

# DURATEC AIRLINE SYSTEMS

1/2" - 1"

## Duratec®

Duratec is an innovative compressed air and inert gas distribution system designed to be absolutely leak-proof, installed quickly and easily, and maintained cost-effectively. As a result, Duratec saves you time and money.

Traditional metallic compressed air systems are a main cause of unnecessary energy use, excessive wear and tear on compressors and high consumption of compressor oils and filters. The culprits? Corrosion and leakage at pipe joints and fitting connections which often go undetected until they're discovered during a detailed compressed air system audit.

Duratec pipe comes in long 100 foot or 300 foot coils, which significantly reduces the number of joints in your system. Duratec fittings feature unique double o-ring seals to ensure long-term joint integrity. And the entire Duratec system can be easily and quickly installed, modified or expanded without the need for specialized equipment.

### APPLICATIONS

- Plant air
- Inert gas distribution
- Manufacturing hand tool operation
- Manual and automated welding operations
- Semi-conductor tool hook up
- Valve actuation - control systems
- Microbulk inert gas delivery systems
- Robotic installations

### STANDARDS



CSA B51, B137.9

ASTM F1974

ASME B31.3, B31.9

FDA Compliant

NSI / ASTM F1282

National CRN OA02020.2C

(Some fittings do not have CRN registration. Contact IPEX Inc. for details.)

Certified to OSHA Safety Regulations

### DID YOU KNOW?

To make designing, sizing and installing a Duratec compressed air system easy, IPEX offers comprehensive reference tools, such as our Duratec Technical Manual. To download this manual visit our website at [www.ipexinc.com](http://www.ipexinc.com).



### QUICK INSTALLATION

**Cutting and joining Duratec is fast and simple.**

1. Cut pipe square using plastic pipe cutter.
2. Slide nut and split ring over pipe and bevel the inside of the pipe by inserting then rotating the beveling tool.
3. Push the fitting into the pipe.
4. Turn the nut finger tight plus one full turn with a wrench.



PE-RT  
Aluminum  
PE-RT



## ADVANTAGES

- 1 Low Installation Costs**

Duratec reduces costs on a typical installation not only for materials but also for labour and transportation costs when compared to traditional materials. How? Duratec's lightweight construction and simple assembly procedures.
- 2 Ease of Handling**

Duratec is 75% lighter than the equivalent diameter of copper and SCH 40 carbon steel.
- 3 Quick Removable Connections**

Threading is not required. All joints have double o-ring seals and can be quickly assembled or disassembled. Easy on-site modifications and repairs can be made.
- 4 Quick Installation**

No special training or equipment is required to complete a Duratec system.
- 5 Clean**

All Duratec pipe is packaged in cardboard boxes preventing contamination before use. The smooth PE-RT inner layer cannot rust, corrode or form loose scale. Clean air remains clean throughout the life of the system.
- 6 Flexible Yet Rigid**

Due to its composite structure, Duratec pipe can be easily bent by hand and will maintain its desired shape. This unique feature allows for straight, professional looking installation and eliminates sagging.
- 7 Lower Operating Costs**

Due to Duratec's advantages over metal systems, it costs you less time, labour and money to keep a Duratec system in optimal condition.
- 8 Pressure loss means money loss**

Metal systems can lose pressure due to pin-hole leaks and leakage at connections, all of which result in increased energy costs. Duratec's high-quality construction, on the other hand, guarantees consistent pressure for years to come.
- 9 Smooth Interior**

Less friction means lower pressure drops and higher flow rates. This may allow for smaller pipe sizes to be used.
- 10 Extended Life**

Duratec is designed not to rust, scale or pit. Once properly selected for the application and correctly installed, Duratec Airline Systems will provide years of maintenance-free service.
- 11 Corrosion Resistant**

Duratec's tough outer PE-RT (Polyethylene of Raised Temperature) layer protects it against corrosion and deterioration and ensures long service life even in the most aggressive manufacturing environments. Its inner PE-RT layer is unaffected by inert gases and commonly-used compressor oils. Combined with its industrial nickel-plated Duratec fittings, the system provides long-term performance superior to metal piping systems.
- 12 Fewer Fittings**

