



RAYPEX



800-628-5044

Edition 1

RELATIVE ORDER OF RESISTANCE TO GAS PENETRATION

Impurity levels after six hours of flushing with helium 4.5 (100 l/h)

Moisture (H2O)		Oxygen (O2)	
1. Stainless Steel	1-2 ppm	1. Stainless Steel	1 ppm
2. Copper	1-2 ppm	2. Copper	1 ppm
3. Teflon (PTFE)	1-2 ppm	3. Polyurethane (PU)	1 ppm
4. Raypex (HDPE)	1-2 ppm	4. Raypex (HDPE)	1 ppm
5. PVC	6 ppm	5. PVC	2 ppm
6. Welding Hose (Rubber)	15 ppm	6. Welding Hose (Rubber)	4 ppm
7. Polyurethane (PU)	18 ppm	7. Teflon (PTFE)	16 ppm

THE BEST OVERALL MATERIAL IS RAYPEX!

INTRODUCTION TO RAYPEX PIPING

DESIGNED FOR COMPRESSED GASES UP TO 250 PSI @ 70°F

Raypex composite pipe is manufactured specially for the delivery of compressed air and gases. The pipe consists of inside and outside layers of high-density polyethylene (HDPE), bonded to an aluminum core and extruded in one step.

This composite pipe is approved for above ground installation of:

- Nitrogen
- Argon
- CO₂
- Argon / CO₂
- Helium and other inert gases
- Compressed air

Raypex pipe and fittings have all the advantages of copper and stainless steel but saves considerably on cost and labor.

Product Standards

Raypex pipe is manufactured to meet the following standards:

- United States: ASTM F1281 F1282
- Germany: DVGW W542 W534
- Australia: AS 4176
- Canada: CSA-B137.9 CSA-B137.10
- UK: BS 7291 BS 6920

Main Characteristics

Corrosion Resistance

The polyethylene pipe is a symmetrical and non-polarized material with very stable qualities.

At normal temperatures, it will not dissolve in any known solutions and is resistant to acids, alkalis and salts of various kinds.

Safety Factors

the polyethylene pipe is hygienic, toxin free, rust free and ensures against the growth of microorganisms, thus avoiding contamination. The inside wall is very smooth and scale free. The inside layer of aluminum guarantees static resistance and is impermeable to oxygen and other gases. Below 150°, the pipe will not react to most acid or alkali solutions, enabling the pipe to be used in the chemical industry.

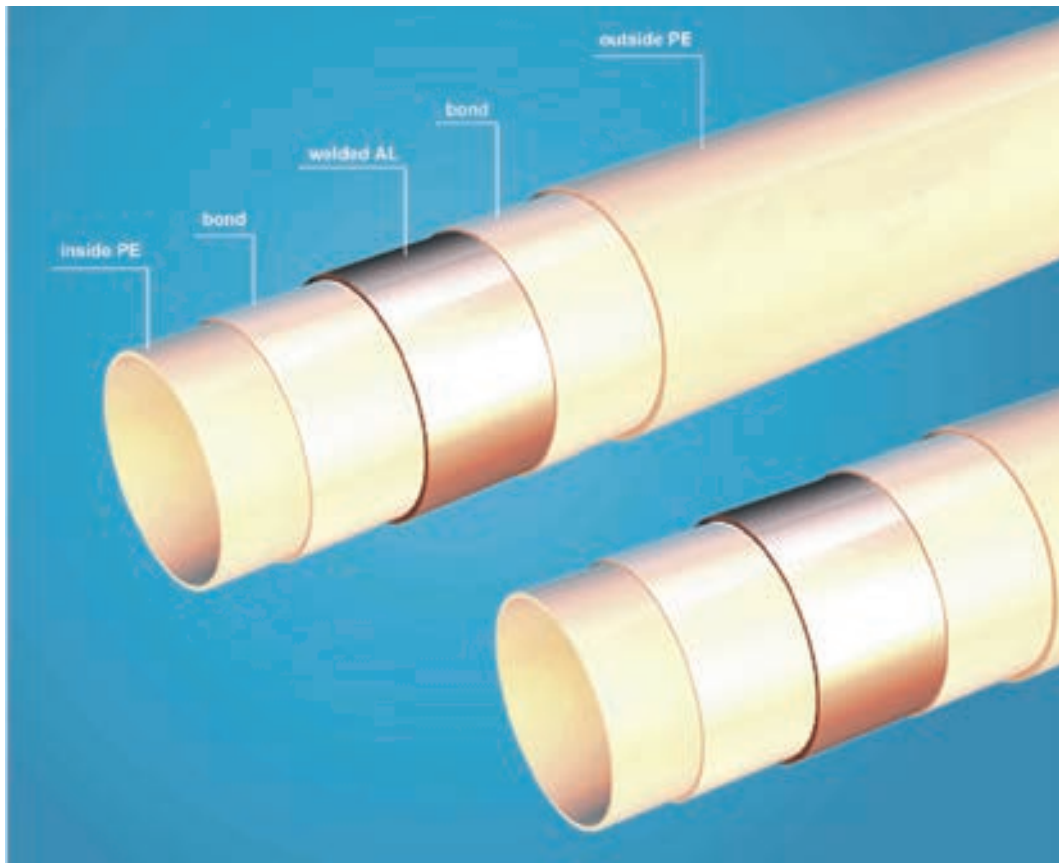
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COMPOSITE PRESSURE PIPE

Raypex pipe is a five layer composite pipe. The inside and outside layers are made of high density polyethylene (HDPE) tightly bonded with heating adhesive to the mid-layer of longitudinally welded aluminum core. All layers are extruded in one step.

