

PVC pressure pipe (grey)



PVC pressure pipe is used for transport of fluids under pressure. The product range is divided into various pressure classes that indicate the maximum working pressure. The maximum permissible pressure in practice may be lower due to higher external loads, chemical and/or temperature influences, but also due to the possible occurrence of water hammer. The large number of pressure classes (up to 16 bar) makes it easy to select a stronger pipe if external factors have an influence on the pipe. PVC pressure pipes are available in diameter from 10 mm to 400 mm.

PVC pipe systems offer great ease of application, a few benefits are: Lightweight, easy to use, wide variety of fittings and a long service life.

APPLICATION

Transport of liquids and/or solutions under pressure at max. 45°C

Note: PVC is not suitable for use in compressed air systems.

CHARACTERISTICS

- ✔ Large number of diameter and pressure classes
- ✔ Supplied as standard in PVC-U
- ✔ Available with glued socket or as plain-end pipe
- ✔ Suitable for both underground and above-ground installation
- ✔ PVC is temperature-sensitive. All pressure classes indicated are based on standard situations at 20°C

TECHNICAL DATA

Density of PVC	: 1.38-1.4 g/cm ³
Linear expansion	: 0.06-0.08 mm/m/°C
Reduction in length	: 1.0 mm/m at maximum pressure (exposed pipe) : 0.5 mm/m at 25% of maximum pressure (exposed pipe)
Melting point	: 80 to 180°C (melting range)
Tensile strength	: 55 N/mm ²
Coefficient of elasticity	: 3000 N/mm ²

STRENGTH AND RIGIDITY

The strength and rigidity of PVC pipes decrease as the temperature rises (see figure). A strengthening of the material (reinforcement factor) can be expected at temperatures below 20°C, but the material then also becomes more brittle.

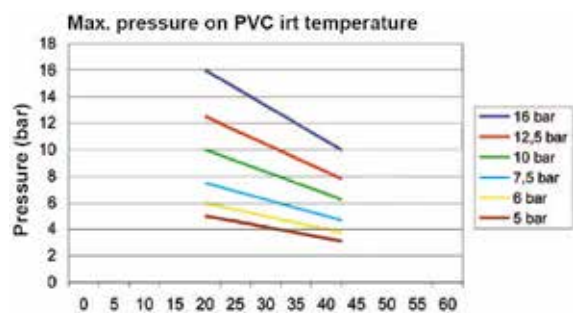
In view of the decreasing admissible pressure at higher temperatures, we recommend the use of PVC-U up to 45°C.

RESISTANCE

- ✔ PVC is resistant to most acids, salts and lyes soluble in water.
- ✔ PVC is not resistant to aromatic and chlorinated hydrocarbons, esters, ethers, ketones and phenol.

Material properties

PVC-U PVC without plasticisers Very good properties at 0°C up to 45°C



INSTALLATION & MAINTENANCE

- ✓ Inspect the pipes before use and do not use pipes that have obvious deviations or which do not fit properly.
- ✓ The joints of the PVC pipes and the method of suspension or burying in the ground determine to a great extent the overall strength of the installation.
- ✓ Failure to observe the instructions can result in a significant weakening of the installation. During the processing of the PVC pipes, attention should be paid to both the installation instructions and the local conditions.
- ✓ For underground application, the soil should be free of stones and free of possible subsidence. If necessary, use refill sand and ensure uniform compaction around the pipe. For applications in soft ground, a higher pressure class is recommended.
- ✓ Prior to the cold season, PVC pipes and fittings should be drained to avoid damage due to freezing.
- ✓ Below +5°C transport, handling and processing should be performed carefully (gluing is not recommended), and transport and handling should be avoided below -5°C.

PVC-C (OPTIONAL)

PVC-C is a chlorinated PVC. PVC-C has a number of distinctive properties compared with PVC-U that offer an important added value for pipework systems. The two most important and most essential differences are the higher temperature resistance up to 80°C and the outstanding chemical resistance at higher temperatures. PVC-C is glued using special PVC-C glue.

Recommended bracket spacings

Diameter D (mm)	Horizontal bracket spacing (cm)	Vertical bracket spacing (cm)
25	50	65
32	50	65
40	60	80
50	70	90
63	85	110
75	95	125
90	105	135
110	120	155
125	160	210
160	170	220
200	200	260