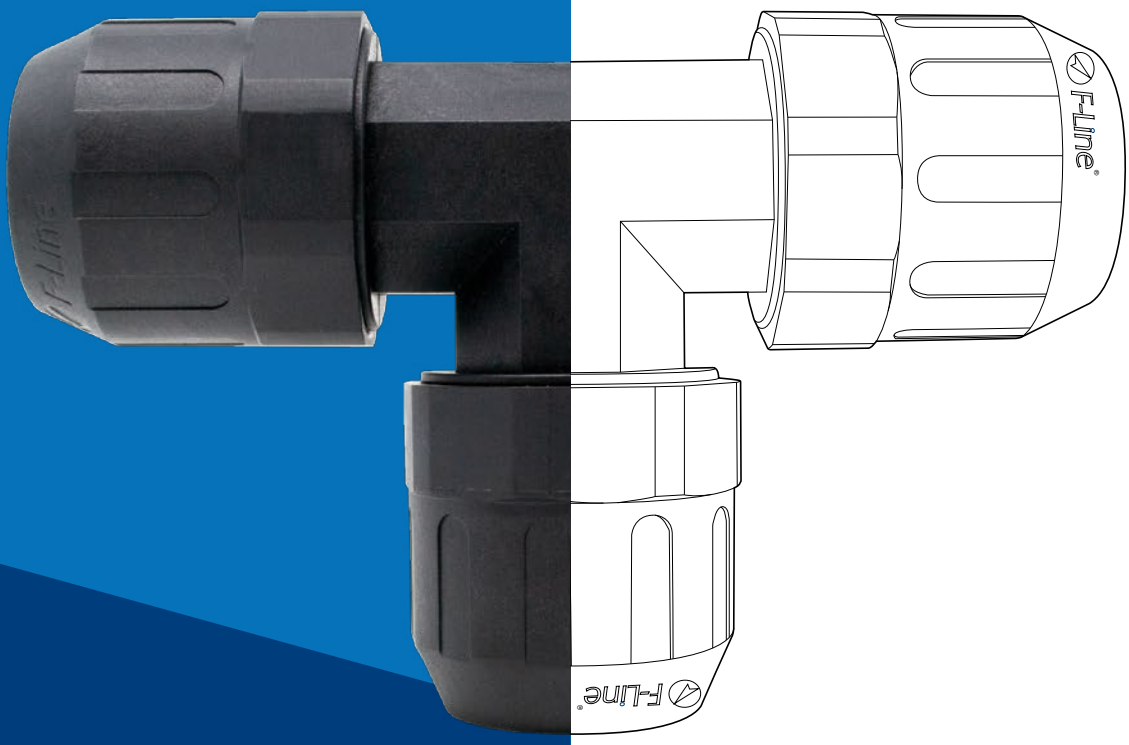
F-Line®.PRO

AIR DISTRIBUTION NETWORK



TierreGroup®


F-Line®.PRO

TierreGroup®

TierreFittings®

F-Line®.PRO

NET.Fit®

INOX.Fit®

F-Line®.PRO

PLUS

Strong construction and rated up to **16 BAR**

LIGHTWEIGHT AND SUITABLE FOR OVERHEAD INSTALLATIONS

Simple and fast installation time due to the **INTEGRATED PUSH-IN SYSTEM (Ø16, 20, 25 & 40)**

LAYOUT MODIFICATION SYSTEM (Ø20, 25 & 40)

VISIBLE INDICATOR WHEN FITTING NUT IS FULLY TIGHTENED (Ø20, 25, 40 & 63)

DOUBLE PROFILE SEALS BEFORE GRIPPING CLAW DESIGN (Ø20, 25, 40 & 63), to prevent tube scratches and avoid leaks

REINFORCED PA MATERIAL (Ø20, 25, 40 & 63)

PRE-INSTALLED LOCKING CLIP (Ø16), to prevent accidental disconnections

F-LINE®.PRO TEN-YEAR WARRANTY

RIGID TUBES

BRACKETS

FLEXIBLE TUBES

FITTINGS Ø16

Male connector BSPP thread

Swivel male elbow BSPP thread

Union connector

Union elbow

Union tee

Locking clip

FITTINGS Ø20 - Ø25 - Ø40 - Ø63

WALL APPLIQUES

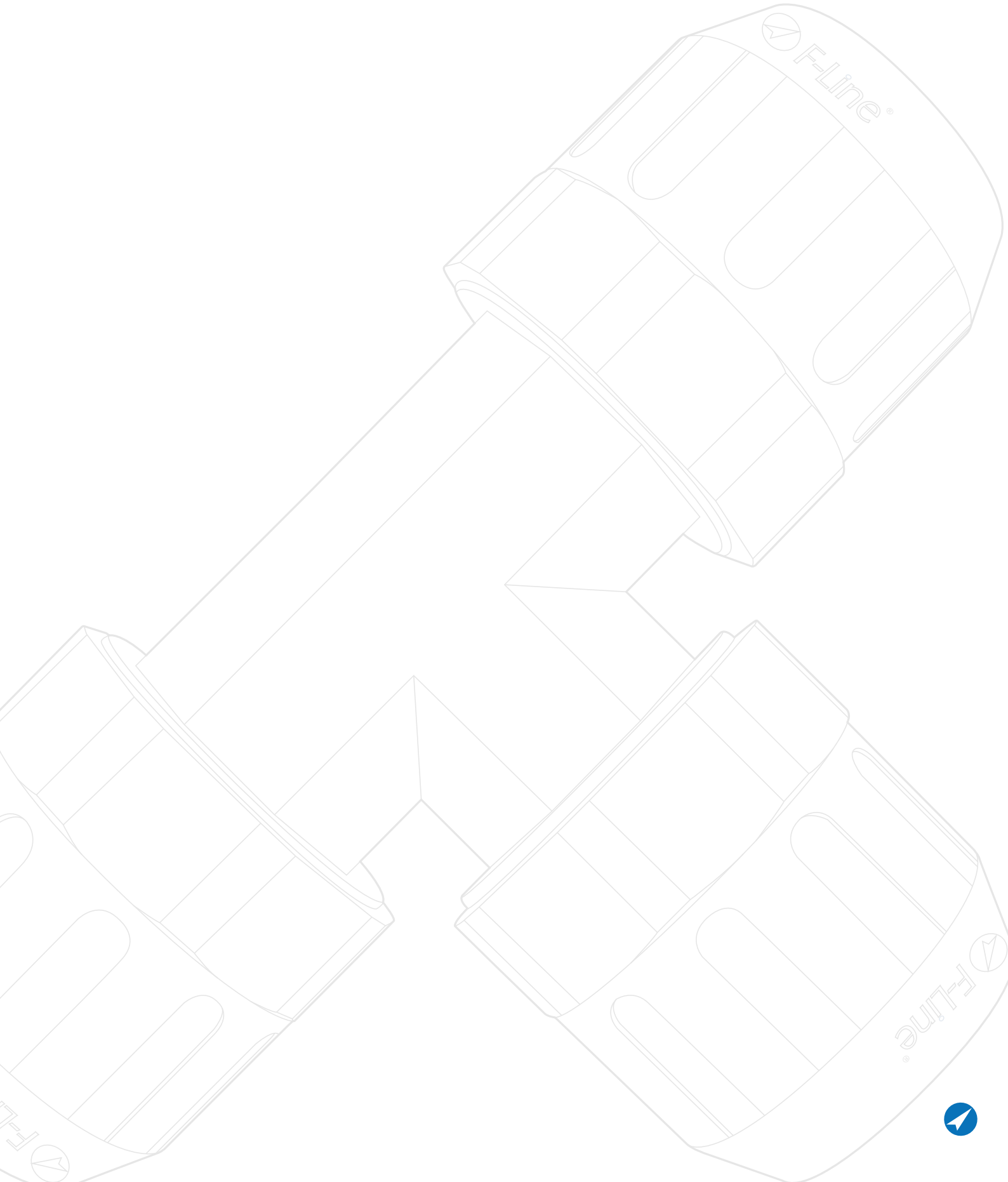
VALVES

INSTALLATION ACCESORIES

F.R.L. UNITS

QUICK COUPLINGS

TECHNICAL & COILED TUBES


F-Line
F-Line
F-Line

TECHNICAL SPECIFICATIONS

The F-Line.PRO system has been designed for the realization of networks for compressed air, vacuum, neutral gases and for the construction of industrial plants. Thanks to the very long experience in the industrial field, with focus on pneumatic applications, Tierre Group created a new system, highly technological. F-Line.PRO is a quick assembly system with a perfect pneumatic seal and a remarkable mechanical endurance. The special aluminium alloy of the pipes, coated by hot electrostatic paint, and the high performance reinforced polymer used for the fittings are the best solution for compressed air networks and minimize the risk of corrosion, always granting the best possible quality of the air for a long life of the system and of the connected tools in normal working conditions. Easy to be assembled, thanks to the low weight components (tubes, fittings and accessories), connection without glue or welding needs, reusable, modular, these are only some of the advantages when choosing F-Line.PRO.

TEN-YEAR WARRANTY

Tierre Group S.p.A. guarantees that all F-Line.PRO products are free from defects in material and workmanship, as they are made according to the guidelines of good manufacturing practices, both national and international.
Unless otherwise specified by Tierre Group S.p.A., this Warranty is valid for ten years from the date of shipment of each individual product belonging to the F-Line.PRO range, provided it is used correctly and in accordance with the instructions provided or available on the F-Line.PRO website.

PLANT DESIGN

Here below you will find some tables and technical details to be considered as suggestions for the design of an efficient network. We suggest, when possible, to create networks through a closed ring. This solution will equilibrate the flow and will work as an air storage, keeping a stable air pressure. Moreover, a closed air ring is the best solution in case of maintenance and modifications, avoiding the need of a complete stop of the system. In order to reduce shocks and vibrations, we recommend you to use FPTUC tubes (see page 36) for connecting the network to the air compressor.

COMPRESSOR'S INDICATIVE AIR DELIVERY (AT 7 BAR)

KW	1,5	3	4	5,5	7,5	11	12,5	15	18	22	29	37	45	55
CV	2	4	6	7,5	10	15	17	20	25	30	40	50	60	75
Nl/min	230	400	600	900	1200	1750	2000	2500	3000	3500	4500	5500	7000	8500

PLANT SIZING

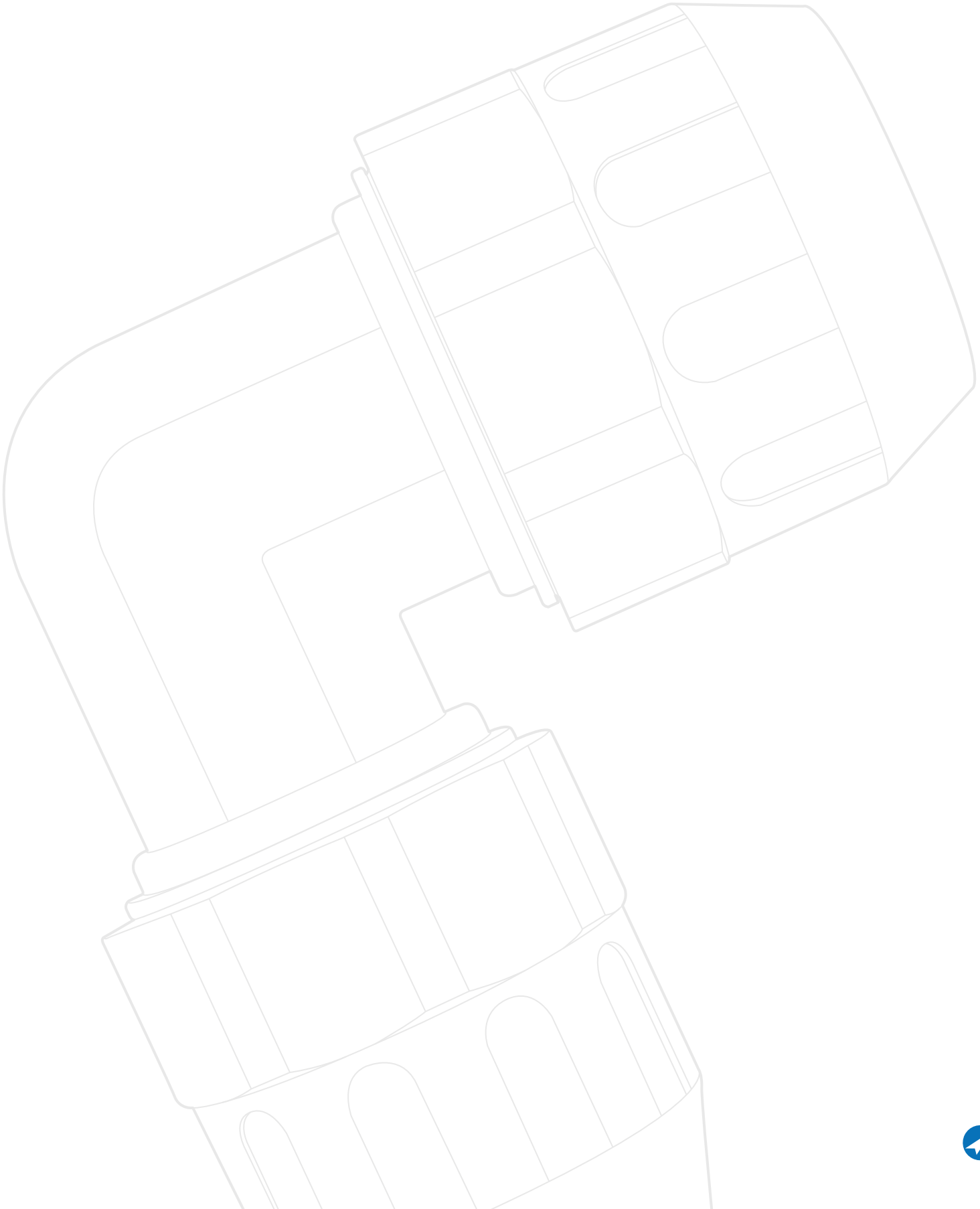
According to the distance from the compressor to the most distant user and to the required flow, this table let you calculate the best F-Line.PRO diameter for your network, taking in consideration that the values refer to a closed ring at a pressure of 8 bar with a maximum pressure loss of 5%.

		METERS										
Nm^{3}/h	Nl/min	25	50	100	150	200	300	400	500	1000	1500	2000
36	600	20	20	20	20	25	25	25	25	40	40	40
54	900	20	20	20	25	25	25	40	40	40	40	40
72	1200	20	25	25	25	40	40	40	40	40	40	63
105	1750	25	25	40	40	40	40	40	40	63	63	63
150	2500	25	40	40	40	40	40	40	63	63	63	63
210	3500	40	40	40	40	40	63	63	63	63	63	63
270	4500	40	40	40	40	63	63	63	63	63	63	
360	6000	40	40	40	63	63	63	63	63			
510	8500	40	40	63	63	63	63	63	63			
720	12000	40	63	63	63	63						
900	15000	63	63	63	63							
1080	18000	63	63	63								
1260	21000	63	63	63								
1560	26000	63	63									
1860	31000	63	63									
1980	33000	63										
2640	44000	63										

FLOW DROPS FITTINGS TABLE

This table is an another useful help in order to get a right plant dimensioning. Each fitting determines a loss of charge and the table indicates the correspondence to pipe meters for every assembled fitting. The equivalent length obained from all fittings will be added to the average length of the installed pipe.

	FITTINGS						
SIZES	FPC FPCA	FPUC	FPUL	FPUT	FPGT	FPBR	FPWLM
20	0,2	0,2	1,2	0,2	-	-	-
25	0,2	0,2	2	0,3	1,8	2	4
40	0,3	0,3	3,6	0,4	3,5	4	-
63	0,4	0,5	5	0,5	-	7	-



THERMAL EXPANSIONS

It's important to check the dimensional changes due to temperature variations in order to avoid that the expansional contraction effects may cause heavy damages to the plant; for that reason it's necessary to sustain and bracket the plant in order to let the pipeline free slide between two fixed points or otherwise to insert a compensator between two fixed points if they are positioned at a distance which may cause sensible contractions/expansions.
For the system F-Line.PRO with aluminum tube this coefficient **"d"** is equal to 0,023 mm/m/°C.

Aluminum thermal expansion factor: 0,023 mm/m/°C

CONTRACTION - EXPANSION OF ALUMINUM TUBE

L (m)	T MIN	T MAX	ΔT	ΔL
10	5°C	45°C	40	9,2 mm
20	5°C	45°C	40	18,4 mm
30	5°C	45°C	40	27,6 mm
50	5°C	45°C	40	46 mm
100	5°C	45°C	40	92 mm

Table of contraction - expansion depending on the length L of a straight stretch and the temperature difference ΔT.

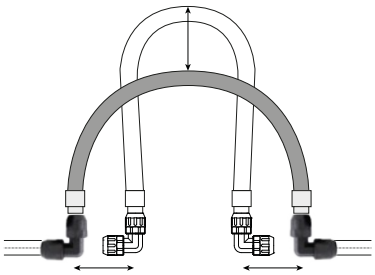
The design and the construction of any plant will consider this phenomenon which is calculated with the following formula:

$$\Delta L = d \times L \times \Delta T$$

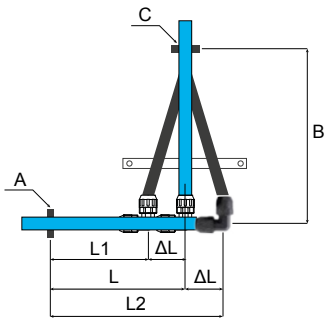
LEGEND:
d= coefficient of lateral expansion
L= length of piping
ΔT= difference of temperature in centigrade
ΔL= difference of length (expansion or contraction)

example: temperature is +10°C; length of piping 20m; working temperature 35°C

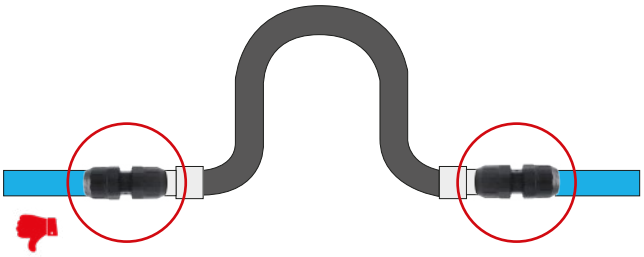
$$\Delta T = 35 - 10 = 25\,°C$$
$$\Delta L = 0{,}023 \times 20 \times 25 = 11{,}5\ mm$$



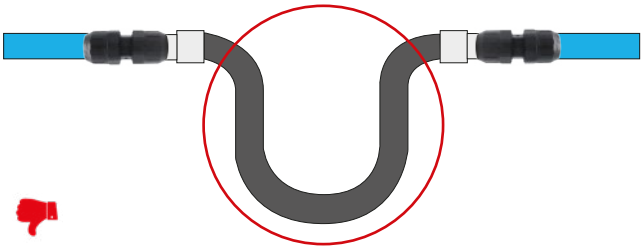
DN	FLEXIBLE TUBE LENGHT
25	1 m / 2 m
40	1,5 m / 3 m
63	1,5 m / 3 m



L: pipeline length at the installation
L1: length with minimum temperature
L2: length with maximum temperature
ΔL: length difference due to ΔT
B: length of the arms of the Lira or of the direction change
A: Sliding bracketing
C: Fixed bracketing



Avoid anchoring the expansion joint to two connections aligned to the same plan.



