Quality People. Building Solutions.

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Date: 2/4/2025
Return Request: 2/14/2025
Project: City Of Sherwood Public Works (Maintenance Building)
Supplier: Comfort Systems USA (Arkansas), Inc.
Manufacturer: Airnet
Submittal: Compressed Air Systems (Piping)
Submittal Number: 22 15 00-02
Drawing # and Installation: Plumbing Drawings

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Notes:

CSUSA PROJECT NO.
24-6084
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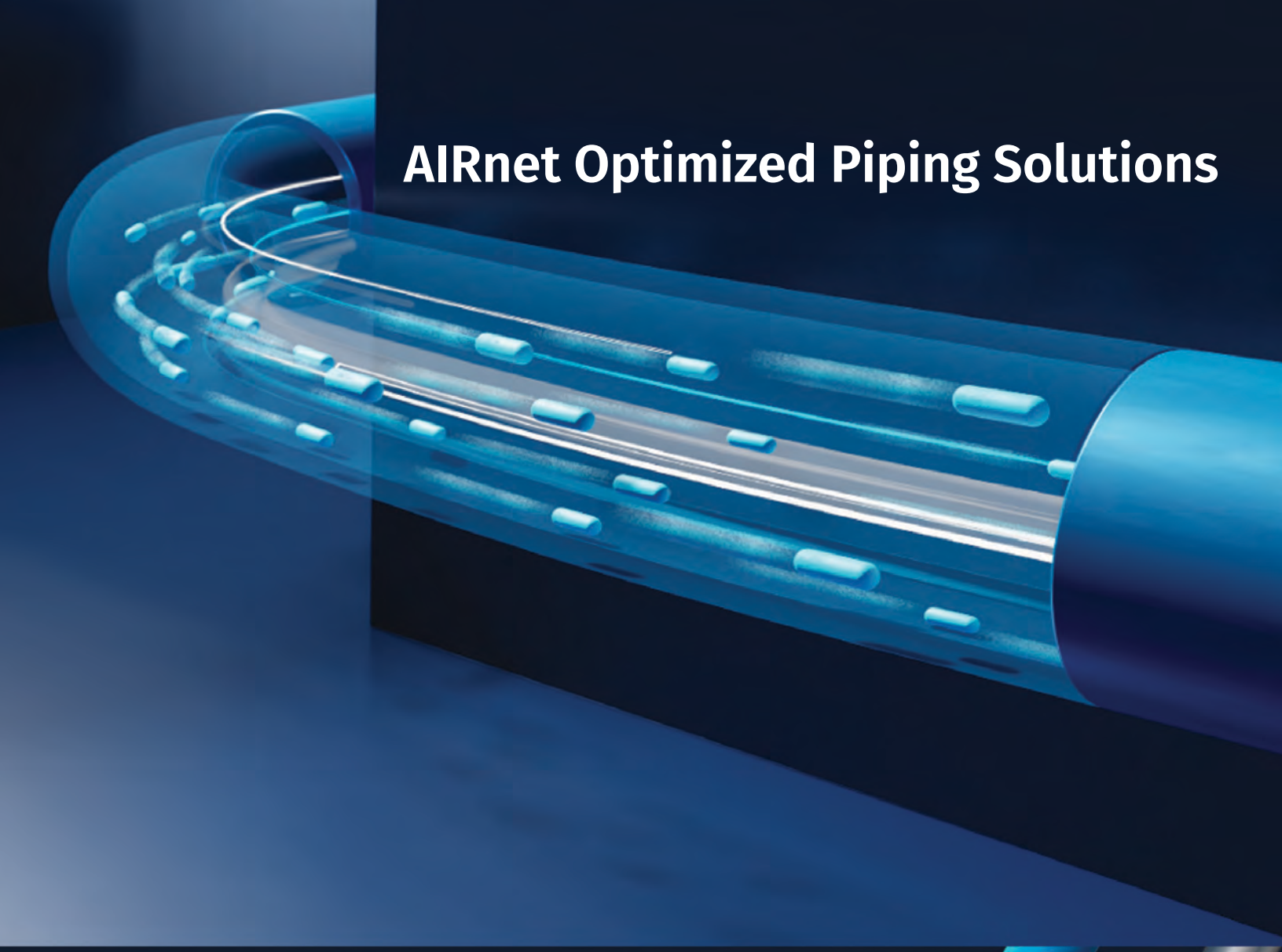
AIRnet Optimized Piping Solutions



Preserving the power of air

AIRNET

Piping Solutions

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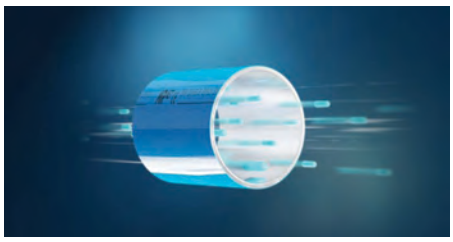


Atlas Copco in the United States

Our products help customers to achieve sustainable productivity in a wide range of markets, including general engineering, manufacturing and process industries, construction, automotive, electronics, oil and gas, and much more.

Atlas Copco in the United States handles the sales and service of industrial gas and air compressors, dryers and filters, compressor parts and service, and vacuum pumps; construction and demolition tools including mobile compressors, pumps, light towers and generators and handheld tools; industrial electric, pneumatic, cordless transducerized assembly tools, alongside an extensive range of pneumatic grinders, sanders, drills, and chipping hammers and riveting systems.

Atlas Copco customers are supported by a nationwide sales, distribution, and service network, to ensure that products are running at maximum efficiency and minimum downtime at our customers' sites.

The Atlas Copco Group is a world-leading provider of sustainable productivity solutions. The Group serves customers in more than 180 countries with products and services focused on productivity, energy efficiency, safety and ergonomics.

Aluminum Piping

A comprehensive range of accessories for hooking up your compressed air network to the final point of use. The new point of use accessories are designed to complement the AIRnet piping system and provide end-to-end solutions for all your compressed air distribution needs.

PIPES

20 (¾") - 25 (1") - 40 (1 ½") - 50 (2") - 63 (2 ½") - 80 (3") - 100 (4") - 158 (6") mm

Applications	Compressed Air and Vacuum	EN standard
Additional Gasses	Nitrogen, Helium, Argon, Neon, Xenon and Krypton	
Material	Extruded aluminum alloy EN AW-6060 T6 (similar to alloy 6063T5)	EN 755-2 (ASTM B241)
Safety factor	64bar - 4x MAWP for all diameters (burst pressure)	(according to ASME B31.1)
Working pressure	Max 16 bar(g) (Max 232 psig) (D158: max 13 bar (188 psig) acc. ASME B31.1)	
Working temperature	-20°C to 80°C (-4°F to 176°F)	
Vacuum level	13 mbar(a) (0.189 psia)	
Dewpoint	Lowest allowable pressure dewpoint is -40°C (-40°F)	
Outside treatment	Polyester powder paint (according to QUALICOAT Standards)	
Inside treatment	Chrome free conversion treatment	
Colors	Blue RAL 5012, Green RAL 6018 and Grey RAL 7001	

Aluminum Piping

PF SERIES FITTINGS
20 (¾") - 25 (1") - 40 (1 ½") - 50 (2") mm

Connection	Push to fit technology	EN standard
Materials	Engineered polymer PA6 - GF30 fiberglass reinforcement Aluminum high pressure die casting EN AC-46100 (Similar to A03830) Wrought aluminum alloy EN AW-6026 (Similar to alloy 6082)	 EN 1706 (ASTM B85) EN 755-2 (ASTM B221)
Seal fittings	NBR 70 Sh A (PTFE coating on pipe seal)	EN 755-2 (ASTM B241)

PM SERIES FITTINGS
63 (2 ½") – 80 (3") mm

Connection	Torque to grip technology, pre marked	EN standard
Materials	Aluminum high pressure die casting EN AC-43400 (similar to A360) Wrought aluminum alloy 6082	ASTM B85 / EN 1706 ASTM B221
Seal fittings	NBR 70 Sh A	

BIGGER DIAMETERS FITTINGS
100 (4") - 158 (6") mm

Connection	Bolt clamp technology	EN standard
Materials	Aluminum permanent mold casting EN AC-43100 (Similar to A13600) Stainless Steel EN 1.4301 (Similar to alloy 304)	EN 1706 (ASTM B85) EN 10088-2 (AISI 304)
Seal fittings	NBR 70 Sh A	

Product Information

A comprehensive range of accessories for hooking up your compressed air network to the final point of use. The new point of use accessories are designed to complement the AIRnet piping system and provide end-to-end solutions for all your compressed air distribution needs.

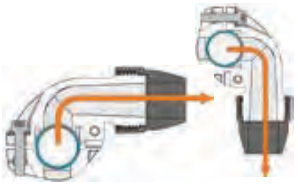
AIRNET IS FAST AND EASY TO INSTALL AND FLEXIBLE FOR THE FUTURE

TIME AND TOOLING

- Quick connections with no need to crimp, thread, solder or glue the pipe
- No heavy tooling or machinery required
- PF series and Black Series can be connected to any existing network via simple use of adaptor unions and nipple sockets
- PF series is assembled by hand, a push of the pipe into the fitting is all it takes

MODULARITY

- Easy to handle and easy to work with lightweight materials
- Modular design supports extensions and modifications to meet new demands
- Components are interchangeable and reusable after disassembly
- Quickdrops are easily mounted, both horizontally and vertically



Quickdrop design safeguards leaktight and condensate free droplines

Guarantee 10 years

AIRNET IS RELIABLE, SAFE, AND MAINTENANCE FREE

SUSTAINABILITY

- Optimized inner body design minimizes flow resistance and pressure drop in the fittings
- Low friction factor and seamless connections minimize pressure drops in the pipe network
- Superior sealing technology ensures a leak free system and maintains performance over time
- Durable and corrosion resistant materials offers a maintenance free system

SAFETY

- Safety factor of 4 for all diameters (burst pressure)
- Camera control and automatic assembly guarantee zero defect manufacturing
- Plastic components and pipe clips comply to UL 94 HB and UL 94 V-2 for flammability
- Torque indicators ensure sufficient torquing

White torque indicators (PF Series)

Stainless Steel

A comprehensive range of accessories for hooking up your compressed air network to the final point of use. The new point of use accessories are designed to complement the AIRnet piping system and provide end-to-end solutions for all your compressed air distribution needs.

Product Range	Pipes SS304L: D15 (½"), D28 (1"), D35 (1 ¼"), D42 (1 ½"), D54 (2"), D76 (2 ¾"), D89 (3 ½"), D108 (4") Pipes SS316L: D15 (½"), D28 (1"), D42 (1 ½")	
Applications	Compressed Air, Nitrogen, Vacuum...	
Material	Stainless Steel AISI 316L 1.4404 Stainless Steel AISI 304L 1.4301	EN10088 ASTM A666
Safety factor	4, Burst pressure > 64 Bar (> 928 PSI)	
Working pressure	16 Bar (232 PSI)	
Working temperature	-20°C to 120°C (- 4°F to 248° F)	
Vacuum level	20 mbar (0.29 PSI) abs	
Dewpoint	Lowest allowable pressure dewpoint is -70°C (-94°F)	
Treatment	Annealing	

Fittings	D15 (½"), D28 (1"), D35 (1 ¼"), D42 (1 ½"), D54 (2"), D76 (2 ¾"), D89 (3 ½"), D108 (4")	
Connection	Press fit system	
Materials	Stainless steel AISI 316L 1.4404	EN10088 ASTM A666
Seal fittings	FKM (fluoroelastomer)	

Accessories

A comprehensive range of accessories for hooking up your compressed air network to the final point of use. The new point of use accessories are designed to complement the AIRnet piping system and provide end-to-end solutions for all your compressed air distribution needs.

These accessories are specifically introduced

☑ to ensure the highest efficiency of your distribution network
☑ to protect your downstream equipment
☑ to complement the performance of your compressed air equipment

Customer benefits

☑ AIRnet is now a one-stop solution for all your compressed air distribution needs
☑ All products are designed to ensure the optimum efficiency of your distribution network
☑ Full range of accessories to cater to all industry segments
☑ All products are manufactured according to EU standards ensuring highest reliability
☑ Strong distribution and service network across the globe

Service units

Pressure regulators

Filter regulator

Filter regulator - Lubricator

COMING SOON!

Quick release couplings

Quick couplers

Safety couplers

Connectors

Hose connectors

Hose clips

Reducers

Double nipples

NEW POU and PA Series Catalog available separately.

Accessories

A comprehensive range of accessories for hooking up your compressed air network to the final point of use. The new point of use accessories are designed to complement the AIRnet piping system and provide end-to-end solutions for all your compressed air distribution needs.

For a perfectly organized workplace

For private use and professional workshop applications – hard-workingfabric hoses, flexible Super-Flex hoses or durable polyurethane hoses for every application. For optimal workplace organization and ergonomic work-hose rewinders, power and air supply units and tractors.

Install perfect compressed air outlets in the pipe sustem for each workplace – versatile pipe sockets are fully compatible with the AIRnet pipe system and various attachement parts, and can be extended by fitting additional outlet components.

COMING SOON!

Aluminum

Aluminum Pipes for Air
(5.7m / 18.7 ft)

PART NUMBER	OUTSIDE Ø (mm / inch)	INSIDE Ø (mm / inch)	LENGTH (ft)	PACK QTY
2811 1000 00	20 / ¾	17.4 / .7	18.7	1
2811 2000 00	25 / 1	22.2 / .9	18.7	1
2811 4000 00	40 / 1½	36.4 / 1.4	18.7	1
2811 5000 00	50 / 2	46 / 1.8	18.7	1
2811 6000 00	63 / 2½	59 / 2.3	18.7	1
2811 7000 00	80 / 3	76 / 3	18.7	1
2811 8000 00	100 / 4	97 / 3.88	18.7	1
2811 9000 00	158 / 6	151 / 5.71	18.7	1

Aluminum Pipes for Inert Gases (Green)
(5.7m / 18.7 ft)

PART NUMBER	OUTSIDE Ø (mm / inch)	INSIDE Ø (mm / inch)	LENGTH (ft)	PACK QTY
2811 1061 00	20 / ¾	17.4 / .7	18.7	1
2811 2061 00	25 / 1	22.2 / .9	18.7	1
2811 4061 00*	40 / 1½	36.4 / 1.4	18.7	1
2811 5061 00*	50 / 2	46 / 1.8	18.7	1*
2811 6061 00*	63 / 2½	59 / 2.3	18.7	1*
2811 7061 00*	80 / 3	76 / 3	18.7	1*
2811 8061 00*	100 / 4	97 / 3.88	18.7	1*
2811 9061 00*	158 / 6	151 / 5.71	18.7	1*

* Special Order Only. P.O. Required, 12 - 14 week lead time, Ordered / ships in bundle quantity

Aluminum Pipes for Vacuum (Gray)
(5.7m / 18.7 ft)

PART NUMBER	OUTSIDE Ø (mm / inch)	INSIDE Ø (mm / inch)	LENGTH (ft)	PACK QTY
2811 1062 00*	20 / ¾	17.4 / .7	18.7	1*
2811 2062 00*	25 / 1	22.2 / .9	18.7	1*
2811 4062 00*	40 / 1½	36.4 / 1.4	18.7	1*
2811 5062 00*	50 / 2	46 / 1.8	18.7	1*
2811 6062 00*	63 / 2½	59 / 2.3	18.7	1*
2811 7062 00*	80 / 3	76 / 3	18.7	1*
2811 8062 00*	100 / 4	97 / 3.88	18.7	1*
2811 9062 00*	158 / 6	151 / 5.71	18.7	1*

* Special Order Only. P.O. Required, 12 -14 week lead time, Ordered / ships in bundle quantity

S-bends

PART NUMBER	OFFSET (max inch)	OUTSIDE Ø (mm / inch)	INSIDE Ø (mm / inch)	LENGTH (inch)	PACK QTY
2811 1067 05	6	20 / ¾	17.4 / .7	17.25	5
2811 2067 05	6	25 / 1	22.2 / .9	18	5

Clip, Brackets and Support

Pipe Clip PF Series (Imperial)

PART NUMBER	AIRnet Ø (mm / inch)	THREAD TYPE	PACK QTY
2811 1122 20	20 / ¾	1/4 UNC	20
2811 2122 20	25 / 1	1/4 UNC	20
2811 4122 20	40 / 1½	1/4 UNC	20
2811 5122 20	50 / 2	1/4 UNC	20
2811 6122 20	63 / 2½	5/16 UNC	20
2811 7122 20	80 / 3	5/16 UNC	20
1312 1013 61	100 / 4	M8 - ⅜ UNC	1
2810 9122 10	158 / 6	M10 - ⅜ UNC	10

Pipe Clip Spacer PF Series

PART NUMBER	FIT SIZES	METRIC	PACK QTY
2811 0027 10	¾ - 1	20 - 25	10
2811 0127 10	1½ - 2	40 - 50	10
2811 0227 10	2½ - 3	63 - 80	10
2810 0327 10	4	100	10

Threaded Rod Adapters

PART NUMBER	DIAMETER (inch)	PACK QTY
2811 0172 00	¼ - ⅜	1
2811 0272 00	5⁄16 - ⅜	1

Aluminum

Straight Connection

Equal Union PF Series

PART NUMBER	OUTSIDE Ø (mm / inch)	DIMENSIONS (inch)			PACK QTY
		L	W	H	
2811 1002 80	20 / ¾	5	1.4	1.4	1
2811 2002 80	25 / 1	4.9	1.8	1.8	1
2811 4002 80	40 / 1½	7.8	2.8	2.8	1
2811 5002 80	50/ 2	8.9	3.5	3.5	1

Equal Union PM Series

PART NUMBER	OUTSIDE Ø (mm / inch)	DIMENSIONS (inch)			PACK QTY
		L	W	H	
2811 6002 90	63 / 2½	6.29	3.5	3.5	1
2811 7002 90	80/ 3	7.9	4.4	4.4	1

Equal Union Large Sizes

PART NUMBER	OUTSIDE Ø (mm / inch)	DIMENSIONS (inch)			PACK QTY
		L	W	H	
2810 8802 00	100 / 4	3.86	5.22	6.40	1
2810 9002 00	158 / 6	4.52	7.59	8.95	1

Reducing Union PF Series

PART NUMBER	OUTSIDE Ø (mm / inch)	REDUCED DIAMETER (mm / inch)	DIMENSIONS (inch)			PACK QTY
			L	W	H	
2811 2121 80	25 / 1	20 / ¾	5.22	1.71	1.8	1
2811 4221 80	40 / 1½	25 / 1	6.82	2.66	2.8	1
2811 5421 80	50 / 2	40 / 1½	8.81	2.91	3.5	1

Reducing Union PM Series

PART NUMBER	OUTSIDE Ø (mm / inch)	REDUCED DIAMETER (mm / inch)	DIMENSIONS (inch)			PACK QTY
			L	W	H	
2811 6521 90	63 / 2½	50 / 2	7.46	3.57	3.57	1
2811 7621 90	80 / 3	63 / 2½	6.95	4.40	4.40	1

Reducing Union Large Sizes

PART NUMBER	OUTSIDE Ø (mm / inch)	REDUCED DIAMETER (mm / inch)	DIMENSIONS (inch)			PACK QTY
			L	W	H	
2810 8721 00	100 / 4	80 / 3	11.97	4	4	1
2810 9821 00	158 / 6	100 / 4	10.59	6	6	1

*Unions required

Elbow

90° Elbow PF Series

PART NUMBER	OUTSIDE Ø (mm / inch)	DIMENSIONS (inch)			PACK QTY
		L	W	H	
2811 1003 80	20 / ¾	3.24	1.47	0.98	1
2811 2003 80	25 / 1	3.76	1.67	1.18	1
2811 4003 80	40 / 1½	5.84	2.67	1.97	1
2811 5003 80	50 / 2	7.33	3.30	2.56	1

90° Elbow PM Series

PART NUMBER	OUTSIDE Ø (mm / inch)	DIMENSIONS (inch)			PACK QTY
		L	W	H	
2811 6003 90	63 / 2½	6.00	3.60	6.0	1
2811 7003 90	80 / 3	7.66	4.40	7.66	1

90° Large Sizes

PART NUMBER	OUTSIDE Ø (mm / inch)	DIMENSIONS (inch)			PACK QTY
		L	W	H	
2810 8003 00	100 / 4	9.92	9.92	7.95	1
2810 9003 00	158 / 6	9.78	9.78	6.69	1

45° Elbow PF Series

PART NUMBER	OUTSIDE Ø (mm / inch)	DIMENSIONS (inch)			PACK QTY
		L	W	H	
2811 1004 80	20 / ¾	4.29	1.47	0.78	1
2811 2004 80	25 / 1	5.03	1.71	0.98	1
2811 4004 80	40 / 1½	7.66	2.67	1.57	1
2811 5004 80	50 / 2	9.48	3.30	1.97	1

45° Elbow PM Series

PART NUMBER	OUTSIDE Ø (mm / inch)	DIMENSIONS (inch)			PACK QTY
		L	W	H	
2811 6004 90	63 / 2½	7.84	3.60	1.07	1
2811 7004 90	80 / 3	9.08	4.40	1.37	1

45° Large Sizes

PART NUMBER	OUTSIDE Ø (mm / inch)	DIMENSIONS (inch)			PACK QTY
		L	W	H	
2810 8004 00	100 / 4	11.29	11.29	5.80	1
2810 9004 00	158 / 6	11.22	11.22	5.29	1

* 4" & 6" Elbows require separate Unions.

Aluminum

Tee

Equal Tee PF Series

PART NUMBER	OUTSIDE Ø (mm / inch)	DIMENSIONS (inch)			PACK QTY
		L	W	H	
2811 1005 80	20 / ¾	5.02	3.25	1.41	1
2811 2005 80	25 / 1	5.82	3.76	1.71	1
2811 4005 80	40 / 1½	9.01	5.84	2.67	1
2811 5005 80	50 / 2	11.38	7.33	3.30	1

Equal Tee PM Series

PART NUMBER	OUTSIDE Ø (mm / inch)	DIMENSIONS (inch)			PACK QTY
		L	W	H	
2811 6005 90	63 / 2½	8.61	6.09	3.57	1
2811 7005 90	80 / 3	11.42	7.91	4.40	1

Large sizes

PART NUMBER	OUTSIDE Ø (mm / inch)	DIMENSIONS (inch)			PACK QTY
		L	W	H	
2810 8005 00	100 / 4	11.97	7.95	4.00	1
2810 9005 00	158 / 6	12.59	9.40	6.00	1

* 4" & 6" Tees require separate Unions.

Reducing Tee PF Series

PART NUMBER	OUTSIDE Ø (mm / inch)	REDUCED DIAMETER (mm / inch)	DIMENSIONS (inch)			PACK QTY
			L	W	H	
2811 2107 80	25 / 1	20 / ¾	5.82	3.56	2.66	1
2811 4107 80	40 / 1½	20 / ¾	9.01	4.43	2.66	1
2811 4207 80	40 / 1½	25 / 1	9.01	4.64	2.66	1
2811 5107 80	50 / 2	20 / ¾	11.37	5.14	3.30	1
2811 5207 80	50 / 2	25 / 1	11.37	5.35	3.30	1
2811 5407 80	50 / 2	40 / 1½	11.89	5.96	3.50	1

Reducing Tee PM Series

PART NUMBER	OUTSIDE Ø (mm / inch)	THREAD SIZE (mm / inch)	DIMENSIONS (inch)			PACK QTY
			L	W	H	
2811 6407 90	63 / 2	40 / 1½	8.61	2.67	6.48	1
2811 6507 90	63 / 2½	50 / 2	8.61	3.57	7.13	1
2811 7407 90	80 / 3	40 / 1½	11.42	4.40	7.50	1
2811 7507 90	80 / 3	50 / 2	11.42	4.$0	8.10	1
2811 7607 90	80 / 3	63 / 2½	11.42	4.40	7.30	1

Large Sizes

PART NUMBER	OUTSIDE Ø (mm / inch)	THREAD SIZE (mm / inch)	DIMENSIONS (inch)			PACK QTY
			L	W	H	
2810 8507 00	100 / 4	50 / 2	11.97	8.94	4.00	1
2810 8607 00	100 / 4	63 / 2½	11.97	8.94	4.00	1
2810 8707 00	100 / 4	80 / 3	11.97	9.92	4.00	1
2810 9707 00	158 / 6	80 / 3	12.59	12.21	6.00	1
2810 9807 00	158 / 6	100 / 4	12.59	11.05	6.00	1

* 4" & 6" Tees require separate Unions.

Reducing Tee

Threaded Reducing Tee PF Series (NPT)

PART NUMBER	OUTSIDE Ø (mm / inch)	REDUCING DIA. (inch-Female)	DIMENSIONS (inch)			PACK QTY
			L	W	H	
2811 0009 80	20 / ¾	NPT ⅜	5.02	0.98	3.40	1
2811 1009 80	20 / ¾	NPT ½	5.02	0.98	3.40	1
2811 2009 80	25 / 1	NPT ½	5.82	1.10	3.73	1
2811 2109 80	25 / 1	NPT ¾	5.82	1.10	3.73	1
2811 4209 80	40 / 1½	NPT 1	9.01	1.18	5.47	1
2811 5209 80	50 / 2	NPT 1	11.38	1.18	5.59	1

Threaded Reducing Tee PM Series

PART NUMBER	OUTSIDE Ø (mm / inch)	REDUCING DIA. (inch-Female)	DIMENSIONS (inch)			PACK QTY
			L	W	H	
2811 6509 90	63 / 2½	NPT 2	8.89	3.60	6.33	1
2811 7609 90	80 / 3	NPT 2½	11.06	4.40	7.55	1
2811 7709 90	80 / 3	NPT 3	11.06	4.40	7.83	1

Large Sizes

PART NUMBER	OUTSIDE Ø (mm / inch)	REDUCING DIA. (inch-Female)	DIMENSIONS (inch)			PACK QTY
			L	W	H	
2810 8209 00	100 / 4	NPT 1	11.97	4.40	5.93	1
2810 9209 00	158 / 6	NPT 1	12.59	6.00	8.12	1

4" and 6" Unions required

End Cap

PF Series

PART NUMBER	OUTSIDE Ø (mm / inch)	DIMENSIONS (inch)			PACK QTY
		L	W	H	
2811 1006 80	20 / ¾	2.31	1.47	1.53	1
2811 2006 80	25 / 1	2.71	1.71	1.73	1
2811 4006 80	40 / 1½	3.91	2.67	2.48	1
2811 5006 80	50 / 2	4.70	3.30	3.07	1

PM Series

Large Sizes

PART NUMBER	OUTSIDE Ø (mm / inch)	DIMENSIONS (inch)			PACK QTY
		L	W	H	
2811 6006 90	63 / 2½	4.42	3.57	3.57	1
2811 7006 90	80 / 3	5.68	4.40	4.40	1

PART NUMBER	OUTSIDE Ø (mm / inch)	DIMENSIONS (inch)			PACK QTY
		L	W	H	
2810 9816 00**	100 & 158 / 4 & 6	10.59	10.00	6.00	1

Note: 2810 9816 00 has 4" / 6"on same fitting. Flip for required size.

