



THE FORD METER BOX COMPANY, INC.
CERTIFIED TO ISO 9001:2015
10002505

Products Catalogue

08/2018

Web Revision 10/22/2018

The Ford Meter Box Company, Inc.



Contents

Information

Ford® Lead-Free Brass	3
Underground Product Map Overview	4 & 5

Ford Brass Products

Corporation Stop Information	6
Corporation Stop Specifications	6
Ball Valve Information	7
Quick Joint Connections	7
Ball Valves	8
Corporation Stops and Ballcorp Corporation Stops	8
Angle Ball Meter Valves	9
Valve Handles	9
Tracer Wire/Thaw Wire	9
No-Contact Coupling	10
HST Heavy Stem Valve	10
Quick Joint Couplings	11
Pack Joint Couplings	11
Kitec/Q-Line Fittings	12
Ultra-Tite Compression Fittings	13
Insert Stiffeners	14

Meter Settings

Kornerhorn Information	15
Kornerhorns	16
Kornerhorn Options	17

Ford Pit Setters

Pit Setter Information	18 & 19
Plastic Pit Setter for Moderate to Cold Climates	20
Plastic Pit Setter Numbering System	21
Plastic Pit Setter Configuration for Moderate to Cold Climates	22
Plastic Pit Setter Configuration for Cold Climates	23
Plastic Pit Setters for 5/8" & 5/8" x 3/4" Meters	24
Plastic Pit Setters for 3/4" Meters	25
Plastic Pit Setters for 1" Meters	26
Plastic Pit Setters for 1-1/2" & 2" Meters	27-30
Pit Setter Covers	31 & 32
Coil Pit Setters	33
Coil Pit Setter Installation Instructions	34
Coil Pit Setter Features	35
Coil Pit Setter Numbering System	36
Coil Pit Setter Ordering Information	37 & 38
Coil Pit Options and Accessories	39 & 40

Ford All Stainless Steel Repair Clamps

Repair Clamp Specifications	41
FS1 Single Section	42
Tapped Repair Clamps	42
FS2 Double Section	43
FS3 Triple Section	43
FLSC All Stainless Steel Snap Clamp	44
FLSC All Stainless Steel Wrap Clamp	44
with Full Wrap Gasket	45
FLSC All Stainless Steel Wrap Clamp	45
with Dual Armor, Full Wrap Gasket	45

Ford Stainless Steel Repair Clamps with Ductile Lugs

F1 Single Section	46
Tapped Repair Clamps	46
F2 Double Section	47
F3 Triple Section	47
FSC Wrap Clamp with Full Wrap Gasket	48
FSC Wrap Clamp with Dual Armor, Full Wrap Gasket	48
FSEK Emergency Repair Clamp Kit	49

Ford Saddles

Stainless Saddle Specifications	50
FS3X3 Stainless Saddles	51

Brass Saddle Specifications	52
202BSD Brass Saddles	53
Ductile Iron Saddle Specifications	54
F101 / FC101 / F202 / FC202	
Ductile Iron Saddles	55 & 56

Ford Abandoned Corp Cap

Abandoned Corporation Cap	57
---------------------------	----

Ford Tapping Sleeves

Tapping Sleeve Specifications	58
Ultra-Seal Cap Style Flange Gasket	58
Mechanical Joint (MJ) Adapter Outlet	59
FAST Style Tapping Sleeve	60 & 61
FTSS Style Tapping Sleeve	62 & 63
FTSC Steel Tapping Sleeve	64 & 65

Ford Couplings

Coupling Specifications	66
Installation Instructions	67
FC1 Coupling	68
FC1-L12 Extended Length Coupling	69
FC2A Transition Coupling	70
FC2A-L12 Extended Length Transition Coupling	71
Coupling Parts	72 & 73
FC2W Ultra-Flex Wide Range Coupling	74
FC2W Ultra-Flex Wide Range Coupling Parts	75
FC2W-L12 Extended Length Ultra-Flex	75

Restrained Couplings

Specifications	76
RCDD / RCPP / RCDP Restrained Couplings	77

Ford Restraints

UFR1300 for PVC	78 & 79
UFR1300-P Pipe Restraint for PVC Sewer Pipe	80
UFR1309 for C909	81
UFR1350 Bell Joint Restraint	82 & 83
UFR1360 Split Ring Restraint	84 & 85
UFR1360-C for Oversized DR18 C900 or C907	86
UFR1369 Split Ring Resraint for C909 and PVC Pressure Fittings	87
UFR1390 Bell Joint Restraint	88 & 89
UFR1390-P Restraint for Sewer Pipe Bell Joints	90
UFR1399 for C909	91
UFR1400 MJ Retainer Gland	92 - 95
UFR2800 Restraints for high pressure applications on Ductile Iron	96
UFR2850 Bell Joint Restraints for high pressure applications on Ductile Iron	97
UFR1450 Restraint for Push-on Fittings	98 & 99
UFR1500 MJ Retainer Gland for PVC	100 - 104
UFR1559 for C909	105
SO-EZ Gasket	106

Restrained Casing Spacers

Information	107
Specifications	108
Restrained Casing Spacers for Barrel and Pipe Bell Joints	109 - 111

Restrained Casing Spacers for Sewer Pipe

Restrained Casing Spacers for Sewer Pipe	112
--	-----

Ford Drilling Machine

SIMTAP	113 - 115
--------	-----------

Drilling Machine Adapters	116 - 117
---------------------------	-----------

Retrosetter Sampling Station	118
------------------------------	-----

OD Chart	119
----------	-----

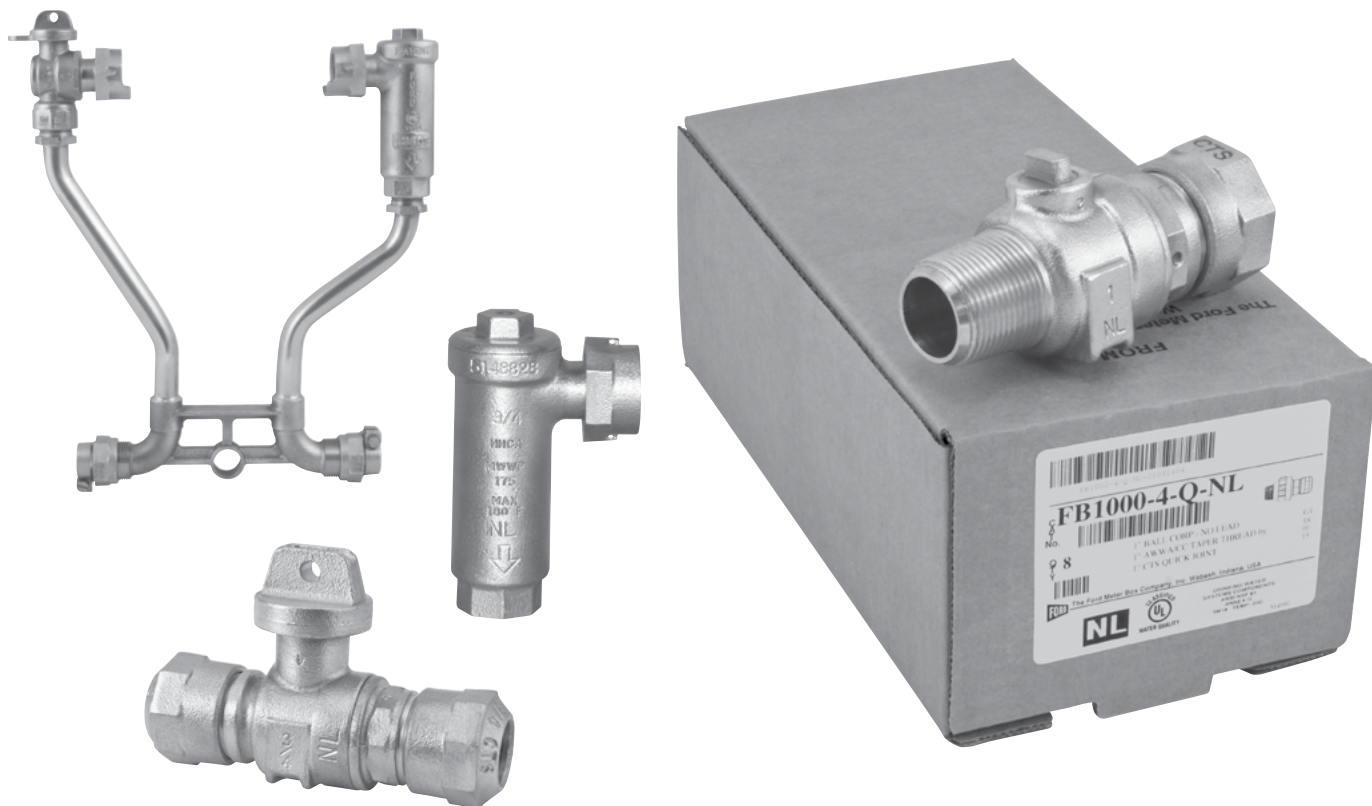
Warranty	121
----------	-----

Ford offers many products listed to specific standards and classifications. Due to the forthcoming standards changes understood during the publication of this catalogue, product listings will evolve to meet the changing standards requirements. Please contact the Ford Meter Box Customer Service Department at 260-563-3171 or a local Ford distributor to verify a product meets a specific standard. Ford Meter Box meets your needs for products that are proven and reliable. Due to design improvements, product images in the catalogue do not always reflect the most current design.

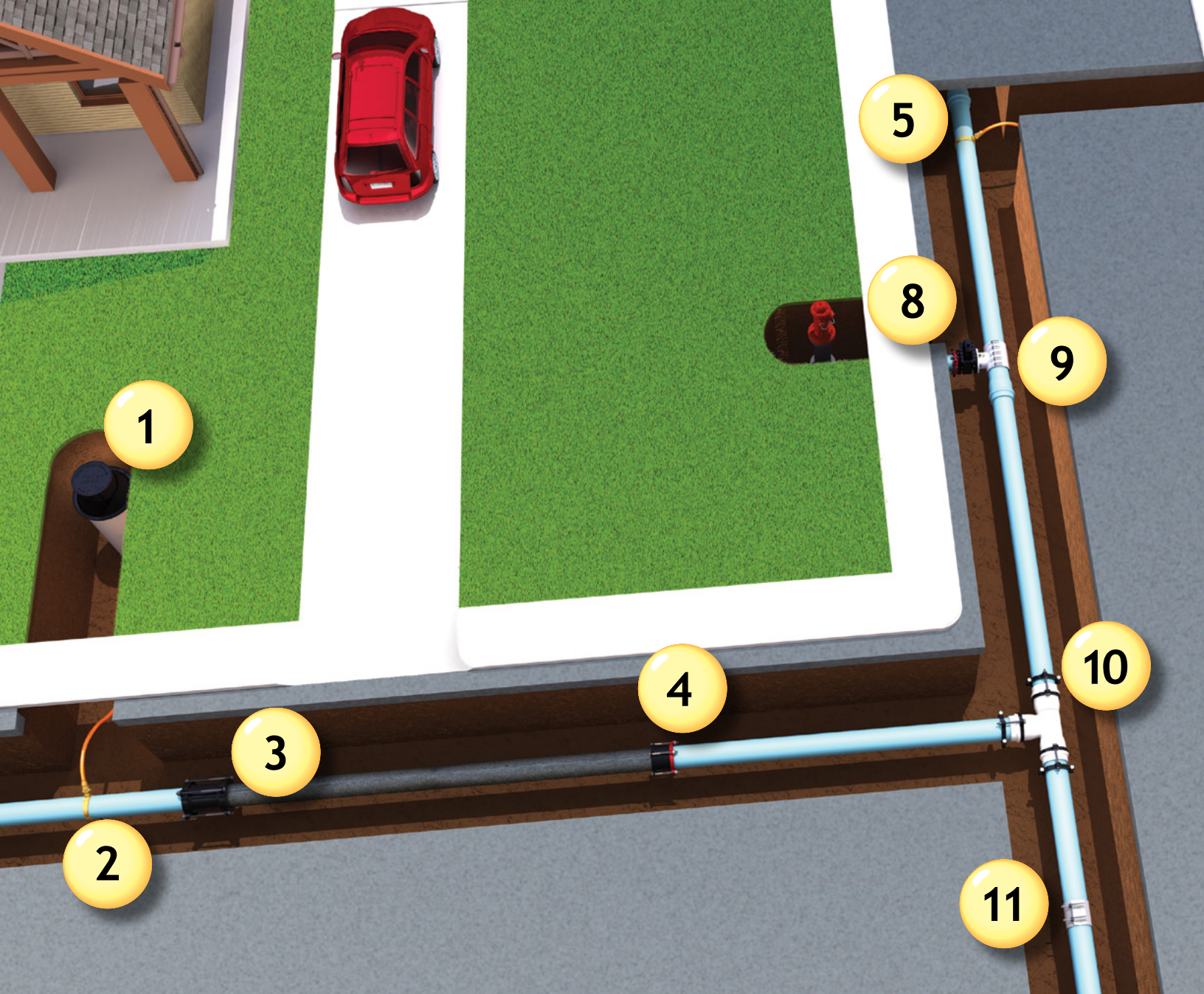
Ford, Ford Meter Box and Uni-Flange are trademarks of The Ford Meter Box Company, Inc. registered in the U.S.

Lead-Free Brass

For years, Ford's commitment has been to provide products that meet or exceed the requirements of the Safe Drinking Water Act. Ford offers more products that are approved to NSF/ANSI Standard 61 than any other brass manufacturer in the industry. To meet current NSF/ANSI 61 standards, all water works brass in contact with potable water must be manufactured from lead-free alloy.



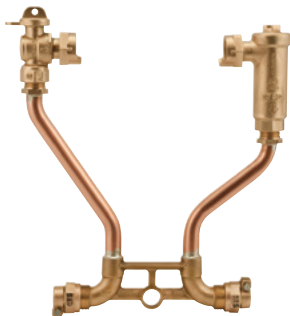
- Made from UNS/CDA No C89833 cast alloy
- Classified to NSF/ANSI Standard 61 and NSF/ANSI Standard 372 where applicable
- Brass components in contact with potable water shall be of lead-free alloy (UNS/CDA No C89833)
- UNS/CDA No C89833 conforms to AWWA C800 and ASTM B-584
- Components that do not come in contact with potable water shall be UNS/CDA No C83600 - 85-5-5-5 and shall conform to AWWA Standard C800 (ASTM B62 and ASTM B584)
- Ford lead-free products are identified with an "NL" on the major body component
- Ford lead-free products are packaged with a lime-green box label and have "-NL" at the end of product number



From the main to the meter, look for the Ford Meter Box Underground Connection.



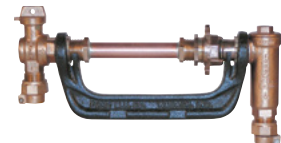
Ford Ball Valves withstand working pressures up to 300 psi and are available with a wide variety of end connections.



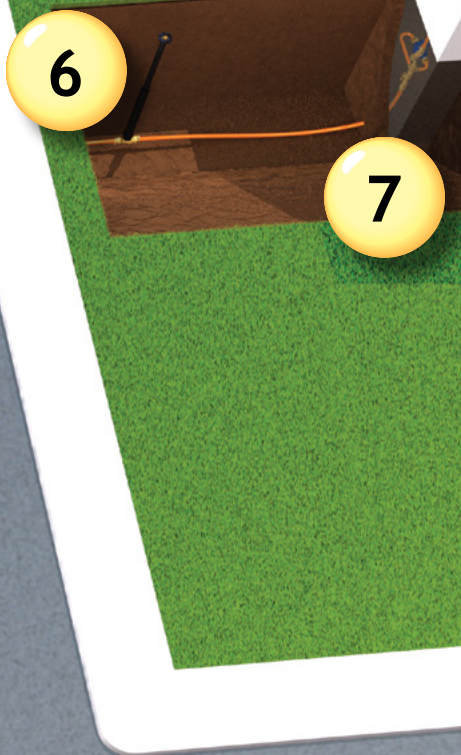
The Ford Coppersetter has the largest variety of meter and service line connections in the industry.



Ford Dismantling Joints provide longitudinal adjustment in a flanged piping system.



Ford Yokes provide a convenient and durable setting for water meters.



The Automated Measuring System (AMS) Test Bench provides the versatility, convenience, accuracy and productivity required for the modern meter shop to test water meters.

Ford manufactures the Uni-Flange Series 1400 Retainer Glands for ductile iron pipe.



Ford Plastic Pit Setters provide a fast and simple method of securing and reading outdoor meter settings in cold and moderate climates. Ford Plastic Pit Setters are available to accommodate 5/8" though 2" meters.



Ford Ballcorp Corporation Stops are made from waterworks brass, meeting AWWA C800 standards, and are designed to withstand working pressures up to 300 psi.



Ford Ultra-Flex Couplings are available to connect any water main material and can transition between different pipe OD's of the same nominal size.



Ford Cast Couplings offer an easy and economical way to join pipe, whether the pipe is of the same nominal size and type or different at each coupling end.



Ford Service Saddles are available for installation of corporation stops on virtually any type of water main material.



Ford Curb Boxes provide access to open and close curb stops, enabling service line maintenance or meter change-outs.



Ford Inside Meter Settings satisfy any indoor water meter setting requirement.



Ford Meter Box has a complete line of Series 1500 Retainer Glands for C900 and Steel Pipe Size PVC.



Ford offers a wide range of water main tapping sleeves.



Ford has a full line of pipe restraints for C900, C909 and Steel Pipe Size PVC pipe and associated fittings.



Ford Repair Clamps are lightweight and a simple way to repair any type of leaking water main.

Information

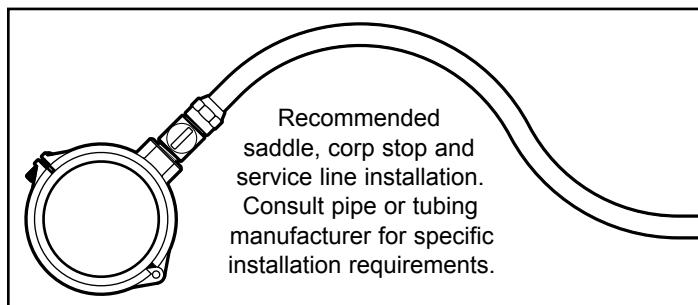
Ford Corporation Stops

The Ford Square Design for Conventional Plug-Type Corporation Stops



As shown above, the Ford “square” design for conventional plug-style Corporation Stops provides larger, more rugged wrench flats. During the installation of almost every Corporation Stop, a wrench must be used across the body to make final adjustments in the main or saddle, or to connect the service line to the outlet. The Ford “square” design puts the wrench flats where they should be – at the strongest part of the body, thus minimizing the danger of leaks from distortion. These larger wrench flats also provide a more secure grip, resulting in less danger of injuring knuckles and hands. *Plug-type Corporation Stops are designed for a maximum working pressure of 100 psi in the 3/4" and 1" sizes. See AWWA Standard C800.*

The Ford Ballcorp Corporation Stop



This field-proven Corporation Stop incorporates the performance-proven design features of the popular Ford Ball Valve. It reduces the inherent problems of hard turning and temporary weeping under high test pressures, which is sometimes encountered in standard plug-style Corporation Stops. The Ford Ballcorp is available in 3/4", 1", 1-1/4", 1-1/2", and 2" sizes, with most styles of outlet connections. It may be installed in either a dry main or a main under pressure with a standard tapping machine or saddle. The large wrench flats ensure ease of final adjustment in the main, as well as ease in connecting the service line to the stop. *Ford Ballcorp Corporation Stops are designed to withstand working pressures up to 300 psi.*

Specifications

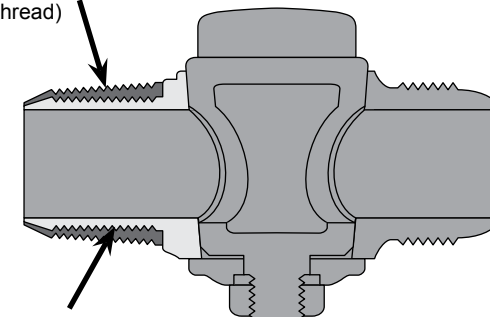
Corporation Stops

Ford Corporation Stops are designed and manufactured to conform with AWWA Standard C800. This specification covers thread dimensions, the metal alloy, and the pressure rating for the valve. All Ford Corporation Stops are individually inspected and tested for leaks with air pressure. They are all compatible with tapping machines of current design.

Inlet Threads

Two types of inlets are available on Ford Corporation Stops, both the conventional plug-style and the Ford Ballcorp Corporation Stop. The AWWA standard thread has a steeper taper than iron pipe threads. When ordering, please use the catalogue number corresponding to the type of inlet threads desired.

AWWA Taper Thread (CC or CS thread)



Iron Pipe Thread

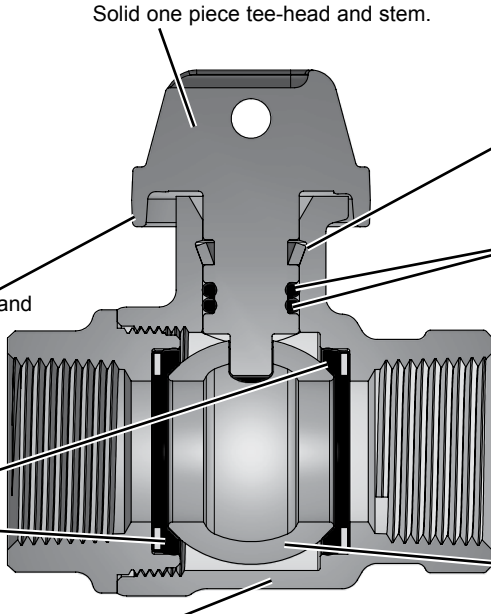
Outlet Connections

Outlet threads on both plug-style and Ford Ballcorp Corporation Stops conform to AWWA Standard C800.

Ball Valve

Ford Ball Valves are ideal for use in water service lines. Watertight in either direction at pressures up to 300 psi, easy turning, nonbinding, and minimum pressure loss - these characteristics are added to superb design, quality, and precise manufacturing.

Standard Ford Ball Valve



Ford Ball Valves are designed to withstand working pressures up to **300 psi**. Stop-and-Waste Ball Valves are rated to 150 psi.

Variety of end connections available - for copper, iron, plastic, or direct to meter. Ends are integral or secured with adhesive to prevent unintentional disassembly.

Sturdy stops allow 90° motion and are enclosed and protected.

Molded EPDM seat(s) support the ball. Valve is watertight and is a non-directional valve.

Solid one piece tee-head and stem.

A bronze or plastic ring locks the stem solidly into the body of the valve.

EPDM O-ring(s) in the stem ensure permanent watertight seal at top.

Fluorocarbon-coated brass ball provides maximum flow capacity and ease of turning.

*Heavy cast bronze body is engineered to withstand pipe stresses.

All Ford Meter Box brass conforms to AWWA Standard C800 (UNS No. C89833 - no-lead alloy — ASTM B62 and ASTM B584).

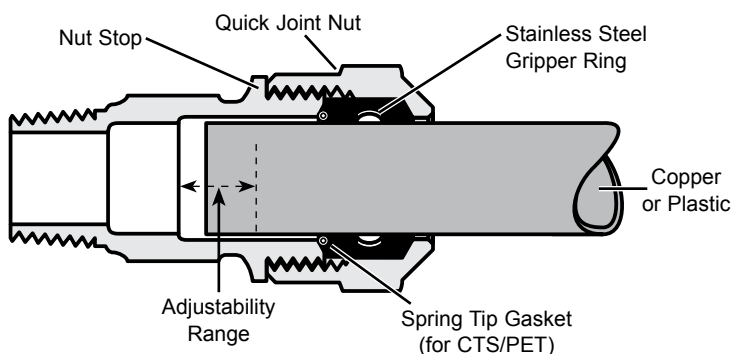
Quick Joint Connections

The Ford Quick Joint offers traditional Ford features of quality and reliability. This easy to use fitting is available on a wide variety of Ford products. Just stab the copper or plastic tubing into the fitting and tighten down the compression nut to the stop. That's it! The Quick Joint provides excellent pullout resistance and superior hydraulic blow-off protection. Note: The Ford Quick Joint Nut is NOT interchangeable with other compression fittings.

How the Quick Joint Works

1. A large gasket and stainless steel gripper ring are drawn down together when the nut is tightened, providing the hydraulic seal and mechanical restraint.
2. A transparent fluorocarbon coating covers the interior of the nut, providing smooth torque transfer. This coating eliminates "back drive," reduces tightening torque and minimizes gasket distortion.
3. A positive, external and visual stop ensures correct installation, providing maximum gasket seal.

The Ford Quick Joint is designed and manufactured for 3/4" - 2" copper, PET (SDR9) or 3/4" - 1" PEP with a solid tubular metal insert.



Consult pipe or tubing manufacturer for specific installation requirements.

Corporation Stops and Ballcorp Corporation Stops

With Quick Joint for Copper or Plastic Tube (CTS)

FB1000 Ballcorp - AWWA/CC Taper Thread Inlet by Quick Joint Outlet for Copper or Plastic Tubing (CTS)



Catalogue Number	Description			Body Outlet Threads	Approx. Wt. Lbs.
	Valve Size	Inlet Size	Outlet Size		
FB1000-3-Q-NL	3/4"	3/4"	3/4"	3/4" Flare Copper	1.8
FB1000-4-Q-NL	1"	1"	1"	1" Flare Copper	2.7
FB1000-5-Q-NL	1-1/4"	1-1/4"	1-1/4"	1-1/4" Special Thread	4.9
FB1000-6-Q-NL	1-1/2"	1-1/2"	1-1/2"	1-1/2" Special Thread	6.0
FB1000-7-Q-NL	2"	2"	2"	2" Special Thread	11.1

F1000 - AWWA/CC Taper Thread Inlet by Quick Joint Outlet for Copper or Plastic Tubing (CTS)



Catalogue Number	Description			Body Outlet Threads	Approx. Wt. Lbs.
	Valve Size	Inlet Size	Outlet Size		
F1000-1-Q-NL	1/2"	1/2"	1/2"	1/2" Flare Copper	0.9
F1000-2-Q-NL	5/8"	5/8"	5/8"	5/8" Flare Copper	1.4
F1000-3-Q-NL	3/4"	3/4"	3/4"	3/4" Flare Copper	1.6
F1000-4-Q-NL	1"	1"	1"	1" Flare Copper	2.7

NOTE: Ford recommends using insert stiffeners when using plastic pipe or tubing. Insert stiffeners are listed on page 14.

Pressure Requirements - The AWWA Standard C800 specifies normal pressure service line valves shall be suitable for use with water at 100 psi for 1" and smaller sizes, and 80 psi for 1-1/4" through 2" sizes. Ford Key Style Valves are designed for normal service line pressure conditions. Use Ford Ball Valves for higher pressure requirements.

Ball Valves

With Quick Joint for Copper or Plastic Tube (CTS)

Quick Joint for Copper or Plastic Tubing Both Ends



B44-444-Q-NL

Catalogue Number	Description			Approx. Wt. Lbs.
	Valve Size	One End	Other End	
B44-333-Q-NL	3/4"	3/4"	3/4"	2.4
* BC44-333SW-Q-NL	3/4"	3/4"	3/4"	-
B44-343-Q-NL	3/4"	1"	3/4"	2.5
B44-344-Q-NL	3/4"	1"	1"	3.1
B44-444-Q-NL	1"	1"	1"	3.1
* BC44-444SW-Q-NL	1"	1"	1"	-
B44-445-Q-NL	1"	1"	1-1/4"	3.7
B44-455-Q-NL	1"	1-1/4"	1-1/4"	5.0
B44-555-Q-NL	1-1/4"	1-1/4"	1-1/4"	6.6
** B44-666-Q-NL	1-1/2"	1-1/2"	1-1/2"	9.0
** B44-777-Q-NL	2"	2"	2"	13.8

* This valve includes Stop and Waste feature.

NOTE: Ford recommends using insert stiffeners when using plastic pipe or tubing. Insert stiffeners are listed on page 14.

Options Available

** **Stop-and-Waste feature** is available. Add "SW" to the end of the catalogue number. Example: B44-666SW-Q-NL.

Padlock Wings - All valves are available with padlock wings. Add "W" to catalogue number.

2" Gate Valve Operating Nut is available for 1-1/4", 1-1/2" and 2" Ball Valves.

Lock Caps are available for 5/8" through 2" Ball Valves.

Handles available for Ball Valves are listed on page 9.

Angle Ball Meter Valves

With Quick Joint for Copper or Plastic Tube (CTS)



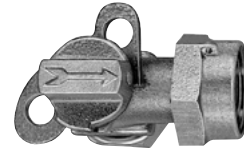
Quick Joint for Copper or Plastic Tubing (CTS) Inlet by Meter Swivel Nut Outlet

Catalogue Number	Description			Approx. Wt. Lbs.
	Valve Size	Service Line	Meter Size Outlet	
BA43-231W-Q-NL	5/8"	3/4"	5/8"	1.5
BA43-232W-Q-NL	5/8"	3/4"	5/8"x3/4" & 3/4"	1.6
BA43-332W-Q-NL	3/4"	3/4"	5/8"x3/4" & 3/4"	2.2
BA43-334W-Q-NL	3/4"	3/4"	1"	2.4
BA43-341W-Q-NL	3/4"	1"	5/8"	-
BA43-342W-Q-NL	3/4"	1"	5/8"x3/4" & 3/4"	2.4
BA43-344W-Q-NL	3/4"	1"	1"	2.5
BA43-444W-Q-NL	1"	1"	1"	3.4

NOTE: Ford recommends using insert stiffeners when using plastic pipe or tubing. Insert stiffeners are listed on page 14.

Padlock Wings on Angle Meter Valves

Inverted Key Meter Valves and Ball Meter Valves include padlock wings for locking the valve in a closed position. The "W" in the catalogue number indicates the valve is standard with padlock wings. Padlock holes are normally 7/16".



Top view of the valve in the open position.

Valve Handles

All handles are cast from waterworks brass (AWWA Standard C800 / ASTM B-62 UNS C83600 — 85-5-5-5). Handles may be attached by the customer using bolt holes already in the Tee Head of the valve or handles may be ordered factory-assembled on valves if specified.

Catalogue Number	Description and Usage of Handle	Approx. Wt. Lbs.
HB-2	Straight Lever Handle for 5/8" (3-3/8" long) Straight and Angle Ball Valves	.3
HB-34	Straight Lever Handle (4-3/8" long) for 3/4" and 1" Straight and Angle Ball Valves	.3
HB-34-RW	"Reclaimed Water" Straight Lever Handle (4-1/4" long) for 3/4" and 1" Straight and Angle Ball Valves	-
HB-34S	Straight Lever Handle (3-3/8" long) for 3/4" and 1" Straight and Angle Ball Valves	.3
HH-34	High Lever Handle for 3/4" and 1" Straight and Angle Ball Valves	.5
HP-4	Special Angled High Lever Handle for 3/4" and 1" Ball Valves for Pitometer Service	.4
HT-2	Combination Tee-head Cap and Lever Handle for 5/8" Ball Valves. Padlock Wing not available with HT-2 Handle. (Factory Assembled Only!)	-
HT-34	Combination Tee-head Cap and High Lever Handle for 3/4" and 1" Ball Valves. Padlock Wing not available with HT-34 Handle. (Factory Assembled Only!)	.5



HB-2 for 5/8" Ball Valves Straight and Angle



Tracer Wire / Thaw Wire

Ford Meter Box makes it easy to install a tracer wire or thaw wire by offering a Quick Joint nut with a wire terminal that has a set screw for a positive connection.

TW-Q = CTS Quick Joint nut with a tracer wire terminal (1/4" drilled hole)

THW-Q = CTS Quick Joint nut with a thaw wire terminal (7/16" drilled hole)

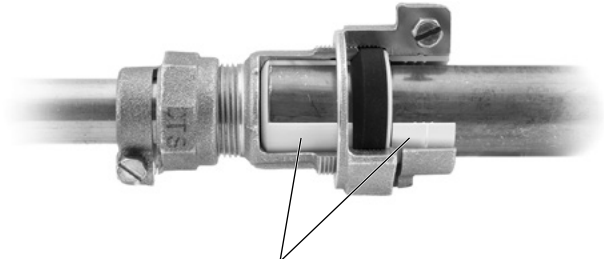
No-Contact Coupling (patent pending)

For Connecting Lead Lines to Copper, Iron Pipe or Plastic Tubing (CTS)

Ideal for connecting existing lead plumbing lines to other service line materials, the No-Contact Lead-Pak Coupling prevents direct contact of the lead plumbing line with other metallic water system components. This design mitigates the possibility of galvanic corrosion.

No-Contact Lead-Pak compression couplings employ proven Pack Joint performance and complement Ford's extensive line of waterworks coupling solutions.

A permanently installed plastic gripper ring and sleeve liner prevent direct contact between lead pipe material and other metallic water system components.

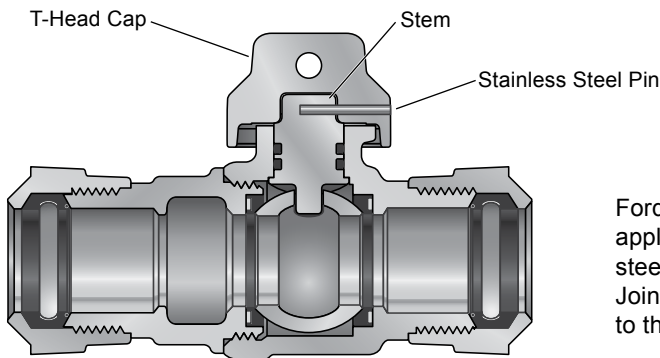


Permanently installed plastic gripper ring and sleeve liner prevent direct contact between lead pipe material and other metallic water system components

Catalogue Number	Description	Approx Wt. Lbs.
* Q11-33-Q31-23-NC-NL	5/8" dbl. extra strong lead (XXS) or 3/4" strong lead (S) x 3/4" female iron pipe thread	1.2
* Q14-33-Q34-23-NC-NL	5/8" dbl. extra strong lead (XXS) or 3/4" strong lead (S) x 3/4" cop. or plastic tubing (CTS)	1.5
* Q18-33-Q38-23-NC-NL	5/8" dbl. extra strong lead (XXS) or 3/4" strong lead (S) x 3/4" male iron pipe threads	1.2
Q22-33-NC-NL	3/4" extra strong lead (XS) x 3/4" flare copper	1.4
Q22-34-NC-NL	3/4" extra strong lead (XS) x 1" flare copper	1.9
Q24-33-NC-NL	3/4" extra strong lead (XS) x 3/4" cop. or plastic tubing (CTS)	1.3
Q24-34-NC-NL	3/4" extra strong lead (XS) x 1" cop. or plastic tubing (CTS)	1.5
Q28-33-NC-NL	3/4" extra strong lead (XS) x 3/4" male iron pipe threads	1.1
Q21-44-NC-NL	1" extra strong lead (XS) x 1" female iron pipe thread	1.8
Q22-44-NC-NL	1" extra strong lead (XS) x 1" flare copper	2.4
Q24-44-NC-NL	1" extra strong lead (XS) x 1" cop. or plastic tubing (CTS)	1.4
Q28-44-NC-NL	1" extra strong lead (XS) x 1" male iron pipe threads	1.7

*These items fit two types/sizes of lead pipe as shown in the description.

HST Heavy Stem Valve



Ford HST blowout-proof valves have been developed for heavy-duty applications by anchoring the stem to the t-head cap with a stainless steel pin. Available for 3/4" and 1" meter or curb ball valves with Pack Joint, Quick Joint, Grip Joint or Kitec/Q-Line connections. Add "HST" to the part number. Example: B44-444HST-Q-NL

Quick Joint Couplings for Copper or Plastic Tubing (CTS)

Female Iron Pipe Thread by Quick Joint (CTS)



C14-33-Q-NL

Catalogue Number	Description		Approx. Wt. Lbs.
	Female Iron Pipe	Q.J. for CTS	
STRAIGHT COUPLINGS			
C14-11-Q-NL	1/2"	1/2"	0.5
C14-33-Q-NL	3/4"	3/4"	0.6
C14-34-Q-NL	3/4"	1"	0.7
C14-43-Q-NL	1"	3/4"	0.7
C14-44-Q-NL	1"	1"	0.9
C14-54-Q-NL	1-1/4"	1"	0.9
C14-55-Q-NL	1-1/4"	1-1/4"	1.4
C14-66-Q-NL	1-1/2"	1-1/2"	2.3
C14-77-Q-NL	2"	2"	2.9
C14-87-Q-NL	2-1/2"	2"	4.6

Quick Joint for Copper or Plastic Tubing (CTS) Both Ends



C44-33-Q-NL

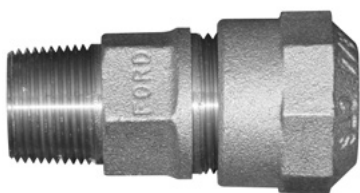


C44-33S-Q-NL

Catalogue Number	Description		Approx. Wt. Lbs.
	Q.J. for CTS	Q.J. for CTS	
STRAIGHT COUPLINGS			
C44-11-Q-NL	1/2"	1/2"	0.7
C44-13-Q-NL	1/2"	3/4"	0.8
C44-22-Q-NL	5/8"	5/8"	1.0
C44-23-Q-NL	5/8"	3/4"	1.0
C44-33-Q-NL	3/4"	3/4"	0.9
C44-34-Q-NL	3/4"	1"	0.9
C44-44-Q-NL	1"	1"	1.2
C44-55-Q-NL	1-1/4"	1-1/4"	2.1
C44-66-Q-NL	1-1/2"	1-1/2"	3.0
C44-77-Q-NL	2"	2"	4.5

Catalogue Number	Description		Approx. Wt. Lbs.
	Q.J. for CTS	Q.J. for CTS	
STRAIGHT COUPLINGS WITH INTERNAL STOP			
C44-13-Q-NL	3/4"	3/4"	0.9
C44-44S-Q-NL	1"	1"	1.5
C44-66S-Q-NL	1-1/2"	1-1/2"	2.6
C44-77S-Q-NL	2"	2"	3.4

Male Iron Pipe Thread by Quick Joint (CTS)



C84-33-Q-NL

Catalogue Number	Description		Approx. Wt. Lbs.
	Male Iron Pipe	Q.J. for CTS	
STRAIGHT COUPLINGS			
C84-11-Q-NL	1/2"	1/2"	0.5
C84-13-Q-NL	1/2"	3/4"	0.6
C84-31-Q-NL	3/4"	1/2"	0.6
C84-32-Q-NL	3/4"	5/8"	0.6
C84-33-Q-NL	3/4"	3/4"	0.6
C84-34-Q-NL	3/4"	1"	0.7
C84-43-Q-NL	1"	3/4"	0.7
C84-44-Q-NL	1"	1"	0.9
C84-45-Q-NL	1"	1-1/4"	1.2
C84-55-Q-NL	1-1/4"	1-1/4"	1.4
C84-66-Q-NL	1-1/2"	1-1/2"	2.1
C84-77-Q-NL	2"	2"	3.1

NOTE: Ford recommends using insert stiffeners when using plastic pipe or tubing. Insert stiffeners are listed on page 14.

Pack Joint Couplings

Male Iron Pipe Thread by Pack Joint for Iron Pipe



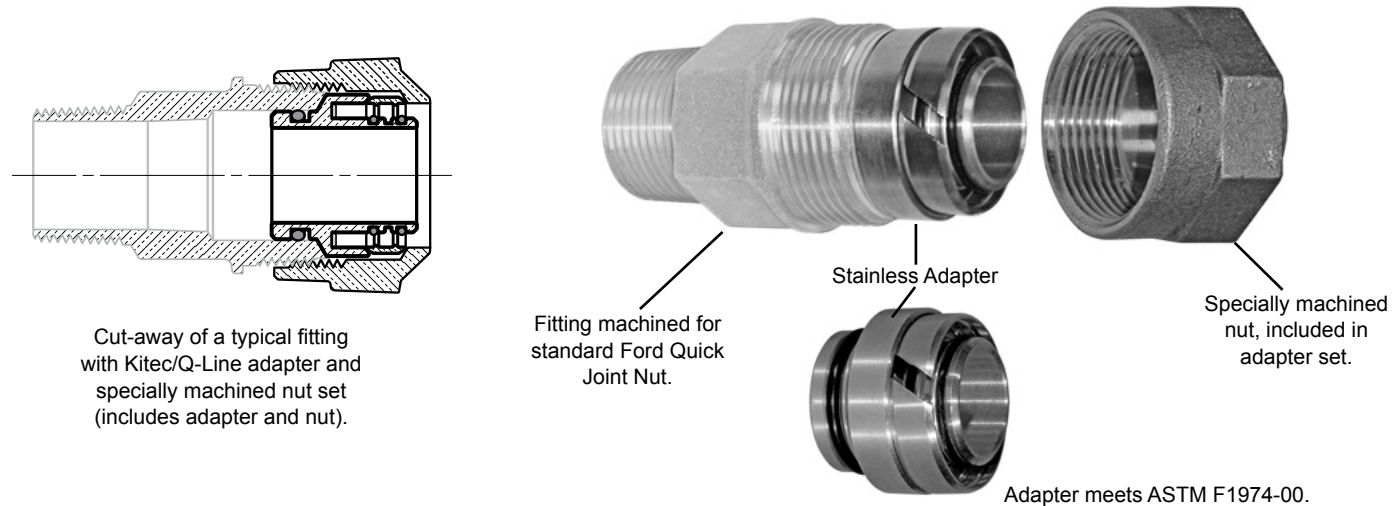
C85-33-NL

Catalogue Number	Description		Approx. Wt. Lbs.
	Male Iron Pipe	P.J. for Iron Pipe	
STRAIGHT COUPLINGS			
C85-11-NL	1/2"	1/2"	0.5
C85-31-NL	3/4"	1/2"	0.6
C85-33-NL	3/4"	3/4"	0.7
C85-34-NL	3/4"	1"	1.0
C85-43-NL	1"	3/4"	0.7
C85-44-NL	1"	1"	1.1
C85-55-NL	1-1/4"	1-1/4"	1.4
C85-66-NL	1-1/2"	1-1/2"	2.0
C85-77-NL	2"	2"	2.6

Ford Meter Box Fittings for use with Kitec/Q-Line Pipe

(AWWA C903-02 Polyethylene Aluminum Pipe for Municipal Services)

Ford Meter Box, the industry leader in water works brass valves and fittings, offers an adapter option on Ford fittings for connecting Kitec/Q-Line Polyethylene, Aluminum, Polyethylene (PE-AL-PE) pipe. **ANY** 3/4" or 1" Ford Quick Joint Coupling or Valve made for Copper Tube Size (CTS) material can be adapted for Kitec/Q-Line pipe.



How To Order

Replace any CTS Quick Joint fitting identifier in the Ford catalogue number with the character K. For example: The C84 in C84-33-Q-NL equals a MIP (Identifier = "8") x Quick Joint for Copper or Plastic Tubing (CTS) (Identifier = "4"). The C8K would equal MIP x Kitec/Q-Line.

EXAMPLE FOR COUPLINGS	
C8K-33-Q-NL	MIP x Kitec/Q-Line Connection
CKK-33-Q-NL	Kitec/Q-Line Connection on both ends
EXAMPLE FOR BALL VALVES	
B4K-333-Q-NL	CTS Quick Joint x Kitec/Q-Line Connection
BKK-333-Q-NL	Kitec/Q-Line Connection on both ends
EXAMPLE FOR CORPORATION STOPS	
FK1000-3-Q-NL	Key/Plug Style with Kitec/Q-Line Connection
FBK1000-3-Q-NL	Ballcorp Style with Kitec/Q-Line Connection
EXAMPLE FOR COPPERSETTERS	
VBHH92-15W-4K-33-Q-NL	Key/Plug Style with Kitec/Q-Line Connection

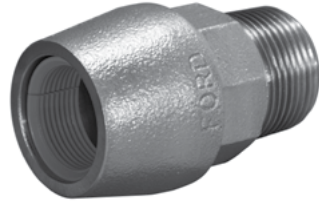
ADAPTER SETS FOR CONVERTING CTS QUICK JOINT CONNECTIONS TO KITEC/Q-LINE CONNECTIONS (INCLUDE ADAPTER AND SPECIALLY MACHINED NUT)

Size	Part Number	Description
3/4"	QJNK-3-NL	3/4" Kitec/Q-Line Adapter Set (includes adapter and nut)
1"	QJNK-4-NL	1" Kitec /Q-Line Adapter Set (includes adapter and nut)

Ultra-Tite Compression Fittings

For Polyethylene Pipe (PEP/IPS) or Polyethylene Tubing (PET/CTS)

Ford's Ultra-Tite compression fitting provides an immediate lock onto Polyethylene Pipe (PEP/IPS) or Polyethylene Tubing (PET/CTS) when inserted to the internal stop. This simple stab fitting is available on 3/4" and 1" couplings by adding "-U" to the part number.