Always install the expansion joint facing upwards and not downwards in order to avoid a deposit of the condensation.

This is the correct application of the installation of expansion joint. It should be facing up and with two elbows aligned. You need also to insert two clips on the pipe aluminum fasteners close to the installation of an expansion joint.

ASSEMBLY & DISASSEMBLY INSTRUCTIONS FOR Ø16

F-Line.PRO system has been studied and realized in order to obtain an easy, fast and safe installation.

These assembly and disassembly instructions are intended for the installer / maintainer of the F-Line.PRO system. They intend to provide a support tool for correct installation, in order to provide the best possible product performances and avoid accidents during installation and subsequent use of the system.

Any use other than the construction of a compressed air, vacuum and neutral gases networks must be considered improper and, therefore, not allowed. Improper use exempts Tierre Group S.p.a. from any liability for any damage to persons or properties. Failure to comply with the conditions of use and these instructions automatically invalidates any type of warranty.

The installation, repair and maintenance operations must be carried out by suitable and qualified people and must be carried out in full compliance with the reference standards for the safety of people. The installer is responsible for everything concerning the safety of the installed products.

ASSEMBLY INSTRUCTIONS

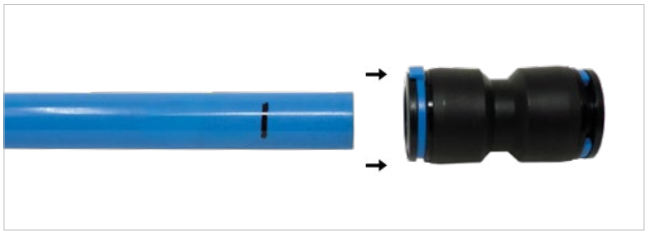
Always use the personal protective equipment required by the regulations. In particular, it is recommended to use protective gloves that allow a firm grip and that are able, at the same time, to prevent any injuries.

It is recommended to provide one or more drainage points for any condensation. The drainage points must be made at the lowest points of the main pipeline by using Tee fittings.

Prepare the tube for assembly. If necessary, cut the pipe using the appropriate FPTT tool. The pipe cut must be perpendicular to its axis (90 ° cut).

Always deburr the pipe, externally and internally, eliminating sharp edges, before making the connection with the fittings. Use the FPUS accessory.

By using a meter make a marking at 20mm distance from the end of the pipe in order to identify the correct and complete insertion point of the pipe into the fitting.



The F-Line.PRO system for 16mm diameter is push-in.
Insert the pipe into the fitting WITHOUT removing the blue locking clip. Ensure that the fitting is supplied with the locking clip already installed before making the connection. If the clip is not installed, install it prior to inserting the pipe. To facilitate insertion, align the pipe with the gasket and then fully insert the pipe.

Verify the correct insertion by checking the marking previously made on the pipe with respect to the insertion of the nut (the sign must be near the end of the nut).

It is recommended to carry out a preventive test of the system or section before starting to use it.

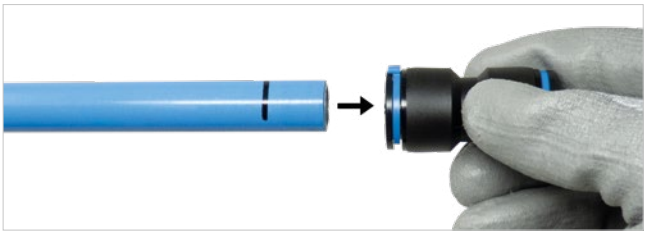
DISASSEMBLY INSTRUCTIONS

It is recommended to check that the system is off and that there is no residual pressure in before carrying out any disconnection.

Never use unsuitable tools that could compromise or damage the fittings (eg multigrip pliers). The use of work gloves is recommended.

Remove the light blue locking clip by pulling it from the tab.

Press the black collet located at the end of the fitting and, while keeping it pressed, pull the pipe out longitudinally without tilting it inside the fitting.



If necessary, the pipe can be reconnected to the fitting, making sure to first reposition the locking clip between the collet and the body of the fitting (see assembly instructions).

ASSEMBLY & DISASSEMBLY INSTRUCTIONS FOR Ø20, Ø25 & Ø40

F-Line.PRO system has been studied and realized in order to obtain an easy, fast and safe installation.

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The installation, repair and maintenance operations must be carried out by suitable and qualified people and must be carried out in full compliance with the reference standards for the safety of people. The installer is responsible for everything concerning the safety of the installed products.

ASSEMBLY INSTRUCTIONS

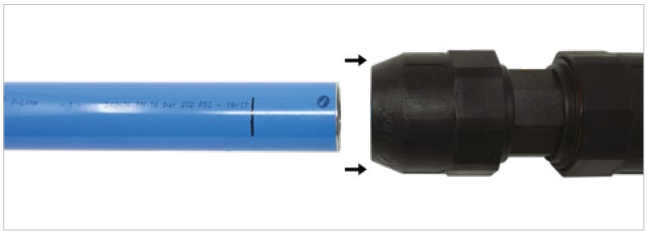
Always use the personal protective equipment required by the regulations. In particular, it is recommended to use protective gloves that allow a firm grip and that are able, at the same time, to prevent any injuries.

It is recommended to provide one or more drainage points for any condensation. The drainage points must be made at the lowest points of the main pipeline by using Tee fittings.

Prepare the tube for assembly. If necessary, cut the pipe using the appropriate FPTT tool. The pipe cut must be perpendicular to its axis (90 ° cut).

Always deburr the pipe, externally and internally, eliminating sharp edges, before making the connection with the fittings. Use the FPUS accessory.

Mark the pipe using the calectometer located on the handle of the appropriate tightening wrench (FPCH) in order to identify the correct and complete insertion point of the pipe into the fitting.



The F-Line.PRO system for diameter 20, 25 and 40 is a push-in system. Insert the pipe into the fitting WITHOUT unscrewing the nut (check that the fitting has been supplied with a completely screwed nut before connection: the screwing witness must not be visible). In order to facilitate insertion, center the tube with respect to the gasket and, subsequently, carry out the complete insertion.

Verify the correct insertion by checking the marking previously made on the pipe with respect to the insertion of the nut (the sign must be near the end of the nut).

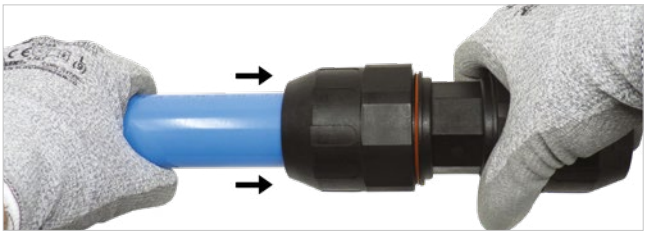
It is recommended to carry out a preventive test of the system or section before starting to use it.

DISASSEMBLY INSTRUCTIONS

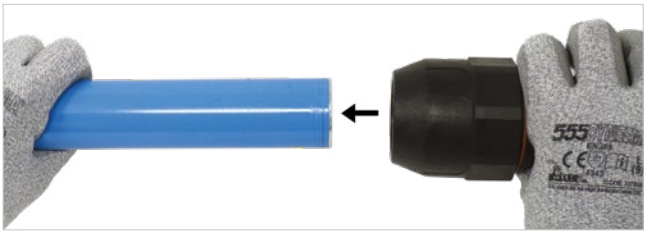
It is recommended to check that the system is off and that there is no residual pressure in before carrying out any disconnection.

Use the dedicated FPCH keys for the unscrewing operations. Never use unsuitable tools that could compromise or damage the fittings (eg multigrip pliers). The use of work gloves is recommended.

Unscrew the nut until the screwing witness is completely visible. Be careful not to insert the tube into the fitting during this step.



Push the tube slightly towards the fitting until the locking ring is disarmed.



Manually remove the tube lengthwise, without tilting the tube inside the fitting.

In case of need, it is possible to re-connect the pipe to the fitting taking care to re-screw the nut in advance until the screwing witness completely disappears.

The F-Line.PRO system has been designed to make maintenance and expansion operations as easy as possible. It is possible to disconnect the pipe from the fitting simply by unscrewing the nut in the event that it is then necessary to reconnect the same pipe in the same position.

In this case, unscrew the nut being careful not to move it from its longitudinal position with respect to the pipe. The same nut can be screwed back with the tube inserted to restore the original situation.

ASSEMBLY & DISASSEMBLY INSTRUCTIONS FOR Ø63

F-Line.PRO system has been studied and realized in order to obtain an easy, fast and safe installation.

These assembly and disassembly instructions are intended for the installer / maintainer of the F-Line.PRO system. They intend to provide a support tool for correct installation, in order to provide the best possible product performances and avoid accidents during installation and subsequent use of the system.

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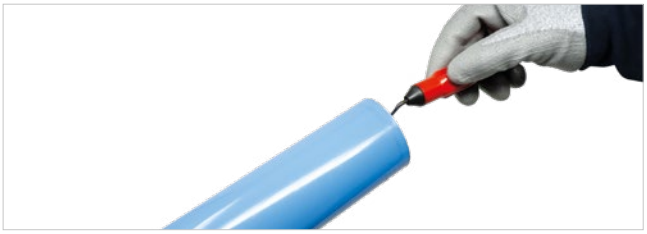
ASSEMBLY INSTRUCTIONS

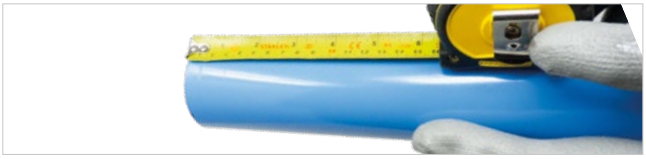
Always use the personal protective equipment required by the regulations. In particular, it is recommended to use protective gloves that allow a firm grip and that are able, at the same time, to prevent any injuries.

It is recommended to provide one or more drainage points for any condensation. The drainage points must be made at the lowest points of the main pipeline by using Tee fittings.

Prepare the tube for assembly. If necessary, cut the pipe using the appropriate FPTT tool. The pipe cut must be perpendicular to its axis (90 ° cut).

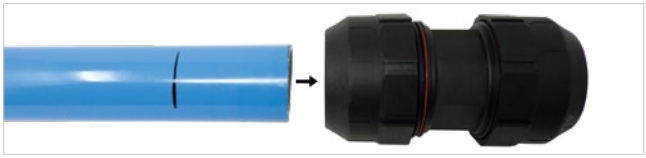


Always deburr the pipe, externally and internally, eliminating sharp edges, before making the connection with the fittings.



By using a meter make a marking at 90mm distance from the end of the pipe in order to identify the correct and complete insertion point of the pipe into the fitting.

Prepare the fitting by unscrewing the locknut, leaving 2–3 turns of thread so that the internal clamp can fully open.



Insert the pipe into the fitting, making sure to align it with the gasket. Then, fully insert the pipe until it reaches the stop inside the fitting.

Manually tighten the fitting's locknut to prevent the pipe from slipping out during the assembly phase with wrenches.

Then, complete the tightening using the appropriate FPCH and FPCCH tools, making sure the locknut covers the orange tightening indicator located on the body of the fitting.

Verify the correct insertion by checking the marking previously made on the pipe with respect to the insertion of the nut (the sign must be near the end of the nut).

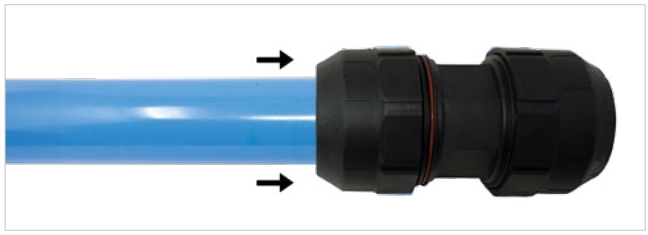
It is recommended to carry out a preventive test of the system or section before starting to use it.

DISASSEMBLY INSTRUCTIONS

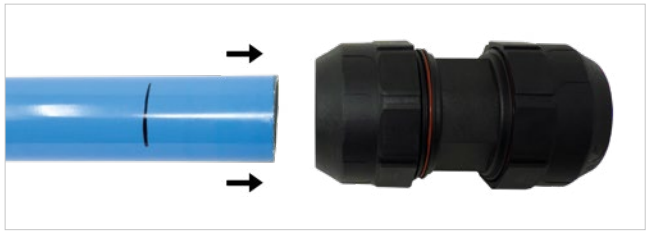
It is recommended to check that the system is off and that there is no residual pressure in before carrying out any disconnection.

Use the dedicated FPCH and FPCCH keys for the unscrewing operations. Never use unsuitable tools that could compromise or damage the fittings (eg multigrip pliers). The use of work gloves is recommended.

Unscrew the nut until the screwing witness is completely visible.



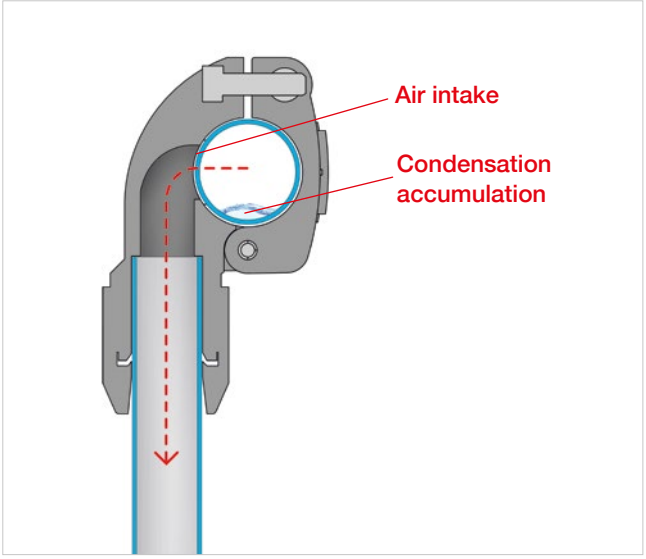
Push the tube slightly towards the fitting until the locking claw is disarmed.



Manually remove the tube lengthwise, without tilting the tube inside the fitting.

If necessary, the pipe can be reconnected to the fitting by repeating the instructions provided on the previous page.

ASSEMBLY INSTRUCTION - QUICK BRANCH



F-Line.PRO quick branches allow to get a quick branch from the main conduit without cutting the pipeline and without having the need to prepare the pipes in advance. Moreover, the air intake is positioned above the level at which the condensation accumulation could be inside the tube in order to ensure an excellent air quality.

Place the quick branch in the opposite direction of its final installation position. Use the markers on the body to center it correctly on the tube.

By using the correct side of the centering template, corresponding to the guide on the fitting, position it at the center of the hole and use the drilling tool to make a pre-hole on the pipe.

Once the pipe is pre-drilled and the center of the hole is identified, remove the centering template and use the drilling tool to complete the drilling of the pipe, taking care not to hit the opposite side of the pipe with the tip of the mill tool.

Remove the quick branch and deburr the hole in order to avoid any residue remaining on the edges or on the surface of the pipe.

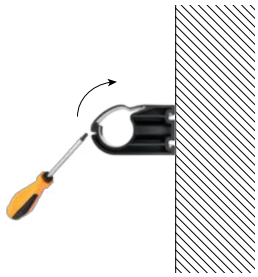
Position the mill vertically, allowing the hook to fall inside the outline of the tip and remove the residual aluminum disk.

Fix the branch so that the internal part will stay correctly in the hole. F-Line.PRO branches have a guided air intake that go inside the tube so that, once they are fixed, it will be impossible for them to move from their position. This system ensure the functioning, always guaranteeing the maximum air flow and eliminating any risk of leakages.

BRACKETING METHOD

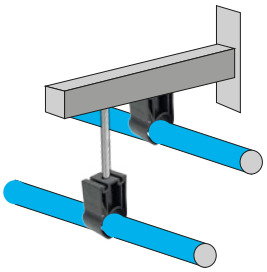
Please, refer to the following indications in order to make a proper bracketing system for your F-Line.PRO network.
We recommend the use of F-Line.PRO wall fasteners (FPST) and the related spacers (FPDST) in order to avoid any possible trouble and in order to keep the system safe.

