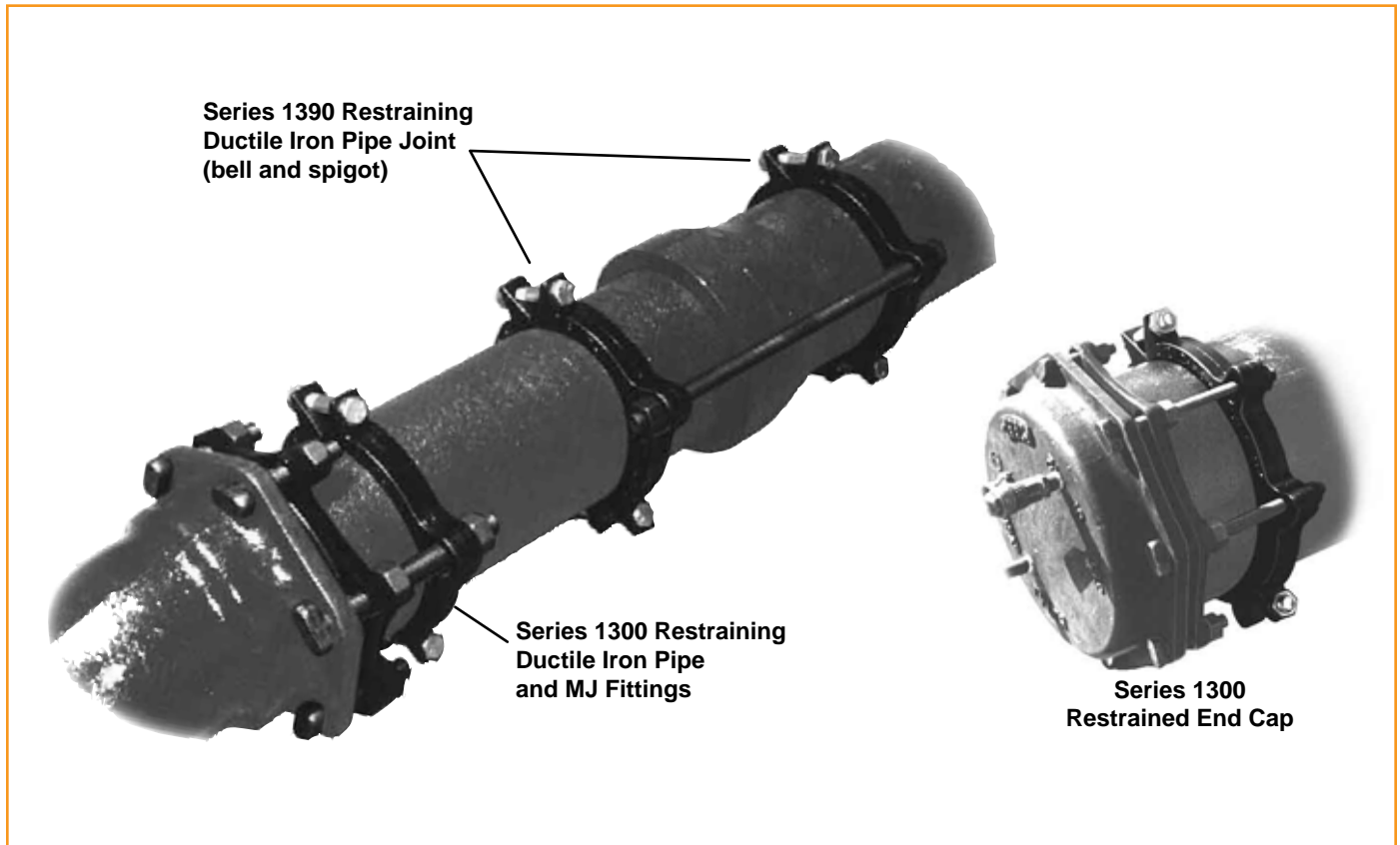


Uni-Flange® Series 1300, 1390 And Casing Spacers For Use On Ductile Iron Pipe

Both the 1300 and 1390 offer full circumferential contact and support of the pipe wall. This is recommended by many pipe manufacturers and is **especially important when thinner walled pipes are used, such as AWWA C-151, Class 50 or the "Pressure Class" Ductile Iron Pipe.** There are no set screws or wedges that may distort / point load the pipe or damage the cement mortar lining. (In fact, the Series 1300 / 1390 combination is very similar to certain "factory restrained joint pipe" with easier installation, faster availability, and a lower overall cost.)



