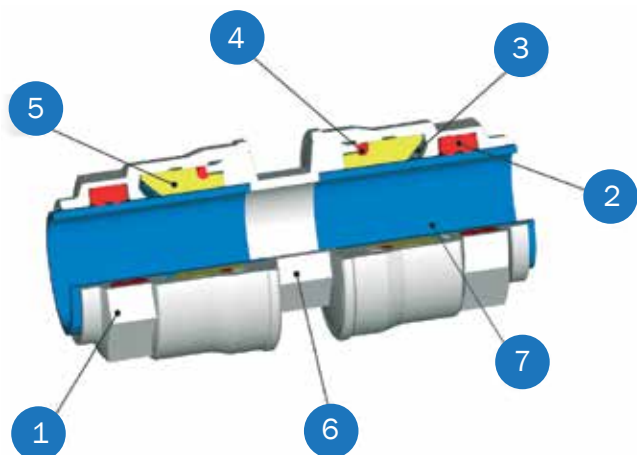


INFINITY PIPE & FITTINGS

TECHNICAL CHARACTERISTICS

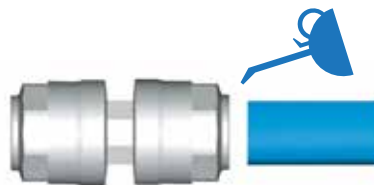
PUSH-IN 20 - 25 - 32 - 40 - 50 - 63



- 1 Nut made in nickel-plated brass
- 2 Seal made in NBR
- 3 Clamping washer made in Inox AISI 304
- 4 O-RING seals made in NBR
- 5 Safety ring made in technopolymeric
- 6 Body made in nickel-plated brass
- 7 Extruded aluminium tube calibrated and powder coated

TEMPERATURES	
MINIMUM	-20°C
MAXIMUM	+80°C
PRESSURES	
MINIMUM	-0.99 bar (0.099 Mpa)
MAXIMUM	16 bar (1.6 Mpa)
COMPATIBLE FLUIDS	
Compressed air	
Vacuum	
Inert Gas (AZOTO, ARGON, NITROGEN)	
FIRE RESISTANCE	
The system does not stoke or propagate any fires	
THREADS	
Female threads in conformity with ISO 228	
TECHNICAL CHARACTERISTICS TO THE TUBES	
EXTRUDED ALUMINIUM	UNI 9006/1 Al Mg 0.5 Si 0.4 Fe 0.2
DESIGNATIONS UNI EN 573-3	EN AW 6060 T6
SURFACE TREATMENT	Electrostatic painting
SPECIFIC WEIGHT	2.70 Kg/dm³
EXPANSION COEFFICIENT	0.024mm/(m °C)

INSTALLATION 20 - 25 - 32 - 40



- 1 Fittings of 20 - 25 - 32 - 40 are pre-assembled. Tubes of 6m are pre-coated, calibrated and deburred.



- 2 Push tube into the fitting for automatic connection.

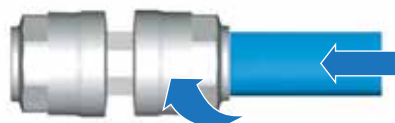
DIAMETER	TORQUE
20	300 cN.m
25	300 cN.m
32	400 cN.m
40	650 cN.m

- 3 In case of fitting disassembling, use the torques as in the chart to re-assemble the fitting.

INSTALLATION 50 - 63



- 1 Fittings of 50 - 63 are pre-assembled with nut untwisted to help tube connection. Tubes of 6m are pre-coated, calibrated and deburred.



DIAMETER	TORQUE
50	75 N.m
63	75 N.m

- 2 Push tube into the fitting for connection and tighten the nut using torques settings as in the chart.



