

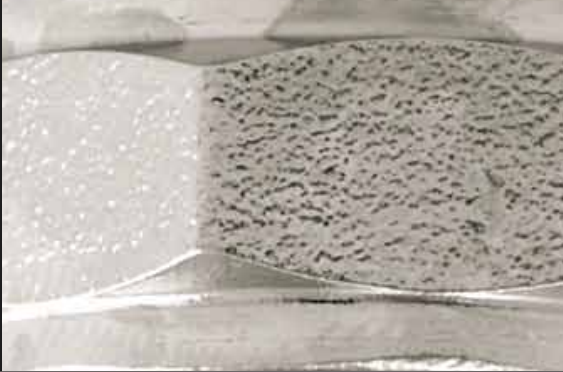
TECHNICAL CATALOGUE

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 brass distribution manifolds for plumbing and heating systems. Thanks to fully automated production processes, with 63 tooling machines and 25 assembly lines, we are able to produce 150,000 pieces per day. Our innate pursuit for innovation and observance of the technical regulations in force is supported by the ISO 9001:2008 certified company structure. The company has always considered its focus on quality as the main tool to obtaining significant business results: today ITAP SpA is proud to offer products bearing the approval of numerous international certifying bodies.





MULTI-FIT[®]
FITTING

SUITABLE FOR HEATING
AND DRINKABLE WATER
SYSTEMS

EASY INSTALLATION
WITHOUT USING ANY
PRESSING MACHINE

FOR MULTILAYER
PIPES MADE BY ANY
MANUFACTURER

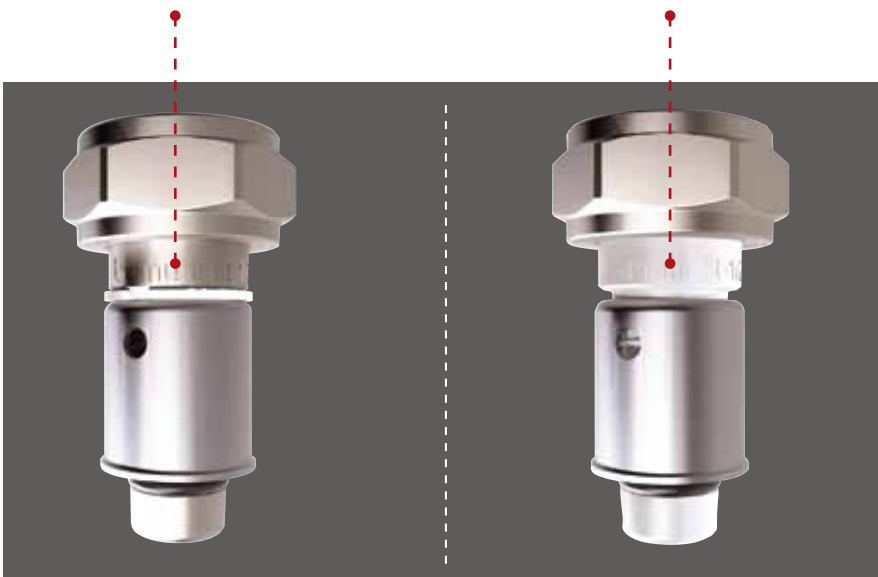
USABLE AGAIN

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



TAIL IN BRASS

TAIL IN POLYMER



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.

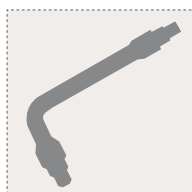
THE ADVANTAGES



- **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 |
| 17x2 | 510001217200 | 15/270 |
| 18x2 | 510001218200 | 15/270 |
| 20x2 | 510001220200 | 15/270 |
| 20x2,25 | 510001220225 | 15/270 |
| 20x2,5 | 510001220250 | 15/270 |

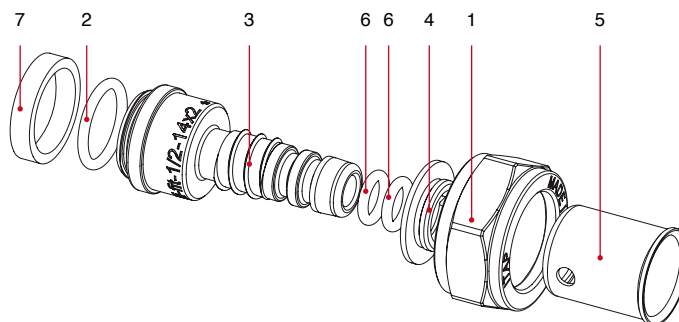
Available sizes with 3/4" nut EUROKONUS.

| SIZE | CODE | PACKING |
|---------|--------------|---------|
| 14x2 | 510003414200 | 20/200 |
| 16x2 | 510003416200 | 20/200 |
| 17x2 | 510003417200 | 15/270 |
| 18x2 | 510003418200 | 15/270 |
| 20x2 | 510003420200 | 15/270 |
| 20x2,25 | 510003420225 | 15/270 |
| 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 |

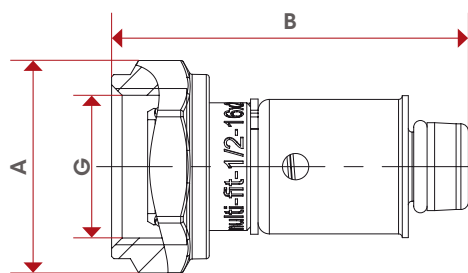
MATERIALS



| POS. | DESCRIPTION | N. | MATERIAL |
|------|---------------|----|--------------------------------|
| 1 | Nut | 1 | Nickel-plated brass CW617N |
| 2 | O-Ring | 1 | NBR |
| 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 |



OVERALL DIMENSIONS



1/2"

| | 14x2 | 16x2 | 16x2,25 | 17x2 | 18x2 | 20x2 | 20x2,25 | 20x2,5 |
|------------------------|------|------|---------|------|------|------|---------|--------|
| A | 28,3 | 28,3 | 28,3 | 28,3 | 28,3 | 28,3 | 28,3 | 28,3 |
| B | 46 | 47,5 | 47,5 | 46 | 46 | 46 | 46 | 46 |
| G | 1/2" | 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 | 20 |
| LBS - psi | 290 | 290 | 290 | 290 | 290 | 290 | 290 | 290 |

3/4"

| | 14x2 | 16x2 | 17x2 | 18x2 | 20x2 | 20x2,25 | 25x2,5 | 26x3 |
|------------------------|------|------|------|------|------|---------|--------|------|
| A | 33 | 33 | 33 | 33 | 33 | 33 | 33 | 33 |
| B | 47 | 48,5 | 47 | 47 | 47 | 47 | 52 | 52 |
| G | 3/4" | 3/4" | 3/4" | 3/4" | 3/4" | 3/4" | 3/4" | 3/4" |
| Kg/cm ² bar | 20 | 20 | 20 | 20 | 20 | 20 | 20 | 20 |
| LBS - psi | 290 | 290 | 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



510R

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



Available sizes with 1/2" nut.

| SIZE | CODE | PACKING |
|------|---------------|---------|
| 16x2 | 510001216200R | 20/540 |
| 20x2 | 510001220200R | 15/405 |

Available sizes with 3/4" nut EUROKONUS.

| SIZE | CODE | PACKING |
|------|---------------|---------|
| 16x2 | 510001216200R | 20/540 |
| 20x2 | 510001220200R | 15/405 |

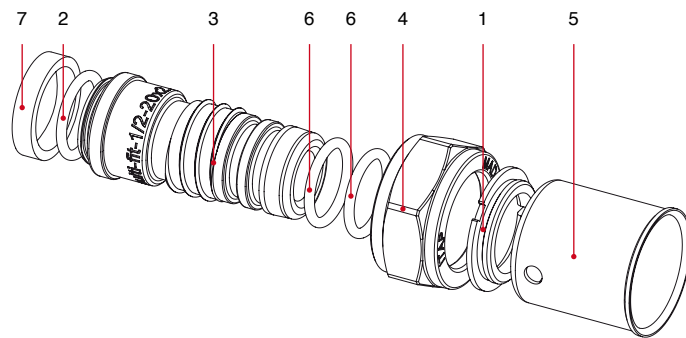
TECHNICAL SPECIFICATIONS

Tail in polymer.

Minimum and maximum working temperatures: -20°C, 90°C.