Pressure Ratings, Ductile Iron Applications

Series 1300-C and 1390-C for Ductile Iron Pipe			
*NOMINAL PIPE SIZE	PIPE STANDARD	TYPE AND SIZE	*PRESSURE RATING (PSI)
4" - 16"	ANSI / A21.51 AWWA C-151	Ductile 4" - 8"	250
		Ductile 10" - 12"	200
		Ductile 14"	150
		Ductile 16"	100

Note: Not recommended for use on machined end pipe or fittings.

* For higher pressure requirements or larger size bell and spigot restraint, see Series 1450. Installation requires maximum torque values stated in installation instructions.

To Order: See 4" - 16" 1300-C, 1390-C and Casing Spacer product listings within this catalog.

Information - Restrained Casing Spacers

Advantages of Uni-Flange® System for Restrained Casing Spacers for PVC Pipe and *Ductile Iron Pipe

The Ford Restrained Casing Spacers, in 4" through 24" pipe sizes, offer several advantages over conventional methods of positioning carrier pipes within casings under roadways, railroads, bridges, and canals.

TWO IN ONE !!

- The only casing spacer to combine axial joint restraint (thrust restraint preventing pipeline separation) with casing spacer performance. It is two products in one. This reduces material inventories and installation costs. From the owner to the distributor, to the installer....everyone saves.



BOLT-ON SIMPLICITY !!

- No special off-site fabrication is required. The Uni-Flange® system uses standardized, off the shelf components that can be added to the restrainers, on the job-site. Parts are interchangeable and the installer can "custom build" each restrained casing spacer according to job-site conditions. Lead times are substantially reduced or eliminated.

HIGH STRENGTH COMPONENTS !!

- The restrainer and casing spacer runner supports are all manufactured of high strength ductile iron. They are stronger and tougher than conventional fabricated casing spacers, which are made from light gauge carbon or stainless steel. The Uni-Flange® restrained casing spacer is built for the rugged conditions encountered when pulling or pushing a carrier pipe through a casing.

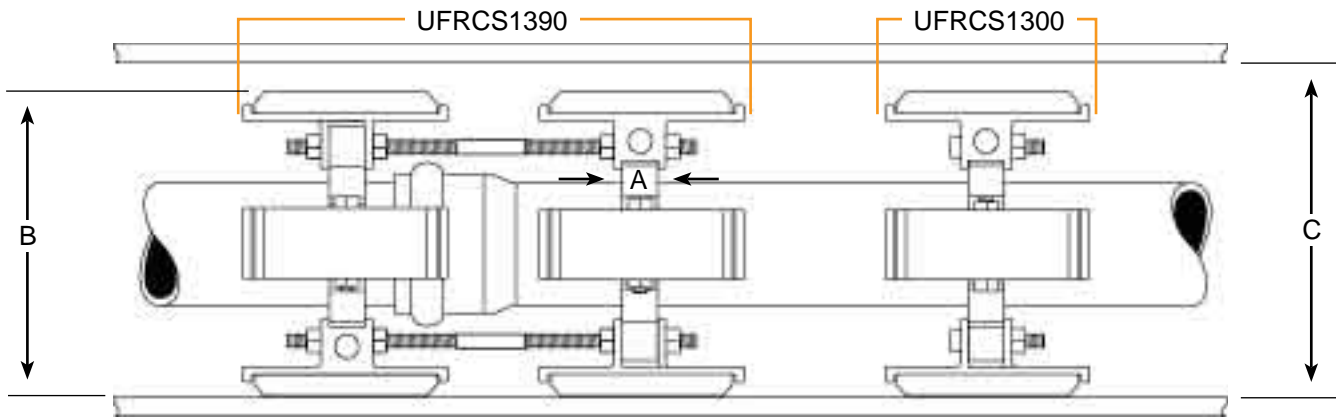


SLIPPERY & TOUGH !!

- The Uni-Flange® Restrained Casing Spacer features runners made from Ultra High Molecular Weight Polymer. Measuring 7/8" thick by 2-1/4" wide by 5-5/8" long, these runners offer a very low coefficient of friction, helping the carrier pipe "glide" easily over the surface of any casing. Dielectric insulation is provided between the carrier pipe and casing and the runners are very resistant to abrasion and impact. They will not absorb moisture. Our runners are tougher and stronger than the runner material used in most fabricated casing spacers.