Always use
Infinity brackets
to install



Never bury an
Infinity system
in soil

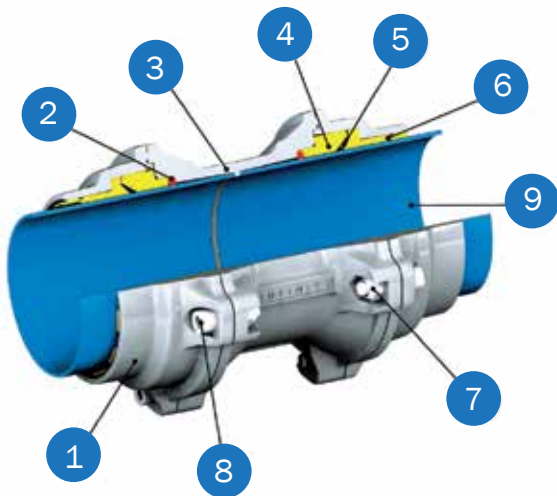


Install system
floating to
ground

INFINITY PIPE & FITTINGS

TECHNICAL CHARACTERISTICS

PUSH-IN 80-110



- 1 Nut made in aluminium with proper surface treatment
- 2 O-RING Seal made in NBR
- 3 Body made in aluminium with proper surface treatment
- 4 Safety ring made in technopolymeric
- 5 Clamping washer made in compliance with AISI 301
- 6 Tube-guide ring made in technopolymeric
- 7 Selflocking nut in zinc-plated steel
- 8 TCEI screw in zinc-plated steel
- 9 Extruded aluminium tube calibrated and powder coated

TEMPERATURES

MINIMUM	-20°C
MAXIMUM	+80°C

PRESSURES

MINIMUM	-0.99 bar (0.099 Mpa)
MAXIMUM	16 bar (1.6 Mpa)

COMPATIBLE FLUIDS

Compressed air
Vacuum
Inert Gas (AZOTO, ARGON, NITROGEN)

FIRE RESISTANCE

The system does not stoke or propagate any fires

THREADS

Male threads taper in conformity with ISO
Female threads in conformity with ISO 228

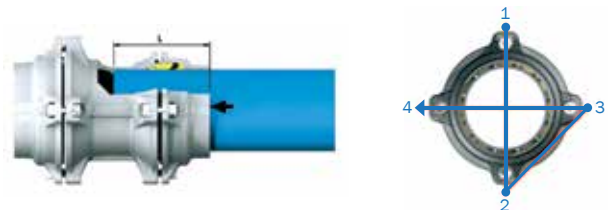
TECHNICAL CHARACTERISTICS TO THE TUBES

EXTRUDED ALUMINIUM	UNI 9006/1 Al Mg 0.5 Si 0.4 Fe 0.2
DESIGNATIONS UNI EN 573-3	EN AW 6060 T6
SURFACE TREATMENT	Electrostatic painting
SPECIFIC WEIGHT	2.70 Kg/dm ³
EXPANSION COEFFICIENT	0.024mm/(m °C)

INSTALLATION 80-110



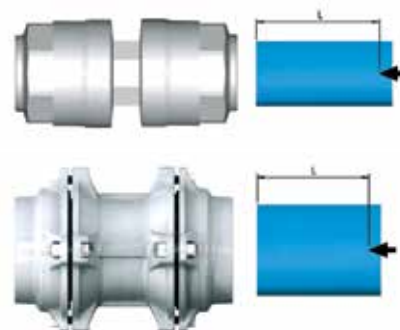
- 1 Fittings of 80-110 are pre-assembled with four screws untwisted to help tube connection. Tubes of 6m are pre-coated, calibrated and deburred.



- 2 Push tube into the fitting for automatic connection and screw up in the suggested sequence. Tightening torque 30Nm.

TUBE CONNECTION

The correct connection of tube is confirmed by the position of the arrow pre-stamp. If you need to cut the tube, mark the distance of tube to insert in the fitting.



DIAMETER	LENGTH
20	31.5mm
25	38.5mm
32	46mm
40	52mm
50	63.5mm
63	75.5mm
80	91mm
110	125.5mm



Always use
Infinity brackets
to install



Never bury an
Infinity system
in soil



Install system
floating to
ground

Determining The Diameter For Installation

The diagram below allows you to determine the diameter of the main line.

