

EUROTIS

SAFETY SYSTEMS



EUROWATER TECHNICAL CATALOGUE NZ Edition 2018v1

316 CSST Connectors for Hot & Cold Water Systems



www.waterware.co.nz
info@waterware.co.nz
ph +64 9 273 9191

The durability of the CSST tubing systems by Eurotis



The pliable corrugated tubing systems by Eurotis satisfies the durability requirements foreseen in the document "Guidance Paper F - Durability and the Construction Products Directive" of the European Commission that refers to the European standard EN 1990 "Eurocode - Basis of structural design" that for building structures and other common structures defines the design working life category 4 (i.e. an indicative design working life of 50 years) and to the EOTA 002 Guidance Document that for "normal" category works (i.e. with a working life of 50 years) requires the use of products with the following working life (durability):

- Repairable or easy replaceable products: 10 years,
- Repairable or easy replaceable products with some more efforts: 25 years,
- Lifelong products (not repairable or replaceable): 50 years.

Provided that the instructions and warnings for assembling and use given by Eurotis are followed:

- Both the pliable corrugated tubes in stainless steel and the brass fittings have a durability of at least 50 years;
- The sealing elements are easy replaceable and have a durability of at least 10 years (for this reason it is recommended to place the junction of the tubing in accessible places to allow a possible easy replacing of the sealing elements).

As stated in the document "Guidance Paper F" of the European Commission, the working life of the product depends on many factors (plant design, installation modalities, working parameters, plant maintenance, etc.) beyond the control of Eurotis so the working life above declared (intended to mean the maintenance of the characteristics of the products during the working life in foreseeable conditions and taking into consideration their natural process of change by excluding the effect of not foreseeable external external actions) can not be interpreted as being a guarantee given by Eurotis but only as a means for choosing the products to be used in relation to the expected economically reasonable working life of the works.

Storage, preservation and handling of the products



Before the use, maintain all the components of the tubing system (tubes, fittings, gaskets, clamps, etc.) in their original packages and stored in a dry place and safe from the contact with acids, bases, salts and any other corrosive substance and check the integrity of the products before their use.

In particular, do not leave CSST tubes outdoor before their installation and always protect them against direct sun light when exposed for a long time. To avoid the entry of foreign bodies, maintain the tube ends closed with the supplied caps or with adhesive tape or any other equivalent method.

Operative temperature and pressure of the CSST tubing system

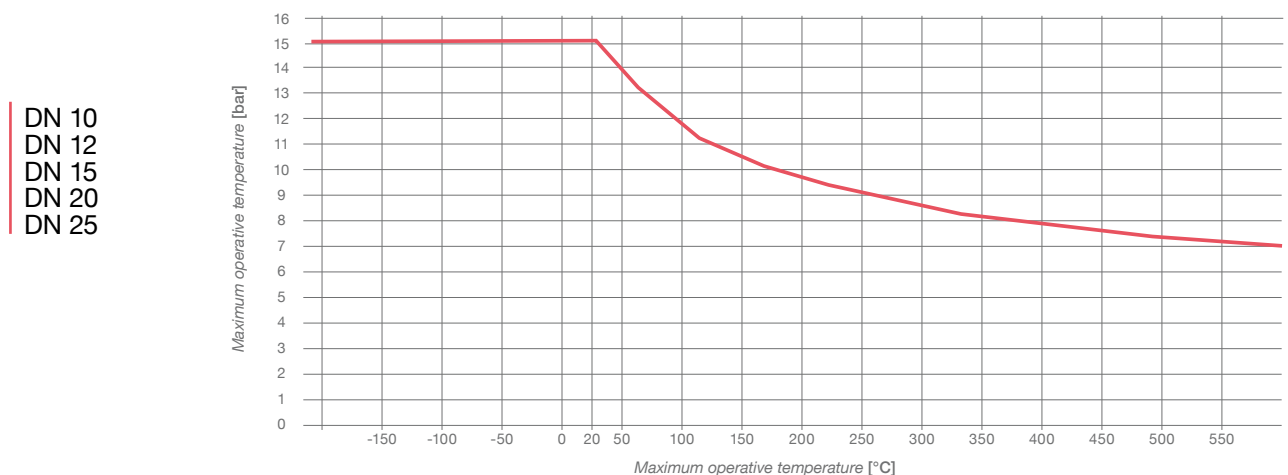


The maximum operative temperature of the CSST tubing depends on:

- System components material:
 - CSST pliable corrugated tubes in AISI 316L stainless steel: 550°C,
 - Fittings in CW614N / CW617N brass: 250°C,
 - Sealing element 'Arammidic fibre washer AFM 34': 250°C,

The maximum operative pressure of the CSST tubes is function of the operative temperature of the plant.