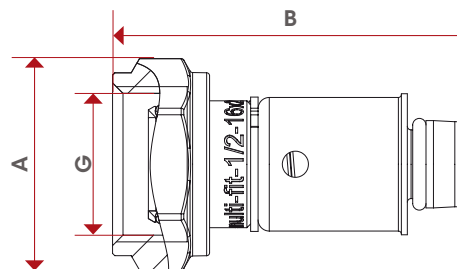
Other features and operating conditions like art. 510.

MATERIALS



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

OVERALL DIMENSIONS



1/2"

| | 16x2 | 20x2 |
|------------|------|------|
| A | 28,3 | 28,3 |
| B | 47,5 | 46 |
| G | 1/2" | 1/2" |
| Kg/cm² bar | 20 | 20 |
| LBS - psi | 290 | 290 |

3/4"

| | 16x2 | 20x2 |
|------------|------|------|
| A | 33 | 33 |
| B | 48,5 | 47 |
| G | 3/4" | 3/4" |
| Kg/cm² bar | 20 | 20 |
| LBS - psi | 290 | 290 |



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

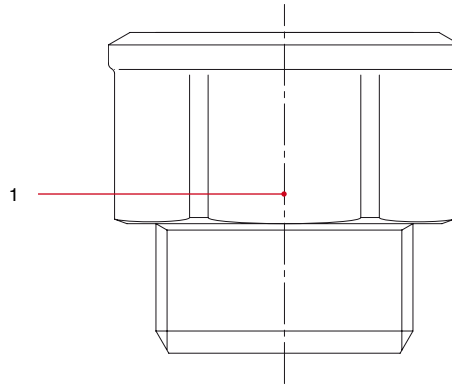
Male thread 1/2" equipped with a conical seat and inner diameter mm.16.

Male thread 3/4" eurokonus.

Maximum working pressure: 20 bar.

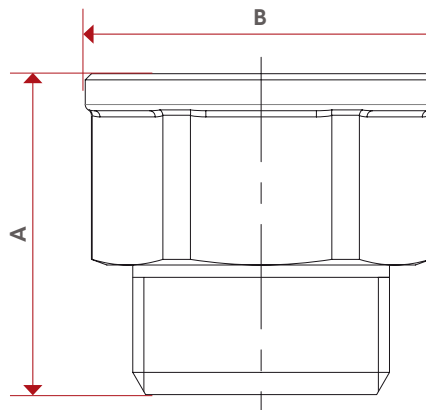
Available sizes: 1/2"x1/2", 1/2"Mx3/4"F, 3/4"x3/4" eurokonus

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/cm ² bar | 20 | 20 | 20 |
| LBS - psi | 290 | 290 | 290 |

CERTIFICATIONS



515

STRAIGHT MALE CONNECTOR



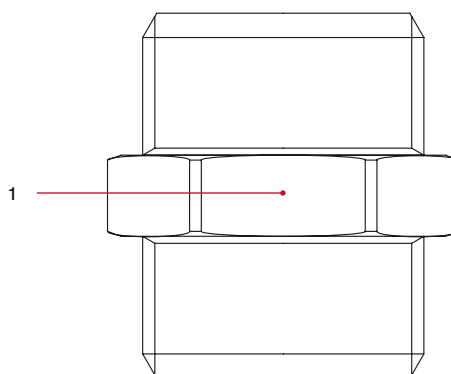
| SIZE | CODE | PACKING |
|-------------|------------|---------|
| 1/2" x 1/2" | 5150012012 | 30/720 |
| 1/2" x 3/4" | 5150012034 | 20/480 |
| 3/4" x 3/4" | 5150034034 | 20/220 |
| 1" x 1" | 5150100100 | 8/240 |

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.

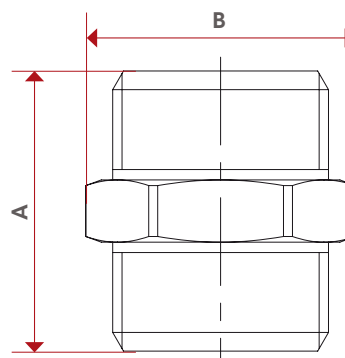
Available sizes: 1/2"x1/2", 1/2"x3/4"eurokonus, 3/4"x3/4" eurokonus, 1"x1"

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

EQUALT COUPLING

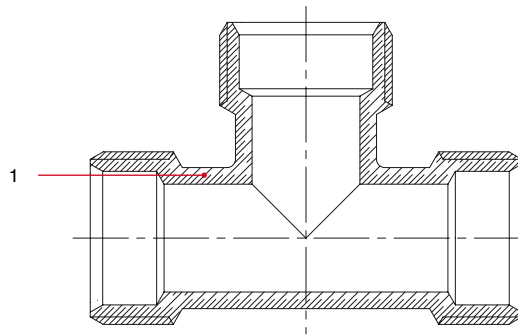


| SIZE | CODE | PACKING |
|------|------------|---------|
| 1/2" | 5300012012 | 16/336 |
| 3/4" | 5300034034 | 8/168 |
| 1" | 5300100100 | 6/126 |

TECHNICAL SPECIFICATIONS

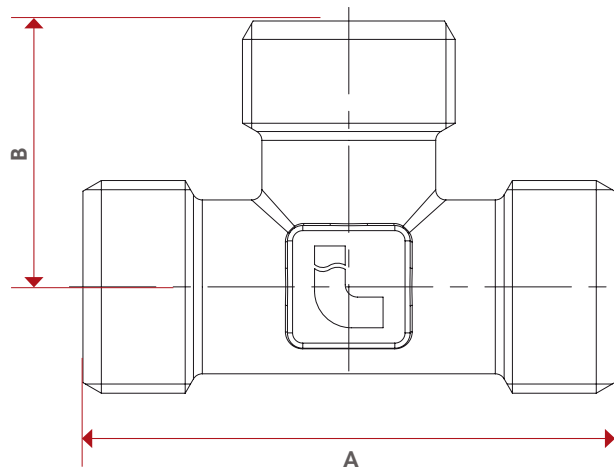
Male thread 1/2" equipped with a conical seat and inner diameter mm.16.
 Male thread 3/4" eurokonus.
 Male thread 1" equipped with a conical seat and inner diameter mm.22.
 Maximum working pressure: 20 bar.
Available sizes: 1/2"x1/2"x1/2", 3/4"x3/4"x3/4" eurokonus, 1"x1"x1"

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

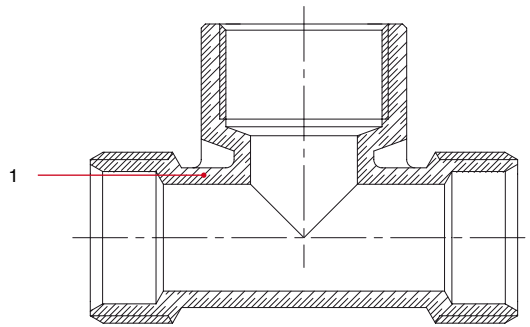


| SIZE | CODE | PACKING |
|------|------------|---------|
| 1/2" | 5350012012 | 14/294 |
| 3/4" | 5350034034 | 8/168 |

TECHNICAL SPECIFICATIONS

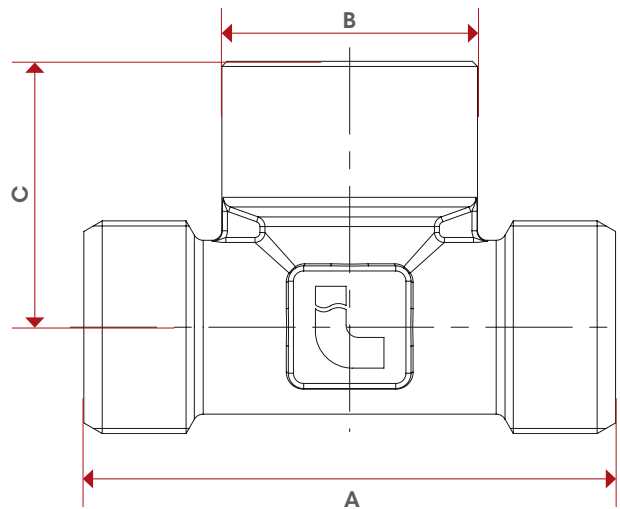
Male thread 1/2" equipped with a conical seat and inner diameter mm.16.
 Male thread 3/4" eurokonus.
 Maximum working pressure: 20 bar.
Available sizes: 1/2"x1/2"x1/2", 3/4"x3/4"x3/4" eurokonus

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/cm ² bar | 20 | 20 |
| LBS - psi | 290 | 290 |

CERTIFICATIONS



540

MALE ELBOW



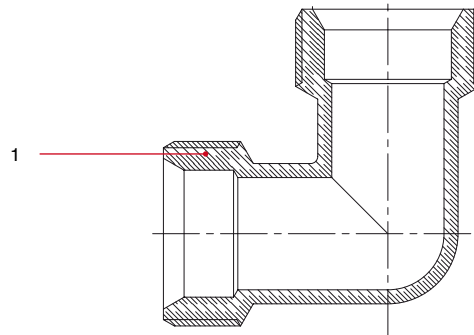
| SIZE | CODE | PACKING |
|-------------|------------|---------|
| 1/2" x 1/2" | 5400012012 | 18/432 |
| 1/2" x 3/4" | 5400012034 | 13/312 |
| 3/4" x 3/4" | 5400034034 | 10/240 |
| 1" x 1" | 5400100100 | 8/168 |

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.

