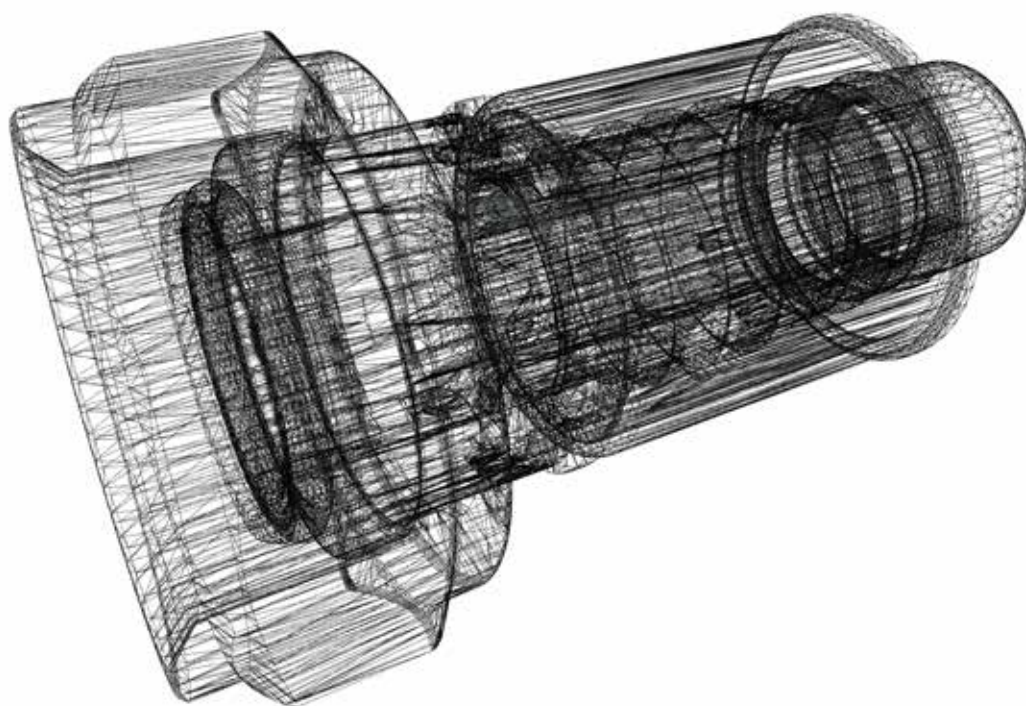




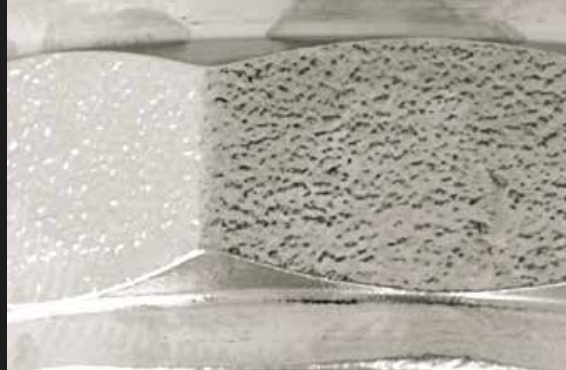
TECHNICAL CATALOGUE

MULTI-FIT® FITTING



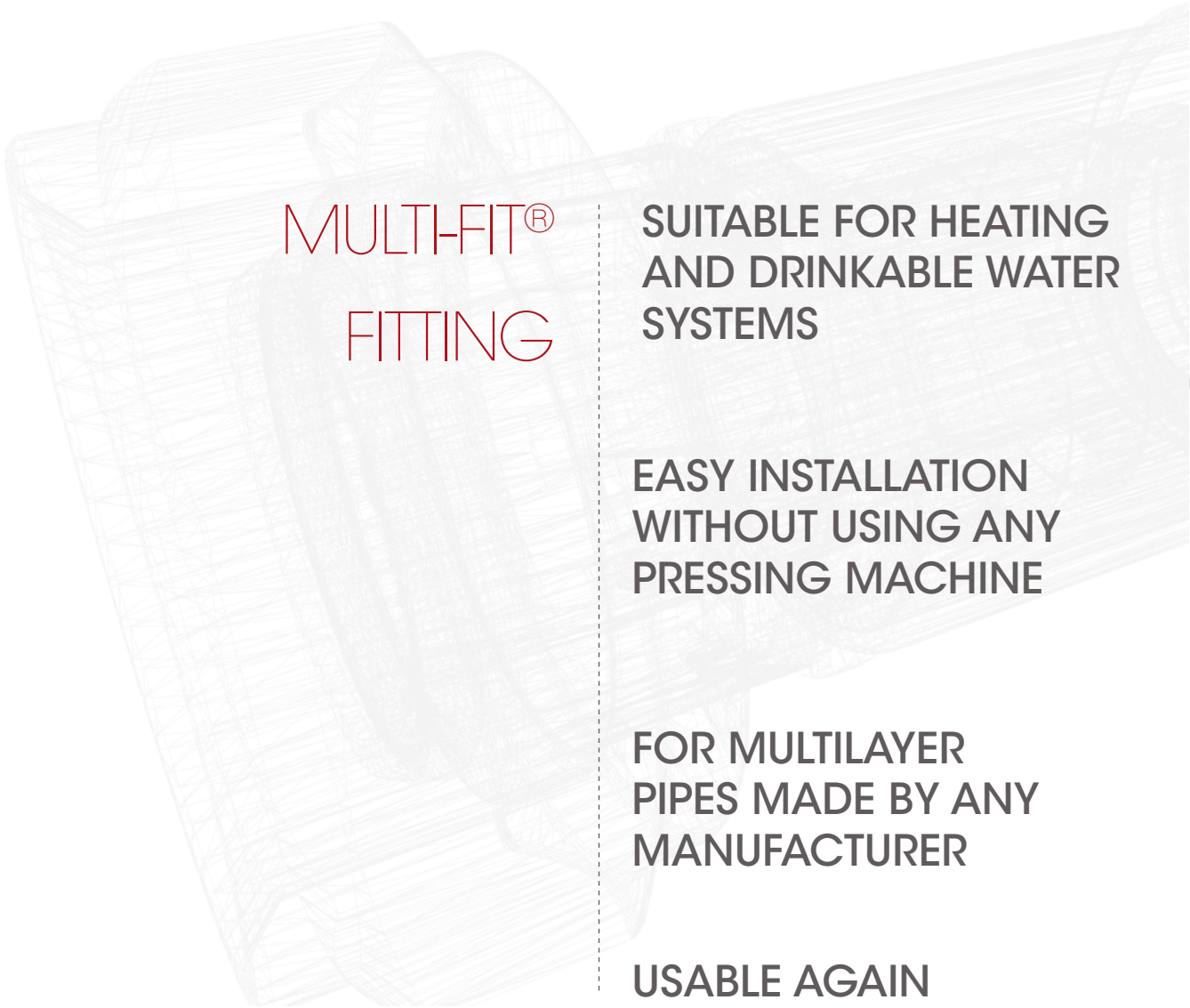


ITAP SpA, founded in Lumezzane (Brescia) in 1972, is currently one of the leading production companies in Italy of valves, fittings and distribution manifolds for plumbing and heating systems. Thanks to fully automated production processes, with 72 tooling machines and 51 assembly lines, we are able to produce 200,000 pieces per day. Our innate pursuit for innovation and observance of technical regulations is supported by the company certification ISO 9001: 2008. The company has always considered its focus on quality as the main tool to obtain significant business results: today ITAP SpA is proud to offer products bearing the approval of numerous international certifying bodies.





TEC

A large, light gray wireframe illustration of a pipe fitting, showing its internal structure and flared ends, serving as a background for the text.

MULTI-FIT[®] FITTING

**SUITABLE FOR HEATING
AND DRINKABLE WATER
SYSTEMS**

**EASY INSTALLATION
WITHOUT USING ANY
PRESSING MACHINE**

**FOR MULTILAYER
PIPES MADE BY ANY
MANUFACTURER**

USABLE AGAIN

MULTI-FIT[®]

THE DISTRIBUTION
SYSTEM CONSISTS
OF A MULTI FIT®
FITTING AND
MULTILAYER PIPE



THE MULTI-FIT® FITTING

Multi-Fit R, patented by ITAP SpA, can be used with multilayer pipes made by any manufacturer, as long as they are manufactured in compliance with the European standard UNI EN ISO 21003. The Multi-Fit® system, with a brass shank, and certified by the DVGW (Germany) and KIWA (Holland) to be used with hot and cold water, in domestic systems.

New in 2013, is that within the range there will be a version with polymer shank, and available for heating and drinking water systems. The Multi-Fit® fitting can be used up to 95°C (90°C for the polymer version), with a maximum pressure of 10 bar.

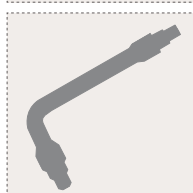
THE ADVANTAGES



- **no calibration is required**



- **it can be installed with a simple hex key, without using any pressing machine**



- **it can be reused**



- **it can be installed in domestic systems and in heating and/or air conditioning systems**

THE MULTI-FIT® FITTINGS

The straight female connector art.510 is the base of the MULTI-FIT® system.

Together with the threaded fittings it is possible to obtain all the different kinds of connection needed to build any heating or water distribution plant.

This makes the system extremely flexible and easily manageable.

510

MULTI-FIT® FITTING FOR
MULTILAYER, PEX AND
POLYBUTYLENE PIPE

TECHNICAL SPECIFICATIONS



Supplied with an O-ring for conical seats and a washer for flat seats.

Nut in nickel-plated brass.

Tail in brass.

Maximum working pressure:

20 bar.

Threads: ISO228 (equivalent to DIN EN ISO 228 and BS EN ISO 228).

Minimum and maximum working temperature: -20°C, 110°C.

Available sizes with 1/2" nut.

