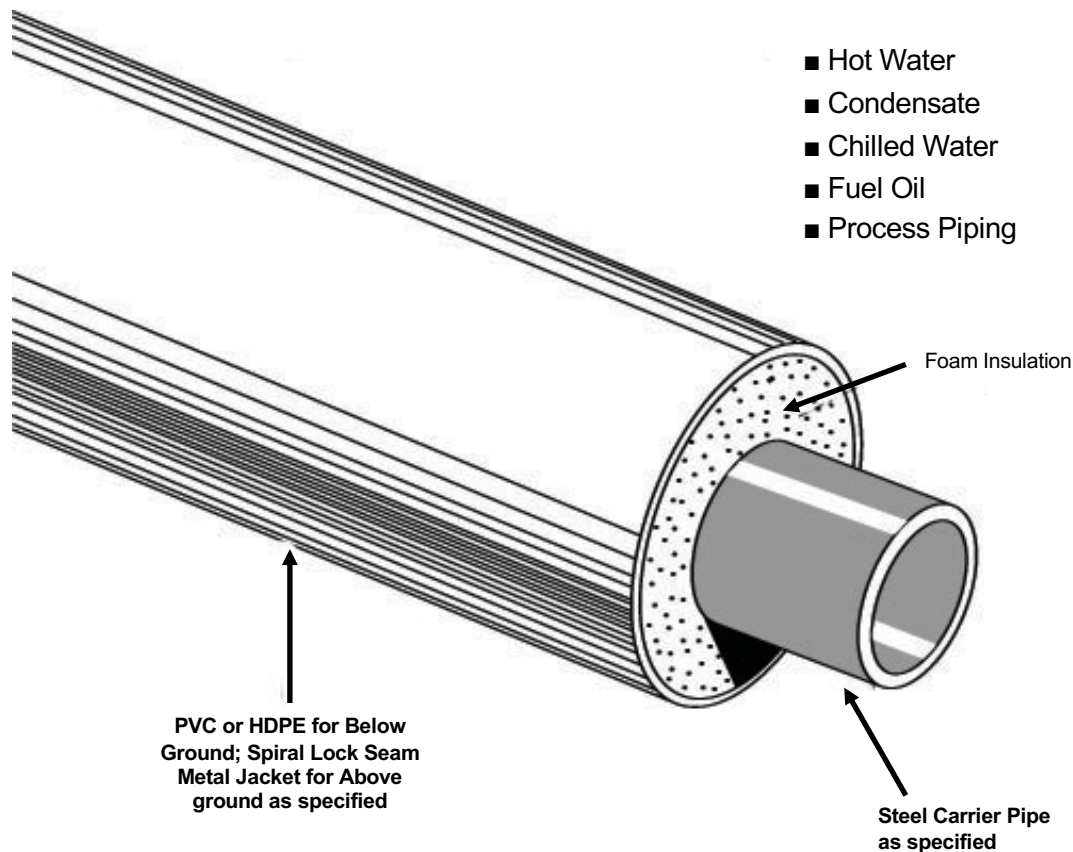


# Rovanco Steel System

For Temperatures to 210°F\* Above and Below Ground



Rovanco's Steel System is designed for piping systems above or below ground suitable for inside or outside applications. High quality polyurethane foam insulation combined with a durable watertight jacket supplied in 20' or 40' random lengths, means an economical, high-quality system.

Rovanco's Steel System is provided with jacketing of either PVC, HDPE, spiral lock-seam aluminum, galvanized or stainless steel which can be supported from the outside with maximum supports spans. Fittings can be either field insulated or factory fabricated as specified.

The Steel System comes complete with joint insulation materials and jacketing to make the installation completely watertight for applications of process fluids, hot water, low pressure steam, pumped condensate, chilled water, etc.

To find out more about Rovanco's Steel System, you can visit our factory, phone us (815) 741-6700, fax us (815) 741-4229, visit our website at [www.rovanco.com](http://www.rovanco.com) or e-mail us at [marketing@rovanco.com](mailto:marketing@rovanco.com).

\*For higher temperatures, consult factory.

*This is a generic product datasheet and is not intended for submittal use.*

# SPECIFICATION DATA SHEET

## Steel Piping System for Low Pressure Steam, Condensate, Chilled or Hot Water, Fuel Oil, and Process Piping Applications

### Carrier Pipe:

A53 Grade B ERW in Schedule (40) or (80). Pipe 10" and above will be standard weight .375 wall or extra heavy .500 wall.

