

PARKER TRANSAIR® MODULAR ALUMINUM PIPE SYSTEM SPECIFICATION SUBMITTAL



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SUBMITTAL FOR PARKER TRANSAIR

1. About Parker Hannifin Corporation:

Transair is part of the Parker Hannifin Corporation (NYSE: PH), which was founded in 1918. With annual sales of \$19.9B in 2024, Parker Hannifin is the world's leading diversified manufacturer of motion and control technologies and systems.

1.1 About Transair:

Transair is a pioneer in aluminum compressed air pipe systems designed for conveying compressed air, inert gases, and vacuum in both industrial and commercial applications. With more than 25 years of experience and over 750,000 worldwide installations, we can supply lightweight compressed air piping systems that feature trademark quick-connect interlocking design. Our easy-to-install compressed air pipework consistently delivers clean, quality air through leak-free, corrosion resistant piping that is built to last. With a variety of sizes available, our compressed air piping is assured to increase your plant's efficiency, reduce pressure drops, and eliminate costly leaks.

2. Parker Transair Aluminum System

The Transair modular pipe system is an instant connection type and is manufactured to the quality system of ISO 9001:2015 and TÜV Rheinland certified, in compliance with ASME B31.1 and/or ASME B31.3 engineering standards, ISO 4414:2010 Pneumatic fluid power - General rules and safety requirements for systems and their components and ISO 8573-1:2010 Compressed Air Quality Standard.

2.1 Parker Transair Submittal

Parker Transair products are shown on drawings and product submittals and shall be specifically identified with the name Parker Transair or specific Parker Transair part numbers.

2.2 Rigid Aluminum Pipe

The pipe is rigid and manufactured in aluminum of AW6060 T51 or AW-6063 T5. It is extruded and calibrated with the tolerances for specific diameters of the Parker Transair fittings. The pipe has been qualified as defined by ISO 9001:2015, to warrant gripping and leak-tight performance of the system. The pipe can either be blue powder coated in RAL 5012, grey powder coated in RAL 7001, or green powder coated in RAL 6029, with Qualicoat to warranty mechanical, physical, and chemical properties. Markings on the pipe will indicate the Transair brand, the internal and external dimensions, batch number and country of origin. The pipe has two marker lines 090 degrees from each other to indicate drilling positions for take-off connectors and brackets. The pipe is available in the following diameters and lengths:

OD (mm)	ID (mm)	OD (in)	ID (in)	Wall Thickness	Lengths (ft)
16.5	13	.65"	.51"	.066"	9 or 15'
25	21	1"	.86"	.066"	9 or 20'
40	37	1.57"	1.45"	.059"	9 or 20'
50	46	2"	1.84"	.066"	20'
63	59	2.5"	2.32"	.079"	20'
76	72	3"	2.83"	.079"	20'
101	96	4"	3.78"	.090"	20'
168	161	6.61"	6.34"	.138"	20'
220	212	8.63"	8.33"	.148"	20'

2.3 Pipe to Pipe Connectors & Adaptors

- **16.5 mm (1/2"), 25 mm (1"), & 40 mm (1-1/2")**

All connectors are instant connection by means of a gripping ring technology with a half turn release nut mechanism. They have a visual torque indicator (window) to guarantee the correct installation of the fittings. They incorporate a lateral dismantling feature for the rigid pipe. The connectors are manufactured in engineering grade polyamide (PA 6.6 or PA 12; both with 30% fiberglass reinforcement) with gripping teeth manufactured in stainless steel Z10 CN 17-7E2 (AISI 301) and with NBR70 Nitrile seals.

2.3 Fittings (cont.)

- **50 mm (2") & 63 mm (2-1/2")**
All connectors use a Snap Ring connection technology with a threaded release nut mechanism. They incorporate a lateral dismantling feature for the rigid pipe. The connection is manufactured in black cathodization coated aluminum AISi9Cu3 with a snap ring manufactured in PA6.6 or PA 12, both with 50% fiberglass reinforcement and incorporated with NBR nitrile seals.
- **76 mm (3") & 101 mm (4")**
All connector fittings are formed from 304 stainless steel, except for the 45° elbow, equal cross, equal y, and end cap with plug, which are cast aluminum. Clam shell mechanical connector is made from carbon steel with a rust inhibitor coating. This rust inhibitor coating is offered in zinc or black cathodization and is based on the customer requirements. The clam shell (union fitting) is used to connect pipe and capture the seal; the clam shell engages a lug on the outside of the pipe and does not interact with the media because of the cartridge seal. The sealing cartridge is made from polyamide reinforced with fiberglass and incorporated with NBR nitrile seals.
- **168 mm (6")**
All connectors are formed from cast aluminum. The sealing cartridge is made from polyamide reinforced with fiberglass and incorporated with NBR70 nitrile seals. All fittings are connected using clam shell and cartridge technology with a reusable mechanical connection.
- **220 mm (8")**
All connectors are formed from 356-T6 aluminum with nitrile seals.