SIZE	CODE	PACKING
14x2	510001214200	20/360
16x2	510001216200	20/360
16x2,25	510001216225	20/360
18x2	510001218200	15/270
20x2	510001220200	15/270
20x2,25	510001220225	15/270
20x2,5	510001220250	15/270

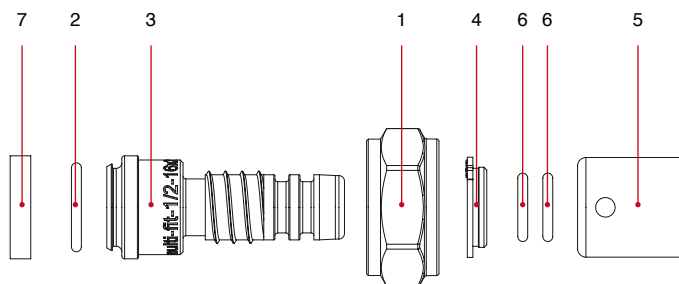
Available sizes with 3/4" nut EUROKONUS.

SIZE	CODE	PACKING
16x2	510003416200	20/160
18x2	510003418200	15/195
20x2	510003420200	15/195
20x2,25	510003420225	15/195
25x2,5	510003425250	10/190
26x3	510003426300	10/190

Available sizes with 1" nut.

SIZE	CODE	PACKING
25x2,5	510010025250	10/190
26x3	510010026300	10/190
32x3	510010032300	10/130

MATERIALS

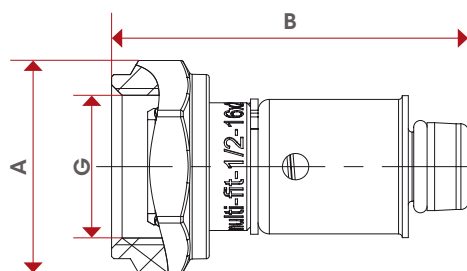


POS.	DESCRIPTION	N.	MATERIAL
1	Nut	1	Nickel-plated brass CW617N
2	O-Ring	1	EPDM
3	Tail	1	Nickel-plated brass PTL CW617N
4	Ring	1	Nylon
5	Outside liner	1	Stainless steel AISI 304
6	O-Ring	2	EPDM
7	Washer	1	NBR





TEC

OVERALL
DIMENSIONS**1/2"**

	14x2	16x2	16x2,25	18x2	20x2	20x2,25	20x2,5
A	28,3	28,3	28,3	28,3	28,3	28,3	28,3
B	46	47,5	47,5	46	46	46	46
G	1/2"	1/2"	1/2"	1/2"	1/2"	1/2"	1/2"
Kg/cm ² bar	20	20	20	20	20	20	20
LBS - psi	290	290	290	290	290	290	290

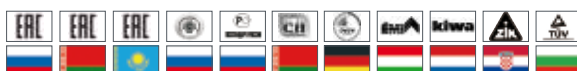
3/4"

	16x2	18x2	20x2	20x2,25	25x2,5	26x3
A	33	33	33	33	33	33
B	48,5	47	47	47	52	52
G	3/4"	3/4"	3/4"	3/4"	3/4"	3/4"
Kg/cm ² bar	20	20	20	20	20	20
LBS - psi	290	290	290	290	290	290

1"

	25x2,5	26x3	32x3
A	40,5	40,5	40,5
B	58,5	58,5	63
G	1"	1"	1"
Kg/cm ² bar	20	20	20
LBS - psi	290	290	290

CERTIFICATIONS



RANGE

509

STRAIGHT FEMALE CONNECTOR



SIZE	CODE	PACKING
1/2" x 1/2"	5090012012	20/600
1/2" x 3/4"	5090012034	15/345
3/4" x 3/4"	5090034034	12/276

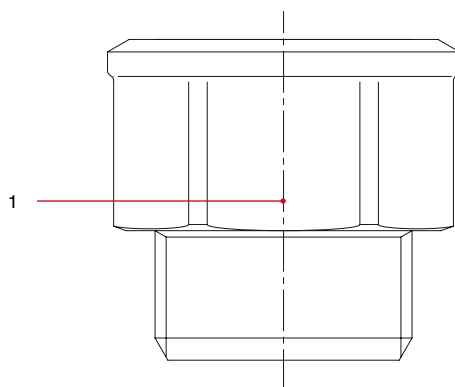
TECHNICAL SPECIFICATIONS

Male thread 1/2" equipped with a conical seat and inner diameter mm.16.
Male thread 3/4" eurokonus.

Maximum working pressure: 20 bar.

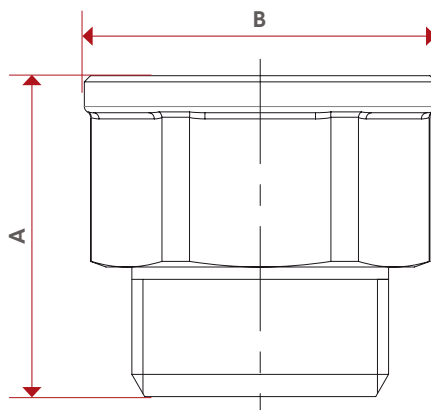
Available sizes: 1/2"x1/2", 1/2"Mx3/4"F, 3/4"x3/4" eurokonus

MATERIALS



POS.	DESCRIPTION	N.	MATERIAL
1	Fitting	1	Nickel-plated brass CW617N

OVERALL DIMENSIONS



	1/2"x1/2"	1/2"x3/4"	3/4"x3/4"
A	26	28	30
B	27,5	33	33
Kg/cm² bar	20	20	20
LBS - psi	290	290	290

CERTIFICATIONS



515

STRAIGHT MALE CONNECTOR



SIZE	CODE	PACKING
1/2" x 1/2"	5150012012	30/720
1/2" x 3/4"	5150012034	20/480
3/4" x 3/4"	5150034034	20/220
1" x 1"	5150100100	8/240

TECHNICAL SPECIFICATIONS

Male thread 1/2" equipped with a conical seat and inner diameter mm.16.

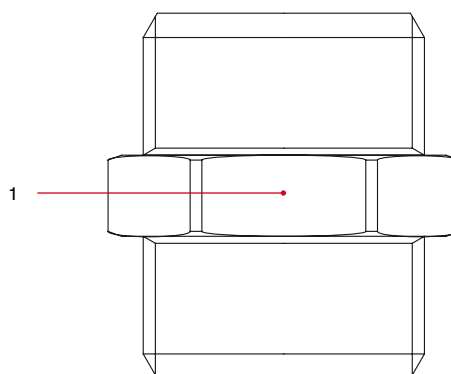
Male thread 3/4" eurokonus.

Male thread 1" equipped with a conical seat and inner diameter mm.22.

Maximum working pressure: 20 bar.

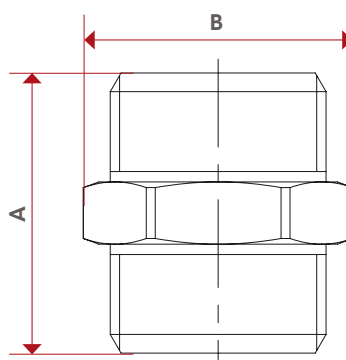
Available sizes: 1/2"x1/2", 1/2"x3/4"eurokonus, 3/4"x3/4" eurokonus, 1"x1"

MATERIALS



POS.	DESCRIPTION	N.	MATERIAL
1	Fitting	1	Nickel-plated brass PTL CW617N

OVERALL DIMENSIONS



	1/2"x1/2"	1/2"x3/4"	3/4"x3/4"	1"x1"
A	27	30	32	37
B	26	29	29	37
Kg/cm ² bar	20	20	20	20
LBS - psi	290	290	290	290

CERTIFICATIONS



530

EQUAL T COUPLING



SIZE	CODE	PACKING
1/2"	5300012012	16/336
3/4"	5300034034	8/168
1"	5300100100	6/126

TECHNICAL SPECIFICATIONS

Male thread 1/2" equipped with a conical seat and inner diameter mm.16.

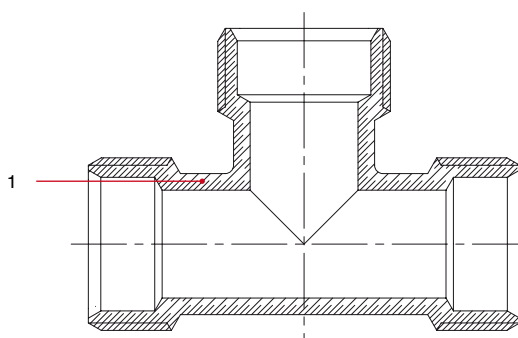
Male thread 3/4" eurokonus.

Male thread 1" equipped with a conical seat and inner diameter mm.22.

Maximum working pressure: 20 bar.

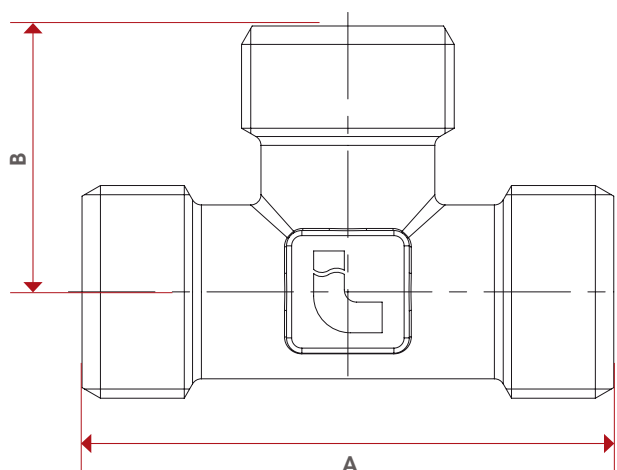
Available sizes: 1/2"x1/2"x1/2", 3/4"x3/4"x3/4" eurokonus, 1"x1"x1"

MATERIALS



POS.	DESCRIPTION	N.	MATERIAL
1	Fitting	1	Nickel-plated brass PTL CW617N

OVERALL DIMENSIONS



	1/2"	3/4"	1"
A	52	64	68
B	26	32	34
Kg/cm ² bar	20	20	20
LBS - psi	290	290	290

CERTIFICATIONS



535

FEMALE BRANCH T COUPLING



SIZE	CODE	PACKING
1/2"	5350012012	14/294
3/4"	5350034034	8/168

TECHNICAL SPECIFICATIONS

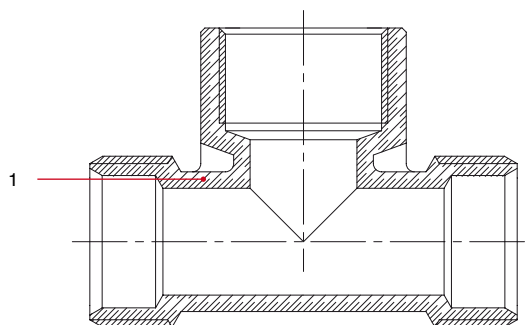
Male thread 1/2" equipped with a conical seat and inner diameter mm.16.