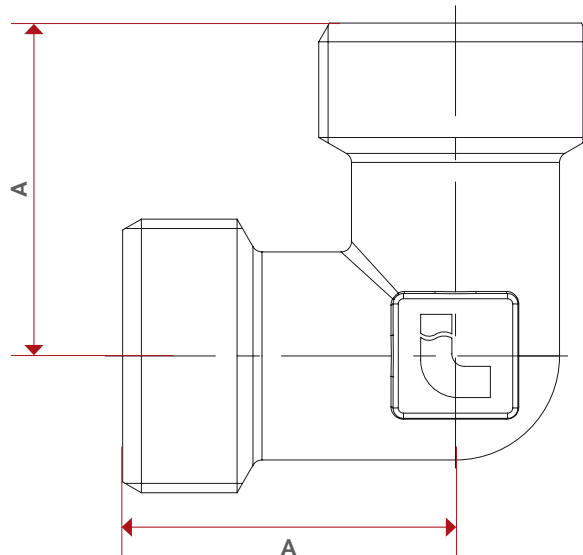
Available sizes: 1/2"x1/2", 1/2"x3/4"eurokonus, 3/4"x3/4" eurokonus, 1"x1"

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

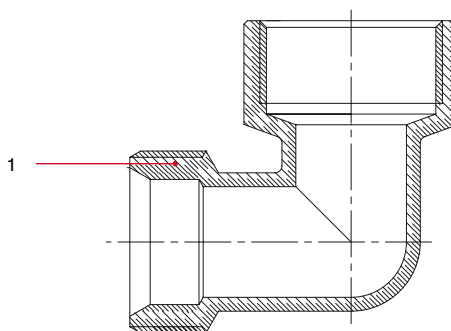
Male thread 1/2" equipped with a conical seat and inner diameter mm.16.

Male thread 3/4" eurokonus.

Maximum working pressure: 20 bar.

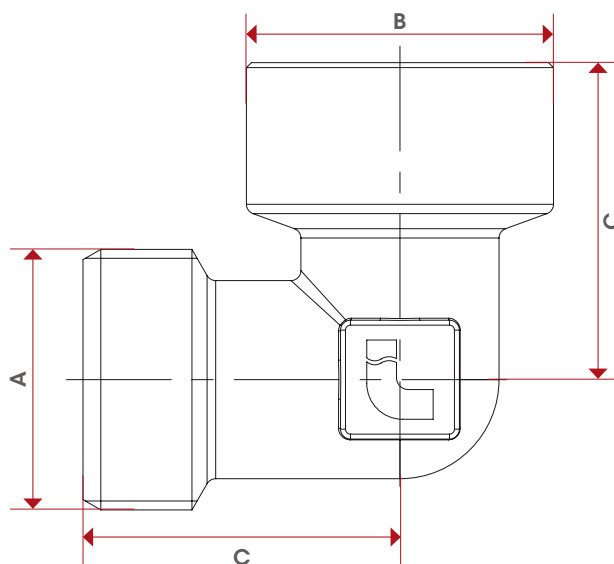
Available sizes: 1/2"x1/2", 1/2"Mx3/4"F, 3/4"x3/4" eurokonus

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/cm ² bar | 20 | 20 | 20 |
| LBS - psi | 290 | 290 | 290 |

CERTIFICATIONS



548

BACKPLATE FEMALE ELBOW

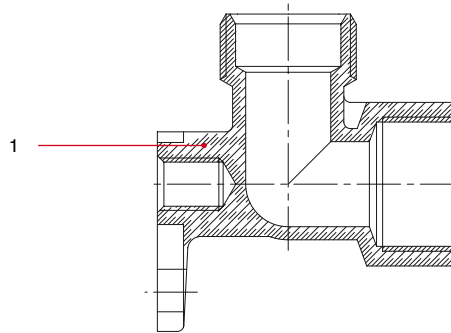


| SIZE | CODE | PACKING |
|------|------------|---------|
| 1/2" | 5480012012 | 12/252 |
| 3/4" | 5480034034 | 8/128 |

TECHNICAL SPECIFICATIONS

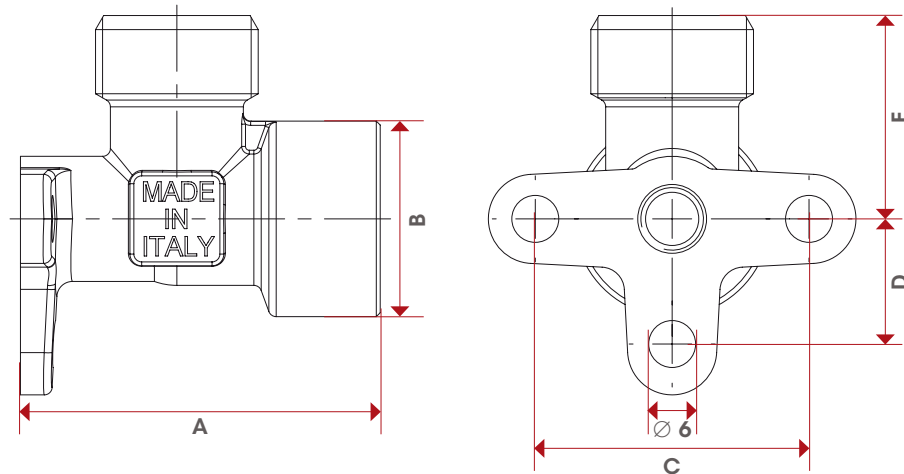
Male thread 1/2" equipped with a conical seat and inner diameter mm.16.
 Male thread 3/4" eurokonus.
 Maximum working pressure: 20 bar.
Available sizes: 1/2"x1/2", 3/4"x3/4" eurokonus

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/cm ² 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.

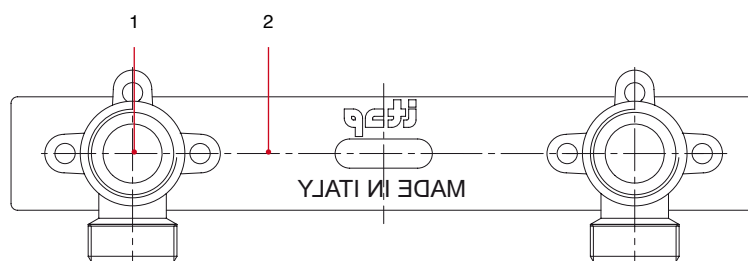
Available sizes: 1/2"x1/2", 3/4"x3/4" eurokonus.

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

Male thread 3/4" eurokonus.

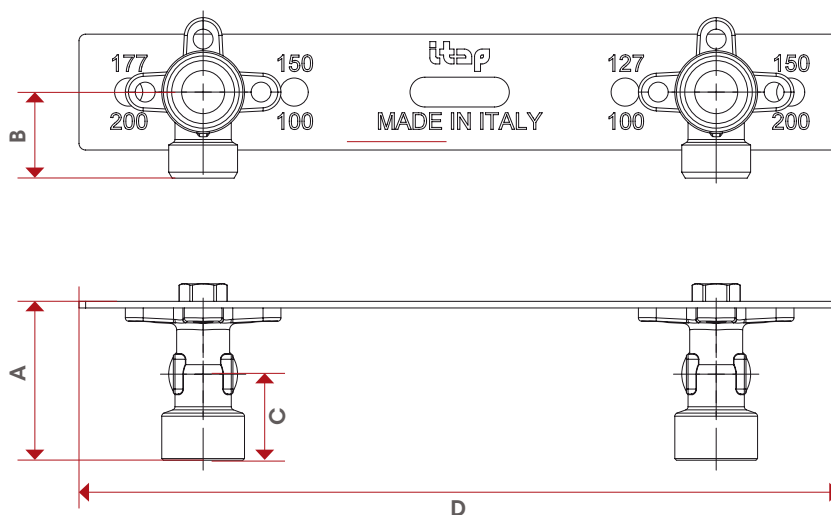
Maximum working pressure: 20bar.

