Applications

It is recommended to consult the technical department of Rubinetterie Bresciane to evaluate the suitability for different/more severe applications/performances.

Heating and cooling installations; sprinkler systems

The TURBO STEEL system is suitable for use in closed heating and cooling water circuits while the use must be absolutely avoided in sanitary system. For chase applications or in wet environments we recommend the use of coated TURBO STEEL pipes and the fittings protection after testing. Antifreeze additives and antioxidants commonly used in hydronic domestic and industrial installations are normally tolerated by the components of the system, but we recommend to consult the technical department of Rubinetterie Bresciane for compatibility.

Compressed air and solar installations

For solar thermal and air compressed installations we recommend to use FKM green O-ring, which is more resistant to high temperatures and to the presence of residual oil in the air (class 5 according to ISO 8573-1). In the latter case we recommend moistening the O-ring before insertion of the pipe in order to improve the mutual adhesion of surfaces and ensure a perfect seal of the joint. The maximum pressure is 16 bar, while respecting the standards for the specific type of installation.

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TURBO® STEEL

PRESSFITTING System STEEL

RUBINETTERIE BRESCIANE BONOMI S.p.A.
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N.158/E.1

100% MADE IN ITALY

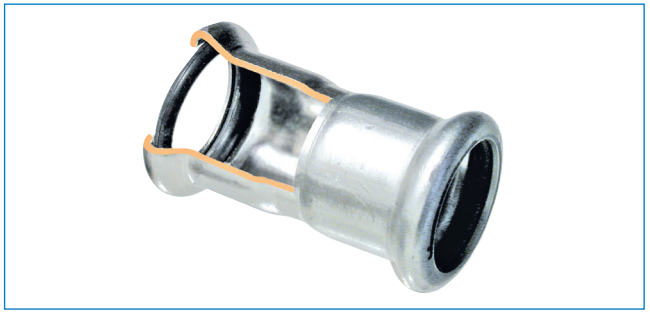
BONOMI GROUP

Introduction

The “cold” technique of union of pipes and fittings called “pressfitting” was born about 50 years ago and is one of the most popular pairing systems in Europe and is now applied either to metal alloys or to plastic and multilayer pipe systems.
The Bonomi Group was born in 1901 in Lumezzane (BS) and since then is always active in the production of adduction systems, distribution and control of gas and water, and distributes its products exclusively through a network made up of wholesalers and retailers of proven competence and professionalism.

Turbo Pressfitting system

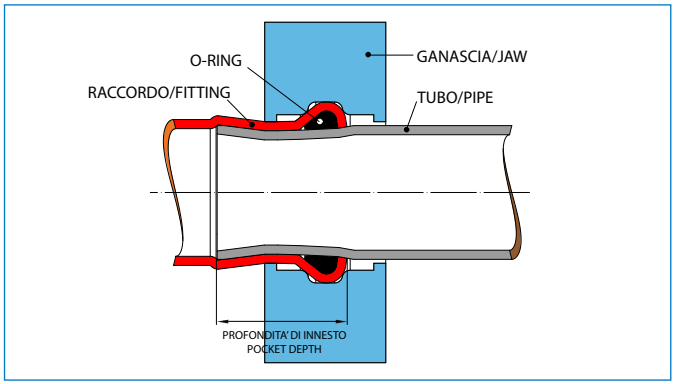
The pressfitting system allows the creation of inseparable joints between pipe and fittings by means of the mechanical action performed quickly and “in cold” by a pressing machine with clamping jaws. The main components of the system are pipes, fittings and the press machine with jaws.

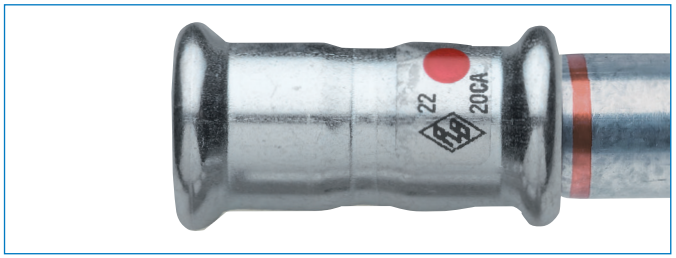


The connections at the pressfitting ends have a pocket in which the tube is inserted up to the stop end. A pressing machine with a suitably sized M jaw deforms, in a controlled way, the tip of the tube, assuring the unthreading rotation of the pipe under pressure.
The simultaneous deformation of the O-ring, housed in the toroidal site at the end of this connection and shape-memory effect free, ensures the sealing assembly. The combination of pipe and fitting thus obtained is capable of withstanding stresses which the system normally undergoes during the year (thermal expansion, water hammering, vibration, etc..), provided they have been assembled following the instructions and within the limits of temperature and pressure provided for each application.

TURBO STEEL pipes

The precision tubes TURBO STEEL are made of carbon steel n. 10226 according to UNI EN 10305 and to UNI 10346. The tubes are available in diameters from 15 to 108 mm they have a length of 6 m and they are thin-walled (thickness 1.2÷2 mm), longitudinally electro welded, seamless, calibrated and tested. They are available in two versions: only galvanized and galvanized with an additional
corrosion protection. This is made by an outer layer of polypropylene of a thickness of 1 mm. The tubes are delivered clean both internally and externally, with caps at both ends and marked externally.





TURBO STEEL fittings

The TURBO STEEL pressfittings are in carbon steel n. 1.0034 (E195) and n. 1.0308 (E235) according to UNI EN 10305-2, protected by a layer of zinc (8 to 15 μ) and available in nominal diameters 15÷108 mm. The connections at the ends have a pocket with the typical toroidal chamber in which is housed a black EPDM peroxide O-ring that ensures the hermetic seal thanks to the deformation made by means of the pressing tooling. The fittings are externally polished and identifiable by the marking and the red tags.

EPDM O-ring (black)

The ring used in the standard TURBO STEEL system is EPDM peroxide, which provides a high chemical inertia, including oxidizing agents such as oxygen, ozone and most chemicals used in household and industrial water and high resistance to the strong and frequent temperature changes.

O-ring in FKM (green)

The thermal solar installations and unfiltered compressed air system require a seal ring that can withstand considerable temperature stress and the presence of many impurities (oil, condensate, etc).
The O-ring in FKM (perfluoral rubber) is particularly suitable for this kind of applications and is supplied on request. Therefore, depending on the used system, the installer must replace or not the standard ring provided by the producer for the application listed below.

Color	Applications	Operating pressure	Operating temperture
EPDM black	Hot water	max 16 bar	-30°C + 120°C
	refrigerated water		
	Compressed air class 1÷4		
FKM green	Solar installations	max 16 bar	-30°C ÷ +200°C
	Compressed air class 1÷5		

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