Male thread 3/4" eurokonus.

Maximum working pressure: 20 bar.

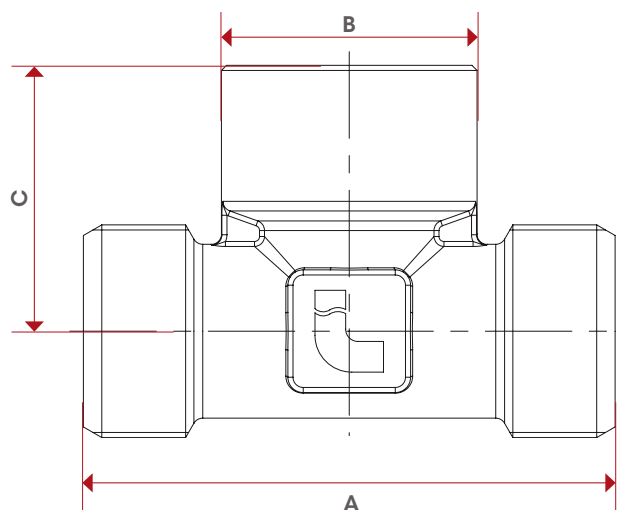
Available sizes: 1/2"x1/2"x1/2", 3/4"x3/4"x3/4" eurokonus

MATERIALS



POS.	DESCRIPTION	N.	MATERIAL
1	Fitting	1	Nickel-plated brass CW617N

OVERALL DIMENSIONS



	1/2"	3/4"
A	52	64
B	26	31
C	25	32
Kg/cm² bar	20	20
LBS - psi	290	290

CERTIFICATIONS



540

MALE ELBOW



SIZE	CODE	PACKING
1/2" x 1/2"	5400012012	18/432
1/2" x 3/4"	5400012034	13/312
3/4" x 3/4"	5400034034	10/240
1" x 1"	5400100100	8/168

TECHNICAL SPECIFICATIONS

Male thread 1/2" equipped with a conical seat and inner diameter mm.16.

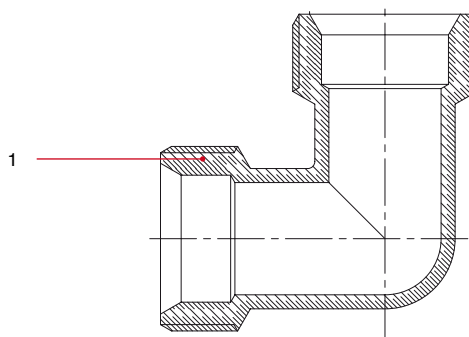
Male thread 3/4" eurokonus.

Male thread 1" equipped with a conical seat and inner diameter mm.22.

Maximum working pressure: 20 bar.

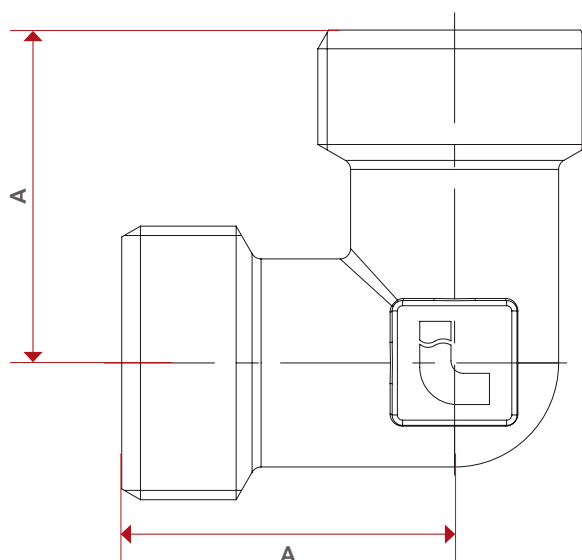
Available sizes: 1/2"x1/2", 1/2"x3/4"eurokonus, 3/4"x3/4" eurokonus, 1"x1"

MATERIALS



POS.	DESCRIPTION	N.	MATERIAL
1	Fitting	1	Nickel-plated brass CW617N

OVERALL DIMENSIONS



	1/2"x1/2"	1/2"x3/4"	3/4"x3/4"	1"x1"
A	26	30	32	34
Kg/cm ² bar	20	20	20	20
LBS - psi	290	290	290	290

CERTIFICATIONS



545

FEMALE ELBOW



SIZE	CODE	PACKING
1/2" x 1/2"	5450012012	14/336
1/2" x 3/4"	5450012034	8/272
3/4" x 3/4"	5450034034	8/272

TECHNICAL SPECIFICATIONS

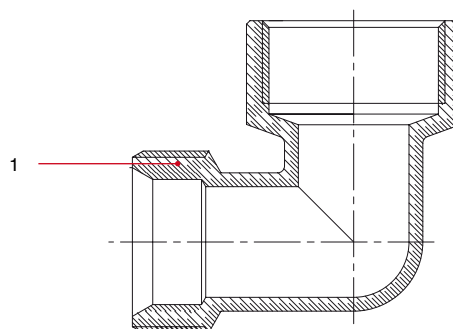
Male thread 1/2" equipped with a conical seat and inner diameter mm.16.

Male thread 3/4" eurokonus.

Maximum working pressure: 20 bar.

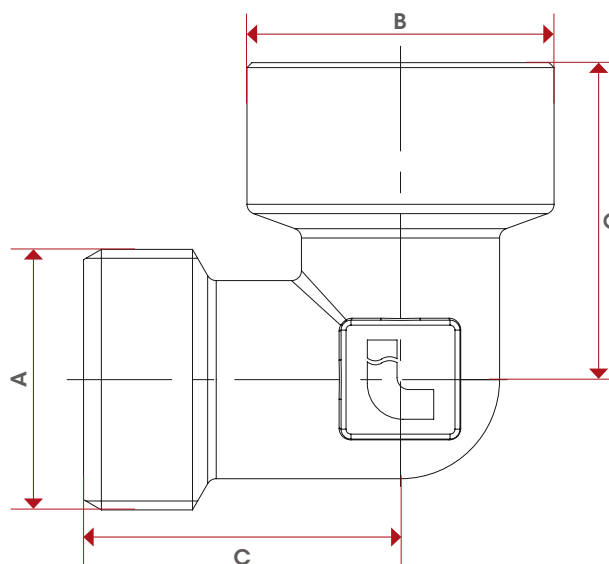
Available sizes: 1/2"x1/2", 1/2"Mx3/4"F, 3/4"x3/4" eurokonus

MATERIALS



POS.	DESCRIPTION	N.	MATERIAL
1	Fitting	1	Nickel-plated brass CW617N

OVERALL DIMENSIONS



	1/2"x1/2"	1/2"x3/4"	3/4"x3/4"
A	1/2	1/2	3/4
B	25	31	31
C	26	30	32
Kg/cm² bar	20	20	20
LBS - psi	290	290	290

CERTIFICATIONS



548

BACKPLATE FEMALE ELBOW

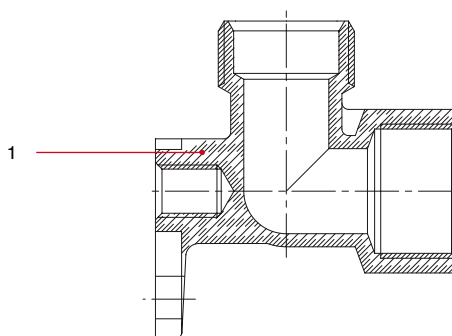


SIZE	CODE	PACKING
1/2"	5480012012	12/252
3/4"	5480034034	8/128

TECHNICAL SPECIFICATIONS

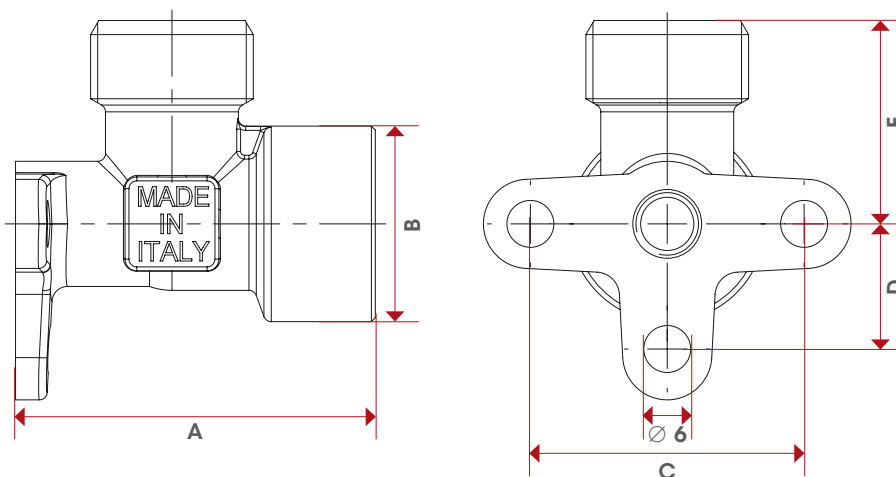
Male thread 1/2" equipped with a conical seat and inner diameter mm.16.
Male thread 3/4" eurokonus.
Maximum working pressure: 20 bar.
Available sizes: 1/2"x1/2", 3/4"x3/4" eurokonus

MATERIALS



POS.	DESCRIPTION	N.	MATERIAL
1	Fitting	1	Nickel-plated brass CW617N

OVERALL DIMENSIONS



	1/2"	3/4"
A	46	54
B	25	31
C	35	40
D	16	19
E	26	32
Kg/cm² bar	20	20
LBS - psi	290	290

