

Thread types

The following thread types are used:

Designation of the thread	Standard	Description	Application
Rp	ISO 7-1, EN 10226-1	Parallel internal thread, where pressure-tight joints are made on the threads	Transitional and threaded fittings, Malleable cast iron fittings
Rc	ISO 7-1, EN 10226-2	Tapered internal thread, where pressure-tight joints are made on the threads	JIS connections
R	ISO 7-1, EN 10226-1	Tapered male thread, where pressure-tight joints are made on the threads	Transitional and threaded fittings, Steel pipe
G	ISO 228-1	Parallel internal or male threads, where pressure-tight joints are not made on the threads, dimension up to and including 4"	Unions (with coupling nut)
NPT = National (American Standard) Pipe Taper	ASTM F 1498	Tapered internal or male threads, where pressure-tight joints are made on the threads	Transitional and threaded fittings
Acme thread	Special thread	Fastening thread for unions made of ABS, PVC-U and PVC-C d75, d90 and d110	Unions
Buttress thread	Special thread	Fastening thread for unions made of PE, PP and PVDF d75, d90 and d110	Unions




5.1.5 Transitional and threaded fittings

Combination G and R threads

The connection of an external parallel pipe thread G in accordance with EN ISO 228-1, with an internal parallel pipe thread Rp in accordance with ISO 7-1 is not intended according to standards. A tight connection is possible under favorable conditions, but cannot be reliably established.

NPT (US-American standard)

A combination of R or G threads with NPT threads is not possible because of the different pitch.

Transitional and threaded fitting	Figure	Property
Adaptor fittings with parallel internal pipe thread Rp and rustproof reinforcement ring A2 (sockets)		<p>Make it possible to connect both plastic and metal pipe, as well as plastic pipe with one another.</p> <p>⚠ Metal pipe may only be bolted into adaptor pipe fittings with a reinforcement ring!</p>
Adaptor pipe fitting with tapered male thread R (nipple)		Nipples with tapered male pipe thread R with the exception of a double nipple can be bolted into plastic as well as metal sockets.
Threaded sockets with tapered internal pipe thread Rp without reinforcement ring		Threaded fittings (without reinforcement ring) with tapered internal pipe thread Rp allow the establishment of connections between plastic pipe.

Installation tips for transition and threaded fittings

It is especially important that the pipe installation is low stress. Adaptor pipe or threaded fittings should be avoided at points in the piping system that are subjected to bending stress. If piping systems are subject to significant temperature changes, adaptor unions should be used because of the O-ring seal.

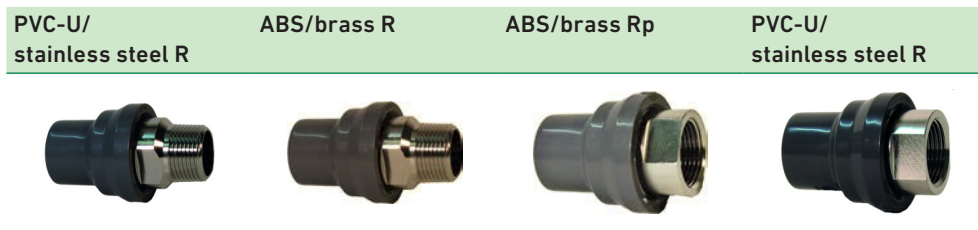
⚠ To avoid damage to plastics fittings, remove any flash (if present) in the area of the metal thread before bolting in the fittings.

Plastic transition and threaded fittings are initially bolted in by hand and without any force. Using a suitable tool, the fittings are subsequently bolted in until only approx. 1 to 2 turns of the thread are visible.

For plastic transition and threaded fittings, GF Piping Systems recommends using PTFE tape for sealing. As an alternative, thread sealing cord Henkel Tangit Uni-Lock or Loctite 55 and/or thread sealing paste Loctite 5331 can also be used. Please consider the appropriate installation guidelines from the manufacturer. If other sealing materials are used, compatibility with the plastics to be used must be established first.

⚠ Do not use hemp! When using hemp, the plastic fittings may be overloaded when the hemp swells and may damage the thread. In addition, hemp is not resistant to chemicals depending on the medium used.

5.1.6 Adaptor pipe fittings for connecting plastic piping systems and metal threads



The adaptor pipe fittings for connecting plastic piping systems and metal threading offer the greatest possible flexibility for assembly given the combined socket/spigot on the plastic end. The metal thread can be sealed with either hemp or PTFE-tape.

The adaptor pipe fitting is factory-sealed with an EPDM O-ring. The O-ring also serves as protection against damage to the plastic during assembly. Compared to the usual adaptor unions, the special connecting technology with circlip increases reliability, even at temperature changes and during vibration.

In addition to the classic transition to metal pipe, the fittings can also be used for connecting manometers.

⚠ To avoid electrochemical corrosion in transitions to non-ferrous metals, brass connections must be used.