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/cm ² 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.

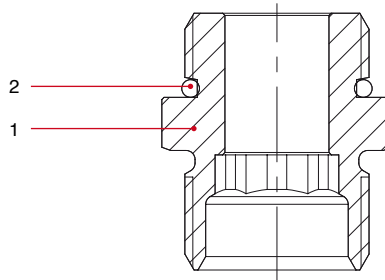
Maximum working temperature: 100°C

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.

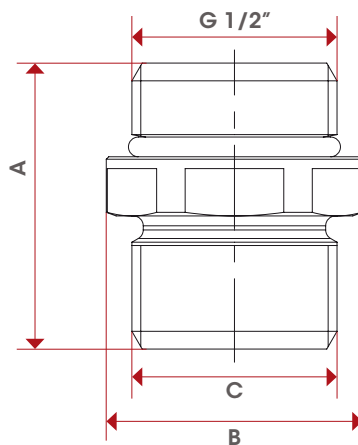
1/2"x1/2" size is also suitable as adapter for flow meters on 1" manifolds.

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 | 29 | 28 |
| B | 26 | 26 |
| C | 1/2" | 3/4" |
| Kg/cm ² 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.

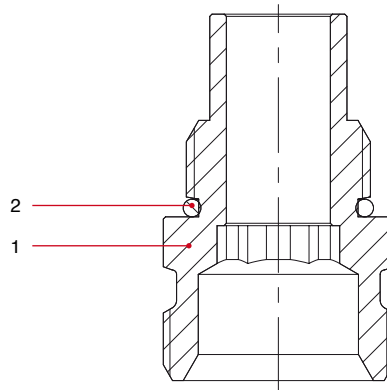
Body in brass.

Maximum working temperature: 100°C.

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

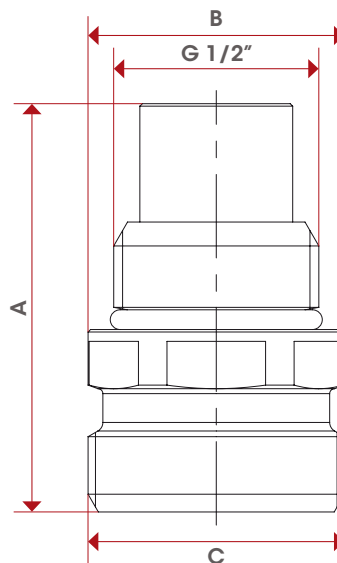
It is also suitable as adapter for flow meters on 1"1/4 manifolds.

MATERIALS



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

OVERALL DIMENSIONS



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

CERTIFICATIONS



494

MALE END CAP WITH O-RING



| SIZE | PRESSURE | CODE | PACKING |
|--------|--------------|---------|---------|
| 3/8" | 10bar/145psi | 4940038 | 50/1100 |
| 1/2" | 10bar/145psi | 4940012 | 40/720 |
| 3/4" | 10bar/145psi | 4940034 | 26/598 |
| 1" | 10bar/145psi | 4940100 | 16/384 |
| 1 1/4" | 10bar/145psi | 4940114 | 12/264 |

TECHNICAL SPECIFICATIONS

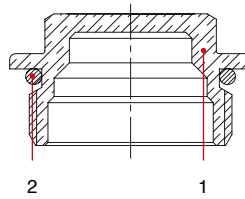
Body in nickel-plated brass.

O-ring in EPDM.

Maximum working temperature: 100°C.

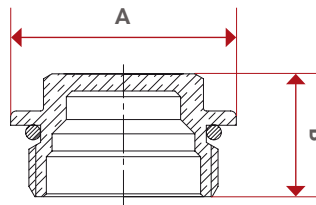
Threads: ISO228 (equivalent to DIN EN ISO 228 and BS EN ISO 228).

MATERIALS



| POS. | DESCRIPTION | N. | MATERIAL |
|------|-------------|----|----------------------------|
| 1 | Cap | 1 | Nickel-plated brass CW617N |
| 2 | O-ring | 1 | EPDM |

OVERALL DIMENSIONS



| | 3/8" | 1/2" | 3/4" | 1" | 1 1/4" |
|------------|------|------|------|------|--------|
| A | 24 | 29 | 33 | 39,5 | 48 |
| B | 15,5 | 16,5 | 17 | 21,5 | 22,5 |
| Kg/cm² bar | 10 | 10 | 10 | 10 | 10 |
| LBS - psi | 145 | 145 | 145 | 145 | 145 |

CERTIFICATIONS



098OR

O-RING FOR
CONICAL SEATS



| SIZE | CODE | PACKING |
|------|----------|---------|
| 1/2" | 098OR038 | 1/20000 |
| 3/4" | 098OR012 | 1/20000 |
| 1" | 098OR034 | 1/6000 |

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 - 15x2,5 | 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.

675

ROTARY
PIPE CUTTER



| CODE | PACKING |
|-----------|---------|
| 675012028 | 1/0 |

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



575

SHEAR
FOR MULTILAYER
AND PEX PIPES



| CODE | PACKING |
|-----------|---------|
| 575014026 | 1/0 |

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

575L

SPARE BLADE
FOR ART. 575



| CODE | PACKING |
|------|---------|
| 575L | 0 |

570

CONNECTING/
DISCONNECTING
TOOL



| CODE | PACKING |
|-----------|---------|
| 570014026 | 0 |



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.



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 with a pipe cutter
2. Trim the inside of the pipe
3. Proceed with the insertion of the pipe fitting
4. When the threaded part of the fitting has reached the pipe, screw it on until the thread has been fully inserted into the pipe

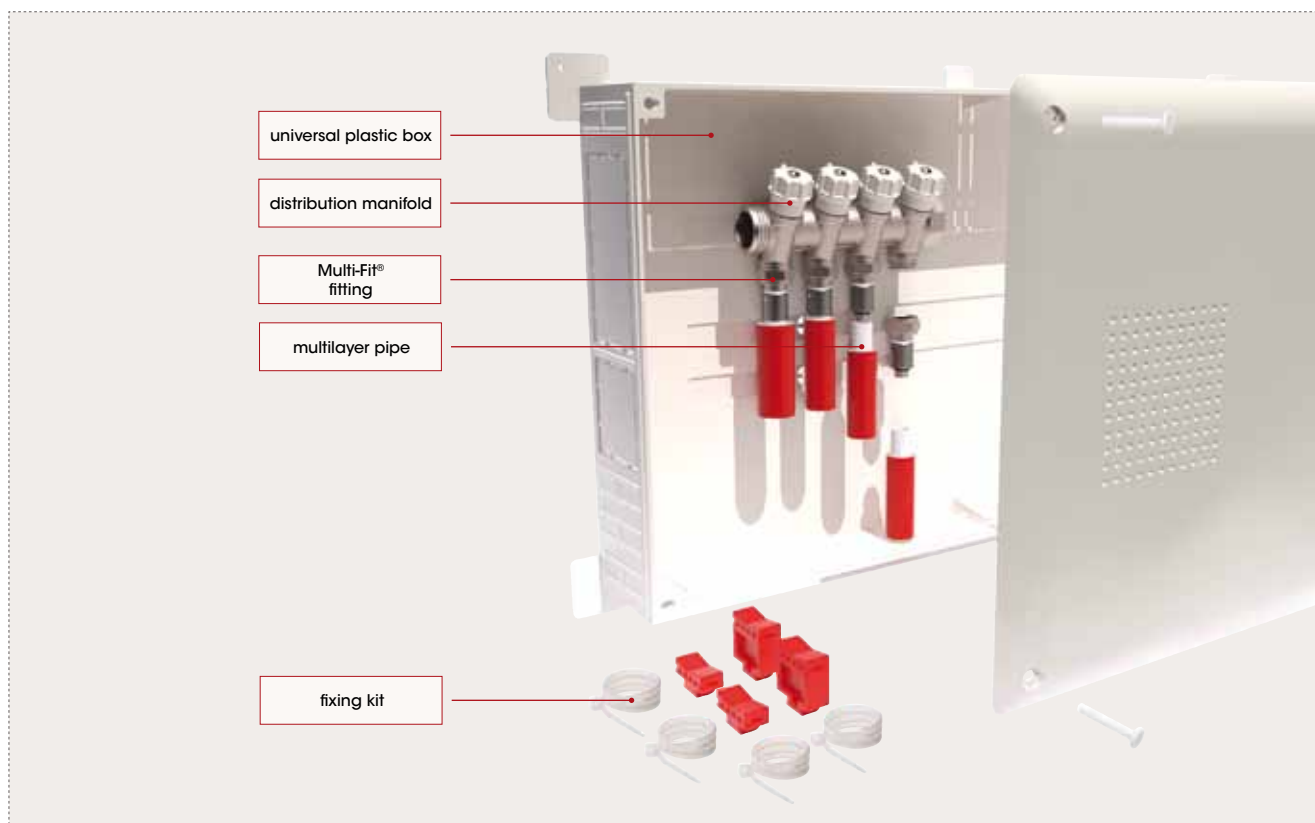


The fitting comes with an O-ring for conical seats. In the event the joint is to be made on flat seats, the above mentioned O-ring must be replaced with the flat gasket in the box.