Aluminum

AIRnet Valves

Valves PF Series

PART NUMBER	OUTSIDE Ø (mm / inch)	DIMENSIONS (inch)			PACK QTY
		L	W	H	
2811 1051 91	20 / ¾	8.61	2.67	6.48	1
2811 2051 91	25 / 1	8.61	4.72	7.13	1
2811 4051 91	40 / 1½	11.42	4.40	7.50	1
2811 5051 91	50 / 2	11.42	4.4	8.10	1

Threaded Valves PF Series (NPT)

PART NUMBER	OUTSIDE Ø (mm / inch)	NPT-OUTLET	DIMENSIONS (inch)			PACK QTY
			L	W	H	
2811 1153 91	20 / ¾	8.61	2.67	2.67	6.48	1
2811 2253 91	25 / 1	8.61	3.57	3.57	7.13	1
2811 4453 91	40 / 1½	11.42	4.40	4.40	7.50	1
2811 5553 91	50 / 2"	11.42	4.40	4.40	8.10	1

Butterfly Valves

PM Series–Pipe to Pipe Assemblies

PART NUMBER	OUTSIDE Ø (mm / inch)	DIMENSIONS (inch)			PACK QTY
		L	W	H	
2811 6051 90*	63 / 2½	8.18	8.34	12.81	1 assy.
2811 7051 90*	80 / 3	10.24	8.34	13.35	1 assy.

* Complete Assembly with Flanges and Pipe Nuts

PM Series–Pipe to NPT Female Threaded

PART NUMBER	OUTSIDE Ø (mm / inch)	DIMENSIONS (inch)			PACK QTY
		L	W	H	
2811 6653 90 *	63 / 2 1/2	6.49	12.82	12.82	1
2811 7753 90 *	80 / 3	9.13	13.14	13.14	1

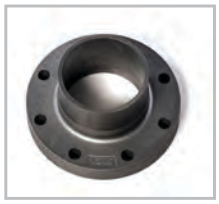
* Complete Assembly with Flanges, Pipe Nuts and Threaded Flange

*4" & 6" Flanged Valve Body Only**

PART NUMBER	OUTSIDE Ø (mm / inch)	DIMENSIONS (inch)			PACK QTY
		L	W	H	
1606 4561 04**	100 / 4	2.06	14.96	14.96	1
2810 9051 00**	158 / 6	2.44	17.75	17.75	1

** Requires Flanges

Flanges



Flanges ANSI PM Series and Large

PART NUMBER	OUTSIDE Ø (mm / inch)	DIMENSIONS & WEIGHT			PACK QTY
		L	W	Wt.(lb)	
2811 6154 90	63 / 2½	5.00	7.08	9.55	1 assy.
2811 7154 90	80 / 3	5.27	7.48	11.44	1 assy.
2810 8254 00	100 / 4	5.19	9.00	6.05	1
2810 9154 00	158 / 6	5.19	11.22	11.78	1

4" and 6" Unions required

Quickdrop

Quickdrop PF Series Pipe-to-Pipe

PART NUMBER	OUTSIDE Ø (mm / inch)	REDUCED DIAMETER (mm / inch)	DIMENSIONS (inch)			PACK QTY
			L	W	H	
2811 2110 80	25 / 1"	20 / 3/4"	4.05	2.30	2.00	1
2811 4110 80	40 / 1 1/2"	20 / 3/4"	4.68	3.80	2.00	1
2811 4210 80	40 / 1 1/2"	25 / 1"	4.9	4.40	2.50	1
2811 5110 80	50 / 2"	20 / 3/4"	5.15	4.40	2.50	1
2811 5210 80	50 / 2"	25 / 1"	5.35	6.50	2.50	1
2811 6110 80	63 / 2 1/2"	20 / 3/4"	5.62	3.80	2.25	1
2811 6210 80	63 / 2 1/2"	25 / 1"	5.62	4.40	2.50	1
2811 7110 80	80 / 3"	20 / 3/4"	6.41	4.40	2.50	1
2811 7210 80	80 / 3"	25 / 1"	6.61	6.50	2.50	1

Quickdrop Series 4" / 6" Pipe-to-Pipe Outlet Large Series

PART NUMBER	OUTSIDE Ø (mm / inch)	REDUCED DIAMETER (mm / inch)	DIMENSIONS (inch)			PACK QTY
			L	W	H	
2811 8110 80	100 / 4	20 / 3/4	10.00	3.27	7.00	1
2811 8210 80	100 / 4	25 / 1	10.16	3.27	7.00	1
2811 8410 80	100 / 4	40 / 1 1/2	10.47	3.27	7.00	1
2811 8510 80	100 / 4	50 / 2	10.98	3.27	7.00	1
2811 9110 80	158 / 6	20 / 3/4	12.32	3.27	10.00	1
2811 9210 80	158 / 6	25 / 1	12.44	3.27	10.00	1
2811 9410 80	158 / 6	40 / 1 1/2	12.72	3.27	10.00	1
2811 9510 80	158 / 6	50 / 2	13.27	3.27	10.00	1

Aluminum

Quickdrop

PF Series
Pipe-to-Female NPT

PART NUMBER	OUTSIDE Ø (mm / inch)	REDUCED DIAMETER (mm / inch)	DIMENSIONS (inch)			PACK QTY
			L	W	H	
2811 2012 80	25 / 1”	1/2” F-NPT	4.21	2.70	2.00	1
2811 4012 80	40 / 1 1/2”	1/2” F-NPT	4.88	3.70	2.00	1
2811 4112 80	40 / 1 1/2”	3/4” F-NPT	4.88	4.40	2.40	1
2811 5012 80	50 / 2”	1/2” F-NPT	5.31	4.40	2.40	1
2811 5112 80	50 / 2”	3/4” F-NPT	5.31	6.50	2.50	1
2811 6012 80	63 / 2 1/2”	1/2” F-NPT	5.82	3.70	2.00	1
2811 6112 80	63 / 2 1/2”	3/4’” F-NPT	5.82	4.40	2.40	1
2811 7012 80	80 / 3”	1/2” F-NPT	6.57	4.30	2.40	1
2811 7112 80	80 / 3”	3/4” F-NPT	6.57	6.50	2.50	1

Threaded Quick Drops
4" / 6" Pipe-to-Female NPT
Large Series to F-NPT Outlets

PART NUMBER	OUTSIDE Ø (mm / inch)	REDUCED DIAMETER (inch-Female)	DIMENSIONS inch)			PACK QTY
			L	W	H	
2811 8112 80	100 / 4”	3/4" F-NPT	10.08	3.27	7.00	1
2811 8212 80	100 / 4”	1" F-NPT	10.08	3.27	7.00	1
2811 8412 80	100 / 4”	1 1/2" F-NPT	10.83	3.27	7.00	1
2811 8512 80	100 / 4”	2" F-NPT	10.83	3.27	7.00	1
2811 9112 80	158 / 6”	3/4" F-NPT	12.36	3.27	10.00	1
2811 9212 80	158 / 6”	1" F-NPT	12.36	3.27	10.00	1
2811 9412 80	158 / 6”	1 1/2" F-NPT	13.11	3.27	10.00	1
2811 9512 80	158 / 6”	2" F-NPT	13.11	3.27	10.00	1

NPT Threaded Connectors

Aluminum Nipple Socket
PF Series (NPT-M)

PART NUMBER	AIRnet Ø (mm / inch)	THREAD SIZE (inch)	DIMENSIONS (inch)			PACK QTY
			L	W	H	
2811 1018 80	20 / ¾	NPT ½	2.90	1.47	1.33	1
2811 1118 80	20 / ¾	NPT ¾	2.90	1.47	1.33	1
2811 2118 80	25 / 1	NPT ¾	3.38	1.71	1.53	1
2811 2218 80	25 / 1	NPT 1	3.38	1.71	1.53	1
2811 4318 80	40 / 1½	NPT 1¼	5.02	2.67	1.77	1
2811 4418 80	40 / 1½	NPT 1½	5.02	2.67	1.77	1
2811 5418 80	50 / 2	NPT 1½	5.55	3.30	2.17	1
2811 5518 80	50 / 2	NPT 2	5.55	3.30	2.17	1

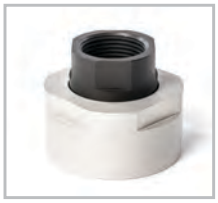
Adaptor Union

PF Series (NPT-Female)

PART NUMBER	AIRnet Ø (mm / inch)	THREAD SIZE (inch)	DIMENSIONS (inch)			PACK QTY
			L	W	H	
2811 1114 80	20 / ¾	¾	5.18	1.73	1.33	1
2811 2214 80	25 / 1	1	6.46	2.69	1.53	1
2811 4414 80	40 / 1½	1½	8.64	2.67	2.95	1
2811 5514 80	50 / 2	2	9.24	3.30	2.95	1

PM Series (NPT-Female)

PART NUMBER	AIRnet Ø (mm / inch)	THREAD SIZE (inch-Female)	DIMENSIONS (inch)			PACK QTY
			L	W	H	
2811 6614 90	63 / 2½	2½	6.61	3.47	4.60	1
2811 7714 90	80 / 3	3	7.42	4.40	4.60	1



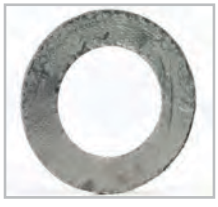
KIT- Reductions
PF and PM Series

PART NUMBER	AIRnet Ø (inch)	THREAD SIZE (inch)	PACK QTY
2811 0020 80	20 / ¾	NPT ⅜	1
2811 1020 80	20 / ¾	NPT ½	1
2811 2020 80	25 / 1	NPT ½	1
2811 2120 80	25 / 1	NPT ¾	1
2811 4220 80	40 / 1½	NPT 1	1
2811 5420 80	50 / 2	NPT 1½	1
2811 5520 80	50 / 2	NPT 2	1
2811 6520 90	63 / 2½	2 ½	1
2811 7620 90	80 / 3	2 ½	1
2811 7720 90	80 / 3	3	1

Spare Parts

O-Rings

PART NUMBER	AIRNET Ø (mm)	QUICK DROP INNER SEAL	PACK QTY
2811 2065 10	25	Contour	10
2811 4065 10	40-50	Contour	10
2811 6065 10	63-80	Standard O-Rings	10



Flat Gasket (Flange Accessory)

PART NUMBER	SIZE (mm / inch)	DESCRIPTION	Ø (mm)	H (mm)	PACK QTY
0650 0100 16	63 / 2½	Flat Gasket	63	93	1
0650 1001 27	90 / 3½	Flat Gasket	90	117	1
0650 0100 06	100 / 4	Flat Gasket	100	132	1
0650 1001 25	158 / 6	Flat Gasket	158	132	1

Aluminum

Hex Nipples – NPT Connectors

NPT Male-to-Male Connectors

PART NUMBER	THREAD SIZE (inch)	PACK QTY
2811 0077 00	½	1
2811 1177 00	¾	1
2811 2277 00	1	1
2811 4477 00	1 ½	1
2811 5577 00	2	1

NPT Female-to-Female Connectors

PART NUMBER	THREAD SIZE (mm / inch)	PACK QTY
2811 0079 00	15 / ½	1
2811 1179 00	20 / ¾	1
2811 2279 00	25 / 1	1
2811 3379 00	32 / 1 ¼	1
2811 4479 00	40 / 1 ½	1
2811 5579 00	50 / 2	1

Wall Mounted Manifolds

Wall Mounted Single-Port and 3-Port PF Series (NPT)

PART NUMBER	DESCRIPTION	AIRNET Ø (mm / inch)	THREADED OUTLET Ø (inch)	PACK QTY
2811 1024 80	3-Port Manifold	20 / ¾	½	1
2811 2024 80	3-Port Manifold	25 / 1	½	1
2811 1041 80	1-Port Manifold	20 / ¾	½	1
2811 2041 80	1-Port Manifold	25 / 1	½	1

Wall Mounted 6-Port PF Series (NPT)

PART NUMBER	AIRNET Ø (mm / inch)	THREADED OUTLET Ø (inch)	PACK QTY
2811 1043 80	20 / ¾	½	1
2811 2043 80	25 / 1	½	1

Aluminum Accessories

Flexible Hoses

(NPT Threaded)

PART NUMBER	DIAMETER	LENGTH (FT)	PACK QTY
1312 1009 50	¾" Straight	2.5	1
1312 1009 51	¾" Straight	5	1
1312 1009 52	1" Straight	2.5	1
1312 1009 53	1" Straight	5	1
1312 1009 54	1½" Straight	5	1
1312 1009 55	2" Straight	5	1

Straight Ends

PART NUMBER	DIAMETER	LENGTH (FT)	PACK QTY
2810 1057 00	¾" Female-Female	2.5	*
2810 2057 00	1" Female-Female	2.5	*
2810 1157 00	¾" Female-Female	4.9	*
2810 2157 00	1" Female-Female	4.9	*
2810 4157 00	1½" Female-Female	4.9	*
2810 5157 00	2" Female-Female	4.9	*

* Special Order Only

Elbow Ends

PART NUMBER	DIAMETER	LENGTH (FT)	PACK QTY
2810 4057 00	1½" Female-Female	3.33	*
2810 5057 00	2" Female-Female	3.33	*

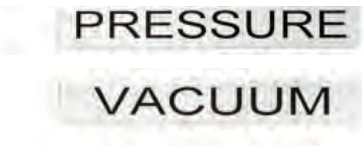
* Special Order Only

Flange Ends

PART NUMBER	DIAMETER	LENGTH (FT)	BOLT PATTERN	PACK QTY
2810 6155 00	2 ½" Flange-Straight	4.9	5.7"	*
2810 6055 00	3" Flange-Elbow	3.3	5.7"	*
2810 7155 00	3" Flange-Straight	4.9	6.3"	*
2810 7055 00	3" Flange-Elbow	6.2	6.3"	*

* Special Order Only

Labels



PART NUMBER	DESCRIPTION	DIMENSIONS (inch)	PACK QTY
2810 8067 05	Pressure Label	All Sizes	5
2810 8167 05	Vacuum Label	All Sizes	5

Aluminum Accessories

Conductivity Strip Kits

PART NUMBER	AIRnet Ø (mm / inch)	TYPE	PACK QTY
2811 1002 90	20 / ¾	Equal Socket	5
2811 4002 90	40 / 1½	Equal Socket	5
2811 5002 90	50 / 2	Equal Socket	5
2811 1003 90	20 / ¾	90°	5
2811 2003 90	25 / 1	90°	5
2811 4003 90	40 / 1½	90°	5
2811 5003 90	50 / 2	90°	5
2811 1004 90	20 / ¾	45°	5
2811 2004 90	25 / 1	45°	5
2811 4004 90	40 / 1½	45°	5
2811 5004 90	50 / 2	45°	5
2811 1005 90	20 / ¾	Tee	5
2811 2005 90	25 / 1	Tee	5
2811 4005 90	40 / 1½	Tee	5
2811 5005 90	50 / 2	Tee	5

Needed only in ATEX applications or potentially explosive environments.
MUST be Special Ordered from Airpower (Belgium); 4 - 6 week lead time.

Hanging Hardware

Available upon request

Screw Beam Clamp

PART NUMBER	DESCRIPTION QTY	DIMENSIONS (inch)	PACK
1310 0744 82	Screw Beam Clamp	¼	1
1310 0744 83	Screw Beam Clamp	5/16	1

Threaded Rod Standard

6 Foot (72 in)

PART NUMBER	DESCRIPTION	DIMENSIONS (inch)	PACK QTY
1310 0742 50	¼" All Thread	¼ " SAE	1
1310 0744 13	5/16" All Thread	5/16 " SAE	1
1310 0736 18	⅜" All Thread	⅜ " SAE	1

Aluminum Tools

AIRnet Spanner

Spanner Wrench with Depth Gauge on Handle

PART NUMBER	DESCRIPTION	SIZE (mm/inch)	PACK QTY
2811 1028 00	Spanner PF	20 / 0.75	1
2811 2028 00	Spanner PF	25 / 1	1
2811 4028 00	Spanner PF	40 / 1 1/2	1
2811 5028 00	Spanner PF	50 / 2	1
2811 6028 90	Spanner PM Nut D63	63 / 2 1/2	1
2811 6628 90	Spanner PM - Body D63	63 / 2 1/2	1
2811 7028 90	Spanner PM Nut D80	80 / 3	1
2811 7728 90	Spanner PM - Body D80	80 / 3	1
2811 7728 91	PM Nut D80 & Union D63	80 / 3	1
2810 8028 00	Belt Spanner	40 - 80 / 1 1/2 - 3	1

Torque Wrench

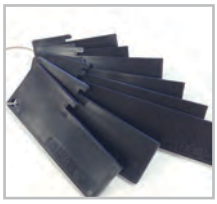
Wrench Heads

Handle-All

PART NUMBER	DESCRIPTION	DIAMETER (mm)	PACK QTY
2811 0028 80	Torque Wrench Handle	All PM / Large	1
4027 1323 08	Drive Head - H8 (100mm)	100mm Large Unions	1
0462 3601 23	Drive Head - H10 (158mm)	158mm Large Unions	1

Pipe Marker

All Sizes



PART NUMBER	DESCRIPTION	SIZE (MM / INCH)	PACK QTY
2811 0229 90	Pipe Marker Ring Kit	20 - 158 / 0.75 - 6"	1

Aluminum Pipe Cutter

Manual Pipe Cutter

PART NUMBER	ITEM DESCRIPTION	DIAMETER RANGE (mm)	PACK QTY
2810 0040 00	Pipe Cutter	20-63	1
2810 0140 00	Pipe Cutter	50-100	1
2810 0240 00	Pipe Cutter	100-158	1
2810 0340 00	Spare Cutting Wheel	20-40	1
2810 0440 00	Spare Cutting Wheel	50-158	1

Aluminum Tools

Electric Pipe Cutter

PART NUMBER	DESCRIPTION	DIAMETER (mm)	PACK QTY
2810 0640 80	Electric Saw	40-158 / 1 ½”- 6”	1 Kit

Aluminum Pipe Deburrer

PART NUMBER	DIAMETER RANGE (mm)	PACK QTY
2810 0041 00	20-25	1
2810 0141 00	20-50	1

Hole Deburrer

PART NUMBER	ITEM DESCRIPTION	DIAMETER RANGE (mm/inch)	PACK QTY
2810 0042 00	Pen Deburrer	20-110	1
2810 0641 00	2-Handle Deburring Tool (SS)	76 - 108 / 2¾”-4	1

Drill Bits

Hole Saws

PART NUMBER	DESCRIPTION	DIAMETER (mm)	PACK QTY
2810 0143 00	For 1" Header Quick Drop	25 / 1" ONLY	1
2810 0243 00	For 1 1/2"-3" Header QD	40-80 / 1 1/2" - 3"	1
2810 0343 00	For D100-158 Quick Drops	100-158 / 4 & 6"	1

Aluminum Tools

Drill Bit Holder

PART NUMBER	DESCRIPTION	DIAMETER RANGE (mm)	PACK QTY
2810 0044 00	For All PF Series Drops	20-80	1

L Key

PART NUMBER	DESCRIPTION	DIAMETER (mm)	PACK QTY
2811 0149 00	Allen / L Key	5	1

Slide Fluid

Lubricant

PART NUMBER	SIZE	AMOUNT	PACK QTY
2810 0148 00	½ Liter	½ Litre Bottle	1
1312 1009 45	4-1 Liter	Four (4) Litre Bottles	1 case (4)
2810 0248 00	Tub - Pint	One Pint	1

Complete Toolbox

PART NUMBER	DESCRIPTION	DIAMETER (mm)	PACK QTY
2811 0045 00	PF Series AIRnet Tool Box	20-50	1
2811 0245 00	Large Size AIRnet Tool Box	63-158	1

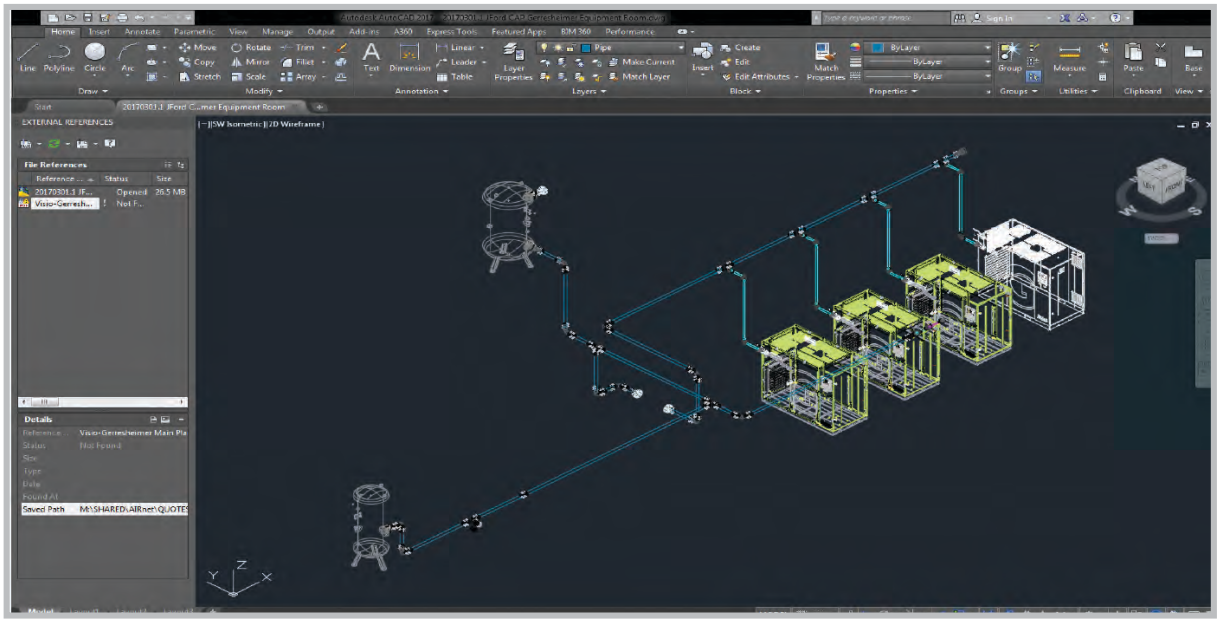
Aluminum Design Requirements

A Properly designed AIRnet system

- Guarantees the required pressure at the point of use with minimal pressure drop.
- Allows air flow from generation to point of use with maximum efficiency.
- Maintains contaminant free, high quality air to the downstream equipment and points of use over the lifetime of the system.
- Performs the installation with minimum downtime. The system can be pressurized immediately after assembly.
- Anticipates future requirements, and provides the necessary flexibility for future evolution.
- Reduces downtime, with the proper placement of valves that allows for isolation of areas for maintenance.

Have questions? Contact us at **www.airnet-system.com/en**.

Fill in the Information Form and someone will contact you directly regarding Design and Quoting Services offered.



Pre-Installation

What is the point of highest pressure drop?

The point of the highest **pressure drop** is typically the furthest point of use in the system. It takes into account all the pressure drops along the path from the point of generation to the point of use.

A high pressure drop requires a higher loading pressure on the compressor compensating for the losses along the network.

A 2 psi increase in operating pressure results in a 1% increase in energy consumption. Pressure drops drastically increase the electric bill.

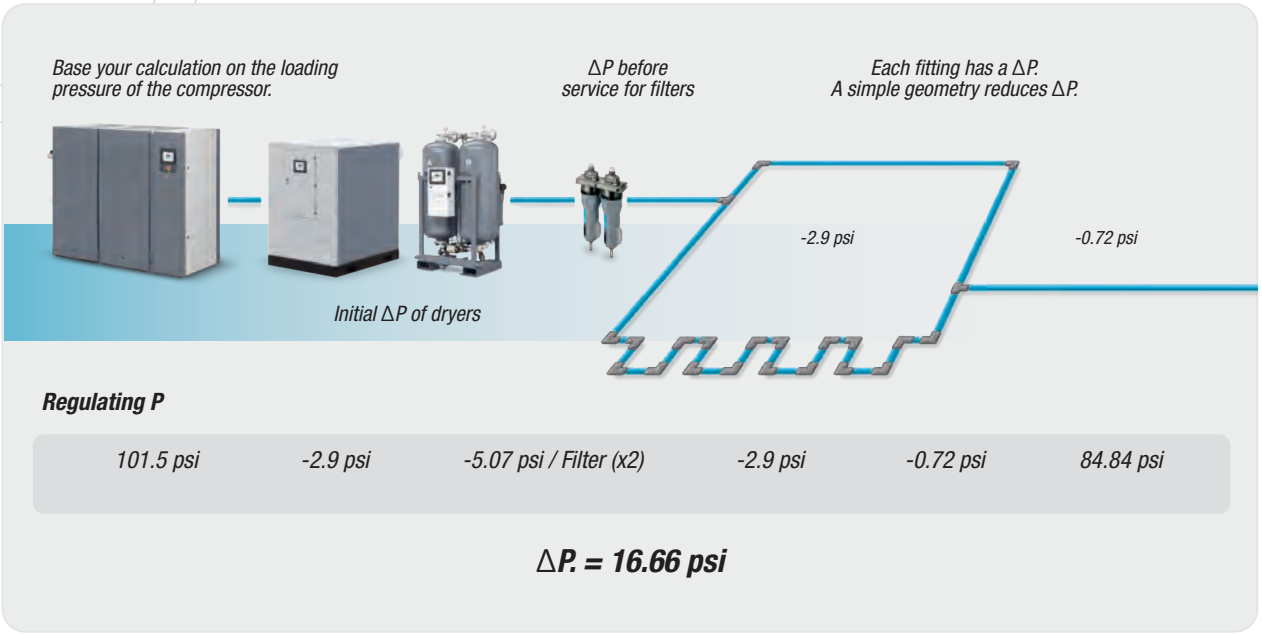
The pressure drop is influenced by various factors which can be classified from highest to lowest impact.

- The pipes' inner diameter:
  Increasing the pipes' inner diameter reduces the pressure drop but increases the initial investment.
- Free air delivery:
  The air demand of all downstream equipment connected to the network.
- The friction factor:
  Related to the pipes' material. AlRnet pipe has a very low friction factor due to its smooth surface as opposed to galvanized pipes.
- The length of the network:
  The longer the network, the higher the pressure drop.
- The design:
  It is recommended to build a ring in order to reduce your pressure drop.
- Working pressure:
  When the working pressure is lower, the pressure drop increases.

A properly designed system takes all these factors into account. By sizing the pipe properly, using AlRnet pipe with its low friction factor, minimizing the length of pipe used, and designing a system that takes advantage of a ring design, you will be able to minimize the pressure drop throughout the network. This will allow you to set a narrow pressure band on your compressor, maximizing the efficiency of the system and greatly saving on energy consumption and cost.

Aluminum Design Requirements

To evaluate the pressure drop in a typical installation



Regulating P

101.5 psi	*-2.9 psi*	*-5.07 psi / Filter (x2)*	*-2.9 psi*	*-0.72 psi*	*84.84 psi*

ΔP. = 16.66 psi

Expansion Loops

Long, straight pipes can expand and contract due to temperature changes. To compensate, expansion loops are suggested. The total number of expansion loops depends on the total length of the straight line of pipe and the maximum temperature variation.

The following table clarifies the maximum possible straight distance vs. the temperature variation. Expansion loops are required when the maximum length of the straight line is exceeded.