Size	Part Number	Length
1/2"	RW451-50M	50 Meters
	RW451-100M	100 Meters
3/4"	RW551-50M	50 Meters
	RW551-100M	100 Meters
1"	RW601-50M	50 Meters
	RW601-100M	100 Meters

Standard Boxes 1/2" 164 feet (50 meters) and 328 feet (100 meters)
(1 continuous roll) 3/4" 164 feet (50 meters) and 328 feet (100 meters)
 1" 164 feet (50 meters) and 328 feet (100 meters)



Raypex Connector Installation

Tools Required

To install Raypex pipe and connector fittings, you will need the following:

Raypex plastic pipe cutter
Raypex beveling or reaming tool
Adjustable end- wrenches
Suitable bending spring (optional)

Cutting and Joining Raypex

1. Cut the pipe squarely using the Raypex plastic pipe cutter p/n 55190. Ensure that the stainless steel cutting blade being used is in good condition and sharp.
2. Remove the nut and split ring from the fitting.
3. Push the nut and split ring into the pipe. Bevel the inside of the pipe by inserting the Raypex reaming tool p/n RW888 and rotating it 360°. The fitting will then slip easily in the pipe without damaging the O-ring.
4. Push the fitting into the pipe 1/16" (1 to 2 mm) from the shoulder of the fitting. If necessary, at this point the fitting can be rotated on the pipe to facilitate threading into a valve, tee, etc. Turn the nut finger tight, plus one full turn with a wrench. ***Note* Over tightening the nut may cause damage to the pipe.**
5. If it is necessary to remove the fitting, release the nut, remove the split ring and pull the fitting off the pipe. Before reassembling the joint, replace the split ring and the O-ring.
6. The minimum bend radius of Raypex pipe can be no less than 5 times the outside diameter. The tensile and compressive stresses developed on the outermost and innermost layer of the pipe cross section are well within the allowable limits when the bending radius is more than or equal to 5 times of OD of the pipe.



holds a bend - won't spring back



easy cutting



rounding




no need of threading




tightening

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COMPRESSION FITTINGS

Raypex x Male Thread Adapter	Size	Part Number	Description
 Male Union	1/2" x 1/2" MPT	RW808	One end connector to composite pipe, the other to female threads.
	3/4" x 1/2" MPT	RW727	
	3/4" x 3/4" MPT	RW228	
	1" x 1/2" MPT	RW229	
	1" x 1" MPT	RW208	


Raypex x Raypex x 90 Degree Elbow

	1/2"	RW958	Both ends connected to composite pipe of same size.
	3/4"	RW978	
	1"	RW988	


Raypex x Raypex x 90 Degree Reducing Elbow

 Reducing Elbow	3/4" x 1/2"	RW946	
	1" x 3/4"	RW956	


Raypex x Raypex x Raypex Tee

 Equal Tee	1/2"	RW068	Three ends connected to composite pipe of same size.
	3/4"	RW088	
	1"	RW148	


Raypex x Raypex x Raypex Reducing Tee

 Reducing Tee	A	B	C	Three ends connected to composite pipe, with one or two ends different in size from the other end(s).	
	3/4" x 3/4" x 1/2"				RW098
	1" x 1" x 1/2"				RW908
	1" x 1" x 3/4"				RW158


Raypex x Raypex Coupling

 Equal Straight Union	1/2"	RW008	Both ends connected to composite pipe of same size.
	3/4"	RW928	
	1"	RW288	

Raypex x Reducing Coupling

 Unequal Straight Coupler	3/4" x 1/2"	RW198	Both ends connected to composite pipe of different sizes.
	1" x 3/4"	RW558	

Raypex x Cap

	1/2"	RW168	The end connected to composite pipe to seal the composite pipe.
	3/4"	RW188	
	1"	RW190	

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REPLACEMENT PARTS & ACCESSORIES

		Size	Part Number	Description
Clic Hanger		1/2"	RW308	
		3/4"	RW328	
		1"	RW338	
Pipe Labels		Specify Gas	RWLAB-ARG	Argon Pipe Label
			RWLAB-CO2	CO ² Pipe Label
			RWLAB-NITRO	Nitrogen Pipe Label
Pipe Cutter			55190	Raypex pipe cutter.
Pipe Reamer			RW888	Raypex pipe reamer.
O-Ring Lubricant			RW005	O-Ring Lubricant
Station Drop		Inert Gas	RW004	1/2" FNPT Inlet 1/4" FNPT Outlet
Thread Sealant			OC-3	O2 compatible thread sealant for NPT threads.
Replacement O-Rings		1"	RW009	1" O-Ring
		3/4"	RW010	3/4" O-Ring
		1/2"	RW011	1/2" O-Ring

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Sherwood Valve LLC