DN	DISTANCE IN METERS BETWEEN WALL FASTENERS DEPENDING FROM THE MAXIMUM TEMPERATURE DIFFERENCE		
mm	< 20°C	30°C	40°C
20	2,5	2	1,5
25	3	2,5	2
40	4	3,5	3
63	4	3,5	3



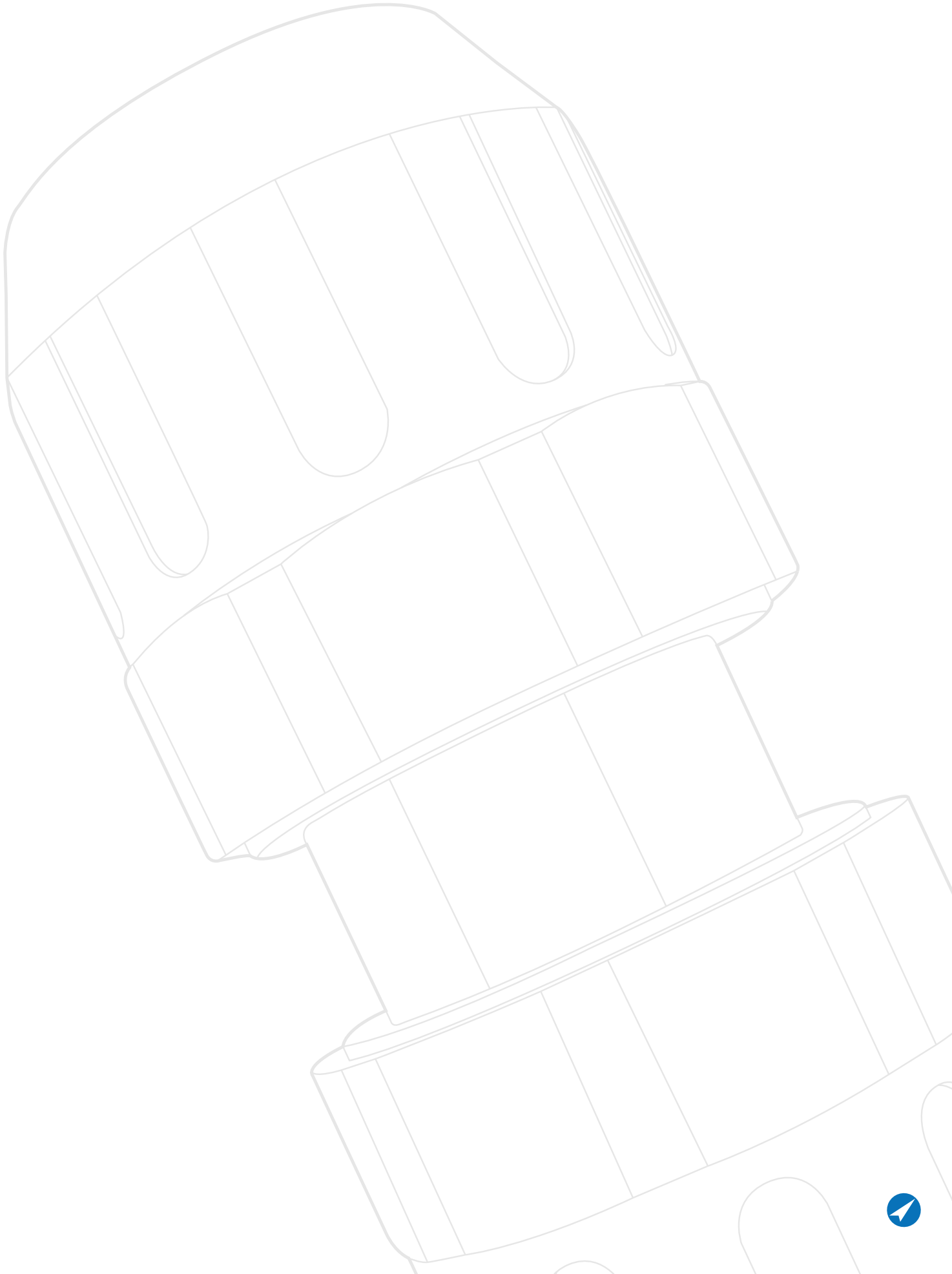
The F-Line.PRO wall fastener can be used both in horizontal or vertical position. Place the FPST at the desired height and open the hook with a screwdriver.

All wall fasteners can be installed using an M8 hexagonal nut to be inserted inside the FPST (by using a threaded bar). It's also possible to use self-tapping screws with a screw-anchor in case of installation on a wall or concrete.



You can secure the wall fastener to any type of clamping system and then insert the tube into the wall fastener and set the hook.

Fasteners can be installed with spacers (FPDST) in order to compensate the distance from the wall.



-20°C ÷ +80°C

Working pressure:
16 Bar
Negative pressure:
- 0,95 Bar (- 95 kPa)

Compressed air, non-aggressive gases and vacuum

Resistant to mechanical shocks and U.V.
Fire resistance. Non-flammable with no propagation of flame.

Tube: Aluminum AN AW 6060 T6

Light blue tube: RAL 5012
Green tube: RAL 6018
Grey tube: RAL 7001

Manufactured with seamless extrusion.
Exterior surface painted with polyester powder.

PED

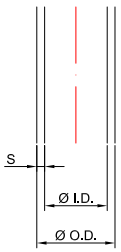
SILICONE FREE

REACH COMPLIANT — Products in compliance with EC Regulation 1907/2006

RoHS3 — Products in compliance with the directive EU 2015/863

FPAL-4AZ

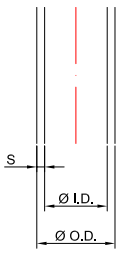
Aluminum pipe 4 meters light blue



CODE	ØOD	ØID	S	WEIGHT (g/m)
FPAL1614-4AZ	16	14	1	100
FPAL2017-4AZ	20	17	1,5	200
FPAL2522-4AZ	25	22	1,5	275
FPAL4036-4AZ	40	36	2	585

FPAL-6AZ

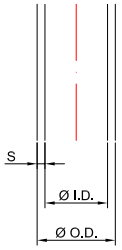
Aluminum pipe 6 meters light blue



CODE	ØOD	ØID	S	WEIGHT (g/m)
FPAL2017-6AZ	20	17	1,5	200
FPAL2522-6AZ	25	22	1,5	275
FPAL4036-6AZ	40	36	2	585
FPAL6359-6AZ	63	59	2	1000

FPAL-6GR

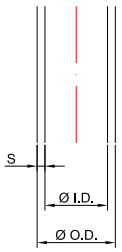
Aluminum pipe 6 meters grey



CODE	ØOD	ØID	S	WEIGHT (g/m)
FPAL2017-6GR	20	17	1,5	200
FPAL2522-6GR	25	22	1,5	275
FPAL4036-6GR	40	36	2	585
FPAL6359-6GR	63	59	2	1000

FPAL-6VD

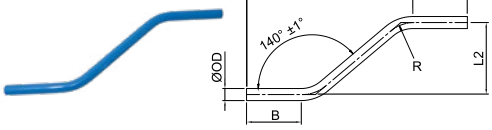
Aluminum pipe 6 meters green



CODE	ØOD	ØID	S	WEIGHT (g/m)
FPAL2017-6VD	20	17	1,5	200
FPAL2522-6VD	25	22	1,5	275
FPAL4036-6VD	40	36	2	585
FPAL6359-6VD	63	59	2	1000

FPIS

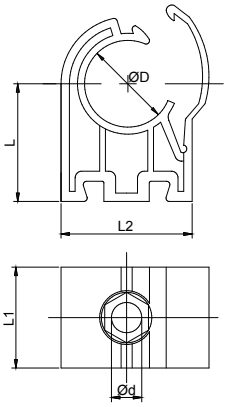
Double bend light blue



CODE	ØOD	B	R	L1	L2	WEIGHT (g)
FPIS20	20	109	60	440	150	100
FPIS25	25	113	75	460	150	140

FPST

Fixing clip rigid pipe with onsert for M8 nut

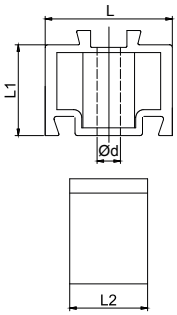


CODE	ØD	L	L1	L2	Ød	WEIGHT (g)
FPST16	16	35	30	31	9	18
FPST20	20	35	30	31	9	18
FPST25	25	35	30	38	9	20
FPST40	40	70	40	60	9	74
FPST63	63	70	40	94	9	120

M8 nut included

FPDST

Spacer for fixing clip rigid pipe



CODE	L	L1	L2	Ød	WEIGHT (g)
FPDST2032	49,0	35,0	30,0	9,0	24
FPDST4063	94,0	30,0	40,0	9,0	55

FPDST2032: to be used with FPST16, FPST20 and FPST25
FPDST4063: to be used with FPST40 and FPST63

FPCL

Zinc-plated steel collar for flexible tube

CODE	Ø	THREAD	WIDTH	THICKNESS	SCREWS	WEIGHT (g)
FPCL25	35 - 44	M8 - M10	20	1,5	M6x25	62,5
FPCL40	44 - 52	M8 - M10	20	1,5	M6x25	68,5
FPCL63	74 - 82	M8 - M10	20	1,5	M6x25	-

FPCL25: to be used with FPTUC25G06, FPTUX25-1000 and FPTUX25-2000 tubes
FPCL40: to be used with FPTUC40G08, FPTUX40-1500 and FPTUX40-3000 tubes
FPCL63: to be used with FPTUC63G10, FPTUX63-1500 and FPTUX63-3000 tubes

FPCLG

Zinc-plated steel collar with rubber protection for aluminum tube

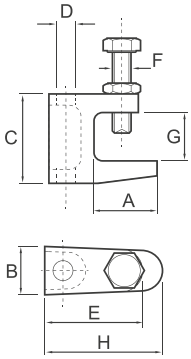
CODE	Ø	THREAD	WIDTH	THICKNESS	SCREWS	WEIGHT (g)
FPCLG2025	20 - 25	M8 - M10	20	1,5	M6x25	61,5
FPCLG40	38 - 44	M8 - M10	20	1,5	M6x25	78
FPCLG63	59 - 65	M8 - M10	20	1,5	M6x25	-

FPCLG2025: to be used with FPAL2017 and FPAL2522 pipe
FPCLG40: to be used with FPAL4036 pipe
FPCLG63: to be used with FPAL6359 pipe

FPAN — Wall anchoring

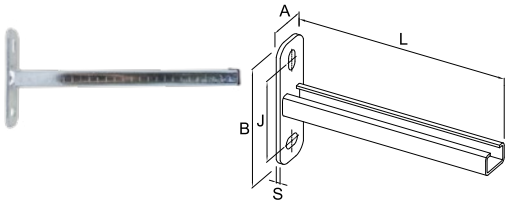
CODE	THICKNESS	DRILL HOLE Ø X DEPTH	ANCHORING LENGHT	THREAD	WEIGHT (g)
FPAN60	10	10x50	60	M10x25	46
FPAN85	16	10x65	85	M10x40	56,6

FPMT — Beam clamp



CODE	F	A	B	C	D	E	G	H	NOMINAL LOAD (N)	WEIGHT (g)
FPMTM8	M8	21	19	35	M8	35	18	38	1200	85

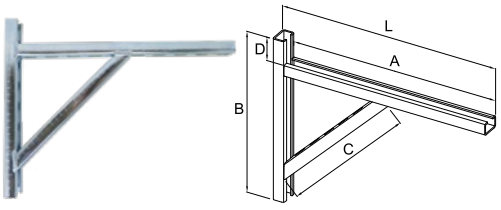
FPMP — Electrolytic zinc-plated wall bracket



CODE	L	A	B	S	J	HOLE Ø	WEIGHT (g)
FPMP280	280	40	120	4	81,5	18x11	500

Bracket profile: 32/20x2,5 (Profile 23x11 width 35mm)
Permissable load: 38kgf

FPMRS — Reinforced bracket



CODE	L	A	B	C	D	WEIGHT (g)
FPMRS370	370	345	275	250	40	1048
FPMRS545	545	520	380	380	46	1580

Bracket profile: 32/20x2,5 (Profile 23x11 width 35mm)
Permissable load: 60kgf (FPMRS370)
40kgf (FPMRS545)

-40°C ÷ +100°C
with hydraulic, synthetic and petroleum-derived fluids

-40°C ÷ +70°C
with compressed air

Working pressure:
16 Bar

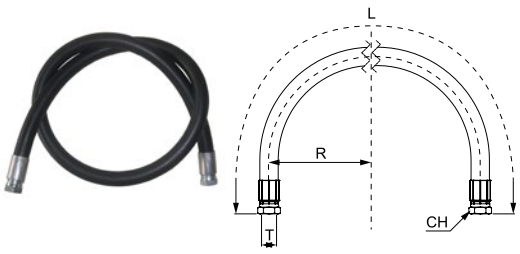
Compressed air, non-aggressive gases and vacuum

Tube: Black synthetic rubber reinforced with braided steel
Thread: Carbon steel

Resistant to synthetic fluids, petroleum-based fluids, water-based fluids, lubricants, hydrocarbons, fuels etc.

FPTUC

Tube for compressor connection with female swivel fitting



CODE	DN	ØOD	T	CH	R (BENDING RADIUS)	L (m)
FPTUC25G06	25	35,2	G 1"	42	300	0,5
FPTUC40G08	38	49,7	G 1-1/2"	55	500	1,32
FPTUC63G10	63	76,4	G 2-1/2"	85	720	2

-30°C ÷ +80°C

Working pressure:
16 Bar
Negative pressure:
- 0,95 Bar (- 95 kPa)

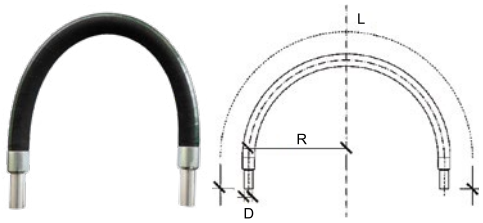
Compressed air, non-aggressive gases and vacuum

Tube: Black SBR/NBR oil mist resistant. High tensile textile cords reinforcement. Black SBR abrasion and ozone reistant cover
Stem: Aluminum

Smooth textile surface.
Resistant to abrasion, weather conditions and aging.

FPTUX

Flexible axpansion joint



CODE	DN	ØOD	D	R (BENDING RADIUS)	L (m)
FPTUX25-1000	25	35,0	25	250	1
FPTUX25-2000	25	35,0	25	250	2
FPTUX40-1500	38	50,0	40	380	1,5
FPTUX40-3000	38	50,0	40	380	3
FPTUX63-1500	63	79,0	63	630	1,5
FPTUX63-3000	63	79,0	63	630	3

-20°C ÷ 80°C

Working pressure:
16 Bar
Negative pressure:
- 0,95 Bar (- 95 kPa)

Compressed air & vacuum
(do not use with water)

Parallel gas BSPP ISO 228
G1/2"

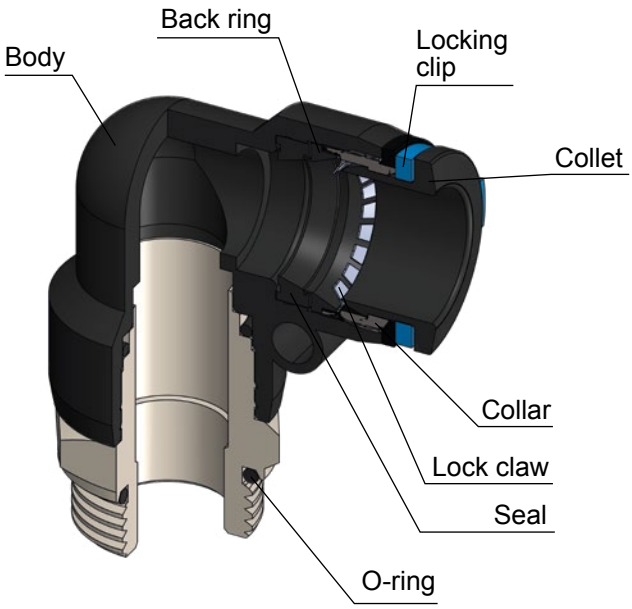
Body: Nickel-plated brass and PBT
Collet: POM
Collar: Black anodised aluminium
Lock claw: Stainless steel AISI 301
Back ring: POM
Seal: NBR
O-ring: NBR
Locking clip: POM (light blu)

SILICONE FREE

REACH COMPLIANT
Products in compliance with EC Regulation 1907/2006

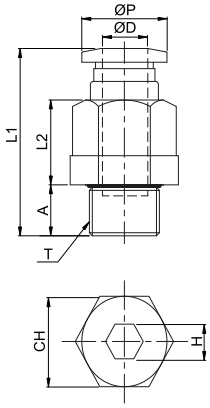
RoHS3
Products in compliance with the directive EU 2015/863

CONSTRUCTION DETAILS



FPC

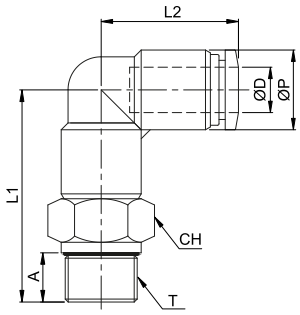
Male connector BSPP thread



CODE	ØD	T	ØP	A	L1	L2	CH	H	WEIGHT (g)
FPC16G04	16	G 1/2"	24,3	8	36,1	18	24	10	50,7

FPL

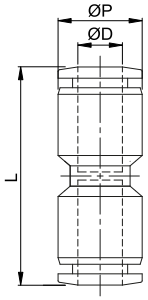
Swivel male elbow BSPP thread



CODE	ØD	T	ØP	A	L1	L2	CH	WEIGHT (g)
FPL16G04	16	G 1/2"	26	8	42	33	24	66,5

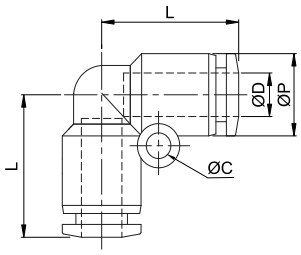
FPUC

Union connector



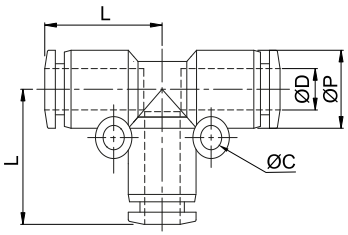
CODE	ØD	ØP	L	WEIGHT (g)
FPUC16	16	26	51	24,5

FPUL Union elbow



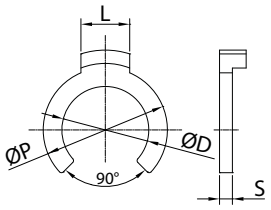
CODE	ØD	ØP	ØC	L	WEIGHT (g)
FPUL16	16	26	5,1	33	27

FPUT Union tee



CODE	ØD	ØP	ØC	L	WEIGHT (g)
FPUT16	16	26	5,1	33	39,7

FPLC Locking clip



CODE	Ø	ØD	ØP	L	S
FPLC16	16	18,3	24,5	6	2

-20°C ÷ +80°C

Max. Working Pressure:
16 Bar
Negative Pressure:
- 0,95 Bar (- 95 kPa)

Compressed air,
non-aggressive gases and
vacuum

- Taper gas BSPT ISO 7
  from R1/2" to R1-1/2"
- Parallel gas BSPP ISO 228
  from G1/4" to G1"

DATASHEET Ø20,25 & 40

Body: Reinforced PA
Aluminum (CA Version)
Tube Seal: NBR
Back Ring: HP technopolymer
Lock Claw: Stainless steel AISI 301
Lock Claw Support: HP technopolymer
Nut Seal: NBR
Nut: Reinforced PA
Screwing Indicator: Silicone
Tubestop: HP technopolymer
(CA Version)

PED

SILICONE FREE

REACH COMPLIANT — Products in compliance with EC Regulation 1907/2006

RoHS3 — Products in compliance with the directive EU 2015/863

CONSTRUCTION DETAILS

Standard Version

CA Version

DATASHEET Ø63

-20°C ÷ +80°C

Max. Working pressure:
16 Bar
Negative pressure:
- 0,95 Bar (- 95 kPa)

Compressed air,
non-aggressive gases and
vacuum

- Taper gas BSPT ISO 7
  R2-1/2"
- Parallel gas BSPP ISO 228
  from G1/2" to G2"

Body: Reinforced PA
Aluminum (CA Version)
Lock Claw: Stainless steel AISI 301
Lock Claw Support: HP technopolymer
O-ring: NBR
Nut: Reinforced PA
Screwing Indicator: Silicone