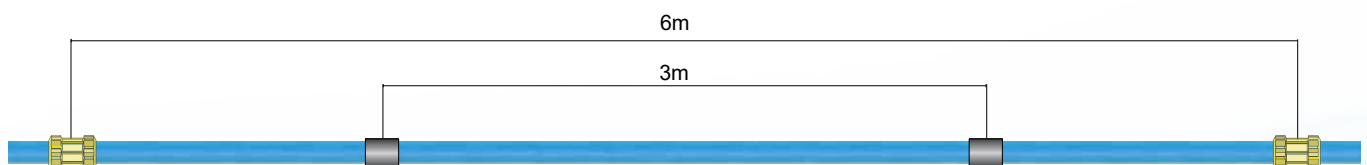
1. Choose the flow rate of compressor in the red column.
2. Choose the distance between compressor and the most distant using point in the blue column.
3. Cross the lines of flow rate and blue column of distance to choose the diameter.

FLOW RATE			Distance from compressor to furthest outlet										
NI/min	Nm³/h	cfm	25m	50m	100m	150m	200m	300m	400m	500m	1000m	1500m	2000m
230	14	8	20	20	20	20	20	20	20	20	20	25	25
650	39	23	20	20	20	20	25	25	25	25	32	32	40
900	54	32	20	20	25	25	25	32	32	32	40	40	40
1200	72	42	20	20	25	25	32	32	32	32	40	40	50
1750	105	62	20	25	32	32	32	40	40	40	50	50	50
2000	120	71	25	25	32	32	32	40	40	40	50	50	50
2500	150	88	25	32	32	32	40	40	40	50	50	63	63
3000	180	106	25	32	32	40	40	40	50	50	50	63	63
3500	210	124	25	32	40	40	40	50	50	50	63	63	63
4500	270	159	32	32	40	40	50	50	50	50	63	63	80
6000	360	212	32	40	50	50	50	50	63	63	80	80	80
7000	420	247	32	40	50	50	50	63	63	63	80	80	80
8500	510	300	40	40	50	50	63	63	63	63	80	80	110
12000	720	424	40	50	63	63	63	80	80	80	110	110	110
15000	900	530	50	50	63	63	80	80	80	80	110	110	110
18000	1080	636	50	63	63	80	80	80	80	110	110	110	110
21000	1260	742	50	63	63	80	80	80	110	110	110	110	110
26000	1560	918	63	63	80	80	80	110	110	110	110	110	110
31000	1860	1095	63	63	80	80	110	110	110	110	110	110	110*
33000	1980	1165	63	80	80	110	110	110	110	110	110	110*	110*
44000	2640	1554	63	80	110	110	110	110	110	110	110*	110*	110*
50000	3000	1766	80	80	110	110	110	110	110	110	110*	110*	110*
58000	3480	2048	80	80	110	110	110	110	110	110	110*	110*	110*
67000	4020	2366	80	110	110	110	110	110	110	110*	110*	110*	110*
75000	4500	2648	80	110	110	110	110	110	110*	110*	110*	110*	110*
83000	4980	2931	80	110	110	110	110	110*	110*	110*	110*	110*	110*
92000	5520	3249	110	110	110	110	110	110*	110*	110*	110*	110*	110*
100000	6000	3531	110	110	110	110	110*	110*	110*	110*	110*	110*	110*

Pressure 7 bar - Total pressure drop 4%

* Pressure drop is higher than 4%

Collar Positions - 6M Tube



INFINITY PIPE & FITTINGS INSTALLATION GUIDE

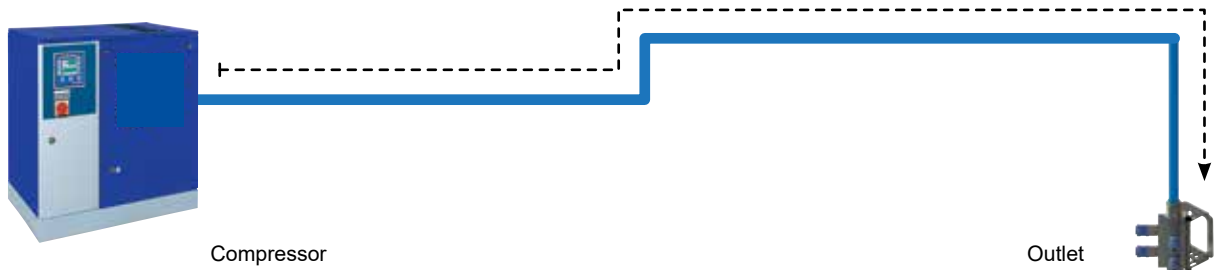
Distance From Compressor To Furthest Outlet