CERTIFICATIONS



578

METAL TEMPLATE WITH 2 BACKPLATE ELBOWS

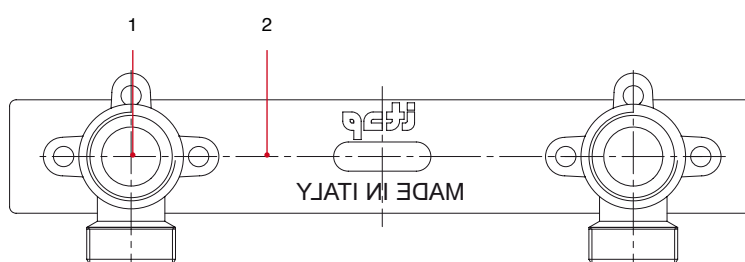


SIZE	CODE	PACKING
1/2"	578012012	4/56
3/4"	578034034	4/56

TECHNICAL SPECIFICATIONS

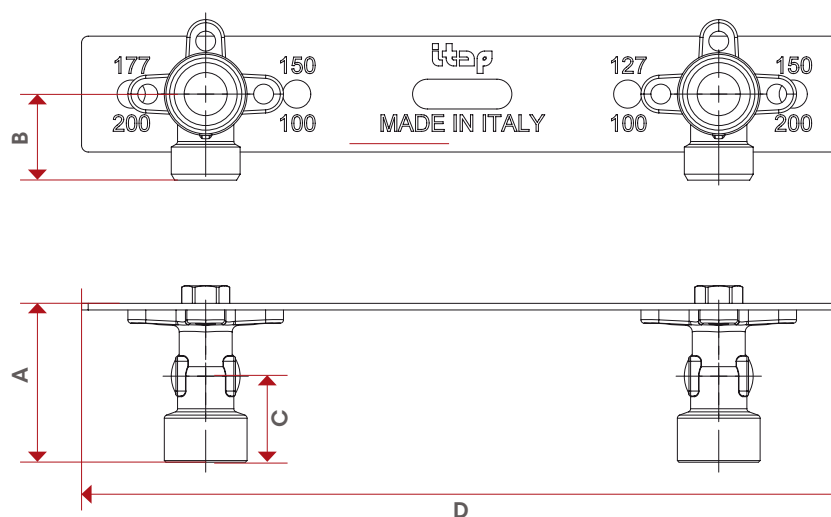
It allows the greatest accuracy during the installation of Multi-Fit® fittings.
Centres distances: mm.100, mm.127, mm.150, mm.177, mm.200.
Available sizes: 1/2"x1/2", 3/4"x3/4" eurokonus.
Male thread 1/2" equipped with a conical seat and inner diameter mm.16.
Male thread 3/4" eurokonus.
Maximum working pressure: 20bar.

MATERIALS



POS.	DESCRIPTION	N.	MATERIAL
1	Fitting	2	Nickel-plated brass CW617N
2	Template	1	Zinc-plated steel

OVERALL DIMENSIONS



	1/2"	3/4"
A	48	56
B	26	32
C	26	32
D	230	230
Kg/cm² bar	20	20
LBS - psi	290	290

CERTIFICATIONS



518

MALE/MALE
ADAPTER
- 1" MANIFOLDS



SIZE	PRESSURE	CODE	PACKING
1/2"-1/2"	20bar/290psi	5180012012	30/540
1/2"-3/4" EUROCONUS	20bar/290psi	5180012034	20/480

TECHNICAL SPECIFICATIONS

Available sizes: 1/2"x1/2", 1/2"x3/4" eurokonus.

Body in brass.

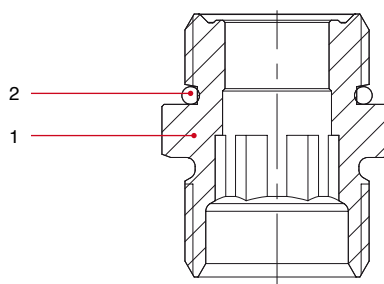
Maximum working temperature: 100°C

Threads: ISO228 (equivalent to DIN EN ISO 228 and BS EN ISO 228).

Thread G: available in size 1/2" with conical seat and inner diameter mm.16 or in size 3/4" eurokonus.

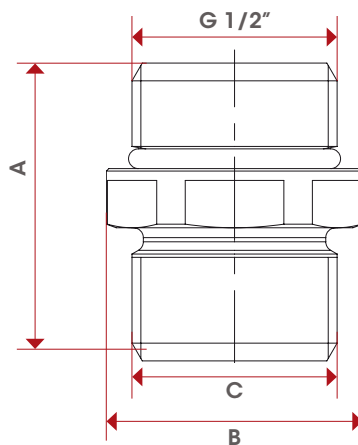
1/2"x1/2" size is also suitable as adapter for flow meters on 1" manifolds.

MATERIALS



POS.	DESCRIPTION	N.	MATERIAL
1	Fitting	1	Brass CW614N
2	O-ring	1	EPDM

OVERALL DIMENSIONS



	1/2"x1/2"	1/2"x3/4"
A	30,2	29,2
B	26	26
C	1/2"	3/4"
Kg/cm² bar	20	20
LBS - psi	290	290

CERTIFICATIONS



519

MALE/MALE
ADAPTER
- 1"1/4 MANIFOLDS



SIZE	PRESSURE	CODE	PACKING
1/2"-3/4" EUROCONUS	20bar/290psi	5190012034	1/0

TECHNICAL SPECIFICATIONS

Available sizes: 1/2"x3/4" eurokonus.

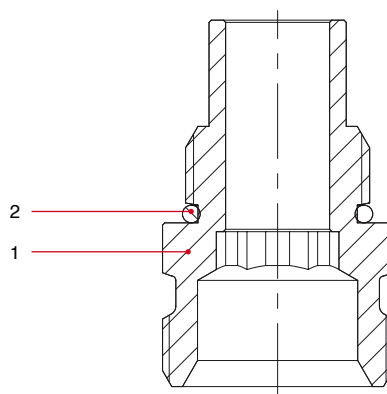
Body in brass.

Maximum working temperature: 100°C.

Threads: ISO228 (equivalent to DIN EN ISO 228 and BS EN ISO 228).

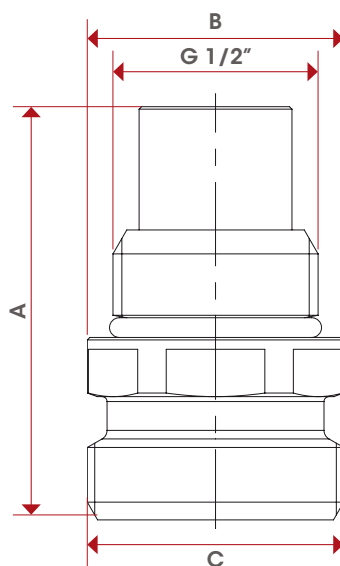
It is also suitable as adapter for flow meters on 1"1/4 manifolds.

MATERIALS



POS.	DESCRIPTION	N.	MATERIAL
1	Fitting	1	Brass CW614N
2	O-ring	1	EPDM

OVERALL DIMENSIONS



	1/2"x3/4"
A	41,9
B	26
C	3/4"
Kg/cm² bar	20
LBS - psi	290

CERTIFICATIONS



OREP

O-RING FOR
CONICAL SEATS



SIZE	CODE	PACKING
1/2"	510EP020200	1/0
3/4"	OREP015617	1/0
1"	OREP022226	1/0

Available for 1/2", 3/4" and 1" tails.

510NB

WASHER FOR
FLAT SEATS



SIZE	CODE	PACKING
1/2"	510NB012	1/0
3/4"	510NB034	1/0
1"	510NB100	1/0

510EP

O-RING
FOR TAIL



SIZE	CODE	PACKING
14x2	510EP014200	1/0
16x2	510EP016200	1/0
16x2,25	510EP016225	1/0
17x2 - 18x2,5	510EP017200	1/0
18x2	510EP018200	1/0
20x2 - 20x2,25	510EP020200	1/0
20x2,5	510EP020250	1/0
26x3 - 25x2,5	510EP026300	1/0
32x3	510EP032300	1/0

Material: EPDM.

Every tail has 2 o-rings.

680

PIPE DEBURRING
TOOL



CODE	PACKING
680012028	1/100

Suitable for pipes with diameter from 3mm to 35mm.

Material: metal.

575

SHEAR
FOR MULTILAYER
AND PEX PIPES



CODE	PACKING
575014026	1/60

Suitable for pipes with diameter from 12mm to 25mm.

575L

SPARE BLADE
FOR ART. 575



CODE	PACKING
575L	1/0

570

CONNECTING/
DISCONNECTING
TOOL



CODE	PACKING
570014026	1/60

505 505R

MULTILAYER
PEX-AL-PEHD PIPE,
SIMPLE AND
INSULATED



SIZE	PRESSURE	CODE
14x2	10bar/145psi	505004014200
16x2	10bar/145psi	505002016200
18x2	10bar/145psi	505002518200
20x2	10bar/145psi	505002520200
26x3	10bar/145psi	505003026300
32x3	10bar/145psi	505008032300



SIZE	PRESSURE	CODE
14x2	10bar/145psi	505004014200R
16x2	10bar/145psi	505002016200R
20x2	10bar/145psi	505002520200R
26x3	10bar/145psi	505003026300R
32x3	10bar/145psi	505008032300R

Suitable for heating and air conditioning plants, domestic water services.
Composition: cross-linked polyethylene type "b" / aluminium / high density polyethylene.

Head-welded aluminium.

Maximum working temperature: 95°C.

Max working pressure (95°C): 10 bar.

14x2 size available till out of stock.





TEC

RANGE

THE MULTILAYER PIPE

The PEX/AL/HDPE multilayer pipe now represents the state of the art in the thermo-hydraulic distribution. Thanks to its layered structure, it combines the advantages of potability and corrosion resistance of plastic pipes with the high strength of metal pipes. The PEX inner layer makes the pipe suitable for heating systems (both with radiators and radiant panels) and in systems for transporting drinking water, reducing pressure drops to a minimum and making the pipe extremely lightweight and easy to install. The intermediate aluminium layer is an oxygen-proof barrier and allows to increase the resistance of the pipe at high pressures. The outer layer made of HDPE (high density polyethylene) protects the aluminium from the aggressive external elements. All this combined with the extreme simplicity of installation, since the multilayer pipe retains the shape given by the installer, thanks to the internal metal core.