PED

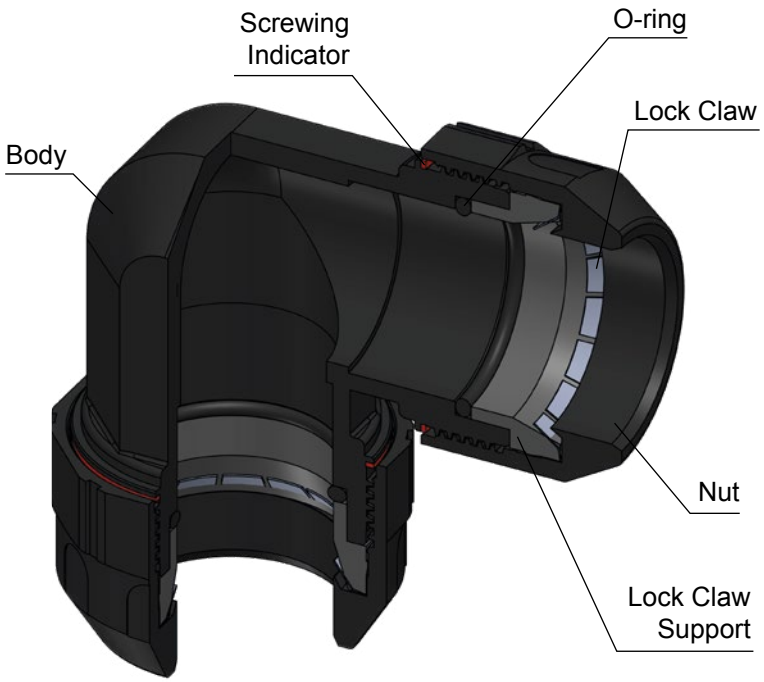
SILICONE FREE

REACH COMPLIANT — Products in compliance with EC Regulation 1907/2006

RoHS3 — Products in compliance with the directive EU 2015/863

CONSTRUCTION DETAILS

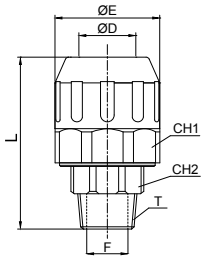
Standard Version



CA Version

FPC

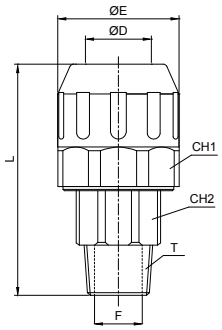
Male connector BSPT thread



CODE	ØD	T	L	ØF	ØE	CH1	CH2	WEIGHT (g)
FPC20R04	20	R 1/2"	64	14	40,5	39	26	44,5
FPC25R04	25	R 1/2"	70,5	14	48	46	32	72
FPC25R05	25	R 3/4"	75,5	18	48	46	32	74
FPC40R06	40	R 1"	113,2	21	70	67	36	201

FPCA

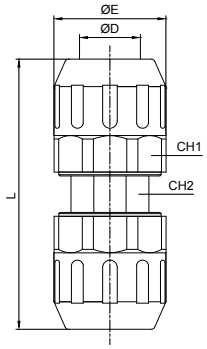
Male connector BSPT thread, aluminum body



CODE	ØD	T	L	ØF	ØE	CH1	CH2	WEIGHT (g)
FPCA25R06	25	R 1"	88	21	48	46	36	141
FPCA40R08	40	R 1" 1/2"	116,1	36	70	67	50	312
FPCA63R10	63	R 2"-1/2"	129,5	59	102	98	75	680

FPUC

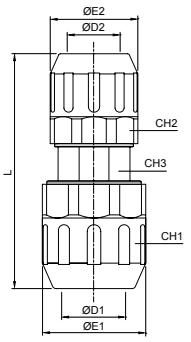
Union connector



CODE	ØD	L	ØE	CH1	CH2	WEIGHT (g)
FPUC20	20	95	40,5	39	26	81,5
FPUC25	25	111	48	46	32	132
FPUC40	40	171,4	70	67	46	388
FPUC63	63	176	102	98	75	720

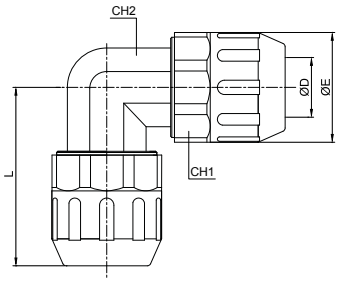
FPG

Reduced union connector



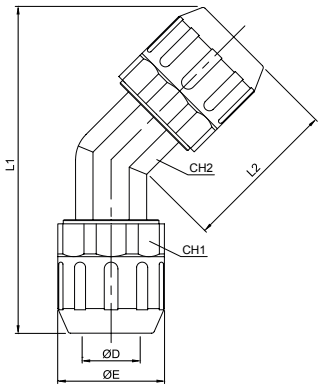
CODE	ØD1	ØD2	ØE1	ØE2	L	CH1	CH2	CH3	WEIGHT (g)
FPG2520	25	20	48	40,5	101,5	46	39	26	103,5
FPG4025	40	25	70	48	136,2	67	46	32	240
FPG6340	63	40	102	70	190,7	98	67	75	580

FPUL — Union elbow



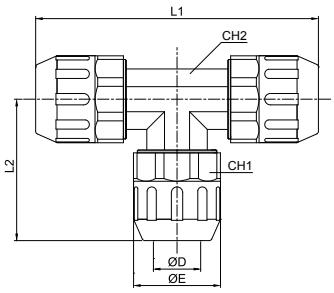
CODE	ØD	ØE	L	CH1	CH2	WEIGHT (g)
FPUL20	20	40,5	63,5	39	26	92,5
FPUL25	25	48	74,8	46	32	152
FPUL40	40	70	110,2	67	46	409
FPUL63	63	102	123,5	98	75	880

FPULH — Union elbow 135°



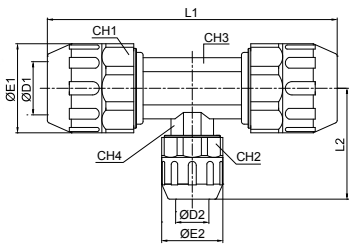
CODE	ØD	ØE	L1	L2	CH1	CH2	WEIGHT (g)
FPULH20	20	40,5	111	53,5	39	26	89
FPULH25	25	48	131	63	46	32	140,5
FPULH40	40	70	201	98,2	67	46	387

FPUT — Union tee



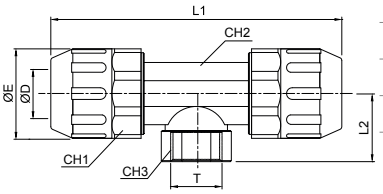
CODE	ØD	L1	L2	ØE	CH1	CH2	WEIGHT (g)
FPUT20	20	127	63,5	40,5	39	26	135
FPUT25	25	149,6	74,8	48	46	32	221
FPUT40	40	220,4	110,2	70	67	46	619
FPUT63	63	247	123,5	102	98	75	1220

FPGT — Reduced union tee



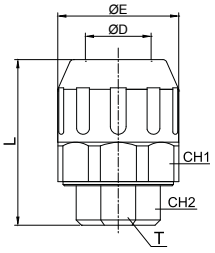
CODE	ØD1	ØD2	L1	L2	ØE1	ØE2	CH1	CH2	CH3	CH4	WEIGHT (g)
FPGT4025	40	25	220,4	83,4	70	48	67	46	46	32	479
FPGT6340	63	40	247	124,7	102	70	98	67	75	46	1040

FPGT-G — Female tee BSPP thread



CODE	ØD	T	ØE	L1	L2	CH1	CH2	CH3	WEIGHT (g)
FPGT25G05	25	G 3/4"	48	149,6	43	46	32	36	161,5
FPGT40G06	40	G 1"	70	220,4	44	67	46	46	420
FPGT63G09	63	G 2"	102	247	67,5	98	75	75	1160

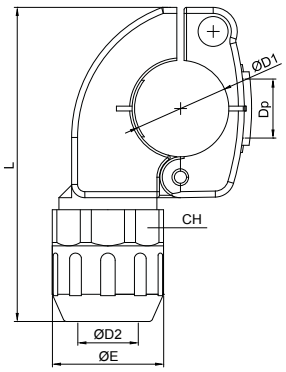
FPPF — End plug



CODE	ØD	T *	L	ØE	CH1	CH2	WEIGHT (g)
FPPF20	20	G 1/4"	56,5	40,5	39	24	46
FPPF25	25	G 1/4"	63	48	46	24	72
FPPF40	40	G 1/4"	88,2	70	67	24	187
FPPF63	63	G 1/4"	107	102	98	75	400

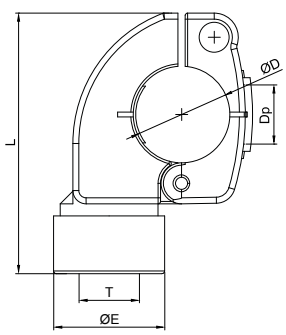
* Blind thread

FPBR — Quick branch

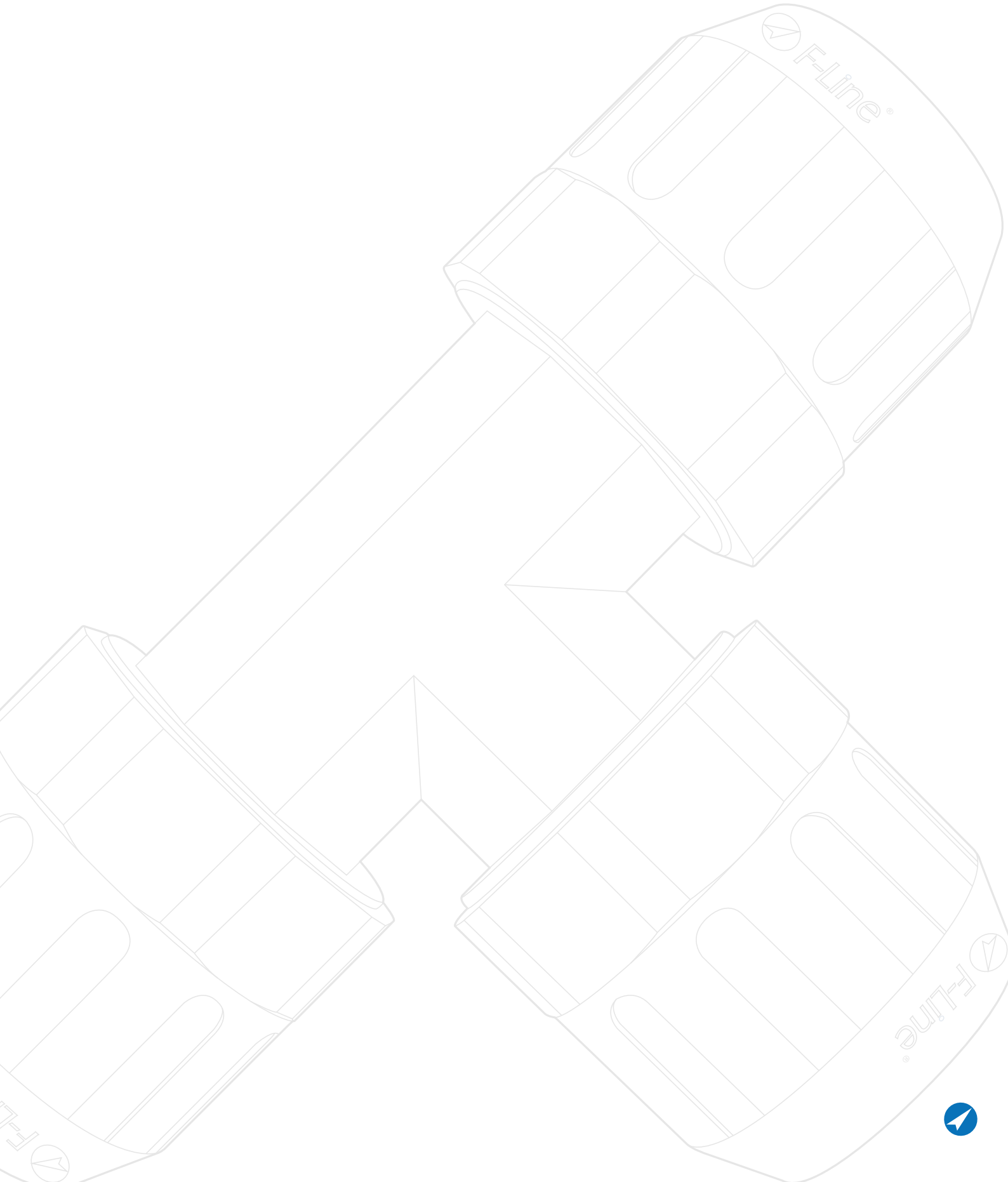


CODE	ØD1	ØD2	L	Dp	ØE	CH	WEIGHT (g)
FPBR2520	25	20	112	18,6	40,5	39	241
FPBR4020	40	20	122	24,5	40,5	39	278
FPBR4025	40	25	130,4	24,5	48	46	290
FPBR6325	63	25	152	24,5	48	46	440

FPBR-G — Quick branch female BSPP thread

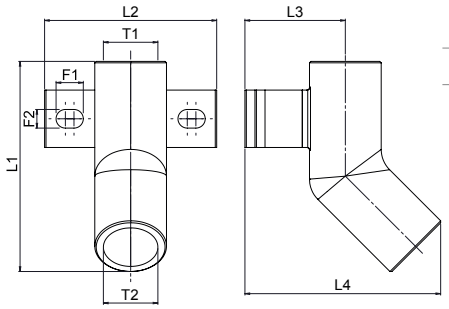


CODE	ØD	T	L	Dp	ØE	WEIGHT (g)
FPBR25G04	25	G 1/2"	90	18,6	34	232,5
FPBR40G05	40	G 3/4"	100	24,5	40,5	287
FPBR63G04	63	G 1/2"	122	24,5	34	380


F-Line®

FPSAS

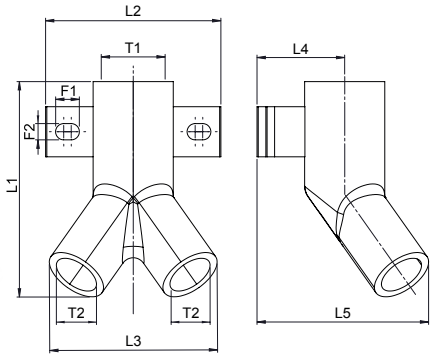
Single applique - Stainless steel AISI 316L



CODE	T1	T2	L1	L2	L3	L4	F1	F2	WEIGHT (g)
FPSAS-G04G04	G 1/2"	G 1/2"	73,5	60	35	68,5	9,5	6,5	159

FPDAS

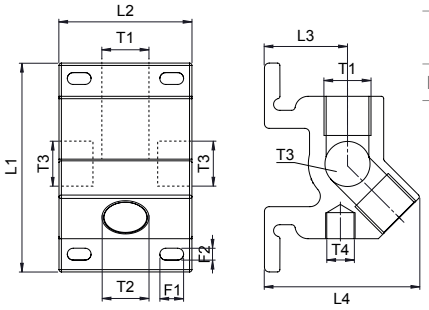
Double applique - Stainless steel AISI 316L



CODE	T1	T2	L1	L2	L3	L4	L5	F1	F2	WEIGHT (g)
FPDAS-G05G04	G 3/4"	G 1/2"	86	70	67	35	68,5	9,5	6,5	265

FPWLM1

Single applique - Aluminum

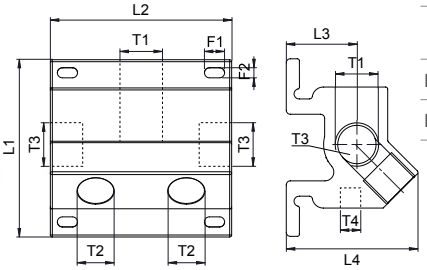


CODE	T1	T2	T3	*T4	L1	L2	L3	L4	F1	F2	WEIGHT (g)
FPWLM1-G04G04	G 1/2"	1xG 1/2"	G 1/2"	G 1/4"	88	56	35	66	10	5	325

* Blind thread

FPWLM2

Double applique - Aluminum



CODE	T1 IN	T2 OUT	T3	*T4	L1	L2	L3	L4	F1	F2	WEIGHT (g)
FPWLM2-G04G04	G 1/2"	2xG 1/2"	G 1/2"	G 1/4"	88	90	35	65,7	10	5	530
FPWLM2-G05G04	G 3/4"	2xG 1/2"	G 1/2"	G 1/4"	88	90	35	65,7	10	5	515

* Blind thread

0°C ÷ 100°C

Working pressure:
16 Bar

Compressed air and non-aggressive gases

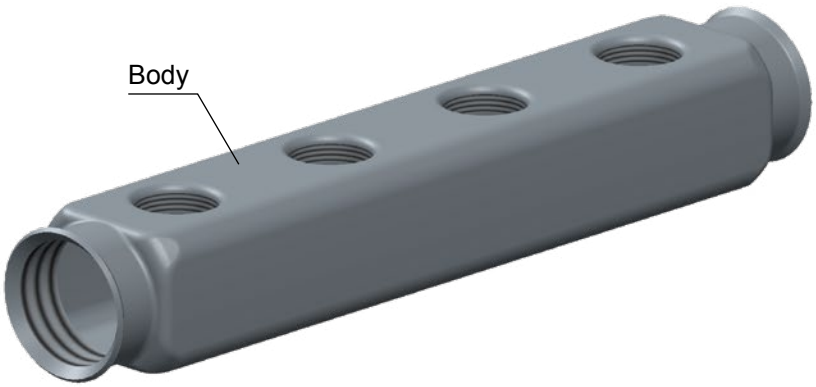
Parallel gas BSPP ISO 228 G1/2" and G1"

Body: Stainless steel AISI 304

Products in compliance with EC Regulation 1907/2006

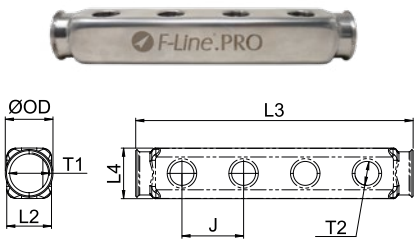
Products in compliance with the directive EU 2015/863

CONSTRUCTION DETAILS



FPMAN

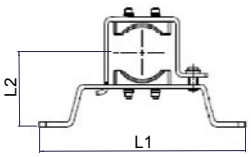
Distribution manifold BSPP thread in stainless steel AISI 304