Distance between the compressor
and the furthest outlet

Ring Main System



Linear System



Air Consumption Values

INDICATIVE FLOW RATES			
K.W.	HP	M ³ /MIN	CFM
1.5	2	0.23	8
3	4	0.46	16
4	6	0.65	23
5.5	7.5	0.9	32
7.5	10	1.2	42
11	15	1.75	62
12.5	17	2	71
15	20	2.5	88
18	25	3	106
22	30	3.5	123
29	40	4.5	159
37	50	6	212
45	60	7	247
55	75	8.5	300
74	100	12	423
92	125	15	530
110	150	18	635
132	180	21	742
170	230	26	918
200	270	31	1094
250	340	44	1554

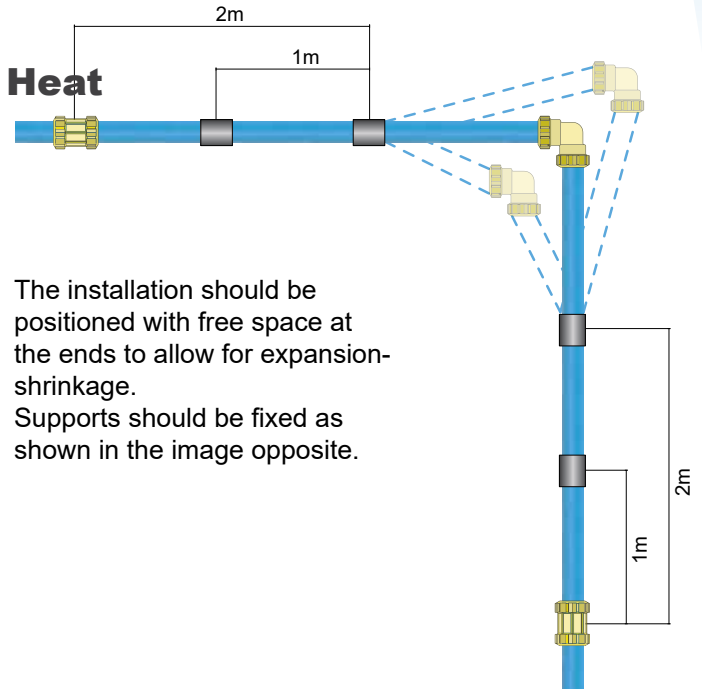
TOOLS	TYPICAL CONSUMPTION AT AN OPERATING PRESSURE OF 6 BAR (CFM)
Small process controls, instrumentation, pneumatic logic units	= 4 CFM
Paint spray gun, small impact wrench, light/medium drill, blowgun	= 9 CFM
Polisher, screwdriver	= 25 CFM
Sheet metal cutter, large impact wrench, automatic plane	= 29 CFM
Small automatic machines, miscellaneous tooling	= 32 CFM
Large tools, power machines and associated equipment	= 36 CFM
Air hoist, grinder	= 74 CFM

Expansion And Shrinkage Due To Heat

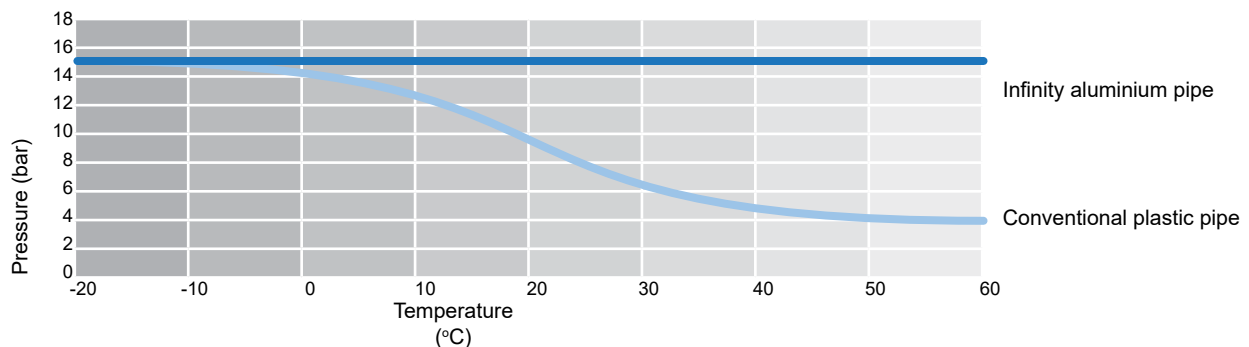
To calculate the linear expansion-shrinkage, we can use the following formula:

