

FITTINGS

FITTING TO PIPE RESTRAINT



**DUCTILE
IRON**

*Eliminates
Concrete
Thrust
Blocks*

Engineered for Durability

Eliminate Concrete Thrust Blocks

With HARCO Fitting to Pipe Restraints as well as Pipe to Pipe Restraints and Valve Restraints, underground gasketed piping can be installed without the use of concrete thrust blocks. Joint Restraint is especially useful for bridge crossings, stream crossings, unstable soils, fill areas, and places where concrete thrust blocks are awkward. Consult HARCO for a simple restrained pipe length calculation utility.

How Joint Restraint Works

Joint restraint systems tie lengths of pipe to a fitting, relying on the friction of the soil on the pipe to resist fitting thrust forces. There are times when additional lengths of pipe are required to hold the fitting. The Pipe to Pipe restraint is for this purpose. A simple restrained length calculation program allows a

user to input the variables from his application and identify the joint restraint design required for his job.

The HARCO Difference

HARCO pipe grip rings are machined to ensure sharp, consistent serrations, and roundness. This allows perfect gripping of the pipe every time. Long term performance is guaranteed. The use of threaded restraint rods allowing adjustment for dimensional variations ensures that forces are distributed for even pull on the pipe and fitting. There is no danger of "cocking" that can reduce the life of the pipe. With larger fittings, forces rise considerably. HARCO's use of multiple restraint rods allows for good distribution of thrust forces about the pipe and assurance of long term pipe performance.

*Machined
Grip Rings
Perform
Long Term*

*Threaded
Restraint
Rods for
"Even Pull"*



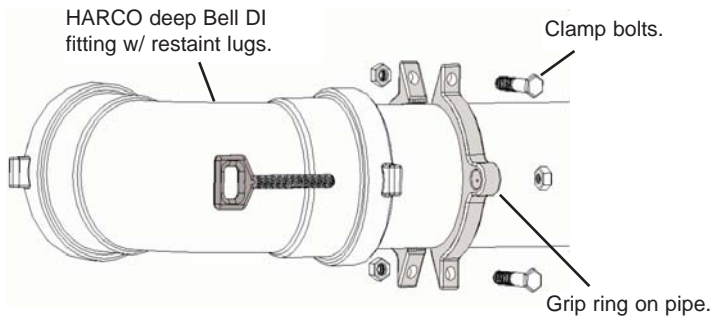
FITTING TO PIPE RESTRAINT

Product Sheet

ASSEMBLY INSTRUCTIONS FOR FITTING TO PIPE RESTRAINT

Tools Required: (2) 12" adjustable wrenches.

Note: Exact configurations may vary from those depicted.



2" - 8" SYSTEMS

Step 1: Insert beveled spigot pipe end into HARCO ductile iron fitting bell.

Step 2: Assemble grip ring on pipe so that restraint rods will engage. Tighten clamp bolts & nuts to 100 ft.lb. torque pad to pad.

Step 3: Slide I-bolts through slots in grip rings and around fitting lugs. Tighten nuts evenly to 5 ft.-lb. of torque for a snug fit.

Ordering Information

SIZE	PART NUMBER	STYLE	WEIGHT
2"	820110	A	4
2.5"	820210	A	4
3"	820310	A	5
4"	820410	A	8
6"	820610	A	10
8"	820810	A	15
10"	821010	B	51
12"	821210	B	66
14"	821210	C	50
16"	821210	C	55



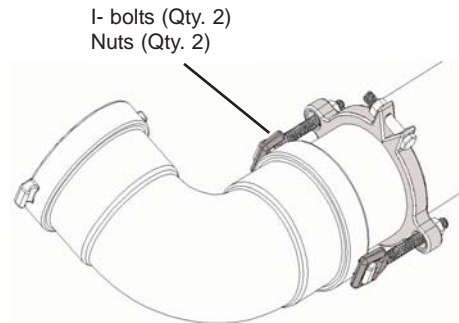
STYLE A



STYLE B



STYLE C



10" & 12" SYSTEMS

Step 1: Insert beveled spigot pipe end into HARCO ductile iron fitting bell.

Step 2: Assemble fitting back-up ring just behind gasket groove shoulder of HARCO DI bell.

Step 3: Assemble grip ring on pipe approximately 12" away from bell end making sure restraint rod holes are aligned. Tighten clamp bolts & nuts to 100 ft.-lb. torque pad to pad. Lugs on HARCO ductile iron fittings are not utilized to connect 10" and 12" joint restraints to fitting.

Step 4: Install threaded restraint rods, and tighten nuts evenly to 5-lb. of torque for a snug fit.

Suggested Specifications

Fitting to Pipe Restraints shall meet the requirements of UNI-B-13-94. Grip ring serrations shall be machined. As cast serrations are not permitted. Restraint rods, bolts and nuts shall be of ductile iron to ASTM A563 or low alloy steel to AWWA/ANSI C111/A21.11. Fitting to Pipe Restraint shall be supplied by The Harrington Corporation, Lynchburg, VA.



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