	Ø20 mm / ¾"	Ø25 mm / 1"	Ø40 mm / 1½"	Ø50 mm / 2"	Ø63 mm / 2½"	Ø80 mm / 3"	Ø100 mm / 4"	Ø158 mm / 6"
H	1.5 m / 4.9 ft		2 m / 6.6 ft					
W	0.75 m / 2.5 ft		1 m / 3.3 ft					
Δt	Maximum distance between two expansion joints							
5°C / 9°F	211 m / 692 ft	168 m / 551 ft	187 m / 614 ft	150 m / 492 ft	119 m / 390 ft	94 m / 308 ft	75 m / 247 ft	47 m / 154 ft
10°C / 18°F	159 m / 522 ft	127 m / 417 ft	141 m / 463 ft	113 m / 371 ft	90 m / 295 ft	71 m / 233 ft	57 m / 186 ft	36 m / 118 ft
20°C / 36°F	107 m / 351 ft	85 m / 279 ft	95 m / 312 ft	76 m / 249 ft	60 m / 197 ft	47 m / 154 ft	38 m / 123 ft	24 m / 79 ft
30°C / 54°F	80 m / 262 ft	64 m / 210 ft	71 m / 233 ft	57 m / 187 ft	45 m / 148 ft	36 m / 118 ft	29 m / 94 ft	18 m / 59 ft
40°C / 72°F	64 m / 210 ft	52 m / 171 ft	57 m / 187 ft	45 m / 148 ft	36 m / 118 ft	29 m / 95 ft	23 m / 76 ft	14 m / 46 ft

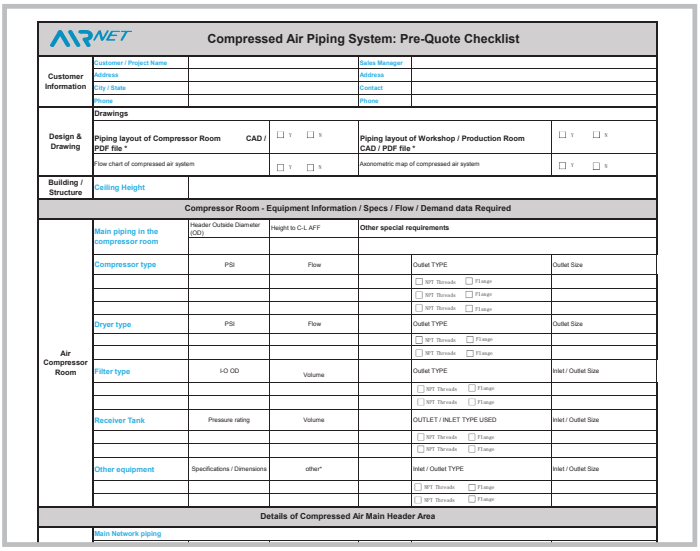
When using flexibles instead of fixed pipes as expansion loops, any length of flexible can be used.

Aluminum Design Requirements

Before Installation

Evaluate network requirements

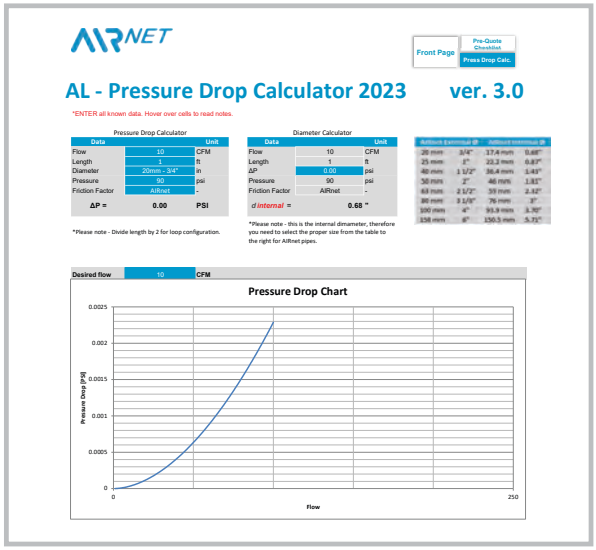
Contact Atlas Copco for help with requirements and pressure drop calculations airnet.supportusa@us.atlascopco.com



Compressed Air Piping System: Pre-Quote Checklist

Customer Information	Customer / Project Name		Sales Manager		
	Address		Address		
	City / State		Contact		
	Phone		Phone		
Design & Drawing	Drawings				
	Piping layout of Compressor Room CAD / PDF file *	☐ Y ☐ N	Piping layout of Workshop / Production Room CAD / PDF file *	☐ Y ☐ N	
	Flow chart of compressed air system	☐ Y ☐ N	Axonometric map of compressed air system	☐ Y ☐ N	
Building / Structure	Ceiling Height				

Compressor Room - Equipment Information / Specs / Flow / Demand data Required						
Air Compressor Room	Main piping in the compressor room	Header Outside Diameter (OD)	Height to C-L AFF	Other special requirements		
	Compressor type	PSI	Flow		Outlet TYPE	Outlet Size
					☐ NPT Threads ☐ Flange	
					☐ NPT Threads ☐ Flange	
					☐ NPT Threads ☐ Flange	
	Dryer type	PSI	Flow		Outlet TYPE	Outlet Size
					☐ NPT Threads ☐ Flange	
					☐ NPT Threads ☐ Flange	
	Filter type	I-O OD	Volume		Outlet TYPE	Inlet / Outlet Size
					☐ NPT Threads ☐ Flange	
					☐ NPT Threads ☐ Flange	
	Receiver Tank	Pressure rating	Volume		OUTLET / INLET TYPE USED	Inlet / Outlet Size
					☐ NPT Threads ☐ Flange	
					☐ NPT Threads ☐ Flange	
	Other equipment	Specifications / Dimensions	other*		Inlet / Outlet TYPE	Inlet / Outlet Size
					☐ NPT Threads ☐ Flange	
					☐ NPT Threads ☐ Flange	
Details of Compressed Air Main Header Area						
	Main Network piping					



AL - Pressure Drop Calculator 2023 ver. 3.0

Front Page | Pre-Quote Checklist | Press Drop Calc.

*ENTER all known data. Hover over cells to read notes.

Pressure Drop Calculator

Data		Unit
Flow	10	CFM
Length	1	ft
Diameter	20mm - 3/4"	in
Pressure	90	psi
Friction Factor	AlRnet	-
ΔP =	0.00	PSI

*Please note - Divide length by 2 for loop configuration.

Diameter Calculator

Data		Unit
Flow	10	CFM
Length	1	ft
ΔP	0.00	psi
Pressure	90	psi
Friction Factor	AlRnet	-
d internal =	0.68	"

*Please note - this is the internal dimameter, therefore you need to select the proper size from the table to the right for AlRnet pipes.

25 mm	3/4"	17.4 mm	0.68"
25 mm	1"	22.3 mm	0.87"
40 mm	1 1/2"	36.4 mm	1.43"
50 mm	2"	46 mm	1.81"
63 mm	2 1/2"	59 mm	2.32"
80 mm	3 1/8"	76 mm	3"
100 mm	4"	91.9 mm	3.70"
138 mm	6"	150.5 mm	5.75"

Desired flow 10 CFM

Pressure Drop Chart

Design your network so that the loading pressure at the compressor (101.5 - in the example above) is as close to the actual pressure needed at the point of use. Anticipate future needs that will result in a higher pressure drop (a pressure > 84.84 psi - in the example above).

An improperly designed network will have a high pressure drop and require you to increase the loading pressure. The higher the loading pressure the higher the energy bills. A more efficient alternative may be to use a larger size pipe, minimizing the pressure drop, when designing your system.

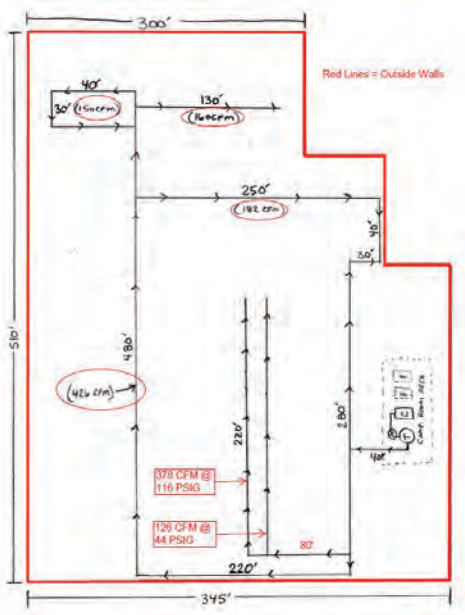
Completing a "Pre-Quote Checklist"

This will help to define the sizing requirements based on the customer's layout, equipment, drops needed, and building / structure.

Creating a network skeleton

- Main Ring
- Distribution Line
- Cross Ring Lines
- Drop Legs

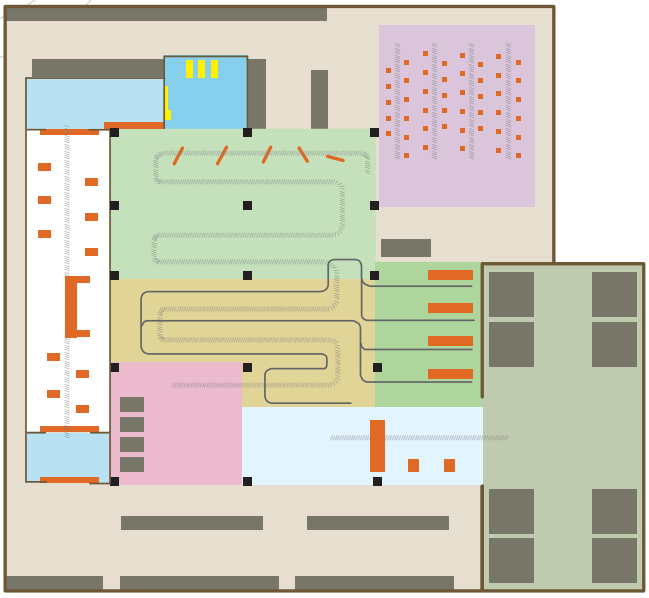
The above data is used for example purposes only.



Aluminum Design Requirements

Designing Your System

Using a drawing of the plant, identify the major air demand locations.



- Parts Storage
- LCD Panel Manufacturing
- Compressor Room
- Clean Room Air Lock
- Frame Assembly
- Quality Control Area
- Final Assembly
- Plastic Injection Moulding
- Shipping
- Packaging
- Clean Room

- Machinery
- Compressed Air equipment
- Strorage Bay

Identify the major air demand locations, including the location of the compressor. Evaluate the consumption level of these locations to make a distinction between high volume consumers (requiring a distribution line) and low volume, point of use consumers (requiring a quick drop).

System Pressurization

- System must be pressurized in progressive steps.
- Test pressure – Test for leaks or faulty connections by slowly and gradually raising the system pressure to 30 psi.
- Once any needed checks and adjustments are made, maintain system pressure at 30 psi to check again for any other needed points of improvement.
- Continue pressurizing the system, gradually raising the pressure 15 psi at a time, and repeat the checks, and make adjustments again for continuous improvement.
- When working pressure is reached, maintain for at least 10 minutes, while checking again for required improvements.
- After 48-96 hours, re-check all seals and fittings, taking any precautions and adjust connections accordingly.

Aluminum Design Requirements

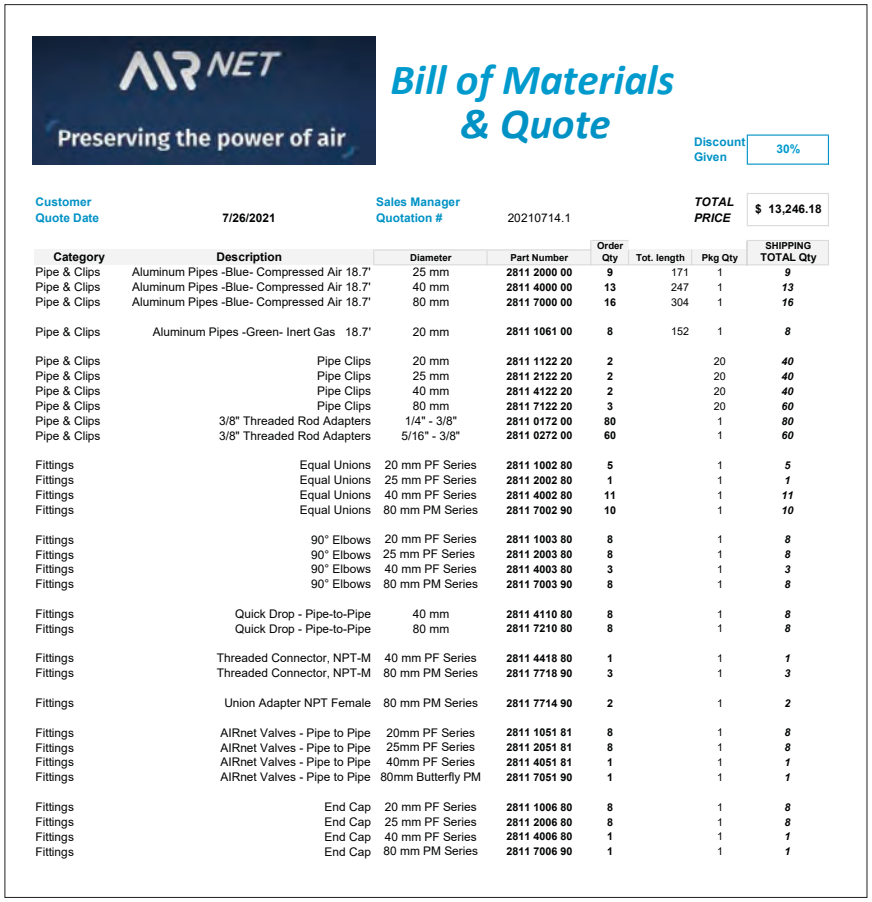
Finalize the bill of material

Tick off the below checklist to make sure nothing is forgotten.

Do you have all necessary equipment for a smooth and successful installation?

- AIRnet pipes
- AIRnet fittings
- Pipe clips
- S-bends to reduce the distance between the pipe and the wall
- Accessories, like hoses and valves
- Threaded connections to connect from and to the manufacturing process
- Bushing - reducing hardware
- Hanging brackets
- Assembly tools
- Lifting equipment
- Additional quick drops to keep on hand stock for possible future extensions

Have you calculated the required assembly and hanging time?



AIRNET
Preserving the power of air

Bill of Materials & Quote

Discount Given: 30%

Customer Quote Date: 7/26/2021

Sales Manager Quotation #: 20210714.1

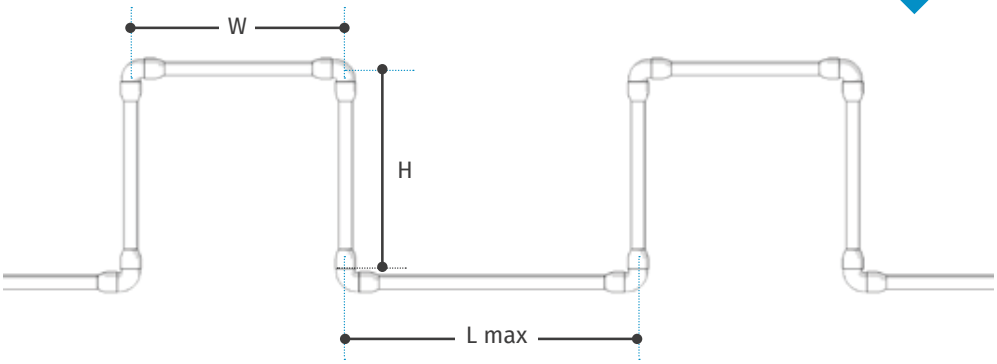
TOTAL PRICE: $ 13,246.18

Category	Description	Diameter	Part Number	Order Qty	Tot. length	Pkg Qty	SHIPPING TOTAL Qty
Pipe & Clips	Aluminum Pipes -Blue- Compressed Air 18.7'	25 mm	2811 2000 00	9	171	1	9
Pipe & Clips	Aluminum Pipes -Blue- Compressed Air 18.7'	40 mm	2811 4000 00	13	247	1	13
Pipe & Clips	Aluminum Pipes -Blue- Compressed Air 18.7'	80 mm	2811 7000 00	16	304	1	16
Pipe & Clips	Aluminum Pipes -Green- Inert Gas 18.7'	20 mm	2811 1061 00	8	152	1	8
Pipe & Clips	Pipe Clips	20 mm	2811 1122 20	2		20	40
Pipe & Clips	Pipe Clips	25 mm	2811 2122 20	2		20	40
Pipe & Clips	Pipe Clips	40 mm	2811 4122 20	2		20	40
Pipe & Clips	Pipe Clips	80 mm	2811 7122 20	3		20	60
Pipe & Clips	3/8" Threaded Rod Adapters	1/4" - 3/8"	2811 0172 00	80		1	80
Pipe & Clips	3/8" Threaded Rod Adapters	5/16" - 3/8"	2811 0272 00	60		1	60
Fittings	Equal Unions	20 mm PF Series	2811 1002 80	5		1	5
Fittings	Equal Unions	25 mm PF Series	2811 2002 80	1		1	1
Fittings	Equal Unions	40 mm PF Series	2811 4002 80	11		1	11
Fittings	Equal Unions	80 mm PM Series	2811 7002 90	10		1	10
Fittings	90° Elbows	20 mm PF Series	2811 1003 80	8		1	8
Fittings	90° Elbows	25 mm PF Series	2811 2003 80	8		1	8
Fittings	90° Elbows	40 mm PF Series	2811 4003 80	3		1	3
Fittings	90° Elbows	80 mm PM Series	2811 7003 90	8		1	8
Fittings	Quick Drop - Pipe-to-Pipe	40 mm	2811 4110 80	8		1	8
Fittings	Quick Drop - Pipe-to-Pipe	80 mm	2811 7210 80	8		1	8
Fittings	Threaded Connector, NPT-M	40 mm PF Series	2811 4418 80	1		1	1
Fittings	Threaded Connector, NPT-M	80 mm PM Series	2811 7718 90	3		1	3
Fittings	Union Adapter NPT Female	80 mm PM Series	2811 7714 90	2		1	2
Fittings	AIRnet Valves - Pipe to Pipe	20mm PF Series	2811 1051 81	8		1	8
Fittings	AIRnet Valves - Pipe to Pipe	25mm PF Series	2811 2051 81	8		1	8
Fittings	AIRnet Valves - Pipe to Pipe	40mm PF Series	2811 4051 81	1		1	1
Fittings	AIRnet Valves - Pipe to Pipe	80mm Butterfly PM	2811 7051 90	1		1	1
Fittings	End Cap	20 mm PF Series	2811 1006 80	8		1	8
Fittings	End Cap	25 mm PF Series	2811 2006 80	8		1	8
Fittings	End Cap	40 mm PF Series	2811 4006 80	1		1	1
Fittings	End Cap	80 mm PM Series	2811 7006 90	1		1	1

Expansion loops

Long straight pipes will expand or contract due to temperature variations. To compensate for this effect, expansion loops are required. The number of expansion loops depends on the total length of the straight line and the maximum temperature variation. An expansion loop is a U-shaped construction that compensates the variation in length.

The below table clarifies the maximum possible straight distance vs. the temperature variation. When the length of the straight line exceeds the maximum, expansion loops are required to compensate for the variation in length.



	Ø20 mm / ¾"	Ø25 mm / 1"	Ø40 mm / 1½"	Ø50 mm / 2"	Ø63 mm / 2½"	Ø80 mm / 3"	Ø100 mm / 4"	Ø158 mm / 6"
H	1.5 m / 4.9 ft			2 m / 6.6 ft				
W	0.75 m / 2.5 ft			1 m / 3.3 ft				
Δt	Maximum distance between two expansion joints							
5°C / 9°F	211 m / 692 ft	168 m / 551 ft	187 m / 614 ft	150 m / 492 ft	119 m / 390 ft	94 m / 308 ft	75 m / 247 ft	47 m / 154 ft
10°C / 18°F	159 m / 522 ft	127 m / 417 ft	141 m / 463 ft	113 m / 371 ft	90 m / 295 ft	71 m / 233 ft	57 m / 186 ft	36 m / 118 ft
20°C / 36°F	107 m / 351 ft	85 m / 279 ft	95 m / 312 ft	76 m / 249 ft	60 m / 197 ft	47 m / 154 ft	38 m / 123 ft	24 m / 79 ft
30°C / 54°F	80 m / 262 ft	64 m / 210 ft	71 m / 233 ft	57 m / 187 ft	45 m / 148 ft	36 m / 118 ft	29 m / 94 ft	18 m / 59 ft
40°C / 72°F	64 m / 210 ft	52 m / 171 ft	57 m / 187 ft	45 m / 148 ft	36 m / 118 ft	29 m / 95 ft	23 m / 76 ft	14 m / 46 ft

When using flexibles instead of fixed pipes as expansion loops, any length of flexible can be used.

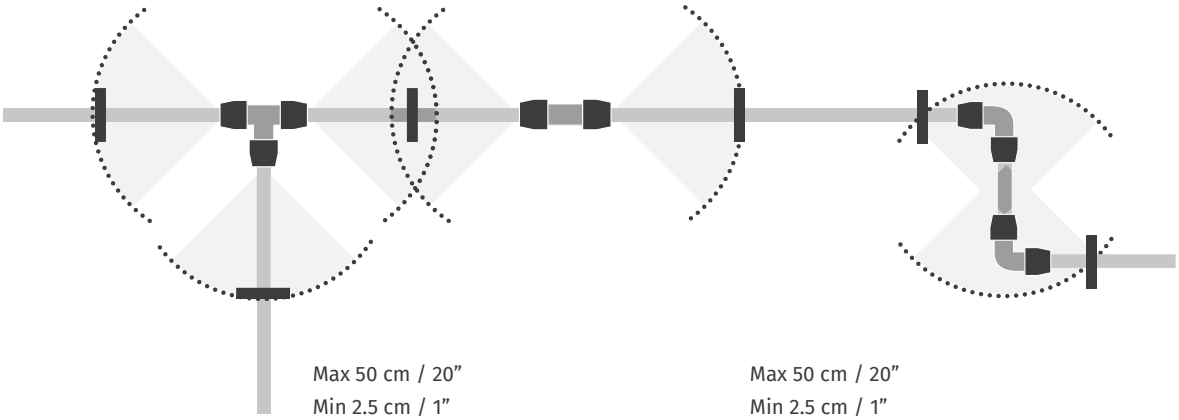
Installation

Make sure the piping system is rigidly supported to the structure of the building so that movement due to external forces (e.g. wind) of the piping is prevented.

Pipe Clips Installation
Diameters 20 - 158 mm / ¾" - 6"

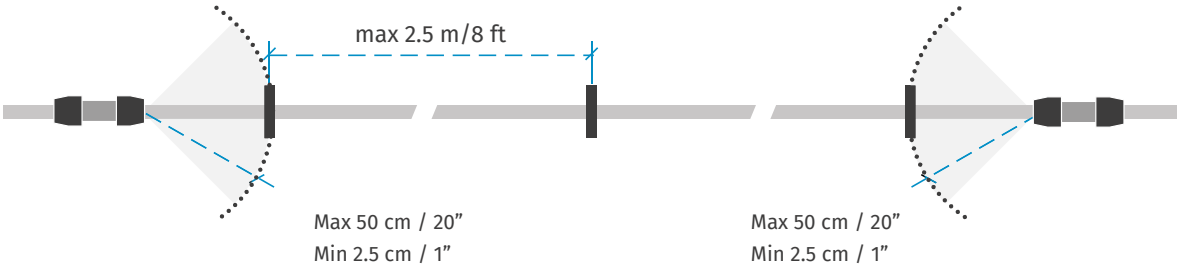
Rule #1

Every side of a fitting should have minimum 1 pipe clip within a distance of max 0.5 m / 20"



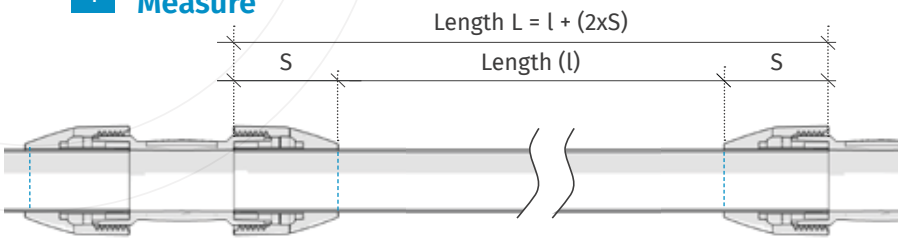
Rule #2

Maximum 2.5 m / 8 ft between 2 pipe clips



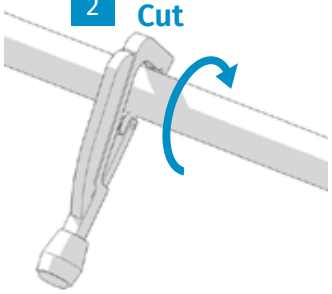
Installation - PF Series Diameters 20 - 50 mm / ¾” - 2”

1 Measure



ø	S
20 mm / ¾”	39 mm / 1½”
25 mm / 1”	44 mm / 1¾”
40 mm / 1½”	63 mm / 2½”
50 mm / 2”	78 mm / 3½ ”

2 Cut



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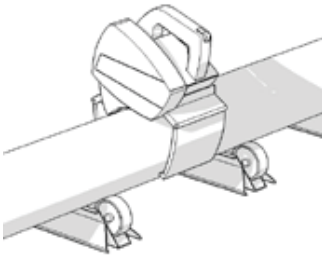
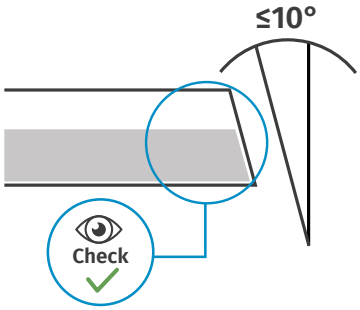


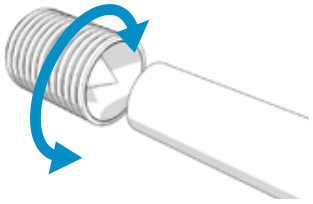
Ø 20-63 mm	2810 0040 00

110/120V	2810 0640 80
220/230V	2810 0540 80

3 Check



4 Deburr/Chamfer



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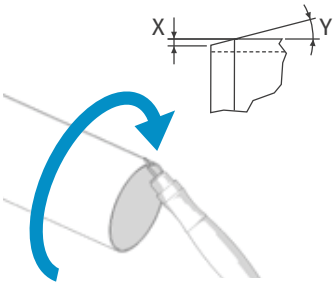
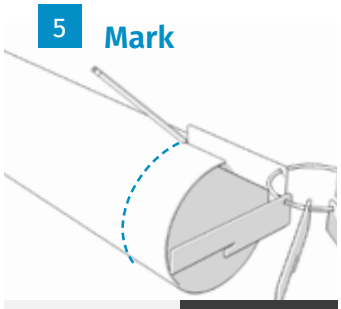


Ø 20-50 mm	2810 0141 00

Heavy Duty	2810 0641 00
Light Duty	2810 0042 00

Diameter	X[mm]	Y [°]

5 Mark



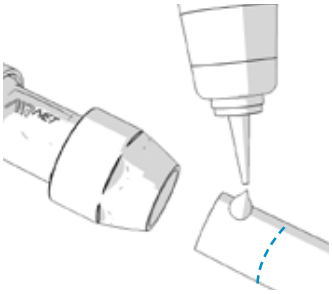
Pipe Marker	2811 0229 80

Installation - PF Series Diameters 20 - 50 mm / ¾” - 2”

(Optional: loosen)

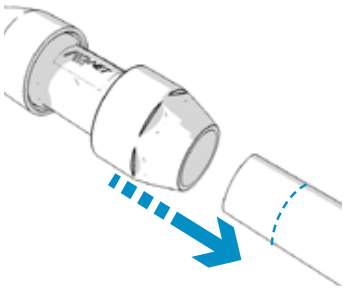
Wrench Ø20	2811 1028 00
Wrench Ø25	2811 2028 00
Wrench Ø40	2811 4028 00
Wrench Ø50	2811 5028 00

6 Lubricate

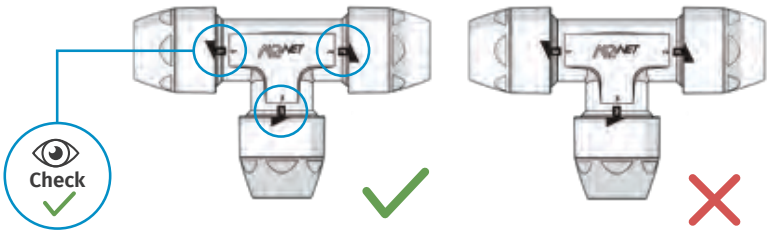


Lubricant	2810 0148 00

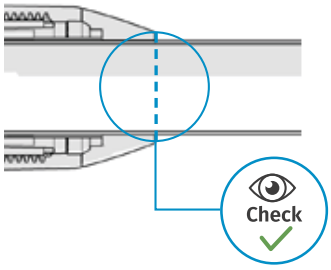
7 Insert



8 The nuts are unique to the side of the fitting



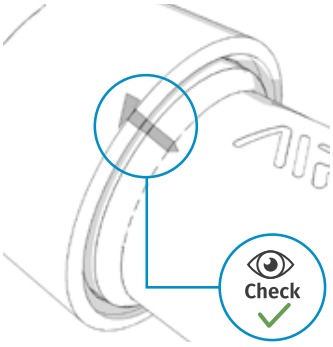
9 Check



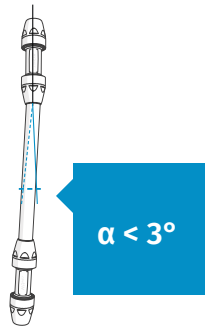
(Optional: tighten)

Wrench Ø20	2811 1028 00
Wrench Ø25	2811 2028 00
Wrench Ø40	2811 4028 00
Wrench Ø50	2811 5028 00

10 Check markers



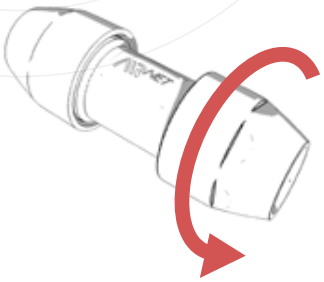
11 Max misalignment 3°



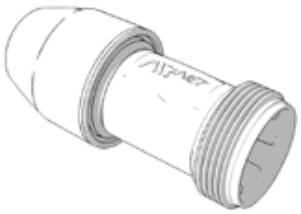
For updated and latest information on the list of chemicals that affects AIRnet, please refer to document number 2946 2422 00.