$$\Delta L = \Delta T \times L \times \alpha$$

ΔL	Linear expansion-shrinkage in mm
ΔT	Heat variation between the operating temperature and the installation one at °C
L	Tube length in M
α	Linear expansion factor, for the aluminium it is 0.024mm/M °C

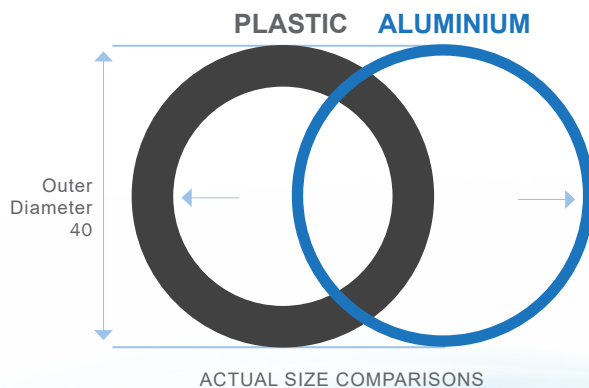


Maximum Working Pressure Versus Operating Temperature



Size For Size There Is No Comparison

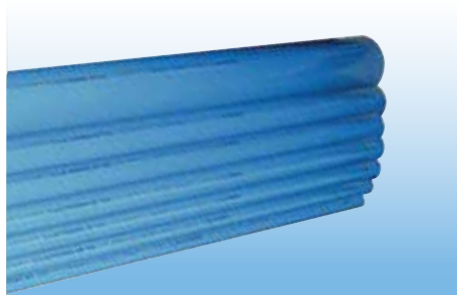
Infinity Pipe Systems when compared with traditional poly systems can often be installed 1 size smaller in diameter due to the thin cross section of the wall whilst maintaining full rigidity and strength.



PLASTIC		ALUMINIUM	
OUTER DIAMETER	INNER DIAMETER	OUTER DIAMETER	INNER DIAMETER
20	14	20	17
25	18	25	23
32	23	32	29
40	29	40	37
50	36	50	46
63	45	63	59
90	65	80	76
110	79	110	106

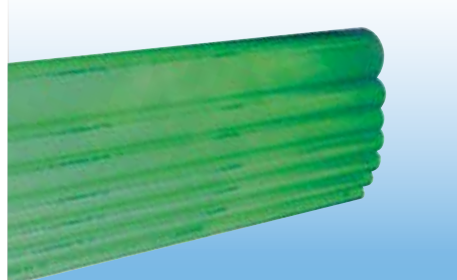
Technical Characteristics Pertinent To The Tubes

→ Aluminium Air Pipe



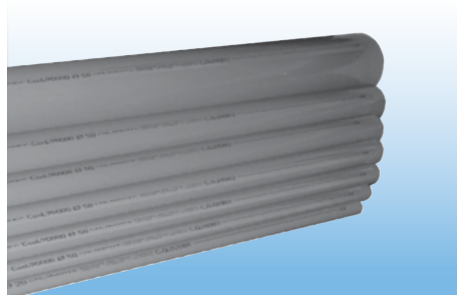
CODE	ALT CODE	DESCRIPTION	MAX FLOW RATE (CFM) (25M, @7BAR)
IN20X6M	900006 20	Aluminium Pipe 20mm x 6m	62
IN25X6M	900006 25	Aluminium Pipe 25mm x 6m	124
IN32X6M	900006 32	Aluminium Pipe 32mm x 6m	247
IN40X6M	900006 40	Aluminium Pipe 40mm x 6m	424
IN50X6M	900006 50	Aluminium Pipe 50mm x 6m	742
IN63X6M	900006 63	Aluminium Pipe 63mm x 6m	1554
IN80X6M	900006 80	Aluminium Pipe 80mm X 6m	2931
IN110X6M	900006 110	Aluminium Pipe 110mm X 6m	3531
IN168X6M	900006 168	Aluminium Pipe 168mm X 6m	