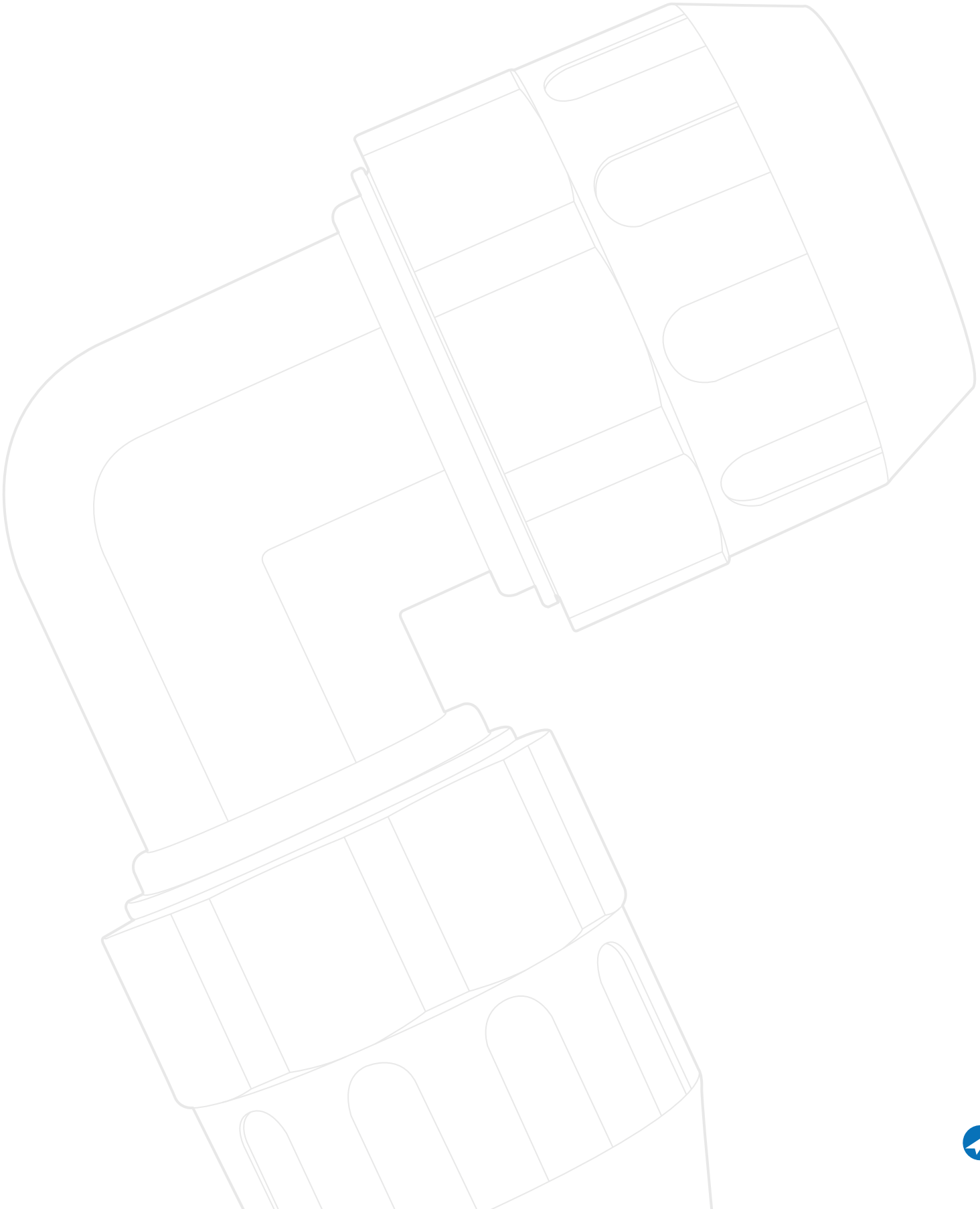
CODE	T1	T2	OUTLETS	J	L1	L2	L3	L4
FPMAN4-G06G04	G 1"	G 1/2"	4	50	38,7	36,3	225	41

FPSTMAN

Set of two brackets for FPMAN manifold



CODE	Ø	L1	L2	WEIGHT (g)
FPSTMAN06-48	1"	140	48	119



9210 - 9220 - 9250
-20°C ÷ +150°C
9210PRO - 9220PRO
-20°C ÷ +80°C
1610
-5°C ÷ +70°C
9120F
0°C ÷ +60°C
9611
-10°C ÷ +110°C

PN (Nominal Pressure)
See the table

Compressed air and non-aggressive gases

- Taper gas BSPT ISO 7 from R1/4" to R3/4"
- Parallel gas BSPP ISO 228-1 from G1/4" to G2-1/2"

9210 - 9220 - 9250
Body: Nickel plated brass
Body end: Nickel plated brass
Seat: PTFE
Ball: Chrome plated brass
Stem: Nickel plated brass
O'Ring: NBR
Seal: PTFE
Packing nut: Nickel plated brass
Handle: Steel
Nut: Steel

1610
Body: Chrome plated brass
Slide: Blue anodized aluminum
O'Ring: NBR 70
Elastic ring: Steel

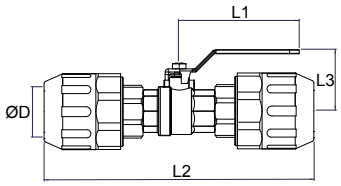
1110 & 1112
Body: Nickel plated brass

Products in compliance with EC Regulation 1907/2006

Products in compliance with the directive EU 2015/863

9210PRO

Full bore ball valve with fittings

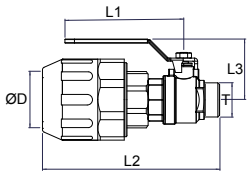


CODE	ØD	DN	PN	L1	L2	L3	WEIGHT (g)
9210PRO25	25	21	16	115	216	59	704
9210PRO40	40	36	16	150	290	75	1583
9210PRO63	63	59	16	200	342	108	-

For fittings construction details & technical datasheet, please refer to page 42 and 43.

9220PRO

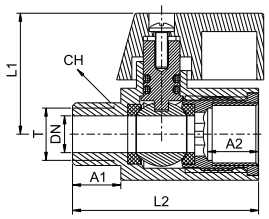
Full bore ball valve with fitting and male BSPP thread



CODE	ØD	T	DN	PN	L1	L2	L3	WEIGHT (g)
9220PRO20G04	20	G 1/2"	14	16	92	102,5	43	217
9220PRO25G04	25	G 1/2"	14	16	92	108,5	43	246
9220PRO25G05	25	G 3/4"	18	16	92	121	47	319
9220PRO25G06	25	G 1"	21	16	115	143	59	554
9220PRO40G08	40	G 1-1/2"	36	16	150	191	75	1242

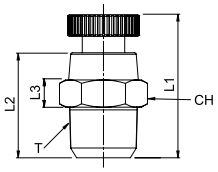
For fittings construction details & technical datasheet, please refer to page 42.

9120 Brass miniball valve M/F, BSPP thread



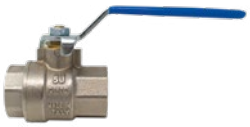
CODE	T	PN	DN	A1	A2	L1	L2	CH	WEIGHT (g)
9120PRO14	G 1/4"	16	8	10	10	26	40,5	20	74

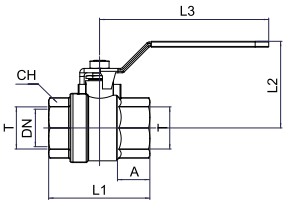
9611 Brass drain valve, BSPT thread



CODE	T	PN	L1	L2	L3	CH	WEIGHT (g)
9611PRO14	R 1/4"	16	24	16	5	14	20

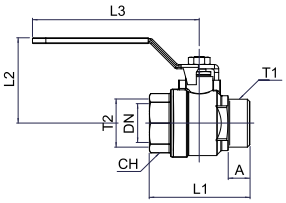
9210 Full bore ball valve, threaded ends BSPP F/F





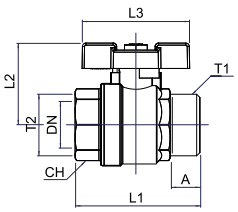
CODE	T	DN	PN	A	L1	L2	L3	CH	WEIGHT (g)
9210PRO12	G 1/2"	15	50	11	50	43	92	25	158
9210PRO34	G 3/4"	20	50	13	57	47	92	31	255
9210PRO1	G 1"	25	40	15	70	59	115	38	422
9210PRO112	G 1-1/2"	40	32	18	90	75	150	54	959
9210PRO2	G 2"	50	32	20	107	82	150	66	-
9210PRO212	G 2-1/2"	60	16	22	132	108	200	84	-

9220 Full bore ball valve, threaded ends BSPP M/F



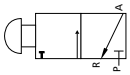
CODE	T1	T2	DN	PN	A	L1	L2	L3	CH	WEIGHT (g)
9220PRO12	G 1/2"	G 1/2"	15	50	10,5	50	43	92	25	174
9220PRO34	G 3/4"	G 3/4"	20	50	13	58	47	92	31	245
9220PRO1	G 1"	G 1"	25	40	15	70	59	115	38	413
9220PRO112	G 1-1/2"	G 1-1/2"	40	32	18	91	75	150	54	930
9220PRO2	G 2"	G 2"	50	32	20	107	82	150	66	-

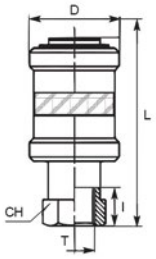
9250 Full bore ball valve, threaded ends BSPP M/F - butterfly lever



CODE	T1	T2	DN	PN	A	L1	L2	L3	CH	WEIGHT (g)
9250PRO12	G 1/2"	G 1/2"	15	50	10,5	50	43	50	25	153
9250PRO34	G 3/4"	G 3/4"	20	50	13	58	47	50	31	224
9250PRO1	G 1"	G 1"	25	40	15	70	59	61	38	364

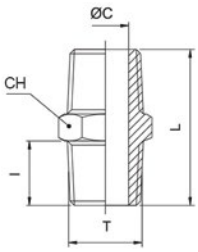
FP1610 — Slide valve BSPP thread





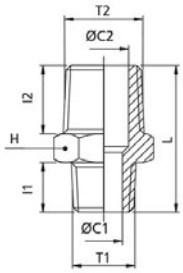
CODE	T	PN	D	L	I	CH	FLOW (Nl/min)	WEIGHT (g)
FP1610TR12	G 1/2"	10	40	75	15	27	3800	212
FP1610TR34	G 3/4"	10	50	83	16,5	32	5700	317

1110 — Nipple BSPT thread



CODE	T	ØC	L	I	CH	WEIGHT (g)
1110PRO12	R 1/2"	15	30,5	12,5	22	79
1110PRO34	R 3/4"	20	34,5	14	27	61

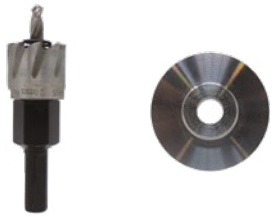
1112 — Reduced nipple BSPT thread



CODE	T1	T2	ØC1	ØC2	L	I1	I2	H	WEIGHT (g)
1112PRO1234	R 1/2"	R 3/4"	15	20	32,5	12,5	14	27	58

FPFD

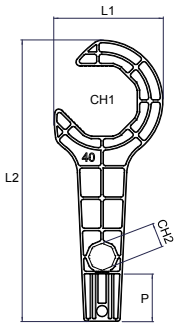
Utensile per foratura tubo



CODE	Ø TUBE	Ø HOLE	WEIGHT (g)
FPFD25	25	18	132,5
FPFD4063	40 - 63	24	155

FPCH

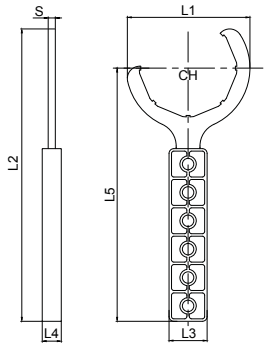
Wrench for nut fittings tightening



CODE	DN	CH1	L1	L2	* P	CH2	WEIGHT (g)
FPCH20	20	39	66	170	24,5	-	104
FPCH25	25	46	75	200	29	-	153
FPCH40	40	67	105	270	45,5	24	269

* Tube insertion depth marking function included

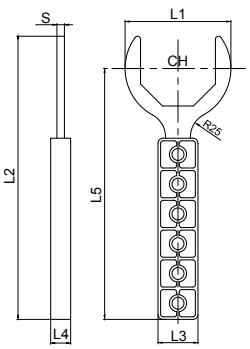
CH2: Hexagon for use with FPPF end plug only available on FPCH40 (Ø40)



CODE	DN	CH1	L1	L2	L3	L4	L5	S	WEIGHT (g)
FPCH63	63	98,5	128,8	307	40	20	266	7,5	269

FPCCH

Wrench for Ø63 body fittings locking



CODE	DN	CH1	L1	L2	L3	L4	L5	S	WEIGHT (g)
FPCCH63	63	75	106	283,5	40	20	251,2	7,5	104

FPTT — Metal pipe cutter

CODE	Ø MIN.	Ø MAX.	WEIGHT (g)
FPTT1632	16	32	350
FPTT1663	16	63	800

FPUS — Beveling cone

CODE	Ø MIN.	Ø MAX.	WEIGHT (g)
FPUS1650	16	50	428

FPHBT — Hand beveling

CODE	WEIGHT (g)
FPHBT	30,5

R-PTFEPRO

Teflon tape for professional use

CODE	THICKNESS	WIDTH	CONTEINER
R-PTFEPRO190215	0,2 mm	3/4"	15 m

TEMPERATURE

-200°C ÷ +260°C

FEATURES

The PTFE thread sealing tape of unsintered PTFE is mainly used as a thread sealing element. It resists all known chemical compound and solvents, with the exception of gaseous Flourine at high temperature, Trifluoro Chlorine, alkali metals either molten or in solution. It can be used in a temperature range: -200°C to +260°C; has a low coefficient of friction, is tasteless, insolubile, and doesn't smell. The tapes are normally available on plastic reels. Is compounded from virgin material and is produced through a process called "Paste Extrusion".

LOXPRO1810

Low strength PTFE anaerobic adhesive for sealing of metal thread pipe joints

CODE	HANDLING TIME	FUNCTIONAL CURE TIME	FULL CURE TIME	MAX THREAD Ø / GAP FILLING	CONTEINER
LOXPRO1810	20 - 40 min	1 - 3 hours	5 - 10 hours	2" / 0,30 mm	75 ml

TEMPERATURE

-55°C ÷ +150°C

FEATURES

Anaerobic adhesive for sealing of metal thread pipe joints. Suitable for gas, LP gas, compressed air, gasoline and oil, industrial fluids, CFC, water and several chemicals. Low friction coefficient will assure easy assembly. Thixotropic property prevents migration from thread of the sealant before or during curing. It replaces P.T.F.E. tape and yarn. Cured product provides elastic film. Shocks and vibrations resistant; unaffected sealing properties in the temperature range from -55 to +150°C.
Easy dismantling is assured even after years.

5°C ÷ +60°C

Max. working pressure:
10 Bar

Compressed air

FPF filters are used to filtering from particles and condensing the impurity inside compressed air. The big surface of filtering element allows to keep constant the flow rate even in hard working conditions. The condensed moisture discharge is manual when the filter is pressurized and automatic when it is depressurized. On request it can be completely automatic.

Body: Aluminium
Bowl: Polycarbonate (FPFP02)
Polycarbonate with steel protection (FPFM04)
Drain mode: Brass and ABS
Seal: NBR
Whirlpool element: ABS
Filter: Sinterized bronze

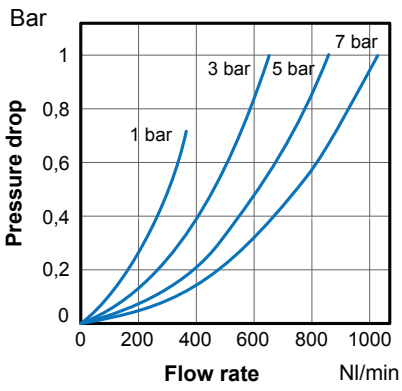
Products in compliance with EC Regulation 1907/2006

Products in compliance with the directive EU 2015/863

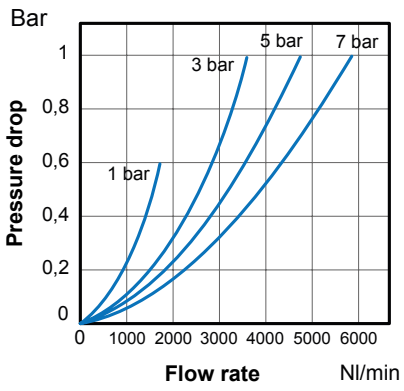
CODE	NOMINAL FLOW RATE *	BLOW CAPACITY	FILTER DEGREE
FPFP02	750 Nl/min	15 cm^3	25 µm
FPFM04	4000 Nl/min	45 cm^3	25 µm

* Flow rate measured with an inlet pressure of 7 bar and an outlet pressure of 5 bar

FLOW CHART
FPFP02

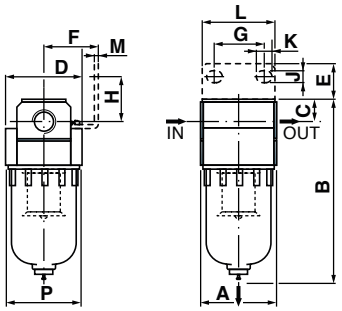


FLOW CHART
FPFM04

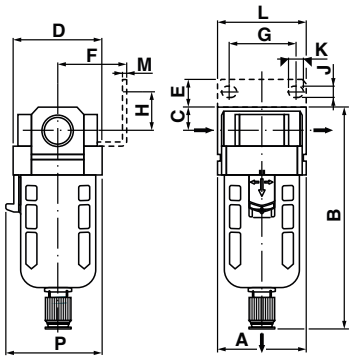


FPF

Filter



CODE	THREAD	A	B	C	D	E	F	G	H	J	K	L	M	P	WEIGHT (g)
FPFP02	G 1/4"	40	98	11	40	17	30	26	22	5,5	8,5	40	2,3	40	190



CODE	THREAD	A	B	C	D	E	F	G	H	J	K	L	M	P	WEIGHT (g)
FPFM04	G 1/2"	70	169	18	70	17	50	54	26	8,5	10,5	70	2,3	73	550

5°C ÷ +60°C

Max. working pressure:
10 Bar

Compressed air

Pressure regulators are used to maintain a constant downstream pressure and get the best performance avoiding any energy wasting.

Reducers can be placed inside the control panels thanks to their ease in fixing with the proper brackets; moreover pressure can be fixed safely by means of a knob locking system.