Operative pressure / temperature CSST tubes

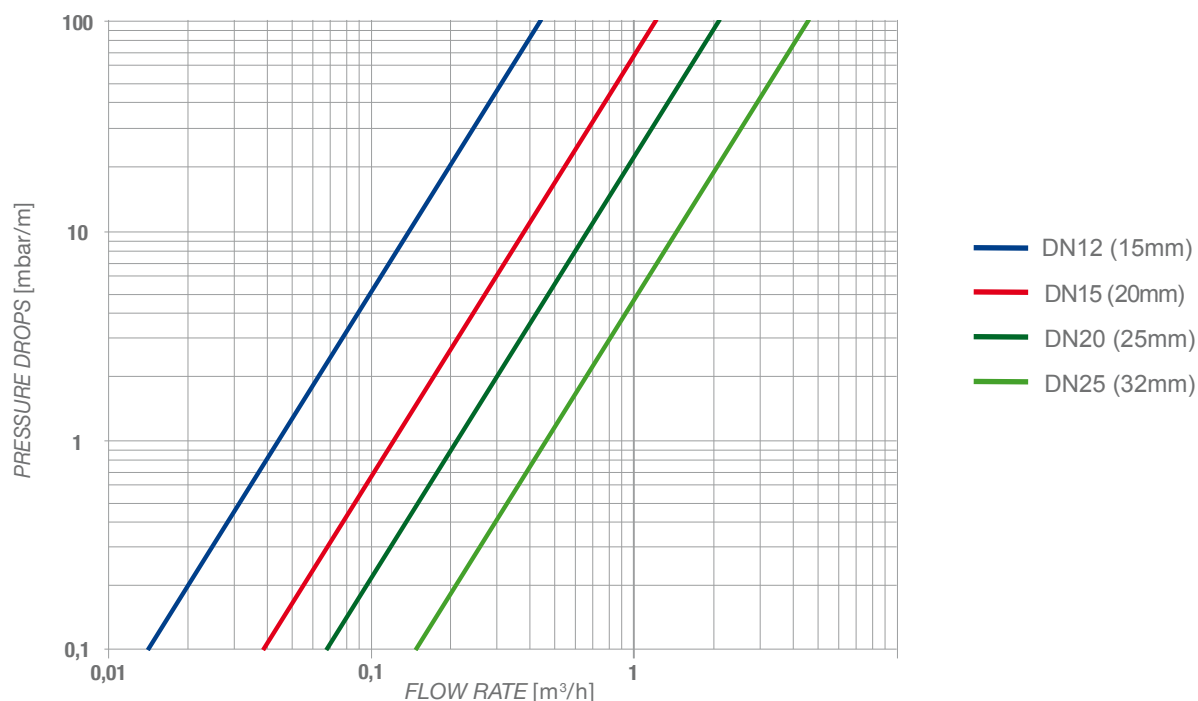


CSST

DN 10
DN 12
DN 15
DN 20
DN 25

Hydraulic flow / pressure drops characteristics of the corrugated pliable CSST tubes

AISI 316 CSST tubes pressure drops (water)



CSST TUBES

Dimensions of the CSST tubes

Dimensions of the AISI 316L authentic stainless steel CSST tubes



Di: Inner diameter
De: Outer diameter
S: Thickness
P: Pitch

DN	Thread connection	Di	De	S	P	Inner lineic surface	Outer lineic surface	Lineic volume
12	1/2"	12,0 mm	15,8 mm	0,3 mm	5,0 mm	0,0540 m ² /m	0,0568 m ² /m	0,150 l/m
15	3/4"	15,8 mm	20,0 mm	0,3 mm	5,5 mm	0,0702 m ² /m	0,0730 m ² /m	0,248 l/m
20	1"	19,7 mm	25,0 mm	0,3 mm	6,4 mm	0,0912 m ² /m	0,0942 m ² /m	0,383 l/m
25	1 1/4"	26,5 mm	33,0 mm	0,3 mm	7,1 mm	0,1313 m ² /m	0,1345 m ² /m	0,700 l/m

Corrugated pliable CSST tubes, in AISI 316L stainless steel, suitable for drinking water (*), 0,3 mm thick x 5m coils.



Code	DN	Connection thread	Length (m)
EU00675	12	1/2"	5
EU00679	15	3/4"	5
EU00683	20	1"	5
EU00687	25	1 1/4"	5

* 10, 25, 50 and 100m coils available on request.

Nickel plated brass nuts with special seat and ISO 228 G female thread.