Installation - Adapter Union PF Series Diameters 20 - 50 mm / ¾” - 2”

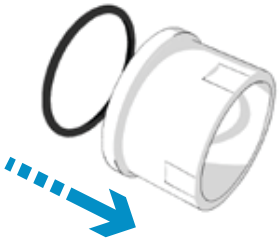
1 Unscrew



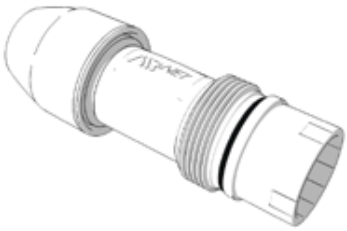
2 Remove



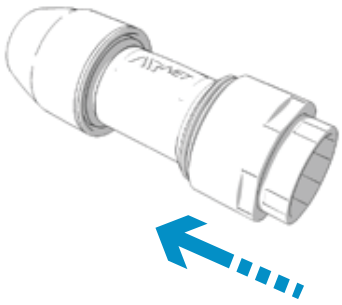
3 O-ring assembly



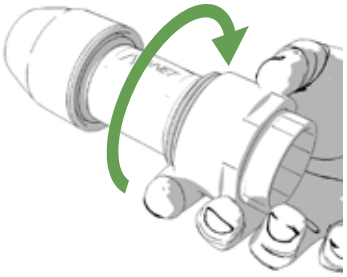
4 Body assembly



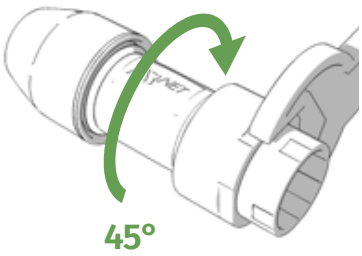
5 Adapter assembly



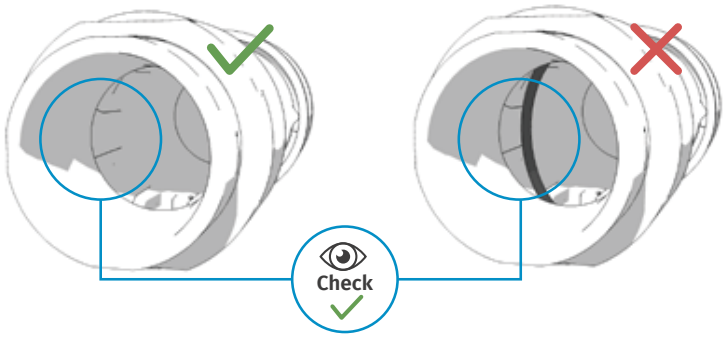
6 Screw on



7 Tighten

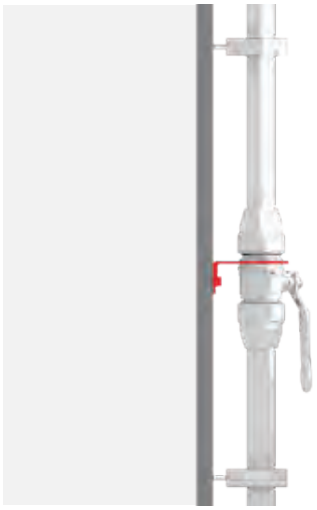


8 Check O-ring



Installation - Valve Installation PF Series Diameters 20 - 50 mm / 3/4” - 2”

1 Assemble



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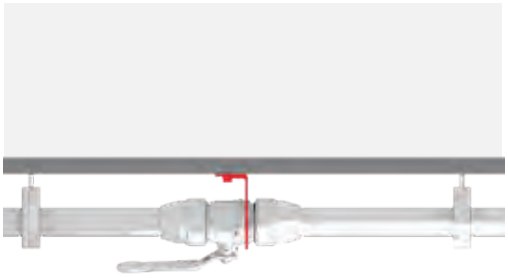
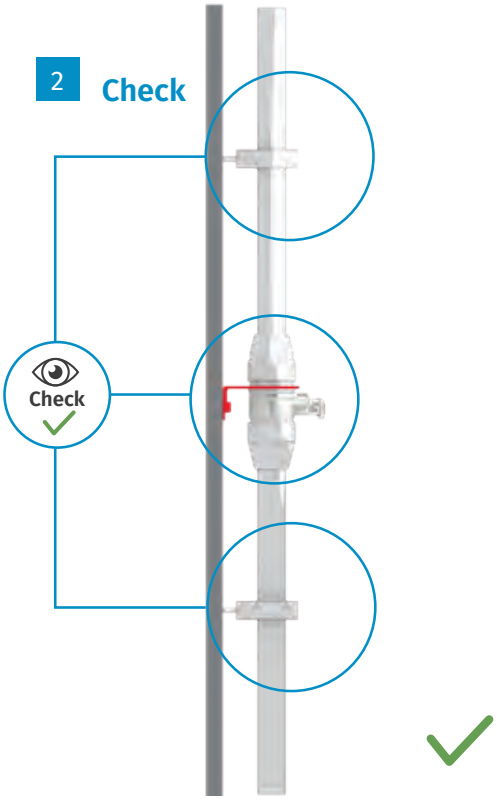
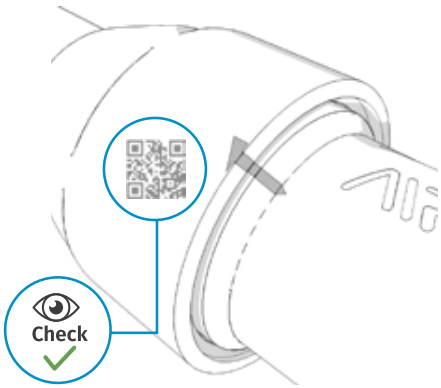


2 Check



(Optional: Check DCM code)



Installation - Valve Installation PF Series Diameters 20 - 50 mm / ¾” - 2”

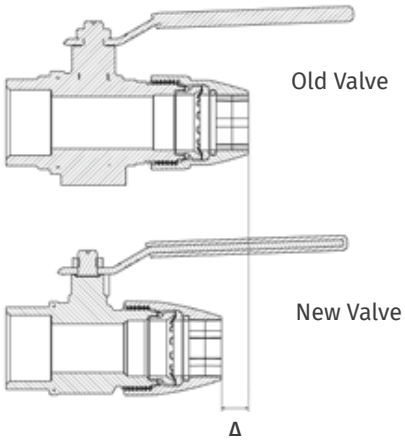
The new valves do not have the same dimension as the old valves. When substituting an old valve for the new version, you will need to use at least one new pipe having extra length according to the difference in length mentioned in the table shown below. The insertion depth of the new valve is the same as the previous one.

Δ	AIRnet	ISO/NPT
ø 20 mm	11 mm	7.3 mm
ø 25 mm	14 mm	12.4 mm
ø 40 mm	/	8.3 mm
ø 50 mm	/	6.2 mm

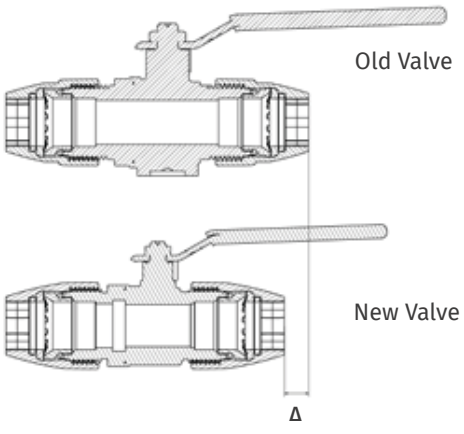
Δ	AIRnet	ISO/NPT
ø ¾”	7/16”	9/32”
ø 1”	9/16”	½”
ø 1 ½”	/	1 1/32”
ø 2”	/	¼”

	Old Part Number	New Part Number	Description
D20	2811 1051 81	2811 1051 91	AIRnet Valve
	2811 1152 81	2811 1152 91	ISO Valve
	2811 1153 81	2811 1153 91	NPT Valve
D25	2811 2051 81	2811 2051 91	AIRnet Valve
	2811 2252 81	2811 2252 91	ISO Valve
	2811 2253 81	2811 2253 91	NPT Valve
D40	2811 4051 81	2811 4051 91	AIRnet Valve
	2811 4452 81	2811 4452 91	ISO Valve
	2811 4453 81	2811 4453 91	NPT Valve
D50	2811 5051 81	2811 5051 91	AIRnet Valve
	2811 5552 81	2811 5552 91	ISO Valve

ISO/NPT



AIRnet

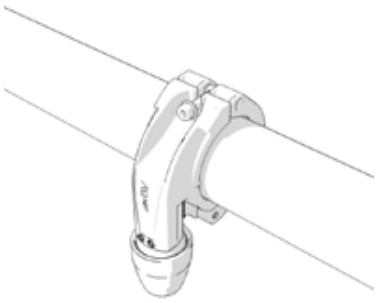


Δ = Length to be added (when cutting the new pipe)

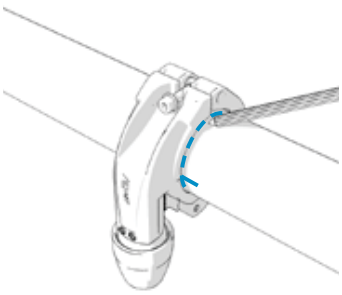
Installation Quickdrop Assembly Diameters 25 - 80 mm / 1” - 3”

System should be depressurized before installing the quickdrop!

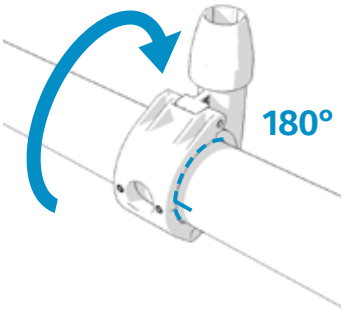
1 Mount



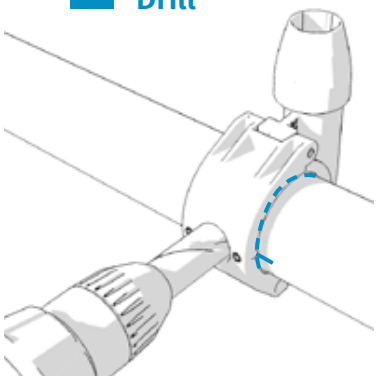
2 Mark



3 Turn

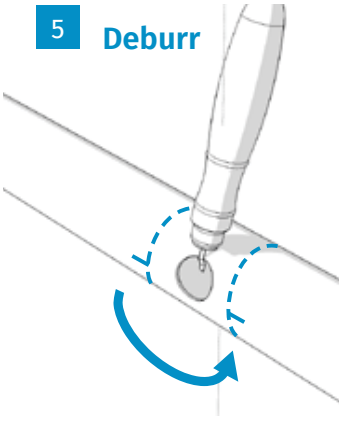


4 Drill



Ø 25 mm drill bit	2810 0143 00
Ø 40-80 mm drill bit	2810 0243 00

5 Deburr

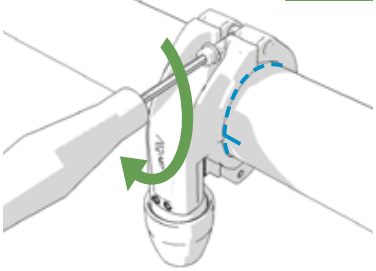


Heavy Duty	2810 0641 00
Light Duty	2810 0042 00

Installation Quickdrop Assembly Diameters 25 - 80 mm / 1” - 3”

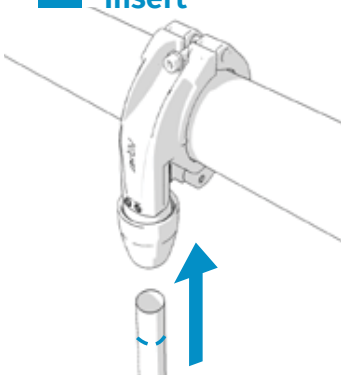
6 Tighten

4 Nm

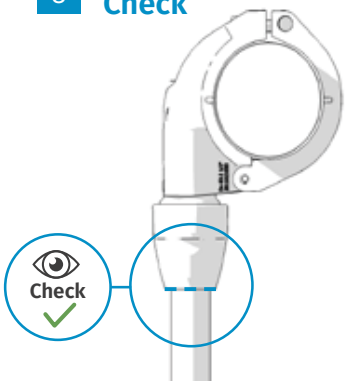


ALL	2811 0149 00

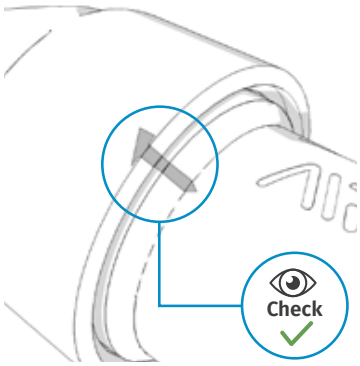
7 Insert



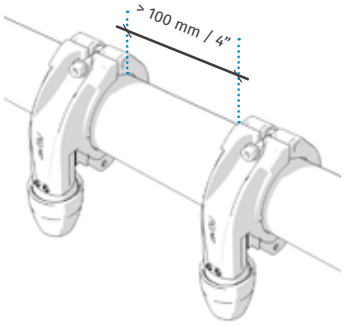
8 Check



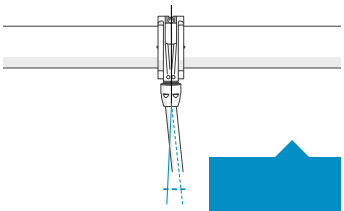
9 Check markers



10 Minimum distance

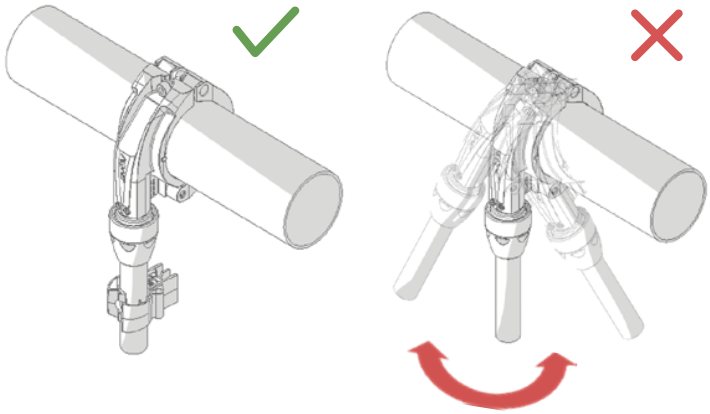


11 Max misalignment 3°



α < 3°

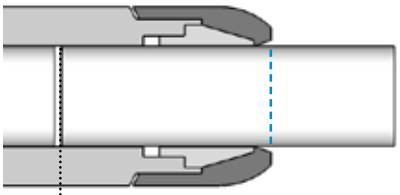
12 Pipe clip prevents rotation



Installation - Replace Classic Series with PF Series
Diameters 20 - 50 mm / ¾” - 2”

Description	Equal socket	Elbow 90°	Elbow 45°	Equal tee	Ball valve	End cap
Δ						
ø 20 mm	21.5 mm	9 mm	9 mm	8 mm	8 mm	13 mm
ø 25 mm	19 mm	14.5 mm	13 mm	6 mm	8 mm	20 mm
ø 40 mm	38 mm	23 mm	28 mm	23 mm	9 mm	35 mm
ø 50 mm	37.5 mm	32 mm	35 mm	32 mm	0 mm	34 mm
ø 3/4“	7/8”	3/8”	3/8”	1/4”	1/4”	1/2”
ø 1”	3/4”	1/2”	1/2”	1/4”	1/4”	3/4”
ø 11/2”	11/2”	7/8”	11/8”	7/8”	3/8”	13/8”
ø 2”	11/2”	11/4”	13/8”	11/4”	0”	13/8”

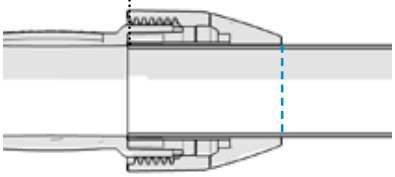
Classic Series



Δ

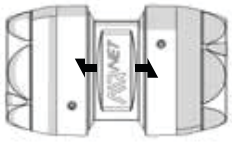
Δ = Length to be cut off before replacement

PF Series



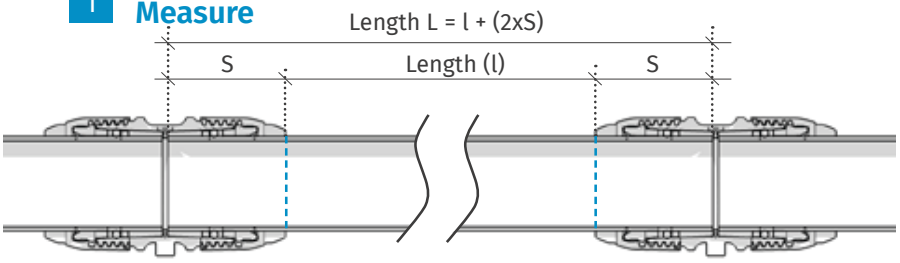
Installation - PM Series
Diameters 63 - 80 mm / 2 ½” - 3”

Difference between Black Series and pm Series



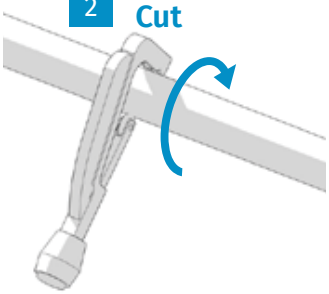
Black Series	Pre-Marked (PM) Series
Torque at 50 Nm	Torque till marking
Insertion depth Ø 63 / 2 ½”: 78 mm	Insertion depth Ø 63 / 2 ½”: 73 mm (Δ 5 mm)
Insertion depth Ø 80 / 3”: 97 mm	Insertion depth Ø 80 / 3”: 95 mm (Δ 2 mm)
	Decreased risk of installation errors
	Safety screw on the nut
	Light weight
	Easy to assemble (pre-marked)

1 Measure

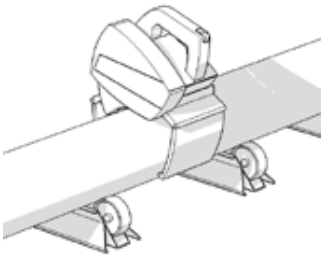


ø	S
63 mm / 2½”	73 mm
80 mm / 3”	95 mm

2 Cut



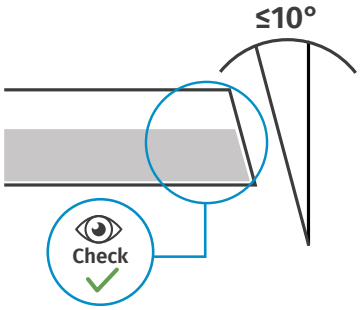
OR



Ø 20-63 mm	2810 0040 00
Ø 40-100 mm	2810 0140 00

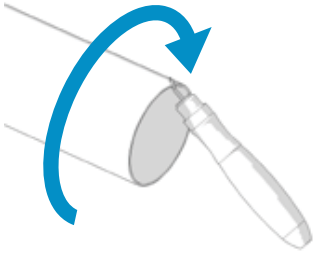
110/120V	2810 0640 80
220/230V	2810 0540 80

3 Check

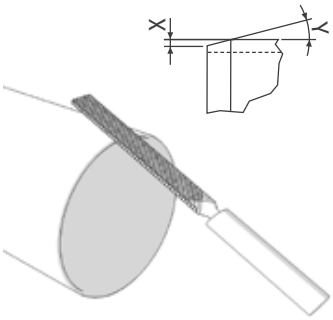


Installation - PM Series
Diameters 63 - 80 mm / 2 ½” - 3”

4 Deburr/chamfer



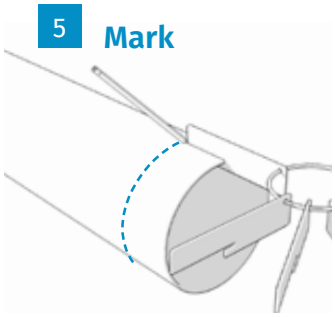
OR



Heavy Duty	2810 0641 00

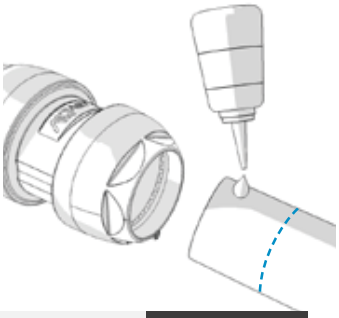
Diameter	X[mm]	Y [°]
D63 2811 6000 00	1	15
D80 2811 7000 00	1	15

5 Mark



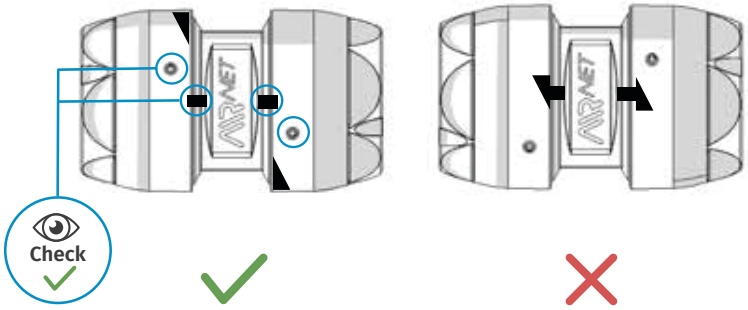
Pipe Marker	2811 0229 90

6 Lubricate

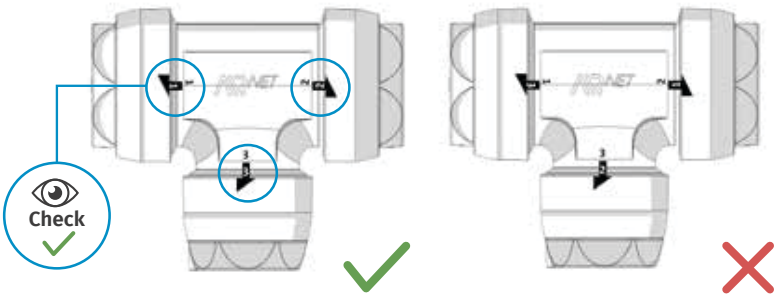


Lubricant	2810 0148 00

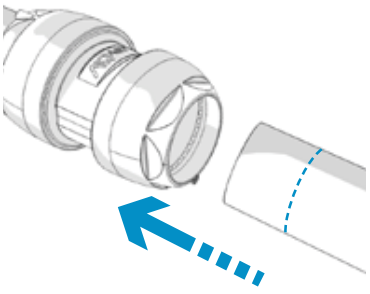
7 Check: nut and safety screw loosened



8 The nuts are unique to the side of the fitting, marked with a number

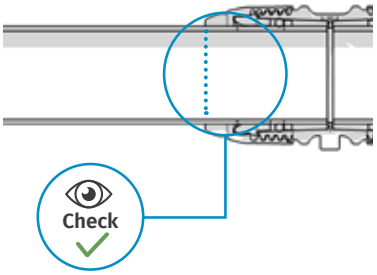


9 Insert

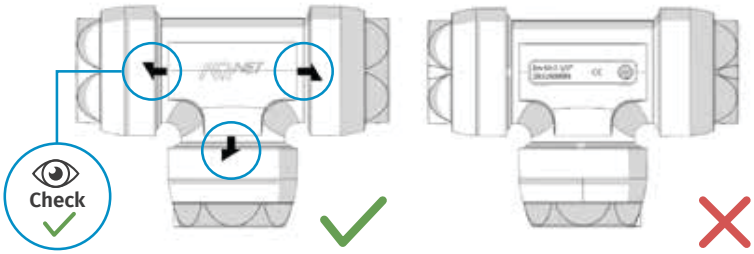


Installation - PM Series
Diameters 63 - 80 mm / 2 ½” - 3”

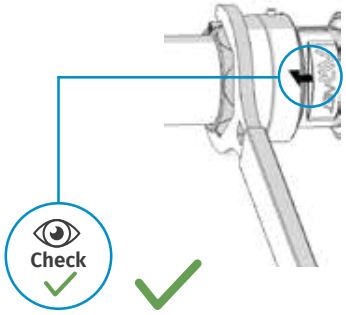
10 Check



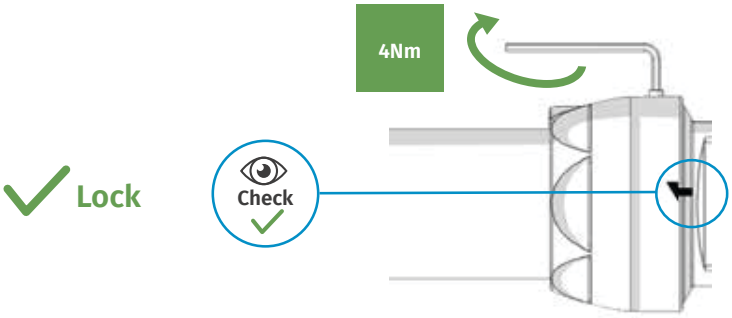
11 Fitting should be placed with markings visible from the ground