Body: Aluminium
Diaphragm: NBR
Spring: Zinc-plated steel
Handle: Charged nylon
Ring nut: Plastic (FPRP02 and FPRPG02)
Aluminium (FPRP04 and FPRPG04)
Seal: NBR
Shutter: Brass - NBR

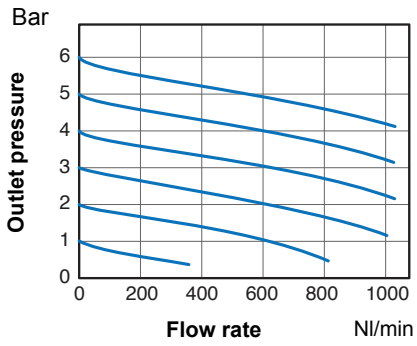
Products in compliance with EC Regulation 1907/2006

Products in compliance with the directive EU 2015/863

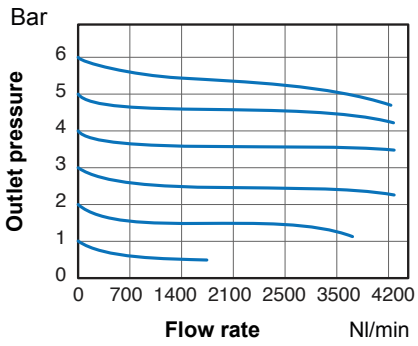
CODE	NOMINAL FLOW RATE *	ADJUSTMENT RANGE
FPRP02 / FPRPG02	550 Nl/min	0,5 - 8,5 Bar
FPRP04 / FPRPG04	6000 Nl/min	0,5 - 8,5 Bar

* Flow rate measured with an inlet pressure of 7 bar and an outlet pressure of 5 bar

FLOW CHART
FPRP02 / FPRPG02

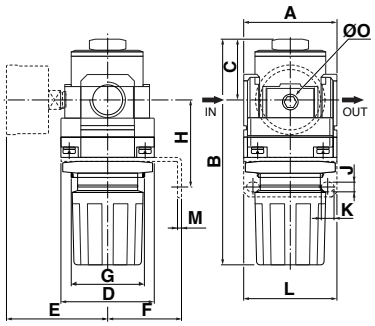


FLOW CHART
FPRP04 / FPRPG04



FPRP

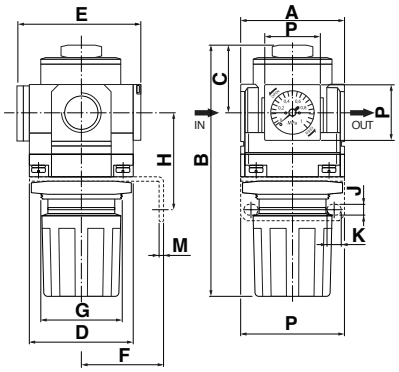
Pressure regulator



CODE *	THREAD	A	B	C	D	E	F	G	H	J	K	L	M	ØO	WEIGHT (g)
FPRP02	G 1/4"	40	95	17	40	57	30	M32x1,5	44	5,4	15,5	55	2,3	G 1/8"	270
FPRP04	G 1/2"	70	150	38	70	66	50	M52x1,5	54	8,5	10,5	70	2,3	G 1/4"	840

* Pressure reducer with possibility of additional pressure gauge.

For FPRP02 code: MABP40R0138 pressure gauge (pressure gauge data sheet supplied on request)
For FPRP04 code: MABP50R0238 pressure gauge (pressure gauge data sheet supplied on request)



CODE *	THREAD	A	B	C	D	E	F	G	H	J	K	L	M	P	WEIGHT (g)
FPRPG02	G 1/4"	40	99	17	40	59	30	M32x1,5	44	5,4	15,5	55	2,3	27	280
FPRPG04	G 1/2"	70	150	38	70	81	50	M52x1,5	54	8,5	10,5	70	2,3	27	900

* Pressure reducer with integrated pressure gauge.

5°C ÷ +60°C

Max. working pressure:
10 Bar

Compressed air

Filters and pressure regulators combine the functions of a filter and pressure reducer in a single element.

Body: Aluminium
Diaphragm: NBR
Spring: Zinc-plated steel
Handle: Charged nylon
Ring nut: Plastic (FPFRP02 and FPFRPG02)
Aluminium (FPFRM04 and FPRMG04)
Seal: NBR
Shutter: Brass - NBR
Bowl: Polycarbonate (FPFRP02 and FPFRPG02)
Polycarbonate with steel protection (FPFRM04 and FPFRMG04)
Drain mode: Brass and ABS
Whirlpool element: ABS
Filter: Sinterized bronze

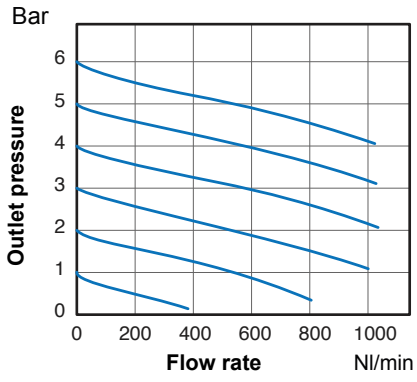
Products in compliance with EC Regulation 1907/2006

Products in compliance with the directive EU 2015/863

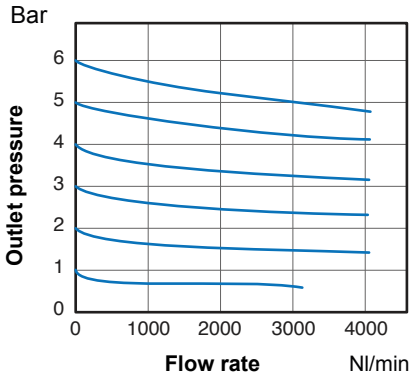
CODE	NOMINAL FLOW RATE *	ADJUSTMENT RANGE	FILTER DEGREE
FPFRP02 / FPFRPG02	550 Nl/min	0,5 - 8,5 Bar	25 µm
FPFRM04 / FPFRMG04	4000 Nl/min	0,5 - 8,5 Bar	25 µm

* Flow rate measured with an inlet pressure of 7 bar and an outlet pressure of 5 bar

FLOW CHART
FPFRP02 / FPFRPG02

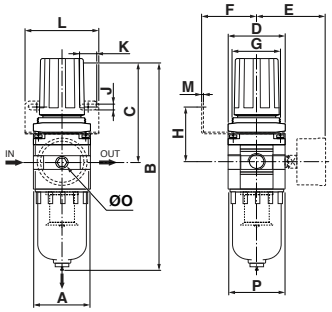


FLOW CHART
FPFRM04 / FPFRMG04



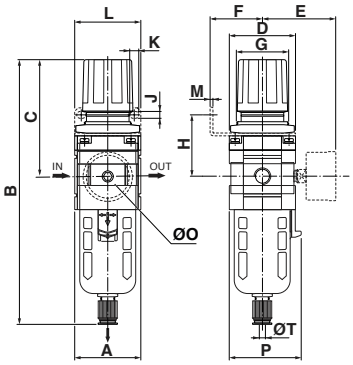
FPFR

Filter regulator



* Pressure regulators with the possibility of adding a pressure gauge.
For FPFRP02 code: MABP40R0138 pressure gauge (pressure gauge data sheet supplied on request)

CODE *	THREAD	A	B	C	D	E	F	G	H	J	K	L	M	P	ØO	WEIGHT (g)
FPFRP02	G 1/4"	40	165	78	40	57	30	M32x1,5	44	5,5	15,5	55	2,3	40	G 1/8"	360

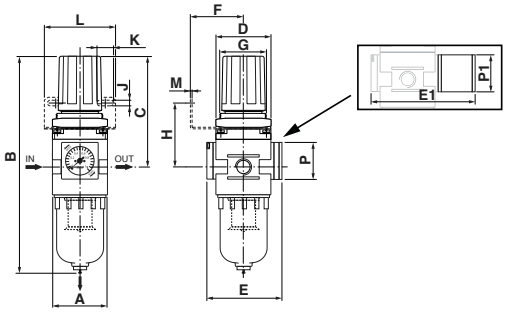


* Pressure regulators with the possibility of adding a pressure gauge.
For FPFRM04 code: MABP50R0238 pressure gauge (pressure gauge data sheet supplied on request)

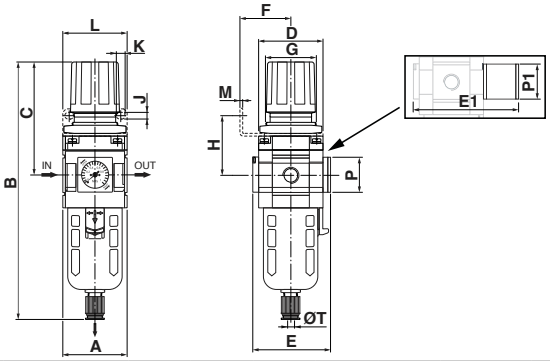
CODE *	THREAD	A	B	C	D	E	F	G	H	J	K	L	M	P	ØO	ØT	WEIGHT (g)
FPFRM04	G 1/2"	70	262	112	70	71	50	M52x1,5	54	8,5	10,5	70	2,3	73	G 1/4"	8	1150

FPFRG

Filter regulator with integrated pressure gauge



CODE	THREAD	A	B	C	D	E	E1	F	G	H	J	K	L	M	P	P1	WEIGHT (g)
FPFRPG02	G 1/4"	40	99	17	40	59	85	30	M32x1,5	44	5,4	15,5	55	2,3	27	27	380



CODE	THREAD	A	B	C	D	E	E1	F	G	H	J	K	L	M	P	P1	ØT	WEIGHT (g)
FPFRMG04	G 1/2"	70	150	38	70	81	107	50	M52x1,5	54	8,5	10,5	70	2,3	27	27	8	1160

5°C ÷ +60°C

Max. working pressure: 10 Bar

Compressed air

The special shape of the bowl protection allows to see the oil level in the lubrificator.
The flow of the circulating oil can be observed from the see-trough window and can be regulated by the special adjustment screw.

Body: Aluminium
Bowl: Polycarbonate (FPLP02)
Polycarbonate with steel protection (FPLM04)
Seal: NBR
Oil filler cap: ABS
Oil screw adjustment: Brass and ABS
Venturi's device: Polyurethane
Venturi element support: Polyurethane

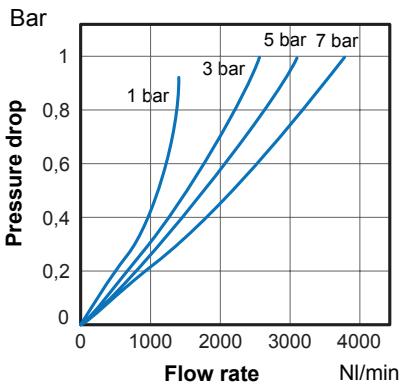
Products in compliance with EC Regulation 1907/2006

Products in compliance with the directive EU 2015/863

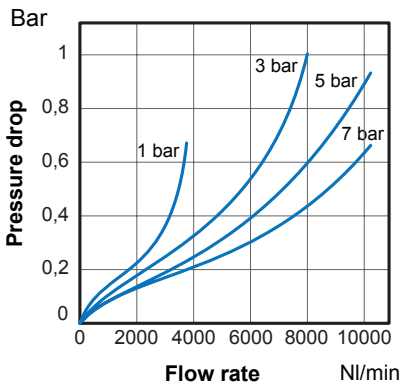
CODE	NOMINAL FLOW RATE *	BLOW CAPACITY	MIN. FLOW OF OIL DROP
FPLP02	800 Nl/min	25 cm^3	15 Nl/min
FPLM04	5000 Nl/min	130 cm^3	50 Nl/min

* Flow rate measured with an inlet pressure of 7 bar and an outlet pressure of 5 bar

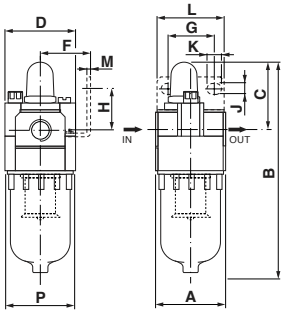
FLOW CHART
FPLP02



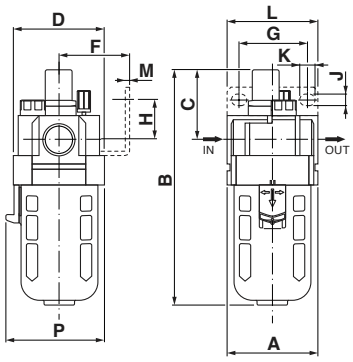
FLOW CHART
FPLM04



FPL Lubrificator



CODE	THREAD	A	B	C	D	F	G	H	J	K	L	M	P	WEIGHT (g)
FPLP02	G 1/4"	40	122	38	40	30	27	22	5,5	8,5	40	2,3	40	220



CODE	THREAD	A	B	C	D	F	G	H	J	K	L	M	P	WEIGHT (g)
FPLM04	G 1/2"	70	177	41	70	50	54	26	8,5	10,5	70	2,3	73	560

5°C ÷ +60°C

Working pressure:
From 1,5 Bar to 10 Bar

Compressed air

The FPSA automatic drain unit is useful to collect and automatically release water produced in a closed branch of a pneumatic circuit. Water releasing is possible either with or without pressure.

On the top of the body there is a manual operated valve useful to depressurize cup before the maintenance operations.

Body: Aluminium

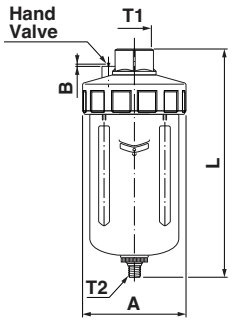
Blow: Polycarbonate with steel protection

Products in compliance with EC Regulation 1907/2006

Products in compliance with the directive EU 2015/863

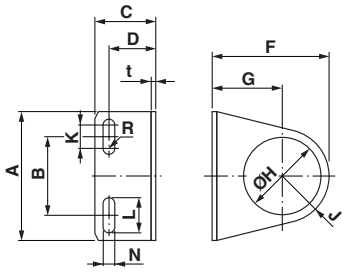
FPSA

Automatic drain unit



CODE	T1	T2	A	B	L	WEIGHT (g)
FPSA04	G 1/2"	G 1/8"	72	2,5	162	400

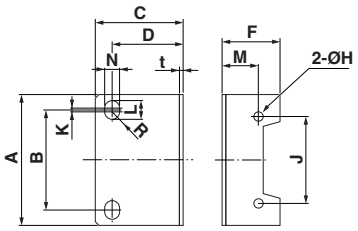
FPSTRP — L bracket



L bracket to use with the following series:
FPRP, FPRPG, FPFRP, FPFRM, FPFRPG and FPFRMG

CODE	A	B	C	D	F	G	ØH	J	K	L	N	R	t	WEIGHT (g)
FPSTRP02	55	34	25	19	50	30	33,5	20	10	15,4	5,4	2,7	2	35
FPSTRP04	70	54	27	18	79,2	49,2	52,5	30	2	10,5	8,5	4,25	2	60

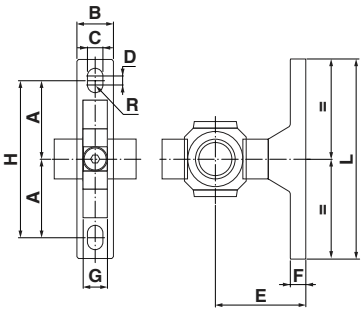
FPSTFL — L bracket



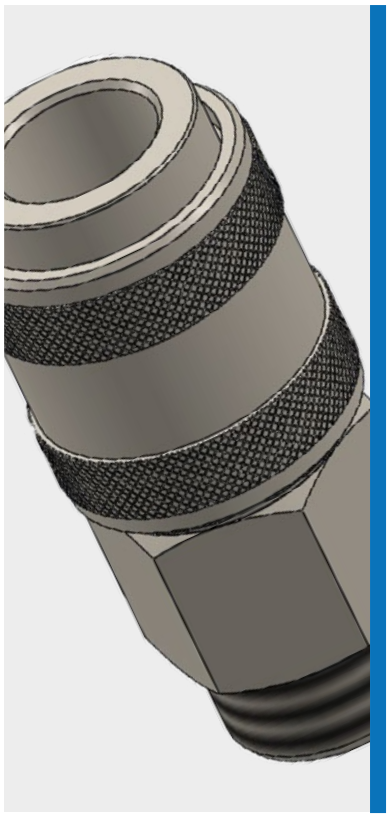
L bracket to use with the following series:
FPFP, FPFM, FPLP and FPLM

CODE	A	B	C	D	F	ØH	J	K	L	M	N	R	t	WEIGHT (g)
FPSTFL02	40	27	33	27	18	4,5	26	3	8,4	14	5,4	2,7	2	24
FPSTFL04	70	54	47	38	31	5,5	47	2	10,5	20	8,5	4,25	2	67

FPST — Full T bracket



CODE	A	B	C	D	E	F	G	H	L	R	WEIGHT (g)
FPST02	24	15	5,5	3	30	5	10	48	66	2,75	77
FPST04	40	22	9	4	50	7	14	80	100	4,5	137



-15°C ÷ +80°C

Working pressure:
16 Bar

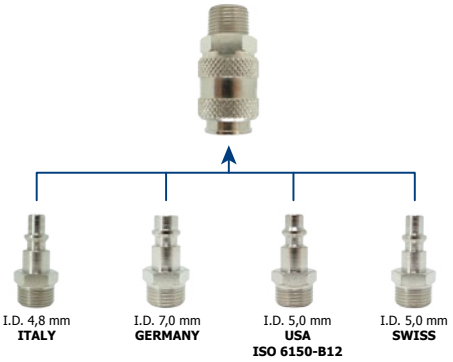
Compressed air

- Taper gas BSPT ISO 7 from R1/4" to R1/2"
- Parallel gas BSPP ISO 228 from G1/4" to G1/2"

Body: Nickel-plated brass with 6 stainless steel spheres

PROFILE - UNIVERSAL SERIES

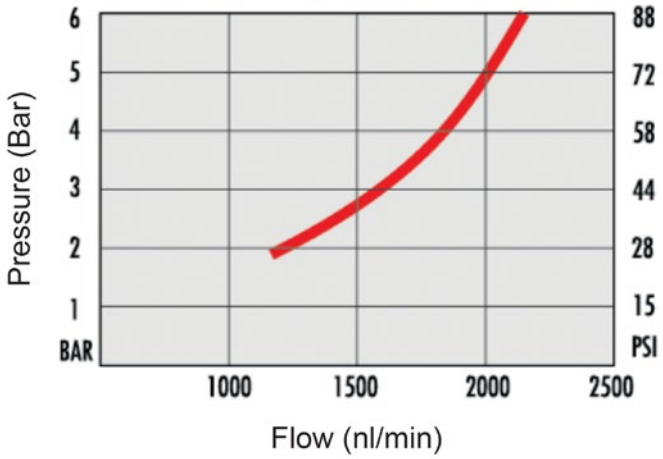
The 8400 Series multi-socket allows 4 different profiles to be used while managing a single quick coupling. A simple solution for handling profiles that are not compatible with each other.