PET/CTS ULTRA-TITE
(Red Gripper Ring)



PEP/IPS ULTRA-TITE
(White Gripper Ring)

Ultra-Tite Compression Fittings and Couplings

CATALOGUE NUMBER	DESCRIPTION		
C04-33-U	3/4" female copper flare	x	3/4" PET/CTS Ultra-Tite
C04-44-U	1" female copper flare	x	1" PET/CTS Ultra-Tite
C06-33-U	3/4" female copper flare	x	3/4" PEP/IPS Ultra-Tite
C06-44-U	1" female copper flare	x	1" PEP/IPS Ultra-Tite
C14-33-U	3/4" female iron pipe	x	3/4" PET/CTS Ultra-Tite
C14-44-U	1" female iron pipe	x	1" PET/CTS Ultra-Tite
C16-33-U	3/4" female iron pipe	x	3/4" PEP/IPS Ultra-Tite
C16-44-U	1" female iron pipe	x	1" PEP/IPS Ultra-Tite
C44-33-U	3/4" PET/CTS	x	3/4" PET/CTS Ultra-Tite
C44-44-U	1" PET/CTS	x	1" PET/CTS Ultra-Tite
C66-33-U	3/4" PEP/IPS	x	3/4" PEP/IPS Ultra-Tite
C66-44-U	1" PEP/IPS	x	1" PEP/IPS Ultra-Tite
C84-33-U	3/4" male iron pipe	x	3/4" PET/CTS Ultra-Tite
C84-44-U	1" male iron pipe	x	1" PET/CTS Ultra-Tite
C86-33-U	3/4" male iron pipe	x	3/4" PEP/IPS Ultra-Tite
C86-44-U	1" male iron pipe	x	1" PEP/IPS Ultra-Tite

Chamfer Tool Part Numbers:

PECT-3-CTS (3/4" PET/CTS)
PECT-4-CTS (1" PET/CTS)
PECT-3-IPS (3/4" PEP/IPS)
PECT-4-IPS (1" PEP/IPS)



Removal Tool Part Number:

UTRT-520200

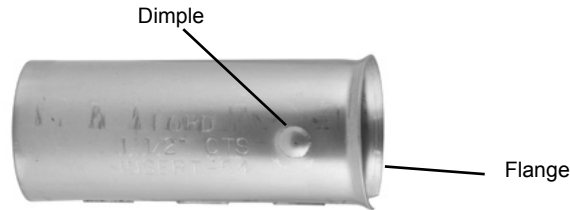


Nominal Size of Connection	Material	Tubing or Pipe O.D. Range (in.)	Tubing or Pipe Wall Thickness Range (in.)	Tubing or Pipe I.D. Range (in.)
3/4" CTS PE	Polyethylene PE	0.871 - 0.879	0.097 - 0.107	0.657 - 0.685
1" CTS PE	Polyethylene PE	1.120 - 1.130	0.125 - 0.137	0.846 - 0.880
3/4" IPS PE	Polyethylene PE	1.045 - 1.110	0.118 - 0.138	0.809 - 0.834
1" IPS PE	Polyethylene PE	1.329 - 1.399	0.150 - 0.170	1.029 - 1.059

CTS polyethylene (PE) per ASTM D-2737 - SDR-9
IPS polyethylene (PE) per ASTM D-2239 - SDR-7

The Ford Ultra-Tite is for applications on Polyethylene Pipe (PEP) or tubing (PET) only.
The use of a tubing insert is not required or recommended.

Insert Stiffeners



Ford insert stiffeners are a solid 304 tubular stainless steel design, dimpled and flanged to retain placement within the service line.

Before using Ford Insert Stiffeners, be sure inside tubing or pipe dimensions correspond to the tables below.

NOTE: Consult pipe or tubing manufacturer for specific installation requirements.

Ford recommends using insert stiffeners when using plastic pipe or tubing.

50 Series For Polyethylene Tubing (PET)

Catalogue Number	Nominal Size	PET ID
INSERT-51	3/4"	0.681
INSERT-52	1"	0.875
INSERT-53-72	1-1/4"	1.069
◆ INSERT-53-72-Q	1-1/4"	1.069
INSERT-54	1-1/2"	1.263
INSERT-55	2"	1.653
◆ INSERT-54-Q	1-1/2"	1.263
◆ INSERT-55-Q	2"	1.653

Inserts For OD Controlled PE 3408 High Density Polyethylene (HDPE)

Catalogue Number	Nominal Size and Pipe Type	DR	HDPE OD	Nominal ID
INSERT-51	3/4" CTS	9	0.875	0.68
INSERT-52	1" CTS	9	1.125	0.88
▲ INSERT-81-200	3/4" CTS	11	0.875	0.71
INSERT-53-72	1" IPS	11	1.315	1.055
INSERT-73-DR11	1-1/4" IPS	11	1.660	1.34
INSERT-74-DR11	1-1/2" IPS	11	1.900	1.53
INSERT-75-DR11	2" IPS	11	2.375	1.92

- ◆ These inserts are specially designed and required for Quick Joint fittings. They are not interchangeable with other compression fittings.
- ▲ INSERT-81-200 does not have dimples.

Dimension Comparison Table For Plastic, Copper and Galvanized Iron

Pipe or Tubing Type	SDR	psi	Control	OD						ID						
				1/2"	3/4"	1"	1-1/4"	1-1/2"	2"	1/2"	3/4"	1"	1-1/4"	1-1/2"	2"	
Copper	–	–	OD	.625	.875	1.125	1.375	1.625	2.125	–	–	–	–	–	–	
PET	PE3408	9	200	OD	.625	.875	1.125	1.375	1.625	2.125	–	.681	.875	1.069	1.263	1.653
PEP	PE3408	11.5	125	ID	–	–	–	–	1.978	2.537	–	–	–	–	–	
PVC	–	–	OD	.840	1.050	1.315	1.660	1.900	2.375	–	–	–	–	–	–	
Galv IP	–	–	OD	.840	1.050	1.315	1.660	1.900	2.375	–	–	–	–	–	–	

Ford Pack Joints for PVC are recommended for use only with Schedule 40 and Schedule 80 PVC.

Kornerhorns

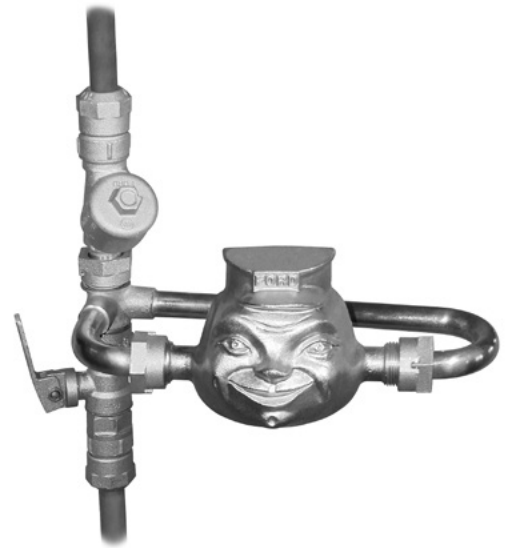
For Metering Existing Services

When installing meters in existing service lines, the Ford Kornerhorn is the setter of choice.

Thousands of installations in hundreds of metering programs have proven that the Kornerhorn saves time and money when setting water meters in basements and utility rooms.

The Kornerhorn is adaptable.

The Kornerhorn can position the water meter properly (horizontally) in a vertical pipe and, if necessary, in close quarters, such as in the corner of a basement or utility room. It can also position the meter properly in horizontal or sloping pipe. **The interchangeable Quick Joint or Pack Joint Assembly System eliminates the usual pipe survey prior to the meter installation.** Kornerhorn Inside Setters can be ordered in a quantity sufficient to complete the job along with a small representative number of Quick Joint or Pack Joint Assemblies. As the job progresses, experience will dictate the approximate quantity of each type of Quick Joint or Pack Joint necessary to complete the job and they can be ordered at a later date.



The heart of the Kornerhorn system is the removable Pack Joint Assembly.

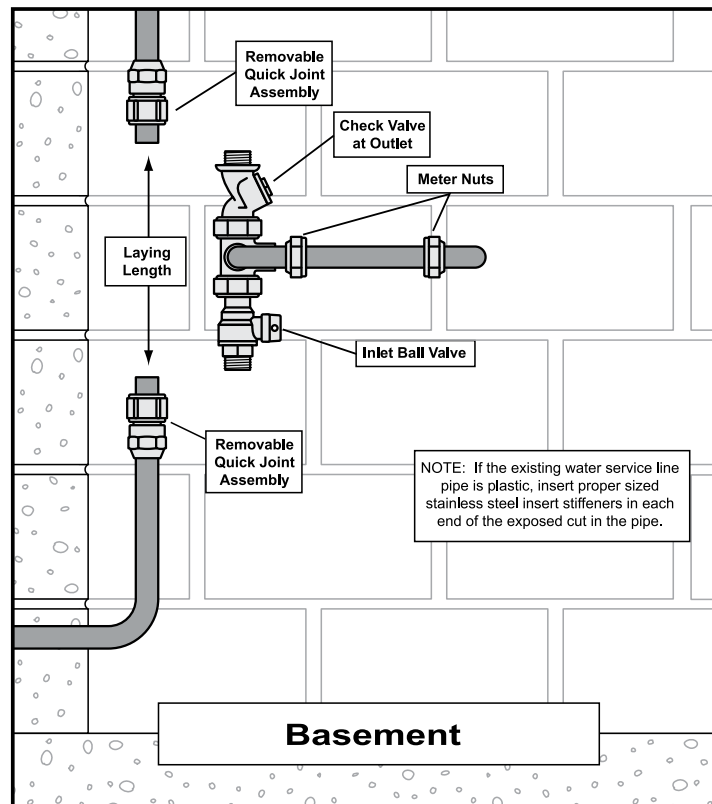
Using these removable Quick Joint or Pack Joint Assemblies, any Kornerhorn can be adapted to connect to iron pipe, copper tubing or plastic pipe, with no threading, flaring or soldering. Little or no changes need to be made in customer's plumbing. Meter couplings, pipe fittings, and electrical bonding devices are not required. Electrical bonding is achieved through the clamping/set screw mechanism of the Pack Joint Nut.



PJA4-13-Q-NL removable Quick Joint Assembly for Copper or Plastic Tubing.



PJA5-13-NL removable Pack Joint Assembly for Iron Pipe.



Kornerhorns

For Metering Existing Services



KH-2-NL Kornerhorn

Kornerhorns Only

Catalogue Number	Meter Size	Approx. Wt. Lbs.
KH-1-NL	5/8"	2.0
KH-2-NL	5/8"x3/4"	2.1
KH-3-NL	3/4"	2.2
KH-4-NL	1"	4.3

Detachable Valves for KH-1-NL, KH-2-NL and KH-3-NL Kornerhorns

Catalogue Number	Description	Approx. Wt. Lbs.
KH-VALVE-1-NL	Compression Kornerhorn Valve	1.3
KH-VALVE-1D-NL	Compression Kornerhorn Valve with drain	1.4
KHBV-1-NL	5/8" Kornerhorn Ball Valve	1.4
KHBV-1-D-NL	5/8" Kornerhorn Ball Valve with drain	1.5
KHBV-1-HB-2-NL	5/8" Kornerhorn Ball Valve with HB-2 handle	1.6
KHCV-1-NL	Kornerhorn Check Valve	1.2
KHHCV-1-NL	Kornerhorn Dual Check Valve	1.7
KHHCV-1D-NL	Kornerhorn Dual Check Valve with drain	1.9
KH-HHCH-1-NL	In-Line Accessible Cartridge Style Kornerhorn Dual Check Valve	1.9
KH-HHCH-1D-NL	In-Line Accessible Cartridge Style Kornerhorn Dual Check Valve with drain	-



KH-2-NL Kornerhorn shown with detachable Ball Valve, Dual Check Valve and Pack Joint Assemblies

Detachable Valves for KH-4-NL Kornerhorn

Catalogue Number	Description	Approx. Wt. Lbs.
KH-VALVE-4-NL	1" Kornerhorn Compression Valve	2.1
KH-VALVE-4D-NL	1" Kornerhorn Compression Valve with drain	2.2
B81-455-NL	1" Kornerhorn Ball Valve	2.9
B81-455-HB-34-NL	1" Kornerhorn Ball Valve with HB-34 Handle	3.1

NOTE: Detachable items will be packaged separately.

Kornerhorns with Integral Valves



KHVBHH-2-NL Kornerhorn with integral Angle Ball Valve and Angle Dual Check Valve

Catalogue Number Meter Size & Valve Type		Description		Approx. Wt. Lbs.
5/8"	5/8"x3/4"	Inlet Valve	Outlet Valve	
KHVB-1-NL	KHVB-2-NL	Ball	None	3.1
KHVBH-1-NL	KHVBH-2-NL	Ball	Single Check	4.2
KHVBHH-1-NL	KHVBHH-2-NL	Ball	Dual Check	4.3
KHVBHC-1-NL	KHVBHC-2-NL	Ball	Dual Cartridge Check	-
KHH-1-NL	KHH-2-NL	None	Single Check	-
KHHH-1-NL	KHHH-2-NL	None	Dual Check	-
KHHC-1-NL	KHHC-2-NL	None	Dual Cartridge Check	3.6

Setters with integral angle ball valve will be reduced port unless otherwise requested. Reduced port valves usually provide suitable water flow. (Add "-FP" to end of catalogue number for full port.)

Note: The inlet operating valve, on a single valve unit, is assembled on the short tube unless otherwise specified. This configuration will place the meter to the left of the plumbing as water flows up into the Kornerhorn. Units with a check valve are assembled with the check valve on the short tube unless otherwise specified. This configuration will place the meter to the right of the plumbing as water flows up into the Kornerhorn.

Kornerhorn Options

For Metering Existing Services

Quick Joint/Pack Joint Assemblies for KH-1-NL, KH-2-NL and KH-3-NL Kornerhorns (two required per Kornerhorn)



Catalogue Number	Description		Approx. Wt. Lbs.
	Size and Type of Existing Pipe	Compression Assembly Required	
PJA4-11-Q-NL	1/2" Copper or Plastic Tube	1/2" Q. J. for (CTS)	0.5
PJA4-13-Q-NL	3/4" Copper or Plastic Tube	3/4" Q. J. for (CTS)	0.5
PJA5-11-NL	1/2" Iron Pipe	1/2" P. J. for Iron Pipe	0.5
PJA5-13-NL	3/4" Iron Pipe	3/4" P. J. for Iron Pipe	0.5
PJA5-14-NL	1" Iron Pipe	1" P. J. for Iron Pipe	1.0
PJA5-15-NL	1-1/4" Iron Pipe	1-1/4" P. J. for Iron Pipe	1.7
† PJA5-16-AWT-NL	1-1/2" Iron Pipe	1-1/2" P. J. for Iron Pipe	2.3

† NOTE: This item is not one piece but is two adapter pieces assembled water tight.

NOTE: Ford recommends using insert stiffeners when using plastic pipe or tubing.

Pack Joint or Other Compression Assemblies for KH-4-NL Kornerhorn (two required per Kornerhorn)



Catalogue Number	Description		Approx. Wt. Lbs.
	Size and Type of Existing Pipe	P.J. Assembly Required	
▼* PJA4-44-C14-54-NL	1" Copper or Plastic Tube	1" P. J. for (CTS)	0.9
▼♦ PJA4-45-C14-55-NL	1-1/4" Copper or Plastic Tube	1-1/4" P. J. (CTS)	1.7
▼ PJA4-46-C14-56-NL	1-1/2" Copper or Plastic Tube	1-1/2" P. J. (CTS)	1.6
▼ PJA5-44-C15-54-NL	1" Iron Pipe	1" P. J. for Iron Pipe	1.1
▼ PJA5-45-C15-55-NL	1-1/4" Iron Pipe	1-1/4" P. J. for Iron Pipe	1.2
▼ PJA5-46-C15-56-NL	1-1/2" Iron Pipe	1-1/2" P. J. for Iron Pipe	1.9
▼* PJA6-44-C16-54-NL	1" Polyethylene Pipe	1" P. J. for P.E. Pipe	1.7
▼ PJA6-45-C16-55-NL	1-1/4" Polyethylene Pipe	1-1/4" P. J. for P.E. Pipe	1.6
▼ PJA6-46-C16-56IDR7-NL	1-1/2" Polyethylene Pipe	1-1/2" P. J. for P.E. Pipe	2.8
▼ PJA7-44-C17-54-NL	1" PVC Pipe	1" P. J. for PVC Pipe	1.4
▼ PJA7-45-C17-55-NL	1-1/4" PVC Pipe	1-1/4" P. J. for PVC Pipe	1.6
▼ PJA7-46-C17-56-NL	1-1/2" PVC Pipe	1-1/2" P. J. for PVC Pipe	2.4

* **Grip Joint** for CTS and PEP (3/4" & 1") can be ordered by adding "-G" to the catalogue number.

♦ Quick Joint can be ordered by adding "-Q" to this catalogue number.

☒ The Pack Joint assemblies can be used with 274 series coppersettlers.

NOTE: Ford recommends using insert stiffeners when using plastic pipe or tubing. Insert stiffeners are listed on page 14.

Pack Joint Ell Assemblies for KH-1-NL, KH-2-NL and KH-3-NL Kornerhorns (two required per Kornerhorn)



Catalogue Number	Description		Approx. Wt. Lbs.
	Size and Type of Existing Pipe	P.J. Assembly Required	
PJAL4-13-NL	3/4" Copper or Plastic Tube	3/4" P. J. for (CTS)	0.9
PJAL6-13-NL	3/4" Polyethylene Pipe	3/4" P. J. for P.E. Pipe	-

NOTE: Ford recommends using insert stiffeners when using plastic pipe or tubing. Insert stiffeners are listed on page 14.

Special Items for Kornerhorns (Available for KH-1-NL, KH-2-NL and KH-3-NL Kornerhorns only) (two required per Kornerhorn)

Catalogue Number	Description	Approx. Wt. Lbs.
PJAS-11-NL-NL	1/2" Solder Sleeve (includes KHSCW, solid copper washer)	0.3
PJAS-13-NL	3/4" Solder Sleeve (includes KHSCW, solid copper washer)	0.3
PJA8-13-NL	3/4" Male Iron Pipe Thread	0.3
PJA8-15-NL	1-1/4" Male Iron Pipe Thread	0.5
KHSCW	Solid Copper Washer (for positioning KH-Valve-1-NL)	-
ORING-650024-EP	Kornerhorn Body O-ring only (Formerly KH-O-Ring)	-
ORING-65021X2-EP	O-ring for Kornerhorn Valve Swivel Connection	-

Ford Plastic Pit Setter

For 5/8", 5/8"x3/4", 3/4", 1", 1-1/2" and 2" Meter Settings

Ford Plastic Pit Setters and Components are 100% made in the USA

The Ford Meter Box Plastic Pit Setter design positions the meter below the frost line and positions the meter near the top of the pit for easy meter access.



Accessories

Cast Iron Double Lid Covers



Cast Iron Single Lid Covers



Plastic Single Lid Covers



Insulating disc and lids
sold separately
see page 39 for details

Introduction

The setting of meters outdoors in covered pits is an idea that dates back to the late 19th century when Edwin Ford, founder of The Ford Meter Box Company, Inc., first utilized this principle to meter the town of Hartford City, Indiana. Mr. Ford's idea has been modified extensively over the intervening years, but the pit setting remains one of the most popular ways of installing meters.

Outdoor meter pit settings offer the utility a number of advantages, including easy access to the meter, protection and control of the meter setting device and a clear division of responsibility for maintaining the utility's and the customer's service line. However, cost considerations have led many utilities to install pit settings that have been less than satisfactory and which become maintenance and freeze-up problems.

Introduced in 1981, the Ford Plastic Pit Setter offers a real cost-saving alternative to the standard "build-your-own" pit setting. Constructed of high-quality 15", 18", 20" or 36" PVC pipe, the Plastic Pit Setter has the service lines attached firmly to the pit walls, with all the valves and meter coupling materials necessary to install the meter as part of the total package. Installation of the Ford Plastic Pit Setter is easy. Simply dig an appropriately sized hole, connect your inlet and outlet piping to the connections at the bottom of the box, place a cover on top, and complete the job of installing a meter.

In the pages that follow, we will describe the principles of a good meter setting device and offer engineering drawings of standard plastic pit type settings. We are not limited to the styles and sizes shown in this catalogue section. Our production methods allow us to custom build plastic pit settings for practically any conceivable requirement.

Principles of Meter Pit Design

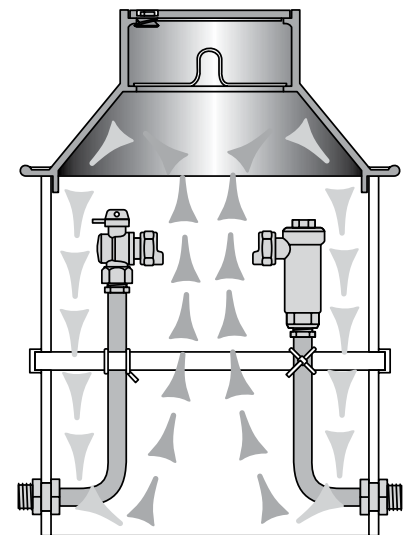
One of the most important jobs of a meter pit setting in northern climates is to prevent meter and service line freeze-ups during the winter months. Several factors affect freezing in meter pits. These are air temperature, snow cover, the type of soil, the temperature of the service water, and the frequency of customer water consumption. The theory of pit design is that the depth of the service shall be below that of the lowest frost line and the heat from the base of the meter pit shall circulate and keep the meter setting above it from freezing. If the base of the meter pit is above the frost line, the only thing that would keep the meter from freezing is the continuous use of the service during the winter months.

Not only should meter pits be deep, but they also should be sufficiently wide. Larger diameter pits may allow a greater loss of heat through the pit walls, but that is more than compensated for by the increased amount of warm air generated by warm soil exposed at the base of the pit. Furthermore, the large diameter provides greater clearance between the cold pit walls and the riser pipes. If these pipes are allowed to touch the walls, the pipes will freeze, the flow of water will be stopped, and meter and valve damage will likely result. In the Ford Plastic Pit Setter, the service lines are kept at a minimum of 2" from the pit wall, thus providing this important protection.

The top of the pit is equally important. In colder climates, a double lid cover such as our Wabash Cover is desirable, as it provides a dead air space between the top lid and the interior of the pit. This "dead air" acts as an insulator, retaining ground heat and keeping outside cold from entering. The Ford Plastic Pit Setter offers the Wabash Cover as an option, also available are single lid iron covers or single lid plastic covers for climates that are less severe. Most Ford covers are "hat shaped" (wider at the base than at the top) which exposes as little surface area as possible to the cold outside air. Flat cast iron covers, for mild climates, are also available. See Ford Catalogue Section D.

In summary, the basic points of meter pit design provided by Ford Plastic Pit Setters are as follows: (1) Keep the meter pit depth below the deepest frost penetration line; (2) Keep the meter pit diameter sufficiently large to provide a good base of warm soil as well as to prevent pipe from freezing due to "frost jump" from the pit walls; (3) Use a hat shaped meter pit cover, with an inner lid where necessary.

These pit setting principles have been proven in over a century of outdoor pit design. The Ford Plastic Pit Setter is designed around these conservative principles in order that you, the utility customer, will not be faced with the expense of frozen services and unhappy customers. Remember—don't cut corners with pit settings that are too shallow or too small in diameter.

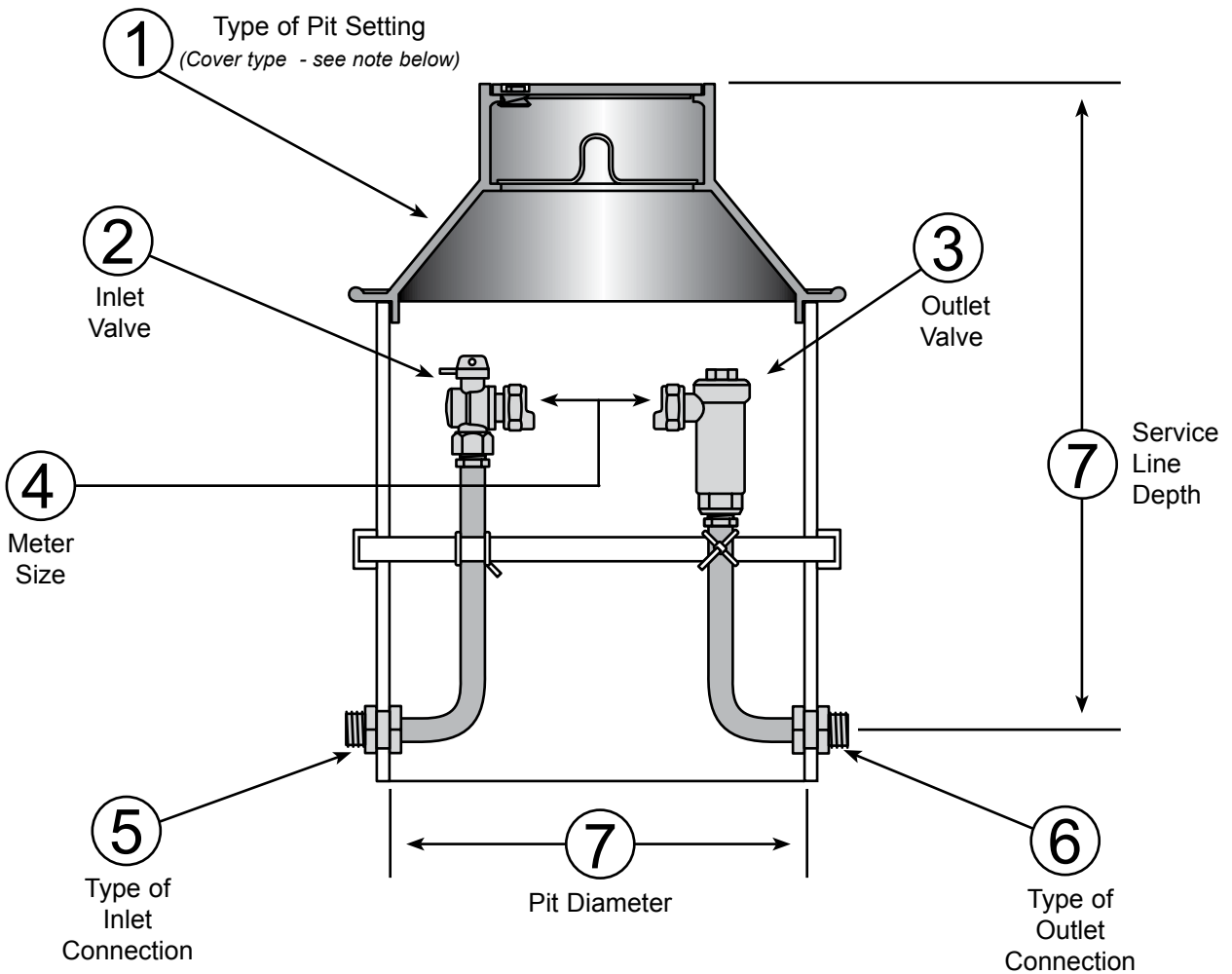


Plastic Pit Setter for Moderate to Cold Climates

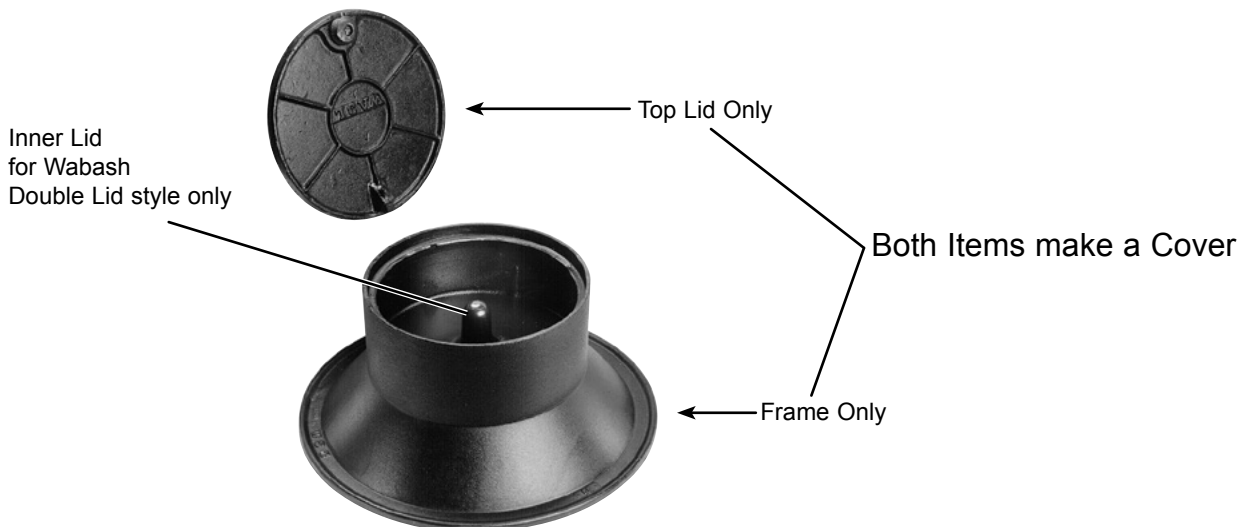
For 5/8", 5/8"x3/4", 3/4" and 1" Meters

How To Order A Plastic Pit Setter

See pages 22 & 23 for configuration and dimensional information.



NOTE: A wide variety of 18" and 20" covers can be purchased for Plastic Pit Setters. A complete selection of covers with their specifications and available options are listed in Ford Catalogue Section D and must be ordered separately. An abbreviated selection of covers is shown on pages 31 and 32 of this catalogue section.



Ford Plastic Pit Setter Numbering System

For Copper Riser Plastic Pit Setters. See page 36 for Coil Pit numbering system.

TYPE OF PLASTIC SETTER

- PS** = Standard for Single Lid Cover
- PD** = Standard for Double Lid Cover
- *PTS** = Tandem for Single Lid Cover
- *PTD** = Tandem for Double Lid Cover
- *PDS** = Dual Service for Single Lid Cover
- *PDD** = Dual Service for Double Lid Cover
- PM** = Pit Setter for Monitor Cover
(1-1/2" and 2" meter settings only)

* 20" pit recommended for 5/8"-3/4" meters
Not recommended for 1" meters

INLET VALVE TYPE

- **B** = Angle Ball Valve
- V** = Angle Key Valve
- ‡G** = Angle Compression Valve

METER SIZE

(INLET - OUTLET SIZE)

- 1** = 5/8" (3/4")
- 2** = 5/8" x 3/4" (3/4")
- 3** = 3/4" (3/4")
- 4** = 1" (1")
- 6** = 1-1/2" (1-1/2")
- 7** = 2" (2")

(The number in parentheses is the standard inlet-outlet size for a given meter size.)

PIT DIAMETER & DEPTH

- **18-36** = 18" x 36"
- **18-48** = 18" x 48"
- **18-60** = 18" x 60"
- **18-72** = 18" x 72"
- 20-36** = 20" x 36"
- 20-48** = 20" x 48"
- 20-60** = 20" x 60"
- 20-72** = 20" x 72"
- ***36HB-36** = 36" x 36"
- ***36HB-42** = 36" x 42"
- ***36HB-48** = 36" x 48"
- ***36HB-54** = 36" x 54"
- ***36HB-60** = 36" x 60"
- ***36HB-66** = 36" x 66"
- ***36HB-72** = 36" x 72"
- ***36HB-78** = 36" x 78"

** Not available for 3/4" or 1" meters

*** Available only for 1-1/2" and 2" meters.

Contact factory for other tile options.

PSBH-222-18-72-NL

OUTLET VALVE TYPE

- **B** = Angle Ball Valve
- V** = Angle Key Valve
- ‡G** = Angle Compression Valve
- H** = Angle Check Valve
- ΔHH** = Angle Cascading Dual Check Valve
- *** ‡HC** = Angle Cartridge Dual Check Valve
- ‡** Not available with 1-1/2" and 2" Pit Setters.
- Δ** 1" Angle Cascading Check Valve contains 3/4" internal components.

** The 5/8" port angle Ball Valve is a one-way directional valve designed for the inlet of the meter and should not be used as a customer shut-off on the customer side of the meter. 5/8"x3/4", 3/4" & 1" setters with angle ball valves will be reduced port unless otherwise specified. Reduced port valves usually provide suitable water flow. Add "-FP" to the end of catalogue number for full port.

*** Cartridges with enhanced chlorine/ chloramine resistance are available. Add "CR" to the end of the alpha code. Example: PSBHCCR-344-20-36-NL. Cartridge style dual checks not available with 1-1/2" and 2" Pit Setters

TYPES OF INLET-OUTLET (One End - Other End)

- ‡2** = Flare Copper Tube Nut
- ‡4** = Pack Joint for Plastic or Copper Tube (CTS)
- 8** = Male Iron Pipe Threads

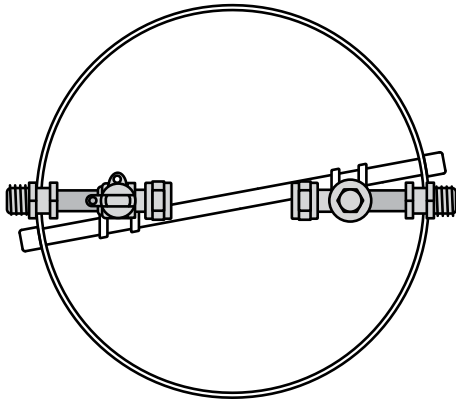
-NL = No-Lead Alloy

Parties responsible for monitoring and maintaining proper water system design must exercise full responsibility in understanding and upholding the full intent and scope of applicable lead laws.

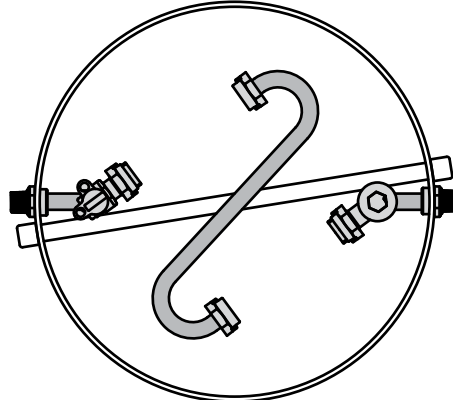
Plastic Pit Setter for Moderate to Cold Climates

For 5/8", 5/8"x3/4", 3/4" and 1" Meters (Configuration and Dimensional Information)

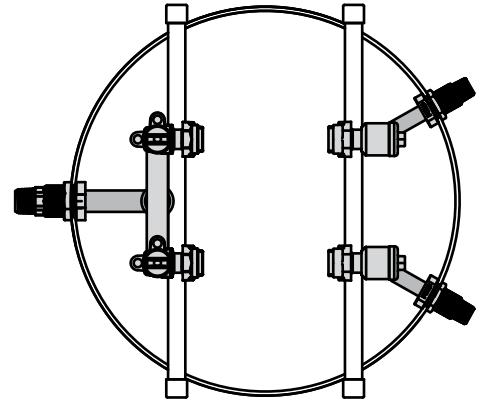
Plastic Pit Setter Design for Single Lid Type (Cover with a 4" depth)



Single Meter Setting



Tandem Setting



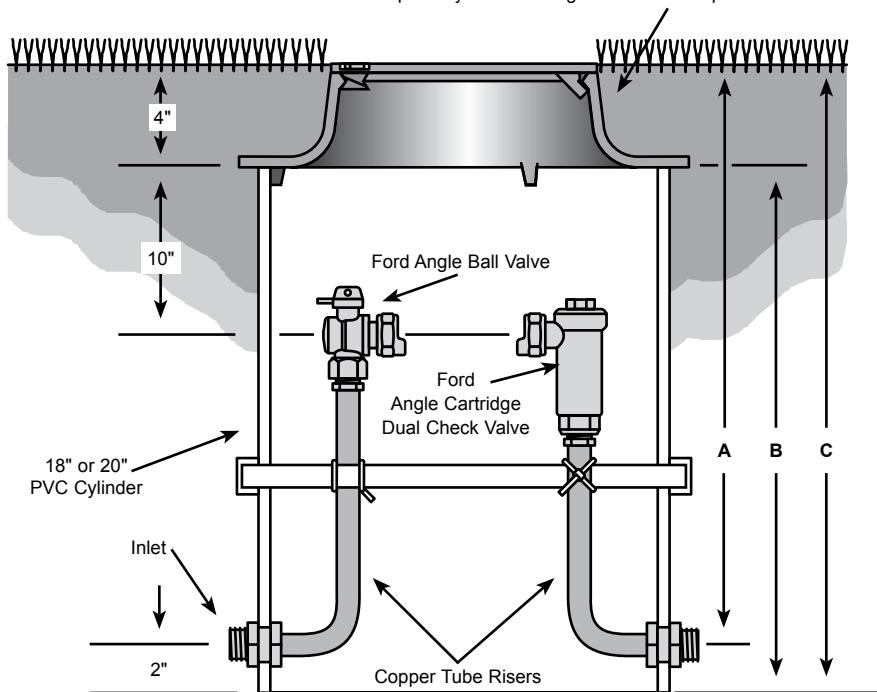
Dual Setting

Vertical Measurements

(Pit Diameter is 18" or 20")

Pit Depth	Service Line Depth "A"	PVC Cylinder Length "B"	Total Pit Depth "C"
3 Ft. Pit	36"	34"	38"
4 Ft. Pit	48"	46"	50"
5 Ft. Pit	60"	58"	62"
6 Ft. Pit	72"	70"	74"

Ford Type "A", "C", "X" or "PMBC-3" Single Lid Cover with a 4" depth. (Covers sold separately. See Catalogue Section D. A partial list is shown on pages 31 and 32.)

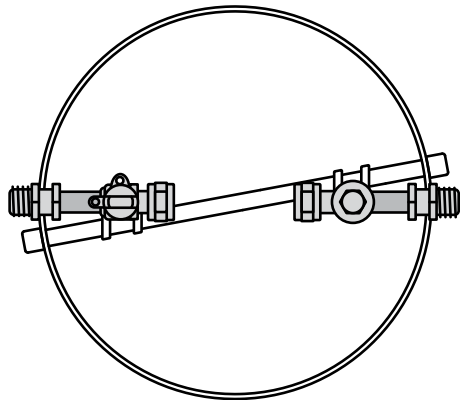


The drawing above shows a Plastic Pit Setter with optional Inlet Angle Ball Valve and Outlet Angle Cartridge Dual Check Valve.

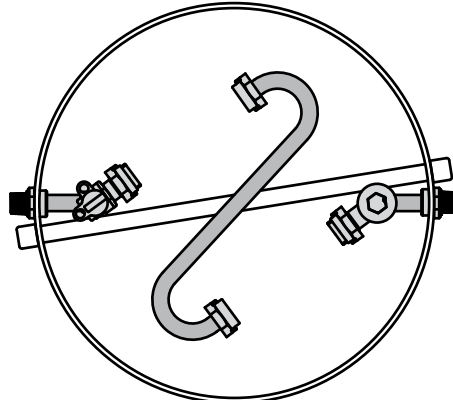
Plastic Pit Setter for Cold Climates

For 5/8", 5/8"x3/4", 3/4" and 1" Meters (Configuration and Dimensional Information)

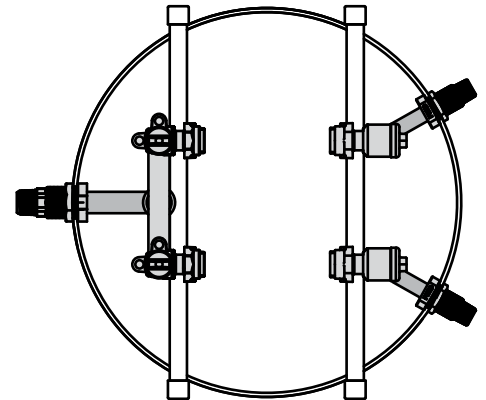
Plastic Pit Setter Design for Double Lid Type (Cover with a 10" depth)



Single Meter Setting



Tandem Setting



Dual Setting

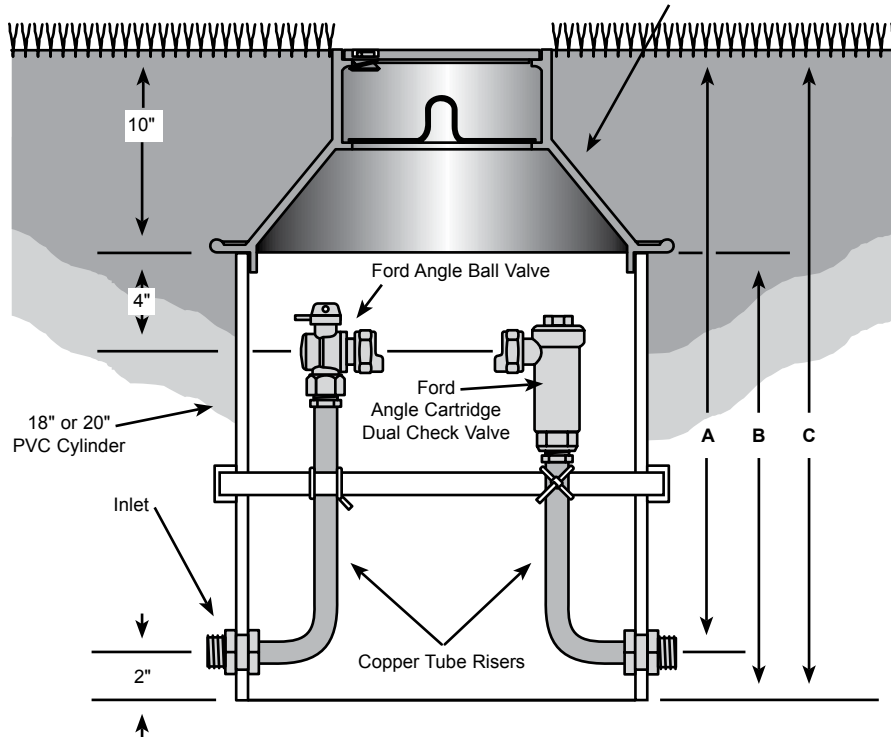
Vertical Measurements

(Pit Diameter is 18" or 20")

Pit Depth	Service Line Depth "A"	PVC Cylinder Length "B"	Total Pit Depth "C"
3 Ft. Pit	36"	28"	38"
4 Ft. Pit	48"	40"	50"
5 Ft. Pit	60"	52"	62"
6 Ft. Pit	72"	64"	74"

Ford Type "W" Wabash Double Lid Cover with a 10" depth. (Covers sold separately. See Catalogue Section D. A partial list is shown on pages 31 and 32.)

Special meter depth should be considered when using Double Lid Covers along with insulating discs. Contact factory for further information.



The drawing above shows a Plastic Pit Setter with optional Inlet Angle Ball Valve and Outlet Angle Cartridge Dual Check Valve.

Plastic Pit Setter for Moderate to Cold Climates

For 5/8" and 5/8"x3/4" Meters

How To Order A Plastic Pit Setter

1. What type of pit setting is required?

+

2. What type of inlet valve is required?

+

3. What type of outlet valve is required?

+ (Insert dash)

4. What meter size is required?

+

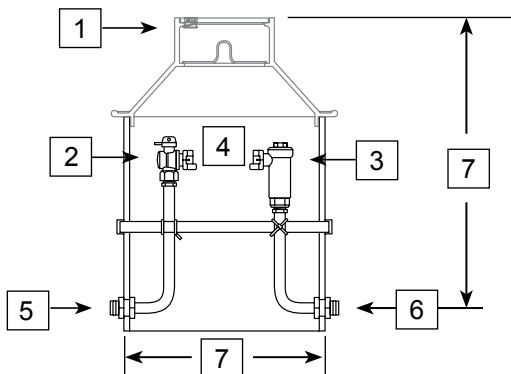
5. What type of inlet connection is required?
(see note below)

+

6. What type of outlet connection is required?
(see note below)

+ (Insert dash)

7. What pit diameter and depth is required?
(Depth is measured from ground level to service line.
The service line is 2" higher than bottom of pit setter.)



Setting Type	Code
Standard for Single Lid Cover	PS
Standard for Double Lid Cover	PD
*** Tandem for Single Lid Cover	PTS
*** Tandem for Double Lid Cover	PTD
*** Dual Service Line for Single Lid Cover	PDS
*** Dual Service Line for Double Lid Cover	PDD

Inlet Valve Type	Code
Angle Key Valve	V
▼ Angle Ball Valve	B
Angle Compression Valve	G
No Inlet Valve	-

Outlet Valve Type	Code
▼ Angle Ball Valve	B
Angle Key Valve	V
Angle Compression Valve	G
Angle Check Valve	H
Angle Dual Check Valve	HH
* Angle Cartridge Dual Check Valve	HC
No Outlet Valve	-

Meter Size	Code
5/8" Meter	1
5/8" x 3/4" Meter	2

3/4" Inlet Type	Code
Flared Copper	2
PET/CTS Pack Joint	4
◆ Male Iron Pipe	8

3/4" Outlet Type	Code
Flared Copper	2
PET/CTS Pack Joint	4
Male Iron Pipe	8

◆ 1" MIP inlet only on 5/8" x 3/4" Dual Setters

Pit Diameter and Depth	Smooth Wall Tile	Corrugated Tile
	Code	Code
18" x 36"	18-36-NL	18C-36-NL
18" x 48"	18-48-NL	18C-48-NL
18" x 60"	18-60-NL	18C-60-NL
18" x 72"	18-72-NL	18C-72-NL
20" x 36"	20-36-NL	**20C-36-NL
20" x 48"	20-48-NL	**20C-48-NL
20" x 60"	20-60-NL	**20C-60-NL
20" x 72"	20-72-NL	**20C-72-NL

Contact factory for other pit dimensions and types not listed.

