure ratings and may take precedence over the higher rated working pressures listed for some couplings.

Installation must be made according to the manufacturer's instructions and requirements. Where couplings are used to join FM Approved pipe, the pipe manufacturer's installation instructions and requirements must also be observed. Grooves should be made according to ANSI/AWWA C606 (latest edition), "Grooved and Shouldered Joints", unless otherwise specified.

FM Approved grooved pipe couplings joining steel pipe may be used in underground service, subject to the installation restrictions placed upon the pipe and to the coupling manufacturer's recommendations and requirements.

Unless otherwise stated in the listing, these couplings have been evaluated for a maximum ambient temperature of 225°F (107°C), suitable for use in normal warehouse protection. For special applications, temperatures, or environments, the manufacturer's recommendations and requirements are to be followed.

Grooved Couplings, Standard-Rigid

These couplings join pipe, valves or fittings having equal diameters.

Models 1G, 1GS, 1GK

Product Designation	Nominal Pipe Size, in.	Pipe Ends	Max Working Pressure, psi (kPa)	Remarks
1G	1, 1 1/4, 1 1/2, 2, 2 1/2, 3, 4, 5, 6, 8	Cut Groove Rolled Groove	300 (2070)	a, b, c, d
1G	10, 12 267.4, 318.5, 356, 377, 406, 426 mm	Cut Groove Rolled Groove	300 (2070)	a, c
1G	73, 76.1, 108, 133, 139.7, 159, 165 mm	Cut Groove Rolled Groove	300 (2070)	c, d
1GS	2, 2 1/2, 3, 4, 5, 6, 8	Cut Groove Rolled Groove	300 (2070)	a, b, c, d
1GS	76.1, 108, 114, 139.7, 159, 165, 216.3 mm	Cut Groove Rolled Groove	300 (2070)	c, d
1GK	1 1/4, 1 1/2, 2, 3, 4 76.1 mm	Cut Groove Rolled Groove	500 (3450)	a, b, c, d
1GK	139.7, 165.1, 216.3 mm	Cut Groove Rolled Groove	300 (2070)	a, b, c, d

Remarks:

- Minimum schedule cut groove pipe to be joined: 6 in. NPS and smaller - Schedule 40; 8 in. NPS and larger - Schedule 30.
- Minimum schedule rolled groove pipe to be joined: 6 in. NPS and smaller - Schedule 10S; 8 in. NPS and larger 0.188 in. (5 mm) wall.
- Approved when supplied with EPDM gasket.
- Approved for use with GB/T3092 regular and extra heavy pipe, ISO 4200, and BS 1387 medium and heavy pipe.

Company Name:	Rapidrop Global Limited
Company Address:	Rutland Business Park, Newark Rd, Peterborough PE15WA, United Kingdom
Company Website:	http://www.rapidrop.com
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