INSTALLATION

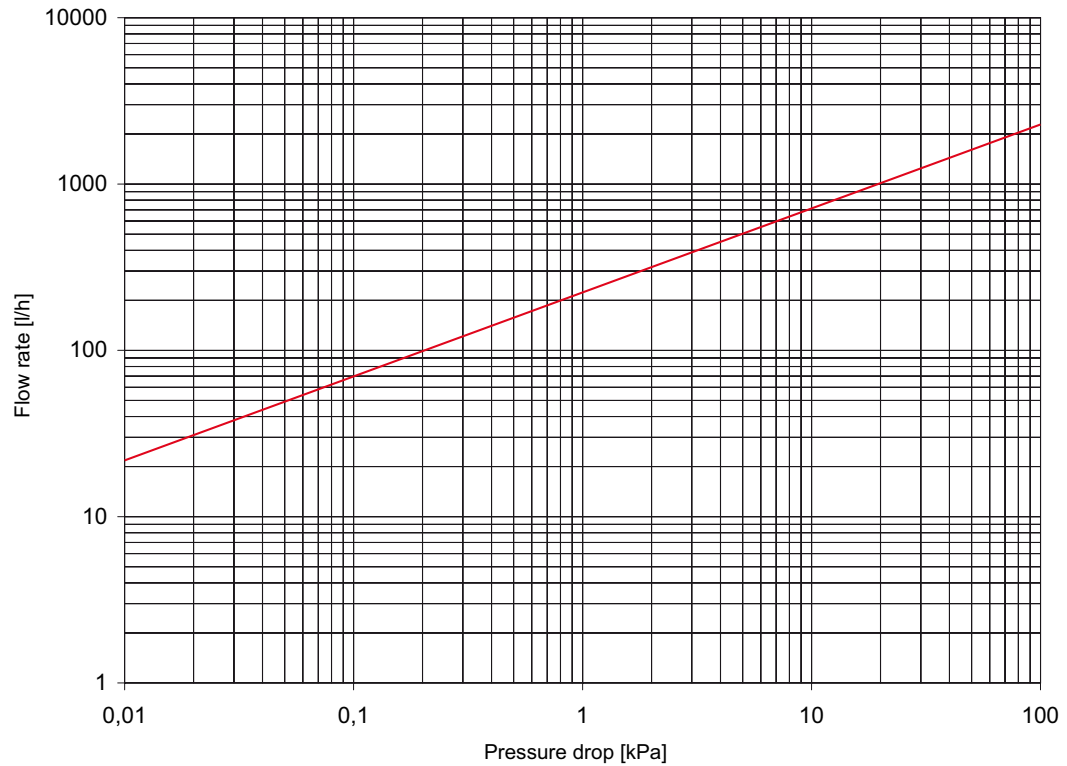
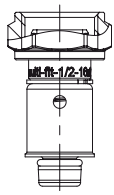
The Multi-fit® system is completed with the installation of the distribution manifold Art. 465 and built-in box Art. 499. This lay-out allows the planning engineer and installer to work in complete safety, also ensuring high quality system standards.



ADVANTAGES

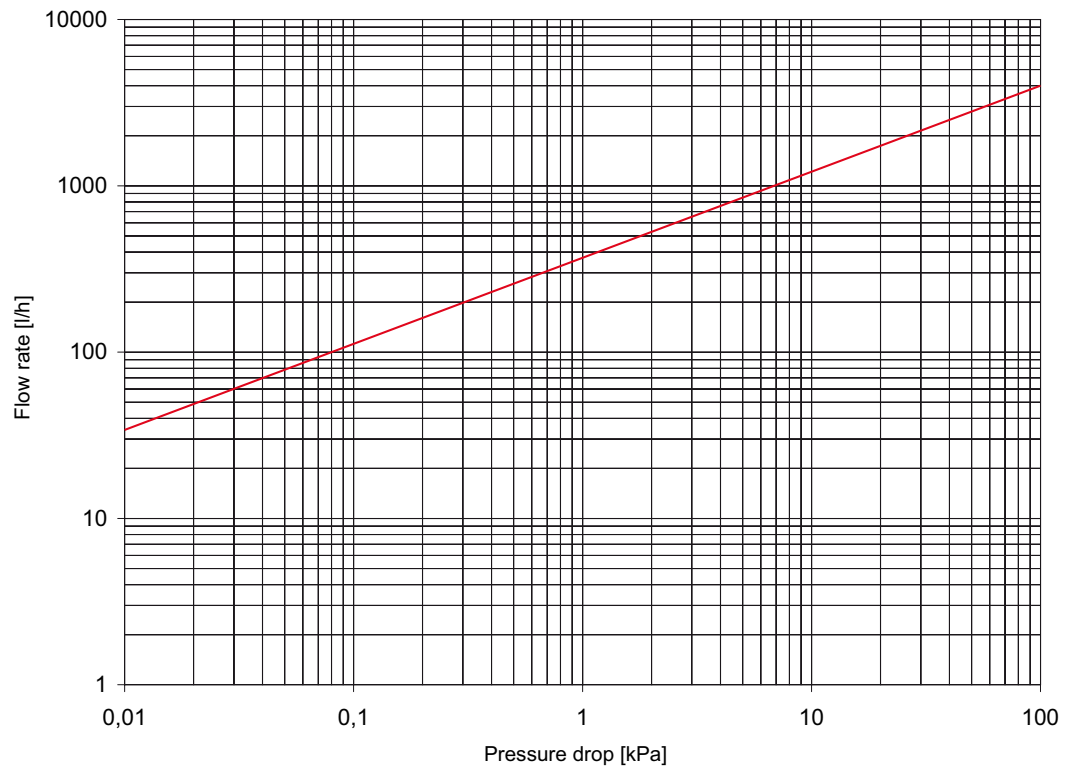
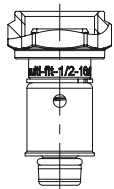
- Removal of all "T" joints
- Possibility to really exploit the ease of installation of the multilayer pipe.
- High water flow.
- Simple and fast repairs.
- Each utility is connected individually to one of the manifold outlets.

Pressure drops diagram: art. 510 - 14x2



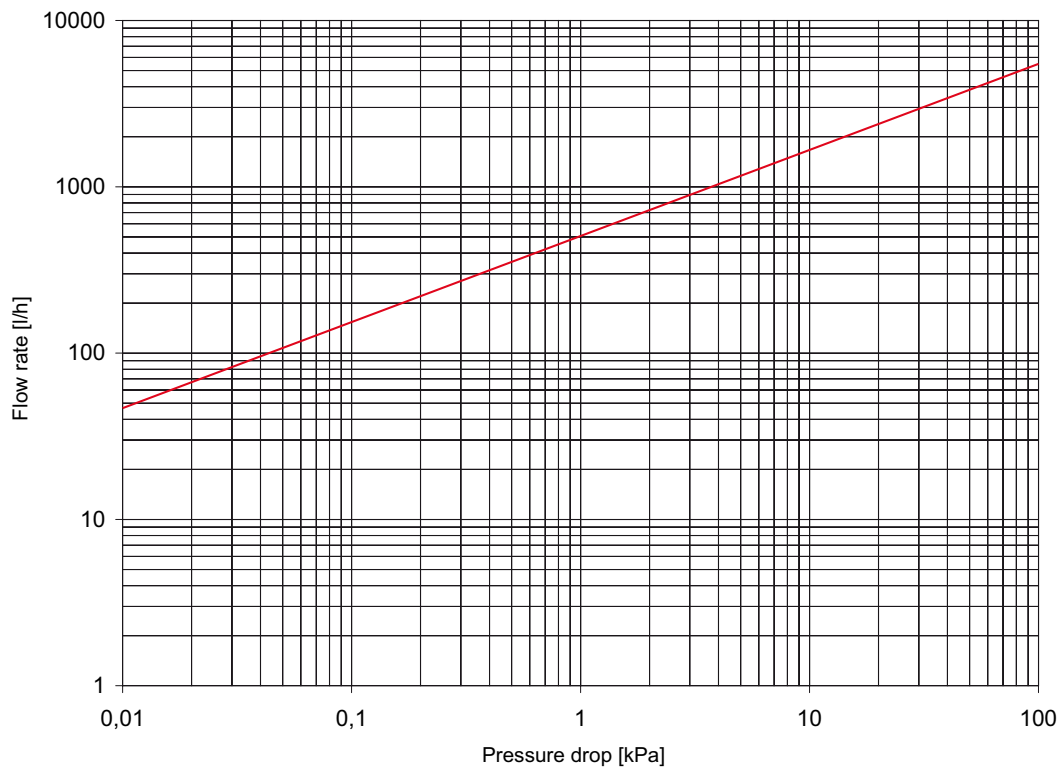
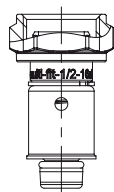
| | |
|-------------|-----------------|
| DIM. | 510 14x2 |
| Kv | 2,35 |