* Cartridges available with enhanced chlorine/chloramine resistance. Add "CR" to the end of the alpha code. Example: PSBCHCR-288-20-36-NL.

Grip Joint for CTS and PEP can be ordered by adding "-G" to the catalogue number.

** Pitsetters manufactured from 20" corrugated tile require Ford iron covers for 21" ID Tile.

*** 20" pit diameter is recommended for Tandem and Dual Settings.

▼ 5/8"x3/4", 3/4" and 1" Setters with angle ball valve will be reduced port unless otherwise requested. Reduced port valves usually provide suitable water flow. (Add "-FP" to the end of the catalogue number for full port.) The 5/8" Port Angle Ball Valve is a one-way directional valve designed for the inlet side of the meter and should not be used as a customer shut-off on the customer side of the meter.

HOW TO ORDER A PLASTIC PIT SETTER :

Answer each question to create a catalogue number. The catalogue codes will build the **Plastic Pit Setter** that meets your setting requirements.

PART NUMBER EXAMPLE:

PSBH-222-18-72-NL = a standard single lid style plastic pit setter with an inlet angle ball valve, outlet angle check valve, 5/8"x3/4" meter, inlet connection for flared copper, outlet connection for flared copper and a pit diameter and depth of 18"x72".

A variety of inlet and outlet couplings for copper, PEP, PVC and lead are available. See catalogue section J. Engineering drawings are available for standard and/or custom pit setter designs.

Note: Inlet and outlet connections are 3/4" in size, for 5/8", and 5/8"x3/4" meter settings on 5/8" x 3/4" dual setters, inlet will be 1" with two 3/4" outlets, unless otherwise specified.

Female iron pipe by Pack Joint couplings are available for a variety of inlet/outlet combinations (see catalogue section J) and are sold separately.

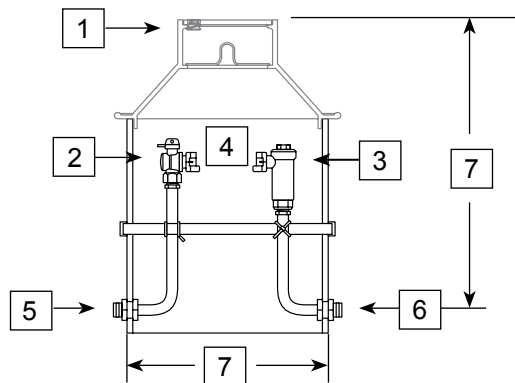
Covers are sold separately in catalogue section D.

Plastic Pit Setter for Moderate to Cold Climates

For 3/4" Meters

How To Order A Plastic Pit Setter

1. What type of pit setting is required?
- +
2. What type of inlet valve is required?
- +
3. What type of outlet valve is required?
- + (Insert dash)
4. What meter size is required?
- +
5. What type of inlet connection is required?
(see note below)
- +
6. What type of outlet connection is required?
(see note below)
- + (Insert dash)
7. What pit diameter and depth is required?
(Depth is measured from ground level to service line.
The service line is 2" higher than bottom of pit setter.)



Setting Type	Code
Standard for Single Lid Cover	PS
Standard for Double Lid Cover	PD
Tandem for Single Lid Cover	PTS
Tandem for Double Lid Cover	PTD

Inlet Valve Type	Code
Angle Key Valve	V
▼ Angle Ball Valve	B
Angle Compression Valve	G
No Inlet Valve	-

Outlet Valve Type	Code
▼ Angle Ball Valve	B
Angle Key Valve	V
Angle Compression Valve	G
Angle Check Valve	H
Angle Dual Check Valve	HH
* Angle Cartridge Dual Check Valve	HC
No Outlet Valve	-

Meter Size	Code
3/4" Meter	3

3/4" Inlet Type	Code
Flared Copper	2
PET/CTS Pack Joint	4
Male Iron Pipe	8

3/4" Outlet Type	Code
Flared Copper	2
PET/CTS Pack Joint	4
Male Iron Pipe	8

Pit Diameter and Depth	Smooth Wall Tile	**Corrugated Tile
	Code	Code
20" x 36"	20-36-NL	** 20C-36-NL
20" x 48"	20-48-NL	** 20C-48-NL
20" x 60"	20-60-NL	** 20C-60-NL
20" x 72"	20-72-NL	** 20C-72-NL

Contact factory for other pit dimensions and types not listed.

Grip Joint for CTS and PEP can be ordered by adding "-G" to the catalogue number.

* Cartridges with enhanced chlorine/chloramine resistance are available. Add "CR" to the end of the alpha code. Example: PSBHCCR-388-20-36-NL.

** Pitsetters manufactured from 20" corrugated tile require Ford iron covers for 21" ID Tile.

▼ 5/8"x3/4", 3/4" and 1" Setters with angle ball valve will be reduced port unless otherwise requested. Reduced port valves usually provide suitable water flow. (Add "-FP" to the end of the catalogue number for full port.) The 5/8" Port Angle Ball Valve is a one-way directional valve designed for the inlet side of the meter and should not be used as a customer shut-off on the customer side of the meter.

HOW TO ORDER A PLASTIC PIT SETTER :

Answer each question to create a catalogue number. The catalogue codes will build the **Plastic Pit Setter** that meets your setting requirements.

PART NUMBER EXAMPLE:

PSBH-322-20-72-NL = a standard single lid style plastic pit setter with an inlet angle ball valve, outlet angle check valve, 3/4" meter, inlet connection for flared copper, outlet connection for flared copper and a pit diameter and depth of 20"x72".

Note: Inlet and outlet connections are 3/4" in size, for 3/4" meter settings, unless otherwise specified.

Female iron pipe by Pack Joint couplings are available for a variety of inlet/outlet combinations (see catalogue section J) and are sold separately. Covers are sold separately in catalogue section D.

Plastic Pit Setter for Moderate to Cold Climates

For 1" Meters

How To Order A Plastic Pit Setter

1. What type of pit setting is required?

Setting Type	Code
Standard for Single Lid Cover	PS
Standard for Double Lid Cover	PD

+

2. What type of inlet valve is required?

Inlet Valve Type	Code
Angle Key Valve	V
▼ Angle Ball Valve	B
No Inlet Valve	-

+

3. What type of outlet valve is required?

Outlet Valve Type	Code
▼ Angle Ball Valve	B
Angle Key Valve	V
Angle Check Valve	H
* Angle Cartridge Dual Check Valve	HC
■ Angle Dual Check Valve	HH
No Outlet Valve	-

+ (Insert dash)

4. What meter size is required?

Meter Size	Code
1" Meter	4

+

5. What type of inlet connection is required?
(see note below)

1" Inlet Type	Code
Male Iron Pipe	8

+

6. What type of outlet connection is required?
(see note below)

1" Outlet Type	Code
Male Iron Pipe	8

+ (Insert dash)

7. What pit diameter and depth is required?
(Depth is measured from ground level to service line.
The service line is 2" higher than bottom of pit setter.)

Pit Diameter and Depth	Smooth Wall Tile	**Corrugated Tile
	Code	Code
20" x 36"	20-36-NL	** 20C-36-NL
20" x 48"	20-48-NL	** 20C-48-NL
20" x 60"	20-60-NL	** 20C-60-NL
20" x 72"	20-72-NL	** 20C-72-NL

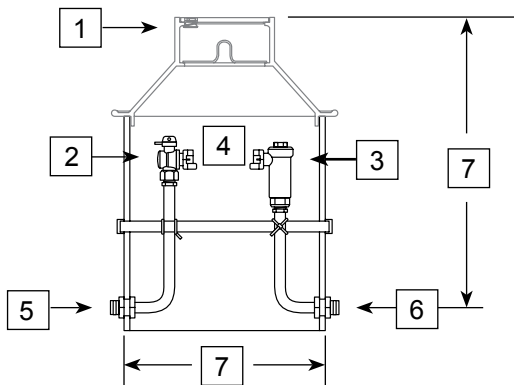
Contact factory for other pit dimensions and types not listed.

* Cartridges with enhanced chlorine/chloramine resistance are available. Add "CR" to the end of the alpha code. Example: PSBHCCR-488-20-36-NL.

** Pitsitters manufactured from 20" corrugated tile require Ford iron covers for 21" ID Tile.

▼ 5/8"x3/4", 3/4" and 1" Setters with angle ball valve will be reduced port unless otherwise requested. Reduced port valves usually provide suitable water flow. (Add "-FP" to the end of the catalogue number for full port.) The 5/8" Port Angle Ball Valve is a one-way directional valve designed for the inlet side of the meter and should not be used as a customer shut-off on the customer side of the meter.

■ Angle Cascading Dual Check Valves contain 3/4" internal components. This valve meets the ASSE flow requirements of a 1" valve. For a full port valve, order the cartridge style check valve.



HOW TO ORDER A PLASTIC PIT SETTER :

Answer each question to create a catalogue number. The catalogue codes will build the **Plastic Pit Setter** that meets your setting requirements.

PART NUMBER EXAMPLE:

PSBH-488-20-60-NL = a standard single lid style plastic pit setter with an inlet angle ball valve, outlet angle check valve, 1" meter, inlet connection for male iron pipe, outlet connection for male iron pipe and a pit diameter and depth of 20"x 60".

Note: Inlet and outlet connections are 1" in size, for 1" meter settings, unless otherwise specified.

Female iron pipe by Pack Joint couplings are used to provide 1" PET, PEP or PVC inlet/outlet combinations (see catalogue section J) and are sold separately.

Covers are sold separately in catalogue section D.

Plastic Pit Setters for 1½" and 2" Meters

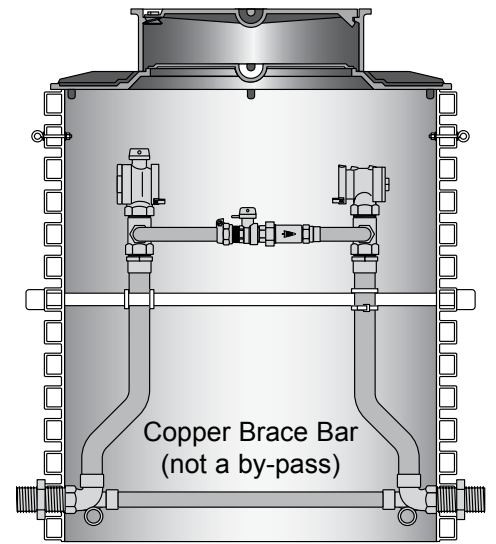
For Flanged Meter Settings

The Ford Plastic Pit Setter is extremely popular with water companies due to its lightweight, durable construction, and ease of installation. The Plastic Pit Setter for 1½" and 2" water meters extends this design to large meters. You can set larger meters with the same ease and assurance as smaller meters and receive the same benefits offered by our original Pit Setters.

The Ford Plastic Pit Setter for 1½" and 2" meters features a pit constructed from heavy duty corrugated plastic for lighter weight and extra strength. The 1½" and 2" sizes have male iron pipe threads on the inlet and outlet service line connections. A full range of connecting couplings for various types of pipe and tubing are available. A variety of inlet and outlet valves are also available. The risers are anchored to a sturdy PVC brace pipe to prevent shifting inside the setting. A copper brace bar (not a by-pass) spans the lower structure, supporting the entire Pit Setter and riser assembly, providing superb structural integrity.

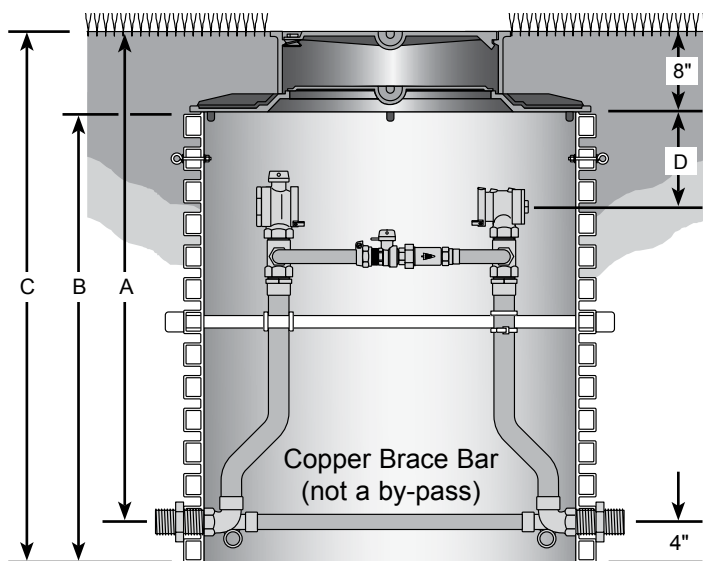
The pit has an open bottom to allow warm air from below the frost line to circulate within the pit setting, preventing freeze-ups. The pit is designed with adequate distance between the side wall and riser to prevent frost jump.

Ford Meter Box offers a special lid with precast holes for a remote electronic meter reading module. This lid is specially configured for this purpose, and it is manufactured so that the electronic meter reading module will seat against a flat surface. See *Catalog Section D* for details.



Shown with optional Dual Check Valve in By-Pass, optional Inlet Angle Ball Valve, and optional Outlet Angle Dual Check Valve.

Monitor Lid Pit Setter - Monitor Cover Shown (Configuration and Dimensional Information)



Shown with optional Dual Check Valve in By-Pass, optional Inlet Angle Ball Valve, and optional Outlet Angle Dual Check Valve.

Approximate Vertical Measurements

(Pit Diameter is 36")

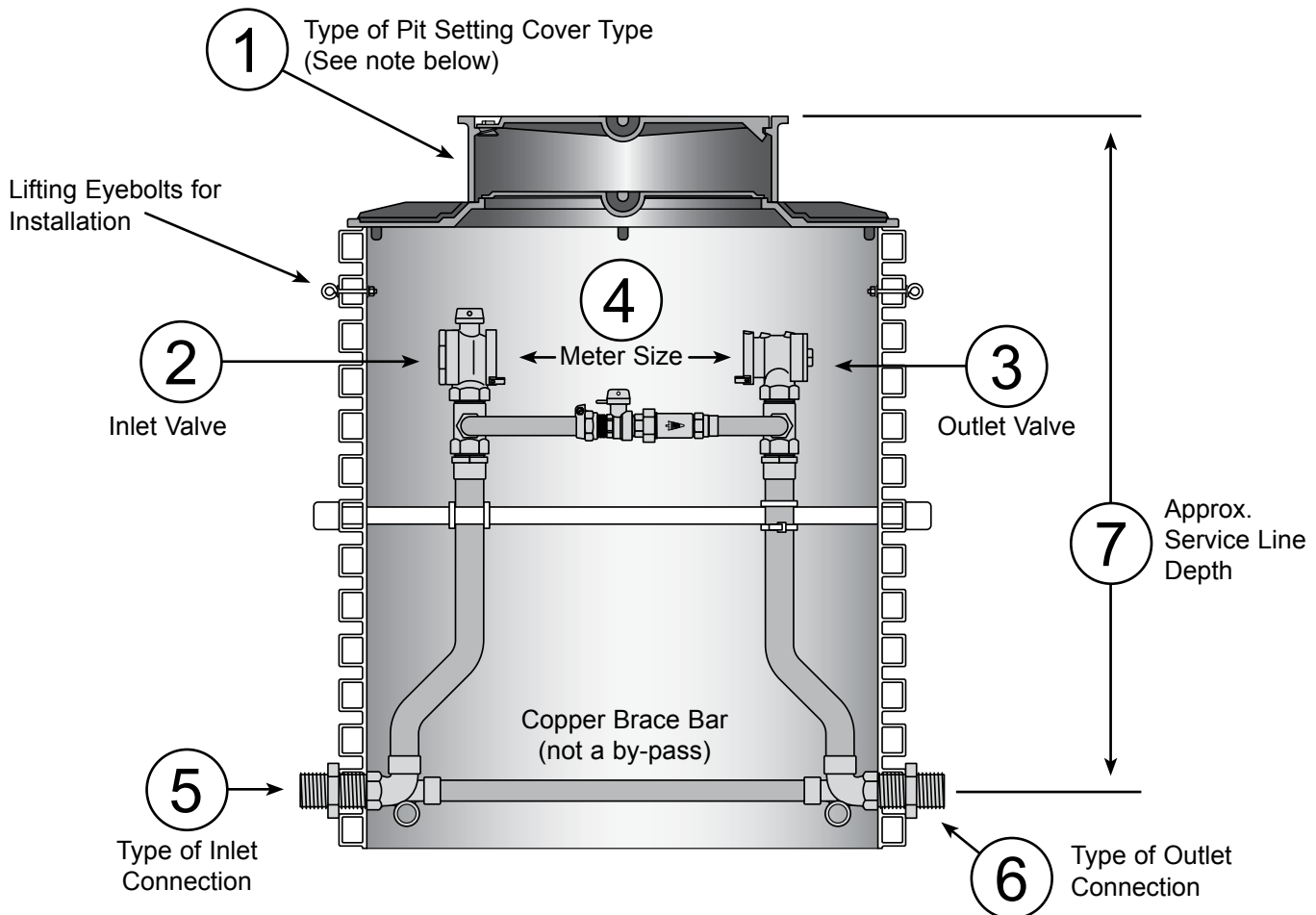
Service Line Depth	PVC Cylinder Length	Total Pit Depth	Tile to Centerline Depth
"A"	"B"	"C"	"D"
36"	32"	40"	**8"
42"	38"	46"	12"
48"	44"	52"	12"
54"	50"	58"	12"
60"	56"	64"	12"
66"	62"	70"	12"
72"	68"	76"	12"
78"	74"	82"	12"

** This dimension is 12" without a high bypass.

Plastic Pit Setters for 1½" and 2" Meters

For Flanged Meter Settings

See pages 29 & 30 for configuration and dimensional information.



Shown with optional Dual Check Valve in By-Pass, optional Inlet Angle Ball Valve, and optional Outlet Angle Dual Check Valve.

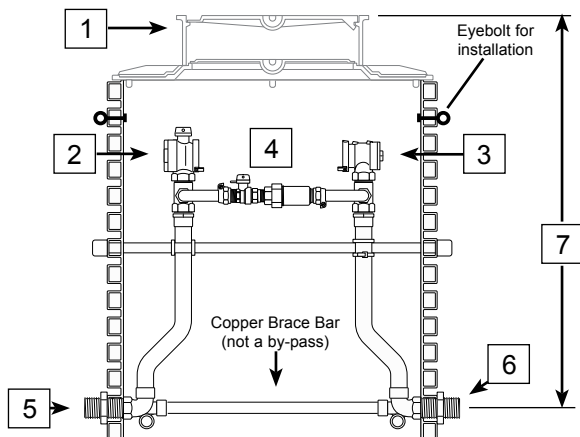
2" Pitsetters have by-pass opposite the side shown above.

NOTE: A wide variety of covers can be purchased for Plastic Pit Setters. A complete selection of covers with their specifications and available options are listed in Catalogue Section D and must be ordered and priced separately.

Plastic Pit Setters for 1½" and 2" Meters

For Flanged Meter Settings

1. What type of pit setting is required?
- +
2. What type of inlet valve is required?
- +
3. What type of outlet valve is required?
- + (Insert dash)
4. What meter size is required?
- +
5. What type of inlet connection is required?
(see note below)
- +
6. What type of outlet connection is required?
(see note below)
- + (Insert dash)
7. What pit depth is required?
(Depth is measured from ground level to service line.
The service line is 4" higher than bottom of pit setter.)



1-1/2" Pit Setter shown with Optional Dual Check Valve in By-Pass

HOW TO ORDER A PLASTIC PIT SETTER : Answer each question to create a catalogue number. The catalogue codes will build the Plastic Pit Setter that meets your setting requirements.

PART NUMBER EXAMPLE:

PMBHH-688-36HB-60-NL = a standard monitor cover style plastic pit setter with an inlet angle ball valve, outlet angle dual check valve, 1-1/2" meter, inlet connection for male iron pipe, outlet connection for male iron pipe, high by-pass and a pit diameter and depth of 36"x 60".

* Meter Flange S-Tube is supplied. Provide PRV length and connection type with order. PRV Adapters are sold separately.

▲ 36" depth not available on 2" Tandem Meter Setters with High By-pass.

Note: Inlet and outlet connections are 1-1/2" in size, for 1-1/2" meter settings, 2" for 2" meters.

Meter spacing is 13" for 1-1/2" meters and 17" for 2" meters.

Female iron pipe by Pack Joint couplings are used to provide PET, PEP or PVC inlet/outlet combinations (see catalogue section J) and are sold separately.

Extension rings are priced separately in catalogue section D.

Setting Type	Code
Standard for Monitor Cover	PM
Standard for Single Lid Cover	PS
Standard for Double Lid Cover	PD
* Tandem for Monitor Cover	PTM
* Tandem for Single Lid Cover	PTS
* Tandem for Double Lid Cover	PTD

Inlet Valve Type	Code
Angle Key Valve	V
Angle Ball Valve	B

Outlet Valve Type	Code
Angle Ball Valve	B
Angle Key Valve	V
Angle Check Valve	H
Angle Dual Check Valve	HH
No Outlet valve (no by-pass)	-

Meter Size	Code
1-1/2" Meter	6
2" Meter	7

Inlet Type	Code
Male Iron Pipe	8

Outlet Type	Code
Male Iron Pipe	8

Approx. Pit Diameter and Depth	Code
▲ 36" x 36"	36HB-36-NL
36" x 42"	36HB-42-NL
36" x 48"	36HB-48-NL
36" x 54"	36HB-54-NL
36" x 60"	36HB-60-NL
36" x 66"	36HB-66-NL
36" x 72"	36HB-72-NL
36" x 78"	36HB-78-NL

1-1/2" and 2" Pit Setters are standard with a high by-pass. (2" Pit Setters have the by-pass opposite side from the side shown.) The by-pass can be deleted by omitting the "HB" from the catalogue number. Example: PMBHH-688-36-60-NL.

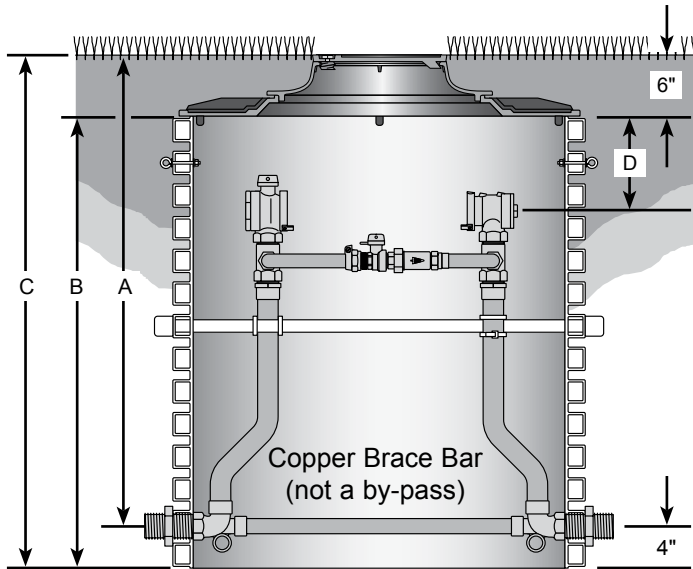
For optional dual cartridge check valve in by-pass, insert "HC" into the catalogue number. Example: PMBHH-688-36HBHC-60-NL.

Optional Test Port for dual check 1-1/2" and 2" Pit Setters is available. See catalogue section F for more information.

Plastic Pit Setters for 1½" and 2" Meters

For Flanged Meter Settings

Single Lid Pit Setter - Type C Cover and Extension Ring (EXT-5) Shown (Configuration and Dimensional Information)



Shown with optional Dual Check Valve in By-Pass, optional Inlet Angle Ball Valve, and optional Outlet Angle Dual Check Valve.

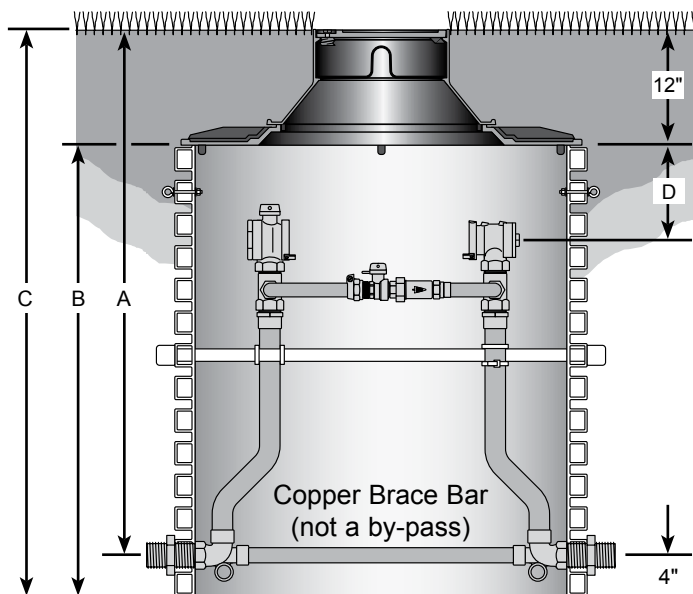
Approximate Vertical Measurements

(Pit Diameter is 36")

Service Line Depth	PVC Cylinder Length	Total Pit Depth	Tile to Centerline Depth
"A"	"B"	"C"	"D"
36"	34"	40"	**10"
42"	40"	46"	14"
48"	46"	52"	14"
54"	52"	58"	14"
60"	58"	64"	14"
66"	64"	70"	14"
72"	70"	76"	14"
78"	76"	82"	14"

** This dimension is 14" without a high bypass.

Double Lid Pit Setter - Wabash Cover and Extension Ring (EXT-5) Shown (Configuration and Dimensional Information)



Shown with optional Dual Check Valve in By-Pass, optional Inlet Angle Ball Valve, and optional Outlet Angle Dual Check Valve.

Approximate Vertical Measurements

(Pit Diameter is 36")

Service Line Depth	PVC Cylinder Length	Total Pit Depth	Tile to Centerline Depth
"A"	"B"	"C"	"D"
36"	28"	40"	**4"
42"	34"	46"	8"
48"	40"	52"	8"
54"	46"	58"	8"
60"	52"	64"	8"
66"	58"	70"	8"
72"	64"	76"	8"
78"	70"	82"	8"

** This dimension is 8" without a high bypass.

How to Order a Cover

Covers for Plastic Pit Setters are sold and listed separately in **Ford Catalogue Section D**. A modest selection of popular covers is listed below. For a complete listing of available lids and covers, along with installation instructions and precautions please refer to **Ford Catalogue Section D**.

Covers with a 10" depth and *inset* lids - The Wabash Double Lid Cover

Inset lids provide an installation that is flush with the surface of the sidewalk or lawn. The inner lid provides greater frost protection for meters. These cast iron covers are 10" in depth and include the lifter Worm Lock with a standard Pentagon Bolt unless a larger bolt is specified.



Wabash Double Lid Covers

Catalogue Number	Description		Approx. Wt. Lbs.
	Lid Size*	Tile I.D.	
Cover with Locking Lid			
W2	9-1/2"	18"	42.0
* W32	11-1/2"	18"	50.0
• * W3	11-1/2"	20"	55.0
Cover with Lockless Lid			
W32-LL	11-1/2"	18"	50.0
• W3-LL	11-1/2"	20"	55.0
Cover with Locking Electronic Meter Read Lid			
W2-T	9-1/2"	18"	42.0
W32-T	11-1/2"	18"	50.0
• W3-T	11-1/2"	20"	55.0
Cover with Locking Double Electronic Meter Read Lid			
W32-TT	11-1/2"	18"	50.0
• W3-TT	11-1/2"	20"	55.0
Extra Heavy Frame and Extra Heavy Locking Lid			
• W3H	11-1/2"	20"	89.0
Extra Heavy Frame and Extra Heavy Locking Electronic Meter Read Lid			
• W3H-T	11-1/2"	20"	89.0

- * Plastic lid and optional ERT bracket available. See Catalogue Section D for more information.
- Use with EXT-5 (extension ring) for use on 36" tile applications

Covers with a 4" depth and *inset* lids - The Type A Single Lid Cover

Inset lids provide an installation that is flush with the surface of the sidewalk or lawn. These cast iron covers are 4" in depth and include the lifter Worm Lock with a standard Pentagon Bolt unless a larger bolt is specified.



Type A Single Lid Covers

Catalogue Number	Description		Approx. Wt. Lbs.
	Lid Size*	Tile I.D.	
Type A Cover with Locking Lid			
A2	9-1/2"	18"	30.0
* A32	11-1/2"	18"	32.0
• * A3	11-1/2"	20"	37.0
Type A Cover with Lockless Lid			
A32-LL	11-1/2"	18"	32.0
• A3-LL	11-1/2"	20"	37.0
Type A Cover with Locking Electronic Meter Read Lid			
A2-T	9-1/2"	18"	30.0
A32-T	11-1/2"	18"	32.0
• A3-T	11-1/2"	20"	37.0
Type A Cover with Locking Double Electronic Meter Read Lid			
A32-TT	11-1/2"	18"	32.0
• A3-TT	11-1/2"	20"	37.0
Extra Heavy Frame and Extra Heavy Locking Lid			
• A3H	11-1/2"	20"	54.0
Extra Heavy Frame and Extra Heavy Locking Electronic Meter Read Lid			
• A3H-T	11-1/2"	20"	54.0

- * Plastic lid and optional ERT bracket available. See Catalogue Section D for more information.
- Use with EXT-5 (extension ring) for use on 36" tile applications

How to Order a Cover

Covers with a 4" depth and overlapping lids - The Type C Single Lid Cover

Overlapping style lid is primarily for installation in lawns. Locking lids have a standard pentagon bolt unless a larger size bolt is specified.



Type C Single Lid Covers

Catalogue Number	Description		Approx. Wt. Lbs.
	Lid Size*	Tile I.D.	
Cover with Locking Lid			
C12	8"	18"	27.0
* C32	11-1/2"	18"	29.0
C52	15"	18"	39.0
• * C3	11-1/2"	20"	34.0
Cover with Lockless Lid			
C32-LL	11-1/2"	18"	29.0
• C3-LL	11-1/2"	20"	34.0
Cover with Locking Electronic Meter Read Lid			
C12-T	8"	18"	27.0
C32-T	11-1/2"	18"	29.0
C52-T	15"	18"	39.0
• C3-T	11-1/2"	20"	34.0
• C53-T	15"	20"	47.0
Extra Heavy Frame with Extra Heavy with Locking Lid			
C32H	11-1/2"	18"	46.0
• C3H	11-1/2"	20"	52.0

- * Plastic lid and optional ERT bracket available. See Catalogue Section D for more information.
- Use with EXT-5 (extension ring) for use on 36" tile applications

Cover with a 4" depth and overlapping lid - The Ford PMBC-3 Plastic Meter Box Cover

The Ford PMBC-3 plastic meter box cover is an economical alternative to iron covers. Its light weight means reduced shipping costs and easier installation. Constructed of high strength polypropylene, which resists chemical attack and the weakening effect of ultraviolet light, the PMBC-3 fits both 18" and 20" meter pits. As plastic is an excellent insulator, the PMBC-3 provides superior protection against meter pit freeze-ups in all but the harshest climates.



PMBC-3 Plastic Meter Box Cover

Catalogue Number	Description		Approx. Wt. Lbs.
	Lid Size*	Tile I.D.	
Locking lid			
• ♦ PMBC-3	11"	18" and 20"	8.0

- * Lid size indicates pit access opening; lid diameter is approximately 1" larger.
- ♦ Optional ERT bracket add "-BR" to catalogue number. Example: PMBC-3-BR
- Use with EXT-5 (extension ring) for use on 36" tile applications

Covers for 1-1/2" and 2" Pit Setters - The Ford Monitor Cover

Monitor Covers are designed for use on large tiles where a large lid opening is desired. Each Monitor Cover consists of a flange casting to fit on the tile, a ring, which is centered in place on the flange by a circular bead, and the top lid with a Lifter Worm Lock. An optional plastic inner lid provides added protection against frost damage in cold climates. The Monitor Cover is not designed to withstand traffic, but heavier lids are available for driveway installations where only light traffic is likely.



Monitor Covers

Catalogue Number	Description		Approx. Wt. Lbs.
	Lid Size*	Tile I.D.	
Locking Lid			
MC-36	20"	36"	185.0
Lockless Lid			
MC-36-LL	20"	36"	185.0
Locking Lid with Plastic Inner Lid			
MC-36-MB	20"	36"	205.4
Locking Electronic Meter Reading Lid with Plastic Inner Lid			
MC-36-MB-T	20"	36"	205.2

- * Lid size indicates pit access opening; lid diameter is approximately 1" larger.

Smaller lids for 20" I.D. tile will fit 1-1/2" and 2" Pit Setters by using an EXT-5 extension ring, which adapts 20" covers to 36" tile.

The Ford Coil Pit Setter

For 5/8", 5/8"x3/4", 3/4" and 1" Meter Settings

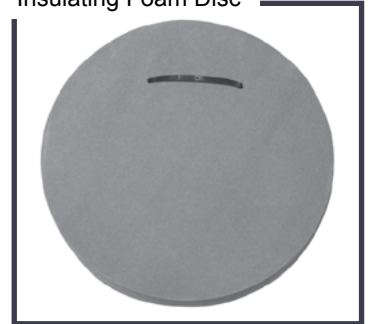
Ford Coil Pit Setters and Components are 100% made in the USA

The Ford Meter Box Coil Pit Setter design positions the meter below the frost line and allows the meter to be raised to the top of the pit for easy meter access.



Accessories

Insulating Foam Disc



Cast Iron Flat Lockless Lid



Driveway Cover
(frame and lid)



Insulating disc and lids
sold separately

The Ford Coil Pit Setter

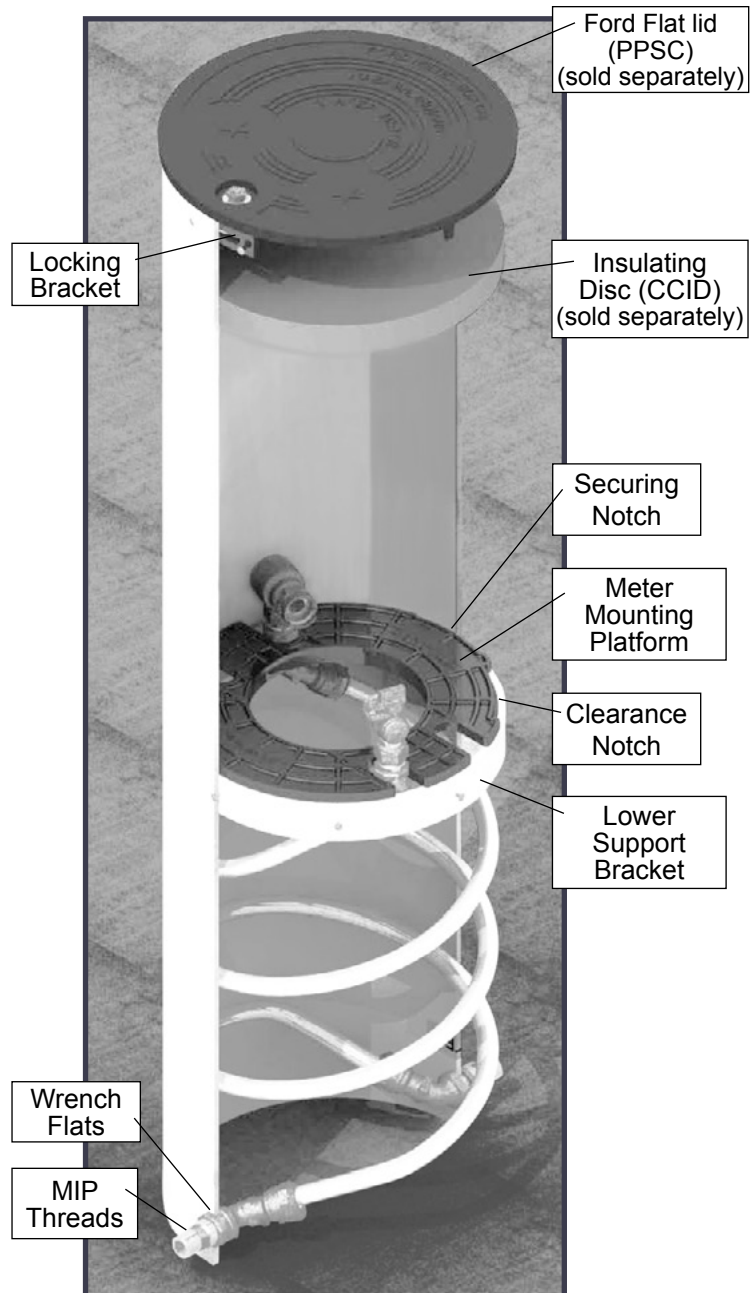
Installation Instructions

INSTALLATION INSTRUCTIONS FOR THE FORD COIL PIT SETTER

1. Dig trench to proper depth for Coil Pit Setter and lid, also allow for bottom support/drainage.
2. Place crushed gravel or an even layer of concrete blocks in the bottom of hole; if using a bottom plate, place in hole before installing the Coil Pit Setter.
3. Lower the pit setter in the hole so that the top edge is flush with grade level.
4. Connect the inlet and outlet service lines to the appropriate connection as marked on the tile by placing an additional wrench on the wrench flats of the MIP fitting to avoid unintentional twisting of the coil tubing.
5. Pressure test the Coil Pit Setter prior to backfilling to ensure all valves and joints are secured tightly and no leaks are detected.
6. **IMPORTANT:** Carefully backfill around the tile, 12" at a time, tamping each layer. Improper backfill may distort tile, resulting in immobility of the meter mounting platform.

PRECAUTIONS

1. Do not kink, fold, or over-stress the coil tube or damage may result. Avoid cuts, nicks and abrasions to the coil tube as they may affect service life and pressure integrity. Damaged coils should be replaced.
2. Be sure to lift the meter mounting platform just past both locking brackets. Rest the platform on the locking brackets and engage securing the notch of the platform onto one of the locking brackets. This secures the assembly while servicing the meter.
3. Ford's flat lid should be placed properly on the tile after each entry. Locking lid should have the lug and locking mechanism aligned within the tile's locking brackets to secure lock.
4. Meter mounting platform should be completely lowered to the lower support bracket when meter is not being serviced.
5. Store Coil Pit Setter in upright position, do not stack on its side.



The Ford Coil Pit Setter

Features

HOUSING:

- SDR 51 PVC PIP tile, per ASTM D2241
- Lightweight to provide easy installation
- Heights range from 36" to 96"
- Bottom is open to allow ground heat from below the frost line to circulate in the pit, preventing freeze-ups
- 15" diameter PVC tile (.300" thick)
 - 5/8" and 5/8"x3/4" single meter settings
 - 5/8" and 5/8"x3/4" tandem meter settings
- 18" diameter PVC tile (.360" thick)
 - 5/8", 5/8"x3/4" and 3/4" single, dual and tandem meter settings
 - 1" single and tandem meter settings

COIL:

- Coiled high-density polyethylene (HDPE) tubing, per ASTM D2737, SDR 9 CTS sized
- Complies with AWWA C901 (Note: Other comparable products in the market place may use polybutylene coil tubing and claim it meets AWWA C902 Standards.
Caution: AWWA has *withdrawn* Standard C902 and it is no longer a valid standard.)
- Coil is ANSI/NSF Standard 61 approved
- Working pressure 200 psiG. (This pressure rating should be adequate for any Ford Coil Pit Setter or comparable competitor's product, as some of the connecting valves have a lesser pressure rating.)
- Coils are formed by a proprietary process specific to each tile diameter and pit depth, thus allowing consistent mobility while retaining its original form and providing minimal stress to the coil
- Ford provides 12" coil extension length standard with each pit to accommodate risers for future grade changes

CONNECTIONS:

- Brass components that come in contact with potable water conform to AWWA Standard C800 (UNS NO C89833)
- Brass components that do not come in contact with potable water conform to AWWA Standard C800 (ASTM B62 and ASTM B584, UNS NO C83600 - 85-5-5-5)
- Inlet and outlet service line connections are MIP and are clearly labeled
- Angled 60° elbows provide minimal stress on the tubing and maintain proper coil orientation
- Quick Joint Nuts (QJN) with thin stainless steel inserts are used for connecting to the HDPE tubing allowing full water flow, unlike crimping techniques requiring a thick brass insert that reduces the tubing ID at every connection
- Special lubricants within the QJN allow it to rotate on the tubing without becoming loose or compromising the connection
- If ever necessary, removal of coil or replacement of connections is easy and inexpensive as it only requires replacing the QJN gasket, unlike crimping techniques that require special tools, complete replacement of tubing and the entire crimped connection

METER MOUNTING PLATFORMS:

- Single or tandem platforms are molded polypropylene with structural ribs for rigidity
- Dual setting platforms are made from e-coated aluminum
- Various product heights may require spacers for alignment purposes

PLATFORM ACCESS RODS (ordered separately):

- Carbon Steel wire ASTM A510 with black e-coat finish
- Constructed with opposing fingers that fit over meter and hook under meter spuds which securely holds platform and meter during vertical movement
- Reduces potential tube drag by allowing a counterclockwise movement of the meter assembly that slightly tightens coil, reducing coil diameter
- Available 36" up to 72" long

EXTENSION RINGS (ordered separately):

- SDR 51 PVC PIP tile, per ASTM D2241
- Available in 2" increments up to 12". (Coil pits are standard with an extra 12" of tubing to accommodate up to 12" extension)
- Three separate locating supports
- Support/lid bracket factory installed

BOTTOM PLATES:

- Available in stainless steel partial tile bottom for 15" (15.30 O.D.) and 18" (18.70 O.D.) heavy walled PVC
- Available in High Density Polyethylene (HDPE) solid bottom for 15" (15.30 O.D.) and 18" (18.70 O.D.) heavy walled PVC
- Drain holes may be field installed in solid pit bottom or at factory

BRASS VALVES:

- Brass components that come in contact with potable water conform to AWWA Standard C800 (UNS NO C89833)
- Brass components that do not come in contact with potable water conform to AWWA Standard C800 (ASTM B62 and ASTM B584, UNS NO C83600 - 85-5-5-5)
- All dual check valves are ASSE 1024 approved
- 1" full port ball valve settings shall have the ball valve rotated and a 120° elbow will be assembled to maintain meter alignment within the tile ID. 5/8", 5/8" x 3/4". 3/4" and 1" Coil Pit Setters with angle ball valves will be reduced port unless otherwise specified. Add "-FP" to the end of the catalogue number for full port.
- Brass valves and fittings will maintain their individual NSF/ANSI Standard 61 approval where applicable

IRON LIDS (Order separately):

- Locking and lockless lids are cast iron, per ASTM A48, Class 25
- Available with single or double 2" EMR holes
- Optional under-the-lid AMR plastic mounting plate
- Not for use with Coil Pit Driveway Covers below

IRON DRIVEWAY COVERS (Order separately):

- Load rating of 25,000 pounds
- Standard Ford worm latch with Pentagon Bolt
- Mounting wide cast lugs used in place of mounting bracket
- Available with electronic meter read feature (2" hole), -T or -TT
- Not for use with standard coil pit flat iron lid

INSULATING DISC (Order separately):

- 1-1/2" - 6" thick, minimum R-value 6.0 - 12.0
- Closed-cell polyethylene foam resists moisture absorption
- Provides extra protection against meter freeze-ups
- Plastic tie strap handle to assist in disc removal

The Ford Coil Pit Setter

For 5/8", 5/8"x3/4", 3/4" and 1" Meter Settings

Ford Coil Pit Setter Numbering System

TYPE OF PLASTIC COIL PIT SETTER
 PFC = Standard Single Setting
 PDFC = Dual Setting
 PTFC = Tandem Setting

METER SIZE (INLET - OUTLET SIZE)
 1 = 5/8" (3/4")
 2 = 5/8" x 3/4" (3/4")
 3 = 3/4" (3/4")
 4 = 1" (1")
 (The number in the parentheses is the standard inlet-outlet size for a given meter size.)

DEPTH
 36"
 42"
 48"
 54"
 60"
 66"
 72"
 78"
 84"
 90"
 96"

INLET VALVE TYPE
 V = Angle Key Valve
 *B = Angle Ball Valve

OUTLET VALVE TYPE
 V = Angle Key Valve
 * B = Angle Ball Valve
 H = Angle Check Valve
 HH = Angle Cascading Dual Check Valve
 ** HC = Angle Cartridge Dual Check Valve (on 1" only)
 L = ELL (No Valve)

PFCBHH-288-15-72A-FP-NL

TYPE OF INLET - OUTLET
8 = Male Iron Pipe Threads

TILE DIAMETER
15 = 15"
18 = 18"

FULL PORT BALL VALVE

Optional 1" Tubing and MIP Service Connections
 for 5/8", 5/8" x 3/4" and 3/4" Setters - NOT AVAILABLE on 1" tiles or dual settings

-NL = No-Lead Alloy

* The 5/8" Port Angle Ball Valve is a one-way directional valve designed for the inlet side of the meter and should not be used as a customer shut-off on the customer side of the meter. 5/8"x3/4", 3/4" & 1" setters with angle ball valves will be reduced port unless otherwise specified. Reduced port valves usually provide suitable water flow. Add "-FP" to end of catalogue number for full port.