* Suitable for 4" through 16" ductile iron pipe. See page 23 for installation and pressure requirements.

Specifications



Dimensions

NOM. PIPE SIZE	ACTUAL PIPE OD (IN.)	A	B (APPROX.)	1390 RESTRAINT ROD		C MIN. CASING SIZE (ID)	RATED (PSI) PRESSURE PVC PIPE*	RATED (PSI) PRESSURE DUCTILE IRON*
				No.	SIZE			
4"	4.80	1-1/8"	11-3/4"	2	3/4"x17"	12.4"	200	250
6"	6.90	1-1/8"	13-3/8"	2	3/4"x17"	14"	200	250
8"	9.05	1-1/8"	17-1/8"	2	3/4"x17"	17.875"	200	250
10"	11.10	1-3/8"	19-3/4"	4	3/4"x24"	21.5"	200	200
12"	13.20	1-3/8"	21-7/8"	4	3/4"x24"	23"	200	200
14"	15.30	4"	26-3/8"	6	3/4"x30"	27"	175	150
16"	17.40	4"	28-3/8"	6	3/4"x30"	30"	175	100
18"	19.50	5"	30-1/2"	8	3/4"x30"	31"	175	NA
20"	21.60	7"	32-1/4"	8	3/4"x36"	33"	175	NA
24"	25.80	7"	38-1/4"	12	3/4"x36"	39"	175	NA

* Working Pressure rating for the restrained carrier pipe, minimum 2:1 safety factor on all sizes.
 Note: Restrained Casing Spacers are also available for PVC pipe with steel equivalent OD (IPS).
 Contact Ford Meter Box for details.

MATERIALS AND SPECIFICATIONS

Restrainer Body and Runner Supports:	High Strength Ductile Iron, ASTM A536, 65,000 psi tensile strength, 45,000 psi yield strength, 12% elongation capability. (Grade 65-45-12)
Color Code:	Black for PVC with ductile iron pipe O.D., gray for PVC with steel pipe O.D.
Restraining Rods / Nuts:	High Strength, Low Alloy ASTM A242, ANSI / AWWA C111 / A21.11.
Clamping Bolts / Nuts:	SAE J429, Grade 5
Runners:	Ultra High Molecular Weight Polymer Tensile Impact 600-1200 ft. lbs. / in. Coefficient of Friction .14 - .17 ASTM D-1894

Suggested Specification - Casing Spacers

Carrier pipes to be installed inside casings shall be installed with self-restraining casing spacers. Casing spacers shall provide axial thrust restraint to prevent pipe joint separation during and after installation. They shall also provide dielectric insulation between the carrier pipe and the casing and facilitate installation of the carrier pipe into the casing.

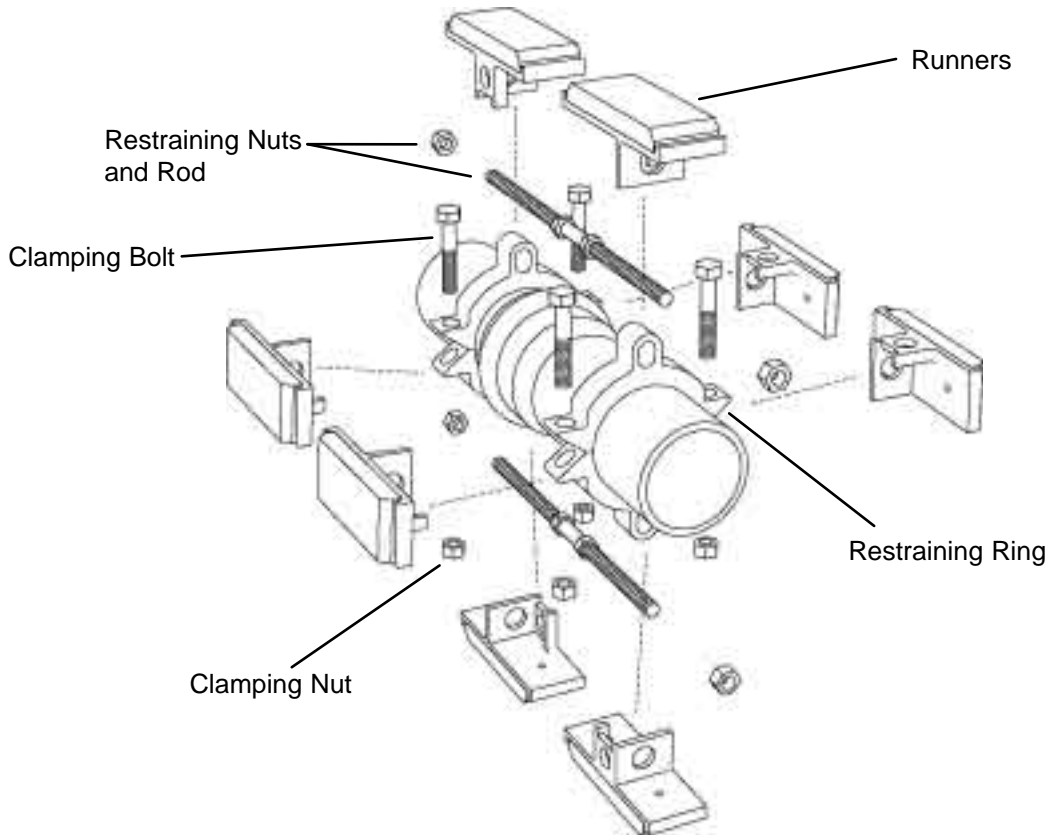
Restrained casing spacers shall be manufactured of high strength ductile iron, ASTM A536, Grade 65-45-12. Restraining rods shall be of high strength, low alloy material meeting the requirements of ANSI / AWWA C111 / A21.11. Casing spacer runners shall be of ultra high molecular weight polymer.