→ Aluminium Nitrogen Pipe Green



CODE	ALT CODE	DESCRIPTION	MAX FLOW RATE (CFM) (25M, @7BAR)
IN20X6G	900006 20 G	Aluminium Pipe Green 20mm x 6m	62
IN25X6G	900006 25 G	Aluminium Pipe Green 25mm x 6m	124
IN32X6G	900006 32 G	Aluminium Pipe Green 32mm x 6m	247
IN40X6G	900006 40 G	Aluminium Pipe Green 40mm x 6m	424
IN50X6G	900006 50 G	Aluminium Pipe Green 50mm x 6m	742
IN63X6G	900006 63 G	Aluminium Pipe Green 63mm x 6m	1554
IN80X6G	900006 80	Aluminium Pipe Green 80mm X 6m	2931
IN110X6G	900006 110	Aluminium Pipe Green 110mm X 6m	3531

→ Aluminium Vacuum Pipe Grey



CODE	ALT CODE	DESCRIPTION	MAX FLOW RATE (CFM) (25M, @7BAR)
INV20X6M	900006GR 20	Aluminium Pipe Grey 20mm x 6m	62
INV25X6M	900006GR 25	Aluminium Pipe Grey 25mm x 6m	124
INV32X6M	900006GR 32	Aluminium Pipe Grey 32mm x 6m	247
INV40X6M	900006GR 40	Aluminium Pipe Grey 40mm x 6m	424
INV50X6M	900006GR 50	Aluminium Pipe Grey 50mm x 6m	742
INV63X6M	900006GR 63	Aluminium Pipe Grey 63mm x 6m	1554
INV80X6M	900006GR 80	Aluminium Pipe Grey 80mm X 6m	2931
INV110X6M	900006GR 110	Aluminium Pipe Grey 110mm X 6m	3531
INV168X6M	900006GR 168	Aluminium Pipe Grey 168mm X 6m	

MAX PRESSURE	16 Bar
WORKING TEMPERATURE RANGE	-20 °C to 80 °C (Fire tested in accordance with UNI EN 13501-1:2005)
UV EFFECT	NONE
EXTRUDED ALUMINIUM	UNI 9006/1 Al Mg 0.5 Si 0.4 Fe 0.2
CHEMICAL COMPOSITION	Si: 0.3 ± 0.6 - Mg: 0.35 ± 0.6 - Fe: 0.10 ± 0.30
DESIGNATIONS UNI EN 573 - 3	EN AW 6060
HEAT TREATMENT / MELTING POINT	DRAINED "16" / 600°C
SURFACE TREATMENT	Electrostatic painting
SPECIFIC WEIGHT / RESISTANCE	2.70 Kg/dm ³ / 3.25 μΩ cm
THERMAL CONDUCTIVITY	1.75 W/(cm °K)
EXPANSION COEFFICIENT	0.024mm/(m °C)
SPECIFIC HEAT AT 100°C	0.92 J/(g °K)
BEARING TENSILE STRESS	205 N/mm ²
COEFFICIENT OF ELASTICITY	66000 N/mm ²
PROPORTIONALITY DEVIATION LOAD	165 N/mm ²
BRINEL HARDNESS	60 ± 70 HB
CHEMICAL TREATMENT	Fluorine-Zirconium - prevents corrosion from acid condensing water & sticks like a film on the internal surface of the tube.
EXTERNAL COATING / INTERNAL COATING	Epoxypolyester Powder / Chemically treated with fluorine-zirconium.
QUALITY FEATURES	UV resistant and fire tested in accordance with UNI EN 13501-1:2005