** 1" cartridges with an enhanced chlorine/chloramine resistance are available. Insert "CR" at the end of the alpha code.
 Example: PFCBHCCR-488-18-60-NL.

If PRV lengths are outside of range (see chart on page 22) or have connections other than FNPT. Contact factory for price and availability.

Parties responsible for monitoring and maintaining proper water system design must exercise full responsibility in understanding and upholding the full intent and scope of applicable lead laws.

STANDARD SPECIFICATIONS	15" Diameter PVC Tile (.300" Thick)	18" Diameter PVC Tile (.360" Thick)
SETTING TYPE		
5/8" Single Setting	X	X
5/8" Tandem Setting	X	X
5/8" Dual Setting		X
5/8" x 3/4" Single Setting	X	X
5/8" x 3/4" Tandem Setting	X	X
5/8" x 3/4" Dual Setting		X
3/4" Single Setting		X
3/4" Tandem Setting		X
3/4" Dual Setting		X
*1" Single Setting		X
*1" Tandem Setting		X
INLET AND OUTLET SERVICE LINE CONNECTIONS		
3/4" Coil Tubing with 3/4" MIP	X	X
1" Coil Tubing with 1" MIP inlet with 3/4" MIP outlets & 3/4" tubing (Dual Pits Only)		X
1" Coil Tubing with 1" MIP (Standard on 1" Setters. Add "A" to all other meter sizes)		X
COIL TUBING (HDPE 3408) ASTM D2737 200 PSI		
3/4" Tubing	X	X
1" Tubing	X	X
ADJUSTABLE METER PLATFORM PLATE		
All settings	X	X
SUPPORT BRACKETS		
All settings	X	X
INSULATION DISC		
1-1/2" - 6" thickness	X	X
CAST IRON LID		
Locking	X	X
Lockless	X	X
Cast Iron Covers (Standard iron lid will not fit frame)	X	X
COIL PIT SETTER HEIGHT		
36" up to 96"	X	X

* 1" Angle Cascading Dual Check Valve contains 3/4" components.

The Ford Coil Pit Setter

For 5/8", 5/8"x3/4", 3/4" Meter Settings

15" Diameter Coil Pit Setter with Single or Tandem Settings for 5/8", or 5/8" x 3/4" Meters

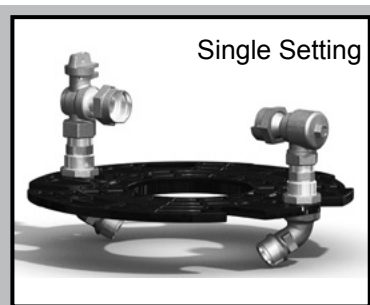
Setting Type	Code
Standard Coil Pit Setter (flat lid ordered separately)	PFC
Tandem Coil Pit Setter (flat lid ordered separately)	PTFC
Inlet Valve Type	
Angle Key Valve	V
Angle Ball Valve (reduced port)	B
* Full Port Angle Ball Valve (see page 53)	⊗ B (-FP-R)
Outlet Valve Type	
Angle Key Valve	V
Angle Ball Valve (reduced port) (see page 53)	⊗ ⊗ B
* Full Port Angle Ball Valve (see page 53)	⊗ B (-FP-R)
Angle Check Valve	H
Cascading Angle Dual Check Valve (ASSE)	HH
EII (no valve)	L
Meter Size	
5/8"	1
5/8" x 3/4"	2
Type of Inlet/Outlet Service Connection	
3/4" MIP x 3/4" MIP with 3/4" tubing	88
Pit Diameter and Depth	
15" x 36"	15-36-NL
15" x 42"	15-42-NL
15" x 48"	15-48-NL
15" x 54"	15-54-NL
15" x 60"	15-60-NL
15" x 66"	15-66-NL
15" x 72"	15-72-NL
15" x 78"	15-78-NL
15" x 84"	15-84-NL
15" x 90"	15-90-NL
15" x 96"	15-96-NL

Example: PFCBHH-288-15-54-NL

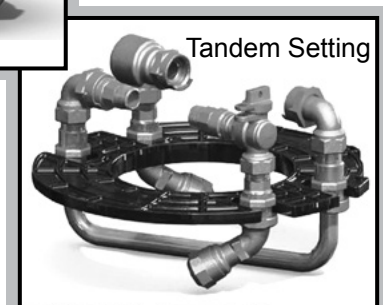
Note: Regulator adapters are furnished with standard coil pits. For PRV lengths with end connections other than FNPT or lengths outside of range, see chart below. Contact factory for price and availability.

Coil Pit setters with a ball valve inlet and a ball valve outlet are not recommended on 15" tile, using an 18" tile is advised. The 5/8" port angle ball valve should not be used as a customer shut-off on the customer side of the meter.

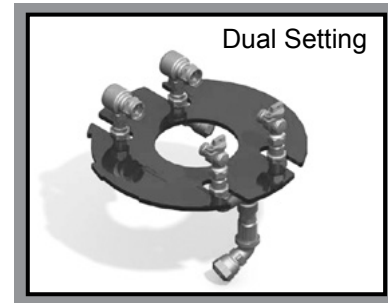
*5/8"x3/4" setters with angle ball valves will be reduced port unless otherwise requested. Reduced port valves usually provide suitable water flow. Add "-FP-R" to end of catalogue number for full port. Full port ball valves shall have a 360° tee-head rotation. Example: PFCBH-288-15-48-FP-R-NL



Single Setting



Tandem Setting



Dual Setting

18" Diameter Coil Pit Setter with Dual Settings for 5/8", 5/8" x 3/4" or 3/4" Meters

Setting Type	Code
Dual Setting (flat lid ordered separately)	PDFC
Inlet Valve Type	
Angle Key Valve	V
Angle Ball Valve (reduced port)	⊗ B
**Full Port Angle Ball Valve (see page 53)	⊗ B (-FP)
Outlet Valve Type	
Angle Key Valve	V
Angle Ball Valve (reduced port) (see page 53)	⊗ ⊗ B
**Full Port Angle Ball Valve (see page 53)	⊗ B (-FP)
Angle Check Valve	H
Cascading Angle Dual Check Valve (ASSE)	HH
EII (no valve)	L
Meter Size	
5/8"	1
5/8" x 3/4"	2
**3/4"	3
Type of Inlet/Outlet Service Connection	
1" MIP Inlet x (2) 3/4" MIP Outlet with 3/4" tubing	88
Pit Diameter and Depth	
18" x 42"	18-42-NL
18" x 48"	18-48-NL
18" x 54"	18-54-NL
18" x 60"	18-60-NL
18" x 66"	18-66-NL
18" x 72"	18-72-NL
18" x 78"	18-78-NL
18" x 84"	18-84-NL
18" x 90"	18-90-NL
18" x 96"	18-96-NL

Example: PDFCBHH-288-18-48-NL

⊗ See next page for key

Note: Regulator adapters are furnished with standard coil pits. For PRV lengths with end connections other than FNPT or lengths outside of range, see chart below. Contact factory for price and availability.

** Full port ball valves for 3/4" dual setters shall have a 360° rotation.

Example: PDFCBHH-388-18-42-FP-R-NL

Custom Coil Pit Setters are available, contact factory.

Standard Coil Pitsetter PRV Length Range			
Tile Size and Meter Settings	Min	Max	
5/8" Meter Setting			
15" Tile	4-1/4"	5-1/4"	
15" Tile w/Full port ball valve	3-1/2"	4-1/2"	
5/8" x 3/4" Meter Setting			
15" Tile	4"	4-3/4"	
15" Tile w/Full port ball valve	3-3/8"	4-1/8"	
18" Tile	4-1/2"	5-3/4"	
18" Tile w/Full port ball valve	3-7/8"	4-7/8"	
3/4" Meter Settings			
18" Tile	4-5/8"	6-5/8"	
18" Tile w/Full port ball valve	4-1/8"	6-1/8"	
1" Meter Settings			
18" Tile	4-1/4"	4-1/4"	
18" Tile w/Full port ball valve	3-1/2"	3-3/4"	

PRV lengths with connections other than FNPT or lengths outside of the range; please contact factory for price and availability.

The Ford Coil Pit Setter

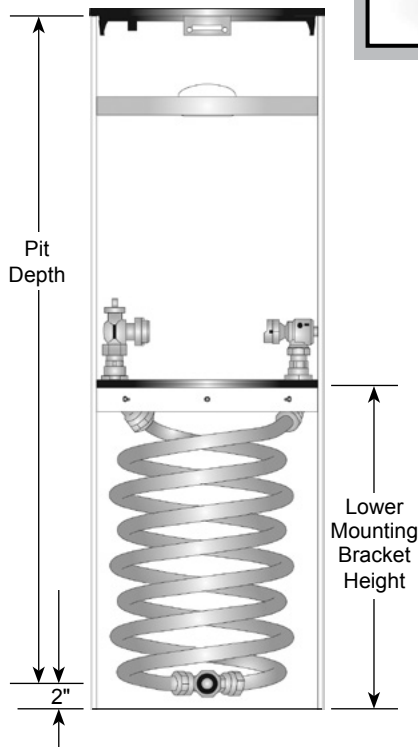
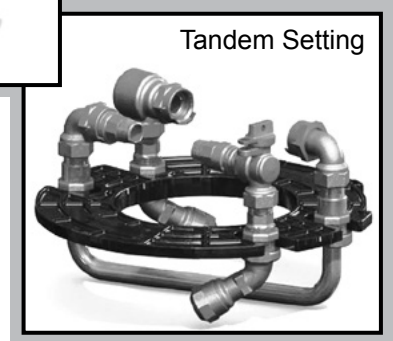
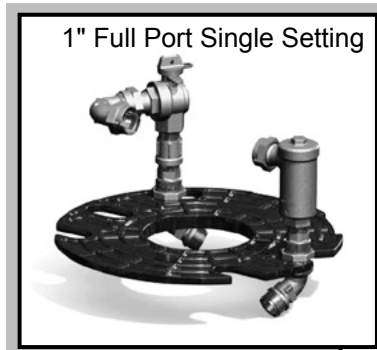
For 5/8", 5/8"x3/4", 3/4" Meter Settings

18" Diameter Coil Pit Setter with Single or Tandem Settings for 5/8", 5/8" x 3/4", 3/4" or 1" Meters

Setting Type	Code
Standard Coil Pit Setter (single) (flat lid ordered separately)	PFC
Tandem Coil Pit Setter (flat lid ordered separately)	PTFC
Inlet Valve Type	
Angle Key Valve	V
Angle Ball Valve (reduced port)	B
* Full Port Angle Ball Valve (see ☒ below)	☒ B (-FP)
Outlet Valve Type	
Angle Key Valve	V
Angle Ball Valve (reduced port)	☒ B
* Full Port Angle Ball Valve (see ☒ below)	☒ B (-FP)
Angle Check Valve	H
Cascading Angle Dual Check Valve (ASSE)	***HH (see below)
1" Cartridge Angle Dual Check Valve (ASSE)	HC
With enhanced chlorine/chloramine resistant cartridges	HCCR
EII (no valve)	L
Meter Size	
5/8"	1
5/8" x 3/4"	2
3/4"	3
** 1"	4
Type of Inlet/Outlet Service Connection	
3/4" MIP x 3/4" MIP (for 5/8", 5/8"x3/4", and 3/4" meter settings) with 3/4" tubing	▲ 88
1" MIP x 1" MIP (for 1" meter settings) with 1" tubing	88
Pit Diameter and Depth	
18" x 36"	18-36-NL
18" x 42"	18-42-NL
18" x 48"	18-48-NL
18" x 54"	18-54-NL
18" x 60"	18-60-NL
18" x 66"	18-66-NL
18" x 72"	18-72-NL
18" x 78"	18-78-NL
18" x 84"	18-84-NL
18" x 90"	18-90-NL
18" x 96"	18-96-NL

Example: PTFCVHH-488-18-60-NL

* 5/8"x3/4", 3/4" & 1" setters with angle ball valves will be reduced port unless otherwise requested. Reduced port valves usually provide suitable water flow. Add "-FP" to end of catalogue number for full port. Add "-FP-R" where a 360° tee-head rotation is required.



Pit Depth	Lower Mounting Bracket Height
36"	14"
42"	20"
48"	26"
54"	26"
60"	26"
66"	26"
72"	26"
78"	26"
84"	26"
90"	26"
96"	26"

Note: Regulator adapters furnished with standard coil pits, for PRV lengths with end connections other than FNPT or lengths outside range contact factory for price and availability.

**** All Coil Pit Setters for 1" meters must have a 360° tee-head rotation (-R) Example: PTFCBH-488-18-36-R-NL, except for single coil pits with full port ball valves. Example: PFCBH-488-18-36-FP-NL**

Description	Code
Optional Full Port Ball Valve	
☒ 5/8"x3/4", 3/4" & 1" setters with angle ball valves will be reduced port unless otherwise requested. Reduced port valves usually provide suitable water flow. (Add "FP" to the end of the catalogue number for full port.) Example: PFCBHH-288-15-48-FP. Add "FP-R" where 360° rotation is required. Example PFCBH-488-18-36-FP-R	-FP -FP-R
▲ Optional 1" tubing and service line connections are available. Add "A" to the end of the catalogue number. Example: PFCBH-288-18-36A. (1" tubing and connections are standard on 1" meters) Not available on 15" tiles or dual settings.	A
☒ The 5/8" Port Angle Ball Valve is a one-way directional valve designed for the inlet side of the meter and should not be used as a customer shut-off on the customer side of the meter.	
*** 1" Angle Cascading Dual Check Valve contains 3/4" components and is ASSE 1024 approved.	
Optional Covers, Insulating Disc, Frames and Lids: (Order separately)	

The Ford Coil Pit Setter

Optional Items Ordered Separately - Coil Pit Lids and Insulating Discs



15" CAST IRON FLAT LIDS

Catalogue Number	Size	Approx. Wt. Lbs.
Lockless Lids		
PPSC-15	15"	20.0
Locking Lids		
PPSC-15-L	15"	20.0
Locking Lids with Plastic ERT bracket		
PPSC-15-L-BR	15"	20.0
Locking Electronic Read Lid		
PPSC-15-L-T	15"	20.0
Locking Double Electronic Read Lid		
PPSC-15-L-TT	15"	20.0
Recessed Locking Electronic Read Lid		
PPSC-15-L-REC-T	15"	20.0
Lockless Electronic Read Lid		
PPSC-15-T	15"	20.0
Double Lockless Electronic Read Lid		
PPSC-15-TT	15"	20.0
Recessed Lockless Electronic Read Lid		
PPSC-15-REC-T	15"	17.2
Recessed Lockless Electronic Read Lid (Extra Heavy)		
PPSCH-15-REC-T	15"	40.5



18" CAST IRON FLAT LIDS

Catalogue Number	Size	Approx. Wt. Lbs.
Lockless Lids		
PPSC-18	18"	28.0
Locking Lids		
PPSC-18-L	18"	28.0
Locking Lids with Plastic ERT bracket		
PPSC-18-L-BR	18"	28.0
Locking Electronic Read Lid		
PPSC-18-L-T	18"	28.0
Locking Double Electronic Read Lid		
PPSC-18-L-TT	18"	28.0
Recessed Locking Electronic Read Lid		
PPSC-18-L-REC-T	18"	27.0
Lockless Electronic Read Lid		
PPSC-18-T	18"	28.0
Double Lockless Electronic Read Lid		
PPSC-18-TT	18"	28.0
Lockless Reading Lid		
PPSC-18-OS-RL	18"	28.0

H-20 RATED COMPOSITE FLAT LIDS

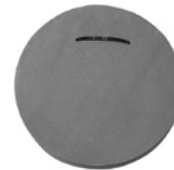
Catalogue Number	Size	Approx. Wt. Lbs.
Locking Lids		
PPSC-15-L-P	15"	18.5
Locking Lids with Plastic ERT Bracket		
PPSC-15-L-P-BR	15"	18.8

Catalogue Number	Size	Approx. Wt. Lbs.
Locking Lids		
PPSC-18-L-P	18"	27.0
Locking Lids with Plastic ERT Bracket		
PPSC-18-L-P-BR	18"	27.3



Coil Pit Iron Driveway Cover (Frame and Lid)

Catalogue Number	Description and Size	Approx. Wt
Cover (Frame and Locking Lid)		
A51H	15"	65.0
A82H	18"	74.0
Cover (Frame with Electronic Read Locking Lid)		
A51H-T	15"	65.0
A82H-T	18"	74.0
Cover (Frame with Double Electronic Read Locking Lid)		
A51H-TT	15"	65.0
A82H-TT	18"	74.0
Iron Frame Only		
*PFC15F	15"	30.0
*PFC18F	18"	39.0
Locking Lid Only		
WA5LH	15"	35.0
WA8LH	18"	35.0
Locking Electronic Read Lid Only		
WA5LH-T	15"	35.0
WA8LH-T	18"	35.0
Locking Double Electronic Read Lid Only		
WA5LH-TT	15"	35.0
WA8LH-TT	18"	35.0



Closed Cell Insulating Discs

Catalogue Number	Meter Pit Diameter	Thickness	Minimum R-Value	Colour
CCID-15	15"	1-1/2"	6.0	Gray
CCID-15-2		2"	4.0	Green or White
CCID-15-4		4"	8.0	Green or White
CCID-15-6		6"	12.0	Green or White
CCID-18	18"	1-1/2"	6.0	Gray
CCID-18-2		2"	4.0	Green or White
CCID-18-4		4"	8.0	Green or White
CCID-18-6		6"	12.0	Green or White

Special meter depth may be required on meter pits depending on lid type and disc thickness. Contact factory for further information.

* Frames cannot be used with standard coil pit flat lids, must be used with these matching lids only. These covers carry a 25,000 pound load rating.

The Ford Coil Pit Setter

Optional Items Ordered Separately
Coil Pit Access Rods and Bottom Plate



Coil Pit Meter Platform Access Rods

Catalogue Number	Meter Size	Service Line Depth	Approx. Wt.
CPLR-2-36	5/8" or 5/8" x 3/4"	Up to 60"	5.0
CPLR-2-48	5/8" or 5/8" x 3/4"	Up to 72"	6.0
CPLR-2-60	5/8" or 5/8" x 3/4"	Up to 84"	7.0
CPLR-2-72	5/8" or 5/8" x 3/4"	Up to 96"	8.0
CPLR-3-36	3/4"	Up to 60"	5.0
CPLR-3-48	3/4"	Up to 72"	6.0
CPLR-3-60	3/4"	Up to 84"	7.0
CPLR-3-72	3/4"	Up to 96"	8.0
CPLR-4-36	1"	Up to 60"	5.0
CPLR-4-48	1"	Up to 72"	6.0
CPLR-4-60	1"	Up to 84"	7.0
CPLR-4-72	1"	Up to 96"	8.0

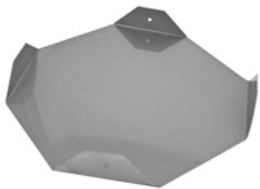
Rods are sold by meter pit size and service line depth.

Coil Pit Extension Rings



Extension Length	15" Diameter Tile	Approx. Wt.	18" Diameter Tile	Approx. Wt.
2"	CPS-EXT15-2	1.7	CPS-EXT18-2	2.5
4"	CPS-EXT15-4	3.3	CPS-EXT18-4	4.8
6"	CPS-EXT15-6	4.9	CPS-EXT18-6	7.2
8"	CPS-EXT15-8	6.5	CPS-EXT18-8	9.6
10"	CPS-EXT15-10	8.2	CPS-EXT18-10	12.0
12"	CPS-EXT15-12	9.6	CPS-EXT18-12	14.3

Standard Coil Pits can accommodate up to a maximum 12" extension ring. Extension lengths are in 2" increments from 2" to 12" for each tile diameter.



Stainless Steel Bottom Plate

Catalogue Number	Size	Approx. Wt.	Catalogue Number	Size	Approx. Wt.
PPSBP-15	15"	3.3	*PPSBP-18H	18"	3.9

* For use on heavy wall tile only.



Solid Plastic (HDPE) Bottom Plate

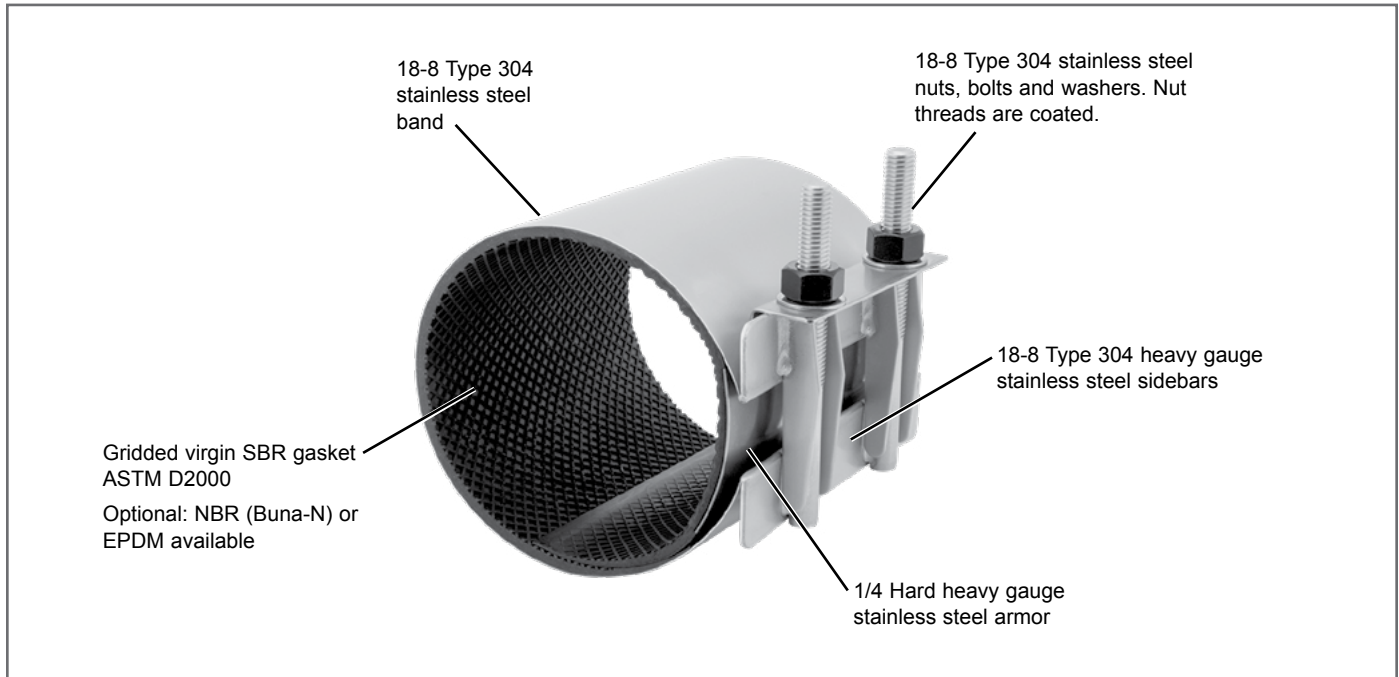
Catalogue Number	Size	Approx. Wt.	Catalogue Number	Size	Approx. Wt.
PPSBP-15-HDPE	15"	1.0	*PPSBP-18-HDPE	18"	2.0

* For use on heavy wall tile only.

Ford All Stainless Steel Repair Clamps

The **Ford All Stainless Steel Repair Clamp** combines the corrosion-resistant characteristics of stainless steel and the sealing capabilities of rubber to provide a strong, dependable and versatile repair clamp.

The all stainless design is lightweight and easy to handle under adverse conditions associated with almost every main break. The fixed studs position provides uniform bolt control and fewer parts to fall into the trench. The sliding lifter bar is retained on the studs by the heavy hex nuts and facilitates the installation by serving as a handle to hold while installing the clamp. Bi-directionally tapered lugs allow the lifter bar to easily slide into locking position on the sidebar.



Specifications:

Band: 18-8 Type 304 stainless steel.

Studs and Heavy Hex Nuts: 18-8 Type 304 stainless steel. Coated nut threads to prevent galling. Studs are permanently attached to the clamp sidebar by means of a Metal Inert Gas (MIG) weld.

Lugs: 18-8 Type 304 heavy gauge stainless steel, MIG welded to clamp sidebar. Lugs are rounded and tapered for easy installation.

Sidebars: 18-8 Type 304 heavy gauge stainless steel Tungsten Inert Gas (TIG) welded to form a strong, permanent fusion with the repair clamp band.

Lifter Bar: 18-8 Type 304 heavy gauge stainless steel. Lip curve holds bolts in position while tightening and serves as a bearing surface for stainless steel nuts and washers.

Gasket: Gridded virgin Styrene Butadiene Rubber (SBR) compounded for water service, ASTM D2000. Gasket ends are tapered for a dependable seal. SBR is suitable for temperatures of 150°F continuous, 180°F intermittent. An optional NBR (Buna-N), nitrile gasket is recommended for 220°F continuous and/or 240°F intermittent.

Armor: 1/4 hard heavy gauge stainless steel vulcanized and recessed into the gasket to ensure uniform compression against the pipe.

Passivated: All clamps are fully passivated by means of a chemical technique which restores the corrosion resistant characteristics of the stainless steel.

Options Include:

- Conductivity strips
- NBR (Buna-N) gasket (suitable for natural gas applications)
- EPDM gasket
- 316 stainless steel
- 1" offset gasket for overlapping clamps for extended lengths

Belleville Washers for use on HDPE: Belleville washers, also referred to as spring washers, promote consistent force on the gasket as the pipe diameter expands and contracts. The Belleville washers are made of 17-7 PH stainless steel. Depending on the pipe size and recommended installation torque, Belleville washers are used singularly, or in a stack to allow for more expansion/contraction of the pipe.

Ford All Stainless Steel Repair Clamps

Style FS1 (single section) / Operating Range .40" (5.14" and larger)

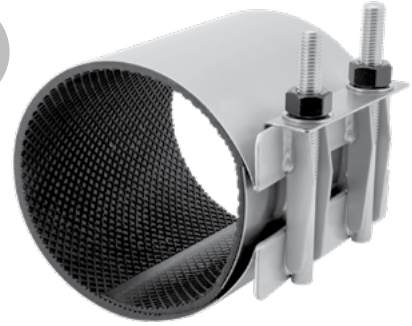
To order: Specify catalogue number x length of clamp desired.

Example: FS1-724-125 would be a one-section clamp for pipe with an O.D. between 6.84 and 7.24, and the length of the clamp would be 12.5".

Options Include: NBR (Buna-N) Gasket - add "-N" to catalogue number
 EPDM Gasket - add "-EPDM" to catalogue number
 Conductivity Strips - add "-CS" to catalogue number

Note: 316 Stainless Steel - add "-Q" to catalogue number. Sizes and lengths not listed (including metric) are available upon request.

MEETS
AWWA
C230



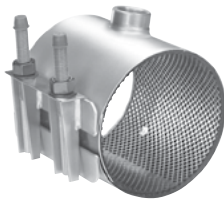
Nom. Pipe Size	Pipe O.D. Range	Catalogue Number	Length and Approximate Shipping Weight Lbs.							
			6"	7.5"	10"	12.5"	15"	20"	24"	30"
2"	1.96-2.15	FS1-215-Length	4 Lbs.	4 Lbs.	5 Lbs.	5 Lbs.	N/A	N/A	N/A	N/A
	2.05-2.25	FS1-225-Length	4	4	5	5	N/A			
	2.35-2.63	FS1-263-Length	4	4	5	5	7			
2-1/4"x2-1/2"	2.70-3.00	FS1-300-Length	4	5	5	6	8	N/A	N/A	N/A
3"	2.97-3.25	FS1-325-Length	4	5	5	6	9	N/A	N/A	N/A
	3.46-3.70	FS1-370-Length								
	3.73-4.00	FS1-400-Length								
3"- 4"	3.96-4.25	FS1-425-Length	5	5	6	7	9	N/A	N/A	N/A
	4.45-4.73	FS1-473-Length								
4"	4.50-4.80	FS1-480-Length	5	6	7	8	10	14	16	21
	4.74-5.14	FS1-514-Length								
	4.95-5.35	FS1-535-Length								
	5.22-5.62	FS1-562-Length								
6"	5.95-6.35	FS1-635-Length	N/A	7	9	10	14	17	21	27
	6.56-6.96	FS1-696-Length								
	6.84-7.24	FS1-724-Length								
	7.05-7.45	FS1-745-Length								
8"	7.45-7.85	FS1-785-Length	N/A	8	10	11	15	19	24	30
	7.95-8.35	FS1-835-Length								
	8.54-8.94	FS1-894-Length								
	8.99-9.39	FS1-939-Length								
10"	9.27-9.67	FS1-967-Length	N/A	11	14	16	24	28	32	42
	9.70-10.10	FS1-1010-Length								
	10.60-11.04	FS1-1104-Length								
	11.04-11.44	FS1-1144-Length								
12"	11.34-11.74	FS1-1174-Length	N/A	13	16	18	27	30	36	48
	11.75-12.15	FS1-1215-Length								
	12.00-12.40	FS1-1240-Length								
	12.60-13.02	FS1-1302-Length								
12"	13.10-13.50	FS1-1350-Length	N/A	13	16	18	27	30	36	48
	13.40-13.80	FS1-1380-Length								
	13.70-14.10	FS1-1410-Length								
	14.00-14.40	FS1-1440-Length								
NUMBER OF STUDS			2	2	3	3-4*	4	6	7	9

*12.5" long clamps in the 10" and 12" nominal pipe size have 4 studs.

Note: Alternative lengths of 8", 12" and 16" are available. Contact factory for more information.

For use on HDPE pipe, use prefix FSP1.

Tapped Repair Clamps



Tapping Codes

Size	CC (AWWA) Thread				IP Thread			
	Code Number	Min. Clamp Size		Size	Code Number	Min. Clamp Size		
		FS1	FS2			FS1	FS2	
3/4"	CC3	2.63	5.24	3/4"	IP3	2.63	5.24	
1"	CC4	2.63	5.24	1"	IP4	2.63	5.24	
1-1/4"	CC5	3.70	5.24	1-1/4"	IP5	3.70	5.24	
1-1/2"	CC6	4.25	5.24	1-1/2"	IP6	3.70	5.24	
2"	CC7	4.73	5.57	2"	IP7	4.25	5.57	

OUTLET TAPS for corporation stops are available on Ford Stainless Steel Clamps. The minimum clamp size for each tap type and size is listed in the tapping code table above. The tapped outlet is 18-8 Type 304 stainless steel and is "fused" to the clamp band by a fully passivated TIG weld.

To Order: 1. Select the proper code from table to match desired size and type of thread.
 2. Add code to catalogue number of repair clamp.

Example: The number for an FS1-724-12.5 with a 3/4" CC tap is FS1-724-125-CC3.

Note: Tapped Repair Clamps are non-returnable.

Ford All Stainless Steel Repair Clamps

Style FS2 (double section) / Operating Range .80" (4" - 12")



MEETS
AWWA
C230

To order: Specify catalogue number x length of clamp desired.

Example: FS2-764-10 would be a two-section clamp for pipe with an O.D. between 6.84 and 7.64, and the length of the clamp would be 10".

Options Include: NBR (Buna-N) Gasket - add "-N" to catalogue number
EPDM Gasket - add "-EPDM" to catalogue number
Conductivity Strips (FS2-979 and larger) - add "-CS" to catalogue number
316 Stainless Steel - add "-Q" to catalogue number

Note: Sizes and lengths not listed (including metric) are available upon request.

Nom. Pipe Size	Pipe O.D. Range	Catalogue Number	Length and Approximate Shipping Weight Lbs.						
			7.5"	10"	12.5"	15"	20"	24"	30"
4"	4.44-5.24	FS2-524-Length	11 Lbs.	14 Lbs.	18 Lbs.	26 Lbs.	32 Lbs.	38 Lbs.	N/A
	4.74-5.57	FS2-557-Length							
6"	6.62-7.42	FS2-742-Length	12	15	19	28	35	42	45
	6.84-7.64	FS2-764-Length							
8"	8.62-9.42	FS2-942-Length	13	17	21	30	38	46	51
	8.99-9.79	FS2-979-Length							
10"	10.70-11.50	FS2-1150-Length	N/A	18	23	32	41	50	54
	11.04-11.84	FS2-1184-Length							
	11.60-12.40	FS2-1240-Length							
12"	12.70-13.50	FS2-1350-Length	N/A	19	25	34	44	54	57
	13.14-13.94	FS2-1394-Length							
	13.65-14.45	FS2-1445-Length							
14"	15.07-15.82	FS2-1582-Length	N/A	20	27	36	47	58	63
16"	17.15-17.90	FS2-1790-Length	N/A	22	29	38	50	62	66
NUMBER OF STUDS			4	6	6-8*	8	12	14	18

* 12.5" long clamps in the 10" thru 16" nominal pipe size have 8 studs.

Note: Alternative lengths of 8", 12" and 16" are available. Contact factory for more information.
For use on HDPE pipe, use prefix FSP2.



Style FS3 (triple section) – Operating Range 1.20"

To order: Specify catalogue number x length of clamp desired.

Example: FS3-1920-24 would be a three-section clamp for pipe with an O.D. between 18.00 and 19.20, and the length of the clamp would be 24".

Options Include: NBR (Buna-N) Gasket - add "-N" to catalogue number
EPDM Gasket - add "-EPDM" to catalogue number
Conductivity Strips - add "-CS" to catalogue number
316 Stainless Steel - add "-Q" to catalogue number

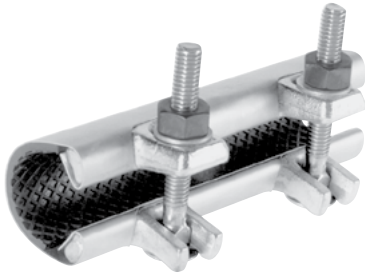
Note: Sizes and lengths not listed (including metric) are available upon request.

Nom. Pipe Size	Pipe O.D. Range	Catalogue Number	Length and Approximate Shipping Weight Lbs.				
			12.5"	15"	20"	24"	30"
16"	17.10-18.30	FS3-1830-Length	31 Lbs.	40 Lbs.	52 Lbs.	64 Lbs.	77 Lbs.
18"	18.00-19.20	FS3-1920-Length	35	44	56	68	84
	19.50-20.70	FS3-2070-Length					
20"	21.60-22.80	FS3-2280-Length	41	48	60	73	89
24"	25.80-27.00	FS3-2700-Length	46	53	65	79	102
30"	29.62-30.82	FS3-3082-Length	50	62	83	88	130
	31.70-32.90	FS3-3290-Length					
NUMBER OF STUDS			12	12	18	21	27

Note: Alternative lengths of 8", 12" and 16" are available. Contact factory for more information.
For use on HDPE pipe, use prefix FSP3.

Ford All Stainless Steel Snap Clamps

Style FLSC



Ford All Stainless Steel Snap Clamps offer a handy way to repair pinholes and other small leaks that do not require a full gasket seal. A gridded gasket design and “cushion lugs” make them ideal for older pitted pipe that has worn thin over the years. The All Stainless Steel Snap Clamp offers the same conveniences and performance of the traditional Snap Clamp with the added corrosion resistance of stainless steel lugs and bolts.

To order: Specify catalogue number by length of desired clamp. For example, an FLSC-190-6 would be a 6" long clamp for 1-1/2" standard steel pipe.

Shell: 18-8 Type 304 stainless steel

Lugs: 18-8 Type 304 stainless steel

Gasket: NBR (Buna-N) with heavy grid design

Fasteners: 18-8 Type 304 stainless steel

NOM. PIPE SIZE	PIPE O.D.	CATALOGUE NUMBER	LENGTH AND APPROXIMATE SHIPPING WEIGHT LBS.							
			3"	CTN. QTY.	6"	CTN. QTY.	9"	CTN. QTY.	12"	CTN. QTY.
1/2"	0.84	FLSC-084-Length	0.54 Lbs.	25	1.08 Lbs.	12	N/A	-	N/A	-
3/4"	1.05	FLSC-105-Length	0.55	25	1.10	12	1.7	-	N/A	-
1"	1.32	FLSC-132-Length	0.56	20	1.12	10	1.7	-	N/A	-
1-1/4"	1.66	FLSC-166-Length	0.58	18	1.16	12	1.8	-	N/A	-
1-1/2"	1.90	FLSC-190-Length	0.60	12	1.20	12	1.8	2	2.9	2
2"	2.38	FLSC-238-Length	1.00	10	2.00	12	3.0	2	4.1	2
2-1/2"	2.88	FLSC-288-Length	1.05	10	2.10	12	3.2	2	4.4	2
3"	3.50	FLSC-350-Length	1.30	10	2.60	6	3.9	1	4.8	1
3-1/2"	4.00	FLSC-400-Length	1.35	10	2.70	6	4.0	1	4.9	1
4"	4.50	FLSC-450-Length	1.40	10	2.80	6	4.2	1	5.2	1
5"	5.56	FLSC-556-Length	1.60	6	3.20	3	4.8	1	5.0	1
6"	6.00	FLSC-600-Length	1.72	6	3.45	2	5.2	1	5.1	1
	6.63	FLSC-663-Length	1.85	6	3.70	2	5.6	1	6.6	1
8"	8.00	FLSC-800-Length	2.00	3	4.00	2	6.0	1	7.7	1
	8.63	FLSC-863-Length	2.20	3	4.40	2	6.6	1	7.9	1

Ford All Stainless Steel Wrap Clamps

Style FLSC Clamp with Full Wrap Gasket

Ford Wrap Clamps offer the same leak repair features of the Snap Clamp with the extra assurance of 360° gasket coverage. Specific sizes are available for I.P.S. steel or copper. The All Stainless Steel Wrap Clamp offers the same conveniences and performance of the traditional Wrap Clamp with the added security of stainless steel lugs and bolts.

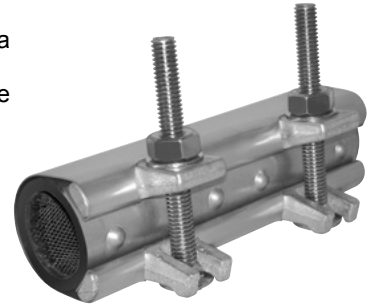
To order: Specify catalogue number. For example, an FLSC-190-6R would be a 6" long clamp for 1-1/2" standard steel pipe.

Shell: 18-8 Type 304 stainless steel

Lugs: 18-8 Type 304 stainless steel

Gasket: NBR (Buna-N) rubber with gridded armored gasket for 360° coverage

Fasteners: 18-8 Type 304 stainless steel



NOM. PIPE SIZE	PIPE O.D.	3" LONG CLAMP (1 BOLT)			6" LONG CLAMP (2 BOLTS)		
		CATALOGUE NUMBER	APPROX. WT. LBS.	CTN. QTY.	CATALOGUE NUMBER	APPROX. WT. LBS.	CTN. QTY.
1/2"	0.625	FLSC-063-3R	0.75	25	N/A	—	—
	0.84	FLSC-084-3R			FLSC-084-6R	—	—
3/4"	0.875	FLSC-088-3R	0.78	25	FLSC-088-6R	1.56	12
	1.05	FLSC-105-3R			FLSC-105-6R		
1"	1.125	FLSC-113-3R	0.85	20	FLSC-113-6R	1.58	10
	1.32	FLSC-132-3R			FLSC-132-6R		
1-1/4"	1.375	FLSC-138-3R	0.92	18	FLSC-138-6R	1.87	12
	1.66	FLSC-166-3R			FLSC-166-6R		
1-1/2"	1.625	FLSC-163-3R	1.03	12	FLSC-163-6R	2.05	12
	1.90	FLSC-190-3R			FLSC-190-6R		
2"	2.125	FLSC-213-3R	1.50	10	FLSC-213-6R	3.00	12
	2.38	FLSC-238-3R			FLSC-238-6R		

To order: Specify catalogue number. Example: an FLSC-190-6R would be a 6" long clamp for 1-1/2" standard steel pipe.

Ford All Stainless Steel Wrap Clamps

Style FLSC with Dual-Armor, Full Wrap Gasket

Ford All Stainless Dual Armor Wrap Clamps provide the same 360° gasket coverage as its wrap clamp counterpart with an added bonus – more armor. This extra armor allows the user to hold the gasket over the leak without worrying about gasket positioning until it is time to tighten the nuts. Stainless steel shell, lugs and fasteners enable a long-lasting, corrosion-resistant solution for any small leak.

To order: Specify catalogue number. For example, an FLSC-190-6R2 would be a 6" long clamp for 1-1/2" standard steel pipe.

Shell: 18-8 Type 304 stainless steel

Lugs: 18-8 Type 304 stainless steel

Gasket: Dual-Armored, gridded EPDM rubber with 360° coverage (NBR (Buna-N) available)

Fasteners: 18-8 Type 304 stainless steel



NOM. PIPE SIZE	PIPE O.D.	3" LONG CLAMP (1 BOLT)			6" LONG CLAMP (2 BOLT)		
		CATALOGUE NUMBER	APPROX. WT. LBS.	CTN. QTY.	CATALOGUE NUMBER	APPROX. WT. LBS.	CTN. QTY.
1/2"	0.625	FLSC-063-3R2	0.75	25	FLSC-063-6R2	1.56	12
	0.84	FLSC-084-3R2			FLSC-084-6R2		
3/4"	0.875	FLSC-088-3R2	0.75	25	FLSC-088-6R2	1.56	12
	1.05	FLSC-105-3R2			FLSC-105-6R2		
1"	1.125	FLSC-113-3R2	0.85	20	FLSC-113-6R2	1.58	10
	1.32	FLSC-132-3R2			FLSC-132-6R2		
1-1/4"	1.375	FLSC-138-3R2	0.92	18	FLSC-138-6R2	1.87	12
	1.66	FLSC-166-3R2			FLSC-166-6R2		
1-1/2"	1.625	FLSC-163-3R2	1.03	12	FLSC-163-6R2	2.05	12
	1.90	FLSC-190-3R2			FLSC-190-6R2		
2"	2.125	FLSC-213-3R2	1.50	10	FLSC-213-6R2	3.00	12
	2.38	FLSC-238-3R2			FLSC-238-6R2		

Ford Repair Clamps

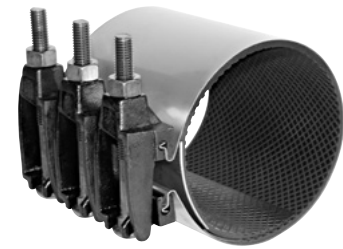
Style F1 (single section) / Operating Range .40" (4" and larger)

To order: Specify catalogue number x length of clamp desired.

Example: F1-724-125 would be a single section clamp for pipe with an O.D. between 6.84 and 7.24, and the length of the clamp would be 12.5".

Options Include: NBR (Buna-N) Gasket - add "-N" to catalogue number
 EPDM Gasket - add "-EPDM" to catalogue number
 Conductivity Strips - add "-CS" to catalogue number
 Blue Fluorocarbon coated nuts and bolts - add "-BBN" to catalogue number
 Type 304 stainless steel bolts & nuts - add "-SH" to catalogue number
 E-Coated lugs - add "-E3" to catalogue number
 Long starter bolt - add "-A" to catalogue number

**MEETS
AWWA
C230**



Note: Sizes and lengths not listed (including metric) are available upon request.

Nom. Pipe Size	Pipe O.D. Range	Catalogue Number	Length and Approximate Shipping Weight Lbs.					
			7.5"	10"	12.5"	15"	20"	30"
1"	1.88-2.15	F1-215-Length	7 Lbs.	9 Lbs.	12 Lbs.	14 Lbs.	N/A	N/A
2"	2.35-2.63	F1-263-Length	7	9	12	14	N/A	N/A
2-1/4"-2-1/2"	2.70-3.00	F1-300-Length	7	10	12	14	N/A	N/A
	2.83-3.13	F1-313-Length	7	10	12	14	N/A	N/A
3"	2.97-3.25	F1-325-Length	8	10	12	14	N/A	N/A
	3.46-3.70	F1-370-Length						
	3.73-4.00	F1-400-Length						
3"-4"	3.73-4.13	F1-413-Length	8	11	13	15	N/A	N/A
	3.96-4.25	F1-425-Length						
	4.45-4.73	F1-473-Length						
4"	4.74-5.14	F1-514-Length	11	15	18	22	29	44
	4.95-5.35	F1-535-Length						
	5.22-5.62	F1-562-Length						
6"	5.95-6.35	F1-635-Length	12	16	20	24	32	48
	6.56-6.96	F1-696-Length						
	6.84-7.24	F1-724-Length						
8"	7.05-7.45	F1-745-Length	13	17	21	25	34	51
	7.45-7.85	F1-785-Length						
	7.95-8.35	F1-835-Length						
8"	8.54-8.94	F1-894-Length	14	19	23	28	37	55
	8.99-9.39	F1-939-Length						
	9.27-9.67	F1-967-Length						
10"	9.70-10.10	F1-1010-Length	15	20	25	29	38	58
	9.90-10.30	F1-1030-Length						
	10.60-11.04	F1-1104-Length						
10"	11.04-11.44	F1-1144-Length	16	21	26	31	41	62
	11.34-11.74	F1-1174-Length						
	11.75-12.15	F1-1215-Length						
12"	12.00-12.40	F1-1240-Length	17	22	28	33	44	67
	12.60-13.02	F1-1302-Length						
	13.10-13.50	F1-1350-Length						
12"	13.40-13.80	F1-1380-Length	18	23	29	35	46	70
	13.70-14.10	F1-1410-Length						
	14.00-14.40	F1-1440-Length						
NUMBER OF BOLTS			3	4	5	6	8	12

Note: Alternative lengths of 8", 12" and 16" are available. Contact factory for more information.
 For use on HDPE pipe, use prefix FP1.