Restrained casing spacers shall be provided at all pipe bell joints. In addition, casing spacers shall be installed each ten feet of the pipeline to support the pipe barrel and the weight of its contents. Restrained casing spacers shall be Uni-Flange® Series UFRCS1300 (pipe barrel) or UFRCS1390 (for pipe bell joints) or approved equal.

How to Order Restrained Casing Spacers

Casing Spacers for Support of 4", 6" and 8" Pipe Barrel and Pipe Bell Joint

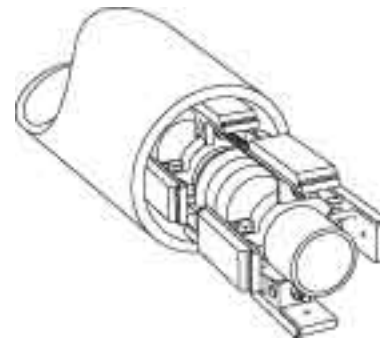
The indicated parts are provided when ordering the catalog number for the casing spacer for Pipe Bell Joint from the chart shown below. Note: The UFRCS1390 unit also provides restraint when used at pipe bell joint. See the order chart below.



CASING SPACER FOR SUPPORT OF PIPE BARREL

NOM. PIPE SIZE	PIPE O.D. (INCHES)	CATALOG NUMBER	NUMBER OF RUNNERS	APPROX. SHIPPING WEIGHT
4"	4.80	UFRCS1300-C-4-(I or U)	4	15.9
6"	6.90	UFRCS1300-C-6-(I or U)	4	17.3
8"	9.05	UFRCS1300-C-8-(I or U)	4	22.7

UFRCS1300-S-I style is available in sizes 4" - 8".



RESTRAINED CASING SPACER FOR PIPE BELL JOINT

NOM. PIPE SIZE	PIPE O.D. (INCHES)	CATALOG NUMBER	NUMBER OF RUNNERS	APPROX. SHIPPING WEIGHT
4"	4.80	UFRCS1390-C-4-(I or U)	8	34.5
6"	6.90	UFRCS1390-C-6-(I or U)	8	37.2
8"	9.05	UFRCS1390-C-8-(I or U)	8	48.1

UFRCS1390-S-I style is available in sizes 4" - 8".