12 Torque fitting until marking



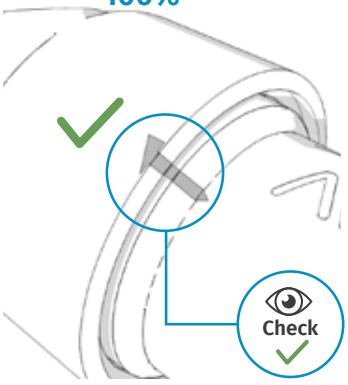
13 Use L key 3mm to lock the screw on the nut. (New feature for additional safety)



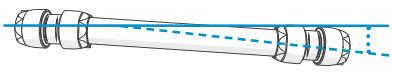
New torque wrenches / spanners:

63 mm spanner	2811 6028 90
80 mm spanner	2811 7028 90
63 mm body wrench	2811 6628 90
80 mm body wrench/63 mm adapter union nut wrench	2811 7728 90
80 mm adapter union nut wrench	2811 7728 91

14 Check markers 100%



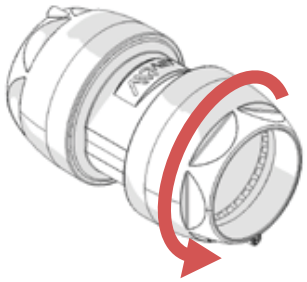
15 Max misalignment 2°



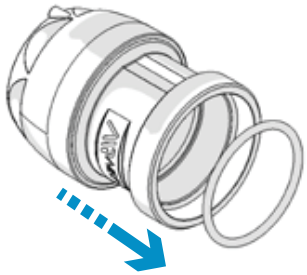
α < 2°

Installation - Adapter Union PM Series Diameters 63 - 80 mm / 2 ½” - 3”

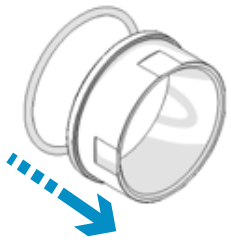
1 Unscrew



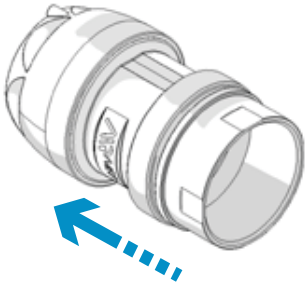
2 Remove



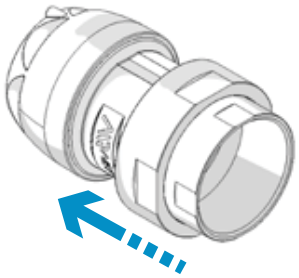
3 O-ring assembly



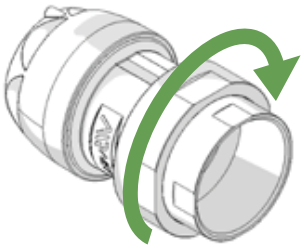
4 Body assembly



5 Adapter assembly

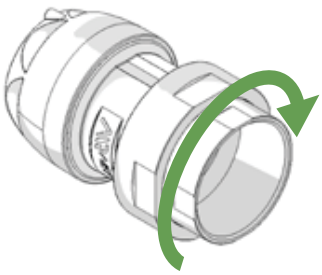


6 Screw on

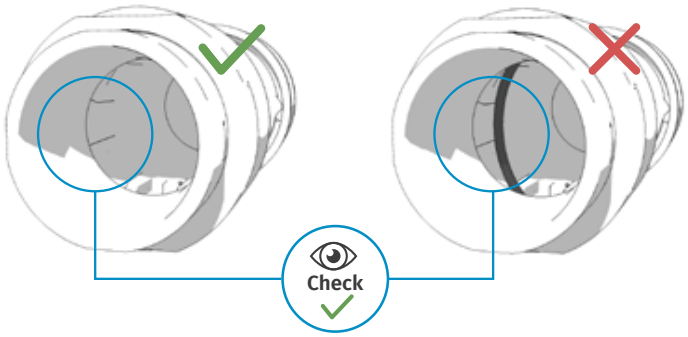


7 Tighten

45 Nm

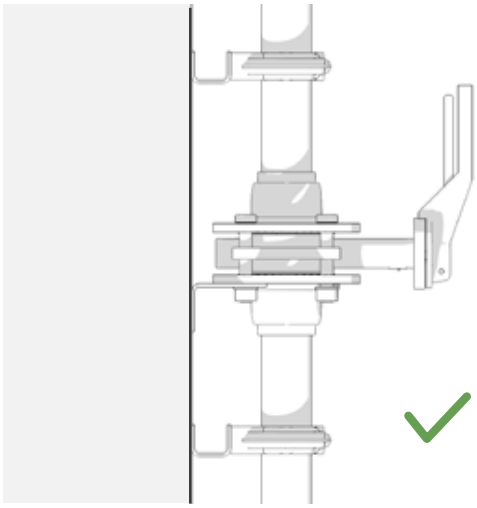


8 Check O-ring

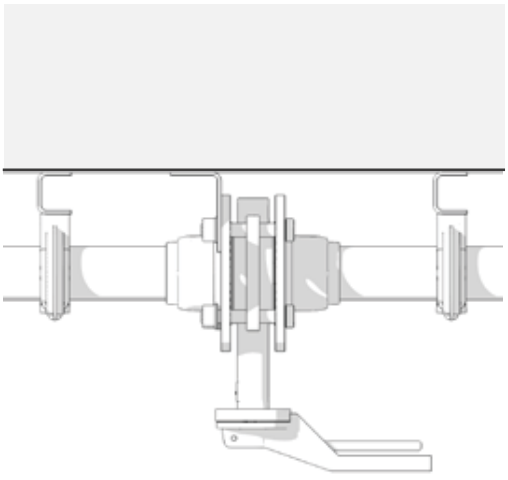


Installation - Adapter Union PM Series Diameters 63 - 80 mm / 2 ½” - 3”

1

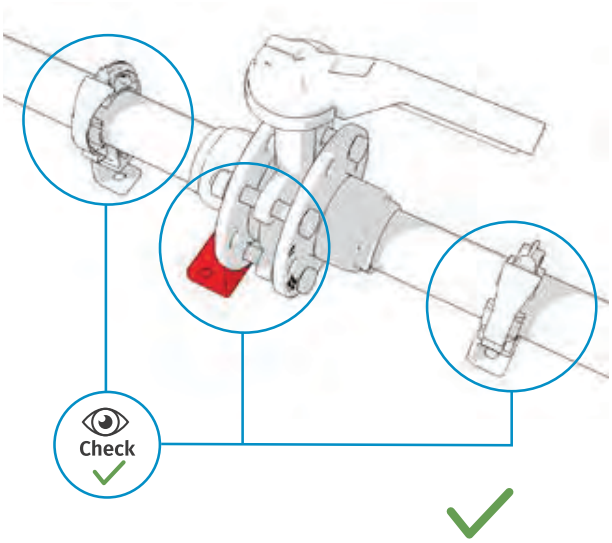


OR



Note: The butterfly valves for 63 mm and 80 mm are delivered pre-assembled with the flanges.

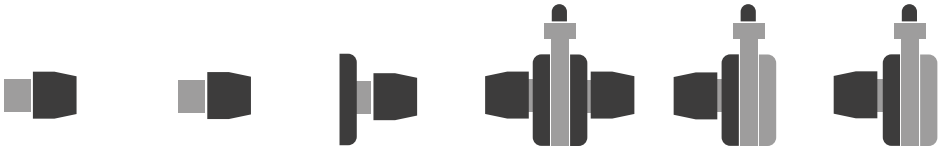
2 Check



Installation - Replace Black Series with new PM Series Diameters 63 - 80 mm / 2 ½” - 3”

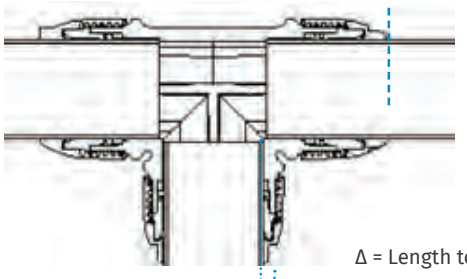
You cannot reuse the black series fitting after it has been installed!

Description	Equal socket	Elbow 90°	Elbow 45°	Equal tee	Reducing tee	Reducing socket
Δ						
ø 63 mm	/	/	4 mm	/	Change pipe D50	5 mm
ø 2 1/2”	/	/	5/32”	/	Change pipe D50	3/16”
ø 80 mm	/	/	6 mm	7 mm	7 mm	/
ø 3”	/	/	1/4”	1/4”	1/4”	/



Description	Nipple socket	Nipple socket	Flange	Butterfly valve	Flange with butterfly valve	Flange with butterfly valve
Δ	2”	2 1/2” and 3”			ISO	NPT
ø 63 mm	4 mm	16 mm	/	/	/	/
ø 2 1/2”	5/32”	5/8”	/	/	/	/
ø 80 mm	/	12 mm	6 mm	8 mm	11 mm	14 mm
ø 3”	/	1/2”	1/4”	1/3”	2/5”	1/2”

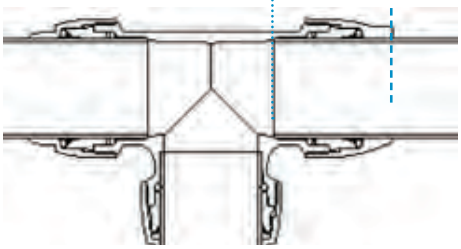
Black Series



Δ = Length to be cut off before replacement

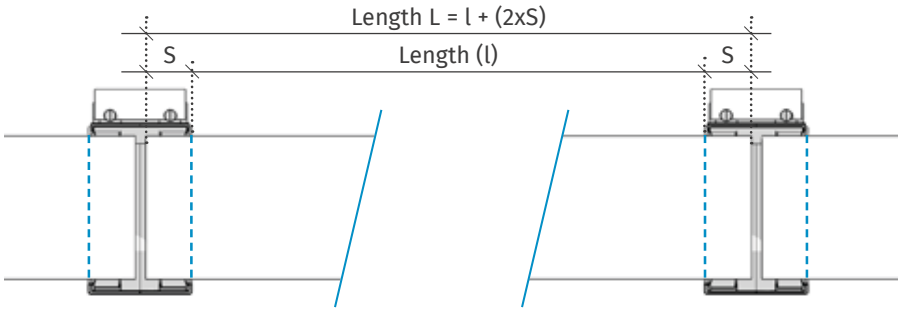
Δ

PM Series



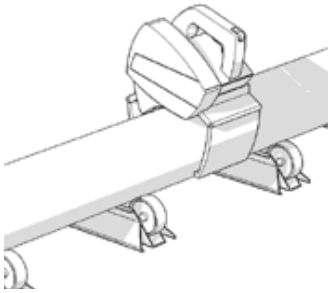
Installation - Diameters 100 - 158 mm / 4” - 6”

1 Measure

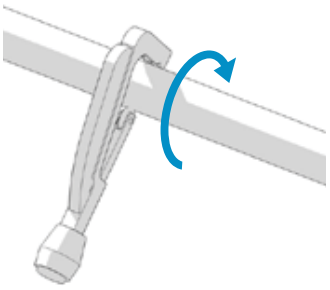


ø	S
100 mm / 4”	47 mm / 1⅞”
158 mm / 6”	55 mm / 2½”

2 Cut



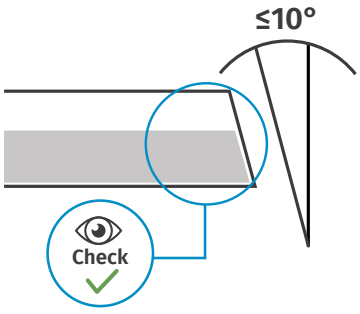
OR



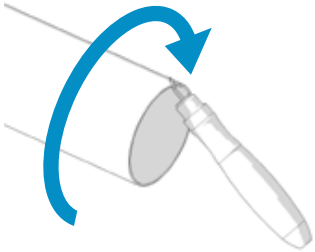
110/120V	2810 0640 80
110/120V	2810 0540 80

Ø 100-158 mm	2810 0240 00

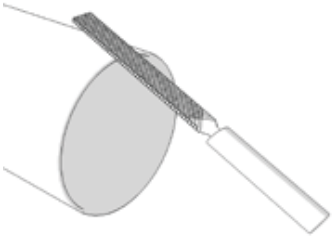
3 Check



4 Deburr

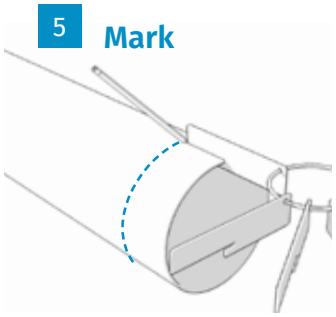


OR



Heavy Duty	2810 0641 00

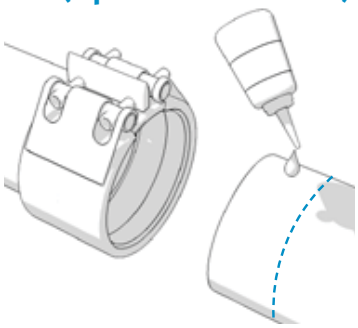
5 Mark



Pipe Marker	2811 0229 80

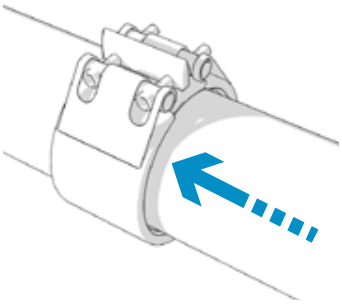
Installation - Diameters 100 - 158 mm / 4” - 6”

(Optional: Lubricate)

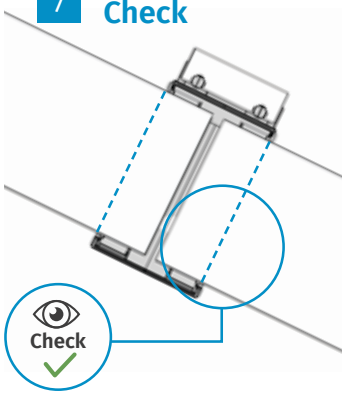


Lubricant	2810 0148 00

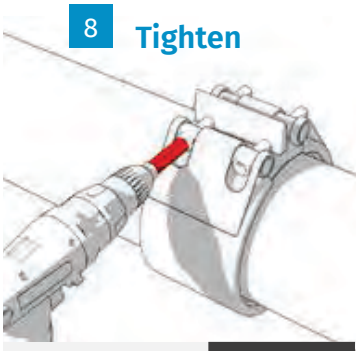
6 Insert



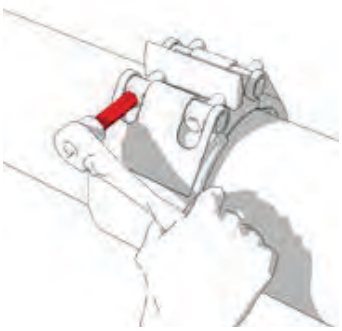
7 Check



8 Tighten

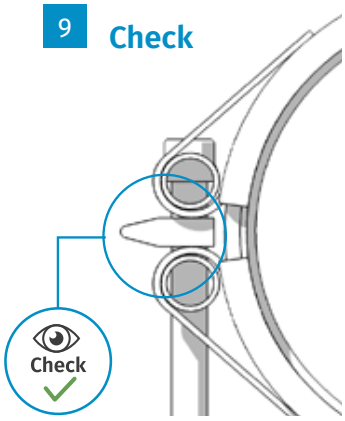


OR

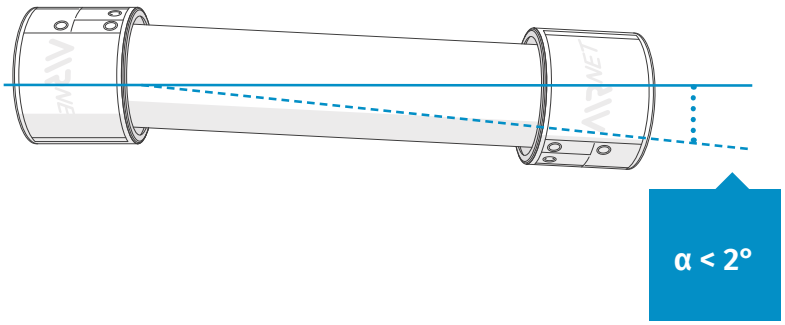


Hexagon Socket - D100	4027 1323 08
Hexagon Socket - D100	0462 3601 23

9 Check

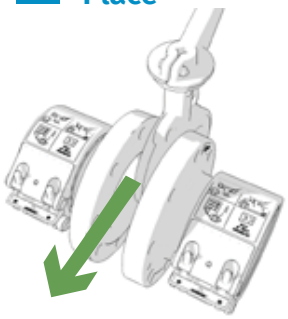


10 Max misalignment 2°

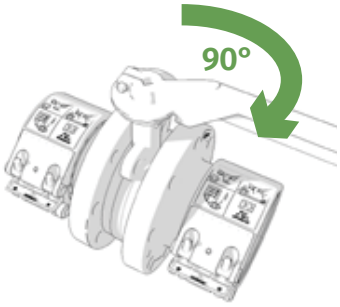


Installation - Butterfly Valve Diameters 100 - 158 mm / 4” - 6”

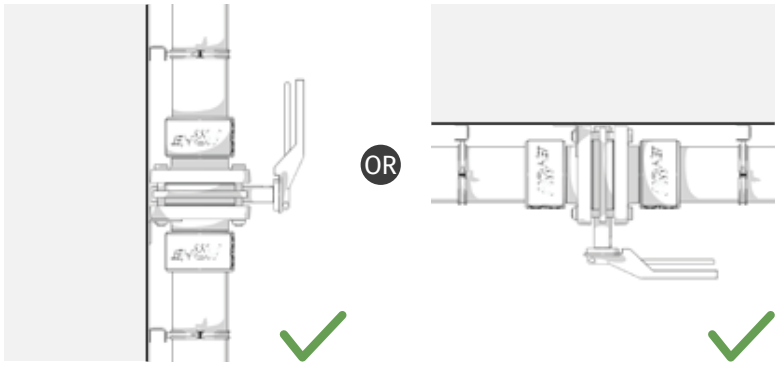
1 Place



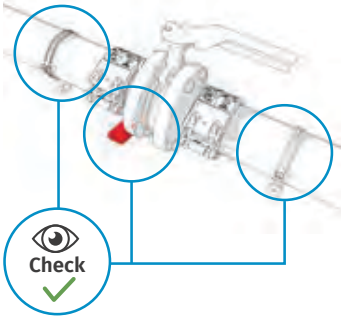
2 Turn



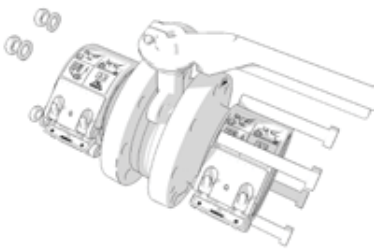
3 Assemble



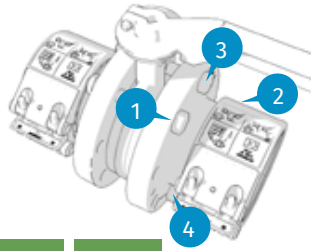
4 Check



5 Place bolts and nuts

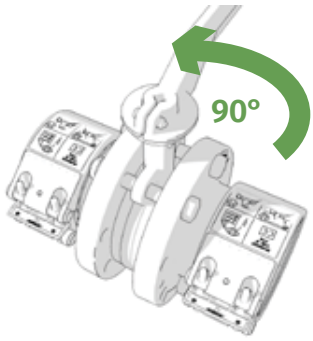


6 Tighten bolts crosswise



D100	D158
16 Nm	38 Nm
12 lbs/ft	28 lbs/ft

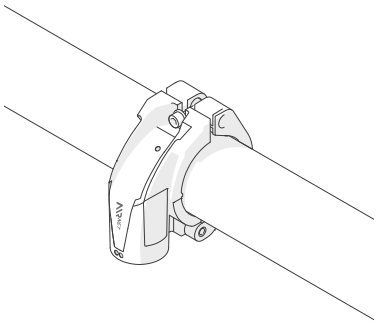
7 Turn



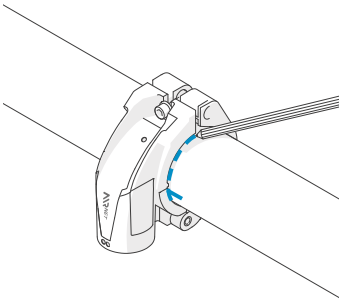
Installation - Quickdrop Assembly Diameters 100 - 158 mm / 4” - 6”

System should be depressurized before installing the quickdrop!

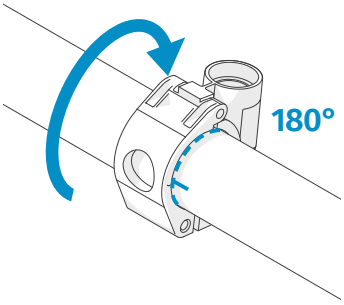
1 Mount



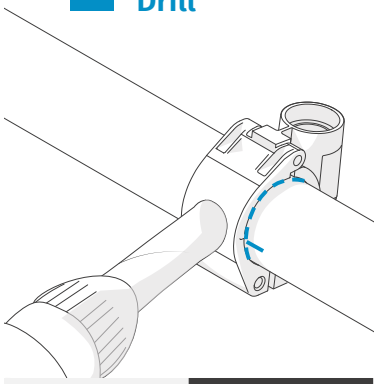
2 Mark



3 Turn

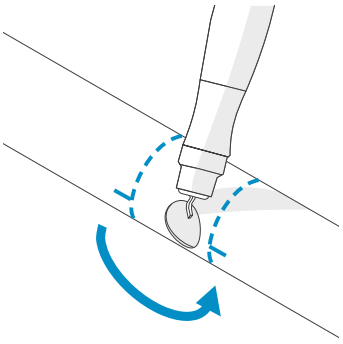


4 Drill



Ø 100-158 mm drill bit	2810 0343 00
Ø 100-158 mm drill bit holder	2810 0344 00

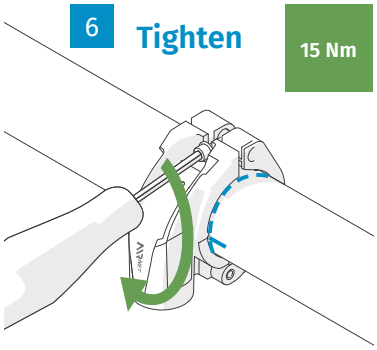
5 Deburr



Heavy Duty	2810 0641 00
Light Duty	2810 0042 00

Installation - Quickdrop Assembly Diameters 100 - 158 mm / 4” - 6”

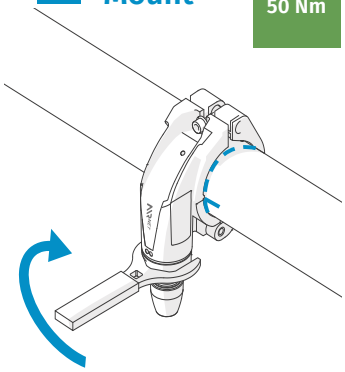
6 Tighten 15 Nm



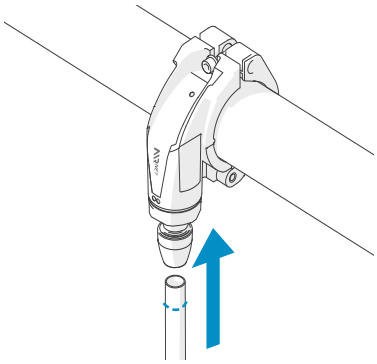
L-key 8 mm	4027 1323 08

(Optional: Lubricate)

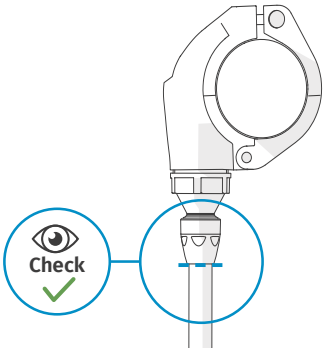
7 Mount 50 Nm



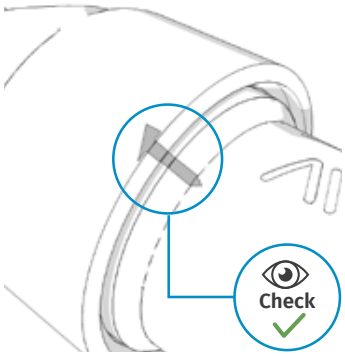
8 Insert



9 Check

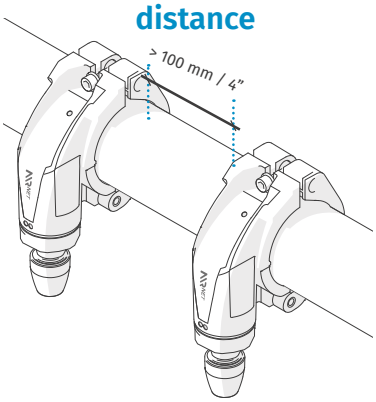


10 Check markers

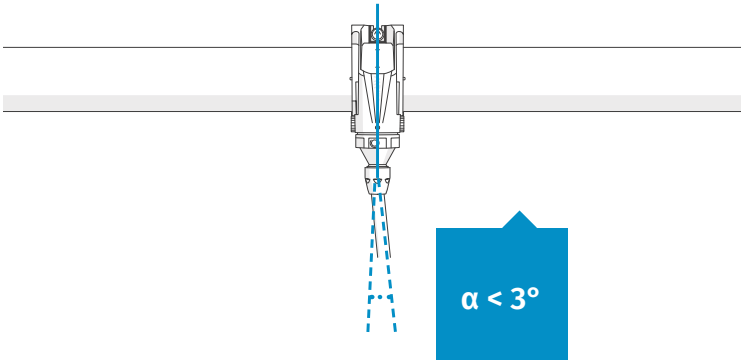


Installation - Quickdrop Assembly Diameters 100 - 158 mm / 4” - 6”

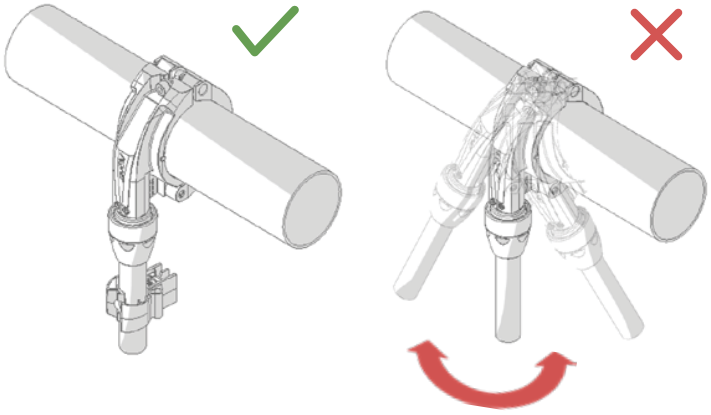
11 **Minimum distance**



12 **Max misalignment 3°**

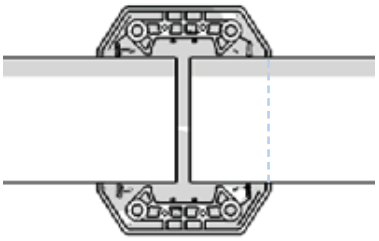


13 **Pipe clip prevents rotation**

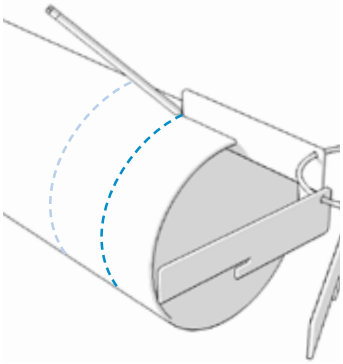


Installation - Replace old D100 Fittings with New D100 Fittings Diameter 100 mm / 4”

1

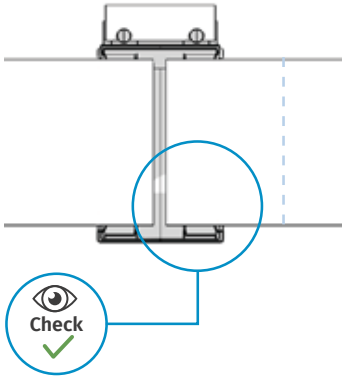


2 Mark



Pipe marker 2811 0229 80

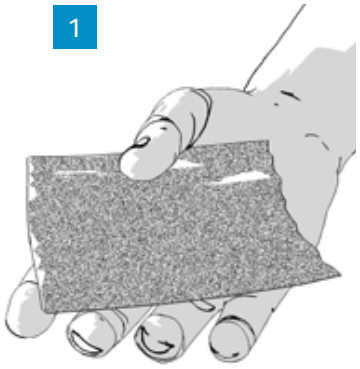
3 Check



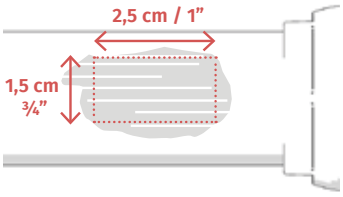
Note: When replacing the old D100 fitting with the new D100 fitting, only a new marking is needed, no cutting of pipes.