Tapped Repair Clamps



Tapping Codes

SIZE	CODE NUMBER	CC (AWWA) THREAD		FIP THREAD			
		MIN. CLAMP SIZE		SIZE	CODE NUMBER	MIN. CLAMP SIZE	
		F1	F2 (W)			F1	F2 (W)
3/4"	CC3	2.63	5.60	3/4"	IP3	2.63	5.60
1"	CC4	2.63	5.60	1"	IP4	2.63	5.60
1-1/4"	*CC5	3.70	5.60	1-1/4"	*IP5	3.70	5.60
1-1/2"	CC6	4.25	5.60	1-1/2"	IP6	3.70	5.60
2"	CC7	4.73	5.60	2"	IP7	4.25	5.60

* Contact factory for availability

OUTLET TAPS for corporation stops are available on Ford Stainless Steel Clamps. The minimum clamp size for each tap type and size is listed in the tapping code table above. The tapped outlet is 18-8 Type 304 stainless steel and is "fused" to the clamp band by a fully passivated TIG weld.

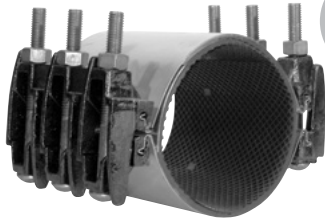
To Order: 1. Select the proper code from table to match desired size and type of thread.
 2. Add code to catalogue number of repair clamp.

Example: The number for an F1-724-12.5 with a 3/4" CC tap is F1-724-125-CC3.

Note: Tapped Repair Clamps are non-returnable.

Ford Repair Clamps

Style F2 (double section) / Operating Range .80"



**MEETS
AWWA
C230**

To Order: Specify catalogue number x length of clamp desired.

Example: F2-1445-20 would be a double section clamp for pipe with an O.D. between 13.65 and 14.45, and the length of the clamp would be 20".

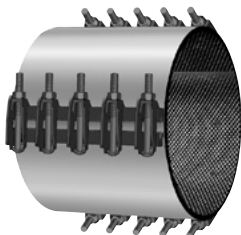
Options Include: NBR (Buna-N) Gasket - add "-N" to catalogue number
EPDM Gasket - add "-EPDM" to catalogue number
Conductivity strips (F2-979 and larger) - add "-CS" to catalogue number
Blue Fluorocarbon coated nuts and bolts - add "-BBN" to catalogue number
Type 304 stainless steel bolts & nuts - add "-SH" to catalogue number
E-Coated lugs - add "-E3" to catalogue number

Note: Sizes and lengths not listed (including metric) are available upon request.

Note: Alternative lengths of 8", 12" and 16" are available. Contact factory for more information.

Nom. Pipe Size	Pipe O.D. Range	Catalogue Number	Length and Approximate Shipping Weight Lbs.					
			7.5"	10"	12.5"	15"	20"	30"
4"	4.44-5.24 4.74-5.57	F2-524-Length F2-557-Length	20 Lbs.	27 Lbs.	32 Lbs.	40 Lbs.	53 Lbs.	80 Lbs.
4" Special	4.45-5.60	F2W-560-Length	N/A	29	N/A	43	58	87
6"	6.62-7.42 6.84-7.64	F2-742-Length F2-764-Length	22	29	36	43	57	86
8"	8.62-9.42 8.99-9.79	F2-942-Length F2-979-Length	23	29	38	46	61	92
10"	10.70-11.50 10.72-11.72 11.04-11.84 11.60-12.40	F2-1150-Length F2-1172-Length F2-1184-Length F2-1240-Length	24	30	42	46	69	98
10" Special	11.04-12.24	F2W-1224-Length	N/A	48	N/A	71	95	144
12"	12.70-13.50 12.72-13.92 13.14-13.94 13.65-14.45	F2-1350-Length F2-1392-Length F2-1394-Length F2-1445-Length	27	30	44	47	70	100
12" Special	13.14-14.34	F2W-1434-Length	N/A	50	N/A	75	98	155
Range	13.65-14.65	F2-1465-Length	N/A	31	N/A	48	71	101
	14.38-15.13	F2-1513-Length	N/A	31	N/A	48	71	101
	15.07-15.82	F2-1582-Length	N/A	31	N/A	49	71	101
	15.20-16.20	F2-1620-Length	N/A	32	N/A	49	72	102
	15.92-16.67	F2-1667-Length	N/A	32	N/A	49	72	102
	16.00-17.00	F2-1700-Length	N/A	32	N/A	50	72	103
	16.56-17.31	F2-1731-Length	N/A	32	N/A	50	72	103
	17.15-17.90	F2-1790-Length	N/A	32	N/A	50	72	104
	17.20-18.20	F2-1820-Length	N/A	32	N/A	50	72	104
	17.82-18.57	F2-1857-Length	N/A	33	N/A	52	73	104
	18.46-19.21	F2-1921-Length	N/A	33	N/A	53	73	104
	18.40-19.40	F2-1940-Length	N/A	34	N/A	53	74	105
	19.23-19.98	F2-1998-Length	N/A	34	N/A	53	74	105
	19.40-20.40	F2-2040-Length	N/A	34	N/A	53	74	105
	19.90-20.65	F2-2065-Length	N/A	34	N/A	53	74	105
	20.40-21.40	F2-2140-Length	N/A	34	N/A	53	74	105
	20.70-21.45	F2-2145-Length	N/A	35	N/A	54	75	106
	21.52-22.27	F2-2227-Length	N/A	35	N/A	54	75	106
	21.40-22.40	F2-2240-Length	N/A	36	N/A	55	76	110
22.12-22.87	F2-2287-Length	N/A	36	N/A	55	76	110	
22.50-23.60	F2-2360-Length	N/A	36	N/A	55	76	110	
22.90-23.65	F2-2365-Length	N/A	36	N/A	55	76	110	
NUMBER OF BOLTS			6	8	10	12	16	24

For use on HDPE pipe, use prefix FP2.



Style F3 (triple section) / Operating Range 1.20"

To order: Specify catalogue number x length of clamp desired.

Example: F3-2680-30 would be a triple section clamp for pipe with an O.D. between 25.60 and 26.80, and the length of the clamp would be 30".

Options Include: NBR (Buna-N) Gasket - add "-N" to catalogue number
EPDM Gasket - add "-EPDM" to catalogue number
Conductivity Strips - add "-CS" to catalogue number
Type 304 stainless steel bolts & nuts - add "-SH" to catalogue number
E-Coated lugs - add "-E3" to catalogue number

Note: Sizes and lengths not listed (including metric) are available upon request.

Nom. Pipe Size	Pipe O.D. Range	Catalogue Number	Length and Approximate Shipping Weight Lbs.			
			10"	15"	20"	30"
Range	23.18-24.38	F3-2438-Length	102 Lbs.	148 Lbs.	185 Lbs.	268 Lbs.
	24.28-25.48	F3-2548-Length	104	151	188	272
	25.60-26.80	F3-2680-Length	106	152	190	275
	26.38-27.58	F3-2758-Length	107	155	193	278
	27.55-28.75	F3-2875-Length	109	158	197	283
	28.63-29.83	F3-2983-Length	111	160	202	287
	29.52-30.72	F3-3072-Length	113	163	204	290
Number of Bolts			12	18	24	36

Note: Clamps for larger pipe and with more sections available. Contact factory for information.

Note: Alternative lengths of 8", 12" and 16" are available. Contact factory for more information.

For use on HDPE pipe, use prefix FP3.

Ford Wrap Clamps

Style FSC Clamp with Full Wrap Gasket

Ford Wrap Clamps offer the same leak repair features of the Snap Clamp with the extra assurance of 360° gasket coverage. Specific sizes are available for I.P.S. steel or copper.

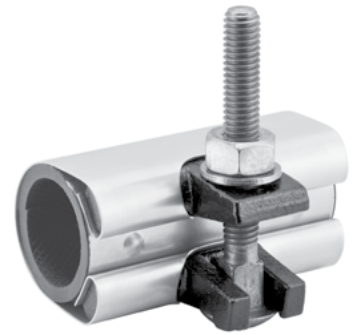
To order: Specify catalogue number. For example, an FSC-190-6R would be a 6" long clamp for 1-1/2" standard steel pipe.

Shell: 18-8 Type 304 stainless steel

Lugs: Ductile Iron per ASTM A536, black Armorguard E-coat finish

Gasket: NBR (Buna-N) rubber with gridded armored gasket for 360° coverage

Bolts: AISI C1018 steel, 3/8" and/or 7/16" electrodeposited zinc with di-chromate seal



NOM. PIPE SIZE	PIPE O.D.	3" LONG CLAMP (1 BOLT)			6" LONG CLAMP (2 BOLTS)		
		CATALOGUE NUMBER	APPROX. WT. LBS.	CTN. QTY.	CATALOGUE NUMBER	APPROX. WT. LBS.	CTN. QTY.
1/2"	0.625	FSC-063-3R	0.75	25	N/A	–	–
	0.84	FSC-084-3R			FSC-084-6R	–	–
3/4"	0.875	FSC-088-3R	0.78	25	FSC-088-6R	1.56	12
	1.05	FSC-105-3R			FSC-105-6R		
1"	1.125	FSC-113-3R	0.85	20	FSC-113-6R	1.51	10
	1.32	FSC-132-3R			FSC-132-6R		
1-1/4"	1.375	FSC-138-3R	0.92	18	FSC-138-6R	1.87	12
	1.66	FSC-166-3R			FSC-166-6R		
1-1/2"	1.625	FSC-163-3R	1.03	12	FSC-163-6R	2.05	12
	1.90	FSC-190-3R			FSC-190-6R		
2"	2.125	FSC-213-3R	1.50	10	FSC-213-6R	3.00	12
	2.38	FSC-238-3R			FSC-238-6R		

To order: Specify catalogue number. Example: an FSC-190-6R would be a 6" long clamp for 1-1/2" Standard Steel pipe.

Ford Wrap Clamps

Style FSC with Dual-Armor, Full Wrap Gasket

Similar to the traditional wrap clamp, Ford Dual-Armor Wrap Clamps provide 360° gasket coverage. This unique design also offers the extra security and endurance of dual armor. The armor promotes ease of use by allowing user to squeeze and hold gasket over the leak. Gasket positioning is made simple with location indicators on either side. Specific sizes are available for I.P.S. steel or copper.

To order: Specify catalogue number. For example, an FSC-190-6R2 would be a 6" long clamp for 1-1/2" standard steel pipe.

Shell: 18-8 Type 304 stainless steel

Lugs: Ductile iron per ASTM A536, black Armorguard E-coat finish

Gasket: Dual-Armored, gridded EPDM rubber with 360° coverage (NBR (Buna-N) available)

Fasteners: AISI C1018 steel, 3/8" and/or 7/16" electrodeposited zinc with dichromate seal



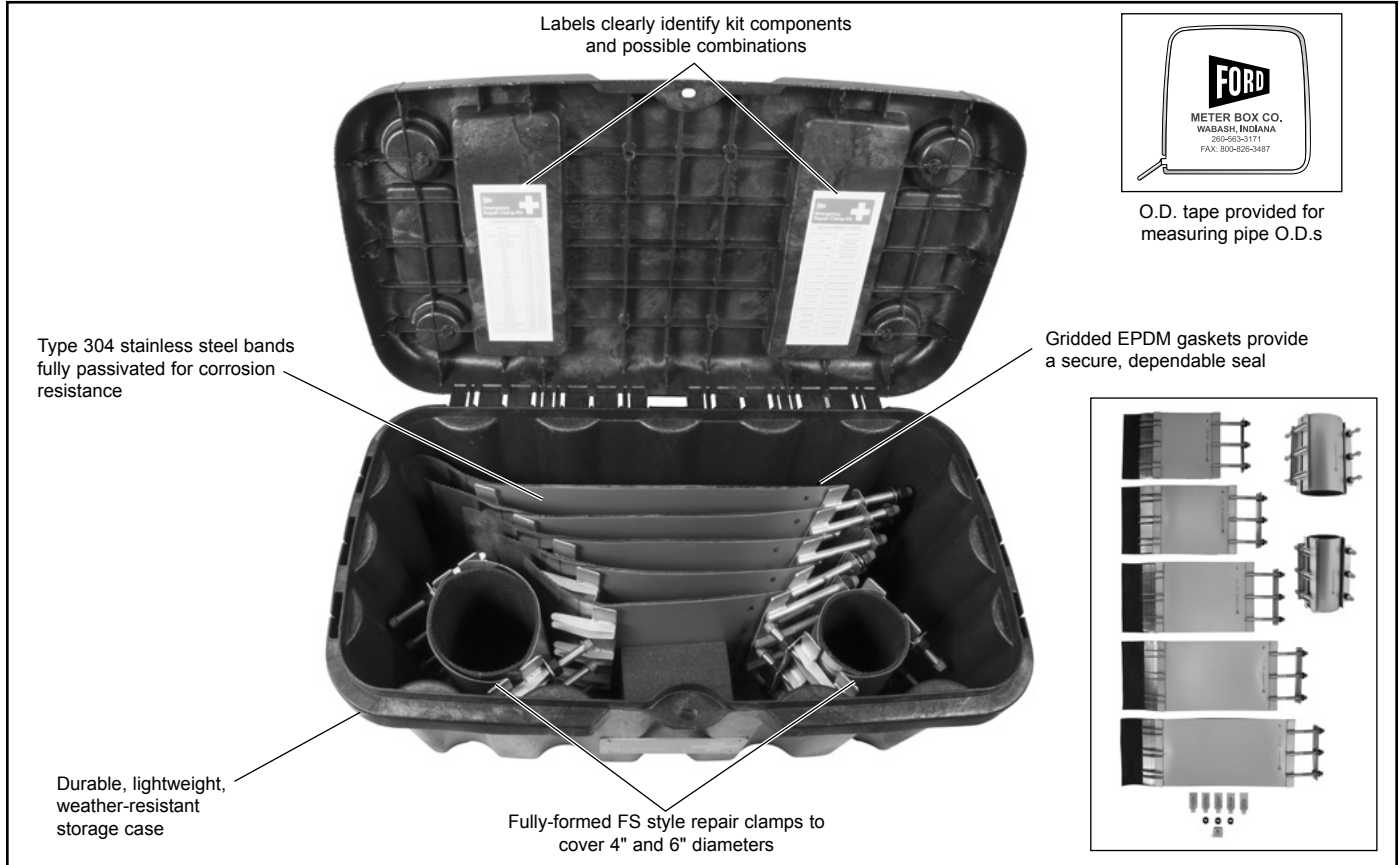
NOM. PIPE SIZE	PIPE O.D.	3" LONG CLAMP (1 BOLT)			6" LONG CLAMP (2 BOLT)		
		CATALOGUE NUMBER	APPROX. WT. LBS.	CTN. QTY.	CATALOGUE NUMBER	APPROX. WT. LBS.	CTN. QTY.
1/2"	0.625	FSC-063-3R2	0.75	25	FSC-063-6R2	1.56	12
	0.84	FSC-084-3R2			FSC-084-6R2		
3/4"	0.875	FSC-088-3R2	0.75	25	FSC-088-6R2	1.56	12
	1.05	FSC-105-3R2			FSC-105-6R2		
1"	1.125	FSC-113-3R2	0.85	20	FSC-113-6R2	1.58	10
	1.32	FSC-132-3R2			FSC-132-6R2		
1-1/4"	1.375	FSC-138-3R2	0.92	18	FSC-138-6R2	1.87	12
	1.66	FSC-166-3R2			FSC-166-6R2		
1-1/2"	1.625	FSC-163-3R2	1.03	12	FSC-163-6R2	2.05	12
	1.90	FSC-190-3R2			FSC-190-6R2		
2"	2.125	FSC-213-3R2	1.50	10	FSC-213-6R2	3.00	12
	2.38	FSC-238-3R2			FSC-238-6R2		

Emergency Repair Clamp Kit

Style FSERK

The Ford Emergency Repair Clamp Kit is an all-inclusive repair solution for most pipe diameters between 4.50" and 33.74" (O.D.s). Designed for emergencies, the kit proactively prepares water utilities for a situation where the pipe O.D. may not be known. The stainless steel bands are clearly identified and, when combined together, reach specific O.D. ranges. For example, when A + D are combined, they create a repair clamp for a 10.39" - 11.18" pipe O.D.

Features



Kit Options and Accessories

Wider Length Clamps – For increased pipe coverage, order the FSERK-L15 for 15" wide clamps, FSERK-L20 for 20" wide clamps, and FSERK-L24 for 24" wide clamps.

Optional Tapped Panel – The tapped outlet is 18-8 Type 304 stainless steel and is fused to the clamp band by a fully passivated TIG weld. To order, add the tap code from the table to the required stainless steel band.

316 Stainless Steel Hardware Kit – For kits built with 316 stainless steel, add "-Q" to the end of the kit part number.

HDPE Accessory Kits – These kits contain Belleville/Spring washers for use with HDPE pipe.

CATALOGUE NUMBER	DESCRIPTION
FSERK	Complete Repair Clamp Kit
FS2-524-125-FSERK	4" Stainless Steel Repair Clamp
FS2-742-125-FSERK	6" Stainless Steel Repair Clamp
FS1-A-125-EPDM	Stainless Steel Band "A"
FS1-B-125-EPDM	Stainless Steel Band "B"
FS1-C-125-EPDM	Stainless Steel Band "C"
FS1-D-125-EPDM	Stainless Steel Band "D"
FS1-E-125-EPDM	Stainless Steel Band "E"
FN-58-SH-EP3	Stainless Steel Nut
FW-58-SS	Stainless Steel Washer
LIFTERBAR-55034-02	Stainless Steel Lifter Bar
FSERK-BOX	Plastic Carrier Box
FSERK-FOAM	Foam Insert for Box
OD-TAPE	O.D. Tape Measure
FLP-10	Lube Packet

Tapping Codes

CC (AWWA) THREAD		IP THREAD	
SIZE	CODE NUMBER	SIZE	CODE NUMBER
3/4"	CC3	3/4"	IP3
1"	CC4	1"	IP4
1-1/4"	*CC5	1-1/4"	*IP5
1-1/2"	CC6	1-1/2"	IP6
2"	CC7	2"	IP7

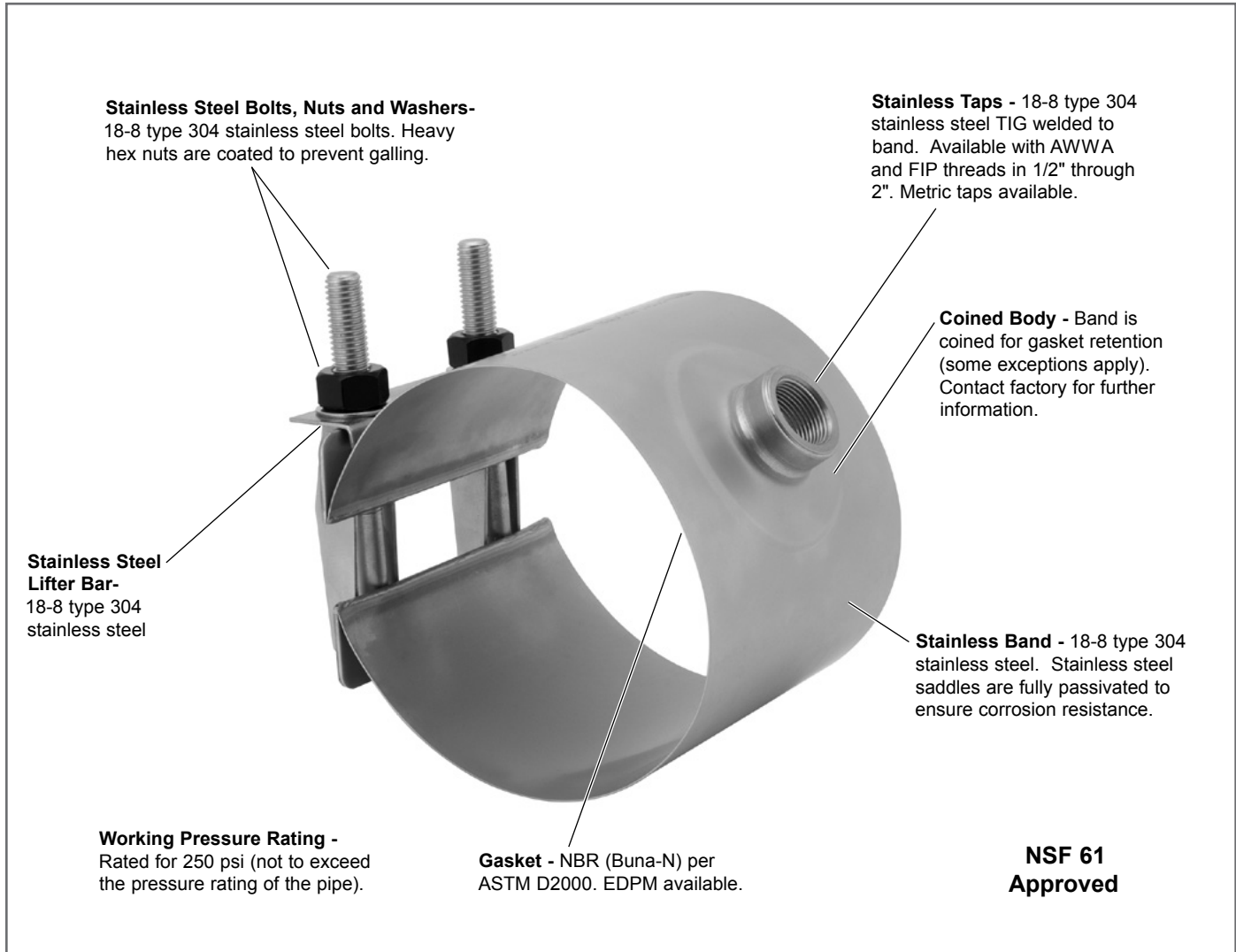
* Contact factory for availability

Ford Stainless Steel Saddles

For 1/2" through 2" Taps

Ford Stainless Steel Saddles are designed for use where corrosive conditions exist. Designed for all pipe types, the stainless steel construction allows the saddle to conform, reducing stress on the pipe.

Specifications



OUTLET THREAD TAP CODE

CC (AWWA) Thread		FIP Thread	
Thread	Code	Thread	Code
-	-	1/2" IP	IP1
3/4" CC	CC3	3/4" IP	IP3
1" CC	CC4	1" IP	IP4
1-1/4" CC	CC5	1-1/4" IP	IP5
1-1/2" CC	CC6	1-1/2" IP	IP6
2" CC	CC7	2" IP	IP7

Ford Stainless Steel Saddles

For 1/2" through 2" Taps

Nom. Pipe Size	O.D. Range	Catalogue Number	Bolt Size	Bolt Quantity	Band Width		No. of Sections	Approx. Weights	
					1/2" - 1"	1-1/4" - 2"		1/2"- 1" Taps	1-1/4" - 2" Taps
FS313 SINGLE BAND									
2"	2.13	◆*FS313-213-Tap	1/2"	1	4"	-	1	1.9	-
	2.13	*FS313W-213-Tap	1/2"	2	6"	-			
	2.38	◆*FS313-238-Tap	1/2"	1	4"	-			
	2.38	*FS313W-238-Tap	1/2"	2	6"	-			
	2.50 - 2.70	◆*FS313-270-Tap	1/2"	1	4"	-			
2-1/2"	2.50 - 2.70	*FS313W-270-Tap	1/2"	2	6"	-	1	1.9	-
	2.88	◆*FS313-288-Tap	1/2"	1	4"	-			
3"	2.88	*FS313W-288-Tap	1/2"	2	6"	-	1	2.2	-
	3.50	◆*FS313-350-Tap	1/2"	1	4"	-			
	3.50	*FS313W-350-Tap	1/2"	2	6"	-			
	3.90 - 4.10	◆*FS313-410-Tap	1/2"	1	4"	-			
4"	3.90 - 4.10	*FS313W-410-Tap	1/2"	2	6"	-	1	3.3	3.9
	4.50 - 4.80	*FS313-480-Tap	1/2"	2	6"	7-1/2"			
5"	4.80 - 5.20	*FS313-520-Tap	1/2"	2	6"	7-1/2"	1	4.4	4.8
	5.56	*FS313-556-Tap	5/8"	2	6"	7-1/2"			
6"	6.00 - 6.40	*FS313-640-Tap	5/8"	2	6"	7-1/2"	1	4.7	5.1
	6.40 - 6.80	*FS313-680-Tap							
	6.63 - 6.90	*FS313-690-Tap							
	6.80 - 7.20	*FS313-720-Tap							
8"	8.00 - 8.40	*FS313-840-Tap	5/8"	2	6"	7-1/2"	1	5.2	5.8
	8.40 - 8.80	*FS313-880-Tap							
	8.63 - 9.05	*FS313-905-Tap							
	9.00 - 9.40	*FS313-940-Tap							
10"	10.00 - 10.40	*FS313-1040-Tap	5/8"	2	6"	7-1/2"	1	5.8	8.7
	10.75 - 11.10	*FS313-1110-Tap							
	11.10 - 11.50	*FS313-1150-Tap							
12"	12.00 - 12.40	*FS313-1240-Tap	5/8"	2	6"	7-1/2"	1	6.4	9.3
	12.75 - 13.20	*FS313-1320-Tap							
	13.10 - 13.50	*FS313-1350-Tap							
FS323 DOUBLE BAND									
4"	4.74 - 5.54	*FS323-554-Tap	5/8"	4	6"	7-1/2"	2	5.2	5.7
6"	6.40 - 7.20	*FS323-720-Tap	5/8"	4	6"	7-1/2"	2	5.1	5.8
8"	8.40 - 9.20	*FS323-920-Tap	5/8"	4	6"	7-1/2"	2	6.3	7.8
10"	10.70 - 11.50	*FS323-1150-Tap	5/8"	4	6"	7-1/2"	2	7.0	9.0
12"	12.70 - 13.50	*FS323-1350-Tap	5/8"	4	6"	7-1/2"	2	9.0	11.0
14"	14.00 - 14.80	FS323-1480-Tap	5/8"	4	6"	7-1/2"	2	10.0	12.0
	14.95 - 15.75	FS323-1575-Tap							
	15.60 - 16.40	FS323-1640-Tap							
16"	15.75 - 16.55	FS323-1655-Tap	5/8"	4	6"	7-1/2"	2	10.5	12.5
	16.40 - 17.20	FS323-1720-Tap							
	17.20 - 18.00	FS323-1800-Tap							
18"	17.60 - 18.40	FS323-1840-Tap	5/8"	4	6"	7-1/2"	2	10.5	12.5
	18.00 - 18.80	FS323-1880-Tap							
	18.40 - 19.20	FS323-1920-Tap							
	18.80 - 19.60	FS323-1960-Tap							
	19.20 - 20.00	FS323-2000-Tap							
FS333 TRIPLE BAND									
20"	21.40-22.60	FS333-2260-Tap	5/8"	6	6"	7-1/2"	3	14.5	17.0
	22.80-24.00	FS333-2400-Tap							
	23.45-24.65	FS333-2465-Tap							
24"	24.45-25.65	FS333-2565-Tap	5/8"	6	6"	7-1/2"	3	15.5	17.5
	25.50-26.70	FS333-2670-Tap							
	28.25-29.45	FS333-2945-Tap							
30"	29.40-30.60	FS333-3060-Tap	5/8"	6	6"	7-1/2"	3	17.0	19.5
	29.85-31.05	FS333-3105-Tap							
	30.85-32.05	FS333-3205-Tap							
FS343 QUAD BAND									
36"	35.80-37.00	FS343-3700-Tap	5/8"	8	6"	7-1/2"	4	21.0	24.0
	37.50-38.70	FS343-3870-Tap							

* Approved for use on HDPE pipe. If Belleville washers are desired, use prefixes FSP313, FSP323, FSP333 and FSP343.

◆ One-bolt design

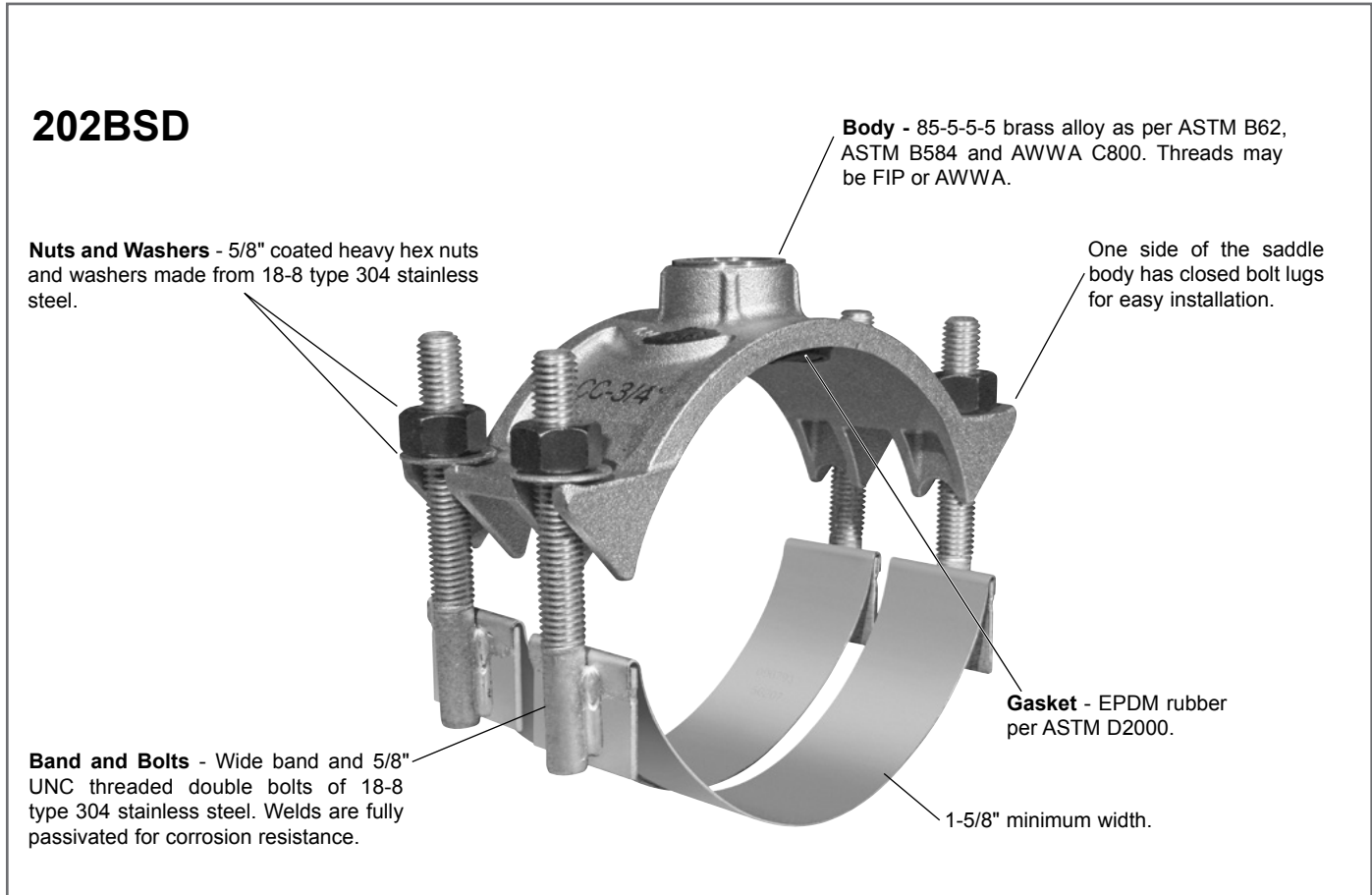
Note: Coined outlet not available on 2" and 3" saddles.

To order: Add tap code from the table on the facing page to the catalogue number: For example, a FS313-556 saddle with a 3/4" CC tap would be FS313-556-CC3.

Ford Brass Saddles Styles 202BSD

With Stainless Steel Dual Band and Bolts for 3/4" through 2" Taps

Specifications



OUTLET THREAD TAP CODE

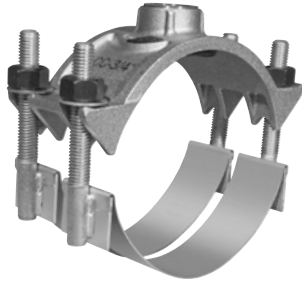
CC (AWWA) Thread		FIP Thread	
Thread	Code	Thread	Code
3/4" CC	CC3	3/4" IP	IP3
1" CC	CC4	1" IP	IP4
1-1/4" CC	CC5	1-1/4" IP	IP5
1-1/2" CC	CC6	1-1/2" IP	IP6
2" CC	CC7	2" IP	IP7

Ford Brass Saddles Styles 202BSD

With Stainless Steel Dual Band and Bolts
for 3/4" through 2" Taps

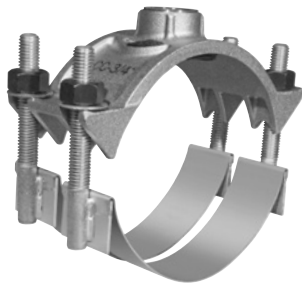
The 202BSD style service saddles incorporate dual stainless steel bands in place of the standard silicon bronze straps. This combination of brass and stainless provides the perfect answer for strength and flexibility. The stainless easily conforms to the surface of PVC pipe and the brass provides the required strength to support service lines. The 202BSD style saddles are ideally suited for tapping C900 PVC pipe. These saddles conform to the recommendation of Uni-Bell and AWWA.

Style 202BSD Dual Band Saddles for C900/C905 PVC Pipe



Nom. Pipe Size	Pipe O.D.	Catalogue Number	Approx. Wt.Lbs. 3/4" & 1" Taps	Approx. Wt.Lbs. 1-1/2" & 2" Taps
4"	4.80	202BSD-480-Tap	7.0	7.7
6"	6.90	202BSD-690-Tap	7.2	7.7
8"	9.05	202BSD-905-Tap	7.8	9.0
10"	11.10	202BSD-1110-Tap	9.0	10.0
12"	13.20	202BSD-1320-Tap	10.8	12.5
14"	15.30	202BSD-1530-Tap	17.0	16.5
16"	17.40	202BSD-1740-Tap	22.0	21.5
18"	19.50	202BSD-1950-Tap	24.0	23.5
20"	21.60	202BSD-2160-Tap	24.5	24.0
24"	25.80	202BSD-2580-Tap	25.0	24.5
30"	32.00	202BSD-3200-Tap	26.0	25.5

Style 202BSD Dual Band Saddles for Iron and AC Pipe



Nom. Pipe Size	Pipe O.D.	Catalogue Number	Approx. Wt.Lbs. 3/4" & 1" Taps	Approx. Wt.Lbs. 1-1/2" & 2" Taps
4"	4.80-5.40	202BSD-540-Tap	6.2	7.2
4"	4.80-5.10	*202BSD-510-Tap	-	7.2
4"	5.10-5.40	*202BSD-540-Tap	-	7.2
6"	6.63	•**202BSD-663-Tap	7.2	-
6"	6.90-7.50	202BSD-750-Tap	7.2	8.0
8"	8.63-9.05	**202BSD-905-Tap	7.8	9.0
8"	9.05-9.62	202BSD-962-Tap	7.8	9.0
10"	10.75	•**202BSD-1075-Tap	9.0	-
10"	11.10-12.12	202BSD-1212-Tap	9.1	10.0
12"	12.75	•**202BSD-1275-Tap	10.8	-
12"	13.20-14.38	202BSD-1438-Tap	11.0	11.0
14"	15.30-16.25	202BSD-1625-Tap	17.0	17.0
14"	16.30-17.25	202BSD-1725-Tap	22.0	22.0
16"	17.40-18.40	202BSD-1840-Tap	23.0	23.0
16"	18.50-19.25	202BSD-1925-Tap	23.0	23.0
18"	19.50-20.50	202BSD-2050-Tap	24.0	24.0
20"	21.20-22.20	202BSD-2220-Tap	24.0	24.0
20"	22.50-23.50	202BSD-2350-Tap	24.0	24.0
24"	25.80-24.80	202BSD-2480-Tap	25.0	25.0
24"	25.60-26.50	202BSD-2650-Tap	25.5	25.5
30"	31.74-32.74	202BSD-3274-Tap	26.0	26.0

* **Please Note:** These 4" saddles have limited range and are for 2" taps only. For all other tap sizes use the standard 4.80-5.40 range.

** 3/4" and 1" taps only

• These saddles are suitable for use on steel size PVC.

OUTLET THREAD TAP CODE

CC (AWWA) Thread		FIP Thread	
Thread	Code	Thread	Code
3/4" CC	CC3	3/4" IP	IP3
1" CC	CC4	1" IP	IP4
1-1/2" CC	CC6	1-1/2" IP	IP6
2" CC	CC7	2" IP	IP7

To order: Select the catalogue number for the desired pipe range and complete the catalogue number by adding the outlet thread tap code.

Example: A double band saddle for 6.90 C900 PVC pipe with a 3/4" CC thread would be 202BSD-690-CC3.

Ford Ductile Iron Service Saddles

Styles F101 and FC101

Styles F202 and FC202

Ford ductile iron service saddles have a wide range and are designed for use on asbestos-cement, cast or ductile iron, and can be specifically sized for PVC pipe. They offer a simple, yet satisfactory, means of tapping water main pipe. The FC style is recommended for use in corrosive areas and the stainless steel bands are especially recommended for use on PVC. Ford style FC saddles should be pre-sized when used on PVC pipe. Pre-sized saddles will conform to the PVC pipe O.D. without placing undue stress on the pipe. The Ford Meter Box Company endorses full compliance with the standard tapping practices and recommended material requirements for tapping PVC pipe outlined in the Uni-Bell Handbook of PVC Pipe and the AWWA Manual M23. **Improperly sized saddles and saddles with narrow straps are not for use on PVC pipe. If properly sized to the OD of PVC pipe, FC Saddles meet the stipulations of AWWA and Uni-Bell for use on PVC pipe.**

One side of the saddle has closed lugs to allow pre-assembly of the saddle straps to facilitate installation. The heavy-duty outlet gasket maintains a positive seal in excess of the pipe rating.

Specifications

F101 and F202

Body - High strength ductile iron per ASTM A536.

Bolt Lugs - One side of the saddle body has closed bolt lugs for easy installation.

Straps - 5/8" AISI C1010 ASTM A510 steel, zinc plated with trivalent seal. Each strap has 5/8" flat bearing surface. 1/2" straps are furnished on saddles 3" and smaller.



Threads - CC or FIP per AWWA C800.

Heavy Hex Nuts and Washers - 1/2" or 5/8" AISI steel alloy, zinc plated, with dichromate seal.

Finish - Fusion bonded epoxy coating

Gasket - EPDM rubber per ASTM D2000.

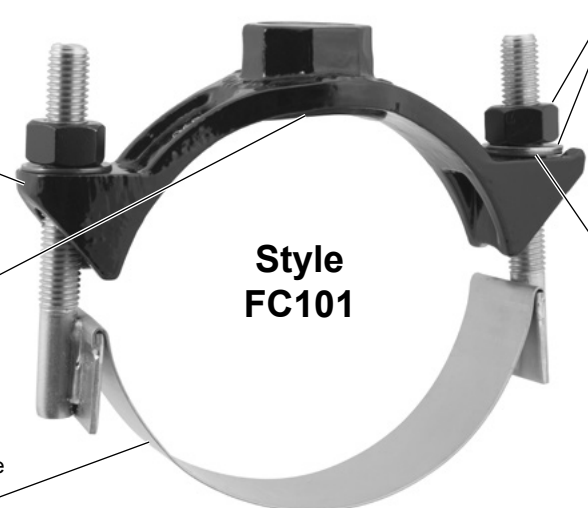
Style F202

FC101 and FC202

Finish - Fusion bonded epoxy coating.

Gaskets - EPDM rubber per ASTM D2000.

Band and Bolts - Wide band and 5/8" UNC threaded bolts of 18-8 type 304 stainless steel. 1/2" bolts are furnished on saddles 3" and smaller. Bands are fully passivated for corrosion resistance.



Nuts and Washers - 18-8 type 304 stainless steel. 1/2" or 5/8" heavy hex nuts are coated to prevent galling. (Washer is only on the open lug side.)

Nylon Washer - (Both sides) Protects epoxy coating

2" minimum width (FC101)

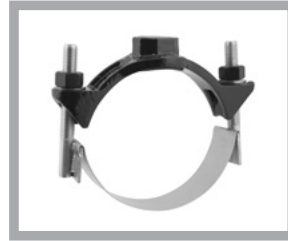
Style FC101

Ford Ductile Iron Service Saddles Styles F101 and FC101

Single Strap for 3/4" and 1" Taps



F101 (epoxy coated with standard strap)



FC101 (epoxy coated with stainless steel band and bolts)

Style F101 and FC101 Ductile Iron Service Saddles For AC and Iron Pipe

To Order: Select the catalogue number for the desired pipe range and complete catalogue number by adding the tap code from the table at the bottom of the page. Example: A standard single strap saddle for 6.90 ductile iron pipe with a 3/4" CC thread would be F101-760-CC3.

Nom. Pipe Size	Pipe O.D. Range	**Catalogue Number Standard Strap	Catalogue Number Epoxy Coated	Approx. Wt. Lbs.
2"	2.35-2.50	F101-250-Tap	FC101-250-Tap	1.8
2-1/2"	2.75-2.90	F101-290-Tap	FC101-290-Tap	2.0
3"	3.46-3.80	F101-380-Tap	FC101-380-Tap	2.1
	3.80-4.25	F101-425-Tap	FC101-425-Tap	2.4
4"	4.26-4.80	F101-480-Tap	FC101-480-Tap	2.8
	4.74-5.26	F101-526-Tap	*FC101-526-Tap	3.0
6"	5.94-6.69	F101-669-Tap	FC101-669-Tap	3.5
	6.63-6.90	F101-690-Tap	*FC101-690-Tap	-
	6.84-7.60	F101-760-Tap	FC101-760-Tap	3.6
8"	7.93-8.71	F101-871-Tap	FC101-871-Tap	3.8
	8.63-9.05	F101-905-Tap	*FC101-905-Tap	-
	8.99-9.79	F101-979-Tap	*FC101-979-Tap	4.3
10"	10.00-10.75	F101-1075-Tap	FC101-1075-Tap	4.4
	11.10-12.12	F101-1212-Tap	FC101-1212-Tap	4.8
12"	12.00-12.75	F101-1275-Tap	FC101-1275-Tap	5.9
	13.20-14.38	F101-1438-Tap	FC101-1438-Tap	6.7

*These saddles are available with 1-1/4", 1-1/2", and 2" taps.

**Available with stainless steel straps, contact factory for availability.

FC101 Saddles Sized for C900 PVC

To Order: Select the catalogue number for the desired pipe O.D. and complete the catalogue number by adding the tap code. Example: An FC101 style saddle for 12" C900 PVC with a 3/4" CC thread tap would be FC101-1320-CC3

Nom. Pipe Size	Pipe O.D.	Catalogue Number Epoxy Coated	Approx. Wt. Lbs.
4"	4.80	*FC101-480-Tap	3.0
6"	6.90	*FC101-690-Tap	3.6
8"	9.05	*FC101-905-Tap	4.3
10"	11.10	FC101-1110-Tap	4.8
12"	13.20	FC101-1320-Tap	6.7

*These saddles are available with 1-1/4", 1-1/2", and 2" taps.

OUTLET THREAD TAP CODE

CC (AWWA) Thread		FIP Thread	
Thread	Code	Thread	Code
1/2" CC	***CC1	1/2" IP	***IP1
3/4" CC	CC3	3/4" IP	IP3
1" CC	CC4	1" IP	IP4
1-1/4" CC	***CC5	1-1/4" IP	***IP5
1-1/2" CC	CC6	1-1/2" IP	IP6
2" CC	CC7	2" IP	IP7

***Contact factory for availability

Ford Ductile Iron Service Saddles Styles F202 and FC202 for AC and Iron Pipe

Double Strap Saddles for 3/4" through 2-1/2" Taps

Ford double strap or band saddles are recommended for larger taps and for use on larger O.D. pipe. Double strap saddles equalize the pressure on the pipe and can be used on asbestos-cement, cast or ductile iron pipe.