THE ADVANTAGES

The multilayer pipe, thanks to the internal aluminium core and cross-linked polyethylene layer, features the following technical characteristics:

- **high resistance to scaling and corrosion**
- **high mechanical behaviour (once folded, the pipe stays in the desired position)**
- **low thermal expansion**
- **low pressure drops**
- **complete oxygen impermeability (it is therefore available for radiant systems)**



THE ITAP PIPE

ITAP SpA offers its customers a simple multilayer pipe Art. 505 and insulated pipe Art. 505R:

- **available for domestic and heating systems**
- **composition: PEXb / Aluminium / HDPE**
- **aluminum layer welding: butt weld**
- **maximum temperature: 95°C**
- **maximum pressure: 10 bar**

PIPE DIAMETER AND THICKNESS	14x2mm	16x2mm	18x2mm	20x2mm	26x3mm	32x3mm
INTERNAL DIAMETER	10mm	12mm	14mm	16mm	20mm	26mm
ROLL LENGTH	100m	100m	100m	100m	50m	50m
INTERNAL SURFACE ROUGHNESS	7µm	7µm	7µm	7µm	7µm	7µm
THERMAL CONDUCTIVITY	0,43 W/mK	0,43 W/mK	0,43 W/mK	0,43 W/mK	0,43 W/mK	0,43 W/mK
EXPANSION COEFFICIENT	0,026 m/mK	0,026 m/mK	0,026 m/mK	0,026 m/mK	0,026 m/mK	0,026 m/mK
MINIMUM BENDING RADIUS	5xD ext	5xD ext	5xD ext	5xD ext	5xD ext	5xD ext

THE ITAP INSULATED PIPE

The insulated pipe Art. 505R (equipped with class 1 fire resistance insulating sheath) has the following additional features:

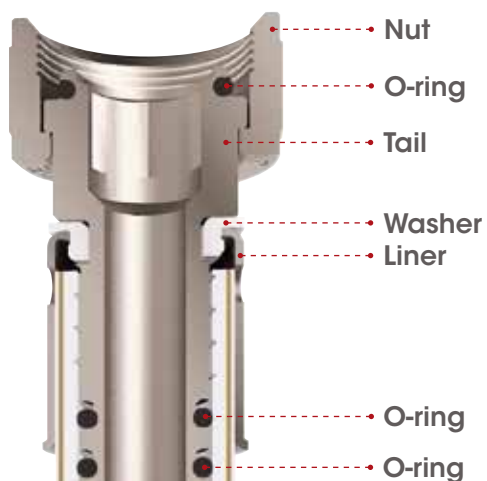
- **suitable for distributing hot domestic water and for heating systems**
- **measures 20x2 mm, 26x3 mm, 32x3 mm are equipped with an insulating coating with a thickness also suitable for air conditioning systems**
- **the coating complies with the requirements of law 10/91 and with the related Italian Presidential Decree 412 of 26 August 1993, for piping in heated environments and/or within structures that do not face outside nor onto unheated rooms**
- **insulating red sheath, closed cell PE-LD foam, CFC and HCFC free**
- **insulating sheath density: 30 Kg/m³ (DN 14, 16) ; 45 Kg/m³ (DN 20, 26, 32)**
- **insulating sheath thermal conductivity: 0.0397 W/mk**
- **insulating sheath steam permeability: µ 5500**

PIPE DIAMETER AND THICKNESS	14x2mm	16x2mm	20x2mm	26x3mm	32x3mm
INSULATING THICKNESS	6mm	6mm	10mm	10mm	10mm
ROLL LENGTH	50m	50m	50m	25m	25m

ASSEMBLY INSTRUCTIONS

1. Cut the pipe by a pipe cutter.
2. Deburr the inner side of the pipe.
3. Insert the fitting into the pipe.
4. Once the threaded part of the fitting reaches the pipe, screw the tail into the pipe as far as the thread has completely entered the pipe.

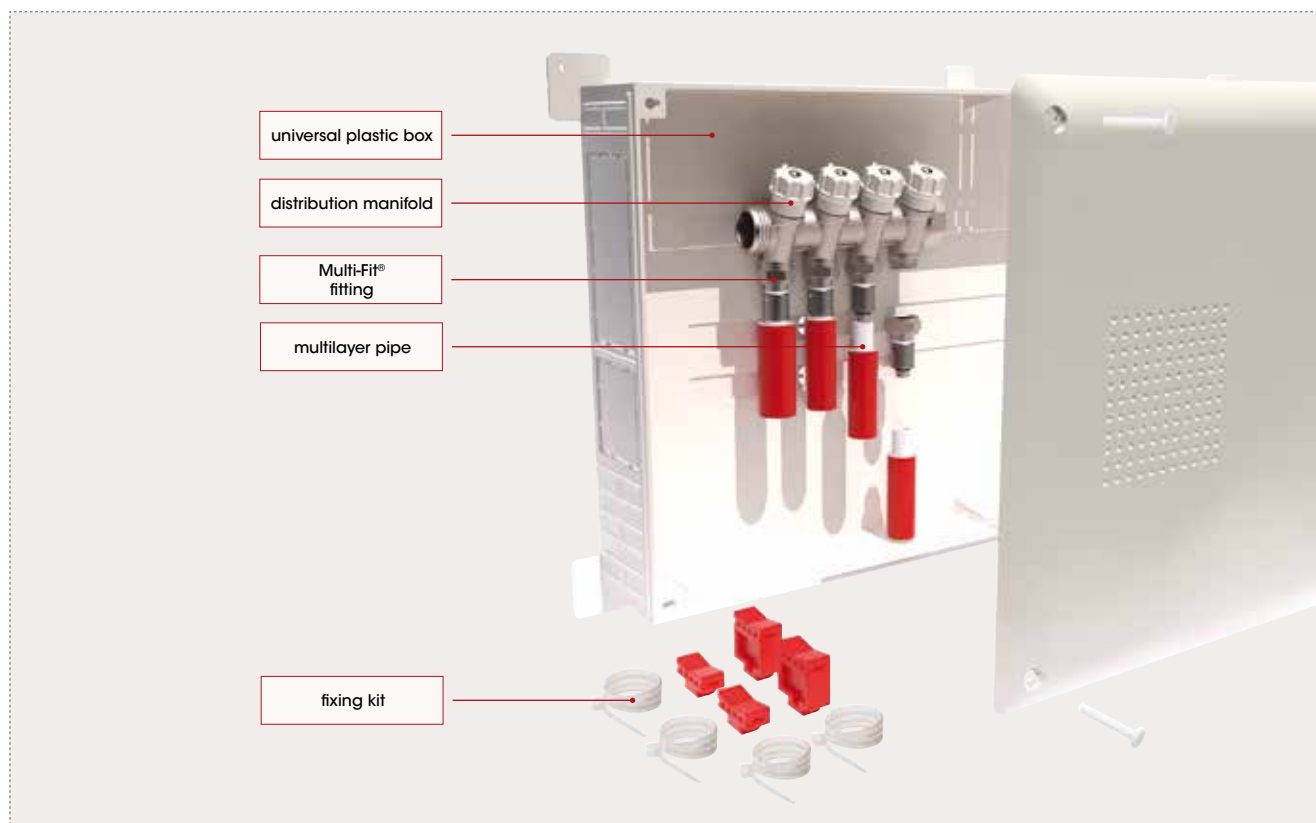
THE CONNECTION IS SAFE AND EASILY REVERSIBLE.



The fittings are supplied with an o-ring for conical seats and a flat washer for flat seats.

INSTALLATION

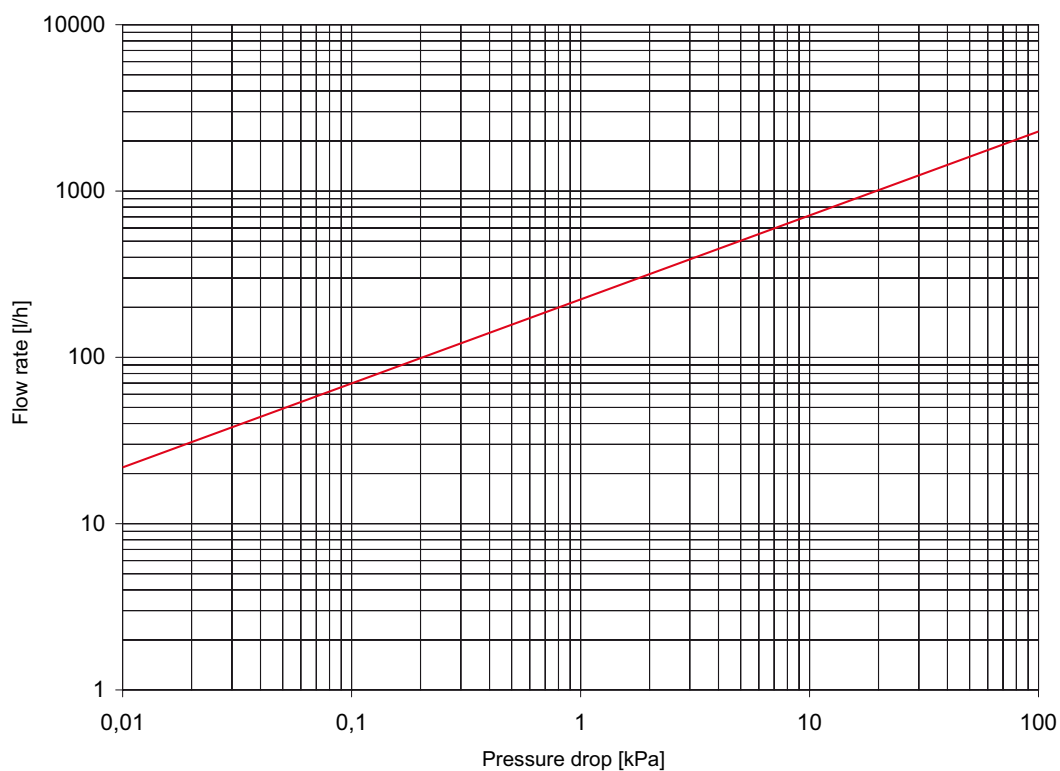
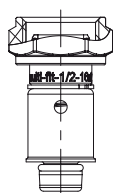
The Multi-fit® system is completed with the installation of the distribution manifold Art. 465 and built-in box Art. 499. This lay-out allows the planning engineer and installer to work in complete safety, also ensuring high quality system standards.