Installation - Mounting Conductivity Strap

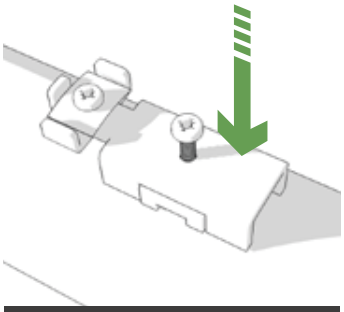
1



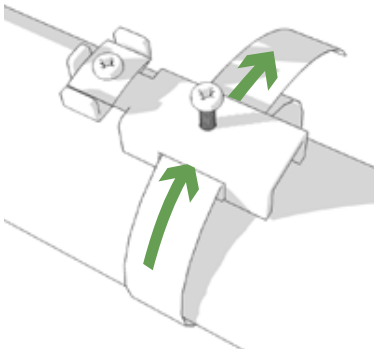
2 Clean spot to bare alluminium



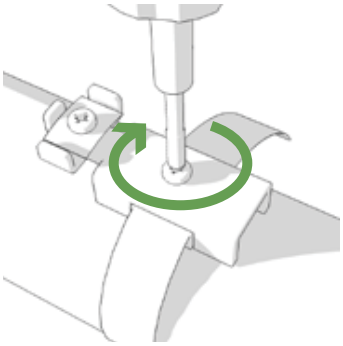
3 Place clamp



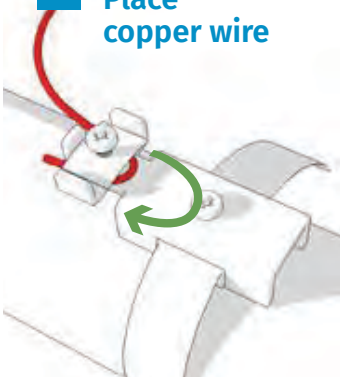
4 Place strap



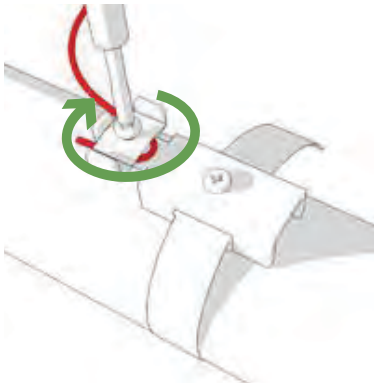
5 Tighten

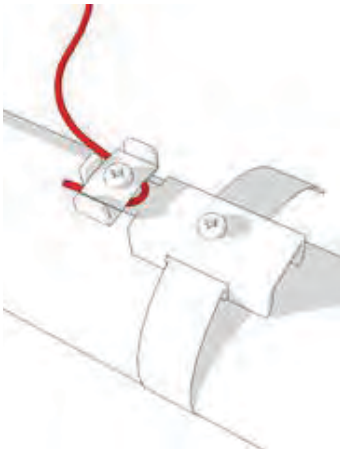


6 Place copper wire



7 Tighten





Aluminum Pre-Quote Checklist

Compressed Air Piping System: Pre-Quote Checklist

Customer Information	Customer / Project Name		Sales Manager	
	Address		Address	
	City / State		Contact	
	Phone		Phone	

Design & Drawing	**Drawings**			
	Piping layout of Compressor Room CAD / PDF file *	☐ Y ☐ N	**Piping layout of Workshop / Production Room CAD / PDF file ***	☐ Y ☐ N
	Flow chart of compressed air system	☐ Y ☐ N	Axonometric map of compressed air system	☐ Y ☐ N
Building / Structure	Ceiling Height			

Compressor Room - Equipment Information / Specs / Flow / Demand data Required

Air Compressor Room	Main piping in the compressor room	Header Outside Diameter (OD)	Height to C-L AFF	**Other special requirements**		
	Compressor type	PSI	Flow		Outlet TYPE	Outlet Size
					☐ NPT Threads ☐ Flange	
					☐ NPT Threads ☐ Flange	
					☐ NPT Threads ☐ Flange	
	Dryer type	PSI	Flow		Outlet TYPE	Outlet Size
					☐ NPT Threads ☐ Flange	
					☐ NPT Threads ☐ Flange	
	Filter type	I-O OD	Volume		Outlet TYPE	Inlet / Outlet Size
					☐ NPT Threads ☐ Flange	
					☐ NPT Threads ☐ Flange	
	Receiver Tank	Pressure rating	Volume		OUTLET / INLET TYPE USED	Inlet / Outlet Size
					☐ NPT Threads ☐ Flange	
					☐ NPT Threads ☐ Flange	
	Other equipment	Specifications / Dimensions	other*		Inlet / Outlet TYPE	Inlet / Outlet Size
					☐ NPT Threads ☐ Flange	
					☐ NPT Threads ☐ Flange	

Details of Compressed Air Main Header Area

Warehouse / Facility / Workshop / Production Room	Main Network piping					
	Header OD Size		Flow		Pressure*	
	Center Line (C-L) of Pipe Elevation Above Finshed Floor (AFF)		layout type*	☐ Closed Loop ☐ Line		
	Branch piping					
	Pipe diameter*		Flow		Pressure*	
	C-L AFF		layout type*	☐ Closed Loop ☐ Line		
	Sub branch piping (If applicable)					
	Pipe diameter*		Flow		Pressure*	
	C-L AFF		layout type*	☐ Closed Loop ☐ Line		
	Point of Use					
	Drop Pipe diameter*		Outlet Size NPT		Single-Port / 3-Port / 6 Multi-Port	
	Height Above Finished Floor (AFF)		Termination Fitting -->	☐ Shut-off valve	☐ Threaded F-NPT Valve, NPT Threaded Adapter, Manifold(s), End Cap, etc.	

Other special requirements

Other	

Commisioning Report

Certified installer: _____ Responsible AIRnet champion: _____

Customer: _____ Commissioning date (dd/mm/yyyy): _____

Customer address: _____

❑ Expansion of existing installation ❑ New installation

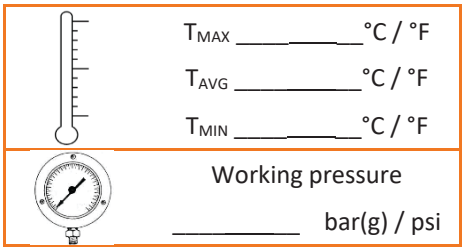
Before installation

Safety

- ❑ All safety instructions at customer site have been acknowledged and applied.
- ❑ The AIRnet installation manual (latest version is available on the website: https://www.airnet-system.com/en) has been read and understood. The installation is carried out in accordance with the instructions in this manual.

Medium

- ❑ Compressed air
- ❑ Vacuum
- ❑ Nitrogen
- ❑ Other: _____



Ambient conditions

If installed outdoors: is the installation protected from

- ❑ Direct sunlight?
- ❑ Rain / snow / ice?
- ❑ Wind?

Network Layout

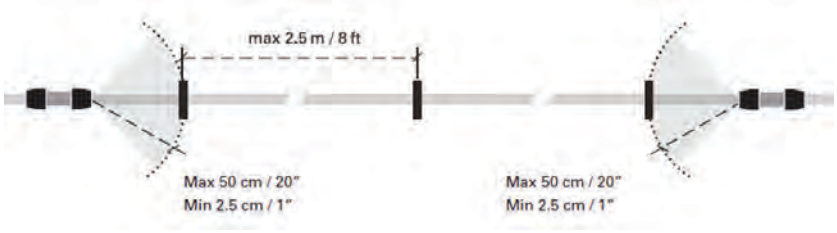
- ❑ To ensure proper draining of condensate, pipes should be sloped at 1-2% and a drain point should be foreseen at every lowest point of the line.
- ❑ Ensure that pressure vessels are bolted to the floor, and that vibrations may not be transmitted to the AIRnet piping.
- ❑ Expansion loops

  Number of expansion loops: _____

  Longest straight line: _____m/ft

Installation

❑ A pipe clip has been foreseen within 50cm (20”) of every side of every fitting
AND
A pipe clip has been foreseen every 2,5m (100”) for longer stretches of pipe




AIRNET
Stainless Steel
D25
2812600525
Batch nr: 13
AIRNET
AIRNET

Piping

PIPING/PIPE 304L (5.7m / 18.7 ft)

PART NUMBER	DESCRIPTION	AIRNET (MM/INCH)	LOT SIZE
2812 1000 00	Pipe 304L D15 (½")	15/½"	1
2812 2000 00	Pipe 304L D28 (1")	28/1"	1
2812 3000 00	Pipe 304L D35 (1¼")	35/1¼"	1
2812 4000 00	Pipe 304L D42 (1½")	42/1½"	1
2812 5000 00	Pipe 304L D54 (2")	54/ 2"	1
2811 6000 00	Pipe 304L D76 (2 ¾")	76/2 ¾"	1
2812 7000 00	Pipe 304L D89 (3 ½")	89/3 ½"	1
2812 8000 00	Pipe 304L D108 (4")	108/4"	1

Piping

PIPING/PIPE 316L (5.7m / 18.7 ft)

PART NUMBER	DESCRIPTION	AIRNET (MM/INCH)	LOT SIZE
2812 1001 00	Pipe 316L D15 (½")	15 / ½"	1
2812 2001 00	Pipe 316L D28 (1")	28/1"	1
2812 4001 00	Pipe 316L D42 (1½")	42/1½"	1

Fittings

SADDLE CLAMP QUICK DROP

PART NUMBER	DESCRIPTION	DIMENSIONS (MM/INCH)	LOT SIZE
2812 6310 00	316L D76xD35 (2¾"x 1¼")	76 x 35	1
2812 7410 00	316L D89xD42 (3½"x 1½")	89 x 42	1
2812 8510 00	316L D108xD54 (4"x 2")	108 x 54	1

Fittings

S-BEND DROP

PART NUMBER	DESCRIPTION	DIMENSIONS (MM/INCH)	LOT SIZE
2812 1067 00	Swan Neck 316L D15 (½")	15/½"	1
2812 2067 00	Swan Neck 316L D28 (1")	28/1"	1

Stainless Steel

Fittings
ELBOWS 45°

PART NUMBER	DESCRIPTION	DIMENSIONS (MM/INCH)	LOT SIZE
2812 1004 00	Elbow 45 DEG 316L D15	(½") 15/ ½"	1
2812 2004 00	Elbow 45 DEG 316L D28	(1") 28/1"	1
2812 3004 00	Elbow 45 DEG 316L D35	(1¼") 35/1¼"	1
2812 4004 00	Elbow 45 DEG 316L D42	(1½") 42/1½"	1
2812 5004 00	Elbow 45 DEG 316L D54	(2") 54/2"	1
2812 6004 00	Elbow 45 DEG 316L D76	(2¾") 6/2¾"	1
2812 7004 00	Elbow 45 DEG 316L D89	(3½") 89/3½"	1
2812 8004 00	Elbow 45 DEG 316L D108	(4") 108/4"	1

Fittings
ELBOWS 90°

PART NUMBER	DESCRIPTION	DIMENSIONS (MM/INCH)	LOT SIZE
2812 1003 02	Elbow 90 DEG 316L D15	(½") 15/ ½"	1
2812 2003 00	Elbow 90 DEG 316L D28	(1") 28/1"	1
2812 3003 00	Elbow 90 DEG316L D35	(1¼") 35/1¼"	1
2812 4003 00	Elbow 90 DEG 316L D42	(1½") 42/1½"	1
2812 5003 00	Elbow 90 DEG 316L D54	(2") 54/2"	1
2812 6003 00	Elbow 90 DEG 316L D76	(2¾") 76/2¾"	1
2812 7003 00	Elbow 90 DEG 316L D89	(3½") 89/3½"	1
2812 8003 00	Elbow 90 DEG 316L D108	(4") 108/4"	1

Fittings
EQUAL TEES

PART NUMBER	DESCRIPTION	DIMENSIONS (MM/INCH)	LOT SIZE
2812 1005 00	Equal Tee 316L D15	(½") 15/ ½"	1
2812 2005 00	Equal Tee 316L D28	(1") 28/1"	1
2812 3005 00	Equal Tee 316L D35	(1¼") 35/1¼"	1
2812 4005 00	Equal Tee 316L D42	(1½") 42/1½"	1
2812 5005 00	Equal Tee 316L D54	(2") 54/2"	1
2812 6005 00	Equal Tee 316L D76	(2¾") 76/2¾"	1
2812 7005 00	Equal Tee 316L D89	(3½") 89/3½"	1
2812 8005 00	Equal Tee 316L D108	(4") 108/4"	1

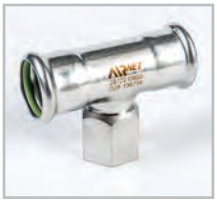
Fittings

REDUCING TEES

PART NUMBER	DESCRIPTION	DIMENSIONS (MM/INCH)	LOT SIZE
2812 2107 00	Reducing Tee 316L D28xD15 (1" x ½")	28/ 1"	1
2812 3207 00	Reducing Tee 316L D35xD28 (1¼"x 1")	35/1¼"	1
2812 4307 00	Reducing Tee 316L D42xD35 (1½"x 1¼")	42/1½"	1
2812 5407 00	Reducing Tee 316L D54xD42 (2"x 1½")	54/2"	1
2812 6507 00	Reducing Tee 316L D76xD54 (2¾"x 2")	76/2¾"	1
2812 7607 00	Reducing Tee 316L D89XD76 (3½"x 2¾")	89/3½"	1
2812 8707 00	Reducing Tee 316L D108xD89 (4" x 3½")	108/4"	1

Fittings

THREADED REDUCING TEES NPT



PART NUMBER	DESCRIPTION	DIMENSIONS (MM/INCH)	LOT SIZE
2812 1009 00	Threaded RT 316L D15 x ½" (½"x ½") NPT	15/ ½"	1
2812 2109 00	Threaded RT 316L D28 x ¾" ("x ¾") NPT	28/1"	1
2812 3109 00	Threaded RT 316L D35 x ¾" (1¼"x ¾") NPT	35/1¼"	1
2812 4109 00	Threaded RT 316L D42 x ¾" (1 ½"x ¾") NPT	42/1½"	1
2812 5109 00	Threaded RT 316L D54 x ¾" (2"x ¾") NPT	54/2"	1
2812 6109 00	Threaded RT 316L D76 x ¾" (2 ¾"x ¾") NPT	76/2¾"	1
2812 7109 00	Threaded RT 316L D89 x ¾" (3 ½"x ¾") NPT	89/3½"	1
2812 8109 00	Threaded RT 316L D108 x ¾" (4"x ¾") NPT	108/4"	1

Stainless Steel

Union

EQUAL UNION

PART NUMBER	DESCRIPTION	DIMENSIONS (MM/INCH)	LOT SIZE
2812 1002 00	Equal Union 316L D15 (½")	15/½"	1
2812 2002 00	Equal Union 316L D28 (1")	28/1"	1
2812 3002 00	Equal Union 316L D35 (1¼")	35/1¼"	1
2812 4002 00	Equal Union 316L D42 (1½")	42/1½"	1
2812 5002 00	Equal Union 316L D54 (2")	54/2"	1
2812 6002 00	Equal Union 316L D76 (2¾")	76/2¾"	1
2812 7002 00	Equal Union 316L D89 (3½")	89/3½"	1
2812 8002 00	Equal Union 316L D108 (4")	108/4"	1

Threaded Adapter

THREADED ADAPTER MALE NPT

PART NUMBER	DESCRIPTION	DIMENSIONS (MM/INCH)	LOT SIZE
2812 1018 00	316L D15 x ½" (½" x ½") NPT	15/½"	1
2812 1118 00	316L D15 x ¾" (½" x ¾") NPT	15/½"	1
2812 2118 00	316L D28 x ¾" (1" x ¾") NPT	28/1"	1
2812 2218 00	316L D28 x 1 " (1" x 1") NPT	28/1"	1
2812 3218 00	316L D35 x 1" (1¼" x 1") NPT	35/1¼"	1
2812 3318 00	316L D35 x 1¼" (1¼" x 1¼") NPT	35/1¼"	1
2812 4318 00	316L D42 x 1¼" (1½" x 1¼") NPT	42/1½"	1
2812 4418 00	316L D42 x 1½" (1½" x 1½") NPT	42/1½"	1
2812 5418 00	316L D54 x 1½" (2" x 1½") NPT	54/2"	1
2812 5518 00	316L D54 x 2" (2" x 2") NPT	54/2"	1
2812 6618 00	316L D76 x 2½" (2¾" x 2½") NPT	76/2¾"	1
2812 7718 00	316L D89 x 3" (3½" x 3") NPT	89/3½"	1
2812 8818 00	316L D108 x 4" (4" x 4") NPT	108/4"	1

Threaded Adapter

THREADED ADAPTER FEMALE NPT

PART NUMBER	DESCRIPTION	DIMENSIONS (MM/INCH)	LOT SIZE
2812 1120 00	316L D15 x ¾" (½"x ¾") NPT	15/½"	1
2812 2220 00	316L D28 x 1" (1"x 1") NPT	28/1"	1
2812 3320 00	316L D35 x 1¼" (1¼"x 1¼") NPT	35/1¼"	1
2812 4420 00	316L D42 x 1½" (1½"x 1½") NPT	42/1½"	1
2812 5520 00	316L D54 x 2" (2"x 2") NPT	54/2"	1

End Caps

END CAPS

PART NUMBER	DESCRIPTION	DIMENSIONS (MM/INCH)	LOT SIZE
2812 1006 00	End Cap 316L D15 (½")	15/½"	1
2812 2006 00	End Cap 316L D28 (1")	28/1"	1
2812 3006 00	End Cap 316L D35 (1¼")	35/1¼"	1
2812 4006 00	End Cap 316L D42 (1½")	42/1½"	1
2812 5006 00	End Cap 316L D54 (2")	54/2"	1
2812 6006 00	End Cap 316L D76 (2¾")	76/2¾"	1
2812 7006 00	End Cap316L D89 (3½")	89/3½"	1
2812 8006 00	End Cap 316L D108 (4“)	108/4"	1

Wall Mounts

WALL MOUNTED MANIFOLD

PART NUMBER	DESCRIPTION	DIMENSIONS (MM/INCH)	LOT SIZE
2812 1041 00	316L D15 x ½" (½"x ½")NPT	15/ ½"	1

Stainless Steel

Reducers
REDUCER MALE X FEMALE

PART NUMBER	DESCRIPTION	DIMENSIONS (MM/INCH)	LOT SIZE
2812 2121 00	Reducer 316L D28 x D15 (1" X ½")	28 x 15/1"	1
2812 3221 00	Reducer 316L D35 x D28 (1¼" x 1")	35 x 28/1¼"	1
2812 4321 00	Reducer 316L D42 x D35 (1½" x 1¼")	42 X 35/1½"	1
2812 5421 00	Reducer 316L D54 x D42 (2" x 1½")	54 x 42/2"	1
2812 6521 00	Reducer 316L D76 x D54 (2¾" x 2")	76 x 54/2¾"	1
2812 7621 00	Reducer 316L D89 x D76 (3½" x 2¾")	89 x 76/3½"	1
2812 8721 00	Reducer 316L D108 x D89 (4" x 3½")	108 x 89/4"	1

Adapters
ADAPTER UNION FEMALE NPT

PART NUMBER	DESCRIPTION	DIMENSIONS (MM/INCH)	LOT SIZE
2812 1114 00	Adapter Union 316L D15 x ¾" (½" x ¾") NPT	15/ ½"	1
2812 2214 00	Adapter Union 316L D28 x 1" (1" x 1") NPT	28/1"	1
2812 3314 00	Adapter Union 316L D35 x 1¼" (1¼" x 1¼") NPT	35/1¼"	1
2812 4414 00	Adapter Union 316L D42 x 1½" (1½" x 1½") NPT	42/1½"	1
2812 5514 00	Adapter Union 316L D54 x 2" (2" x 2") NPT	54/2"	1

Flanges
FLANGE ANSI CL150

PART NUMBER	DESCRIPTION	DIMENSIONS (MM/INCH)	LOT SIZE
2812 1154 00	Flange 316L D15 (½") ANSI CL150	15/½"	1
2812 2154 00	Flange 316L D28 (1") ANSI CL150	28/1"	1
2812 3154 00	Flange 316L D35 (1¼") ANSI CL150	35/1¼"	1
2812 4154 00	Flange 316L D42 (1½") ANSI CL150	42/1½"	1
2812 5154 00	Flange 316L D54 (2") ANSI CL150	54/2"	1
2812 6154 00	Flange 316L D76 (2¾") ANSI CL150	76/2¾"	1
2812 7154 00	Flange 316L D89 (3½") ANSI CL150	89/3½"	1
2812 8154 00	Flange 316L D108 (4") ANSI CL150	108/4"	1

Valves

BALL VALVE

PART NUMBER	DESCRIPTION	DIMENSIONS (MM/INCH)	LOT SIZE
2812 1051 00	Ball Valve 316L D15 (½")	15/½"	1
2812 2051 00	Ball Valve 316L D28 (1")	28/1"	1
2812 3051 00	Ball Valve 316L D35 (1¼")	35/1¼"	1
2812 4051 00	Ball Valve 316L D42 (1½")	42/1½"	1
2812 5051 00	Ball Valve 316L D54 (2")	54/2"	1
2812 6051 00	Ball Valve 316L D76 (2¾")	76/2¾"	1
2812 7051 00	Ball Valve 316L D89 (3½")	89/3½"	1
2812 8051 00	Ball Valve 316L D108 (4")	108/4"	1

Compensator

VIBRATION COMPENSATOR

PART NUMBER	DESCRIPTION	DIMENSIONS (MM/INCH)	LOT SIZE
2812 1055 00	Compensator 316L D15 (½")	15/ ½"	1
2812 2055 00	Compensator 316L D28 (1")	28/1"	1
2812 3055 00	Compensator 316L D35 (1¼")	35/1¼"	1
2812 4055 00	Compensator 316L D42 (1½")	42/1½"	1
2812 5055 00	Compensator 316L D54 (2")	54/2"	1

Accessories

PIPE CLIP UNC

PART NUMBER	DESCRIPTION	DIMENSIONS (MM/INCH)	LOT SIZE
2812 1122 20	Pipe Clip 304L D15 (½") ⅜" UNC 20PCS	15/½"	1
2812 2122 20	Pipe Clip 304L D28 (") ⅜" UNC 20PCS	28/1"	1
2812 3122 20	Pipe Clip 304L D35 (1¼") ⅜" UNC 20PCS	35/1¼"	1
2812 4122 20	Pipe Clip 304L D42 (1½") ⅜" UNC 20PCS	42/1½"	1
2812 5122 20	Pipe Clip 304L D54 (2) ⅜" UNC 20PCS	54/2"	1
2812 6122 20	Pipe Clip 304L D76 (2¾") ⅜" UNC 20PCS	76/2¾"	1
2812 7122 20	Pipe Clip 304L D89 (3½") ⅜" UNC 20PCS	89/3½"	1
2812 8122 20	Pipe Clip 304L D108 (4) ⅜" UNC 20PCS	108/4"	1

Stainless Steel

Accessories
O-RING KIT

PART NUMBER	DESCRIPTION	DIMENSIONS (MM/INCH)	LOT SIZE
2812 1065 20	O-ring Kit D15 (½") 20PCS	15/½"	20
2812 2065 20	O-ring Kit D28 (1") 20PCS	28/1"	20
2812 3065 20	O-ring Kit D35 (1¼") 20PCS	35/1¼"	20
2812 4065 20	O-ring Kit D42 (1⅟) 20PCS	42/1½"	20
2812 5065 20	O-ring Kit D54 (2") 20PCS	54/2"	20
2812 6065 10	O-ring Kit D76 (2¾ ") 10PCS	76/2¾ "	10
2812 7065 10	O-ring Kit D89 (3½ ") 10PCS	89/3½"	10
2812 8065 10	O-ring Kit D108 (4") 10PCS	108/4"	10

Accessories
GASKET FOR FLANGE

PART NUMBER	DESCRIPTION	DIMENSIONS (MM/INCH)	LOT SIZE
0650 0100 43	Gasket D15 (½") PN10-16 ANSI CL150 Typical	15/ ½"	1
0650 0101 06	Gasket D28(1") ANSI CL150	28/1"	1
0650 1001 12	Gasket D35 PN10-16/ANSI CL150	35/1¼"	1
0650 0100 09	Gasket D54 (2") PN10-16/ANSI CL150	54/2"	1
0650 1001 19	Gasket D76 (2¾ ") ANSI CL 150	76/2¾ "	1
0650 1001 27	Gasket D89 (3½ ") PN10-16/ANSI CL150	89/3½ "	1
0650 0100 06	Gasket D108 (4") PN10-16/ANSI CL150	108/4"	1

Tools
DEBURRING/MARKER GAUGE

PART NUMBER	DESCRIPTION	DIMENSIONS (MM/INCH)	LOT SIZE
2810 0641 00	DeBurring Tool/Dual handle	N/A	1
2812 0029 80	Marker Gauge	N/A	1

Tools
CUTTING AND ASSEMEBLY

PART NUMBER	DESCRIPTION	SIZE (MM / INCH)	PACK QTY
2812 0030 01	Press Tool - w/battery	25 / 1" ONLY	1
2812 0130 01	Press Tool - LG - w/batt	40-80 / 1 1/2" - 3"	1
2812 1030 00	Jaw for 1/2"	15mm / 1/2" OD	1
2812 2030 00	Jaw for 1"	28mm / 1" OD	1
2812 3030 00	Jaw for 1 1/4"	35mm / 1 1/4"" OD	1
2812 4030 00	Collar for 1 1/2"	42mm / 1 1/2" OD	1
2812 5030 00	Collar for 2"	54mm / 2" OD	1
2812 6030 00	Collar for 2 3/4"	76mm / 2 3/4" OD	1
2812 7030 00	Collar for 3 1/2"	89mm / 3 1/2" OD	1
2812 8030 00	Collar for 4"	108mm / 4" OD	1
2812 4530 00	Collar Adapter (1 1/2 - 2")	42 - 54mm / 1 1/2-2"	1
2812 0228 00	Extra Batery 18v Makita	Battery Only 18v	1
2812 0328 00	Extra Charger 110v Plug	Charger Only - 110v	1
2812 0428 01	Power Cable 110v Corded	Wall cord power connector	1
2810 0141 00	Deburring Tool - small	15-54mm / 1/2 - 2"	1
2812 0641 00	Deburring Tool - LG	76-108mm / 2 3/4-4"	1
2812 0040 00	Cutter / manual D15-54	Manual pipe cutter	1
2812 0140 00	Spare Cutting Wheels	Replacement cutter wheel	1
2812 0340 81*	SS Cutting Tool ONLY	For ALL SS pipies (110v)	1
2812 0340 80*	SS Cutting Tool - SET	ALL SS (cutter/stand/rollers)	1

** SPECIAL ORDER ONLY*

Stainless Steel Installation Guide

Operating Conditions & Safety Instructions

OPERATING CONDITIONS

AIRnet stainless steel pipes and fittings are designed to convey compressed air and vacuum. The system can also be used for nitrogen, helium, argon, neon, xenon and krypton.