The FC style is recommended for use in corrosive areas and the stainless steel bands are especially recommended for use on PVC pipe. Ford FC Style saddles should be pre-sized when used on PVC pipe. Pre-sized saddles will conform to the PVC pipe O.D. without placing undue stress on the pipe. A separate listing of FC202 saddles sized for PVC is shown on the following page. The Ford Meter Box Company endorses full compliance with the standard tapping practices and recommended material requirements for tapping PVC pipe outlined in Uni-Bell Handbook of PVC Pipe and AWWA Manual M23. **Improperly sized saddles and saddles with narrow straps are not for use on PVC pipe. If properly sized to the PVC pipe O.D., FC saddles meet the stipulations of AWWA and Uni-Bell for use on PVC pipe.**

The open and closed lug design allows pre-assembly of the straps, thus ensuring a safe yet simple installation. The heavy duty gasket ensures the saddle will maintain pressure in excess of the pipe rating.



Standard Straps and epoxy coated



Stainless Band and Epoxy Coated

Style F202 and FC202 Ductile Iron Saddles

To Order: Select the catalogue number below for the desired pipe O.D. range and complete the catalogue number by adding the outlet thread tap code from the bottom of page 55. Example: A standard double strap saddle for 6.90 ductile iron pipe with a 2" CC thread tap would be F202-760-CC7.

Nom. Pipe Size	Pipe O.D. Range	• Catalogue Number Standard Strap	Catalogue Number Stainless Band	Approx. Wt. Lbs.
2"	2.35-2.50	F202-250-Tap-I	FC202-250-Tap-I	2.8
2-1/2"	2.75-2.90	F202-290-Tap-I	FC202-290-Tap-I	2.8
3"	* 3.46-3.80	F202-380-Tap-I	FC202-380-Tap-I	4.8
	* 3.80-4.25	F202-425-Tap-I	FC202-425-Tap-I	5.5
4"	** 4.26-4.80	F202-480-Tap-I	FC202-480-Tap-I	5.4
	▲ 4.74-5.00	F202-500-Tap-I	FC202-500-Tap-I	5.4
	* 4.74-5.26	F202-526-Tap-I	FC202-526-Tap-I	5.4
	▲ 4.97-5.26	F202-526-Tap-I	FC202-526-Tap-I	5.4
	* 4.50-5.40	-	FC202-540-Tap-I	5.4
6"	5.94-6.69	F202-669-Tap-I	FC202-669-Tap-I	5.7
	6.63-6.90	F202-690-Tap-I	FC202-690-Tap-I	5.7
	6.84-7.60	F202-760-Tap-I	FC202-760-Tap-I	6.7
	6.63-7.61	-	FC202-761-Tap-I	6.7
8"	7.93-8.71	F202-871-Tap-I	FC202-871-Tap-I	6.8
	8.63-9.05	F202-905-Tap-I	FC202-905-Tap-I	8.2
	8.99-9.79	F202-979-Tap-I	FC202-979-Tap-I	8.4
	8.63-9.80	-	FC202-980-Tap-I	8.4
10"	10.00-10.75	F202-1075-Tap-I	FC202-1075-Tap-I	9.4
	10.75-11.10	F202-1110-Tap-I	FC202-1110-Tap-I	9.0
	11.10-12.12	F202-1212-Tap-I	FC202-1212-Tap-I	10.8
	10.64-12.13	-	FC202-1213-Tap-I	10.8
12"	12.00-12.75	F202-1275-Tap-I	FC202-1275-Tap-I	11.0
	12.75-13.20	F202-1320-Tap-I	FC202-1320-Tap-I	11.5
	13.20-14.38	F202-1438-Tap-I	FC202-1438-Tap-I	12.8
	12.62-14.39	-	FC202-1439-Tap-I	12.8
14"	15.30-16.25	F202-1625-Tap-I	FC202-1625-Tap-I	11.9
	16.30-17.25	F202-1725-Tap-I	FC202-1725-Tap-I	12.9
16"	17.40-18.40	F202-1840-Tap-I	FC202-1840-Tap-I	13.1
	18.50-19.25	F202-1925-Tap-I	FC202-1925-Tap-I	12.9
18"	19.50-20.50	F202-2050-Tap-I	FC202-2050-Tap-I	13.1
	21.20-22.20	F202-2220-Tap-I	FC202-2220-Tap-I	13.2
20"	22.50-23.50	F202-2350-Tap-I	FC202-2350-Tap-I	13.3
	23.80-24.80	F202-2480-Tap-I	FC202-2480-Tap-I	13.4
24"	25.60-26.50	F202-2650-Tap-I	FC202-2650-Tap-I	13.9
	31.74-32.74	F202-3274-Tap-I	FC202-3274-Tap-I	14.8

* Saddles for this pipe range are not available with 2" CC or 2-1/2" IP threads.

** These saddles with 2" CC (CC7) or 2-1/2" IP (IP8) taps only fit 4.80" O.D. pipe. Example: F202-480-CC7 fits 4.80" pipe O.D. only

• Available with epoxy coating and stainless steel bales. Contact factory for availability.

▲ This saddle is only available with 2" CC (CC7) or 2-1/2" IP (IP8) taps.

Note: For USA cast bodies, remove "-I" from catalogue number.

Ford Abandoned Corp Cap

Style FACC

Accommodates nominal pipe sizes 4" through 24"

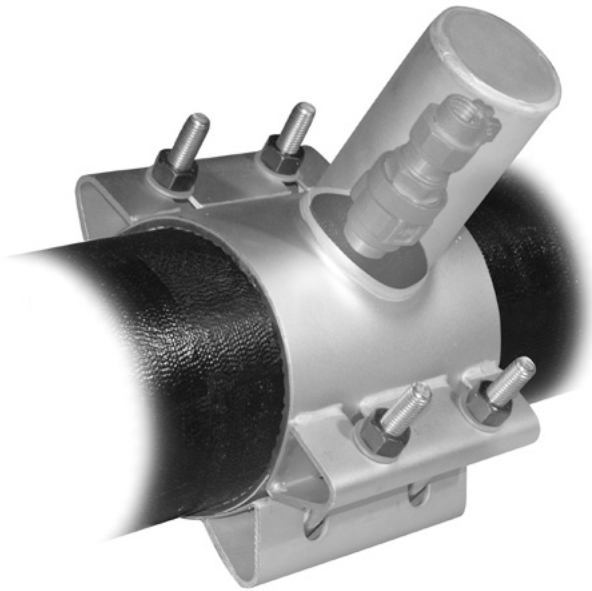
The Ford Abandoned Corporation Cap provides a quick and easy way to encapsulate corporation stops that are no longer used to provide water service. **Standard Corp Cap fits up to 1"**. For larger corps, add "-XL" to the end of the part number.

3" cap to encapsulate 1/2" through 1" corporation stops
 5" cap to encapsulate 1-1/4" through 2" corporation stops

Specifications

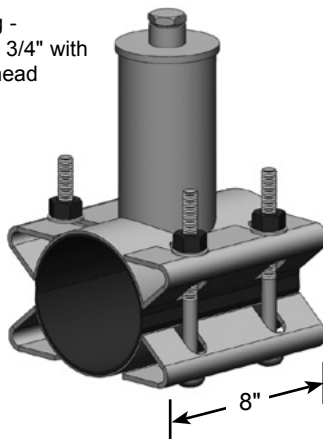
Body: 18-8 type 304 stainless steel construction
Gasket: Gridded SBR full pad gasket
Outlet Gasket: NBR (Buna-N) outlet gasket
Bolts and Nuts: 18-8 type 304 stainless steel hardware

Cap Size	Corp Range
3"	1/2" - 1"
*5"	1-1/4" - 2"



Nominal Pipe Size	Sleeve O.D. Range	Catalogue Number with 3" Outlet
4"	4.50-4.80	FACC-480
	4.80-5.00	FACC-500
	5.10-5.30	FACC-530
	5.20-5.40	FACC-540
*6"	6.63-7.00	FACC-700
	6.90-7.30	FACC-730
	7.30-7.50	FACC-750
*8"	8.63-9.05	FACC-905
	9.05-9.30	FACC-930
	9.30-9.60	FACC-960
	9.45-9.75	FACC-975
*10"	10.75-11.10	FACC-1110
	11.10-11.40	FACC-1140
	11.40-11.70	FACC-1170
	11.85-12.15	FACC-1215
*12"	12.75-13.20	FACC-1320
	13.20-13.50	FACC-1350
	13.50-13.80	FACC-1380
	14.10-14.40	FACC-1440
*14"	15.30-15.70	FACC-1570
	15.80-16.20	FACC-1620
	16.48-16.88	FACC-1688
	17.40-17.80	FACC-1780
*16"	17.75-18.15	FACC-1815
	18.15-18.60	FACC-1860
	18.80-19.20	FACC-1920
	19.50-19.92	FACC-1992
*18"	19.80-20.20	FACC-2020
	20.20-20.60	FACC-2060
*20"	21.20-21.60	FACC-2160
	23.80-24.20	FACC-2420
*24"	25.60-26.00	FACC-2600
	26.20-26.60	FACC-2660

Optional Test Plug -
 Waterworks brass 3/4" with
 standard square head



Options Include:

Add "-TP" to end of catalogue number for Test Plug option.
 Example: FACC-930-TP

*Optional: 5" cap to encapsulate 1-1/4" through 2" corporation stops, add "-XL" following the sleeve O.D.
 Example: FACC-930-XL

Ford Tapping Sleeves

TYPE OF TAPPING SLEEVE

FAST = All stainless steel tapping sleeve
FTSS = All stainless steel tapping sleeve with removable bolts
FTSC = Epoxy coated steel tapping sleeve with stainless steel bolts

OPTIONS

A = Optional carbon steel flange on FAST & FTSS
A-E = Epoxy coated carbon steel flanges for FAST and FTSS

FAST - 970 - 4A - MJ

SIZE OF O.D.
 High end of application O.D. range.
 Please verify actual pipe O.D. is within listed catalogue range.

OUTLET SIZE CODE

3	= 3"
4	= 4"
6	= 6"
8	= 8"
10	= 10"
12	= 12"
*14	= 14"
*16	= 16"
*18	= 18"
*20	= 20"
*24	= 24"

** Not available on FAST*

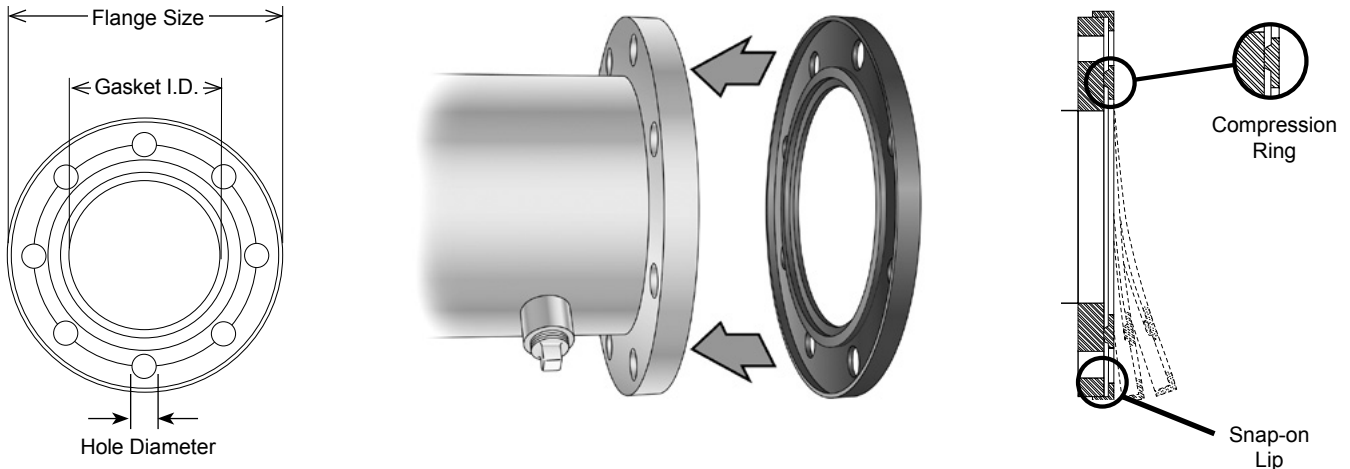
OPTIONS

-MJ = Mechanical Joint Adapter Outlet (instead of C207 flange outlet)
-AH = Optional high strength low alloy steel nuts and bolts on removable bolt tapping sleeves
-EPDM = EPDM gasket
-SH = Optional stainless steel nuts and bolts on FTS
-FG = Optional Ultra-Seal Cap Style Flange Gasket (standard on all 10" & 12" size flanges for FAST and FTSS Tapping Sleeves)

Ford Ultra-Seal Cap Style Flange Gasket

4" Through 12" Nominal Ring Flange Sizes

The Ultra-Seal Cap Style Flange Gasket, CSFG, made from NBR (Buna-N) rubber is NSF-61 approved and has test pressures well beyond AWWA Class D flanges. A raised lip on the outside circumference of the gasket allows it to snap-on and stay on, eliminating the need for adhesives or to hold the gasket in place during installation. The compression ring near the ID of the gasket concentrates the clamping load in a small surface area, providing superior sealing capabilities.



Ford Ultra-Seal Cap Style Flange Gasket for 4" Through 12" Nominal Ring Flange Sizes

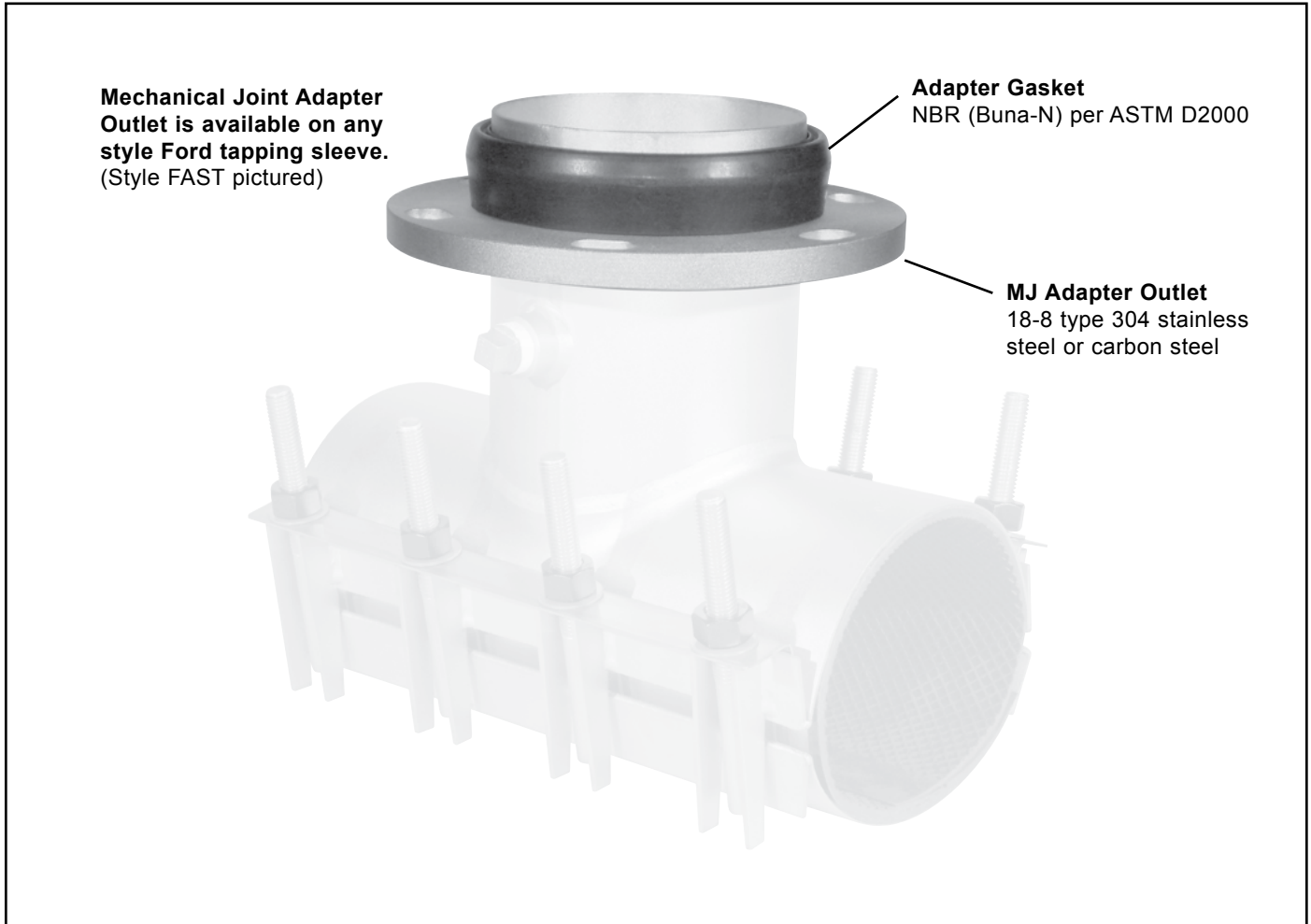
Catalogue Number	Description	Gasket Inside Diameter	Hole Diameter	Weight Lbs.
CSFG-4	4" Cap Style Flange Gasket	5-1/16"	0.81	0.4
CSFG-6	6" Cap Style Flange Gasket	7-1/16"	0.94	0.5
CSFG-8	8" Cap Style Flange Gasket	9-1/16"	0.94	0.7
CSFG-10	10" Cap Style Flange Gasket	11-1/16"	1.06	0.8
CSFG-12	12" Cap Style Flange Gasket	13-1/16"	1.06	1.2

Add "-FG" to end of tapping sleeve catalogue number for Ultra-Seal Cap Style Gasket to be sent with tapping sleeve. Example: FAST-905-4-FG. Please note, this gasket comes standard on all 10" and 12" flanges for FAST and FTSS tapping sleeves.

Mechanical Joint Adapter Outlet Option

For Ford Tapping Sleeves

The mechanical joint adapter outlet ensures alignment between the valve and sleeve. Tightening the fasteners until the valve face makes complete contact with the tapping sleeve flange gives the installer a visual indicator of proper installation and alignment. The face-to-face flange contact prevents the joint from flexing and prevents the gasket from blowing out. The mechanical joint adapter outlet is available on Ford Tapping Sleeves with 3" - 24" outlets*. To order this option, add "-MJ" to the end of the part number.



Ordering Example: The catalogue number for a 6" FAST tapping sleeve with a 6" carbon steel mechanical joint adapter outlet is FAST-700-6A-MJ or FAST-730-6A-MJ.

"-MJ" Outlet Size
3"
4"
6"
8"
10"
12"
*14"
*16"
*18"
*20"
*24"

* Outlet sizes 14" through 24" are not available for FAST tapping sleeves.

* For styles FTSC and FTSS tapping sleeves, a 1" undersized cutter is required for flanges 14" and larger. Oversized outlets are available by special request.

Ford Stainless Steel Tapping Sleeve

Style FAST Stainless Steel Tapping Sleeve with 360° Gasket

Ford FAST Tapping Sleeves take the guesswork out of large pipe taps. A gridded gasket surrounds the pipe and not only cushions the pipe during the tap, but also helps prevent pipe breaks. The flange outlet is welded inside and out. FAST Tapping Sleeves are chemically passivated to ensure maximum corrosion resistance.

The sleeve is constructed of 18-8 type 304 stainless steel to provide corrosion protection. Sleeves are available in pipe sizes 3" through 24", with outlets from 3" through 12". Detailed specifications and critical dimensions are outlined below.

The Ford Ultra-Seal Cap Style Flange Gasket, CSFG, is recommended for best results. See page 58.

Specifications

Test Plug
Waterworks no-lead brass 3/4" plug with standard square head. Proper use of this feature ensures positive seal before tapping.

Studs and Nuts
18-8 stainless steel UNC threads. Heavy hex nuts and washers are coated to prevent galling.

Lifter Bar
18-8 type 304 stainless steel provides a heavy bearing surface for nuts.

Armors
Heavy gauge Type 18-8 stainless steel armors are molded flush into the gasket to bridge the gap between lugs.

Outlet
18-8 type 304 stainless steel. Schedule 10 for 3" and 4" outlets. Outlets larger than 4" are Schedule 5.

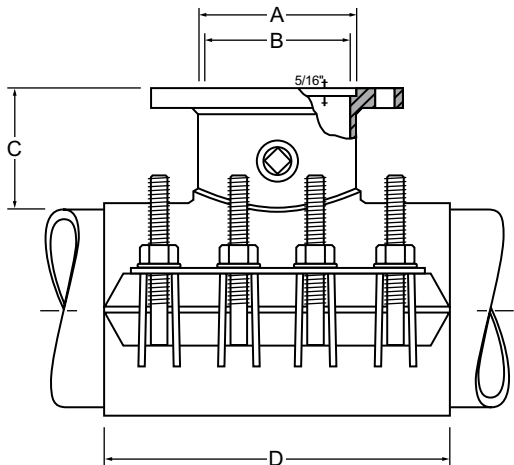
Flange
Type 304 (18-8) stainless steel with recess per MSS SP-60 to accept standard tapping valves. Optional ASTM A36 carbon steel flange may be ordered. Flange conforms to AWWA C228 Class D ANSI 150 lb. drilling. Class E or Class F flange available. Bolt holes straddle pipe center line.
Optional:
Mechanical Joint Adapter Outlet

Body
18-8 type 304 stainless steel for corrosion control. All welds are fully passivated to restore stainless characteristics.

Gasket
Gridded virgin SBR or NBR (Buna-N) compounded for water service per ASTM D2000. Full gasket gives 360° pipe coverage. The outlet gasket is NBR (Buna-N). Optional EPDM

Rating
FAST sleeve is rated for 250 psi working pressure on 3"-12" pipe size. Contact factory for psi rating on pipe sizes 14" and larger.

FAST Dimensions



Nom. Pipe Size	Flange Size Code	Nominal Dimensions - Inches				Stud Size	No. of Studs	Design Style
		A	B	C	D			
3"	3	4-1/64	3-1/4	5-3/16	15	5/8	8	2 pc
	3	4-1/64	3-1/4	5-3/16	15	5/8	8	2 pc
	4	5-1/64	4-1/4	5-3/16	15	5/8	8	2 pc
4" - 12"	6	7-1/64	6-13/32	5-1/2	15	5/8	8	2 pc
	8	9-1/64	8-13/32	5-5/8	20	5/8	12	2 pc
	10	11-1/64	10-31/64	6-1/8	20	5/8	12	2 pc
	12	13-1/64	12-27/64	6-1/4	24	5/8	14	2 pc
	12	13-1/64	12-27/64	6-1/4	24	5/8	14	2 pc
14"	3	4-1/64	3-1/4	5-3/16	16	5/8	10	2 pc
	4	5-1/64	4-1/4	5-3/16	16	5/8	10	2 pc
	6	7-1/64	6-13/32	5-1/2	16	5/8	10	2 pc
	8	9-1/64	8-13/32	5-5/8	20	5/8	12	2 pc
	10	11-1/64	10-31/64	6-1/8	20	5/8	12	2 pc
16" - 18"	12	13-1/64	12-27/64	6-1/4	24	5/8	14	2 pc
	3	4-1/64	3-1/4	5-3/16	16	5/8	15	3 pc
	4	5-1/64	4-1/4	5-3/16	16	5/8	15	3 pc
	6	7-1/64	6-13/32	5-1/2	16	5/8	15	3 pc
	8	9-1/64	8-13/32	5-5/8	20	5/8	18	3 pc
20" - 24"	10	11-1/64	10-31/64	6-1/8	20	5/8	18	3 pc
	12	13-1/64	12-27/64	6-1/4	24	5/8	21	3 pc
	3	4-1/64	3-1/4	5-3/16	16	5/8	15	3 pc
	4	5-1/64	4-1/4	5-3/16	16	5/8	15	3 pc
	6	7-1/64	6-13/32	5-1/2	16	5/8	15	3 pc
20" - 24"	8	9-1/64	8-13/32	5-5/8	20	5/8	18	3 pc
	10	11-1/64	10-31/64	6-1/8	20	5/8	18	3 pc
	12	13-1/64	12-27/64	6-1/4	24	5/8	21	3 pc
	12	13-1/64	12-27/64	6-1/4	24	5/8	21	3 pc

Outlet Options: *Class E or Class F flange available, contact factory.
3" - 12" MJ adapter outlets available, contact factory for dimensions.

Ford Stainless Steel Tapping Sleeve

Style FAST Stainless Steel Tapping Sleeve with 360° Gasket

To Order: Select the catalogue sleeve number for the desired range and complete the catalogue number by adding the flange code. **Example:** The complete catalogue number for a 6" ductile iron pipe (6.90 O.D.) with a 4" stainless steel flange is FAST-730-4. The FAST-700-4 with a range of 6.60 to 7.00 could also be used on 6.90 O.D. pipe. Please contact factory for prices and delivery on pipe O.D. sizes not covered by our standard range.

Nom. Pipe Size	Sleeve O.D. Range	Sleeve Number	by	Stainless Steel Size Flange Code	Optional Carbon Steel Flange Code*	Optional Mechanical Joint Adapter Outlet	Approx. Wt. Lbs.
3"	3.50-3.96	FAST-396-	by	3	3A	-MJ	26
	4.50-4.80	FAST-480-		3	3A		28
4"	4.80-5.10	FAST-510-	by	4	4A	-MJ	29
	5.05-5.30	FAST-530-		3	3A		33
6"	6.60-7.00	FAST-700-	by	4	4A	-MJ	34
	6.90-7.30	FAST-730-		6	6A		38
	7.10-7.50	FAST-750-		3	3A		38
8"	8.63-9.05	FAST-905-	by	4	4A	-MJ	39
	9.05-9.45	FAST-945-		6	6A		42
	9.30-9.70	FAST-970-		8	8A		58
				3	3A		40
10"	10.75-11.15	FAST-1115-	by	4	4A	-MJ	41
	11.05-11.45	FAST-1145-		6	6A		45
	11.75-12.15	FAST-1215-		8	8A		65
				10	10A		85
12"	12.75-13.20 13.10-13.50 14.00-14.40	FAST-1320- FAST-1350- FAST-1440-	by	3	3A	-MJ	43
				4	4A		44
				6	6A		48
				8	8A		68
				10	10A		88
				12	12A		116
14"	15.10-15.50 15.30-15.70 15.80-16.20 16.48-16.88	FAST-1550- FAST-1570- FAST-1620- FAST-1688-	by	3	3A	-MJ	65
				4	4A		66
				6	6A		71
				8	8A		88
				10	10A		96
				12	12A		125
16"	17.30-17.70 17.40-17.80 17.75-18.15 18.15-18.62 18.60-19.00 18.80-19.20	FAST-1770- FAST-1780- FAST-1815- FAST-1862- FAST-1900- FAST-1920-	by	3	3A	-MJ	74
				4	4A		75
				6	6A		78
				8	8A		100
				10	10A		114
				12	12A		146
18"	19.30-19.70 19.50-19.92 19.80-20.20	FAST-1970- FAST-1992- FAST-2020-	by	3	3A	-MJ	80
				4	4A		81
				6	6A		86
				8	8A		106
				10	10A		119
				12	12A		153
20"	20.20-20.60 20.90-21.30 21.40-21.80 21.86-22.26 22.30-22.70 23.40-23.80	FAST-2060- FAST-2130- FAST-2180- FAST-2226- FAST-2270- FAST-2380-	by	3	3A	-MJ	86
				4	4A		87
				6	6A		92
				8	8A		114
				10	10A		124
				12	12A		159
24"	23.80-24.20 25.60-26.00	FAST-2420- FAST-2600-	by	3	3A	-MJ	98
				4	4A		99
				6	6A		103
				8	8A		127
				10	10A		135
				12	12A		171

For use on HDPE pipe, use prefix FASTP.

* Add "-E" for epoxy coated carbon steel flange.

Note: Highlighted ranges are recommended for ductile iron pipe and C900/C905 pipe applications. (4" - 12" also fit IPS PVC pipe.)

Ford Stainless Steel Tapping Sleeve

Style FTSS Stainless Steel Tapping Sleeve with Removable Bolts and 360° Gasket

Ford FTSS tapping sleeves have a heavy gauge stainless steel body with removable bolts. A gridded gasket surrounds the pipe and not only cushions the pipe during the tap, but also helps prevent pipe breaks. FTSS Tapping Sleeves are chemically passivated to ensure maximum corrosion protection.

The Ford Ultra-Seal Cap Style Flange Gasket, CSFG, is recommended for best results. See page 58.

Specifications

Test Plug
Waterworks no-lead brass 3/4" plug with standard square head. Proper use of this feature ensures positive seal before tapping.

Bolts and Nuts
18-8 type 304 stainless steel UNC threads. Heavy hex nuts and washers are coated to prevent galling.

Lugs
18-8 type 304 stainless steel cold formed for additional strength. MIG welded to body.

Armors
Heavy gauge Type 18-8 stainless steel armors are molded flush into the gasket to bridge the gap between lugs.

Flange
Type 304 (18-8) stainless steel with recess per MSS SP-60 to accept standard tapping valves. Flange conforms to AWWA C228 Class D ANSI 150 lb. drilling. Optional ASTM A36 carbon steel flange may be ordered. Class E or Class F flange available.

Outlet
18-8 type 304 stainless steel

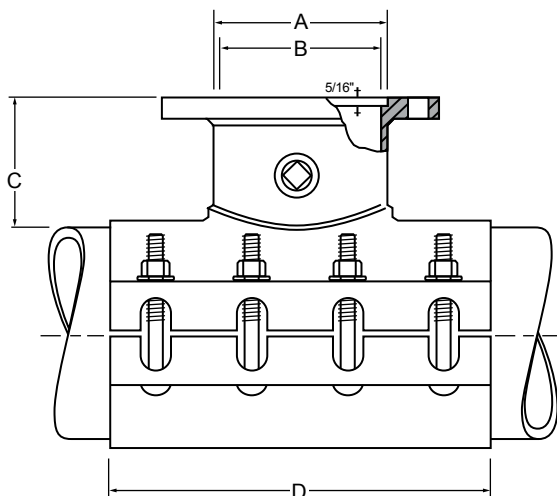
Body
18-8 type 304 stainless steel for corrosion control. All welds are fully passivated to restore stainless characteristics.

Gasket
Gridded virgin SBR or NBR (Buna-N) compounded for water service per ASTM D2000. Full gasket gives 360° pipe coverage. The outlet gasket is NBR (Buna-N). Optional EPDM

Rating:
FTSS sleeve is rated for 250 psi working pressure on 4"-12" pipe size. Contact factory for psi rating on pipe sizes 14" and larger.

Optional:
Mechanical Joint Adapter Outlet

FTSS Dimensions



Nom. Pipe Size	Flange Size Code	Nominal Dimensions - Inches				Bolt Size	No. of Bolts
		A	B	C	D		
4" - 12"	3	4-1/64	3-1/4	5-3/16	15	5/8	8
	4	5-1/64	4-1/4	5-3/16	15	5/8	8
	6	7-1/64	6-13/32	5-1/2	15	5/8	8
	8	9-1/64	8-13/32	5-5/8	20	5/8	12
	10	11-1/64	10-31/64	6-1/8	20	3/4	12
14" - 16"	12	13-1/64	12-27/64	6-1/4	24	3/4	14
	3	4-1/64	3-1/4	5-3/16	16	3/4	10
	4	5-1/64	4-1/4	5-3/16	16	3/4	10
	6	7-1/64	6-13/32	5-1/2	16	3/4	10
	8	9-1/64	8-13/32	5-5/8	20	3/4	12
18" - 24"	10	11-1/64	10-31/64	6-1/8	20	3/4	12
	12	13-1/64	12-27/64	6-1/4	24	3/4	14
	3	4-1/64	3-1/4	5-3/16	16	3/4	10
	4	5-1/64	4-1/4	5-3/16	16	3/4	10
	6	7-1/64	6-13/32	5-1/2	16	3/4	10
18" - 24"	8	9-1/64	8-13/32	5-5/8	20	3/4	12
	10	11-1/64	10-31/64	6-1/8	20	3/4	12
	12	13-1/64	12-27/64	6-1/4	24	3/4	14

Outlet Options: *Class E or Class F flange available, contact factory.

3" - 24" MJ adapter outlets available, contact factory for dimensions.

Ford Stainless Steel Tapping Sleeve

Style FTSS Stainless Steel Tapping Sleeve with Removable Bolts and 360° Gasket

To Order: Select the catalogue sleeve number for the desired pipe material and range; complete the catalogue number by adding the flange code.

Examples: The complete FTSS catalogue number for a 6" ductile iron pipe (6.90 O.D.) with a 4" stainless steel flange

Nom. Pipe Size	Sleeve O.D. Range	Sleeve Number	By	Stainless Steel Size Flange Code	Optional Carbon Steel Flange Code	Optional Mechanical Joint Outlet	Approx. Wt. Lbs.
4"	4.50-4.80	FTSS-480-	X	3	3A	-MJ	37
	4.80-5.00	FTSS-500-					
	5.10-5.30	FTSS-530-					
	5.20-5.40	FTSS-540-					
6"	6.63-7.00	FTSS-700-	X	3	3A	-MJ	41
	6.90-7.30	FTSS-730-		4	4A		42
	7.30-7.50	FTSS-750-		6	6A		47
8"	8.63-9.05	FTSS-905-	X	3	3A	-MJ	41
	9.05-9.30	FTSS-930-		4	4A		42
	9.30-9.60	FTSS-960-		6	6A		49
	9.45-9.75	FTSS-975-		8	8A		75
10"	10.75-11.10	FTSS-1110-	X	3	3A	-MJ	46
	11.10-11.40	FTSS-1140-		4	4A		47
	11.40-11.70	FTSS-1170-		6	6A		53
	11.85-12.15	FTSS-1215-		8	8A		79
				10	10A		99
12"	12.75-13.20	FTSS-1320-	X	3	3A	-MJ	49
	13.20-13.50	FTSS-1350-		4	4A		50
	13.50-13.80	FTSS-1380-		6	6A		55
	14.10-14.40	FTSS-1440-		8	8A		86
				10	10A		104
14"	15.10-15.50 15.30-15.70 15.80-16.20 16.48-16.88	FTSS-1550- FTSS-1570- FTSS-1620- FTSS-1688-	X	3	3A	-MJ	74
				4	4A		75
				6	6A		82
				8	8A		102
				10	10A		110
				12	12A		146
16"	17.30-17.70 17.40-17.80 17.75-18.15 18.15-18.62 18.60-19.00 18.80-19.20	FTSS-1770- FTSS-1780- FTSS-1815- FTSS-1862- FTSS-1900- FTSS-1920-	X	3	3A	-MJ	77
				4	4A		78
				6	6A		84
				8	8A		104
				10	10A		114
				12	12A		150
				14	14A		188
				16	16A		195
18"	19.30-19.70 19.50-19.92 19.80-20.20	FTSS-1970- FTSS-1992- FTSS-2020-	X	3	3A	-MJ	83
				4	4A		84
				6	6A		90
				8	8A		112
				10	10A		120
				12	12A		160
				14	14A		190
				16	16A		200
20"	20.20-20.60 20.90-21.30 21.40-21.80 21.86-22.26 22.30-22.70 23.40-23.80	FTSS-2060-** FTSS-2130- FTSS-2180- FTSS-2226- FTSS-2270- FTSS-2380-	X	3	3A	-MJ	85
				4	4A		86
				6	6A		92
				8	8A		114
				10	10A		123
				12	12A		162
				14	14A		195
				16	16A		205
				18	18A		215
				20	20A		222
24"	23.80-24.20 25.60-26.00 26.20-26.60	FTSS-2420-** FTSS-2600- FTSS-2660-	X	3	3A	-MJ	96
				4	4A		97
				6	6A		103
				8	8A		127
				10	10A		136
				12	12A		178
				14	14A		199
				16	16A		210
				18	18A		224
				20	20A		230
24	24A	256					

30" - 36***

42" - 48***

Contact factory for information, please indicate which tapping valve is being used.

Note: Use 1" undersize cutter for flanges 14" and larger. Oversized outlets are available by special request P.O.A.

** Size-on-size not available.

For use on HDPE pipe, use prefix FTSSP.

Note: Highlighted ranges are recommended for ductile iron pipe and C900/C905 pipe applications. (4" - 12" also fit IPS PVC pipe.)

Ford Steel Tapping Sleeves

Style FTSC Epoxy Coated Carbon Steel Tapping Sleeves with Removable Bolts and Outlet Seal Gasket

Ford tapping sleeves feature a simple design that can easily be installed without special tools, welding, or caulking. Most sleeves have a range that allows for installation on more than one pipe diameter. The large gasket has a broad cross-section to resist rolling and to provide a dependable seal. Ford tapping sleeves are recommended for use on commonly used water mains such as asbestos-cement, cast or ductile iron, and/or PVC pipe.

The Ford Ultra-Seal Cap Style Flange Gasket, CSFG, is recommended for best results. See page 58.

Specifications

Test Plug - No-lead brass 3/4" plug with square operating head. Proper use of this feature ensures positive seal before tapping.

Bolts and Nuts -
Style FTSC - 18-8 type 304 stainless steel.
Optional: 316 stainless steel or coated, high strength low alloy per ASTM A424 and AWWA C111.

Finish - Fusion bonded epoxy coating.

Flange - ASTM A36 carbon steel with recess per MSS SP-60 to accept standard tapping valves. Flange conforms to AWWA C228 Class D ANSI 150 lb. drilling. Class E or Class F flange available.

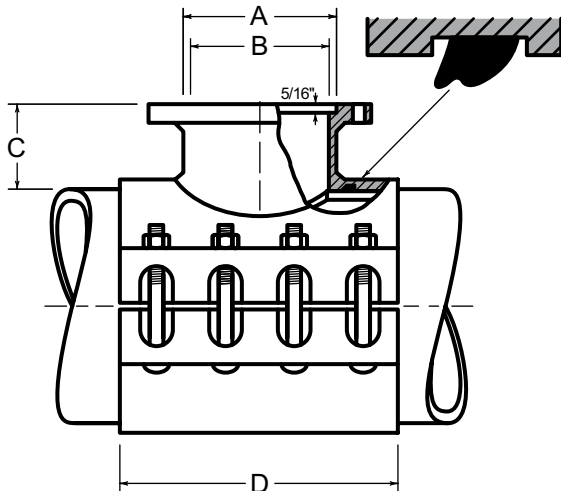
Optional: Mechanical Joint Adapter Outlet

Body - Heavy welded steel with mechanically retained gasket. ASTM A36 36,000 psi minimum yield.

Outlet Gasket - NBR (Buna-N) compounded for water service, per ASTM D2000. Optional EPDM

Rating
 FTSC sleeve is rated for 250 psi working pressure on 4"-12" pipe size. Contact factory for psi rating on pipe sizes 14" and larger.

FTSC Dimensions



Nom. Pipe Size	Flange Size Code	Nominal Dimensions - Inches				Bolt Size	No. of Bolts
		A	B	C	D		
4"	3	4-3/64	3-1/16	5-1/16	12	5/8	6
	4	5-3/64	4-1/8	5-1/16	12	5/8	6
6" - 12"	3	4-3/64	3-1/16	5-3/16	12	3/4	6
	4	5-3/64	4-1/8	5-3/16	12	3/4	6
	6	7-3/64	6-1/4	5-3/16	12	3/4	6
	8	9-3/64	8-1/4	5-3/16	16	3/4	8
	10	11-3/64	10-1/4	5-3/16	20	3/4	10
14" - 16"	12	13-3/64	12-1/4	5-3/16	24	3/4	12
	3	4-3/64	3-1/16	5-3/16	16	3/4	6
	4	5-3/64	4-1/8	5-3/16	16	3/4	6
	6	7-3/64	6-1/4	5-3/16	16	3/4	6
	8	9-3/64	8-1/4	5-3/16	20	3/4	8
18" - 24"	10	11-3/64	10-1/4	5-3/16	20	3/4	10
	12	13-3/64	12-1/4	5-3/16	24	3/4	12
	3	4-3/64	3-1/16	5-3/16	16	3/4	6
	4	5-3/64	4-1/8	5-3/16	16	3/4	6
	6	7-3/64	6-1/4	5-3/16	16	3/4	6
18" - 24"	8	9-3/64	8-1/4	5-3/16	20	3/4	8
	10	11-3/64	10-1/4	5-3/16	20	3/4	10
	12	13-3/64	12-1/4	5-3/16	24	3/4	12

Outlet Options: Class E or Class F flange available, contact factory. 3" - 24" MJ adapter outlet available, contact factory for dimensions.

Note: Smaller size on size units may require 1/2" undersize cutter. See notes on next page. Use 1" undersized cutter for flanges 14" and larger. Over-sized outlets, B dimension, are available by special request.

Ford Steel Tapping Sleeves

FTSC (Epoxy Coated) Carbon Steel Tapping Sleeves with Removable Bolts and Outlet Seal Gasket

The Ford FTSC style is coated with fusion applied epoxy and uses stainless steel bolts for maximum corrosion resistance.

To Order: Add flange size to the appropriate sleeve number. For example: A 4" flange on 6" ductile iron pipe would be FTSC-716-4.

Nom. Pipe Size	Sleeve O.D. Range	Epoxy Coated Sleeve	By	Flange Size Code	Optional MJ Outlet	Approx. Wt. Lbs.
4"	4.50-4.80	*FTSC-480-	X	3	-MJ	40
				4		41
6"	6.57-6.73 6.83-7.16 7.20-7.60 7.40-7.73	*FTSC-673- FTSC-716- FTSC-760- FTSC-773-	X	3	-MJ	64
				4		65
				6		72
				6		72
8"	7.95-8.05 8.36-8.75 8.73-9.12 8.89-9.37 9.27-9.69	**FTSC-805- *FTSC-875- FTSC-912- FTSC-937- FTSC-969-	X	3	-MJ	72
				4		73
				6		79
				8		106
10"	9.95-10.10 10.45-10.88 11.03-11.47 11.36-11.80	**FTSC-1010- FTSC-1088- FTSC-1147- FTSC-1180-	X	3	-MJ	81
				4		82
				6		87
				8		117
				10		153
12"	11.76-12.20 12.42-12.88 13.13-13.60 13.60-14.09 14.10-14.58	**FTSC-1220- FTSC-1288- FTSC-1360- FTSC-1409- FTSC-1458-	X	3	-MJ	92
				4		93
				6		98
				8		130
				10		169
				12		216
14"-16"	14.59-15.08 15.23-15.72 15.73-16.22 16.30-16.73 16.74-17.26	FTSC-1508- FTSC-1572- FTSC-1622- FTSC-1673- FTSC-1726-	X	3	-MJ	98
				4		99
				6		105
				8		139
				10		178
				12		230
16"-18"	17.33-17.87 17.88-18.43 18.46-19.03 18.87-19.45 19.41-20.01	FTSC-1787- FTSC-1843- FTSC-1903- FTSC-1945- FTSC-2001-	X	3	-MJ	113
				4		114
				6		120
				8		159
				10		203
				12		256
				16		413
18"-20"	19.88-20.48 20.29-20.92 20.93-21.57 21.51-22.15 22.16-22.81	FTSC-2048- FTSC-2092- FTSC-2157- FTSC-2215- FTSC-2281-	X	3	-MJ	121
				4		122
				6		128
				8		170
				10		216
				12		273
				16		412
20"-24"	22.78-23.45 23.46-24.16 24.15-24.85 24.82-25.52	FTSC-2345- FTSC-2416- FTSC-2485- FTSC-2552-	X	3	-MJ	132
				4		133
				6		136
				8		180
				10		229
				12		299
				16		430
24"	25.71-26.41 26.55-27.25 27.26-27.96 28.14-28.84	FTSC-2641- FTSC-2725- FTSC-2796- FTSC-2884-	X	3	-MJ	148
				4		149
				6		153
				8		212
				10		260
				12		323
				16		459
30"	29.78-30.48 30.48-31.18 31.52-32.22	FTSC-3048- FTSC-3118- FTSC-3222-	X	3	-MJ	161
				4		162
				6		168
				8		222
				10		283
				12		350
36" - 48"	Contact factory for information, please indicate which tapping valve is being used.					

To Order: Add flange size to the appropriate sleeve number. For example: A 4" flange on 6" ductile iron pipe would be FTSC-716-4.

Option: Standard FTSC with **alloy nuts and bolts:** add "-AH" to the catalogue number. Example: FTSC-716-4-AH.

Note: Use 1" undersize cutter for flanges 14" and larger. Oversized outlets are available by special request.

* These units for size-on-size taps may require a 1/2" undersized cutter.