2.4 Brackets

- **Drop Brackets**
Have a patented technology and can quickly be installed by drilling one hole on the rigid pipe utilizing the jig block. They are recommended for rigid drops with horizontal take-off or for all types of air supply with rigid pipe or flexible hose. They are manufactured in engineering grade polyamide PA6.6 or PA12; both with 30% fiberglass reinforcement.
- **Quick Assembly Bracket**
Have a patented technology and can be quick to install by drilling one hole on the rigid pipe utilizing the jig block. They are recommended for vertical or horizontal take-offs, using either rigid pipe or flexible hose. Designed on a single body, the brackets incorporate a compact swan neck water retention system, and with an outlet that gives the 46mm center to center required by the pipe. They are manufactured in engineering grade polyamide PA6.6 or PA12; both with 30% fiberglass reinforcement.
- **Wall Brackets**
Used for wall and machine mounting. They are offered with 1,2 or 3 ports with a 1/4" drain outlet on the bottom. The bodies are manufactured in treated brass.

2.5 Valves: Ball & Butterfly

- **Ball Valves**
Transair ball valves use a push-to-connect or snap ring technology with a threaded release nut for a quick connection of the pipe. In addition, we offer threaded ball valves in female/female and female/male threaded connections. All ball valves are safety lockable.
- **Butterfly Valves**
Transair butterfly valves are available with DIN mounting flange (63 mm), ANSI mounting flange (76, 101, 168 mm), or union clamp connection (220 mm). The bodies are made from treated cast iron or steel and have nitrile seals.

2.6 Flanges

- **Flange**
Transair flanges are available in flange adaptor, threaded flange and flange reducer types and are made from cast aluminum.

2.7 Pipe Hangers

- The system is installed using pipe hangers (fixing clips) manufactured in an engineering grade polyamide (PA6.6 or PA12; both with 30% fiberglass reinforcement) in sizes suitable for pipe diameters OD 16.5mm, 25mm, 40mm, 50mm, 63mm. Center to center dimension to the wall is 46mm for (OD16.5, OD 25mm & OD 40mm), and 90mm for (OD 50mm and OD 63mm).
- The pipe hangers (fixing clips) allow an axial movement of the pipe to consider expansion and contraction.
- The clips have a quick close system without the use of a screw. They are equipped with a 1/4" easy-to-release nut (for OD 16.5 mm, OD 25 mm, and OD 40 mm pipe) and a 3/8" easy-to-release nut (for OD 50 mm and OD 63 mm pipe) for mounting under threaded rods or screws.

2.8 Flexible Hoses

Flexible hose shall consist of a nitrile inner tube and textile exterior. Hoses are compatible with compressor oils. Hoses are available in the following diameters:

For Pipe Diameter	Outside Diameter	Inside Diameter	Bend Radius	Length
25 mm (1")	1-1/2"	7/8"	4"	1' 10"
25 mm (1")	1-1/2"	7/8"	4"	4' 11"
25 mm (1")	1-1/2"	7/8"	4"	6' 6"
40 mm (1-1/2")	2-1/8"	1-1/2"	16"	3' 9"
40 mm (1-1/2")	2-1/8"	1-1/2"	16"	6' 6"
40 mm (1-1/2")	2-1/8"	1-1/2"	16"	9' 10"
50 mm (2")	2-1/2"	2"	11"	4' 3"
50 mm (2")	2-1/2"	2"	11"	6' 6"
63 mm (2-1/2")	3-1/8"	2-1/2"	12"	4' 7"
63 mm (2-1/2")	3-1/8"	2-1/2"	25"	9' 10"
63 mm (2-1/2")	3-1/8"	2-1/2"	25"	13' 1"
76 mm (3")	3-9/16"	3"	14"	4' 11"
76 mm (3")	3-9/16"	3"	14"	6' 6"
101 mm (4")	4-1/2"	4"	20"	6' 6"
101 mm (4")	4-1/2"	4"	20"	9' 10"

3. Performance Criteria

Media:

Approved for compressed air (dry, wet, lubricated), vacuum, and inert gases (argon, helium, nitrogen, CO2 mixes).