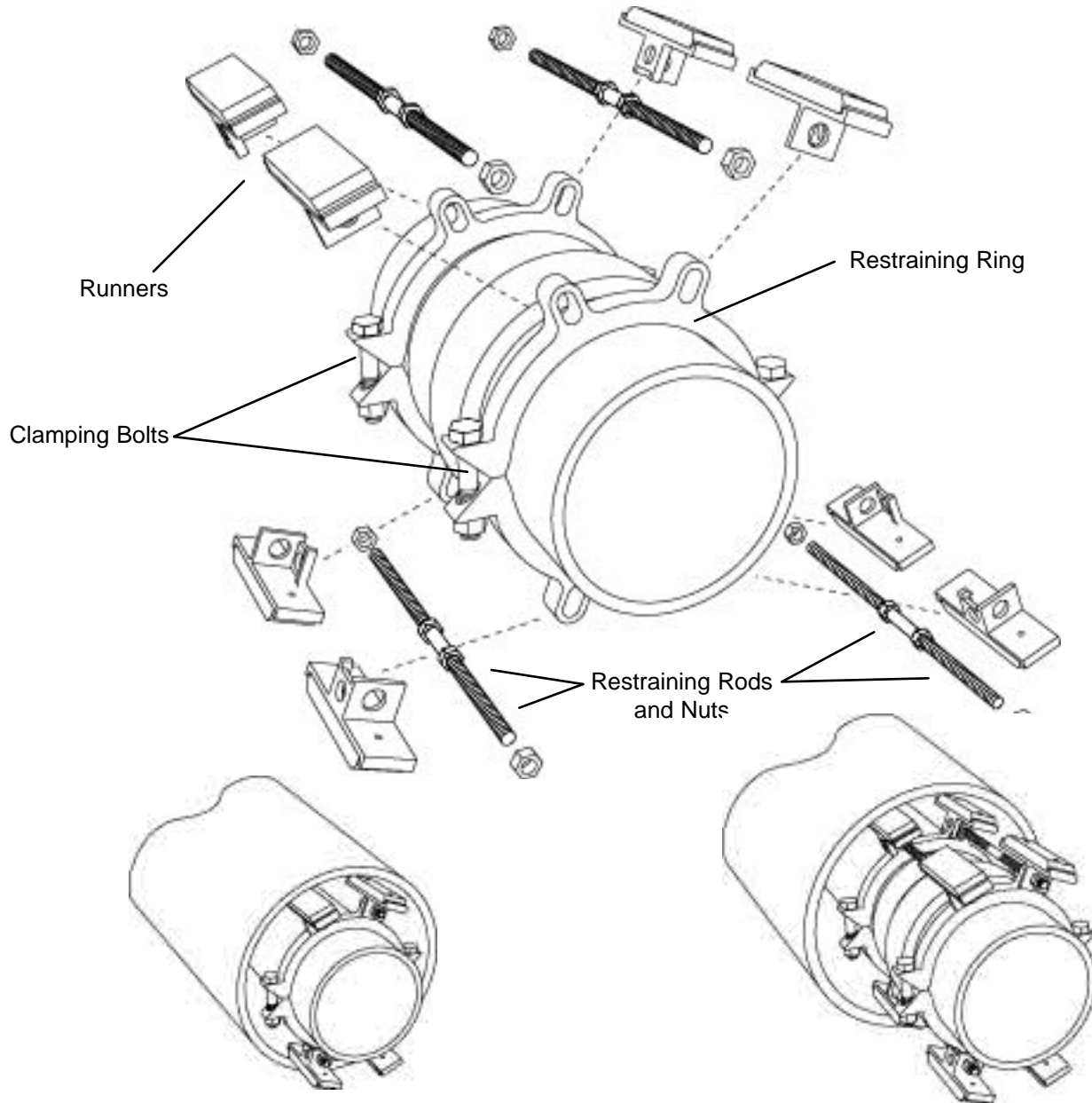
I = Import Casting U = Domestic Casting

See page 25 for minimum casing size (I.D.).

How to Order Restrained Casing Spacers

Casing Spacers for Support of 10" and 12" Pipe Barrel and Pipe Bell Joint

The indicated parts are provided when ordering the catalog number for the casing spacer for Pipe Bell Joint from the chart shown below. Note: The UFRCS1390 unit also provides restraint when used at pipe bell joint. See the order chart below.



CASING SPACER FOR SUPPORT OF PIPE BARREL

NOM. PIPE SIZE	PIPE O.D. (INCHES)	CATALOG NUMBER	NUMBER OF RUNNERS	APPROX. SHIPPING WEIGHT
10"	11.10	UFRCS1300-C-10-(I or U)	4	30.4
12"	13.20	UFRCS1300-C-12-(I or U)	4	32.2

UFRCS1300-S-I style is available in sizes 10" and 12".