Products in compliance with EC Regulation 1907/2006

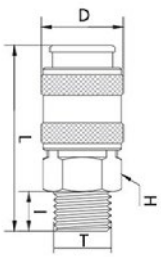
Products in compliance with the directive EU 2015/863

AIR FLOWRATE
UNIVERSAL SERIES



8410PRO

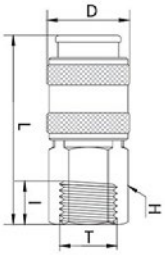
Male quick coupling BSPT thread



CODE	T	I	D	L	H
8410PRO02	R 1/4"	11,0	24,0	58,0	20
8410PRO03	R 3/8"	11,5	24,0	54,0	20
8410PRO04	R 1/2"	14,0	24,0	56,5	22

8420PRO

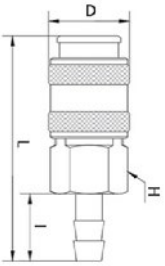
Female quick coupling BSPP thread



CODE	T	I	D	L	H
8420PRO02	G 1/4"	11,0	24,0	55,0	20
8420PRO03	G 3/8"	12,0	24,0	55,0	20
8420PRO04	G 1/2"	14,0	28,0	55,0	25

8430PRO

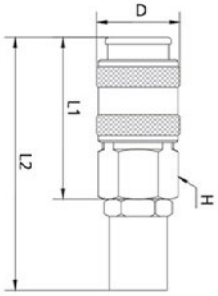
Quick coupling with barb connector



CODE	INT. TUBE Ø	I	BARB	D	L	H
8430PRO06	6	20,0	6,5	24,0	67,0	20
8430PRO08	8	20,0	9	24,0	67,0	20
8430PRO10	10	20,0	11,5	24,0	67,0	20
8430PRO12	12	24,0	13,5	24,0	71,0	20

8440PRO

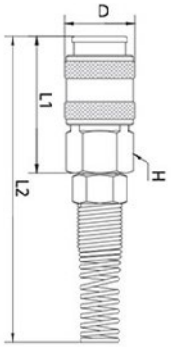
Quick coupling with hose connector



CODE	Ø	D	L1	L2	H
8440PRO610	6x10	24	47,0	73,0	20
8440PRO612	6x12	24	47,0	73,0	20
8440PRO614	6x14	24	47,0	73,5	20
8440PRO812	8x12	24	47,0	73,0	20
8440PRO814	8x14	24	47,0	73,5	20
8440PRO817	8x17	24	47,0	73,5	20
8440PRO10145	10x14,5	24	47,0	73,5	20
8440PRO1017	10x17	24	47,0	73,5	20
8440PRO1019	10x19	24	47,0	77,0	20

8450PRO

Quick coupling with push-on connector and spring



CODE	Ø	D	L1	L2	H
8450PRO58	5x8	24,0	47,0	148,0	20
8450PRO68	6x8	24,0	47,0	148,0	20
8450PRO6510	6,5x10	24,0	47,0	148,0	20
8450PRO810	8x10	24,0	47,0	148,0	20
8450PRO812	8x12	24,0	38,0	155,0	20
8450PRO1012	10x12	24,0	38,0	155,0	20

-20°C ÷ +100°C

Working pressure:
From 0 to 12 Bar

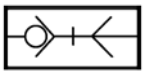
DN 7,4 mm

Compressed air

- Taper gas BSPT ISO 7
  from R1/8" to R1/2"
- Parallel gas BSPP ISO 228
  from G1/8" to G1/2"

Body: Nickel.plated brass
Button: Zinc-plated steel
Connection: Aluminium
Seal: NBR
Plug connection: Zinc-plated steel

CONFIGURATIONS



SO
Single
Shutter

PROFILE

EUROSTANDARD
GERMANY PROFILE

Products in compliance with EC Regulation 1907/2006

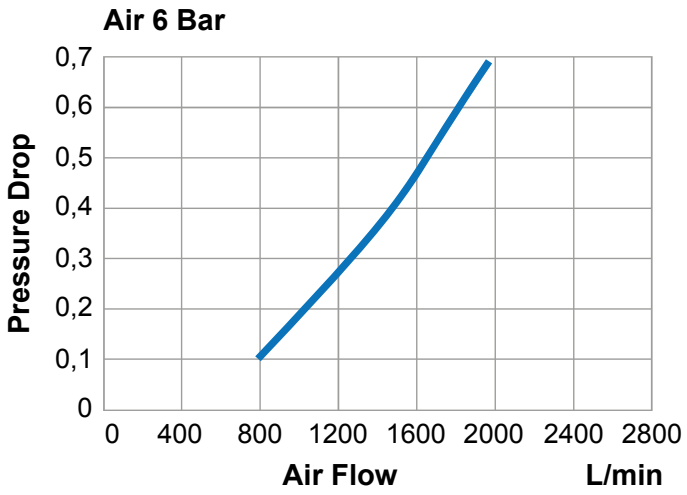
Products in compliance with the directive EU 2015/863

FEATURES

- FPGS series are only to be used with FPIN series.
- Safety 2-stage quick couplings.

AIR FLOW RATE

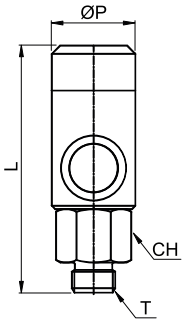
BUTTON QUICK COUPLINGS



FPGSM

Safety male button quick coupling BSPT thread

SAFETY

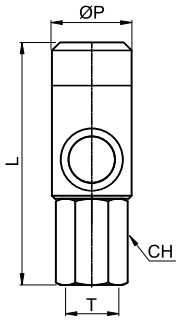


CODE	T	ØP	L	CH	WEIGHT (g)
FPGSM25R02	R 1/4"	26	69	20	110
FPGSM25R03	R 3/8"	26	68	20	128
FPGSM25R04	R 1/2"	26	70	25	142

FPGSF

Safety female button quick coupling BSPP thread

SAFETY

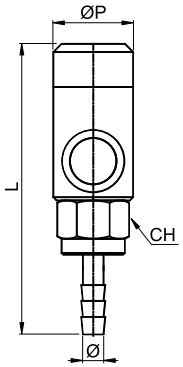


CODE	T	ØP	L	CH	WEIGHT (g)
FPGSF25G02	G 1/4"	26	68	20	136
FPGSF25G03	G 3/8"	26	72	20	133
FPGSF25G04	G 1/2"	26	74	25	168

FPGSB

Safety button quick coupling with barb connector

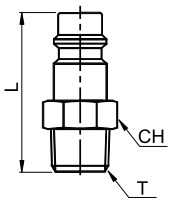
SAFETY



CODE	INT. TUBE Ø	ØP	BARB	L	CH	WEIGHT (g)
FPGSB25D06	6	26	7,3	83,5	20	138,5
FPGSB25D08	8	26	9,4	83,5	20	126
FPGSB25D10	10	26	11,3	83,5	20	115,5

FPINM

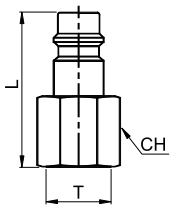
Male connection BSPT thread



CODE	T	L	CH	WEIGHT (g)
FPINM25R01	R 1/8"	33	16	19
FPINM25R02	R 1/4"	37	14	22
FPINM25R03	R 3/8"	37	17	25
FPINM25R04	R 1/2"	43	22	48

FPINF

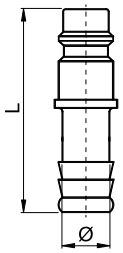
Female connection BSPP thread



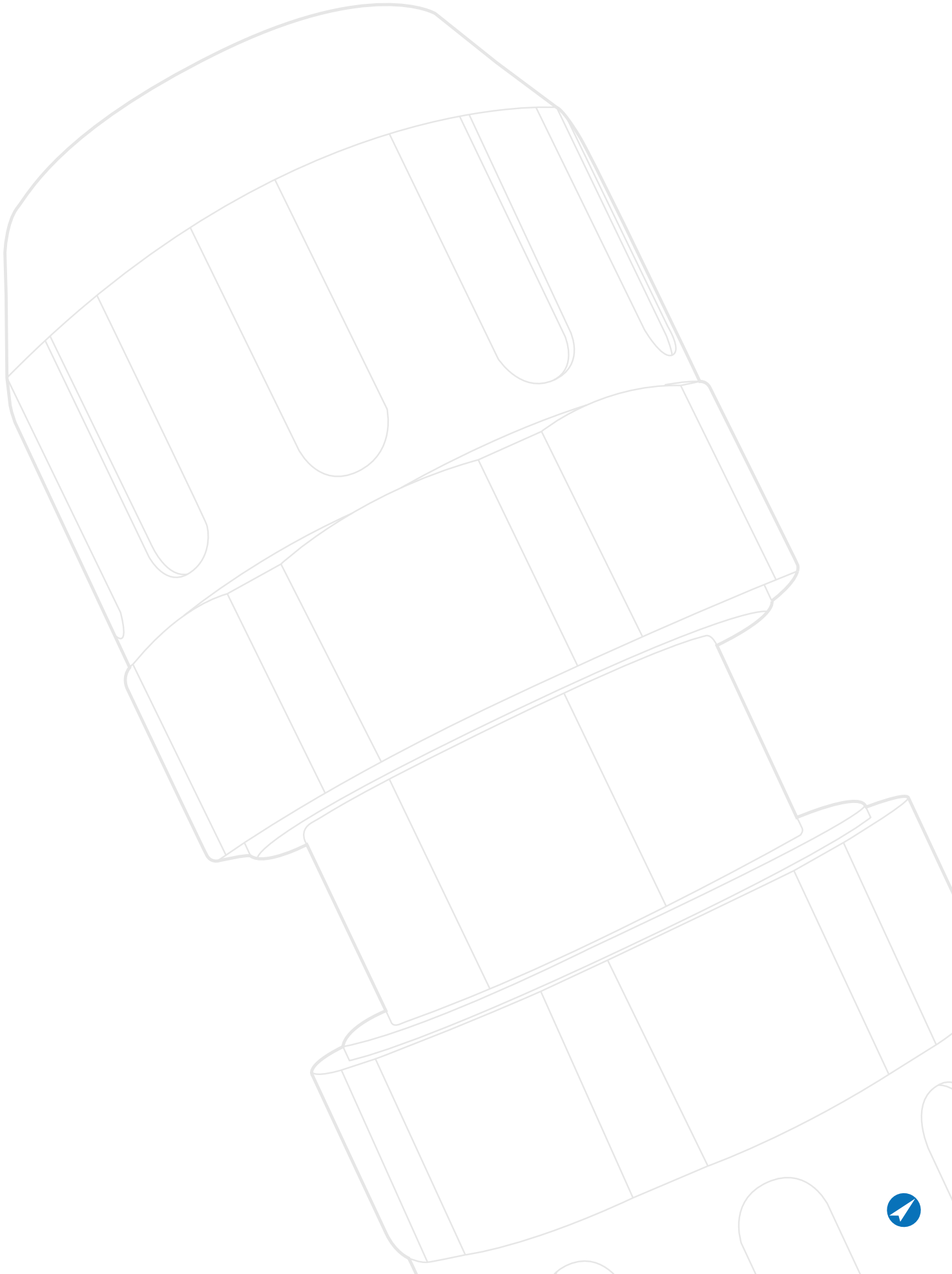
CODE	T	L	CH	WEIGHT (g)
FPINF25G01	G 1/8"	32	14	20
FPINF25G02	G 1/4"	33	17	25
FPINF25G03	G 3/8"	33	19	26
FPINF25G04	G 1/2"	36	24	41

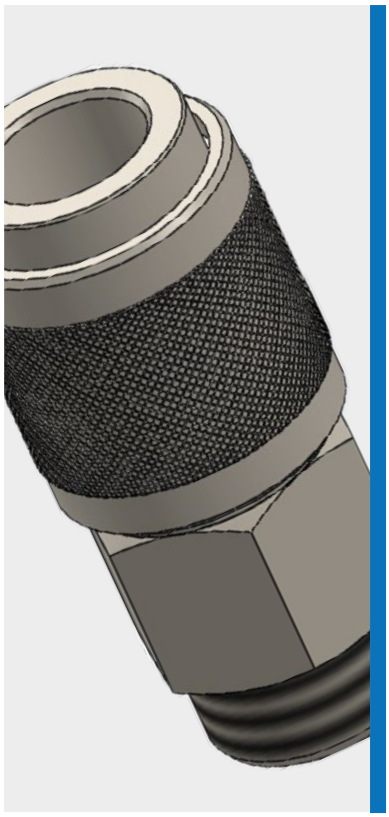
FPINB

Connection with barb connector



CODE	Ø ID TUBE	BARB	L	WEIGHT (g)
FPINB25D06	6	7,3	46	15
FPINB25D08	8	9,3	46	16
FPINB25D10	10	11,3	48	18,5





-18°C ÷ +80°C

Working pressure:
12 Bar

Compressed air

Parallel gas BSPP ISO 228
from G1/4" to G1/2"

Body: Nickel-plated brass
Spring: Nickel-plated steel

PROFILE - JAPAN SERIES

NOMINAL DIAMETER

7,5 mm

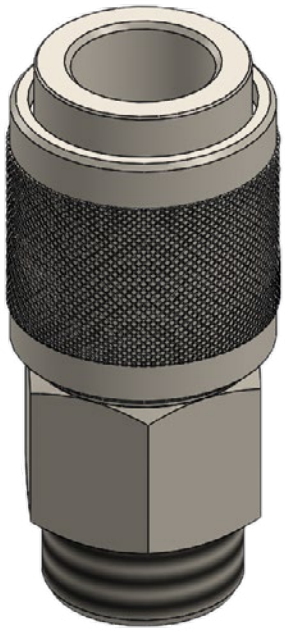
AIR FLOWRATE

2000 l/min

Products in compliance with EC Regulation 1907/2006

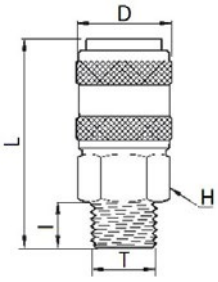
Products in compliance with the directive EU 2015/863

VIEW - QUICK COUPLING 8910PRO



8910PRO

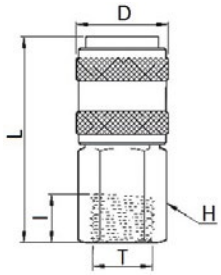
Male quick coupling BSPP thread



CODE	T	I	D	L	H
8910PRO02	G 1/4"	11,0	24,0	56,5	20
8910PRO03	G 3/8"	11,5	24,0	53,0	20
8910PRO04	G 1/2"	14,0	24,0	55,0	22

8920PRO

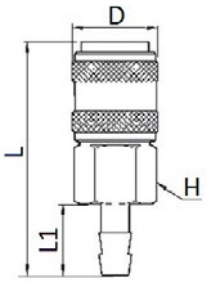
Female quick coupling BSPP thread



CODE	T	I	D	L	H
8920PRO02	G 1/4"	11,0	24,0	54,0	20
8920PRO03	G 3/8"	12,0	24,0	54,0	20
8920PRO04	G 1/2"	14,0	24,0	55,0	20

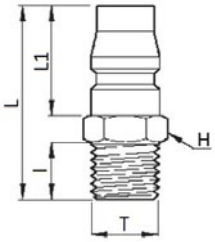
8930PRO

Quick coupling with barb connector



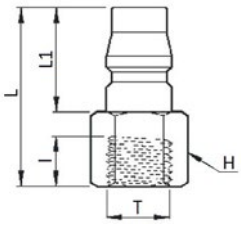
CODE	Ø	D	L1	L	H
8930PRO08	8	24,0	20,0	67,0	19
8930PRO10	10	24,0	20,0	67,0	19
8930PRO12	12	24,0	20,0	67,0	19

8960PRO — Male connection BSPP thread



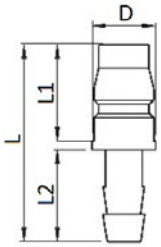
CODE	T	I	L	L1	H
8960PRO02	G 1/4"	11,0	37,0	21,0	14
8960PRO03	G 3/8"	11,5	37,5	21,0	17
8960PRO04	G 1/2"	14,0	40,5	21,0	22

