

7.3 Nominal pressure levels for malleable iron

Threaded fasteners of malleable cast iron are applicable up to the operating pressures indicated in the table below, depending on type of fluid and operating temperature.

permissible operating pressure for the fluids				
DN	d	water and gas	gases and steam	oils
	Inch	up to max. 120 °C	up to max. 150 °C	up to 200 °C
nipples, flat sealing threaded fasteners				
6-50	1/4 - 2	65 bar	50 bar	35 bar
conically sealing threaded fasteners				
6-32	1/4 - 1 1/4	65 bar	50 bar	35 bar
40	1 1/2	65 bar	50 bar	30 bar
50	2	55 bar	40 bar	24 bar

Sealing is to be carried out with special care. The sealing materials are to be selected according to the operating conditions. Only approved sealing materials must be applied for sealing of threaded fasteners in drinking water and gas pipe systems.

Only high-quality threads are appropriate for high operating requirements.

7.4 Corrosion resistance

General

Flexible metal elements are basically suitable for the transport of critical fluids if a sufficient resistance is ensured against all corrosive media that may occur during the entire lifetime.

The flexibility of the corrugated elements like bellows or corrugated hoses generally require their wall thickness to be considerably smaller than that of all other parts of the system in which they are installed.

As therefore increasing the wall thickness to prevent damages caused by corrosion is not reasonable, it becomes essential to select a suitable material for the flexible elements which is sufficiently resistant.

Special attention must be paid to all possible kinds of corrosion, especially pitting corrosion, intercrystalline corrosion, crevice corrosion, and stress corrosion cracking, (see Types of corrosion).

This leads to the fact that in many cases at least the ply of the flexible element that is exposed to the corrosive fluid has to be chosen of a material with even higher corrosion resistance than those of the system parts it is connected to (see Resistance table).