Duratec pipe comes in convenient 100 ft. and 300 ft. coils eliminating several joints and the need for threading, or soldering.
- 13 Safe**

Duratec's unique composite construction means that accidental impact or puncture of the pipe results in a safe, ductile mode of failure. Duratec pipe has been third-party tested and certified to stringent OSHA safety requirements for compressed air systems, standards that guarantee safety comes first.
- 14 Performance**

IPEX engineered Duratec pipe and fittings to provide top-notch performance. Rated for long term continuous operating pressures of 200psi at 73°F and 160psi at 140°F, Duratec pipe and fitting assemblies are also capable of sustaining quick burst pressures in excess of 800psi. This built-in safety factor ensures system performance and provides peace of mind for designers and facility managers.

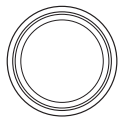
## SHORT FORM SPECIFICATIONS

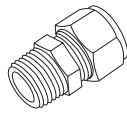
All compressed air and inert gas pipe in sizes 1" and smaller shall be PE-AL-PE composite pipe made with Raised Temperature Polyethylene and aluminum conforming to ASTM F1282 and CSA B137.9. PE-AL-PE pipe shall meet the health and safety requirements of OSHA.

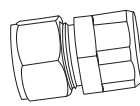
All compressed air and inert gas fittings in sizes 1" and smaller shall be nickel plated brass or 316 stainless steel and shall conform to the dimensional and physical requirements of ASTM F1974 and CSA B137.9.

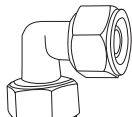
All pipe, fittings and accessories shall be Duratec Air-Line as manufactured by IPEX.


# PRODUCT SELECTION CHART

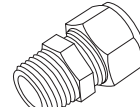
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	3/8	446024	100
	3/8	446025	300
	1/2	446026	100
	1/2	446027	300
	3/4	446030	100
	3/4	446031	300
	1	446032	100
	1	446033	300

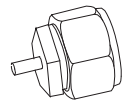
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	3/8 D1 x 1/4 MPT	438081
	3/8 D1 x 3/8 MPT	438000
	3/8 D1 x 1/2 MPT	438001
	1/2 D1 x 1/2 MPT	438002
	3/4 D1 x 3/4 MPT	438003
	1 D1 x 1 MPT	438004

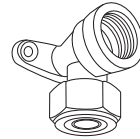
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	3/8 D1 x 1/2 FPT	438005
	1/2 D1 x 1/2 FPT	438006
	3/4 D1 x 3/4 FPT	438007
	1 D1 x 1 FPT	438008

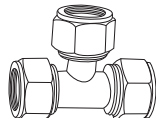
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	1/2 D1 x 1/2 D1	438080
	3/4 D1 x 3/4 D1	438067
	1 D1 x 1 D1	438068

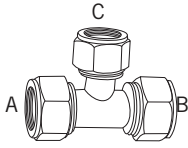
	Dimension inches	Product Code
	3/4 x 1/2	437338
	Inlet - 3/4 MPT	
	Outlet - 1/2 FPT	

	Dimension inches	Product Code
	3/8 D1 x 3/8 MPT SS	438029
	1/2 D1 x 1/2 MPT SS	438030
	3/4 D1 x 3/4 MPT SS	438031
	1 D1 x 1 MPT SS	438032

	Dimension inches	Product Code
	3/8 D1 x 1/4 MPT	438041
	3/8 D1 x 3/8 MPT	438042
	1/2 D1 x 1/2 MPT	438043
	3/4 D1 x 3/4 MPT	438044
	1 D1 x 1 MPT	438045

	Dimension inches	Product Code
	1/2 D1 x 1/2 FPT	438009

	Dimension inches	Product Code
	3/8	438033
	1/2	438010
	3/4	438011
	1	438012

	Dimension inches	Product Code
	1/2 x 1/2 x 3/8	438034
	3/4 x 1/2 x 1/2	438013
	3/4 x 3/4 x 1/2	438014
	3/4 x 1/2 x 3/4	438015
	1 x 1 x 1/2	438016
	1 x 3/4 x 3/4	438017
	1 x 1 x 3/4	438018
	A x B x C	