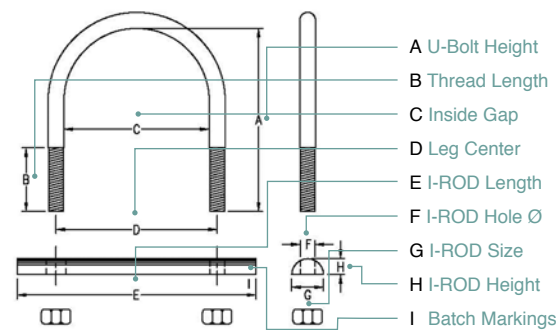


Nu-Bolt™ Pipe Bolt Dimensions

Custom bolt sizes are available, please call for prices. When used independently as a beam dressing, I-Rod is typically supplied in 5' and 10' lengths.



Nominal Pipe Size	1"	1"	1 1/2"	2"	3"	4"	6"	8"	10"	12"	14"	16"	18"	20"	24"	30"	36"
Bolt Stock Ø	1/4"	3/8"	3/8"	3/8"	1/2"	1/2"	5/8"	5/8"	3/4"	7/8"	7/8"	7/8"	1"	1"	1"	1"	1"
U-Bolt Height A	3-7/16"	3-7/16"	4"	4-1/2"	5-13/16"	6-13/16"	9-1/2"	11-1/2"	13-13/16"	6-1/16"	17-5/16"	19-5/16"	21-11/16"	23-11/16"	27-11/16"	33-11/16"	39-11/16"
Thread Length B	2-3/8"	2-3/8"	2-1/2"	2-1/2"	3"	3"	3-3/4"	3-3/4"	4"	4-1/4"	4-1/4"	4-1/4"	4-3/4"	4-3/4"	4-3/4"	4-3/4"	4-3/4"
Inside Gap C	1-3/8"	1-3/8"	2"	2-7/16"	3-9/16"	4-9/16"	6-3/4"	8-3/4"	10-7/8"	12-7/8"	14-1/8"	16-1/8"	18-1/8"	20-1/8"	24-1/8"	30-1/8"	36-1/8"
Leg Center D	1-5/8"	1-3/4"	2-3/8"	2-13/16"	4-1/16"	5-1/16"	7-3/8"	9-3/8"	11-5/8"	13-3/4"	15"	17"	19-1/8"	21-1/8"	25-1/8"	31-1/8"	37-1/8"
I-ROD Length E	3"	3"	4"	4.5"	6"	7"	9"	11"	13.5"	16"	17"	19"	21.5"	23.5"	27.5"	33.5"	39.5"
I-ROD Hole Ø F	3/8"	1/2"	1/2"	1/2"	5/8"	5/8"	11/16"	11/16"	7/8"	1"	1"	1"	1-1/8"	1-1/8"	1-1/8"	1-1/8"	1-1/8"
I-ROD Size G	3/4"	1"	1"	1"	1"	1"	1"	1"	1-1/2"	1-1/2"	1-1/2"	1-1/2"	1-1/2"	1-1/2"	1-1/2"	1-1/2"	1-1/2"
I-ROD Height H	5/16"	7/16"	7/16"	7/16"	7/16"	7/16"	7/16"	7/16"	11/16"	11/16"	11/16"	11/16"	11/16"	11/16"	11/16"	11/16"	11/16"

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Deepwater Corrosion Services Inc.

Eliminate Corrosion Problems at Pipe Supports



DEEPWATER

www.stoprust.com

The Problem

Corrosion at pipe supports is one of the leading causes of process piping failures. Not surprisingly, it is the beam supports and saddle clamps that have historically caused the majority of problems. They have the following undesirable features in common:

Crevices – the formation of a crevice at the pipe surface.

Water Entrapment – water is trapped and held in constant contact with the pipe surface.

Under these conditions, the paint system will fail (atmospheric coatings soften in immersion service). Once corrosion is initiated, it will then undercut the paint film, moving away from the crevice. Crevice corrosion causes rapid wall loss.

Poor Inspectability / Maintainability – these supports are virtually impossible to paint or maintain otherwise; visual inspections and NDT are often difficult.

Galvanic Couples – even when both the pipe and the support are the same steel, the metallurgical differences can still provide enough potential to drive a galvanic corrosion cell.



The Solution is I-Rod®

I-Rod is a durable thermoplastic, extruded and cut into a half round rod. It is the key component in all of Deepwater's I-Rod pipe supports. The way it works is simple:

- 1 The half-round shape minimizes contact between the pipe and the support, eliminating the crevice.
- 2 It also provides an electrically isolated stand-off between the pipe and the supporting beam or saddle clamp. This allows for easy maintenance and inspection, while preventing galvanic corrosion between dissimilar metals (the pipe and support).
- 3 I-Rod also has excellent compressive strength, UV stability, and a very low friction coefficient. This makes I-Rod ideal as a beam dressing, and pipe damage during new construction is reduced when I-Rod is present to assist in pipe fitting.

Be aware of imposters

Other products used to mimic I-Rod have been the cause of many problems.

Each batch of authentic I-Rod has a batch number printed directly on the surface, and only licensed agents of Deepwater are authorized to sell I-Rod. Go to www.stoprust.com for a list of approved agents.

Below: This imposter product fails under the weight of the pipe, others may be crushed completely.

Left: Crevice corrosion (far left) can be eliminated with I-Rod supports (near left).



Nu-Bolt™

Designed by corrosion engineers, the Nu-Bolt assembly combines I-Rod® with a modified pipe U-Bolt. A variety of corrosion resistant treatments provide reliable, long term service in the severe operating environments associated with offshore oil and gas production and coastal process facilities.

Polyshrink

Polyshrink is applied over the shank of the U-Bolt to protect the paint system during installation. Polyshrink is not designed to protect the U-Bolt. The material is a cross-linked, high-compressive-strength, UV Stable polyolefin. It can remain in service in temperatures up to 230 F (110 C).

Coatings

The Bolt itself is available in 316 SS, or with one of two coating options: Hot-Dip Galvanize, or SermaGard®. Sermagard is a corrosion resistant coating reliable in even the most harsh offshore conditions. More info and specs are available at i-rod.com



I-Liner™ / I-Clip™

I-Liner is a new application of Deepwater's popular I-Rod pipe-support material. Where saddle-clamp-style pipe supports are required, I-Liner is the ultimate weapon against crevice corrosion.

The liner is a composite construction, utilizing a compliant base material, housing short sections of low profile I-Rod. When installed, I-Liner also provides highly reliable electrical isolation between the clamp and support, making it ideal for riser clamps where this type of isolation is required.

The I-Clip has been designed to eliminate crevice corrosion under saddle clamps, pipe hangers and pipe support cradles, all of which tend to trap water. The I-Clip simply snaps into the inside diameter (ID) of the support, providing a low profile standoff. This standoff allows ventilation and drainage to prevent the damage caused by water accumulation. And I-Clip still has all the compressive strength of I-Rod. The system is available to fit most popular clamp, cradle and hanger sizes and can be easily retrofitted in most cases.