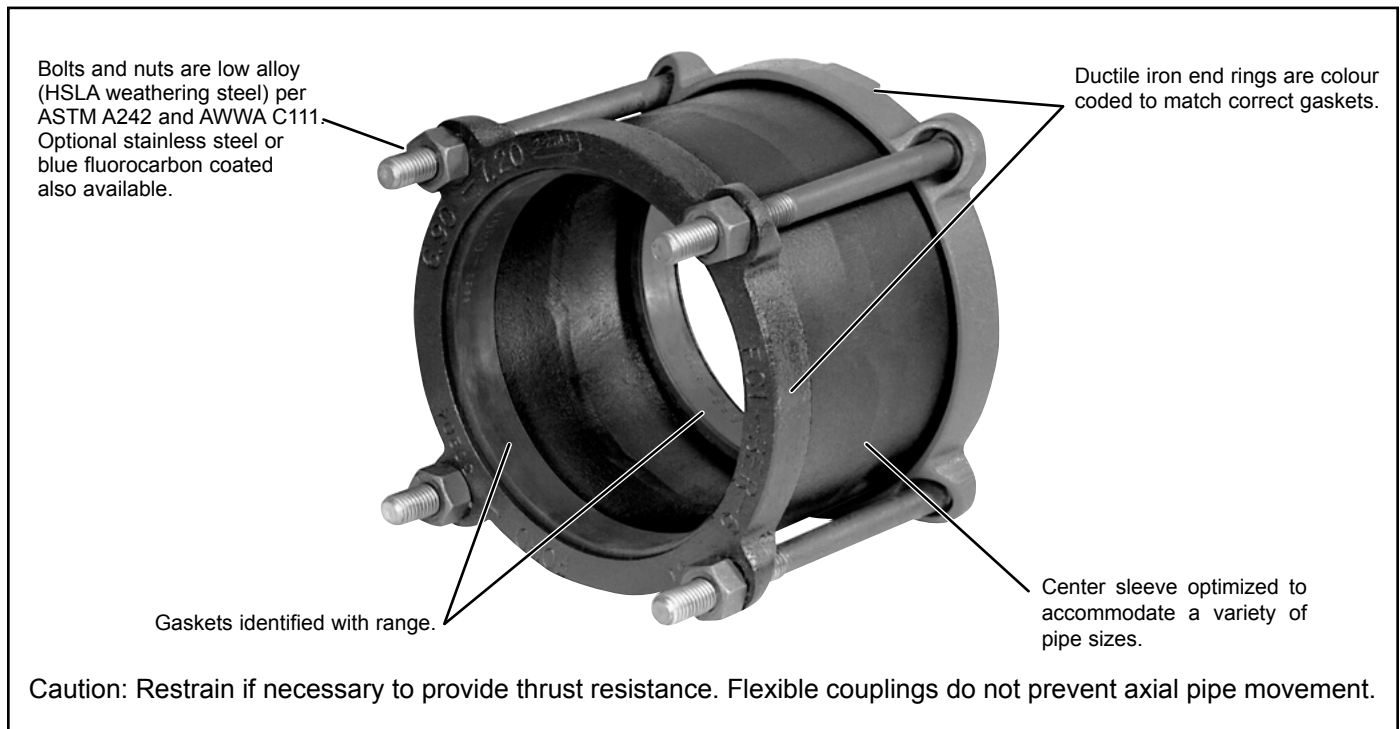
** Size-on-size for this range is not available.

For use on HDPE pipe, use part prefix FTSCP.

Cast Couplings

Features of Ford Cast Couplings

Ford Cast Couplings offer an easy and economical way of joining pipe, whether the pipe is of the same nominal size and/or type, or different at each coupling end. Ford FC1 and FC2A Couplings offer the following quality features:



Specifications:

Ford Bolted Flex Couplings are manufactured in accordance with the design, testing and performance standards of AWWA C219.

Center Sleeve: Cast from ductile iron per ASTM A536 65-45-12.

End Rings: Cast from ductile iron per ASTM A536 65-45-12. End rings are colour coded for easy identification.

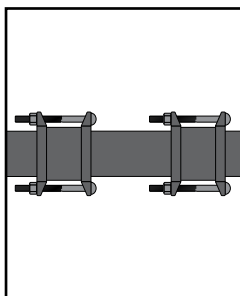
Gaskets: SBR rubber per ASTM D2000. Gaskets have size and end ring colour code embossed for easy identification. Optional armored gaskets are available on style FC1 and style FC2A in 4" thru 12" nominal pipe sizes. Optional NBR (Buna-N) or EPDM gaskets are available.

Bolts and Heavy

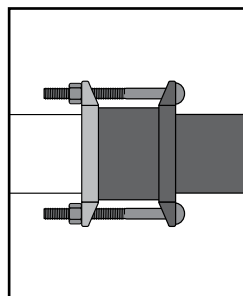
Hex Nuts: High strength low alloy per ASTM A242 and AWWA C111. Optional Blue Fluorocarbon coating available. Optional stainless steel also available.

Finish - Shop coat. Optional epoxy coating is available.

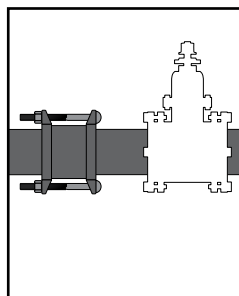
Typical Uses for Ford Cast Couplings



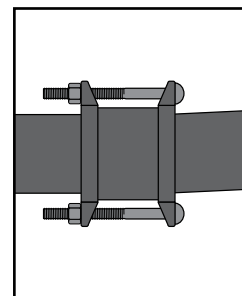
To repair split pipe



To couple different types of pipe



To install (cut-in) hydrants and valves



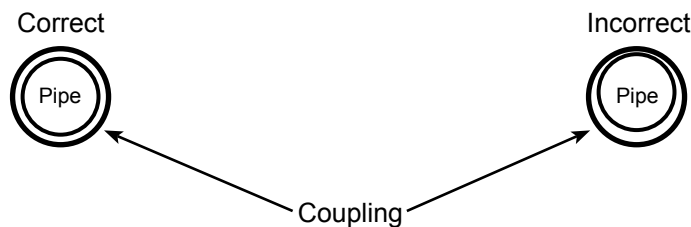
To connect misaligned pipe

Installation Instructions for Ford Flexible Couplings

1. Measure pipe O.D. to ensure it is within the coupling range.
2. Thoroughly clean each pipe end to a smooth, bare surface sufficiently longer than coupling length.
3. Slide the proper end ring onto each pipe end.
4. Lubricate the pipe ends and the gaskets before assembly to assist proper gasket seating. Use a non-petroleum based lubricant (suitable for potable water). In cold conditions, warm gasket to room temperature before installation to improve elasticity.
5. Place the proper gasket on each pipe end with the beveled edge facing the pipe end.
6. Slide center sleeve onto one pipe end, then center the sleeve over the pipe ends.

Sleeve Length	5"	6"	7"	10"
Optimum Pipe End Gap	.50"	.50"	1.00"	1.00"

7. **Extremely Important: Block and shim pipe ends and coupling as needed to ensure that the coupling remains at an equal distance from the pipe circumference.**



8. Push gaskets (by hand) into center sleeve evenly. Position end rings against the gaskets. Insert and tighten all bolts finger tight. Evenly tighten bolts in an alternating sequence being certain that end rings remain parallel to one another.
 - 1/2" Bolts = 40 - 50 ft. lbs.
 - 5/8" Bolts = 60 - 70 ft. lbs.
9. Restrain if necessary. Test and recheck bolt torque before backfilling. If a leak develops during testing, tighten bolts to stop leak; however, extreme torque can over stress coupling components.

CAUTION

- Flexible couplings do not restrain axial movement of pipe.
- Flexible couplings are designed to float on pipe ends and are not designed to support the pipe.

Ford Couplings

Style FC1

Suggested uses for Ford FC1 Couplings include water main repair, joining of plain end pipe, valve and hydrant installation, and flexible joint installation at critical areas of water main stress.

The FC1 Couplings are constructed entirely of ductile iron components, permitting a strong, durable connection.

Only the FC1 offers one gasket and end ring that fits all PVC and ductile iron pipe in the most popular sizes: 4", 6", and 8". Gasket ranges are embossed on each gasket for easy identification.

Caution: Restrain if necessary to provide thrust resistance.
Flexible couplings do not prevent axial pipe movement.



Style FC1 for Cast, Steel, Ductile Iron or PVC Pipe

Rated Working Pressure: Up to 300 psi

Nom. Pipe Size	Catalogue Number Prefix	Gasket Range		End Ring Colour Code	By	Gasket Range		End Ring Colour Code	Center Sleeve Length	Number of Bolts	Approx. Weight Lbs
		1st. Half Cat. No.				2nd Half Cat. No.					
2"	FC1-	2.34	— 2.63	Red	X	2.34	— 2.63	Red	4"	2	6
2 1/2"	FC1-	See 2" FC2A on page M-7									
4"	FC1-	4.00	— 4.00	Red	X	4.00	— 4.00	Red	5"	3	14
		4.50	— 4.80	Red		4.50	— 4.80	Red			
		4.80	— 5.10	Black		4.80	— 5.10	Black			
6"	FC1-	6.00	— 6.00	Red	X	6.00	— 6.00	Red	5"	4	20
		6.30	— 6.30	Red		6.30	— 6.30	Red			
		6.63	— 6.90	Red		6.63	— 6.90	Red			
		6.90	— 7.20	Black		6.90	— 7.20	Black			
8"	FC1-	8.00	— 8.00	Red	X	8.00	— 8.00	Red	5"	5	29
		8.16	— 8.40	Red		8.16	— 8.40	Red			
		8.63	— 9.05	Red		8.63	— 9.05	Red			
		9.05	— 9.40	Black		9.05	— 9.40	Black			
10"	FC1-	10.20	— 10.50	Red	X	10.20	— 10.50	Red	6"	6	41.5
		10.75	— 10.75	Red		10.75	— 10.75	Red			
		11.10	— 11.46	Black		11.10	— 11.46	Black			
12"	FC1-	12.24	— 12.50	Red	X	12.24	— 12.50	Red	6"	7	54.5
		12.75	— 12.75	Red		12.75	— 12.75	Red			
		13.20	— 13.56	Black		13.20	— 13.56	Black			

To order: Locate the gasket range that accommodates your pipe O.D. for both pipe ends. Use the top range of each gasket size to determine the part number. For example, to connect pipe with an O.D. of 6.63 to a pipe with an O.D. of 7.10, the catalogue number is FC1-690-720.

- Options:**
- SH** Standard coated coupling with Type 304 stainless steel nuts and bolts. Add "-SH" to the catalogue number.
 - ESH** Epoxy coated coupling with Type 304 stainless steel nuts and bolts. Add "-ESH" to the catalogue number.
 - Q** Standard coated coupling with Type 316 stainless steel nuts and bolts. Add "-Q" to the catalogue number.
 - Z** Epoxy coated couplings with Type 316 stainless steel nuts and bolts. Add "-Z" to the catalogue number.
 - BBN** Blue fluorocarbon coating on HSLA nuts and bolts. Add "-BBN" to catalogue number.
 - N** NBR (Buna-N) gasket, standard coated coupling and standard alloy bolts. Add "-N" to the catalogue number.
 - EPDM** EPDM gasket. Add "-EPDM" to the catalogue number.

Example: FC1-690-720-ESH is an FC1 coupling with epoxy coating and 304 stainless steel nuts and bolts.

Component Parts for Style FC1 Couplings

Nom. Pipe Size	Gasket Cat. No.	End Ring Cat. No.	Center Sleeve Cat. No.	Bolt and Nut Cat. No.
2"	FC1G-234-263	FC1-RER-2	FC1-CS-2	FBN-58-65
	FC1G-400	FC1-RER-4		
4"	FC1G-450-480	FC1-RER-4	FC1-CS-4	FBN-58-8
	FC1G-480-510	FC1-BER-4		
	FC1G-600	FC1-RER-6		
6"	FC1G-630	FC1-RER-6	FC1-CS-6	FBN-58-8
	FC1G-663-690	FC1-RER-6		
	FC1G-690-720	FC1-BER-6		
	FC1G-800	FC1-RER-8		
8"	FC1G-816-840	FC1-RER-8	FC1-CS-8	FBN-58-8
	FC1G-863-905	FC1-RER-8		
	FC1G-905-940	FC1-BER-8		
	FC1G-1020-1050	FC1-RER-10		
10"	FC1G-1075	FC1-RER-10	FC1-CS-10	FBN-58-9
	FC1G-1110-1146	FC1-BER-10		
	FC1G-1224-1250	FC1-RER-12		
12"	FC1G-1275	FC1-RER-12	FC1-CS-12	FBN-58-9
	FC1G-1320-1356	FC1-BER-12		

Ford Extended Length Couplings

Style FC1-L12

Suggested uses for Ford FC1-L12 Couplings include water main repair, joining of plain end pipe, valve and hydrant installation, and flexible joint installation at critical areas of water main stress.

The FC1 couplings are constructed entirely of ductile iron components permitting a strong, durable connection.

Only the FC1-L12 offers one gasket and end ring that fits all PVC and ductile iron pipe in the most popular sizes: 4" and 6", with 12" center sleeve length. Gasket ranges are embossed on each gasket for easy identification. End rings are colour coded to match the colour embossed on each gasket.

Caution: Restrain if necessary to provide thrust resistance.
Flexible couplings do not prevent axial pipe movement.



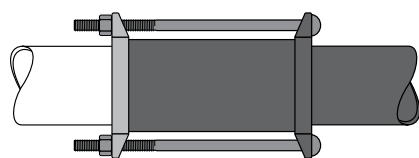
Style FC1-L12 for Cast, Ductile Iron or PVC Pipe
Rated Working Pressure: Up to 300 psi

Nom. Pipe Size	Gasket Range		End Ring Colour Code	By	Gasket Range		End Ring Colour Code	Center Sleeve Length	Number of Bolts	Approx. Weight Lbs
		1st. Half Cat. No.				2nd Half Cat. No.				
4"	4.00	4.00	Red	X	4.00	4.00	Red	12"	3	29
	4.50	4.80	Red		4.50	4.80	Red			
	4.80	5.10	Black		4.80	5.10	Black			
6"	6.00	6.00	Red	X	6.00	6.00	Red	12"	4	42
	6.30	6.30	Red		6.30	6.30	Red			
	6.63	6.90	Red		6.63	6.90	Red			
	6.90	7.20	Black		6.90	7.20	Black			

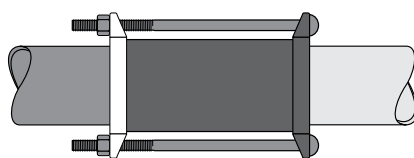
To order: Locate the gasket range that accommodates your pipe O.D. for both pipe ends. Use the top range of each gasket size to determine the part number. For example, to connect pipe with an O.D. of 6.63 to a pipe with an O.D. of 7.10, the catalogue number is FC1-690-720-L12.

- Options:**
- SH** Standard coated coupling with Type 304 stainless steel nuts and bolts. Add "-SH" to the catalogue number.
 - ESH** Epoxy coated coupling with Type 304 stainless steel nuts and bolts. Add "-ESH" to the catalogue number.
 - Q** Standard coated coupling with Type 316 stainless steel nuts and bolts. Add "-Q" to the catalogue number.
 - Z** Epoxy coated coupling with Type 316 stainless steel nuts and bolts. Add "-Z" to the catalogue number.
 - BBN** Blue fluorocarbon coating on HSLA nuts and bolts. Add "-BBN" to catalogue number.
 - N** NBR (Buna-N) gasket, standard coated coupling and standard alloy bolts. Add "-N" to the catalogue number.
 - EPDM** EPDM gasket. Add "-EPDM" to the catalogue number.

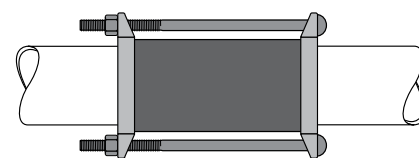
Example: FC1-690-720-L12-ESH is an FC1 coupling with epoxy coating and 304 stainless steel nuts and bolts with 12" center sleeve.



Steel Size PVC x Ductile Iron



A/C x C900 PVC



Steel Size PVC x Steel Size PVC

Component Parts for Style FC1-L12 Extended Length Couplings

Nom. Pipe Size	Gasket Cat. No.	End Ring Cat. No.	Center Sleeve Cat. No.	Bolt and Nut Cat. No.
4"	FC1G-400	FC1-RER-4	FC1-CS-4-L12	FBN-58-155
	FC1G-450-480	FC1-RER-4		
	FC1G-480-510	FC1-BER-4		
6"	FC1G-600	FC1-RER-6	FC1-CS-6 L12	FBN-58-155
	FC1G-630	FC1-RER-6		
	FC1G-663-690	FC1-RER-6		
	FC1G-690-720	FC1-BER-6		

Ford Transition Couplings

Style FC2A

Ford Iron Transition Couplings provide a convenient method of joining two pipes of the same nominal size but with different O.D.s. Gaskets are embossed and end rings are colour coded for easy identification. End rings are colour coded for various pipe sizes per the following chart. The gaskets are identified with the exact O.D. range and the end ring colour with which it is to be used. Generally red signifies use on steel size PVC, black for iron pipe and Class 150 A/C, and white/gray for Class 200 A/C. See the table below for exact ranges. Larger, fabricated steel couplings are detailed in Ford Meter Box Catalogue Section N (available on website).



Rated:
250 psi working pressure (sizes 2" - 12")
150 psi working pressure (sizes 14" - 24")

Caution: Restrain if necessary to provide thrust resistance.
Flexible couplings do not prevent axial pipe movement.

Nom. Pipe Size	Gasket Range		End Ring Colour Code	By	Gasket Range		End Ring Colour Code	Center Sleeve Length	Number of Bolts	Approx. Weight Lbs
	1st. Half Cat. No.	2nd Half Cat. No.			1st. Half Cat. No.	2nd Half Cat. No.				
2"	2.30	2.45	Black	X	2.30	2.45	Black	4"	2	9
	2.40	2.65	Black		2.40	2.65	Black			
	2.65	2.88	Black		2.65	2.88	Black			
3"	3.13	3.13	Red	X	3.13	3.13	Red	4"	3	14
	3.45	3.60	Red		3.45	3.60	Red			
	3.70	3.88	Black		3.70	3.88	Black			
	3.91	4.06	Black		3.91	4.06	Black			
	4.07	4.20	Black		4.07	4.20	Black			
4"	4.00	4.00	Red	X	4.00	4.00	Red	5"	3	16
	4.50	4.50	Red		4.50	4.50	Red			
	4.80	5.14	Black		4.80	5.14	Black			
	5.15	5.57	White/Gray		5.15	5.57	White/Gray			
6"	6.00	6.00	Red	X	6.00	6.00	Red	5"	4	24
	6.63	6.63	Red		6.63	6.63	Red			
	6.90	7.20	Black		6.90	7.20	Black			
	7.21	7.56	White/Gray		7.21	7.56	White/Gray			
8"	8.00	8.00	Red	X	8.00	8.00	Red	5"	5	34
	8.63	8.63	Red		8.63	8.63	Red			
	9.05	9.40	Black		9.05	9.40	Black			
	9.40	9.74	White/Gray		9.40	9.74	White/Gray			
10"	10.00	10.00	Red	X	10.00	10.00	Red	6"	6	48
	10.75	10.75	Red		10.75	10.75	Red			
	11.10	11.40	Black		11.10	11.40	Black			
	11.42	11.77	Black		11.42	11.77	Black			
	11.77	12.12	White/Gray		11.77	12.12	White/Gray			
12"	12.00	12.00	Black	X	12.00	12.00	Black	6"	7	62
	12.75	12.75	Black		12.75	12.75	Black			
	13.20	13.50	Black		13.20	13.50	Black			
	13.69	14.04	White/Gray		13.69	14.04	White/Gray			
	14.03	14.38	White/Gray		14.03	14.38	White/Gray			
14"	15.30	15.70	Black	X	15.30	15.70	Black	6"	9	83
	16.00	16.35	Red		16.00	16.35	Red			
	16.40	16.88	White/Gray		16.40	16.88	White/Gray			
16"	17.40	17.80	Black	X	17.40	17.80	Black	6"	10	103
	18.45	18.97	White/Gray		18.45	18.97	White/Gray			
	18.90	19.20	White/Gray		18.90	19.20	White/Gray			
18"	19.50	20.00	Black	X	19.50	20.00	Black	7"	11	111
20"	21.60	22.06	Black	X	21.60	22.06	Black	7"	12	125
24"	25.80	26.32	Black	X	25.80	26.32	Black	10"	14	183

To Order: Locate the gasket range that accommodates your pipe O.D. for both ends of pipe. Use the top range of each gasket size to determine the part number. For example: to connect pipe with an O.D. of 6.90 to a pipe with an O.D. of 7.37, the catalogue number is FC2A-720-756.

- Options:**
- SH** Standard coated coupling with Type 304 stainless steel nuts and bolts: add "-SH" to the catalogue number.
 - ESH** Epoxy coated coupling with Type 304 stainless steel nuts and bolts: add "-ESH" to the catalogue number.
 - Q** Standard coated coupling with Type 316 stainless steel nuts and bolts. Add "-Q" to the catalogue number.
 - Z** Epoxy coated coupling with Type 316 stainless steel nuts and bolts. Add "-Z" to the catalogue number.
 - BBN** Blue fluorocarbon coating on HSLA nuts and bolts. Add "-BBN" to catalogue number.
 - N** NBR (Buna-N) gasket, standard coated coupling and standard alloy bolts. Add "-N" to the catalogue number.
 - EPDM** EPDM gasket. Add "-EPDM" to the catalogue number.

Example for above options: FC2A-690-720-ESH is an FC2A coupling with epoxy coating and stainless steel nuts and bolts.

Gasket for SDR 35 Sewer Pipe: Gaskets are available in following sizes: 4.22", 6.23", 8.40", 10.50" and 12.50". Use these sizes as part of the catalogue number.

Ford Extended Length Transition Couplings

Style FC2A-L12



The extended length version of the Ford FC2A offers the same advantages as the standard FC2A (page 70) with the added versatility of a 12-inch long center sleeve.

Caution: Restrain if necessary to provide thrust resistance. Flexible couplings do not prevent axial pipe movement.

Rated: 250 psi working pressure (sizes 4" - 12")

Nom. Pipe Size	Gasket Range		End Ring Colour Code	By	Gasket Range		End Ring Colour Code	Center Sleeve Length	Number of Bolts	Approx. Weight Lbs
		1st. Half Cat. No.				2nd Half Cat. No.				
4"	4.00 —	4.00	Red	X	4.00 —	4.00	Red	12"	3	34
	4.50 —	4.50	Red		4.50 —	4.50	Red			
	4.80 —	5.14	Black		4.80 —	5.14	Black			
	5.15 —	5.57	White/Gray		5.15 —	5.57	White/Gray			
6"	6.00 —	6.00	Red	X	6.00 —	6.00	Red	12"	4	48
	6.63 —	6.63	Red		6.63 —	6.63	Red			
	6.90 —	7.20	Black		6.90 —	7.20	Black			
	7.21 —	7.56	White/Gray		7.21 —	7.56	White/Gray			
8"	8.00 —	8.00	Red	X	8.00 —	8.00	Red	12"	5	63
	8.63 —	8.63	Red		8.63 —	8.63	Red			
	9.05 —	9.40	Black		9.05 —	9.40	Black			
	9.40 —	9.74	White/Gray		9.40 —	9.74	White/Gray			
10"	10.00 —	10.00	Red	X	10.00 —	10.00	Red	12"	6	83
	10.75 —	10.75	Red		10.75 —	10.75	Red			
	11.10 —	11.40	Black		11.10 —	11.40	Black			
	11.42 —	11.77	Black		11.42 —	11.77	Black			
11.77 —	12.12	White/Gray	11.77 —	12.12	White/Gray					
12"	12.00 —	12.00	Black	X	12.00 —	12.00	Black	12"	7	106
	12.75 —	12.75	Black		12.75 —	12.75	Black			
	13.20 —	13.50	Black		13.20 —	13.50	Black			
	13.69 —	14.04	White/Gray		13.69 —	14.04	White/Gray			
14.03 —	14.38	White/Gray	14.03 —	14.38	White/Gray					

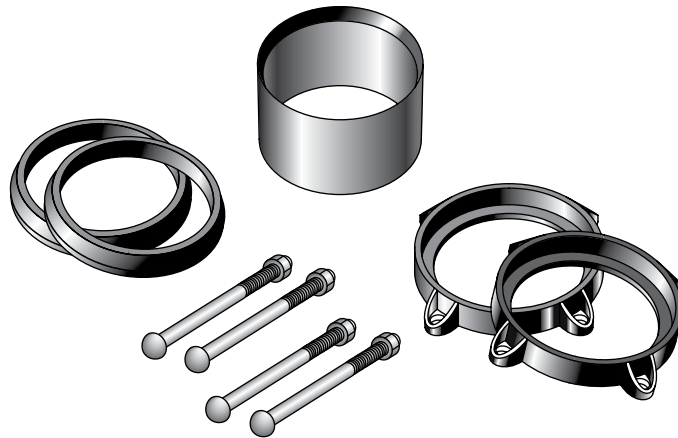
To order: Locate the gasket range that accommodates your pipe O.D. for both ends of pipe. Use the top range of each gasket size to determine the part number. For example, to connect pipe with an O.D. of 6.90 to a pipe with an O.D. of 7.37, the catalogue number is FC2A-720-756-L12.

- Options:**
- SH** Standard coated coupling with Type 304 stainless steel nuts and bolts. Add "-SH" to the catalogue number.
 - ESH** Epoxy coated coupling with Type 304 stainless steel nuts and bolts. Add "-ESH" to the catalogue number.
 - Q** Standard coated coupling with Type 316 stainless steel nuts and bolts. Add "-Q" to the catalogue number.
 - Z** Epoxy coated coupling with Type 316 stainless steel nuts and bolts. Add "-Z" to the catalogue number.
 - BBN** Blue fluorocarbon coating on HSLA nuts and bolts. Add "-BBN" to catalogue number.
 - N** NBR (Buna-N) gasket, standard coated coupling and standard alloy bolts. Add "-N" to the catalogue number.
 - EPDM** EPDM gasket. Add "-EPDM" to the catalogue number.

Example: FC2A-690-720-L12-ESH is an FC2A coupling with epoxy coating and 304 stainless steel nuts and bolts.

Ford Transition Coupling Parts

Style FC2A



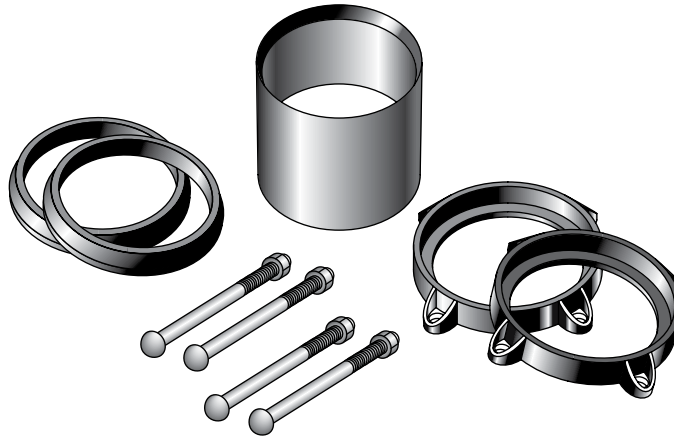
Component Parts for Style FC2A Couplings

Nom. Pipe Size	Gasket Catalogue No.	End Ring Catalogue No.	Center Sleeve Catalogue No.	Bolt and Nut Catalogue No.	Bolt and Nut Size	Number of Bolts Required
2"	FC2AG-230-245	FC2A-BER-2	FC2A-CS-2	FBN-58-65	5/8" x 6-1/2"	2
	FC2AG-240-265	FC2A-BER-2				
	FC2AG-265-288	FC2A-BER-2				
3"	FC2AG-313	FC2A-RER-3	FC2A-CS-3	FBN-58-65	5/8" x 6-1/2"	3
	FC2AG-345-360	FC2A-RER-3				
	FC2AG-370-388	FC2A-BER-3				
	FC2AG-391-406	FC2A-BER-3				
	FC2AG-407-420	FC2A-BER-3				
4"	FC2AG-400	FC2A-RER-4	FC2A-CS-4	FBN-58-8	5/8" x 8"	3
	FC2AG-450	FC2A-RER-4				
	FC2AG-480-514	FC2A-BER-4				
	FC2AG-515-557	FC2A-WER-4				
6"	FC2AG-600	FC2A-RER-6	FC2A-CS-6	FBN-58-8	5/8" x 8"	4
	FC2AG-663	FC2A-RER-6				
	FC2AG-690-720	FC2A-BER-6				
	FC2AG-721-756	FC2A-WER-6				
8"	FC2AG-800	FC2A-RER-8	FC2A-CS-8	FBN-58-8	5/8" x 8"	5
	FC2AG-863	FC2A-RER-8				
	FC2AG-905-940	FC2A-BER-8				
	FC2AG-940-974	FC2A-WER-8				
10"	FC2AG-1000	FC2A-RER-10	FC2A-CS-10	FBN-58-9	5/8" x 9"	6
	FC2AG-1075	FC2A-RER-10				
	FC2AG-1110-1140	FC2A-BER-10				
	FC2AG-1142-1177	FC2A-BER-10				
	FC2AG-1177-1212	FC2A-WER-10				
12"	FC2AG-1200	FC2A-BER-12	FC2A-CS-12	FBN-58-9	5/8" x 9"	7
	FC2AG-1275	FC2A-BER-12				
	FC2AG-1320-1350	FC2A-BER-12				
	FC2AG-1369-1404	FC2A-WER-12				
	FC2AG-1403-1438	FC2A-WER-12				
14"	FC2AG-1530-1570	FC2A-BER-14	FC2A-CS-14	FBN-58-105	5/8"x10-1/2"	9
	FC2AG-1600-1635	FC2A-RER-14				
	FC2AG-1640-1688	FC2A-WER-14				
16"	FC2AG-1740-1780	FC2A-BER-16	FC2A-CS-16	FBN-58-105	5/8"x10-1/2"	10
	FC2AG-1845-1897	FC2A-WER-16				
	FC2AG-1890-1920	FC2A-WER-16				
18"	FC2AG-1950-2000	FC2A-BER-18	FC2A-CS-18	FBN-58-105	5/8"x10-1/2"	11
20"	FC2AG-2160-2206	FC2A-BER-20	FC2A-CS-20	FBN-58-105	5/8"x10-1/2"	12
24"	FC2AG-2580-2632	FC2A-BER-24	FC2A-CS-24	FBN-58-135	5/8"x13-1/2"	14

To Order: Specify desired quantity and order using catalogue number.

Ford Extended Length Transition Coupling Parts

Style FC2A-L12



Component Parts for Style FC2A-L12 Extended Length Couplings

Nom. Pipe Size	Gasket Catalogue No.	End Ring Catalogue No.	Center Sleeve Catalogue No.	Bolt and Nut Catalogue No.	Bolt and Nut Size	Number of Bolts Required
4"	FC2AG-400	FC2A-RER-4	FC2A-CS-4-L12	FBN-58-155	5/8" x 15-1/2"	3
	FC2AG-450	FC2A-RER-4				
	FC2AG-480-514	FC2A-BER-4				
	FC2AG-515-557	FC2A-WER-4				
6"	FC2AG-600	FC2A-RER-6	FC2A-CS-6-L12	FBN-58-155	5/8" x 15-1/2"	4
	FC2AG-663	FC2A-RER-6				
	FC2AG-690-720	FC2A-BER-6				
8"	FC2AG-721-756	FC2A-WER-6	FC2A-CS-8-L12	FBN-58-155	5/8" x 15-1/2"	5
	FC2AG-800	FC2A-RER-8				
	FC2AG-863	FC2A-RER-8				
	FC2AG-905-940	FC2A-BER-8				
10"	FC2AG-940-974	FC2A-WER-8	FC2A-CS-10-L12	FBN-58-155	5/8" x 15-1/2"	6
	FC2AG-1000	FC2A-RER-10				
	FC2AG-1075	FC2A-RER-10				
	FC2AG-1110-1140	FC2A-BER-10				
12"	FC2AG-1142-1177	FC2A-BER-10	FC2A-CS-12-L12	FBN-58-155	5/8" x 15-1/2"	7
	FC2AG-1177-1212	FC2A-WER-10				
	FC2AG-1200	FC2A-BER-12				
	FC2AG-1275	FC2A-BER-12				
	FC2AG-1320-1350	FC2A-BER-12				
FC2AG-1369-1404	FC2A-WER-12					
FC2AG-1403-1438	FC2A-WER-12					

To Order: Specify desired quantity and order using catalogue number.

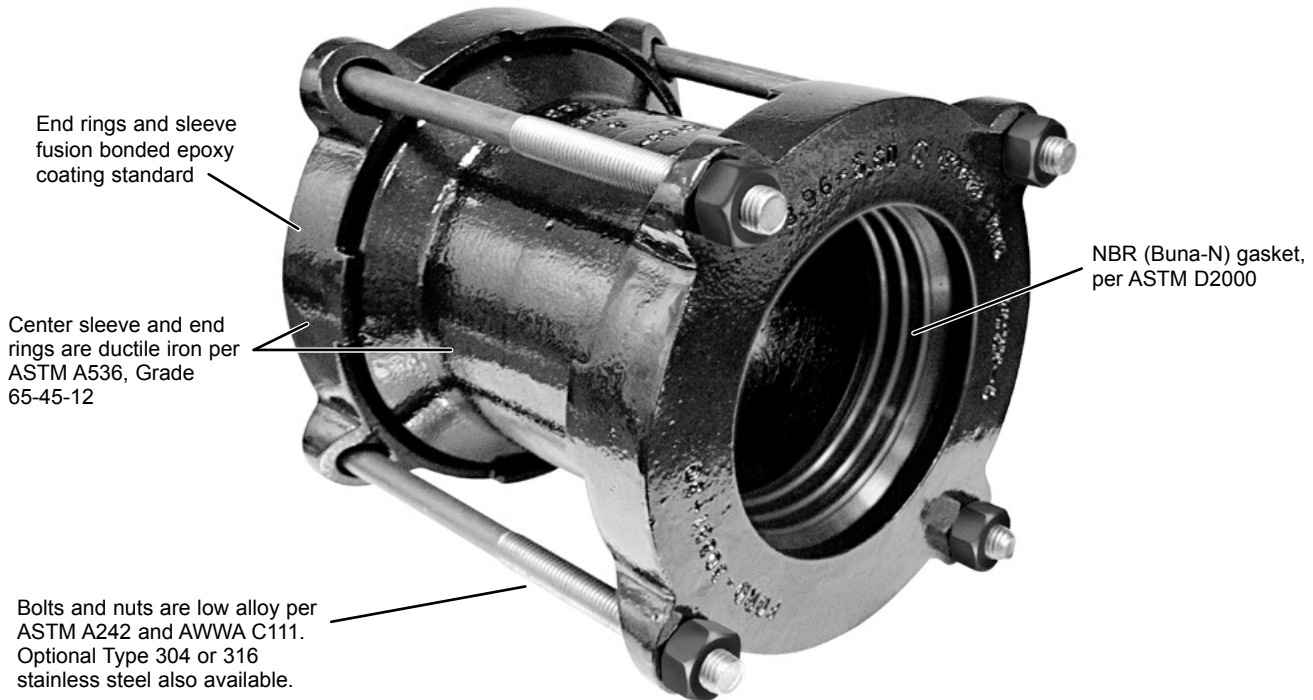
Ford Ultra-Flex Wide Range Couplings

Style FC2W

Ford Ultra-Flex wide range couplings offer convenience, reliability, and inventory reduction. The Ultra-Flex can join virtually any two pipes within a nominal size and is rated for 350 psi working pressure on 3"-12" and 250 psi working water pressure on 16". The stab-in design allows quicker installation and the standard fusion bonded epoxy coating provides corrosion protection. The standard NBR (Buna-N) gaskets are lubricated at the factory. No on site lubrication is required. The unique gaskets seal on the pipe with fewer turns of the wrench. This allows the installer to use a standard deep-well socket, even when installing on pipes at the low end of the listed range. See the table below for exact ranges.

Benefits:

- Stab-in installation, no disassembly required.
- Long standard sleeve.
- Unique gasket allows for quicker installation.
- 350 psi rated working pressure, sizes 3" - 12"
250 psi rated working pressure for 16"



Caution: Restrain if necessary to provide thrust resistance.
Flexible couplings do not prevent axial pipe movement.

Style FC2W Wide Range Couplings

Nominal Pipe Size	Pipe OD Range*		Catalogue Number	Number of Bolts	Bolt Diameter	Sleeve Length	Approx. Weight Lbs.
	Inches	MM					
3"	2.50 - 4.29	63.5 - 109.0	FC2W-3	3	5/8"	7"	27
4"	3.96 - 5.60	100.6 - 142.2	FC2W-4	4	5/8"	7"	35
6"	6.23 - 7.60	158.2 - 193.0	FC2W-6	4	5/8"	7"	44
8"	8.40 - 9.75	213.3 - 247.6	FC2W-8	4	5/8"	7"	52
10"	10.75 - 12.12	273.0 - 307.8	FC2W-10	6	5/8"	9"	76
12"	12.75 - 14.38	323.8 - 365.25	FC2W-12	6	5/8"	9"	97
16"	16.00 - 17.80	406.4 - 452.12	FC2W-16	8	5/8"	10"	135

* Pipes smaller than the published range may be joined using the FC2W coupling at a reduced pressure rating. Contact Ford Meter Box for details.

Options: **SH** Type 304 stainless steel nuts and bolts. Add "-SH" to the catalogue number.

Q Type 316 stainless steel nuts and bolts. Add "-Q" to the catalogue number.

EPDM EPDM gaskets. Add "-EPDM" to the catalogue number.

BBN Blue fluorocarbon coating on HSLA nuts and bolts. Add "-BBN" to catalogue number.

EC End Cap

Ford Ultra-Flex Wide Range Coupling Parts

Style FC2W

Component Parts for FC2W Couplings

Nominal Pipe Size	Gasket Catalogue Number	End Ring Catalogue Number	Center Sleeve Catalogue Number	Bolt and Nut Catalogue Number	Bolt and Nut Size	Number of Bolts Required
3"	FC2WG-3	FC2W-ER-3	FC2W-CS-3	FBN-58-1125	5/8"X11-1/4"	3
4"	FC2WG-4	FC2W-ER-4	FC2W-CS-4	FBN-58-1125	5/8"X11-1/4"	4
6"	FC2WG-6	FC2W-ER-6	FC2W-CS-6	FBN-58-1125	5/8"X11-1/4"	4
8"	FC2WG-8	FC2W-ER-8	FC2W-CS-8	FBN-58-1125	5/8"X11-1/4"	4
10"	FC2WG-10	FC2W-ER-10	FC2W-CS-10	FBN-58-135	5/8"X13-1/2"	6
12"	FC2WG-12	FC2W-ER-12	FC2W-CS-12	FBN-58-135	5/8"X13-1/2"	6
16"	FC2WG-16	FC2W-ER-16	FC2W-CS-16	FBN-58-155	5/8"X15-1/2"	8

Ford Ultra-Flex Long Sleeve Wide Range Couplings

Style FC2W-12" Long



The long sleeve version of the Ford FC2W Ultra-Flex offers the same advantages as the standard FC2W with the added versatility of a 12-inch long center sleeve.

Rating: 250 psi
working water pressure

Style FC2W-12" Long Sleeve Wide Range Couplings

Nominal Pipe Size	Pipe OD Range		Catalogue Number	Number of Bolts	Bolt Diameter	Sleeve Length	Approx. Weight Lbs.
	Inches	MM					
3"	2.50 - 4.29	63.5 - 109.0	FC2W-3-L12	3	5/8"	12"	40
4"	3.96 - 5.60	100.6 - 142.2	FC2W-4-L12	4	5/8"	12"	45
6"	6.23 - 7.60	158.2 - 193.0	FC2W-6-L12	4	5/8"	12"	56
8"	8.40 - 9.75	213.3 - 247.6	FC2W-8-L12	4	5/8"	12"	68
10"	10.75 - 12.12	273.0 - 307.8	FC2W-10-L12	6	5/8"	12"	90
12"	12.75 - 14.38	323.8 - 365.25	FC2W-12-L12	6	5/8"	12"	109

* Pipes smaller than the published range may be joined using the FC2W coupling at a reduced pressure rating. Contact Ford Meter Box for details.

- Options:** **SH** Type 304 stainless steel nuts and bolts: add "-SH" to the catalogue number.
Q Type 316 stainless steel nuts and bolts. Add "-Q" to the catalogue number.
EPDM EPDM gaskets: add "-EPDM" to the catalogue number.
BBN Blue Fluorocarbon coating on HSLA nuts and bolts. Add "-BBN" to catalogue number.
EC End cap

Component Parts for FC2W-L12 Couplings

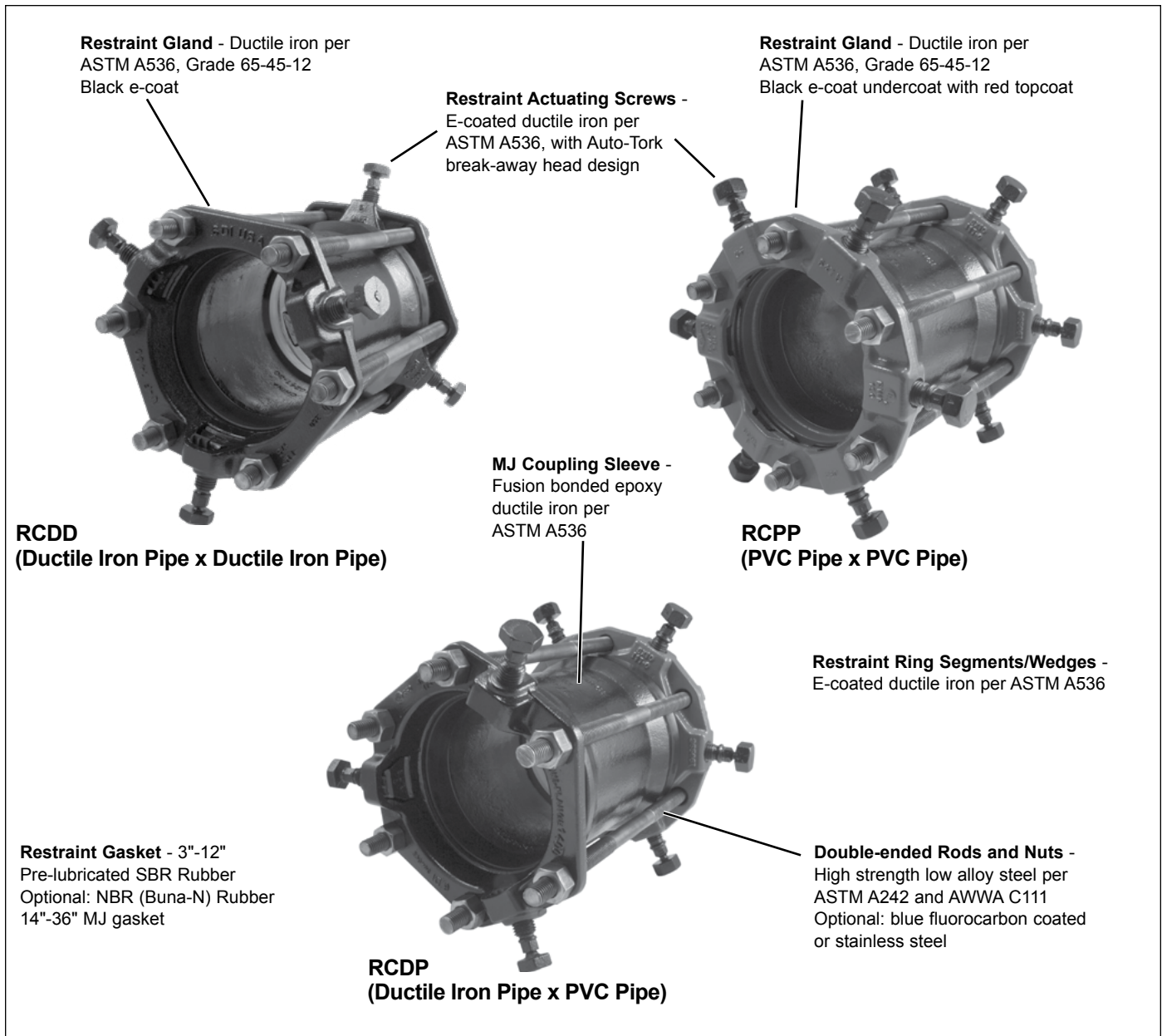
Nominal Pipe Size	Gasket Catalogue Number	End Ring Catalogue Number	Center Sleeve Catalogue Number	Bolt and Nut Catalogue Number	Bolt and Nut Size	Number of Bolts Required
3"	FC2WG-3	FC2W-ER-3	FC2W-CS-3-L12	FBN-58-165	5/8"X16-1/2"	3
4"	FC2WG-4	FC2W-ER-4	FC2W-CS-4-L12	FBN-58-165	5/8"X16-1/2"	4
6"	FC2WG-6	FC2W-ER-6	FC2W-CS-6-L12	FBN-58-165	5/8"X16-1/2"	4
8"	FC2WG-8	FC2W-ER-8	FC2W-CS-8-L12	FBN-58-165	5/8"X16-1/2"	4
10"	FC2WG-10	FC2W-ER-10	FC2W-CS-10-L12	FBN-58-165	5/8"X16-1/2"	6
12"	FC2WG-12	FC2W-ER-12	FC2W-CS-12-L12	FBN-58-165	5/8"X16-1/2"	6

Specifications - Restrained Couplings

Coupling and Restraint Device for Ductile Iron, PVC, Steel or *DR-35 Sewer Pipe

Restraining your pipe coupling just got SO-EZ using Ford's (stab-fit) restrained coupling.