8970PRO — Female connection BSPP thread

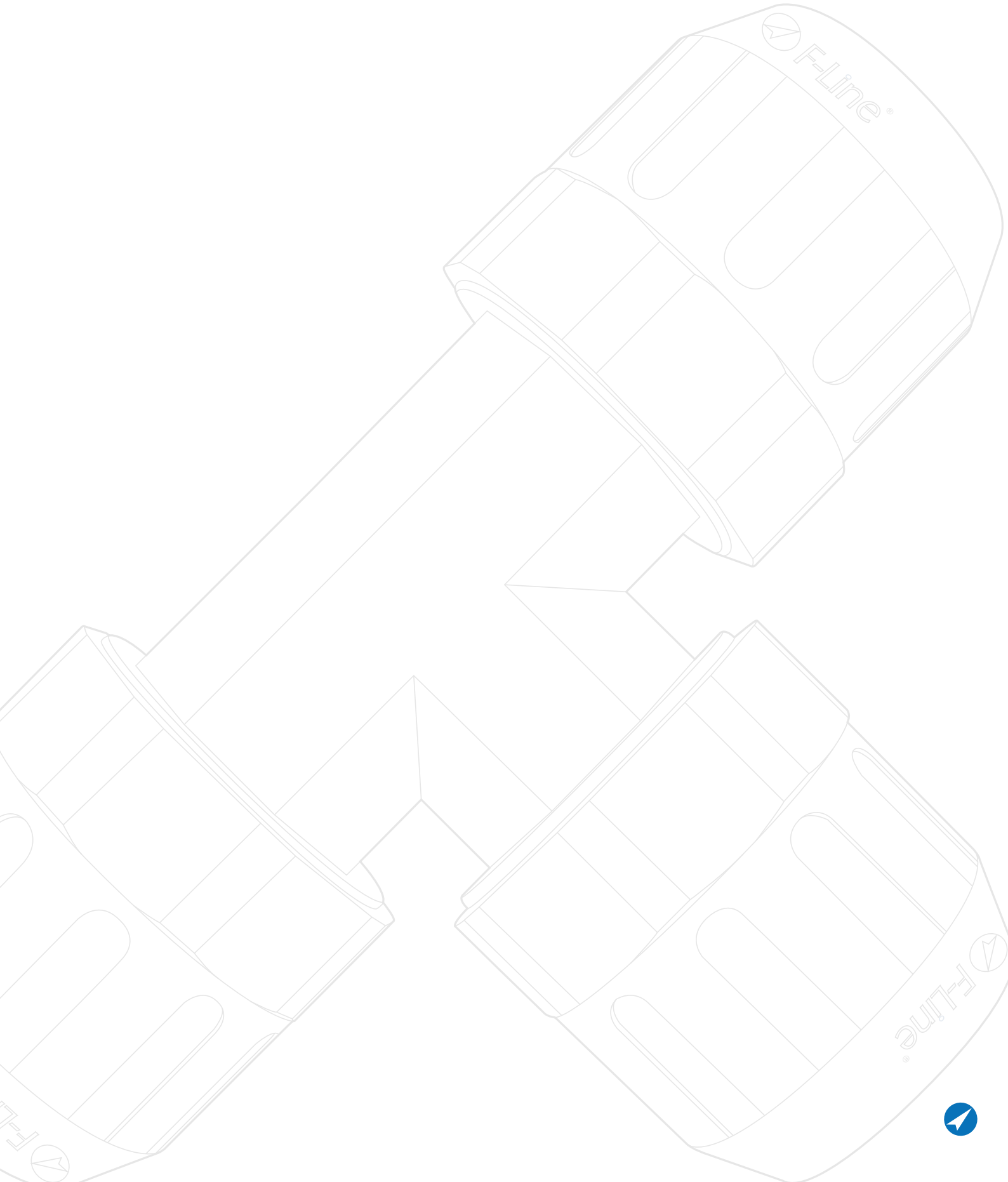


CODE	T	I	L	L1	H
8970PRO02	G 1/4"	12,0	36,0	21,0	17
8970PRO03	G 3/8"	13,0	37,0	21,0	19
8970PRO04	G 1/2"	14,0	38,0	21,0	22

8980PRO — Connection with barb connector



CODE	Ø	D	L	L1	L2
8980PRO06	6	20	43,0	14,0	21,0
8980PRO08	8	20	43,0	14,0	21,0
8980PRO10	10	20	43,0	14,0	21,0


F-Line®

-20°C ÷ +60°C

Working pressure:
20 Bar
Bursting pressure:
60 Bar

Compressed air, vacuum and fluids suitable with the construction materials

Inner layer: Transparent PVC in a special blend
Reinforcement: Synthetic textile insert
Outer layer: PVC with polyurethane

SILICONE FREE

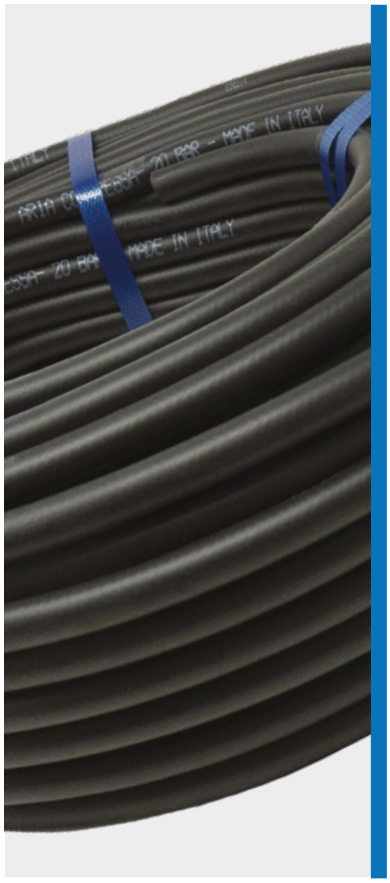
Products in compliance with EC Regulation 1907/2006

Products in compliance with the directive EU 2015/863

PU-PVCPRO

Light blue polyurethane tube with non-toxic PVC inner layer

CODE	Ø IDxOD	THICKNESS (mm)	MIN. BENDING RADIUS (mm)	WORKING PRESSURE (Bar)	BURSTING PRESSURE (Bar)	g/m	Q.TY FOR ROLL (mt)
PU-PVCPRO0610AZ	6x10	2	55	20	60	65	100
PU-PVCPRO0812AZ	8x12	2	65	20	60	80	100
PU-PVCPRO1015AZ	10x15	2,5	68	20	60	100	100
PU-PVCPRO1016AZ	10x16	3	70	20	60	155	100
PU-PVCPRO1319AZ	13x19	3	105	20	60	180	100



-20°C ÷ +60°C

Working pressure:
20 Bar
Bursting pressure:
60 Bar

Compressed air, vacuum and fluids suitable with the construction materials

Inner layer: PVC in a special blend
Reinforcement: Synthetic polyester textile insert
Outer layer: PVC

SILICONE FREE

Products in compliance with EC Regulation 1907/2006

Products in compliance with the directive EU 2015/863

PVC-ACPRO

Black PVC tube with reinforcement in polyester fiber

CODE	Ø IDxOD	THICKNESS (mm)	MIN. BENDING RADIUS (mm)	WORKING PRESSURE (Bar)	BURSTING PRESSURE (Bar)	g/m	Q.TY FOR ROLL (mt)
PVC-ACPRO0614NE100	6x14	4	25	20	60	170	100
PVC-ACPRO0817NE100	8x17	4,5	30	20	60	240	100
PVC-ACPRO1019NE100	10x19	4,5	32	20	60	280	100
PVC-ACPRO1323NE	13x23	5	40	20	60	390	50
PVC-ACPRO1928NE	19x28	4,5	60	20	60	550	50

-5°C ÷ 50°C

Max. Working pressure: 15 Bar

Compressed air

Parallel gas BSPP ISO 228 G 1/4" and G 3/8"

Tube: Polyurethane PU with high tenacity polyester yarn reinforcement
Fittings: Brass

PLUS

- Automatic spring rewind
- Swivelling metal fixing bracket
- Controlled tube rewinding for improved safety
- System for locking the tube to the desired length
- Internal mechanism to prevent jamming during hose drafting and rewinding

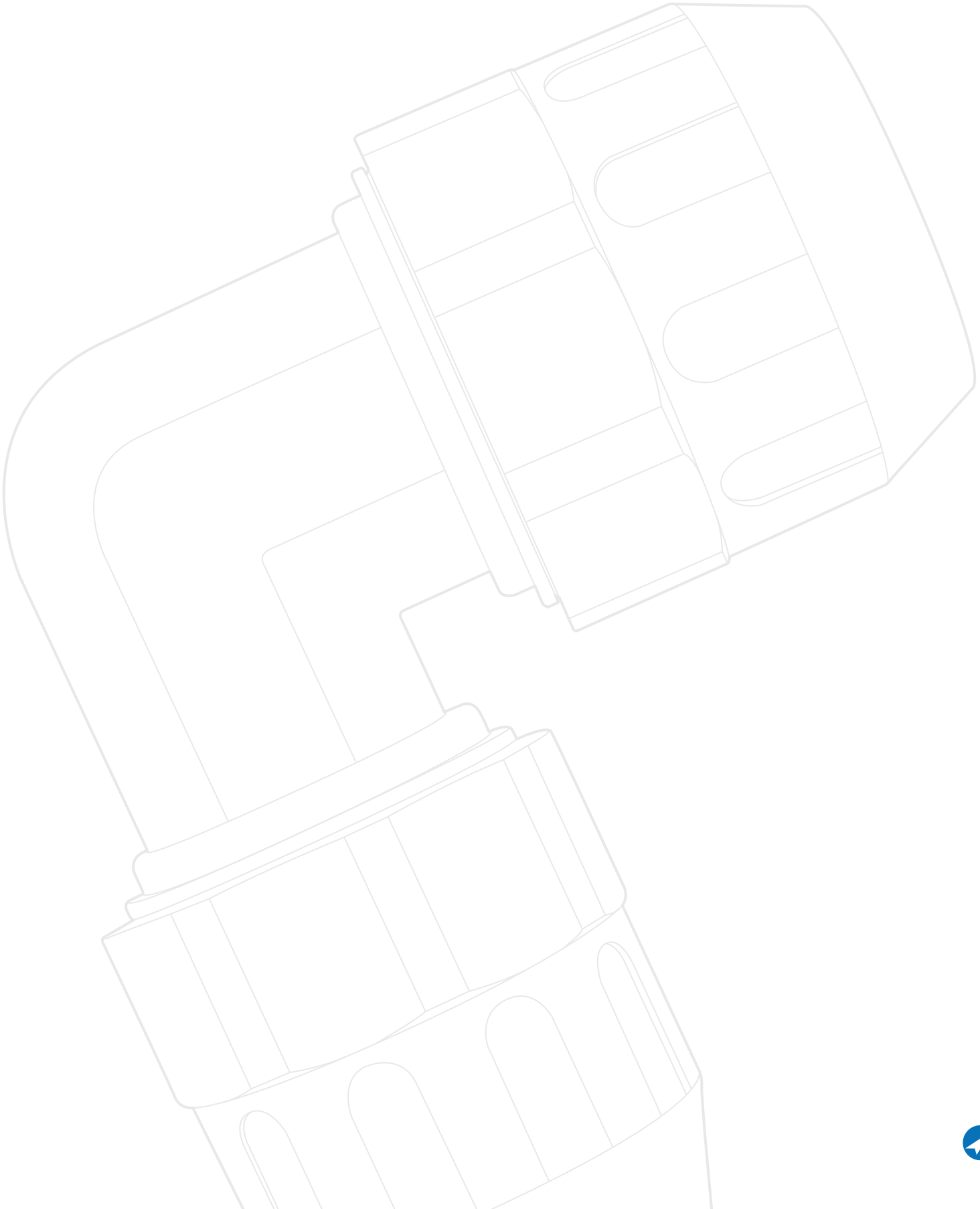
Products in compliance with EC Regulation 1907/2006

Products in compliance with the directive EU 2015/863

FPAV — Automatic hose reel

CODE	Ø IDxOD	TUBE THICKNESS (mm)	TUBE LENGTH (m)	INLET THREAD	OUTLET THREAD (MALE)	SIZES (cm)	WEIGHT (kg)
FPAV120816G14	8x12	2	15+1	-	G 1/4"	49x38x21	8
FPAV141016G38	10x14	2	15+1	-	G 3/8"	49x38x21	8

Fixing holes Ø: Ø6mm
Distance between the two fixing holes: 160mm



-40°C ÷ +60°C

Working Pressure:
See the table
Negative Pressure:
- 0,95 Bar (- 95 kPa)

Compressed air

Parallel gas BSPP ISO 228
G 1/4" and G 3/8"

Tube: Polyurethane on polyester basis
Fittings: Nickel-plated brass

FEATURES
Very flexible tubing with good elastic properties even at low temperatures. Good chemical, abrasion and ageing resistance. If exposed to sunlight, color may change slightly but mechanical featured remain unchanged.

Hardness: Shore 98 A
Ultimate tensile strength: 50 MPa
Ultimate tensile strain: 400%
Specific weight: 1,23 g/cc
Ultimate shear strength: 123 N/mm
Abrasion resistance: 30 mm^3

Products in compliance with EC Regulation 1907/2006

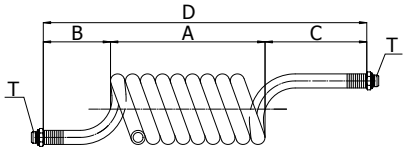
Products in compliance with the directive EU 2015/863

WORKING PRESSURE EXPRESSED IN % AS A FUNCTION OF TEMPERATURES

20°C	30°C	40°C	50°C	60°C
100%	83%	72%	64%	47%

UCESPRO-G

PU coiled tube on polyester basis with spring & BSPP thread fittings



	CODE	Ø ODxID	T	A (mm)	B (mm)	C (mm)	D (mm)	WORKING PRESSURE AT 23°C (Bar)	BURSTING PRESSURE AT 23°C (Bar)	LENGHT TUBE (m)	NUMBER OF TURNS	Ø INTERNAL COILED TUBE (mm)	WEIGHT (g)
*	UCESPRO060435G14	6x4	2x G 1/4"	134	100	500	734	12	40	3,5	31	30	165
*	UCESPRO060405G14		2x G 1/4"	266	100	500	866	12	40	5,0	44	30	190
*	UCESPRO060475G14		2x G 1/4"	399	100	500	999	12	40	7,5	66	30	240
*	UCESPRO060410G14		2x G 1/4"	532	100	500	1132	12	40	10,0	88	30	290
	UCESPRO080535G14	8x5	2x G 1/4"	194	100	500	794	14	45	3,5	34	25	230
	UCESPRO080505G14		2x G 1/4"	387	100	500	987	14	45	5,0	48	25	280
	UCESPRO080575G14		2x G 1/4"	580	100	500	1180	14	45	7,5	72	25	375
	UCESPRO080510G14		2x G 1/4"	773	100	500	1373	14	45	10,0	97	25	470
	UCESPRO106505G14	10x6,5	2x G 1/4"	399	100	500	999	13	42	5,0	40	30	385
	UCESPRO106575G14		2x G 1/4"	598	100	500	1198	13	42	7,5	60	30	525
	UCESPRO106510G14		2x G 1/4"	797	100	500	1397	13	42	10,0	80	30	670
	UCESPRO120805G38	12x8	2x G 3/8"	266	100	500	866	12	40	5,0	22	60	550
	UCESPRO120875G38		2x G 3/8"	399	100	500	999	12	40	7,5	33	60	755
	UCESPRO120810G38		2x G 3/8"	532	100	500	1132	12	40	10,0	44	60	955

* Ø 6x4 fittings are in yellow brass

Sizes Ø ODxID	Light blue
6x4	UCESPRO060435G14AZ
	UCESPRO060405G14AZ
	UCESPRO060475G14AZ
	UCESPRO060410G14AZ
8x5	UCESPRO080535G14AZ
	UCESPRO080505G14AZ
	UCESPRO080575G14AZ
	UCESPRO080510G14AZ
10x6,5	UCESPRO106505G14AZ
	UCESPRO106575G14AZ
	UCESPRO106510G14AZ
12x8	UCESPRO120805G38AZ
	UCESPRO120875G38AZ
	UCESPRO120810G38AZ

PED DECLARATION

* Declaration available on our website (www.f-linepro.it) or on request.

Tierre Group S.p.a.
Sede: Via Dell'Industria 18 – 20032 Cormano (MI) – Italia
Magazzino: Via Dell'Artigianato 2 – 20032 Cormano (MI) – Italia
Produzione: Via Marco Biagi 1 – 25045 Castegnato (BS) – Italia
C.F. e P.IVA IT 12437570158 – Cap. Soc. €2.000.000,00 i.v.
REA MI-1558390

Tel. +39 02 663088.1 – Fax +39 02 66304172
www.tierregroup.com – info@tierregroup.com

DECLARATION OF CONFORMITY

PED

Pressure Equipment

In accordance with Directive 2014/68/EU (PED) of the European Parliament and of the Council of 15 May 2014, as updated by Commission Implementing Decision (EU) 2025/165

TIERRE GROUP S.p.A.

DECLARES

that the products of the F-Line.PRO series, with diameters of 16mm, 20mm, 25mm, 40mm and 63mm, with a maximum PN of 16 bar, are classified in the category provided for in Article 4, paragraph 3.
These products are designed and manufactured in accordance with sound engineering practice and are not required to bear the CE marking, as specified in Article 18 of the same Directive.

Cormano, 30 gennaio 2025

TIERRE GROUP S.p.a.
Dott. Marco Regis

1

M2DC rev.1 – Aprile 2023

TEST REPORT - OMECO

* Full test report available on request.

OMECO
CENTRO RICERCA, PROVE MATERIALI, TARATURE

Sede Centrale, Amministrativa e Laboratori:
Headquarter and Laboratories:
I-20900 MONZA (MB) - Via Monviso, 56
Tel. 039748983 (r.a.) - Fax 039736433
www.omecosrl.it - E-mail: direzione@omecosrl.it - omeco@pec.omecosrl.eu

Sedi distaccate e Laboratori:
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I-20835 MUGGIÒ (MB)
Via Milano, 4
Tel. 0399418049 - Fax 0399418051

I-24061 ALBANO S. ALESSANDRO (BG)
Via Madonna delle Rose, 56
Tel. 035581016 (r.a.) - Fax 035580153

RAPPORTO DI PROVA
TEST REPORT

Numero: SPS/0031/22 del 07/02/2022
Number: *date*
Rif. OMECO: 3224/21 Pag. 1 di 11
OMECO Ref.: *Page 1 of 11*
Rif. CLIENTE: acc.prev.2738/1
CUSTOMER Ref.:

TIERRE GROUP S.P.A.
VIA DELL'INDUSTRIA, 18
20032 CORMANO MI

Dati forniti dal Cliente / *Data supplied by the Customer:*

Campione: Raccordi in plastica a innesto rapido serie "F-Line.PRO" per tubi di alluminio: DN20, DN25 e DN40.
Sample:

Plastic push-in fittings "F-Line.PRO" series for aluminum pipes: DN20, DN25 and DN40.

Identificazione:
Identification:

Per ciascun DN:

- Provino 1 test di tenuta pneumatica
- Provino 2 test di scoppio
- Provino 3 test di trazione/pull-out e successiva prova di tenuta
- Provino 4 test di flessione in pressione

For each type DN:

- *Sample set 1 used for pneumatic pressure test*
- *Sample set 2 used for burst test*
- *Sample set 3 used for pull-out test and following tightness test*
- *Sample set 4 used for flexural test under pressure*

Data ricevimento: 18/01/2022
Date of receipt:

Norma: 1254-2:2021 and 1254-20:2021
Test standards:

ING. MARCO CASARIL
RESPONSABILE DEL LABORATORIO
TECHNICAL MANAGER

FIRMATO DIGITALMENTE
DIGITALLY SIGNED

Data esecuzione: From 1-02-2022 to 07-02-2022 **Presso:** Lab. OMECO-Monza
Date of execution: ***At:***

Questo documento riguarda solo il campione sottoposto a prova. Il campionamento è stato effettuato a cura del Cliente. I risultati si riferiscono al campione così come ricevuto. Il Laboratorio non è responsabile dei dati forniti dal Cliente.
This document concerns only the sample submitted to the test. The sampling operations were performed by the Customer. The test results refers to the sample as received.The Laboratory is not responsible for the data supplied by the Customer

Tempo di conservazione dei campioni dalla data di emissione del documento: 30 gg.
The samples have to be kept, after the issue of the document): 30 days
Tempo di conservazione delle registrazioni tecniche: 10 anni / *Technical recordings are kept:10 years*

PSQ-014/1 Rev.5

ALPHANUMERIC INDEX

F-Line®.PRO

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Cap. Soc. Euro 2.000.000,00 i.v. - REA MI-1558390

F-Line.PRO catalogue - Ed. 3.0 - 05/25