Pressure drops diagram: art. 510 - 16x2



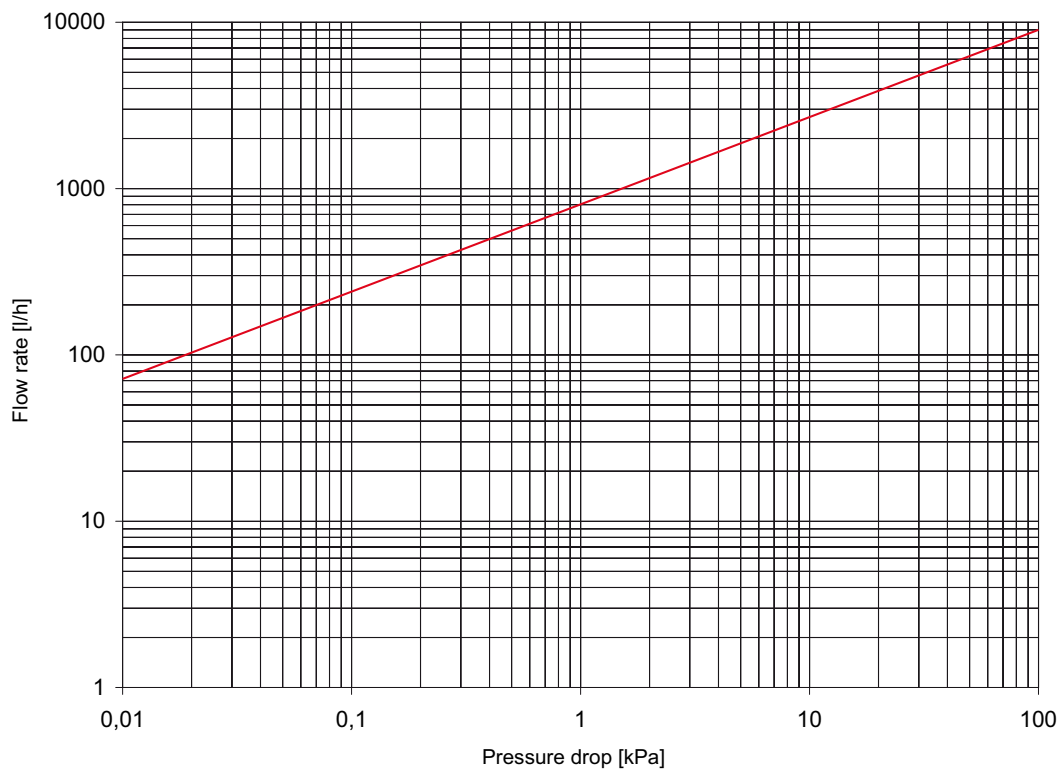
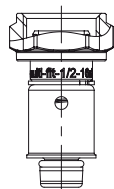
| | |
|-------------|-----------------|
| DIM. | 510 16x2 |
| Kv | 3,88 |

Pressure drops diagram: art. 510 - 18x2



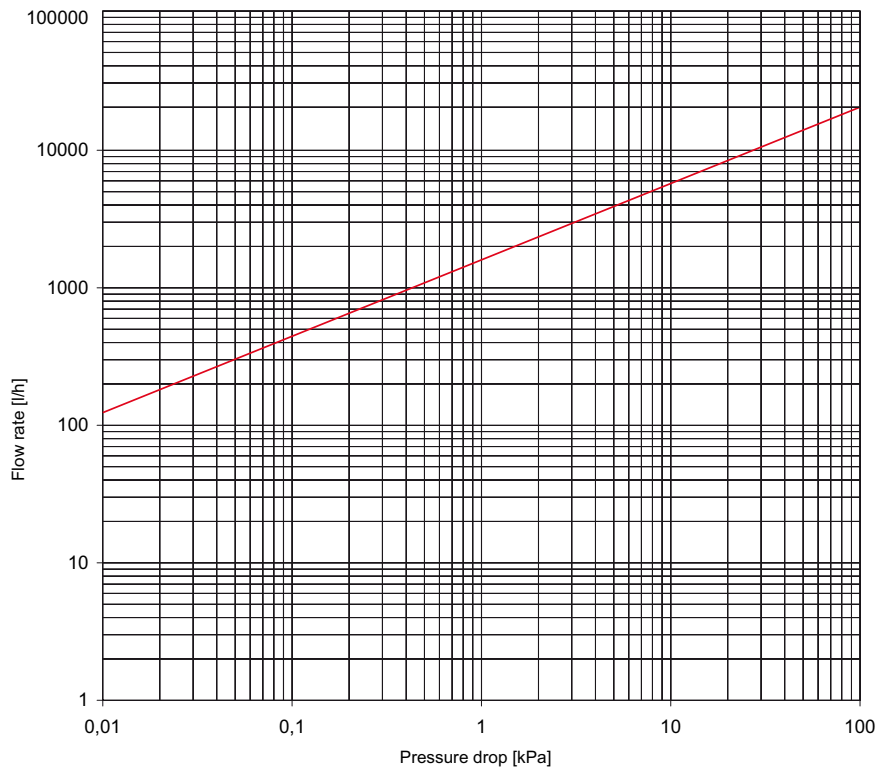
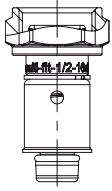
| | |
|-------------|-----------------|
| DIM. | 510 18x2 |
| Kv | 5,82 |

Pressure drops diagram: art. 510 - 20x2



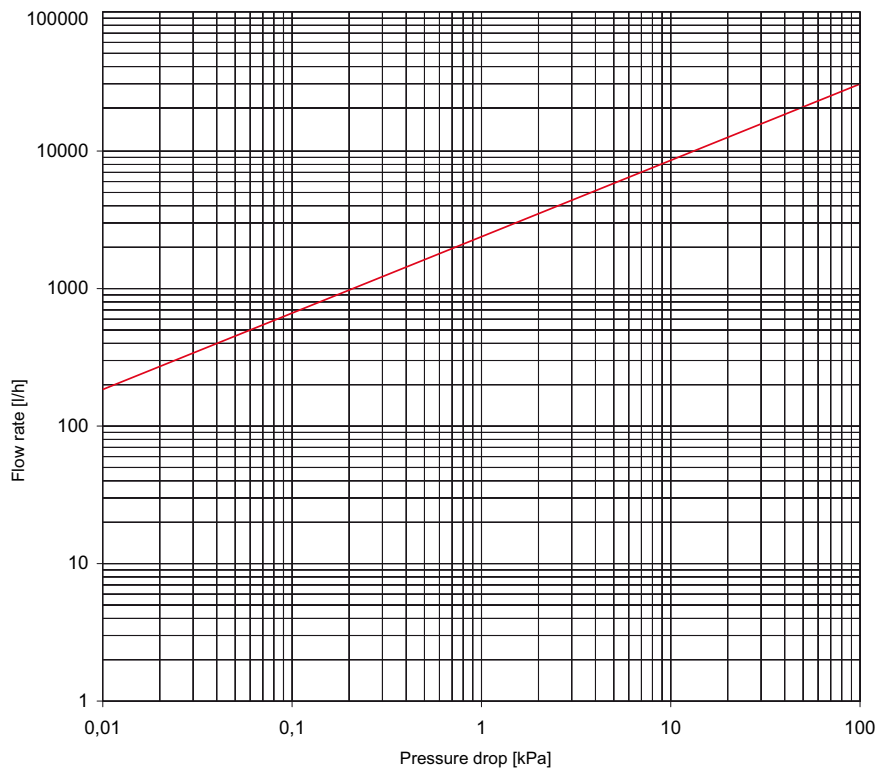
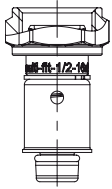
| | |
|-------------|-----------------|
| DIM. | 510 20x2 |
| Kv | 8,68 |