### Polyurethane Insulation:

Insulation shall be a polyurethane foam injected with one shot into the annular space between carrier pipe and jacket. Insulation shall be rigid, minimum 90% closed cell polyurethane with a minimum 2.0 lbs per foot<sup>3</sup> density, compressive strength of 30 psi @ 75° F and a thermal conductivity K factor no higher than 0.180 @ 75° F per ASTM C-518. Maximum operating temperature of urethane foam shall not exceed 250° F.

### Polyisocyanurate Insulation:

Insulation shall be a polyisocyanurate foam injected with one shot into the annular space between carrier pipe and jacket. Insulation shall be rigid, >90% closed cell polyisocyanurate with a minimum 2.0 lbs per foot<sup>3</sup> density, compressive strength of 30 psi @ 75° F, an initial thermal conductivity K factor no higher than 0.14 @ 75° F per ASTM C-518 and an E84 25/50 passive fire resistance rating. Maximum continuous operating temperature of polyisocyanurate foam shall not exceed 300° F. Also available in a 400° F polyisocyanurate foam.

### Jacketing Material:

For below ground; jacket shall be high impact, seamless Polyvinylchloride (PVC) Class 12454-B compound to ASTM 1784, Type 1, Grade 1, through 14" diameter. Above 16", use high density, polyethylene (HDPE) minimum thickness 175 mils per ASTM D3350 for Type III, Category 5, Class C and Grade P23 & P34. No FRP overwrap or sprayed jacketing will be allowed. Minimum jacket thickness shall be in accordance with Table 1 below. Or for above ground; jacket shall be spiral lock seam aluminum, galvanized or stainless steel in accordance with ASTM A366 and ASTM A256 G90 or as specified. See Table 2 for metal jacket thickness.

Table 1:

Nominal Pipe Size In Inches	Minimum Insulation Thickness In Inches	Jacket Size In Inches	Jacket Thickness In Mils
½	1.58	4	60
¾	1.48	4	60
1	1.34	4	60
1 ¼	1.17	4	60
1 ½	1.05	4	60
2	1.81	6	70
2 ½	1.56	6	70
3	1.25	6	70
4	1.75	8	80
5	2.22	10	100
6	1.68	10	100
8	1.68	12	120
10	1.64	14	140
12	1.46	16	175
14	1.72	18	200
16	1.70	20	200
18	1.89	22	200
20	2.24	24	225

\* Larger pipe sizes are available upon request.

Table 2:

Jacket Size In Inches	Aluminum Jacket Spiral Aluminum with impact and Chemical resistance equivalent to H-14 Temper T-3003 in accordance with ASTM-B 313 specifications	Galvanized Steel Jacket Spiral Seam Galvanized Steel in accordance with ASTM A-366 ASTM A-26 G90.	Stainless Steel Jacket Spiral Seam Stainless Steel in accordance with ASTM A-366 ASTM A-26 G90.
4	22 Gauge	26 Gauge	26 Gauge
6	22 Gauge	26 Gauge	26 Gauge
8	22 Gauge	26 Gauge	26 Gauge
10	22 Gauge	26 Gauge	26 Gauge
12	22 Gauge	26 Gauge	26 Gauge
14	18 Gauge	22 Gauge	22 Gauge
16	18 Gauge	22 Gauge	22 Gauge
18	18 Gauge	22 Gauge	22 Gauge
20+	18 Gauge	22 Gauge	22 Gauge

\* Larger pipe sizes are available upon request.

### Joining Method:

Straight lengths of pipe will be joined by welding.

### Fittings:

All fittings will conform to pipe type and will be insulated and jacketed with materials supplied by the system supplier and as per manufacturers' standard procedures.

### End Seal:

Each length of pre-insulated pipe will be fitted with a watertight mastic end seal at jacket and pipe surfaces. All field cuts will be sealed with a field applied end seal.

### Insulation of Straight Joints:

After welding and testing, all joints shall be insulated and sealed as per manufacturer's standard procedures.

### Anchors:

½" thick steel anchor plate is attached to internal pipe and sealed to pipe jacketing as per system suppliers recommendations.

### Backfill:

Should be tampered compactly in place so as to assure a stable surface. No rock shall be used in the first foot of backfill. 24 inches, top of pipe to grade, of compacted fill shall meet H-20 Highway loading.

### Manufacturer's Assistance:

Rovanco will provide a field service man on-site to properly train the installing personnel in all phases of installation. (if required).

### Approved Vendors:

Steel Pipe Systems by Rovanco, Joliet, Illinois or approved, ISO certified, equal. Any alternate supplier must submit their technical data to the engineer ten days prior to bid date to be approved in writing as an equal.

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