ADVANTAGES

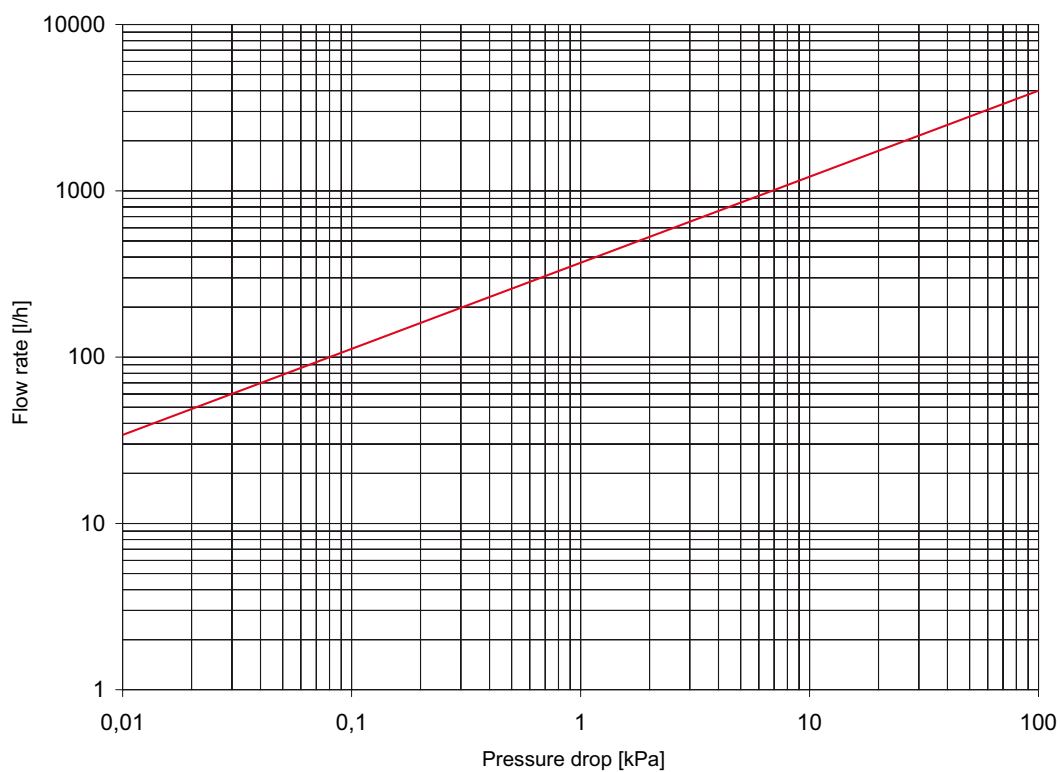
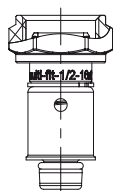
- No more build-in TEE and elbow junctions
- No more leakages
- Really make the most of multilayer piping flexibility and installation speed
- Improve the water flow
- Make repairs easy and fast
- Each endpoint connected to a single manifold outlet

Pressure drops diagram: art. 510 - 14x2



DIM.	510 14x2
Kv	2,35

Pressure drops diagram: art. 510 - 16x2



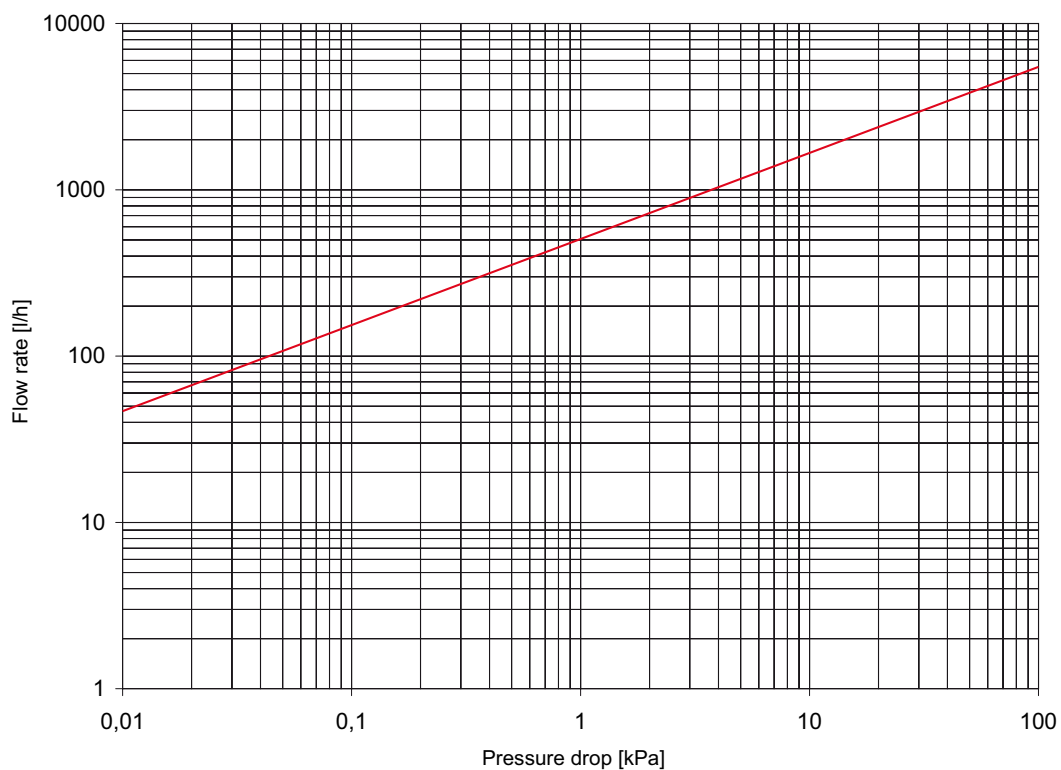
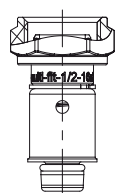
DIM.	510 16x2
Kv	3,88





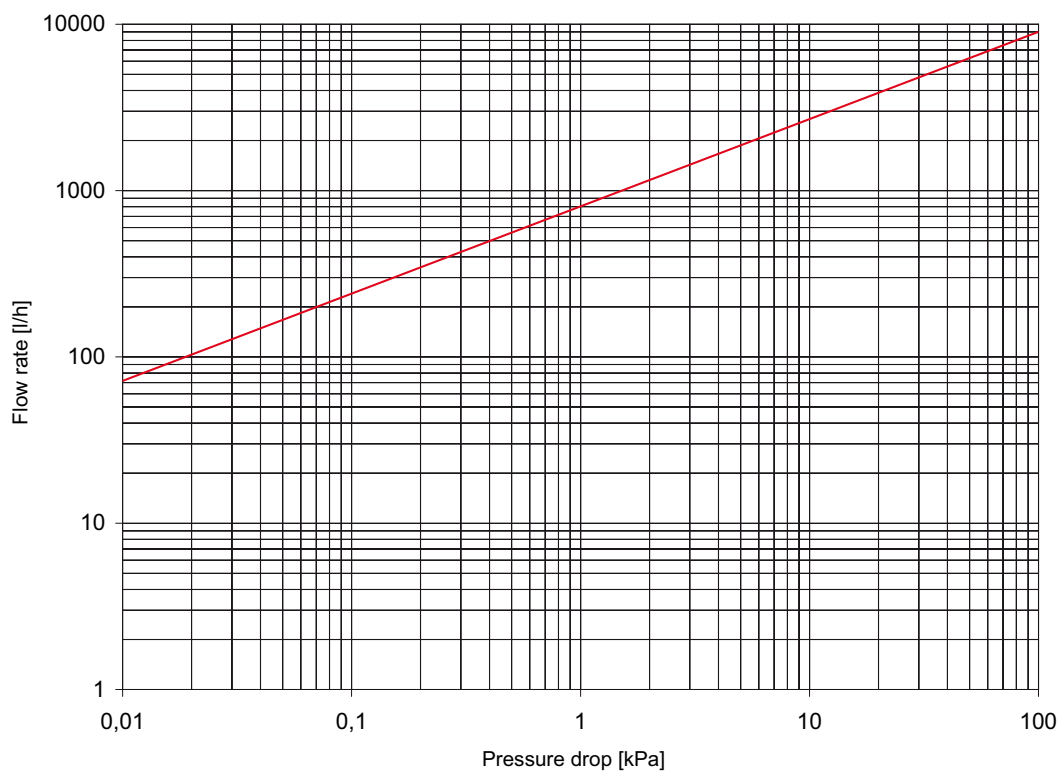
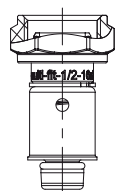
TEC

Pressure drops diagram: art. 510 - 18x2



DIM.	510 18x2
Kv	5,82

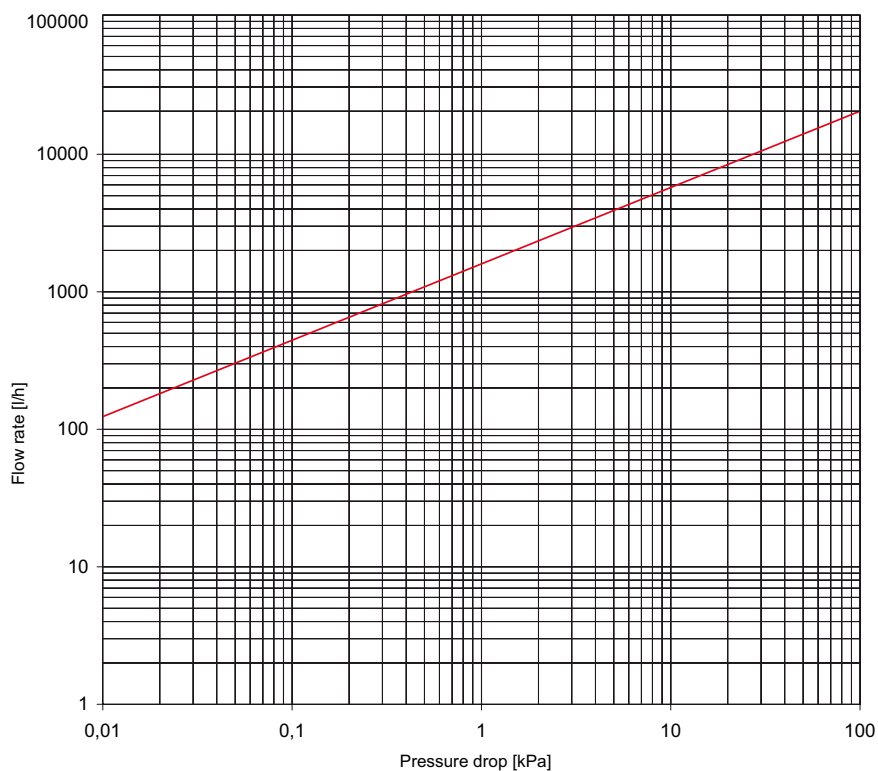
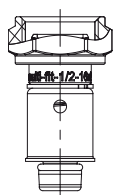
Pressure drops diagram: art. 510 - 20x2