RESTRAINED CASING SPACER FOR PIPE BELL JOINT

NOM. PIPE SIZE	PIPE O.D. (INCHES)	CATALOG NUMBER	NUMBER OF RUNNERS	APPROX. SHIPPING WEIGHT
10"	11.10	UFRCS1390-C-10-(I or U)	8	69.3
12"	13.20	UFRCS1390-C-12-(I or U)	8	72.8

UFRCS1390-S-I style is available in sizes 10" and 12".

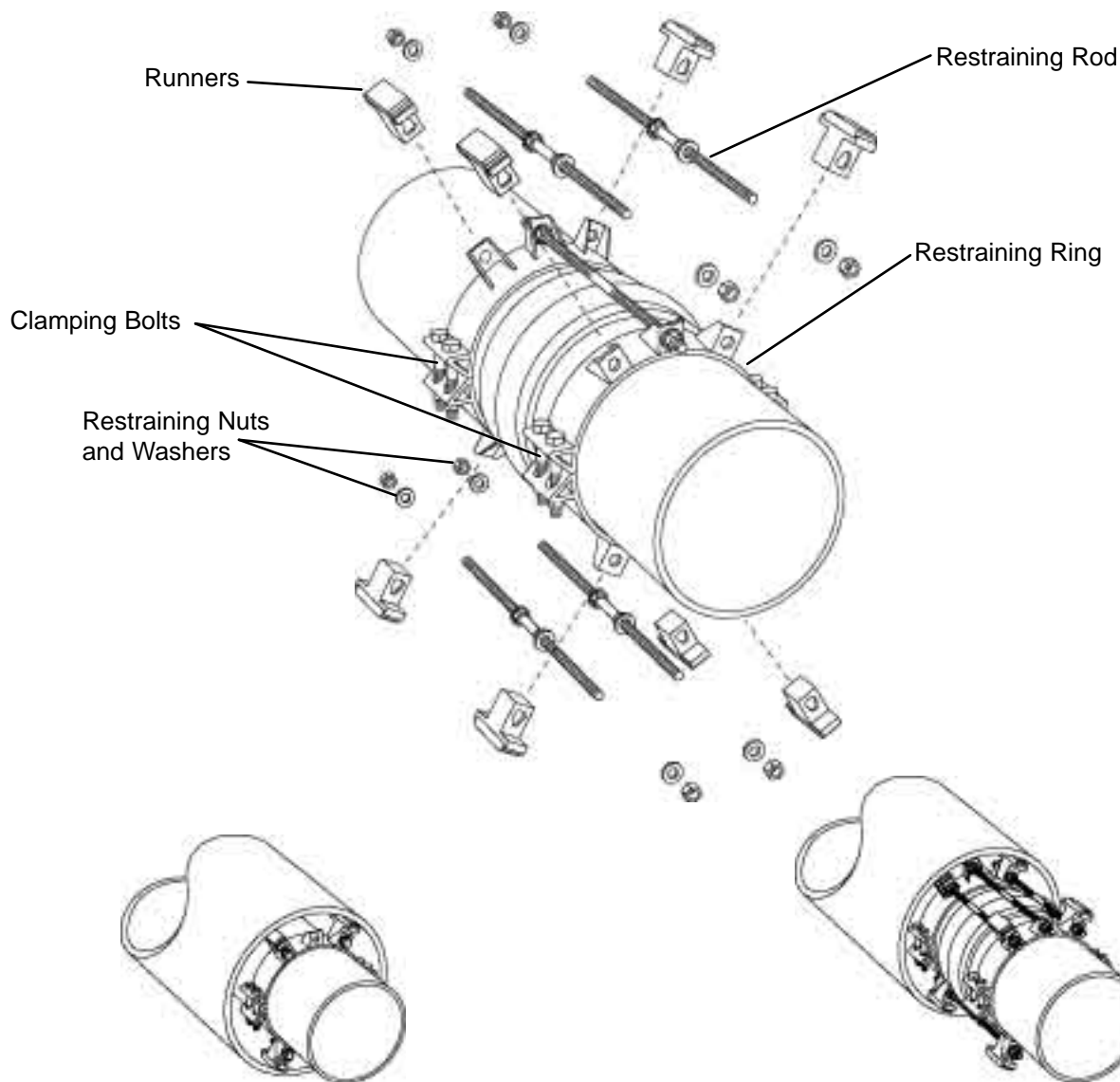
I = Import Casting U = Domestic Casting

See page 25 for minimum casing size (I.D.).

