Red Thread™ IIA (RTIIA) Riser Pipe Assembly

The industry-first corrosion-resistant UL-971 fiberglass riser pipe which is purpose-built for durability and long performance-life.

A standard assembly Includes:

1 qty 5' stick of 4" RTIIA Riser Pipe

2 qty 4" RTIIA Riser Pipe Adapter

1 qty PSX or 8000 Series adhesive kit

Recommended Tools:

- 2102/2102-I box tool
- Strap wrench or chain wrench

Typical Applications:

- Tank Fill
- Tank Vent
- Spill Containers
- Submersible Pumps
- Sensors/Gauges

Features

- More than twice the thickness of standard Red Thread IIA 4" pipe.
- ID of 4.026", identical to 4" Schedule 40 steel pipe.
- Total assembled length of approximately 68" when using standard 5' length of RTIIA Riser Pipe.
- RP100 allows for the use of non-metallic Riser Pipe.

Benefits

- RTIIA Riser Pipe/Adapters are made from materials that will ensure that tools never get stuck inside the riser due to corrosion inside the pipe.
- Both the RTIIA Riser Pipe and Adapters are chemically identical to our standard Red Thread IIA pipe which has been UL-971 listed for over 50 years.
- Compatible with ULSD and all current fuels.
- Assembled length designed to be ideal for a maximum tank burial of 7' below grade.
- Durable RTIIA Riser Pipe utilizes significantly greater wall thickness to better withstand surface loading.
- RTIIA Riser Pipe Adapters have thicker walls and are lengthened to accommodate the thicker-walled Red Thread IIA Riser Pipe.
- Ideal for use on both steel and fiberglass tanks.
- Designed for both direct-bury and use inside a sump.
- RTIIA Riser Pipe sized for application, making shipping easier and more cost effective.
- RTIIA Riser Pipe can be cut and tapered in the field using existing tools.
- Uses either PSX or 8000 Series adhesive, the same adhesive currently used for bonding Dualoy™ or Red Thread IIA fiberglass pipe.
- No on-site pipe threading required like with metallic risers.
- Requires less force to deflect laterally to align spill buckets, thereby reducing bending moment applied to tank fittings.

Part Number	Description	Box Minimum
012040-060-0	RTIIA RISER PIPE 4" PXP - 5'	4 lengths/bundle
012040-240-0	RTIIA RISER PIPE 4" PXP – 20'	4 lengths/bundle
011040-145-5	RTIIA RISER PIPE 4" PXP – 30'	4 lengths/bundle
012040-191-9	RTIIA RISER PIPE ADAPTER 4" BXMN	8 adapters

UL LISTED

Technical Guidance:

UL Listing

Red Thread IIA Riser Pipe is now UL-971 Listed.

On April 11, 2019 the Red Thread IIA Riser Pipe assembly became the first and only UL Listed riser pipe on the market. Underwriters Laboratories issued a written statement confirming that Red Thread IIA Riser Pipe and adapters are encompassed by the File MH9162 listing awarded to Fiber Glass Systems.

Torque

Recommended maximum of 500 ft-lbs. of torque when installing our Red Thread IIA Riser Pipe.

Testing has proven the ability of the Red Thread IIA Riser Pipe to perform well in excess of the 500 ft.-lbs. torque recommendation, without experiencing any damage to the pipe or threads. It's recommended to use a strap wrench for installation. However, it is acceptable to use a chain wrench so long as a protective rubber sleeve is used to protect the adapter surface. Never use a wrench on the pipe wall. The Adapters may be bonded to the riser pipe either before or after threading them into the mating connection.

The maximum torque recommendation for the Red Thread IIA Riser Pipe assembly is well in excess of the highest required torque of any spill containers on the market as of March 2019. See table below.

Spill Container Manufacturer	Manufacturer's Max Torque Requirement for Installation
CNI Manufacturing	350 ft.-lbs.
OPW	250 ft.-lbs.
Franklin Fueling	200 ft.-lbs.
EMCO Wheaton	150 ft.-lbs

Compressive Strength

Red Thread IIA Riser Pipe can withstand an axial compressive load of over 25,000 pounds.

The ultimate axial compressive strength of Red Thread IIA is 12,510 psi. The cross sectional area of the pipe is over 2 square inches and therefore the Riser Pipe is capable of withstanding an axial load of over 25,000 pounds before crushing. Since Riser Pipes are relatively short and are fixed at one end, they do not act like slender columns. Therefore the Riser Pipe would tend to crush before buckling when subjected to an axial load so the ultimate axial load is still over 25,000 pounds.

Grounding

Red Thread IIA Riser Pipe is constructed of fiberglass materials, making it non-conductive.

When grounding underground equipment, such as spill containers, the Red Thread IIA Riser Pipe cannot be grounded or used as a ground. When installing third-party riser-top equipment such as spill-containers, consult with the manufacturer for proper grounding practices.

Bending Tolerance

Red Thread IIA Riser Pipe will withstand a bending moment of 1,990 ft.-lbs.

In order to establish how the Red Thread IIA Riser Pipe will perform when a lateral force is applied, UL-1316 was taken into consideration. UL-1316, "Standard for Fibre Reinforced Underground Tanks for Flammable and Combustible Liquids" dictates that a tank connection must be able to tolerate 1,990 ft.-lbs. of bending moment, as applied by an installed pipe. The Red Thread IIA Riser Pipe has been tested to meet and even exceed this requirement.

Additionally, due to its fiberglass construction, the Red Thread IIA Riser Pipe transmits significantly less bending moment into the tank-top than a comparable steel riser pipe for a given deflection.
ie. It takes less force to laterally deflect the top of a Red Thread IIA Riser Pipe than it does a steel riser pipe.

Recommended Practices (RP)

RP100 allows for the use of non-metallic Riser Pipe.

See section 10.13 of the latest RP100 document from PEI for more information.