DIM.	510 20x2
Kv	8,68

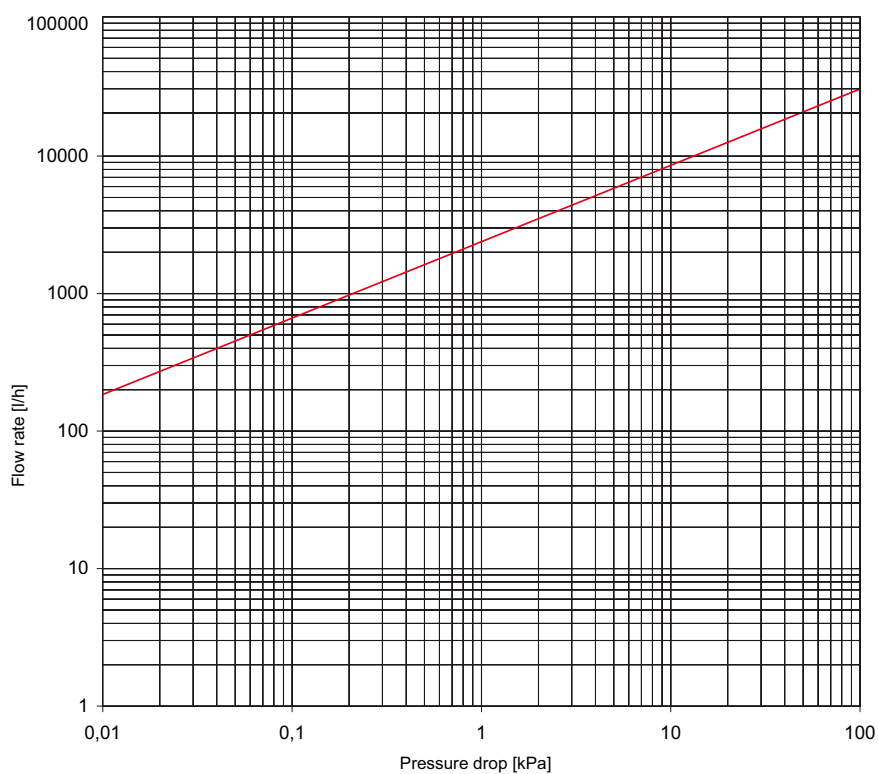
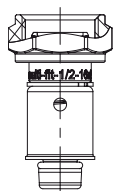
PRESSURE DROPS

Pressure drops diagram: art. 510 - 26x3



DIM.	510 26x3
Kv	19,83

Pressure drops diagram: art. 510 - 32x3



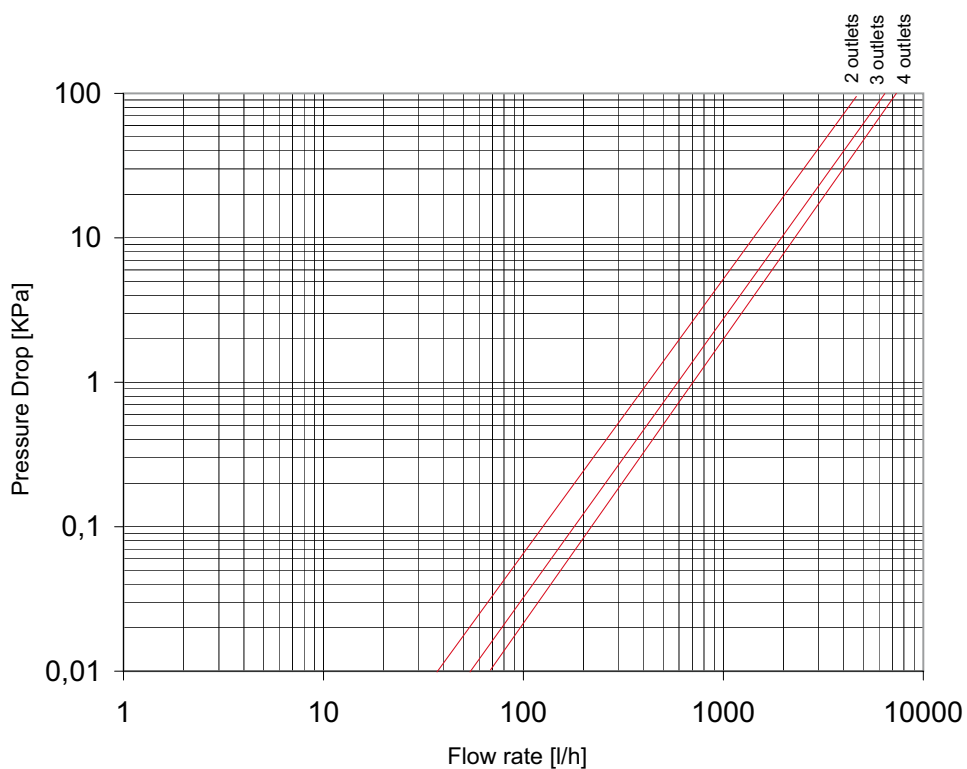
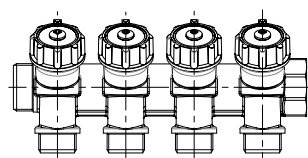
DIM.	510 32x3
Kv	31,04





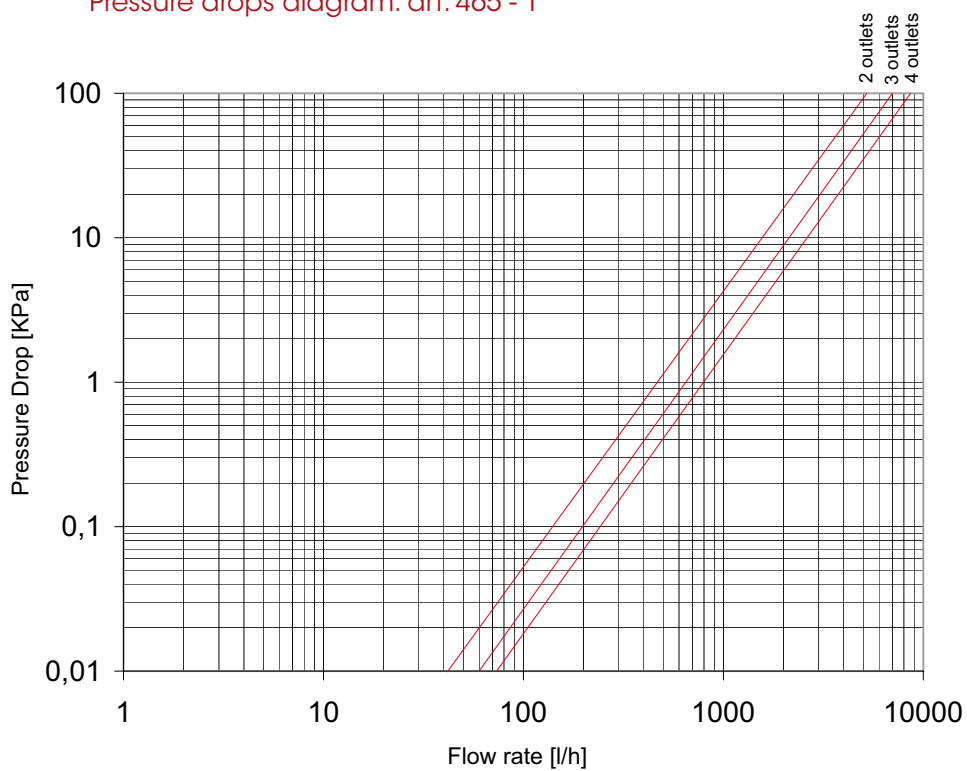
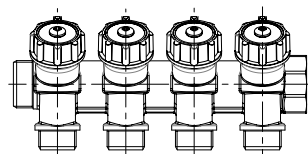
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Pressure drops diagram: art. 465 - 3/4"