AIRnet stainless steel pipes and fittings must only be used within the pressure and temperature specifications referred to in the AIRnet Stainless Steel Component List.

AIRnet stainless steel pipes and fittings must be appropriately protected against violent impacts and wind gusts.

Ensure accessibility of the AIRnet system for possible future system expansion or maintenance.

AIRnet stainless steel pipes and fittings should not be used as support for electrical equipment or earth conductors.

AIRnet stainless steel pipes should never be directly connected to a source of vibrations (use hoses instead).

Pressure relief valves must be installed where needed to ensure that the system working pressure cannot exceed the maximum working pressure of AIRnet Stainless Steel.

AIRNET INSTALLATIONS IN EXPLOSIVE ENVIRONMENTS

Cutting, deburring and assembly of AIRnet stainless steel pipes can create sparks. Necessary precautions in explosive atmospheres must be taken.

AIRnet stainless steel installations in explosive environments must always be earthed. Bonding and earthing must be checked at frequent intervals to secure that the system cannot be electrically charged.

PURITY REMARKS

To guarantee the purity of the compressed air at the point of use:

- a system purge of at least 24h is highly recommended.
- a properly sized certified point-of-use filter is advised, depending on the application requirements.

AIRnet stainless steel cannot be allowed to convey any end products (food, beverage, pharmaceuticals, etc.)

SAFETY INSTRUCTIONS

Installation, adjustments and repair work of an AIRnet system must be performed by authorized trained personnel.

Installers must use the necessary protection means (PPMs). When working at heights, use a harness for personal protection, and ensure that tools are securely fastened to prevent them from falling.

Installers must comply to all local safety requirements related to the application(s) in scope. Special care must always be taken to prevent suffocation risks when working with gases other than air.

Before any installation, adjustment, repair work or other non-routine checks, relieve the AIRnet system of pressure and effectively isolate the system from all sources of pressure.

Only genuine AIRnet parts should be used when installing, adjusting or repairing an AIRnet stainless steel system.

All plugs and caps must be removed before installing the AIRnet pipes.

Check the surface of the AIRnet pipes before installing. There should be no relevant scratches, abrasions, dents etc.

Use only solvents or chemicals which do not damage the materials of AIRnet.

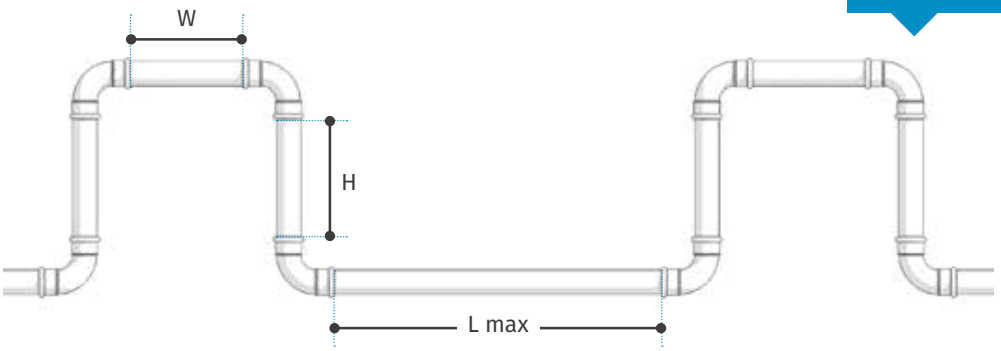
Before using the AIRnet stainless steel system, installers must ensure that all necessary test controls and applicable rules for the specific installation are complied with.

At initial startup of the AIRnet system, apply a test pressure of 1.5 bar to identify leakage or imperfect joints. After performing an inspection, increase the pressure gradually and constantly (max 1 bar every 5 minutes) and perform a second inspection for leakages or imperfect joints at the final pressure.

Expansion Loops and Compensators

Long straight pipes will expand or contract due to temperature variations. To compensate for this effect, expansion loops or compensators are required. An expansion loop is a U-shaped construction that compensates the variation in length. Compensators are straight fittings specifically designed to allow axial movement. The number of expansion loops / compensators depends on the total length of the straight line and the maximum temperature variation.

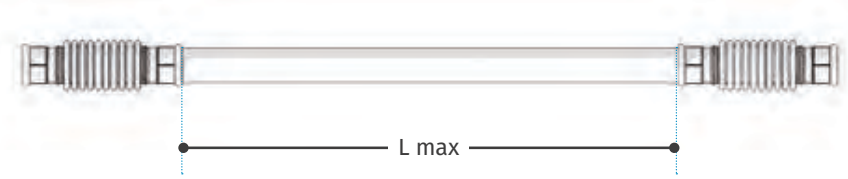
The below table gives the maximum possible straight distance between two expansion loops with fixed piping vs. the temperature variation:



	Ø15 mm / 1/2"	Ø28 mm / 1"	Ø35 mm / 1 1/4"	Ø42 mm / 1 1/2"	Ø54 mm / 2"	Ø76 mm / 2 3/4"	Ø89 mm / 3 1/2"	Ø108 mm / 4"
H	0,75 m / 2,5 ft	1 m / 3,3 ft		1,25m / 4,1 ft		1,5 m / 5 ft		1,75 m / 5,75 ft
W	0,375 m / 1,25 ft	0,5 m / 1,6 ft		0,625m / 2 ft		0,75 m / 2,5 ft		0,875 m / 2,9 ft
Δt	Maximum distance between two expansion joints							
5°C / 9°F	726 m / 2383 ft	691 m / 2269 ft	553 m / 1815 ft	720 m / 2364 ft	560 m / 1838 ft	573 m / 1881 ft	489 m / 1606 ft	549 m / 1802 ft
10°C / 18°F	363 m / 1191 ft	345 m / 1134 ft	276 m / 907 ft	360 m / 1182 ft	280 m / 919 wft	286 m / 940 ft	244 m / 803 ft	274 m / 901 ft
20°C / 36°F	181 m / 595 ft	172 m / 567 ft	138 m / 453 ft	180 m / 591 ft	140 m / 459 ft	143 m / 470 ft	122 m / 401 ft	137 m / 450 ft
30°C / 54°F	121 m / 397 ft	115 m / 378 ft	92 m / 302 ft	120 m / 394 ft	93 m / 306 ft	95 m / 313 ft	81 m / 267 ft	91 m / 300 ft
40°C / 72°F	90 m / 297 ft	86 m / 283 ft	69 m / 226 ft	90 m / 295 ft	70 m / 229 ft	71 m / 235 ft	61 m / 200 ft	68 m / 225 ft
50°C / 90°F	72 m / 238 ft	69 m / 226 ft	55 m / 181 ft	72 m / 236 ft	56 m / 183 ft	57 m / 188 ft	48 m / 160 ft	54 m / 180 ft
60°C / 108°F	60 m / 198 ft	57 m / 189 ft	46 m / 151 ft	60 m / 197 ft	46 m / 153 ft	47 m / 156 ft	40 m / 133 ft	45 m / 150 ft
70°C / 126°F	51 m / 170 ft	49 m / 162 ft	39 m / 129 ft	51 m / 168 ft	40 m / 131 ft	40 m / 134 ft	34 m / 114 ft	39 m / 128 ft
80°C / 144°F	45 m / 148 ft	43 m / 141 ft	34 m / 113 ft	45 m / 147 ft	35 m / 114 ft	35 m / 117 ft	30 m / 100 ft	34 m / 112 ft
90°C / 162°F	40 m / 132 ft	38 m / 126 ft	30 m / 100 ft	40 m / 131 ft	31 m / 102 ft	31 m / 104 ft	27 m / 89 ft	30 m / 100 ft
100°C / 180°F	36 m / 119 ft	34 m / 113 ft	27 m / 90 ft	36 m / 118 ft	28 m / 91 ft	28 m / 94 ft	24 m / 80 ft	27 m / 90 ft

*Includes Battery / Charger

Expansion Loops and Compensators



The table below gives the maximum possible straight distance between two compensators vs. the temperature variation:

	Ø15 mm / 1/2"	Ø28 mm / 1"	Ø35 mm / 1 1/4"	Ø42 mm / 1 1/2"	Ø54 mm / 2"
Δt	Maximim distance between two compensators (1000 cycles max.)				
5°C / 9°F	193 m / 636 ft	266 m / 874 ft	315 m / 1033 ft	387 m / 1272 ft	436 m / 1431 ft
10°C / 18°F	96 m / 318 ft	133 m / 437 ft	157 m / 516 ft	193 m / 636 ft	218 m / 715 ft
20°C / 36°F	48 m / 159 ft	66 m / 218 ft	78 m / 258 ft	96 m / 318 ft	109 m / 357 ft
30°C / 54°F	32 m / 106 ft	44 m / 145 ft	52 m / 172 ft	64 m / 212 ft	72 m / 238 ft
40°C / 72°F	24 m / 79 ft	33 m / 109 ft	39 m / 129 ft	48 m / 159 ft	54 m / 178 ft
50°C / 90°F	19 m / 63 ft	26 m / 87 ft	31 m / 103 ft	38 m / 127 ft	43 m / 143 ft
60°C / 108°F	16 m / 53 ft	22 m / 72 ft	26 m / 86 ft	32 m / 106 ft	36 m / 119 ft
70°C / 126°F	13 m / 45 ft	19 m / 62 ft	22 m / 73 ft	27 m / 90 ft	31 m / 102 ft
80°C / 144°F	12 m / 39 ft	16 m / 54 ft	19 m / 64 ft	24 m / 79 ft	27 m / 89 ft
90°C / 162°F	10 m / 35 ft	14 m / 48 ft	17 m / 57 ft	21 m / 70 ft	24 m / 79 ft
100°C / 180°F	9 m / 31 ft	13 m / 43 ft	15 m / 51 ft	19 m / 63 ft	21 m / 71 ft

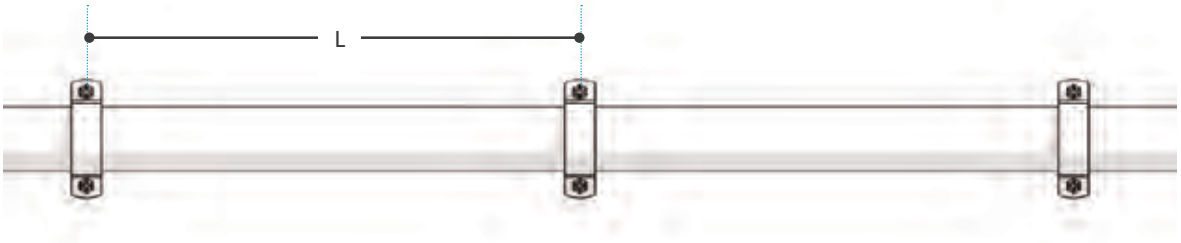
Example:
Consider an installation with a 100m / 328 ft straight line in 15mm / ½" pipe. The minimum temperature of the system is -20°C / -4°F in the winter, and the maximum temperature is 50°C / 122°F due to hot compressed air when the system is in use. The Δt is then 70°C / 126°F.

For this 100m / 328 ft straight line, this means that 1 expansion loop is required. This means that for this straight line, 7 compensators are required.

Pipe Support

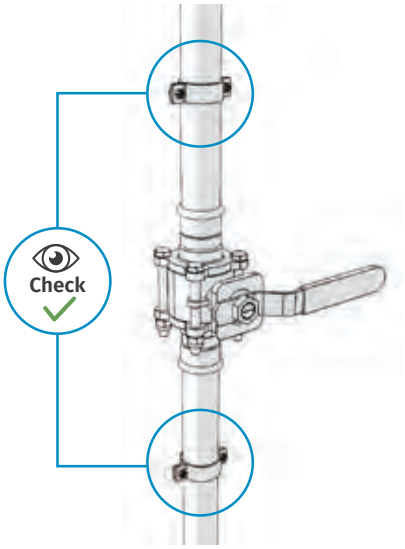
Make sure the piping system is rigidly supported to the structure of the building so that movement due to external forces (e.g. wind) of the piping is prevented.

The maximum distance L between two pipe clips is given by the table below:



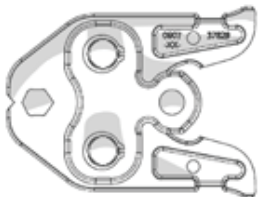
External Pipe Diameter (mm / inch)	Maximum distance (m / ft)
15 / ½"	1,5 / 5
28 / 1"	2,5 / 8
35 / 1 ¼"	2,5 / 8
42 / 1 ½"	3 / 10
54 / 2"	3,5 / 11,5
76 / 2 ¾"	4 / 13
89 / 3 ½"	4,5 / 14,5
108 / 4"	5 / 16

Valves must be supported by a pipe clip on both sides, with a maximum distance of 0.5m (20") between the valve and the pipe clips.

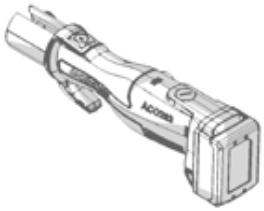


Tools - Overview

D15 - D35
½" - 1 ¼"

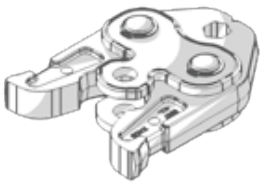


D15 / ½" = 2812 1030 00
D28 / 1" = 2812 2030 00
D35 / 1 ¼" = 2812 3030 00

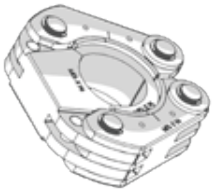


230V: 2812 0030 00
110V: 2812 0030 01
Including protective case, battery charger, charger cable

D42 - D54
1 ½" - 2"



2812 4530 00



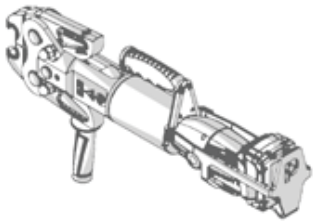
D42 / 1 ½" = 2812 4030 00
D54 / 2" = 2812 5030 00

Spare parts:
Charger: 230V: 2812 0430 00
110V: 2812 0430 01
Battery: 2812 0230 00

Cable to work on grid power:
2812 0428 01 (110V)
2812 0428 00 (220V)

D76 - D108
2 ¾" - 4"

D76 / 2 ¾" = 2812 6030 00
D89 / 3 ½"= 2812 7030 00
D108 / 4" = 2812 8030 00



230V: 2812 0030 00
110V: 2812 0030 01
Including protective case, battery charger, charger cable, cable to work on power grid

Spare parts:
Charger: 230V: 2812 0430 00
110V: 2812 0430 01
Battery: 2812 0230 00

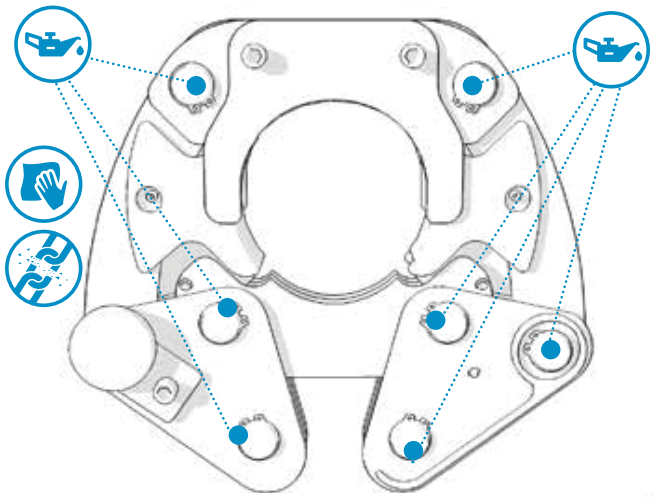
Cable to work on grid power:
2812 0428 01 (110V)
2812 0428 00 (220V)

Note: the AIRnet Stainless Steel System will only attain the designed pressure when installed using the tools in the table above. Using other tools is not recommend, as this may lower the pressure rating.

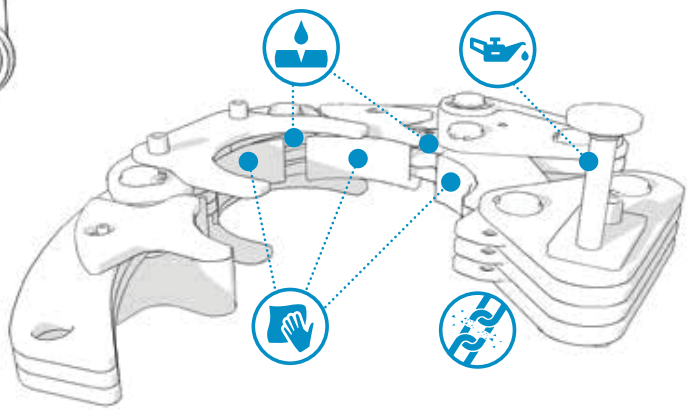
Tools - Inspection and Maintenance

To guarantee correct installation, the pressing tools must be checked regularly by an official authorized repairer according to the manufacturer specifications. All moving parts and pressing surfaces must be cleaned and lubricated daily. Before starting installation, make sure to inspect the tools thoroughly. Any possible oxidation, paint or dirt will affect the reliability, possibly resulting in sliding issues on the fittngs during pressing.

		Klauke D15 - D54										Klauke D76 - D108			
		15	18	22	28	35	42	54	Chain + collar 42	Chain + collar 54	Battery/ charger	76	89	108	Battery/ charger
Novopress ACO 203 BT	15	YES													
	18		YES												
	22			YES											
	28				YES										
	35					YES									
	42						NO								
	54							NO							
	Chain + collar 42								YES						
	Chain + collar 54									YES					
	Battery/charger										NO				
Novopress ACO 403 BT	76											NO			
	89												NO		
	108													NO	
	Battery/charger														NO



New "Novopress" toll compatibility with old "Klauke" tool:
-D15 - D35 jaws are interchangeable
-D42 – D54 the chain of Klauke is not compatible with collar of Novopress and vice versa
-D42 – D54 the combination of chain and collars is interchangeable with both tools
-D76 – D108 collars are not interchangeable




Keep the pins lubricated with grease


Keep the pins lubricated with oil

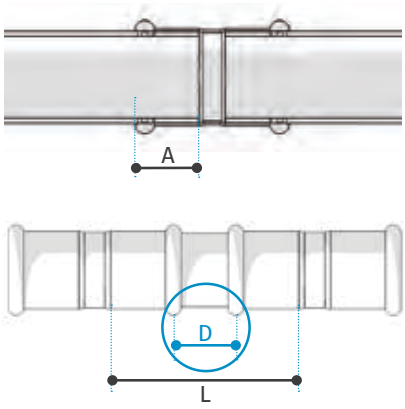

Attention it can break


Keep the chain clean

Installation - Pipe Preparation

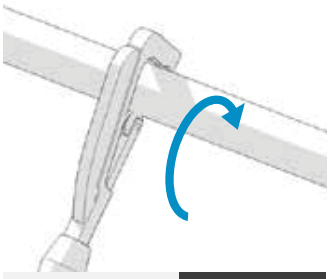
1 Measure

Pipe Outside Diameter (mm/inch)	A mm/ inch	D (mm/inch)	L (mm / inch)
15 / ½"	20 / 13/16"	20 / 13/16"	60 / 2 3/8"
28 / 1"	23 / 15/16"	20 / 13/16"	66 / 2 5/8"
35 / 1 ¼"	26 / 1"	20 / 13/16"	72 / 2 13/16"
42 / 1 ½"	30 / 1 3/16"	40 / 1 9/16"	100 / 5 ½"
54 / 2"	35 / 1 3/8"	40 / 1 9/16"	110 / 4 5/16"
76 / 2 ¾"	55 / 2 3/16"	60 / 2 3/8"	170 / 6 11/16"
89 / 3 ½"	60 / 2 3/8"	60 / 2 3/8"	180 / 7 1/16"
108 / 4"	75 / 2 15/16"	60 / 2 3/8"	210 / 8 ¼"



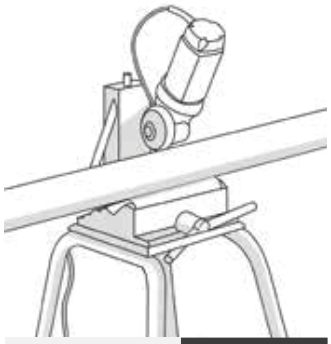
A = Insertion Depth
D = Minimum Distance
L = Minimum Pipe Length Tube

2 Cut



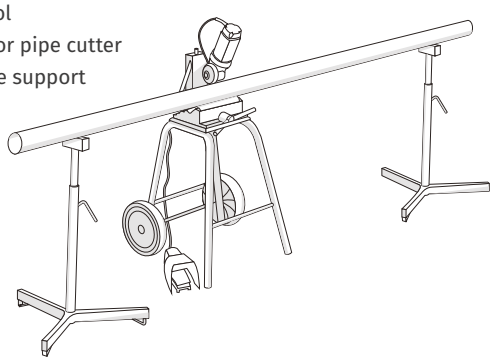
Ø 15-54 mm	2810 0040 00

OR



110V (complete kit)	2812 0340 80
220V (complete kit)	2812 0240 80

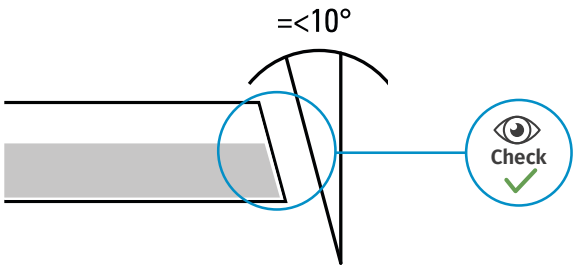
The 'complete kit' contains:
1 x Pipe cutter tool
1 x Wheel stand for pipe cutter
2 x Tripod for pipe support
1 x Cutting wheel



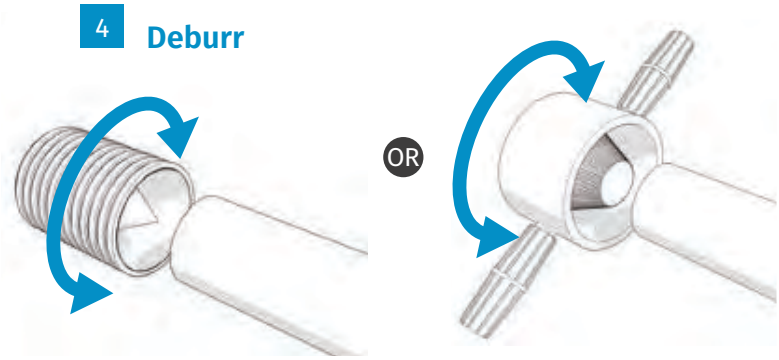
Pipe cutter tool – 110V (1 pc)	2812 0340 81
Pipe cutter tool – 220V (1 pc)	2812 0240 81
Wheel stand (1 pc)	2812 0740 00
Tripod (1 pc)	2812 0840 00
Spare cutting wheel for pipe cutter (1 pc)	2812 0640 00
Spare pipe rollers for pipe cutter (set of 4pcs)	2812 0940 00

Installation - Pipe Preparation

3 Check

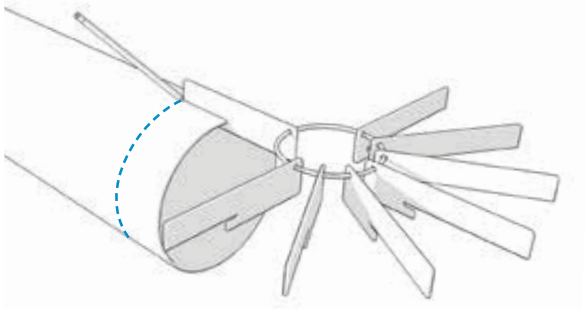


4 Deburr



Ø 15-54 mm	2810 0141 00
Ø 76 - 108 mm	2810 0641 00

5 Mark

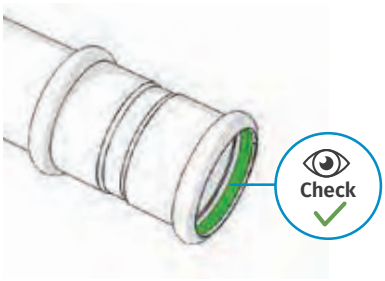


Pipe Marker	2812 0029 80

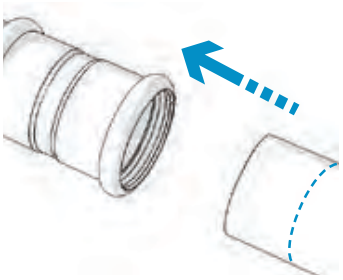
Installation - Press Fitting

Diameters 15 - 35 mm / 1/2"- 1 ¼"