Code	DN	Thread	Pack qty
EU00746	12	1/2"	10
EU00747	15	3/4"	10
EU00748	20	1"	10
EU00749	25	1 1/4"	10

Aramid fibre based "AFM34" plane gaskets for nuts

Thickness: 2 mm - Resistant to continuous working temperatures up to 250°C (liquids) and 200°C (vapors)



Code	DN	For nut	Pack qty
EU00844	12	1/2"	10
EU00845	15	3/4"	10
EU00846	20	1"	10
EU00847	25	1 1/4"	10

Nickel plated brass M/M nipples with double ISO 228 G B male threads (with flat face)



Code	DN	Thread		Pack qty
		A	B	
EU00773	12	1/2"	1/2"	10
EU00774	15	3/4"	3/4"	10
EU00775	20	1"	1"	5
EU00776	25	1 1/4"	1 1/4"	5

Flanging template "60DB" for CSST tubes



Code	For tube
EU00878	CSST DN 12-15
EU00876	CSST DN 20-25

Pipe cutter



Code	For tube
EU05409	CSST DN 12-15-20-25

Spare blades for pipe-cutter



Code	For tube cutter
EU05538	EU05409

Manual flanging tool "60DB" for the CSST tubes:



Code	For tube
EU02395	CSST DN 12-15-20-25

Battery press flanging tool "60DB" for the CSST tubes:



Code	For tube
EU05156	CSST DN 12-15-20-25

Note: press template not included (as shown)

Manual flanging of the CSST tubes

The EUROTIS manual flanging tool and templates will quickly and easily flange the pliable corrugated tube from DN 12 up to DN 25.



Ensure you start with a cleanly cut end. Define the finished length of the CSST connector you require by adding two corrugations for each end to be flanged. Cut the CSST tube in the middle of two corrugations with the EUROTIS tube-cutter.



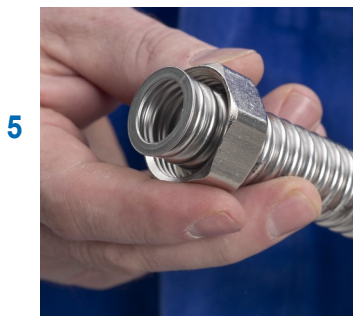
Before creating a flange ensure you have positioned the nut with its thread facing the flanging template. Insert into the CSST tube into the correct flanging template with two corrugations protruding from the flat faced side of the template.



Insert the flanging template in the flanging tool with the protruding end to be flanged facing the hammer.



With moderate force slide hammer the two protruding corrugations completely flat, circular and without burr. 5 - 10 hits should suffice. (see page over).



Extract the template from the flanging tool and recheck that the flanged surface is completely flat, circular and without burr (see page over).

Flanging CSST tube correct form

To ensure water tightness, flanging is a very important operation that has to be carried out strictly in accordance with the indicated procedure.

At the end of the flanging procedure, verify that the flange of the CSST tube is complete, entirely flat, circular and without burr.

In the case of a defective flange being formed (as per the examples shown left) remove the defective flange and repeat the procedure. Failure to do so may compromise water tightness.

Below is an example of a perfectly formed flange:



Flanged with the incorrect template side



Ovalized flange



Burred flange



Poorly compressed corrugations



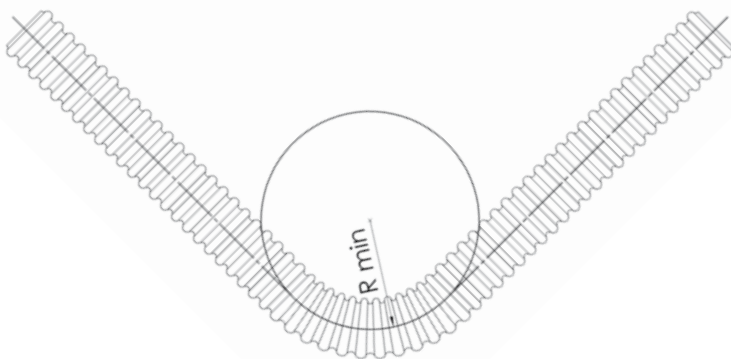
Uneven flange



Bending CSST tubes



As long as any curves in the pipe have a radius greater than 2 x pipe O.D. the CSST pipe can be bent from 0° to 180° in all directions.



Nominal Dimension	Minimum bending radius R_{min}
DN 12	25 mm
DN 15	25 mm
DN 20	30 mm
DN 25	45 mm

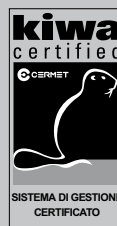
EUROTIS

SAFETY SYSTEMS

Eurotis S.r.l

Via Quintino Sella, 1 ang. via A. Volta
20094 Corsico (MI)
Tel. +39 02 4501442
Fax +39 02 4503023

E-mail vendite@eurotis.it - sales@eurotis.it - tecnico@eurotis.it
Sito www.eurotis.it



www.waterware.co.nz
info@waterware.co.nz
ph +64 9 273 9191