Working Pressure/Temperature:

- 101 mm (4") and below: 232 PSI max from -4° F (-20°C) to 113°F (45°C)
- 168 mm (6") & 220mm (8"): 188 PSI from -4° F (-20°C) to 140°F (60°C)
- Vacuum: 29.6 Hg (98.7%)

Storage Temperature:

- -40° F (-40°C) to 176°F (80°C)

Resistant to:

- Aggressive environment
- Corrosion
- Thermal variations
- Mechanical shock
- Ultraviolet (UV)
- Compressor oil carry over (mineral, synthetic)

4. Certifications & Compliance

Product Quality

- **ISO 9001-2015 Certified:** Parker Hannifin is certified ISO 9001:2015 and operates a quality management system that provides a framework for our organization to establish, implement, maintain, and continually improve processes to ensure consistent quality in our products and services, ultimately aiming to meet customer expectations and enhance satisfaction.
- **IATF 16949:2016 Certified:** Parker Hannifin Transair is IATF 16949:2016 certified which operates the quality management system required for the automotive industry. It sets the requirements for a quality management system (QMS) to be implemented by organizations involved in the design, development, product, and service of automotive products. The focus of this certification is to ensure the continuous improvement of processes, ensure the prevention of defects, and reduce variation and waste in the supply chain.
- **Qualicoat Certification:** Parker Transair complies with the Qualicoat quality label (product certification scheme), which guarantees the quality of the painting process, the chemical used, the finish quality, and the coating resistance on our aluminum pipe.

Media Quality

- **ISO 8573-1 Standard:** ISO 8573-1 is an international standard for compressed air quality. Parker Transair products have been tested and conform to ISO 8573-1:2010 Class 1.1.1. This is only achievable with proper air generation and filtration in the compressor room. Transair will not introduce additional particulate contamination, water, or oil into the media being conveyed.
- **Oil Free Certificate:** Parker Transair products will not contaminate the conveyed media with grease or oil particles.
- **Silicone Free Certificate:** Parker Transair products are guaranteed to be silicone-free, a mandatory factor for premium air quality.

Certifications, Standards & Directives

- **ASME B31.1 Standard:** Parker Transair meets the requirements of ASME B31.1 engineering standard, which applies to power piping systems that are used in power plants and other facilities that generate or distribute steam, hot water and other energy forms. Specifically, it governs the design, construction, installation, and maintenance of piping systems in these environments.
- **ASME B31.3 Standard:** Parker Transair meets the requirements of ASME B31.3 engineering standard, which applies to process piping systems. These systems are typically found in industries such as petroleum refineries, chemical, pharmaceutical, textile, paper, semiconductor, and cryogenic plants. Specifically, it governs the design, construction, installation, and maintenance of piping systems in these facilities.
- **TSSA - CRN Certification:** Parker Transair products are approved by the Technical Standards and Safety Authority (TSSA) and registered under the Canadian Registration Number (CRN).
- **TÜV Rheinland Certification:** TÜV Rheinland certifies that Transair products meet the German AD-2000 Merkblatt rules and European Pressure Equipment Directive 2014/68/EU (EPED) requirements for piping.
- **UL94HB Rating:** Parker Transair products are non-flammable, with no propagation of flame. UL94HB applies to pipe-to-pipe connectors, adaptors, wall brackets, ball valves, and butterfly valves.
- **Euroclass EN 13501-1 Standard:** Parker Transair meets the requirements of Euroclass EN 13501-1 standard as Bs2d0. It is not combustible and does not generate burning droplets or particles.
- **Euroclass EN 13501-2 Standard:** In accordance with Euroclass EN 13501-2 Parker Transair aluminum range, equipped with a specific solution, is a fireproof conduit passage that prevents the propagation of flame and resists for 120 minutes (E120).
- **ATEX Directive 2014/34/EU:** The ATEX European Union directive is mandatory for electrical and non-electrical components used in explosive, gaseous, or dusty environments. Parker Transair products can be used in these environments, according to the ATEX zoning defined by the user.

- **CE Directive 2014/68/EU:** Parker Transair products conform to the European Pressure Equipment Directive 2014/68/EU. This directive outlines the safety requirements for storage tanks, compressors and piping.

Environmental Protection

- **ISO 14001 Standard:** Parker Transair is ISO 14001 certified for our Environmental Management Systems, which requires a plan to reduce the environmental impact on manufacturing and selling products.
- **REACH & RoHS:** Parker Transair products comply with REACH European Union regulation and RoHS directive, which controls or restricts the use of hazardous chemicals and substances.
- **Eco Design:** Parker Transair follows Eco-design best practices and conducts a life-cycle analysis when developing new products. These steps help to reduce the long-term impact on the environment.
- **100% Recyclable:** All Parker Transair products are 100% recyclable.