Pressure drops diagram: art. 510 - 26x3



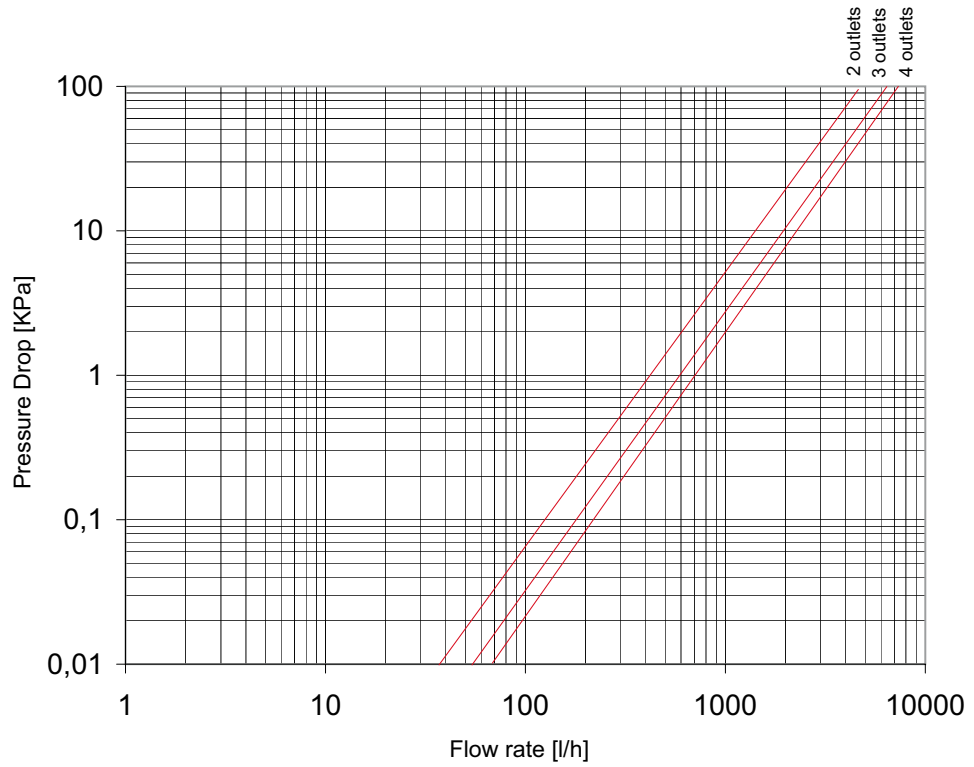
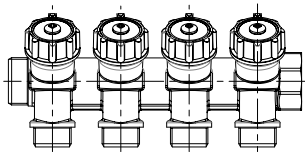
| | |
|-------------|-----------------|
| DIM. | 510 26x3 |
| Kv | 19,83 |

Pressure drops diagram: art. 510 - 32x3



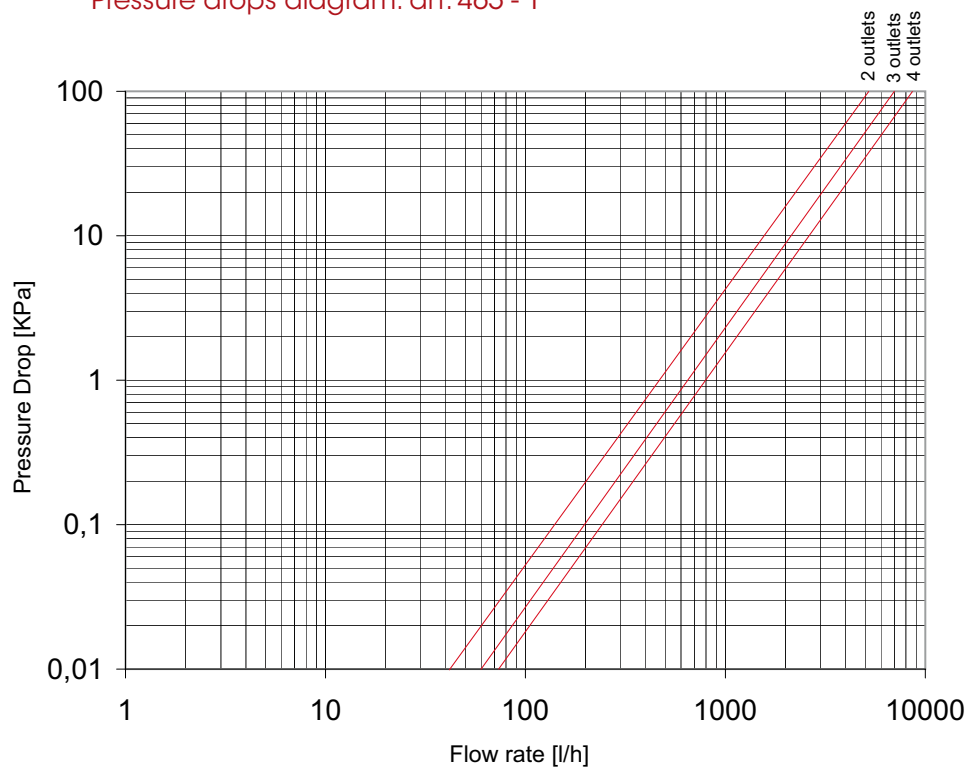
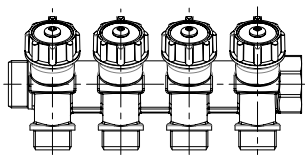
| | |
|-------------|-----------------|
| DIM. | 510 32x3 |
| Kv | 31,04 |

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



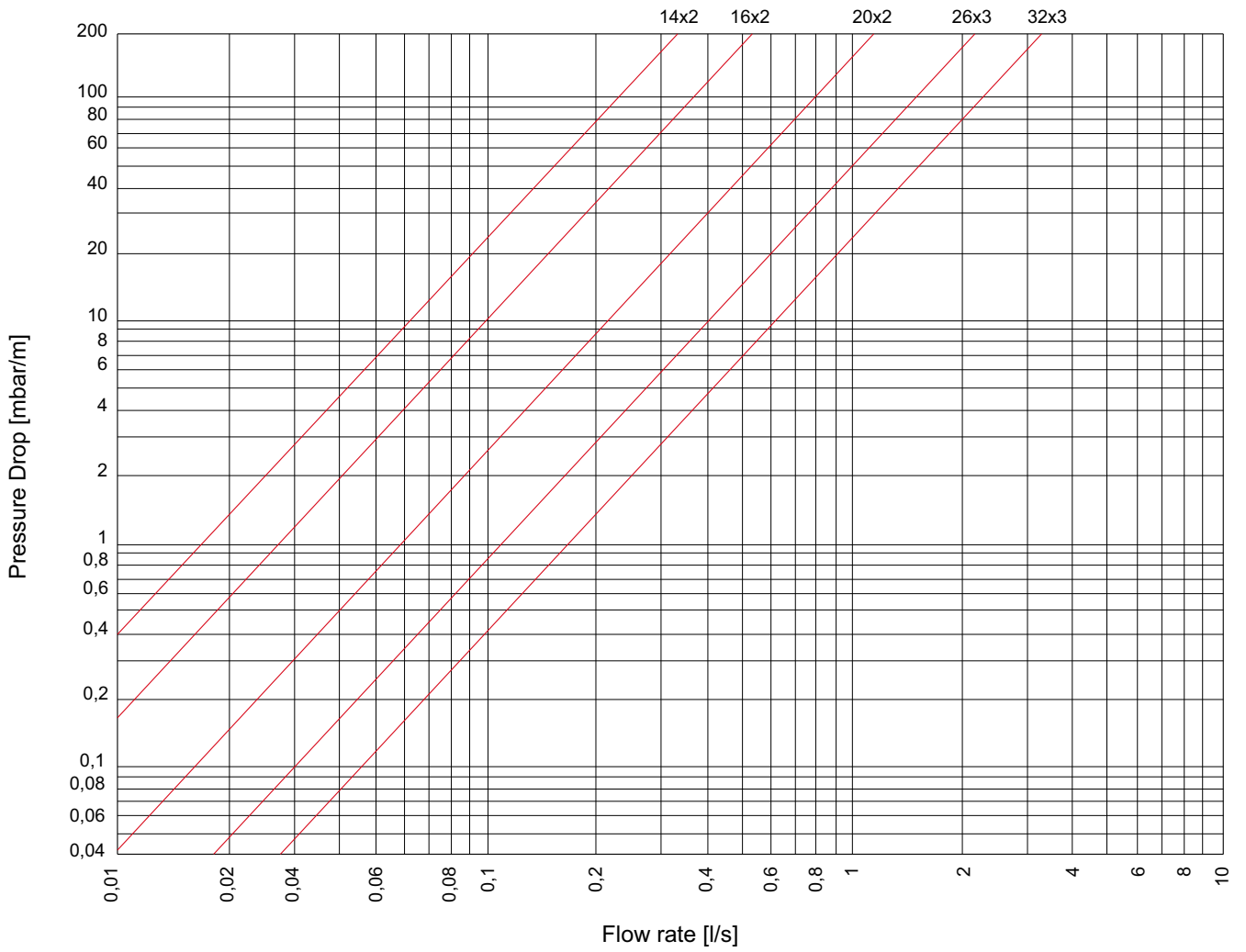
| | | | |
|----------------|-------------|-----|-----|
| DIM. | 3/4" | | |
| Outlets | 2 | 3 | 4 |
| Kv | 4,7 | 6,4 | 7,6 |