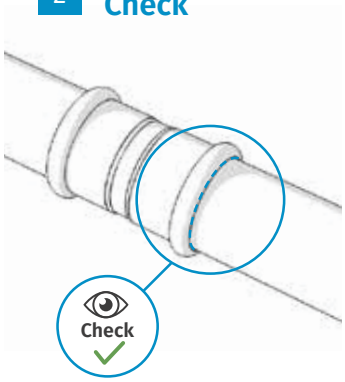
0 Check O-ring for damage



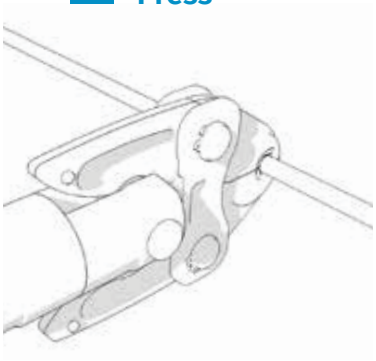
1 Insert



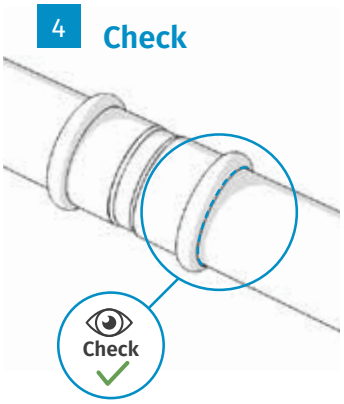
2 Check



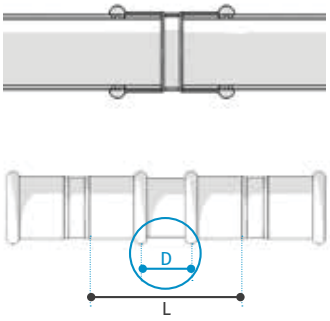
3 Press



4 Check



5 Check distance

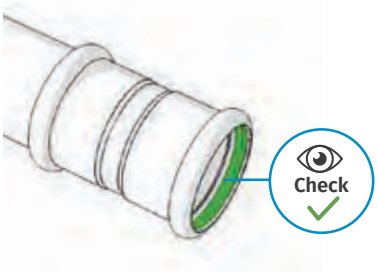


A = Insertion Depth
D = Minimum Distance
L = Minimum Pipe Length Tube

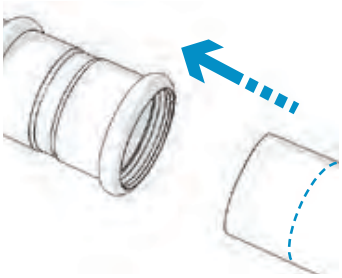
Installation - Press Fitting

Diameters 42 - 54 mm / 1 ½ " - 2"

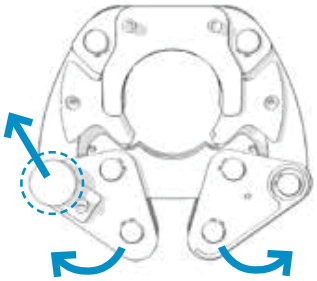
0 Check O-ring for damage



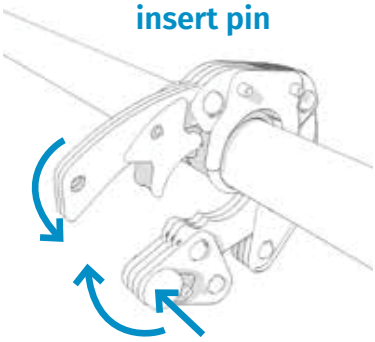
1 Insert



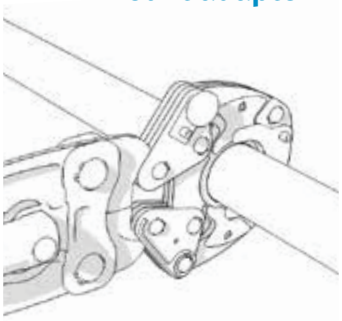
2 Retract pin and open chain



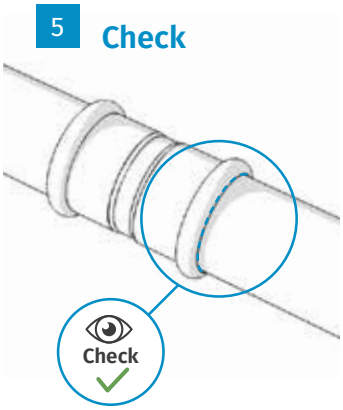
3 Close chain and insert pin



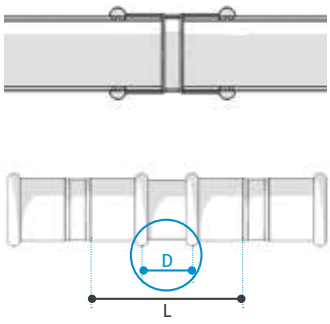
4 Mount adapter



5 Check

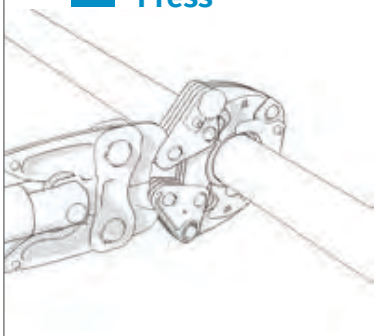


6 Check distance

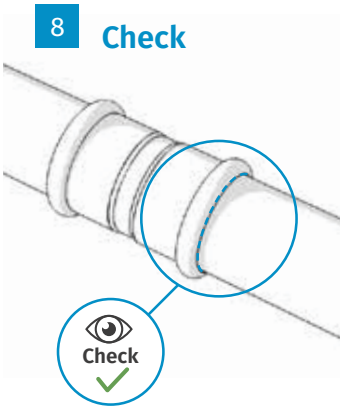


A = Insertion Depth
D = Minimum Distance
L = Minimum Pipe Length Tube

7 Press



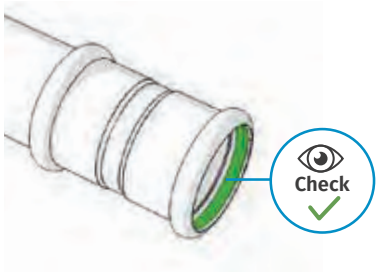
8 Check



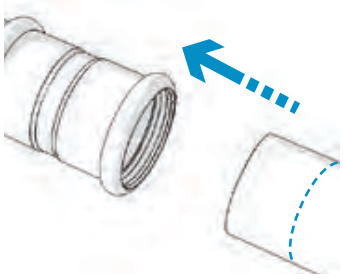
Installation - Press Fitting

Diameters 42 - 54 mm / 1 ½ " - 2"

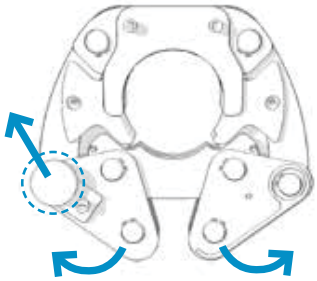
0 Check O-ring for damage



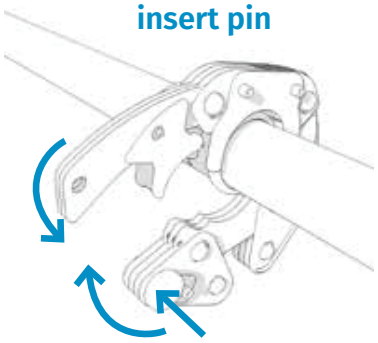
1 Insert



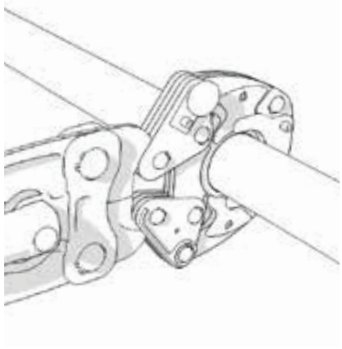
2 Retract pin and open chain



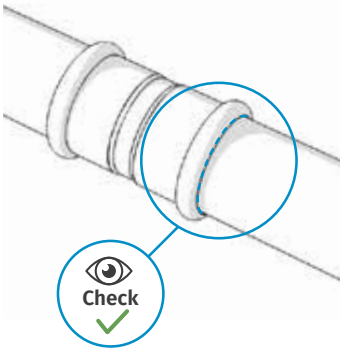
3 Close chain and insert pin



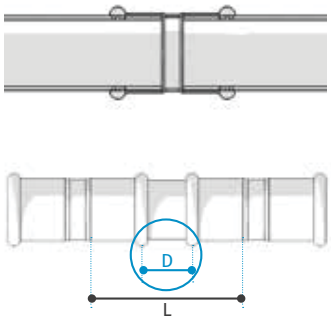
4 Mount adapter



5 Check



6 Check distance



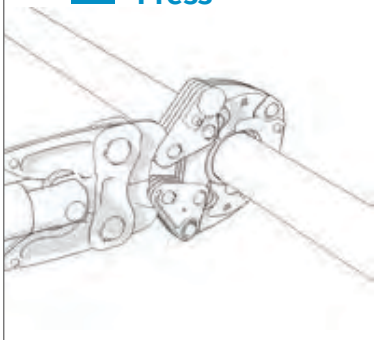
A = Insertion Depth

inimum Distance

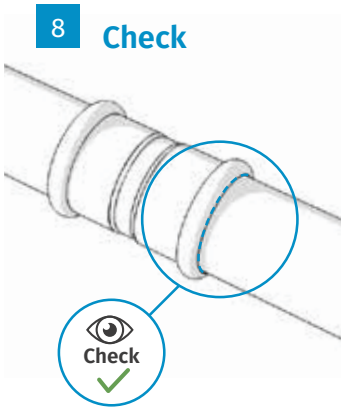
inimum Pipe

Length Tube

7 Press



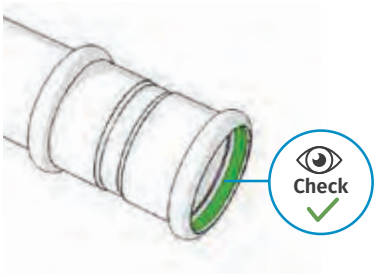
8 Check



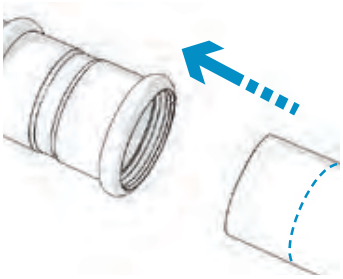
Installation - Press Fitting

Diameters 76 - 108 mm / 2 ¾" - 4"

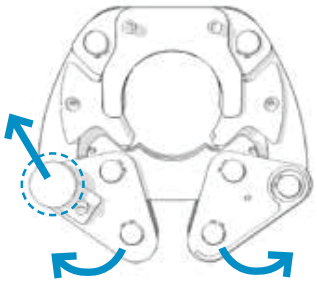
0 Check O-ring for damage



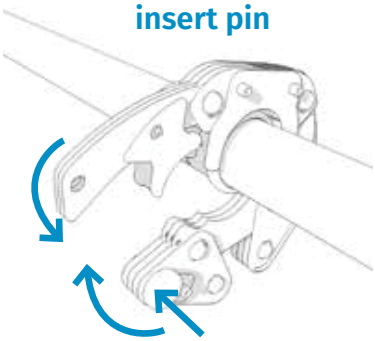
1 Insert



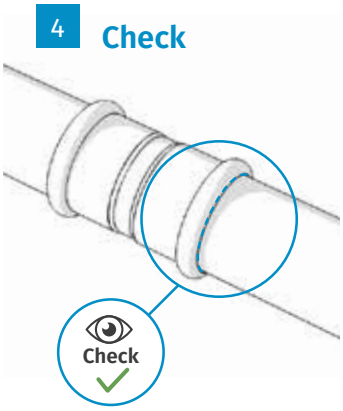
2 Retract pin and open chain



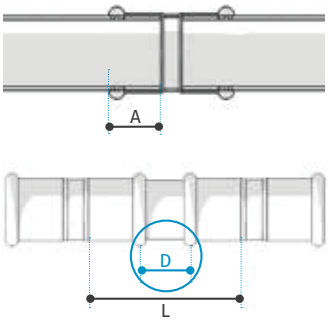
3 Close chain and insert pin



4 Check

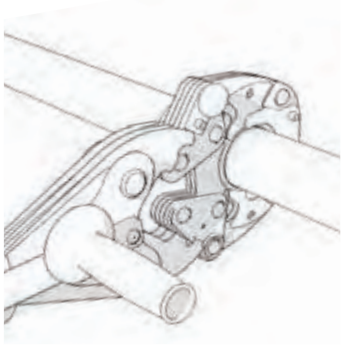


5 Check distance

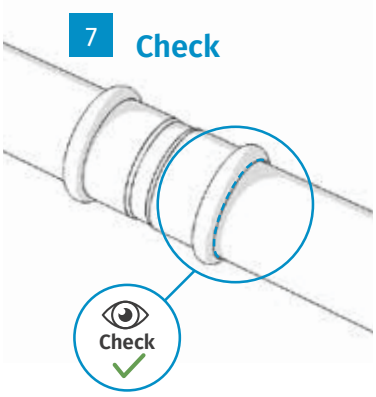


A = Insertion Depth
D = Minimum Distance
L = Minimum Pipe Length Tube

6 Press



7 Check



Installation - Press Fitting

To carry out pressing correctly, there must be a minimum distance between the pipe and the building, and from pipe to pipe as shown in the tables below.

Minimum distances and space requirement 15 - 35 mm

Pipe	Figure 1		Figure 2			Figure 3				Figure 4	
Ø	A	D	A	D	D1	A	C	D	D1	D	E
15	56	30	75	30	35	85	155	30	35	40	60
28	82	40	90	40	45	90	180	40	45	40	63
35	85	40	90	40	45	90	180	40	45	40	66

Minimum distances 42 - 108 mm

Pipe	Figure 4		Figure 5		
Ø	D	E	A	B	C
42	50	80	150	150	110
54	50	85	150	150	110
76	60	115	170	210	170
89	60	120	190	260	190
108	60	135	200	320	280

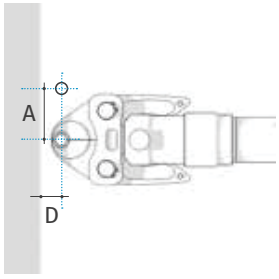


Figure 1 - Minimum distances and space requirements

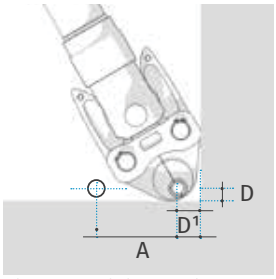


Figure 2 - Minimum distances and space requirements

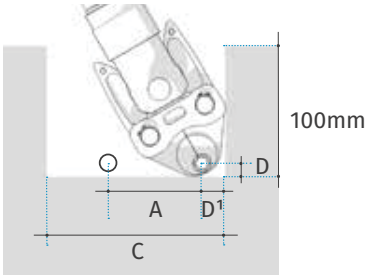


Figure 3 - Minimum distances and space requirements

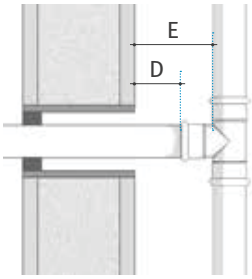


Figure 4 - Minimum distances and space requirements

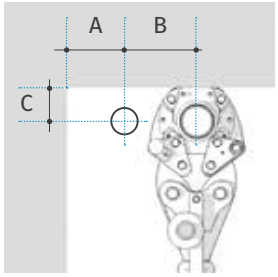


Figure 5 - Minimum distances for chains / collars

Stainless Steel Pre-Quote Checklist

Compressed Air Piping System: Pre-Quote Checklist

Customer Information	Customer / Project Name			Sales Manager		
	Address			Address		
	City / State			Contact		
	Phone			Phone		
Design & Drawing	**Drawings**					
	Piping layout of Compressor Room CAD / PDF file *		☐ Y ☐ N	**Piping layout of Workshop / Production Room CAD / PDF file ***		☐ Y ☐ N
	Flow chart of compressed air system		☐ Y ☐ N	Axonometric map of compressed air system		☐ Y ☐ N
Building / Structure	Ceiling Height					

Compressor Room - Equipment Information / Specs / Flow / Demand data Required

Air Compressor Room	Main piping in the compressor room	Header Outside Diameter (OD)	Height to C-L AFF	**Other special requirements**		
	Compressor type	PSI	Flow		Outlet TYPE	Outlet Size
					☐ NPT Threads ☐ Flange	
					☐ NPT Threads ☐ Flange	
					☐ NPT Threads ☐ Flange	
	Dryer type	PSI	Flow		Outlet TYPE	Outlet Size
					☐ NPT Threads ☐ Flange	
					☐ NPT Threads ☐ Flange	
	Filter type	I-O OD	Volume		Outlet TYPE	Inlet / Outlet Size
					☐ NPT Threads ☐ Flange	
					☐ NPT Threads ☐ Flange	
	Receiver Tank	Pressure rating	Volume		OUTLET / INLET TYPE USED	Inlet / Outlet Size
					☐ NPT Threads ☐ Flange	
					☐ NPT Threads ☐ Flange	
	Other equipment	Specifications / Dimensions	other*		Inlet / Outlet TYPE	Inlet / Outlet Size
					☐ NPT Threads ☐ Flange	
					☐ NPT Threads ☐ Flange	

Details of Compressed Air Main Header Area

Warehouse / Facility / Workshop / Production Room	Main Network piping					
	Header OD Size		Flow		Pressure*	
	Center Line (C-L) of Pipe Elevation Above Finshed Floor (AFF)		layout type*		☐ Closed Loop ☐ Line	
	Branch piping					
	Pipe diameter*		Flow		Pressure*	
	C-L AFF		layout type*		☐ Closed Loop ☐ Line	
	Sub branch piping (If applicable)					
	Pipe diameter*		Flow		Pressure*	
	C-L AFF		layout type*		☐ Closed Loop ☐ Line	
	Point of Use					
	Drop Pipe diameter*		Outlet Size NPT		Single-Port / 3-Port / 6 Multi-Port	
	Height Above Finished Floor (AFF)		Termination Fitting -->		☐ Shut-off valve ☐ Threaded F-NPT Valve, NPT Threaded Adapter, Manifold(s), End Cap, etc.	

Other special requirements

Other	

Commisioning Report

Certified installer: _____ Responsible AIRnet champion: _____

Customer: _____ Commissioning date (dd/mm/yyyy): _____

Customer address: _____

❑ Expansion of existing installation ❑ New installation

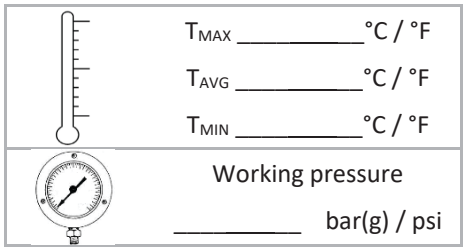
Before installation

Safety

- ❑ All safety instructions at customer site have been acknowledged and applied.
- ❑ The AIRnet installation manual (latest version is available on the website: https://www.airnet-system.com/en) has been read and understood. The installation is carried out in accordance with the instructions in this manual.

Medium

- ❑ Compressed air
- ❑ Vacuum
- ❑ Nitrogen
- ❑ Other: _____



T_{MAX} _____°C / °F

T_{AVG} _____°C / °F

T_{MIN} _____°C / °F

Working pressure

_____ bar(g) / psi

Ambient conditions

The installation is installed:

❑ Indoor ❑ Outdoor

❑ The piping is protected against violent impacts and wind gusts

Network Layout

- ❑ To ensure proper draining of condensate, pipes should be sloped at 1-2% and a drain point should be foreseen at every lowest point of the line.
- ❑ Ensure that pressure vessels are bolted to the floor, and that vibrations may not be transmitted to the AIRnet piping.
- ❑ Expansion loops or compensators

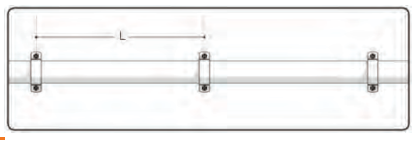
  Number of expansion loops or compensators: _____

  Longest straight line: _____m/ft

Installation

❑ Check if enough supporting is used based on the table on the right. The table shows the maximum allowed distance L between two pipe clips.

External Pipe Diameter (mm / inch)	Maximum distance (m / ft)
15 / ½"	1,5 / 5
28 / 1"	2,5 / 8
35 / 1¼"	2,5 / 9
42 / 1½"	3 / 10
54 / 2"	3,5 / 11,5
76 / 2¾"	4 / 13
89 / 3½"	4,5 / 14,5
108 / 4"	5 / 16



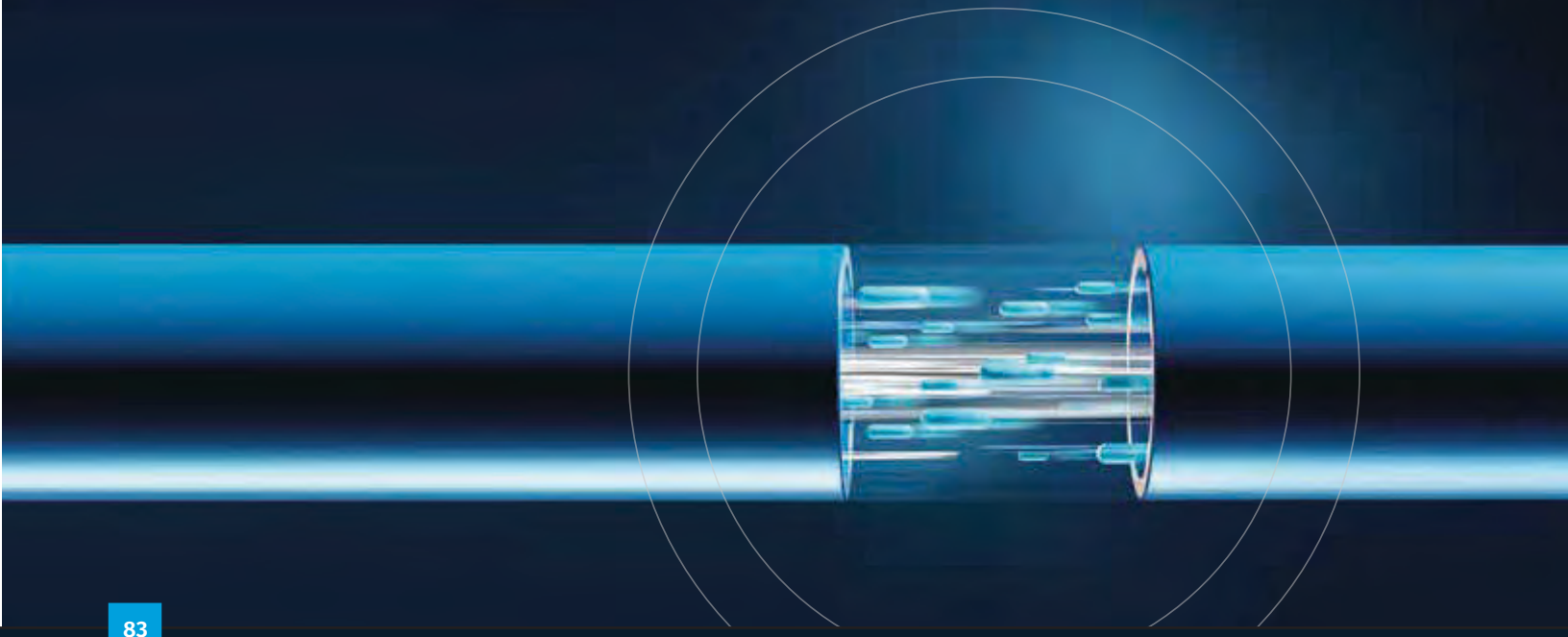
★★★★★

Guarantee
10
years

In line with the high quality performance of the AIRnet product range, we provide our customers with a 10 year guarantee on the AIRnet fittings and aluminium pipes against any damages resulting from material defect.

Warranty Coverage Terms

- ✓ Use only genuine parts.
- ✓ Perform installation according to our instructions and guidelines.
- ✓ Never use the components below or in excess of its limit ratings.
- ✓ Protect your installation against shocks or vibrations, corrosive environments.
- ✓ Damaged parts and/or site conditions must be submitted for inspection, prior to the settlement of any claim.
- ✓ AIRnet warranty is restricted to component replacement only.
- ✓ Claims should be addressed to any Customer Center or Authorized distribution network according to the standard procedure.
- ✓ This 10 year guarantee is limited to providing you with a new AIRnet fitting or pipe and is subject to our determination that the fitting or pipe failed exclusively due to a defect in the material during the production period.



AIRnet 10 year Limited Warranty

Atlas Copco warrants that any and all AirNet Products delivered by Atlas Copco are delivered free of defects in material and workmanship. Unless specified otherwise by Atlas Copco in its written quotation regarding the particular Product, the above-stated limited warranty shall expire ten years from the date of installation by authorized Atlas Copco personnel. Notwithstanding the foregoing, in the event the Product is a part (spare part/ replacement part), the above-stated warranty shall expire on the last day of the original ten year period. The warranty expressly excludes the effects of normal wear and tear.

If Products do not meet the above-stated warranties, Buyer shall promptly notify Atlas Copco in writing. Atlas Copco shall at its option (i) replace the defective Product or (ii) repair the defective Product. Atlas Copco will determine at its sole discretion which option Atlas Copco will take.

Atlas Copco warrants that any service performed by Atlas Copco is performed in a workmanlike manner. If Atlas Copco provides parts in connection with the service, Atlas Copco warrants that the parts are free of defects in material and workmanship. If service (and/or parts provided in connection therewith) does not meet the above-stated warranties, Buyer shall promptly notify Atlas Copco in writing. Atlas Copco shall at its option re-perform the non-conforming portion of the service and (if applicable) repair or (at Atlas Copco's option) replace the nonconforming part. Atlas Copco will determine at its sole discretion which of the above-mentioned options Atlas Copco will take.

Warranty repair or replacement or re-performed service shall not extend or renew the original warranty period; such Products or parts or service shall remain under warranty only for the unexpired portion of the original warranty period. Replaced Products/parts become the property of Atlas Copco.

Atlas Copco warrants that Atlas Copco has good and marketable title to the Products delivered by Atlas Copco. Atlas Copco is excused and not obligated to perform on its limited warranty due to any cause beyond its reasonable control (including but not limited to acts of God, strike or other concerted action of workmen, act or omission of any governmental authority, act of war or terrorism, act of the public enemy, embargo, delays of carriers, and/or delays by its usual suppliers).

Notwithstanding anything else, under no circumstances shall atlas copco be liable for any consequential, indirect, incidental, or special damages (including but not limited to loss of profits or revenue, loss of total or partial use of products or services, downtime costs, and delay costs), even if advised of the possibility of such damages or if such damages are foreseeable (regardless of whether such damages are characterized as arising out of breach of warranty, tort, contract, or otherwise)

The foregoing warranties are exclusive and in lieu of all other warranties (written, oral, implied, or otherwise), and all other warranties, including but not limited to any implied warranties of merchantability or fitness for a particular purpose, are hereby expressly disclaimed. Correction of nonconformities (i.e. warranty repair or replacement or refund or credit, all at Atlas Copco's option, of Products that do not conform to the Product warranty above, and re-performance or refund or credit, all at Atlas Copco's option, of service that does not conform to the service warranty above) **in the manner and within the applicable warranty period set forth above provides the exclusive remedies with respect to the quality of or any defect in products or services delivered or performed hereunder.**

Solutions Portfolio

Air Compressors

Piston/Scroll

Oil Injected
Rotary Screw

Oil Free Rotary
Screw/Tooth

Centrifugal | High-Pressure | CNG

Gas Generation | Air Treatment | Controls

Nitrogen and Oxygen

Filters

Dryers

Control Systems

Industrial & Aeration Blowers

Turbo

Screw

Claw

Lobe

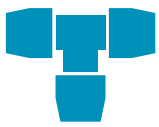
Vacuum and Industrial Cooling

Vacuum Pumps

Industrial Cooling

Service Solutions

Factory Trained
Technicians



Layout, Installation,
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Customized
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