How to Order Restrained Casing Spacers

Casing Spacers for Support of 14" through 24" Pipe Barrel and Pipe Bell Joint

The indicated parts are provided when ordering the catalog number for the casing spacer for Pipe Bell Joint from the chart shown below. Note: The UFRCS1390 unit also provides restraint when used at pipe bell joint. See the order chart below.



CASING SPACER FOR SUPPORT OF PIPE BARREL

NOM. PIPE SIZE	PIPE O.D. (INCHES)	CATALOG NUMBER	NUMBER OF RUNNERS	APPROX. SHIPPING WEIGHT
14"	15.30	UFRCS1300-C-14-(I or U)	4	77.1
16"	17.40	UFRCS1300-C-16-(I or U)	4	82.4
18"	19.50	UFRCS1300-C-18-(I or U)	4	108.1
20"	21.60	UFRCS1300-C-20-(I or U)	4	134.1
24"	25.80	UFRCS1300-C-24-(I or U)	4	197.1

UFRCS1300-S-U style is available in sizes 14" - 24".

RESTRAINED CASING SPACER FOR PIPE BELL JOINT

NOM. PIPE SIZE	PIPE O.D. (INCHES)	CATALOG NUMBER	NUMBER OF RUNNERS	APPROX. SHIPPING WEIGHT
14"	15.30	UFRCS1390-C-14-(I or U)	8	170.9
16"	17.40	UFRCS1390-C-16-(I or U)	8	183.8
18"	19.50	UFRCS1390-C-18-(I or U)	8	240.0
20"	21.60	UFRCS1390-C-20-(I or U)	8	292.0
24"	25.80	UFRCS1390-C-24-(I or U)	8	432.0

UFRCS1390-S-U style is available in sizes 14" - 24".

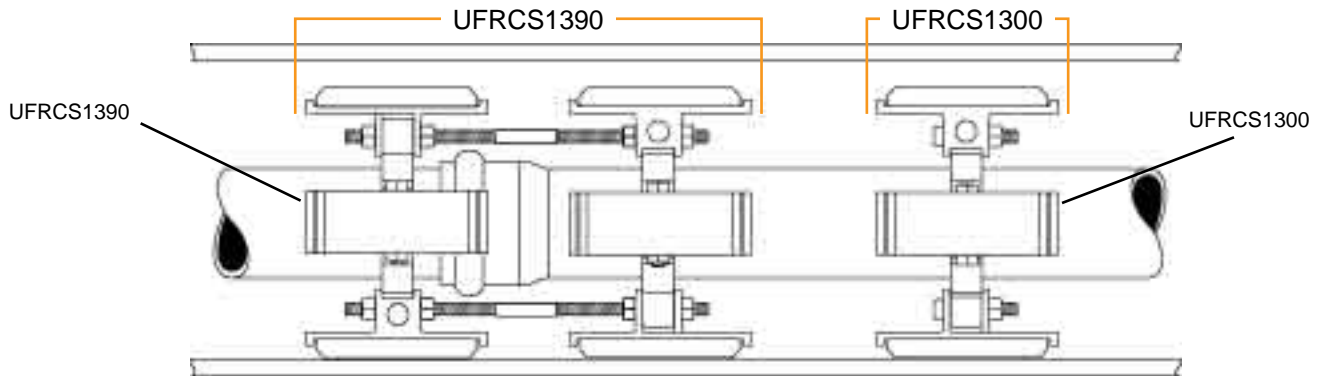
I = Import Casting U = Domestic Casting

Note: 14" - 24" items are nonreturnable and may be subject to a cancellation fee.

See page 25 for minimum casing size (I.D.).

UFRCS Installation Recommendations

Uni-Flange® System for Restrained Casing Spacers



Installation Recommendations

Each pipe bell joint within the casing should be restrained and supported with a UFRCS1390 restrained casing spacer. Additionally, Uni-Flange® recommends a UFRCS1300 be installed every ten feet of the pipeline. The UFRCS1300 casing spacer supports the weight of the pipe barrel and the water it is carrying.

CARRIER PIPE SIZE	RUNNER LOCATION AND QUANTITY
4" - 8"	Runners installed on tie rod ears and clamping bolt pads. Total (4) on the UFRCS1300 and (8) on the UFRCS1390.
10" - 24"	Runners installed on tie rod ears. Total (4) for UFRCS1300 and (8) for UFRCS1390.