Pressure drops diagram: art. 465 - 1"

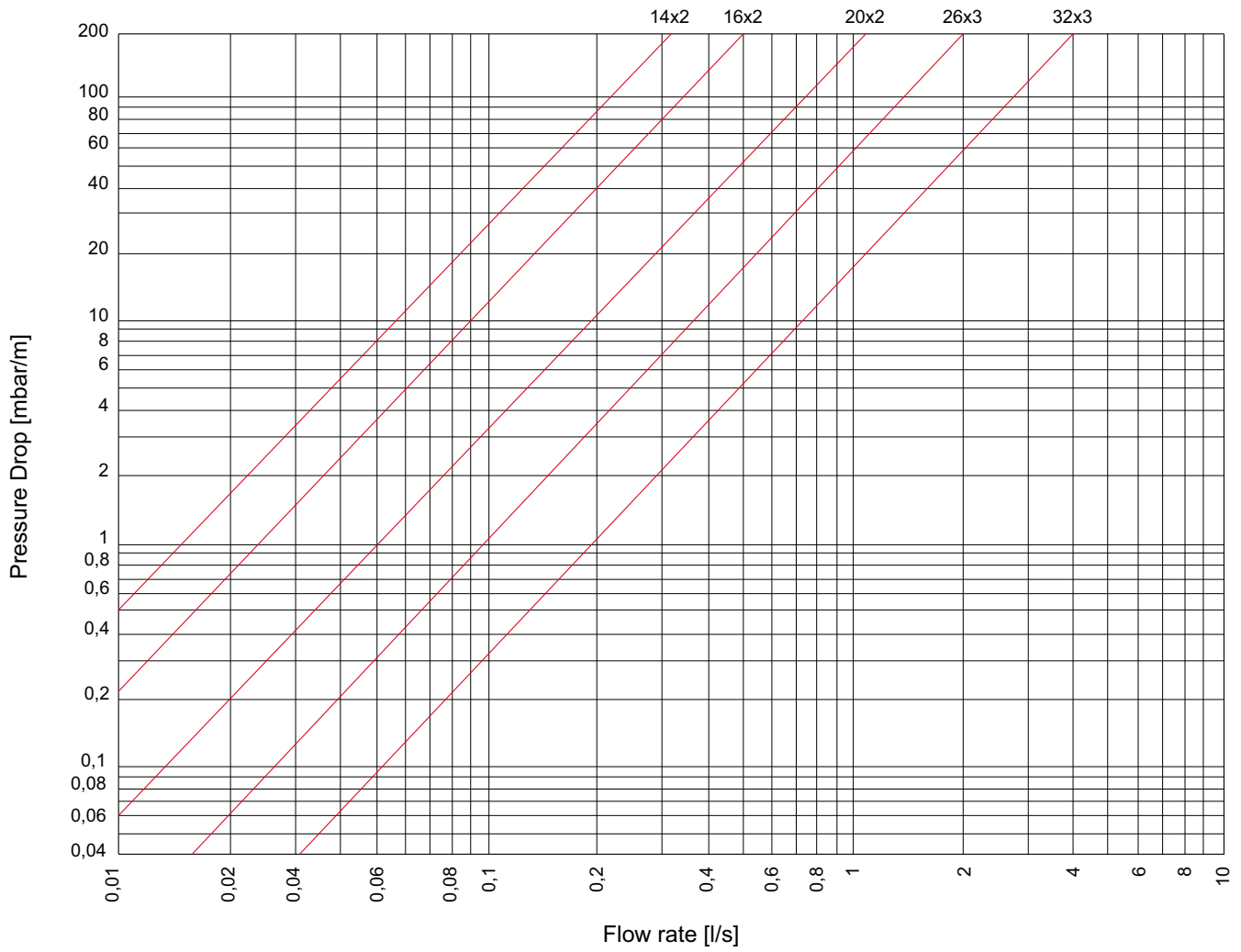


| | | | |
|----------------|-----------|-----|-----|
| DIM. | 1" | | |
| Outlets | 2 | 3 | 4 |
| Kv | 5,0 | 7,0 | 8,5 |

Pressure drops 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:

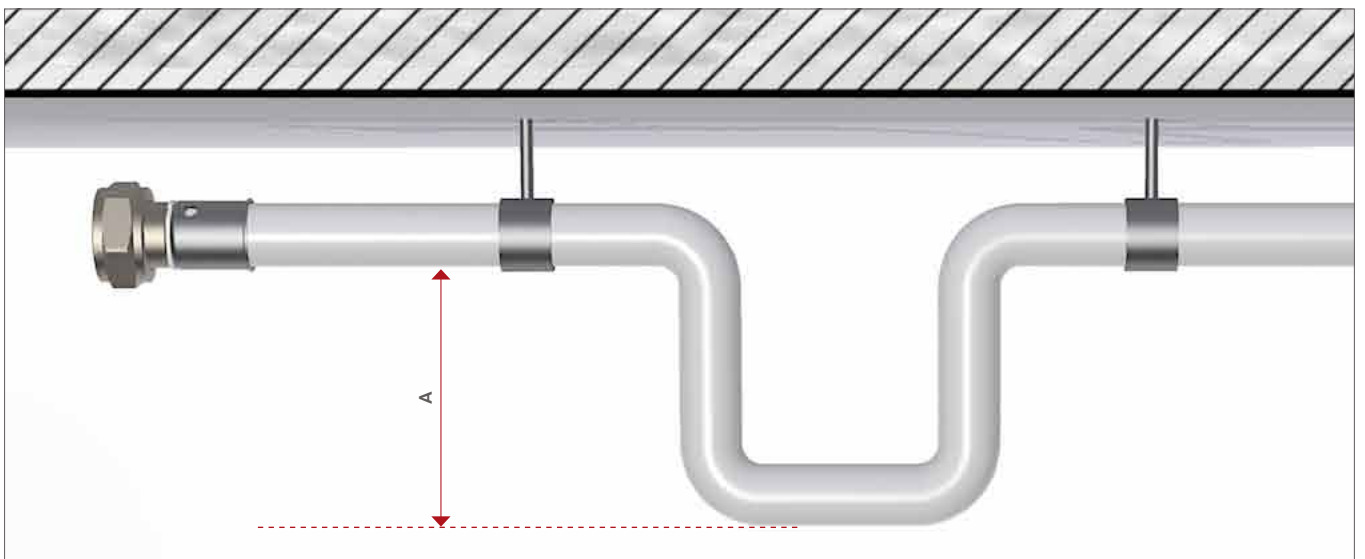
$$A = c * (D * \Delta L)^{0.5}$$

A = loop length [mm]

C = pipe constant [=33]

D = external pipe diameter [mm]

ΔL = piping expansion [mm]





NOTES

A series of horizontal dashed lines for taking notes, starting from the top right of the 'NOTES' header and extending down the page.



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