DIM.	3/4"		
Outlets	2	3	4
Kv	4,7	6,4	7,6

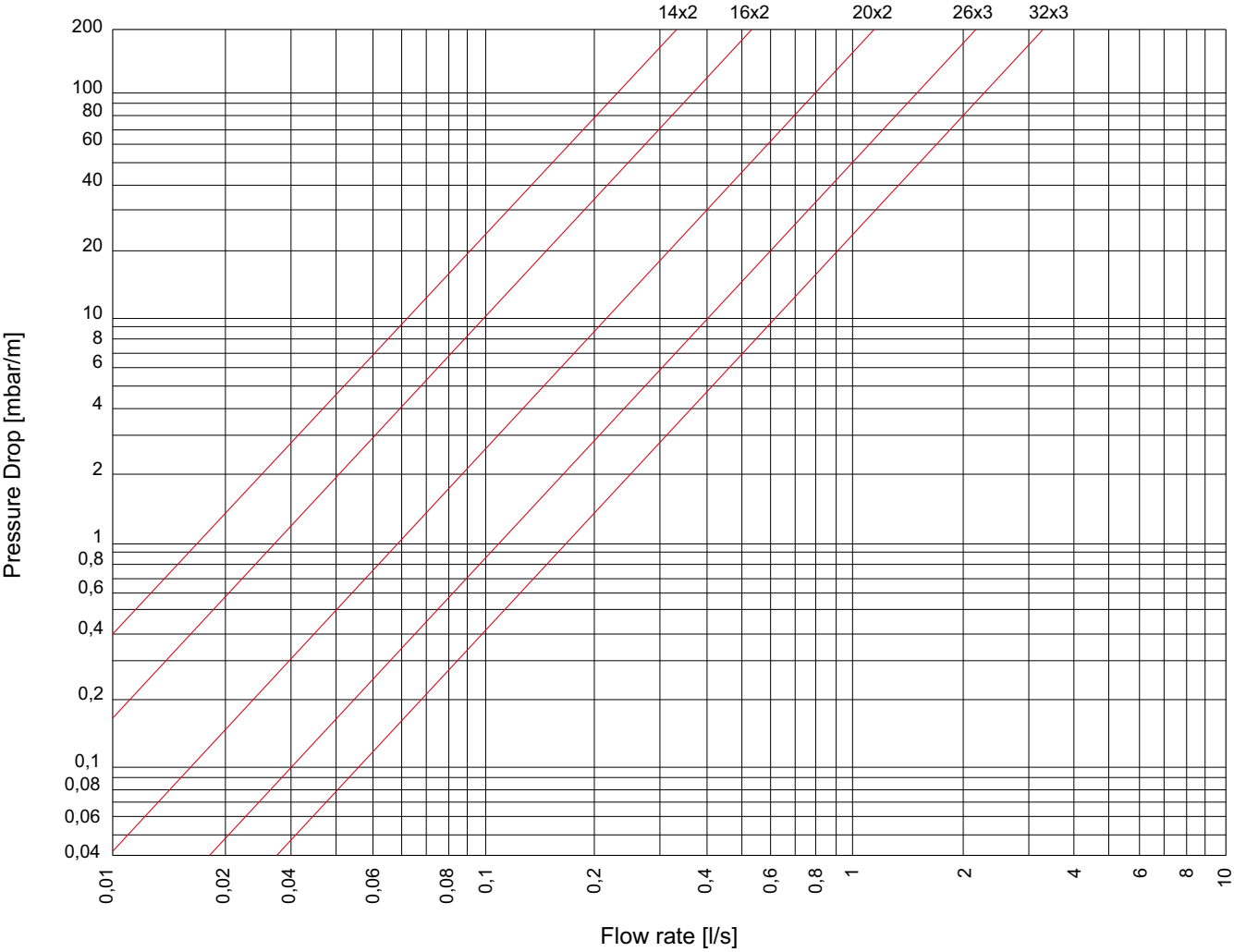
Pressure drops diagram: art. 465 - 1"



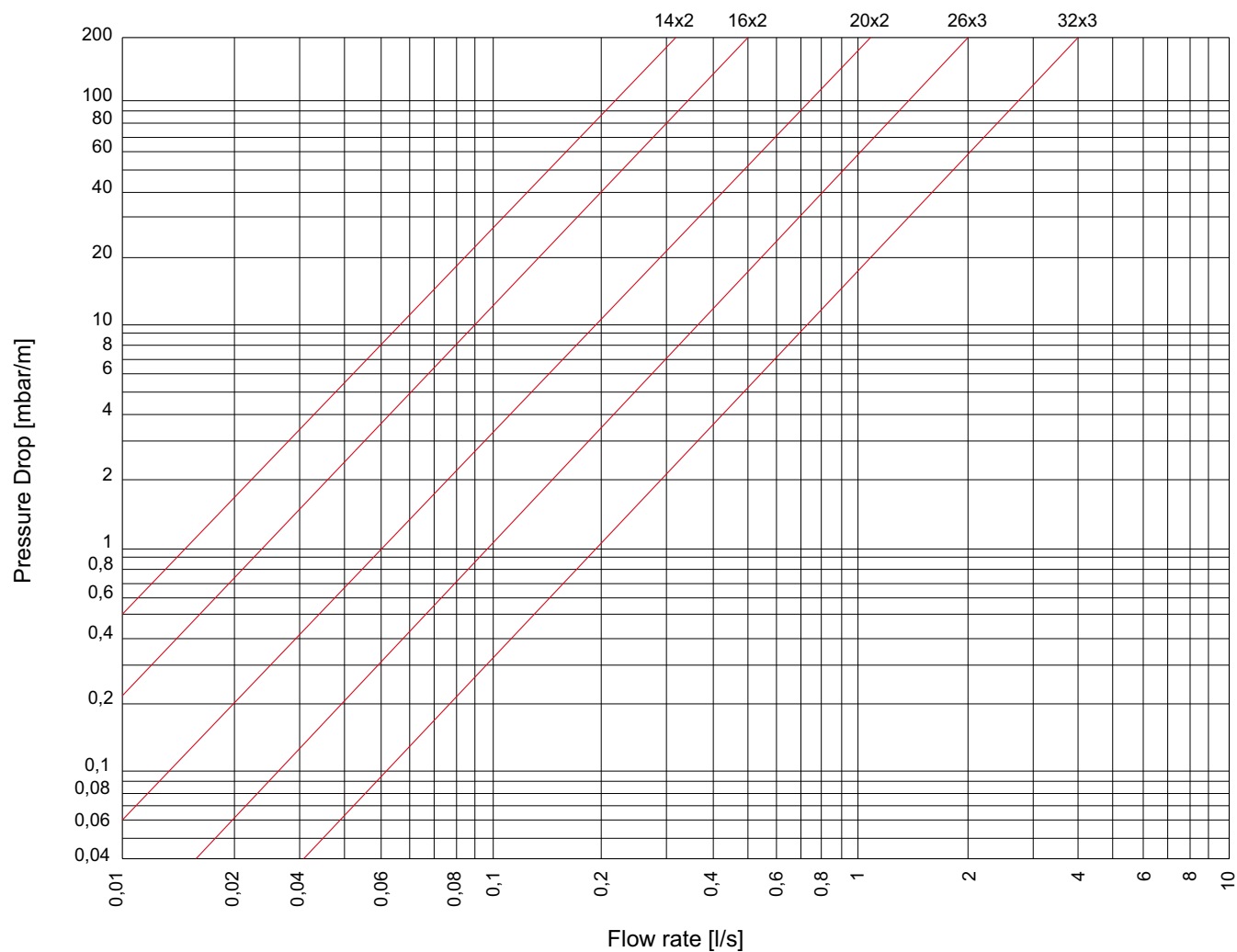
DIM.	1"		
Outlets	2	3	4
Kv	5,0	7,0	8,5

PRESSURE DROPS

Pressure drops diagram: MULTILAYER PIPE water temperature at 50°C



Pressure drops diagram: MULTILAYER PIPE water temperature at 10°C



THERMAL EXPANSIONS

The thermal expansions of the multilayer pipe are very low. In order to make the calculation properly, we recommend using this formula:

$$\Delta L = \beta * L * \Delta T$$

ΔL = pipe expansion [mm]

β = material expansion coefficient [0.026 mm/°C m]

L = pipe length [m]

ΔT = difference between the operating temperature and the installation temperature [°C]

To remedy the problems caused by the thermal expansion of the pipe, one must provide an expansion loop. The size follows this formula:

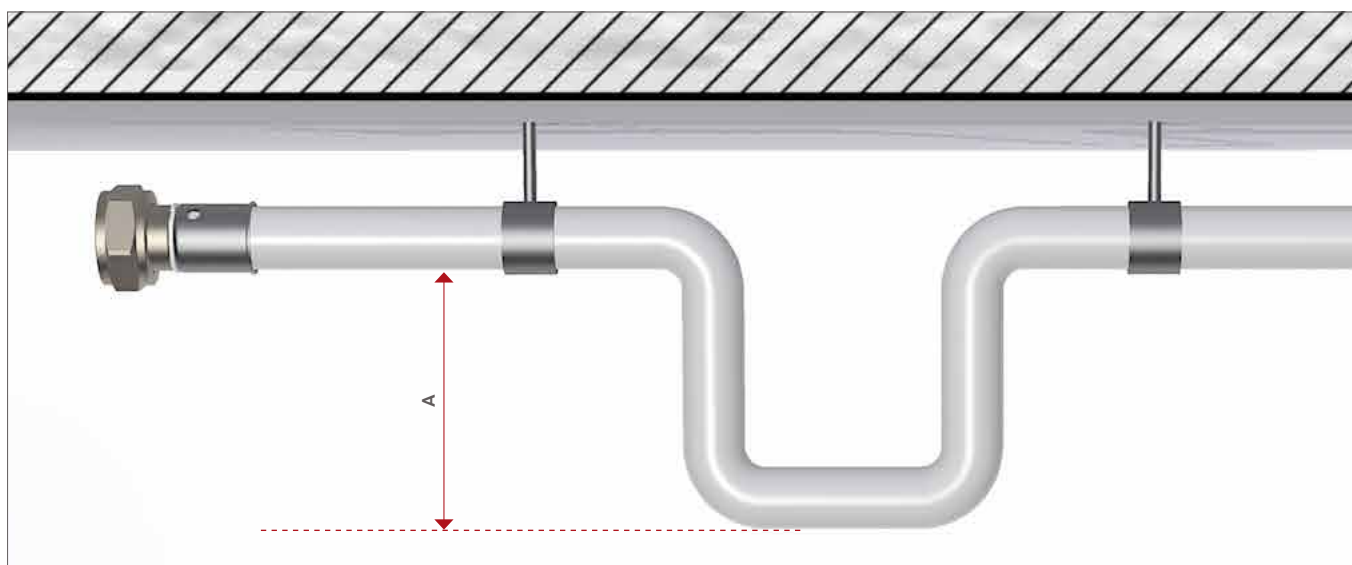
$$A = c * (D * \Delta L)^{0.5}$$

A = loop length [mm]

C = pipe constant [=33]

D = external pipe diameter [mm]

ΔL = piping expansion [mm]





TEC

NOTES

Handwriting practice lines consisting of 30 horizontal dashed lines.

We reserve the right to make improvements and changes to the products described herein and to the relative technical data, at any time and without forewarning.



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