Designed with the UFR1400 or UFR1500 restraints and the SO-EZ gasket, the 3" - 12" RCPP and RCDP restrained couplings accommodate a wider range within a nominal size pipe than any other.



- Sizes 3" - 36"
- Restraint glands epoxy coated
- A true stab fitting in sizes 3"- 12", no disassembly required
- Restrains plain-end pipe to plain-end pipe
- 7-1/2" sleeve in sizes 3"-12", 10" sleeve in sizes 14"-36"
- Corrosion resistant, high strength, low alloy steel rods and nuts
- 2:1 safety factor at the full rated pressure of the pipe on which it is installed

Uni-Flange® Restrained Couplings

Coupling and Restraint Device for Ductile Iron, PVC, C909, HDPE, Steel or *SDR-35 Sewer Pipe

RCDD FOR DUCTILE IRON PIPE

Nominal Pipe Size	Catalogue Number	Pipe O.D.	Max. Deflection Allowance	Approx. Wt. Lbs.
3"	RCDD-3-I	3.96	5°	27
4"	RCDD-4-I	4.80	5°	34
6"	RCDD-6-I	6.90	5°	48
8"	RCDD-8-I	9.05	5°	61
10"	RCDD-10-I	11.10	5°	84
12"	RCDD-12-I	13.20	5°	101

FABRICATED RCDD FOR DUCTILE IRON PIPE (MJ GASKETS)

14"	RCDD-14-(I or U)	15.70	3°	173
16"	RCDD-16-(I or U)	17.40	3°	200
18"	RCDD-18-(I or U)	19.50	3°	235
20"	RCDD-20-(I or U)	21.60	3°	265
24"	RCDD-24-(I or U)	25.80	3°	320
30"	RCDD-30-(I or U)	32.00	1°	580
36"	RCDD-36-(I or U)	38.30	1°	660

Transition and reducing couplings available in sizes 14" through 36", contact factory for more information.

RCPP FOR C900, IPS PVC, STEEL, C909 AND *SDR35 SEWER PIPE

Nominal Pipe Size	Catalogue Number	Pipe O.D.	Max. Deflection Allowance	Approx. Wt. Lbs.
3"	RCPP-3-I	3.50	5°	35
4"	RCPP-4-I	4.21-4.80	5°	41
6"	RCPP-6-I	6.27-6.90	5°	59
8"	RCPP-8-I	8.40-9.05	5°	72
10"	RCPP-10-I	10.50-11.10	5°	94
12"	RCPP-12-I	12.50-13.20	5°	106

FABRICATED RCPP FOR C905 PVC PIPE

14"	RCPP-14-(I or U)	15.70	3°	185
16"	RCPP-16-(I or U)	17.40	3°	225
18"	RCPP-18-(I or U)	19.50	3°	270
20"	RCPP-20-(I or U)	21.60	3°	310
24"	RCPP-24-(I or U)	25.80	3°	405
30"	RCPP-30-(I or U)	32.00	1°	525
36"	RCPP-36-(I or U)	38.30	1°	630

Transition and reducing couplings available in sizes 14" through 36", contact factory for more information.

RCDP FOR DUCTILE IRON PIPE BY PVC, STEEL, OR *SDR35 SEWER PIPE

Nominal Pipe Size	Catalogue Number	Pipe O.D. for Ductile Iron Pipe	Pipe O.D. for PVC, Steel or SDR35 Pipe	Max. Deflection Allowance	Approx. Wt. Lbs.
3"	RCDP-3-I	3.96	3.50	5°	31
4"	RCDP-4-I	4.80	4.21-4.80	5°	38
6"	RCDP-6-I	6.90	6.27-6.90	5°	55
8"	RCDP-8-I	9.05	8.40-9.05	5°	66
10"	RCDP-10-I	11.10	10.50-11.10	5°	89
12"	RCDP-12-I	13.20	12.50-13.20	5°	103

FABRICATED RCDP FOR JOINING DUCTILE IRON PIPE TO C905 PIPE

14"	RCDP-14-(I or U)	15.70	15.70	3°	180
16"	RCDP-16-(I or U)	17.40	17.40	3°	215
18"	RCDP-18-(I or U)	19.50	19.50	3°	252
20"	RCDP-20-(I or U)	21.60	21.60	3°	285
24"	RCDP-24-(I or U)	25.80	25.80	3°	360
30"	RCDP-30-(I or U)	32.00	32.00	1°	550
36"	RCDP-36-(I or U)	38.30	38.30	1°	600

Transition and reducing couplings available in sizes 14" through 36", contact factory for more information.

Pressure Rating for C900, IPS PVC, C909 and *SDR35 Sewer Pipe

C900		ASTM D2241			C909		SDR35
DR25	DR18	DR14	SDR26	SDR21	PC150	PC235	
165 PSI	235 PSI	305 PSI	160 PSI	200 PSI	150 PSI	235 PSI	60 PSI

I = Import Casting U = USA Casting

*SDR35 sewer applications require NBR (Buna-N) gasket, add "-N" to end of catalogue number.



Specifications - Uni-Flange® Series 1300

Series 1300 Uni-Flange® Restraint Device for PVC Pipe used with Mechanical Joint / *Push-On Fittings

A fast, economical method of restraining water main fittings, valves and hydrants used in PVC piping systems, the Uni-Flange® Series 1300 offers guaranteed joint restraint, in every soil condition, every time. It eliminates the need for expensive, time consuming concrete thrust blocks.

The Series 1300 is a split design, incorporating a series of serrations on the inside surface. When the side clamping bolts are tightened, the serrations lock the device onto the pipe surface, providing total axial thrust restraint.

Features:

- Full contact and support of the pipe wall
- Ideal companion for push-on fittings (4" – 12")
- *Rated at full working pressure rating of any class of PVC Pipe, minimum 2:1 safety factor
- Does not replace the follower gland—mechanical joint retains full deflection capabilities
- Can be installed outside of the trench, prior to pipe laying
- 4" through 16" "C" Style units can be used on ductile iron pipe

Series 1300 Restrainer -
Ductile Iron ASTM A536, Grade 65-45-12 or ASTM A36 Structural Steel


Colour Code:
Black for PVC with ductile iron pipe O.D.
Gray for PVC with steel pipe O.D.
Contact factory for coating options.

Side Clamping Bolts and Nuts

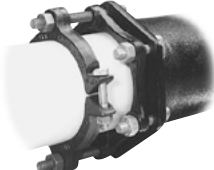
T-Bolts / Studs -
High Strength, Low Alloy Steel
ANSI / AWWA C111 / A21.11
Optional: Type 304 Stainless Steel.

◀FM▶Approved
1300C Approved 4", 6", 8" and 10"


Sample Applications



Series 1300 Restraining push-on fitting



Series 1300 Restraining MJ fitting



Series 1300 Restraining MJ End Cap

Suggested Specification - Series 1300

Restraint Devices for PVC Pipe shall incorporate a series of serrations on the inside diameter to provide positive restraint, exact fit, full contact and support of the pipe wall. Restraint Devices shall be manufactured of high strength ductile iron, ASTM A536, Grade 65-45-12 or ASTM A36 structural steel. Bolts and connecting hardware shall be of high strength low alloy material in accordance with ANSI / AWWA C111/A21.11.

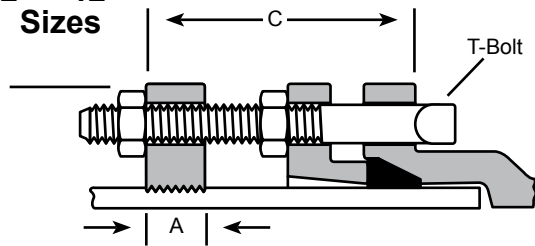
All Restraint Devices for PVC Pipe shall have a water working pressure rating equivalent to the full rated pressure of the PVC Pipe on which they are installed, with a minimum 2:1 safety factor in any nominal pipe size. Notarized certification from the manufacturer of the restraint device shall be provided with submittals. Restraint Devices for Mechanical Joint or Push-On fittings shall be Uni-Flange® 1300 or approved equal.

* The safety factor is derated on 10"-12" push-on joints that do not accommodate all of the 1300 T-Bolts. Consult the Ford Meter Box website for the most current installation instructions.

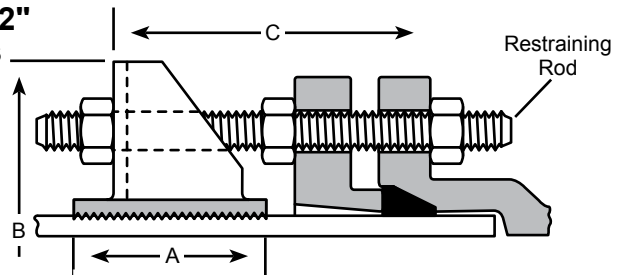
Uni-Flange® Series 1300 Pipe Restraint

Restraint Device for PVC Pipe used with Mechanical Joint / *Push-On Fittings

2" - 12"
Sizes



14" - 42"
Sizes



Nom. Pipe Size	PVC Pipe with Steel Pipe O.D. Style 1300-S		** PVC Pipe with Ductile Iron Pipe O.D. Style 1300-C		A	B Approx.	C Max.	Restraint Bolts / Rods		Clamping Bolts		Approx. Wt. Lbs.
	O.D.	Catalogue Number	O.D.	Catalogue Number				No.	Size	No.	Size	
2"	2.38	UFR1300-S-2-I	N/A	-	1-1/8"	6-3/8"	4"	2	5/8"x5"	2	5/8"x3-1/2"	6.3
2-1/2"	2.88	UFR1300-S-25-I	N/A	-	1-1/8"	6-7/8"	4"	2	5/8"x5"	2	5/8"x3-1/2"	7.4
3"	3.50	UFR1300-S-3-I	N/A	-	1-1/8"	7-11/16"	4"	2	5/8"x5"	2	5/8"x3-1/2"	7.4
4"	4.50	UFR1300-S-4-I	4.80	UFR1300-C-4-(Ior U)	1-1/8"	9-1/8"	6"	2	3/4"x7"	2	5/8"x3-1/2"	8.5
6"	6.63	UFR1300-S-6-I	6.90	UFR1300-C-6-(Ior U)	1-1/8"	11-1/8"	6"	2	3/4"x7"	2	5/8"x3-1/2"	10.0
8"	8.63	UFR1300-S-8-I	9.05	UFR1300-C-8-(Ior U)	1-1/4"	14-5/8"	6"	2	3/4"x7"	2	3/4"x4"	15.5
10"	10.75	UFR1300-S-10-I	11.10	UFR1300-C-10-(Ior U)	1-3/8"	16-5/8"	6"	4	3/4"x7"	2	7/8"x5"	26.5
12"	12.75	UFR1300-S-12-I	13.20	UFR1300-C-12-(Ior U)	1-3/8"	19-1/4"	6"	4	3/4"x7"	2	7/8"x5"	28.5
14"	14.00	UFR1300-S-14-U	15.30	UFR1300-C-14-(Ior U)	4"	22-1/2"	15"	6	3/4"x17"	4	♦	72.5
16"	16.00	UFR1300-S-16-U	17.40	UFR1300-C-16-(Ior U)	4"	24-9/16"	15"	6	3/4"x17"	4	7/8"x7"	77.0
18"	18.00	UFR1300-S-18-U	19.50	UFR1300-C-18-(Ior U)	5"	26-11/16"	15"	8	3/4"x17"	4	1"x7"	109.0
20"	20.00	UFR1300-S-20-U	21.60	UFR1300-C-20-(Ior U)	5"	29-3/16"	22"	8	3/4"x24"	♦	♦	144.0
24"	24.00	UFR1300-S-24-U	25.80	UFR1300-C-24-(Ior U)	5"	33-7/8"	22"	12	3/4"x24"	♦	♦	220.0
30"	30.00	UFR1300-S-30-U	32.00	UFR1300-C-30-(Ior U)	10"	40-9/10"	22"	12	1"x24"	6	♦	325.0
36"	36.00	UFR1300-S-36-U	38.30	UFR1300-C-36-(Ior U)	10"	48"	22"	12	1"x24"	6	♦	360.0
42"	-	-	44.50	UFR1300-C-42-I	10-3/4"	57-9/16"	22"	16	1-1/4"x24"	♦	1-1/8"x6"	487.0

I = Import Casting U = USA Casting

Note: 14" - 42" are non-returnable and may be subject to a cancellation fee.

** 4" through 16" "C" Style Units can be used on ductile iron pipe.

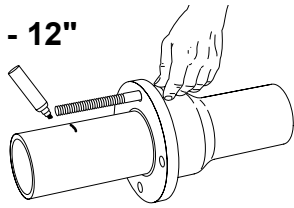
All dimensions in inches unless otherwise stated.

♦ Contact factory for details

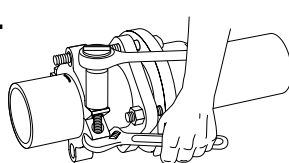
Installation Instructions

2" - 12"

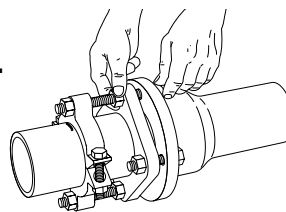
1.



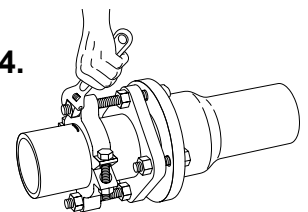
2.



3.



4.



1. Insert pipe into the mechanical joint bell. Insert one of the extra long T-Bolts provided with the Series 1300 through one of the flange holes, mark a line on the pipe approximately 1 inch shorter than the bolt length.

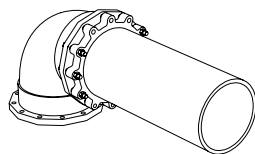
2. Assemble the MJ gland, gasket and bolts to AWWA standards. Assemble Series 1300 clamping ring onto the pipe even with line. (Make sure restrainer ears line up with bolt hole in MJ gland as shown.) Tighten clamping bolts evenly to recommended torque. A torque wrench is required to ensure proper torque.

3. Insert the extra long T-Bolts/rods provided with the Series 1300 and install one nut each between the gland and clamping ring as shown.

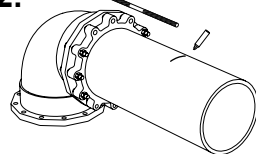
4. Tighten nuts against MJ gland to AWWA standards. Snug retaining nuts behind restrainer ears. **Do not over-tighten retaining nuts.**

14" - 42"

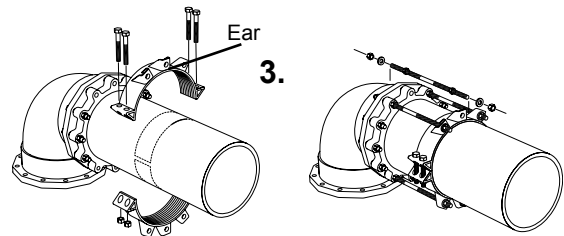
1.



2.



3.



1. Assemble the mechanical joint, installing gasket, gland and Tee-head bolts to AWWA standards. Leave out Tee-head bolts corresponding to ears on 1300 Restrainer.

2. Use one of the rods (provided) as a guide, and mark a line on the pipe to position 1300 restrainer. Leave sufficient threads on the rod ends to fully engage nuts. Tighten clamping bolts on each side evenly, to recommended torque, ensuring the gaps between pads on both sides remain even. A torque wrench is required to ensure proper torque. The clamping pads will not touch.

3. Connect 1300 to fitting by inserting all rods through restrainer ear, gland and fitting bell. Install one nut behind fitting bell, one against the gland and one behind / outside the restrainer ears (against washer). Use additional nuts (not included) on inside of retainer ears and gland if pipe joint is expected to contract.

*The safety factor is derated on 10" and 12" push-on joints that do not accommodate all of the 1300 T-Bolts.

Consult the Ford Meter Box website for the most current installation instructions.

Uni-Flange® Series 1300-P Pipe Restraint

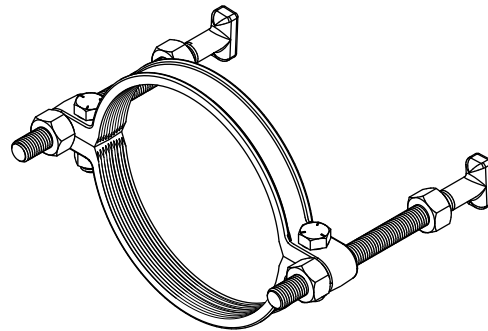
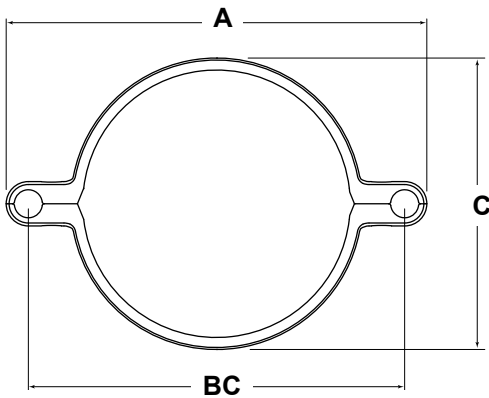
Restraint Device for PVC Sewer Pipe

Features:

- Specially designed for ASTM 3034 type PSM sewer pipe
- Optimized clamping bolt/tie rod location minimizes pipe wall stress, ideal for thin wall pipe
- Rods are high strength, low alloy steel per ANSI/AWWA C111/A21.11
- High-quality ductile iron construction per ASTM A536 (4" – 15")
- Carbon steel per ASTM A36 (18" – 36")
- Epoxy e-coat (15" and under) for superior corrosion resistance. Black shop coat on 18" and larger.
- 50 PSI working pressure rating 2:1 safety factor

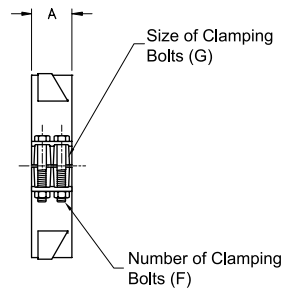
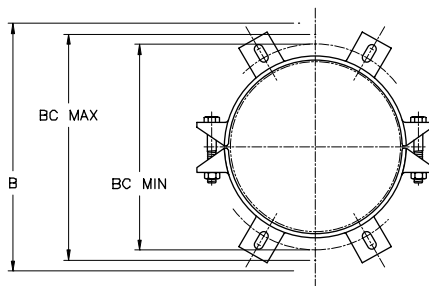


Style A - Combined Bolt/Tie Rod Location



NOM. PIPE SIZE	SEWER PIPE STYLE 1300-P		A	BC	C	RESTRAINT BOLTS		CLAMPING BOLTS		APPROX. WT. LBS.
	O.D.	CATALOGUE NUMBER				No.	SIZE	No.	SIZE	
4"	4.22	UFR1300-P-4-I	8-57/64"	7-1/2"	4-59/64"	2	3/4"x7"	2	5/8"x2-1/4"	5.5
6"	6.28	UFR1300-P-6-I	10-57/64"	9-1/2"	6-63/64"	2	3/4"x7"	2	5/8"x2-1/4"	5.9
8"	8.40	UFR1300-P-8-I	13-9/64"	11-3/4"	9-3/32"	2	3/4"x7"	2	5/8"x2-1/4"	6.3
10"	10.50	UFR1300-P-10-I	15-23/64"	14"	11-29/64"	2	3/4"x7"	2	5/8"x2-1/4"	8.3
12"	12.50	UFR1300-P-12-I	18"	16-1/4"	13-29/64"	2	3/4"x7"	2	5/8"x2-1/4"	9.5

Style B



NOM. PIPE SIZE	SEWER PIPE STYLE 1300-P		A	B APPROX.	RESTRAINT RODS		CLAMPING BOLTS		BC MIN.	BC MAX.	APPROX. WT. LBS.
	O.D.	CATALOGUE NUMBER			No.	SIZE	No.	SIZE			
15"	15.30	UFR1300-P-15-I	4"	22-1/2"	4	3/4"x17"	4	7/8"x7"	18.50	20.50	60.0
		UFR1300-P-15-U			4	3/4"x17"	4	7/8"x5"	18.50	20.50	50.0
18"	18.70	UFR1300-P-18-U	4"	26-3/16"	4	3/4"x17"	4	7/8"x7"	21.88	23.88	62.0
21"	22.05	UFR1300-P-21-U	4"	28-13/16"	4	3/4"x24"	4	7/8"x7"	24.56	26.56	68.5
24"	24.80	UFR1300-P-24-U	4"	32-3/16"	4	3/4"x24"	4	7/8"x7"	27.94	29.94	76.5
27"	27.95	UFR1300-P-27-U	4"	35-3/8"	4	3/4"x24"	4	7/8"x7"	31.09	33.09	85.0
30"											
36"											

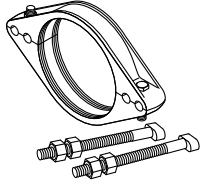
Contact factory for larger sizes. Exact pipe O.D. is required.

Uni-Flange® Pipe Restraints for AWWA C909 PVCO Pipe - Series 1309 Restraint Device

Series 1309 Uni-Flange® Restraint Device for C900 and C909 PVCO Pipe used with Mechanical Joint / *Push-On Fittings

A fast, economical method of restraining water main fittings, valves and hydrants used in PVC piping systems.

Series 1309-C Restraint Device for C900 PVC and C909 PVC Pipe, C906 HDPE and Ductile Iron Pipe for Mechanical Joint / Push-on Fittings



NOM PIPE SIZE	C909 PVC PIPE WITH DUCTILE IRON PIPE OD STYLE 1309-C		RESTRAINING BOLTS		CLAMPING BOLTS		BC MIN.	BC MAX.	APPROX. WT. LBS.
	O.D.	CATALOGUE NO.	No. D	SIZE E	No. F	SIZE G			
4"	4.80	UFR1309-C-4-I	2	3/4" x 9"	2	5/8" x 3"	7.24"	8.00"	11.0
6"	6.90	UFR1309-C-6-I	2	3/4" x 9"	2	5/8" x 3"	9.58"	10.58"	13.0
8"	9.05	UFR1309-C-8-I	2	3/4" x 9"	2	3/4" x 3"	11.50"	12.50"	16.5
10"	11.10	UFR1309-C-10-I	4	3/4" x 9"	2	3/4" x 3-1/2"	14.25"	15.25"	28.0
12"	13.20	UFR1309-C-12-I	4	3/4" x 9"	2	7/8" x 3-1/2"	16.33"	17.33"	31.0
14"	15.30	UFR1309-C-14-U	6	3/4" x 17"	6	1-1/8" x 9"	20.38"	18.44"	85.0
16"	17.40	UFR1309-C-16-U	6	3/4" x 17"	6	1-1/8" x 9"	22.50"	20.56"	90.0
18"	19.50	UFR1309-C-18-U	8	3/4" x 17"	6	1-1/8" x 9"	24.03"	22.63"	97.0
20"	21.60	UFR1309-C-20-U	8	3/4" x 24"	6	1-1/8" x 9"	24.76"	26.76"	100.0
24"	25.80	UFR1309-C-24-U	12	3/4" x 24"	6	1-1/8" x 9"	28.90"	30.90"	162.0

Suggested Specification - Series 1309

Restraint devices for C909 PVC Pipe shall incorporate a series of serrations on the inside diameter to provide positive restraint, exact fit, full contact and support of the pipe wall. Restraint devices shall be manufactured of high strength ductile iron per ASTM A536, Grade 65-45-12 or ASTM A36 structural steel. Bolts and connecting hardware shall be of high strength low alloy material in accordance with ANSI / AWWA C111/A21.11.

All restraint devices for C909 PVC Pipe shall have a water working pressure rating equivalent to the full rated pressure of the C909 PVCO Pipe on which they are installed, with a minimum 2:1 safety factor in any nominal pipe size. Notarized certification from the manufacturer of the restraint device shall be provided with submittals. Restraint devices for mechanical joint or push-on fittings shall be Uni-Flange® 1309 or approved equal.

* The safety factor is derated on 10" and 12" push-on joints that do not accommodate all of the 1300 T-bolts.

Specifications - Uni-Flange® Series 1350

Series 1350 Uni-Flange® Restraint Device for PVC Pipe Bell Joints

The Uni-Flange® Series 1350 offers the fastest, most economical method of restraining bell and spigot joints of PVC Pipe in new installations. Total thrust restraint is guaranteed, in any soil condition.

The Series 1350 consists of two basic components: a Series 1300 split restraint device, which is installed on the spigot end of the pipe, and a Series 1350 solid back-up ring, which has a beveled leading edge and seats behind the pipe bell.

Features:

- Fast and Easy - 1350 solid back-up ring eliminates the need to tighten extra bolts and nuts
- Can be installed outside of the trench, prior to pipe laying
- Full contact and support of the pipe wall
- Rated at full working pressure rating of any class of PVC Pipe, minimum 2:1 safety factor

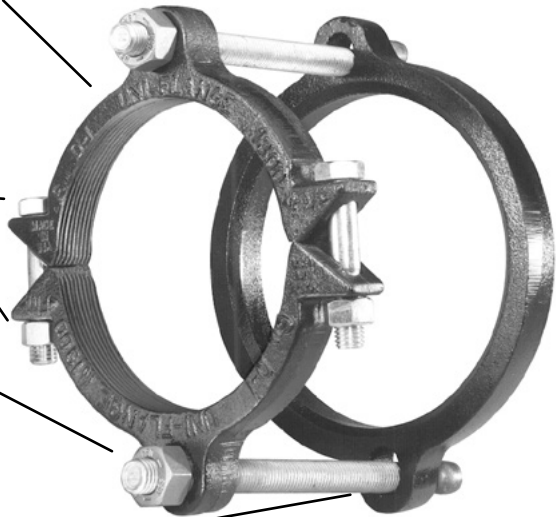
Note: Series 1350 (4" – 12" sizes) is NOT recommended for use on AWWA C900, DR14 PVC pipe. Use Series 1390 for C900 DR14 PVC pipe.

Split Ring Restraint - Uni-Flange®
Series 1300 made from Ductile Iron per ASTM A536, Grade 65-45-12, or ASTM A36 Structural Steel.


Colour Code:
Black for PVC with ductile iron pipe O.D.
Gray for PVC with steel pipe O.D.
Contact factory for coating options.

Side Clamping Bolts and Nuts


T-Bolts / Studs - High strength, low alloy steel ANSI / AWWA C111/A21.11.
Optional: Type 304 Stainless Steel



Back-Up Ring - 2" - 18" Sizes: Ductile Iron per ASTM A536, Grade 65-45-12.
20" - 24" carbon steel per ASTM A36



2" - 12"
Series 1350 Installed



14" - 24"
Series 1350 Installed

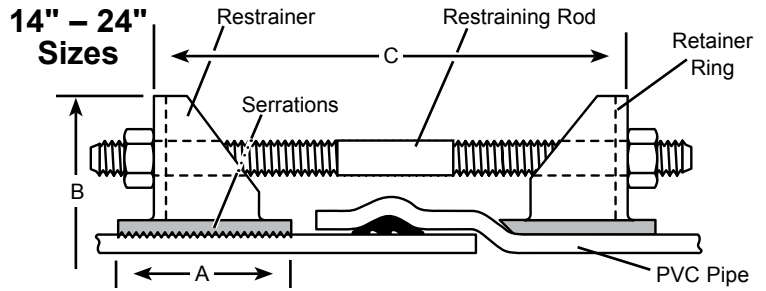
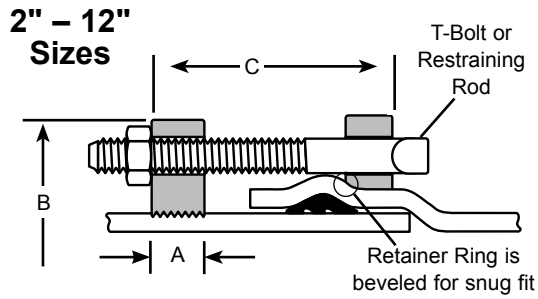
Suggested Specification - Series 1350

Restraint devices for bell and spigot joints of PVC pipe shall consist of a split restraint ring installed on the spigot, connected to a solid backup ring seated behind the bell. The split restraint ring shall incorporate a series of serrations on the inside diameter to provide positive restraint, exact fit and full contact and support of the pipe wall. The solid backup ring shall have a beveled leading edge to ensure exact fit behind the pipe bell. Restraint devices shall be of ductile iron, ASTM A536, Grade 65-45-12, or ASTM A36 structural steel. Connecting bolts shall be of high strength, low alloy material in accordance with ANSI / AWWA C111 / A21.11.

All Restraint devices shall carry a water working pressure rating equivalent to the full rated pressure of the PVC pipe they are installed on, with a minimum 2:1 safety factor in any nominal pipe size. Notarized certification from the manufacturer of the restraint device shall be provided with submittals. Restraint devices for bell and spigot joints of PVC pipe shall be Uni-Flange® 1350 or approved equal.

Uni-Flange® Series 1350 Pipe Restraint

Restraint Device for PVC Pipe Bell Joints



Nom. Pipe Size	PVC Pipe with Steel Pipe O.D. Style 1350-S		PVC Pipe with Ductile Iron Pipe O.D. Style 1350-C		A	B Approx.	C Max.	Restraint Bolts / Rods		Clamping Bolts		Approx. Wt. Lbs.
	O.D.	Catalogue Number	O.D.	Catalogue Number				No.	Size	No.	Size	
2"	2.38	UFR1350-S-2-I	N/A	—	1-1/8"	6-1/4"	4"	2	5/8"x5"	2	5/8"x3-1/2"	8.5
3"	3.50	UFR1350-S-3-I	N/A	—	1-1/8"	7-11/16"	4"	2	5/8"x5"	2	5/8"x3-1/2"	11.0
4"	4.50	UFR1350-S-4-I	4.80	UFR1350-C-4-(I or U)	1-1/8"	9-1/8"	6"	2	3/4"x9"	2	5/8"x3-1/2"	13.0
6"	6.63	UFR1350-S-6-I	6.90	UFR1350-C-6-(I or U)	1-1/8"	11-7/8"	6"	2	3/4"x9"	2	5/8"x3-1/2"	16.5
8"	8.63	UFR1350-S-8-I	9.05	UFR1350-C-8-(I or U)	1-1/4"	14-5/8"	8"	2	3/4"x12"	2	3/4"x4"	26.5
10"	10.75	UFR1350-S-10-I	11.10	UFR1350-C-10-(I or U)	1-3/8"	16-5/8"	8"	4	3/4"x17"	2	7/8"x5"	43.5
12"	12.75	UFR1350-S-12-I	13.20	UFR1350-C-12-(I or U)	1-3/8"	19-1/4"	8"	4	3/4"x17"	2	7/8"x5"	50.0
14"	14.00	UFR1350-S-14-U	15.30	UFR1350-C-14-(I or U)	4"	23-3/16"	15"	6	3/4"x24"	4	◆	118.0
16"	16.00	UFR1350-S-16-U	17.40	UFR1350-C-16-(I or U)	4"	25-3/8"	15"	6	3/4"x24"	4	◆	127.0
18"	18.00	UFR1350-S-18-U	19.50	UFR1350-C-18-(I or U)	5"	27-3/8"	15"	8	3/4"x24"	4	1"x7"	166.0
20"	20.00	UFR1350-S-20-U	21.60	UFR1350-C-20-(I or U)	5"	29-3/4"	21-1/2"	8	3/4"x30"	◆	◆	223.0
24"	24.00	UFR1350-S-24-U	25.80	UFR1350-C-24-(I or U)	5"	33-7/8"	21-1/2"	12	3/4"x36"	◆	◆	334.0
30"	USE SERIES 1390 FOR THESE SIZES											
36"	USE SERIES 1390 FOR THESE SIZES											
42"	USE SERIES 1390 FOR THESE SIZES											

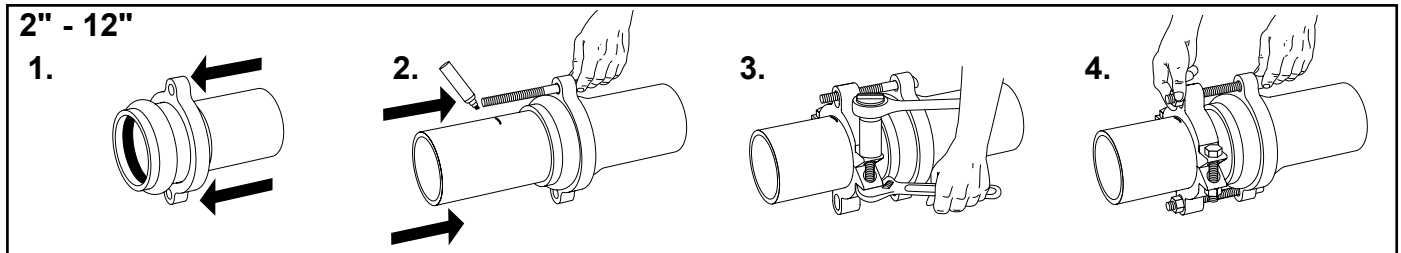
I = Import Casting U = USA Casting

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

All dimensions in inches unless otherwise stated.

◆ Contact factory for details.

Installation Instructions

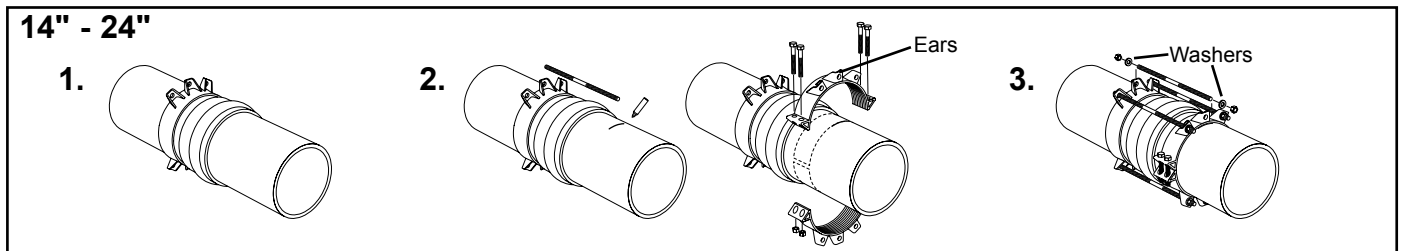


1. Slide bell ring over pipe and onto bell. Make sure beveled side of ring faces the pipe bell.

2. Assemble push-on joint using standard procedure. Insert one of the extra long T-Bolts through one of the bell ring holes. Mark a line approximately 1 inch shorter than the bolt length.

3. Assemble Series 1300 serrated clamping ring onto pipe, and align the restraint and backp ring ears. Evenly tighten clamping bolts to recommended torque.

4. Insert all provided T-Bolts/restraint rods and snug nuts behind restraint ears. **Do not over-tighten retaining nuts.**



1. Assemble pipe bell joint. Slide 1350 Restraint ring up the length of pipe until it seats against the back of the pipe bell. Make sure the beveled edge is facing bell.

2. Use one of the rods (provided) as a guide, and mark a line on the pipe to position serrated restrainer. Leave sufficient threads on rod to fully engage nuts. Tighten clamping bolts on each side evenly, to recommended torque, ensuring the gaps between pads on both sides remain even. A torque wrench is required to ensure proper torque.

3. Connect 1300 to 1350 with all rods provided. Use one washer behind each ear, install nut behind washer and tighten retaining nuts hand-tight, then one revolution. **Do not over-tighten retaining nuts.**

Consult the Ford Meter Box website for the most current installation instructions.

Specifications - Uni-Flange® Series 1360

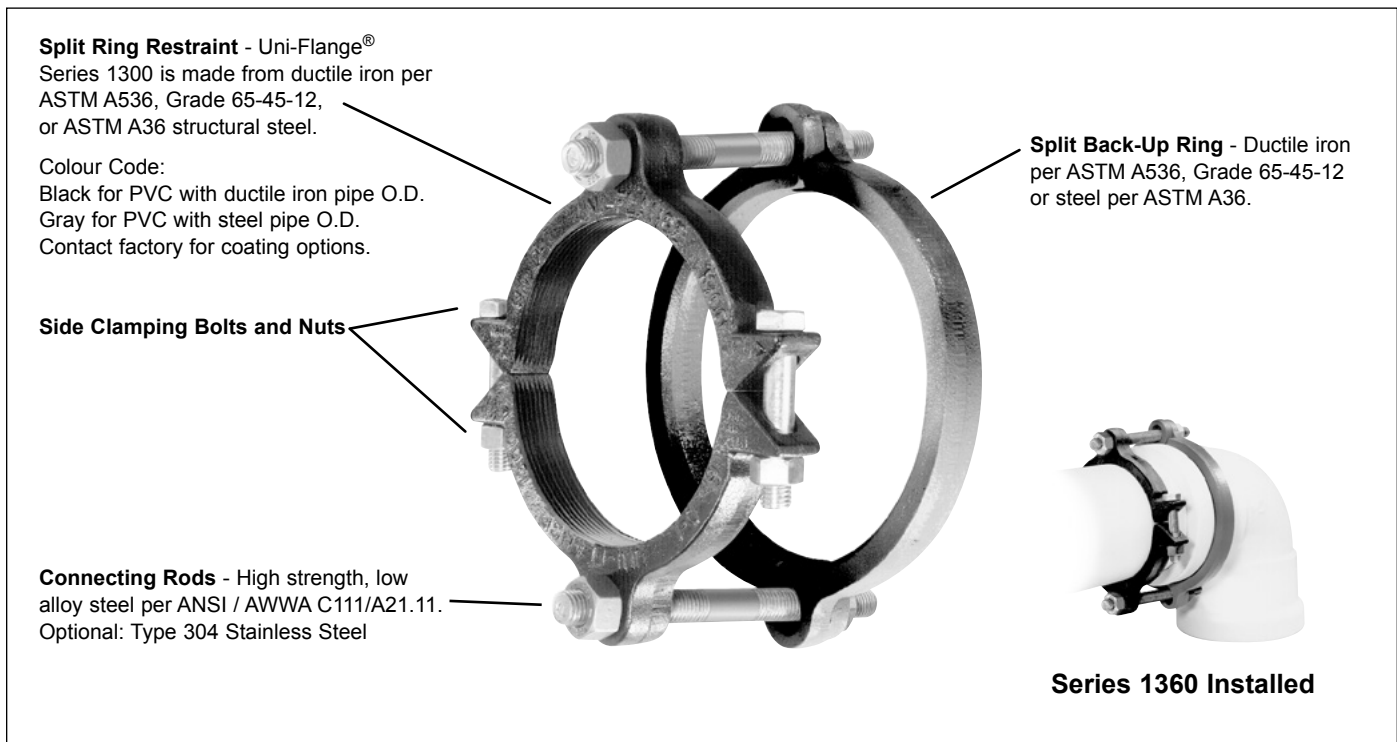
Series 1360 Uni-Flange® Restraint Device for PVC Pressure Fittings

More and more municipalities and consulting engineers are specifying PVC pipe joined with PVC pressure fittings.

Uni-Flange® now offers the fastest, most economical and reliable method of restraining PVC pressure fittings with the series 1360. Complete fitting restraint in a matter of minutes... using only a wrench.

The Uni-Flange® Series 1360 consists of two split rings. The Series 1300 is installed on the PVC pipe and connected to a specially designed backup ring that sits securely behind the fitting bell. The backup ring is beveled on the leading edge and the two halves are designed to interlock... no clamping bolts are required.

The Uni-Flange® Series 1360 offers guaranteed joint restraint every time, eliminating the need for expensive and time consuming concrete thrust blocks. No waiting for trucks. No building forms. Trenches can be backfilled immediately. The 1360 keeps the job moving.



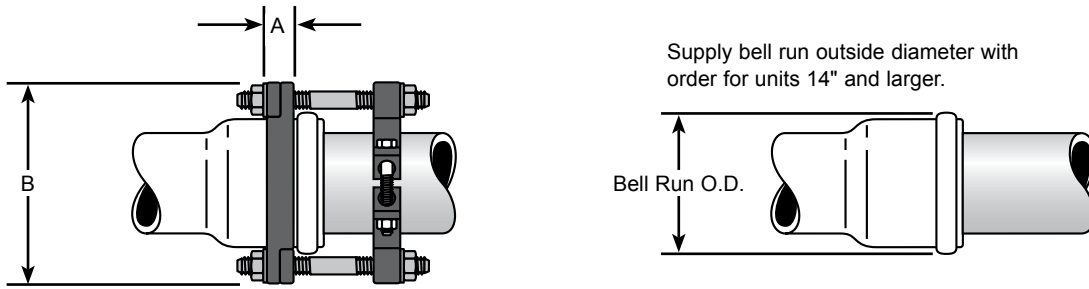
Applications / Pressure Rating

The Uni-Flange® Series 1360 carries a water working pressure rating of 235 psi in 2" through 8" nominal sizes. Larger sizes carry the same pressure rating as the fittings on which they are installed. (Contact fitting manufacturer for rating.) The bell run O.D. is required for sizes 14" and larger. All sizes incorporate a minimum 2:1 safety factor at the full rated pressure.

Suggested Specification - Series 1360

Restraint devices for PVC pipe and PVC pressure fittings shall consist of a split restraint ring installed on the spigot, connected to a split backup ring that seats behind the gasket race of the fitting. The split restraint ring shall incorporate a series of serrations on the inside diameter to provide positive restraint, exact fit and 360° contact and support of the pipe wall. The two halves of the split backup ring shall form a beveled leading edge to ensure exact fit behind the fitting gasket race. Restraint devices shall be of ductile iron, ASTM A536, Grade 65-45-12, or ASTM A36 structural steel and connecting rods shall be of high strength, low alloy material in accordance with ANSI / AWWA C111 / A21.11. Restraint devices shall be Uni-Flange® 1360 or approved equal.

Uni-Flange® Series 1360 Pipe Restraint



Supply bell run outside diameter with order for units 14" and larger.

4" Through 12" Restraint Device For AWWA C907 PVC Pressure Fittings

NOM. PIPE SIZE	PIPE O.D. (INCHES)	A	B APPROX.	CATALOGUE NUMBER FOR FITTINGS	CONNECTING RODS NUMBER AND SIZE	SIDE BOLT QUANTITY AND SIZE		APPROX. WT. LBS.
						RESTRAINT	BACKUP RING	
4"	4.80	1-1/8"	9-1/8"	UFR1360-C-4-(I or U)	(2) 3/4"x12"	(2) 5/8"x3-1/2"	-	13.5
6"	6.90	1-1/8"	11-7/8"	UFR1360-C-6-(I or U)	(2) 3/4"x12"	(2) 5/8"x3-1/2"	-	18.0
8"	9.05	1-1/8"	14-9/16"	UFR1360-C-8-(I or U)	(2) 3/4"x12"	(2) 3/4"x4"	-	29.0
10"	11.10	4"	19-11/16"	*UFR1360-C-10-(I or U)	(4) 3/4"x17"	(2) 7/8"x5"	(2) 7/8" x 3-1/2"	54.5
12"	13.20	4"	21-15/16"	*UFR1360-C-12-(I or U)	(4) 3/4"x17"	(2) 7/8"x5"	(2) 7/8" x 3-1/2"	81.0

* 10" and 12" are adjustable castings to accommodate a range of bell run O.D's.

14" Through 36" Restraint Device For AWWA C907 PVC Pressure Fittings

NOM. PIPE SIZE	PIPE O.D. (INCHES)	A	B APPROX.	CATALOGUE NUMBER FOR FITTINGS	CONNECTING RODS QUANTITY AND SIZE	SIDE BOLT QUANTITY AND SIZE		APPROX. WT. LBS.
						RESTRAINT	BACKUP RING	
14"	15.30	4"	24-1/4"	*UFR1360-C-14-xxxx	(6) 3/4"x24"	♦	(4) 7/8"x7"	127.0
16"	17.40	4"	26-9/16"	*UFR1360-C-16-xxxx	(6) 3/4"x30"	♦	(4) 7/8"x7"	140.0
18"	19.50	4"	28-7/8"	*UFR1360-C-18-xxxx	(8) 3/4"x30"	(4) 1"x7"	(4) 7/8"x7"	181.0
20"	21.60	5"	31-1/8"	*UFR1360-C-20-xxxx	(8) 3/4"x30"	♦	(4) 1" x 9"	227.0
24"	25.80	5"	35-7/8"	*UFR1360-C-24-xxxx	(12) 3/4"x36"	♦	(4) 1" x 9"	328.0
30"	32.00	7"	44-1/16"	*UFR1360-C-30-xxxx	(12) 1"x40"	♦	(6) 1-1/8" x 9"	551.0
36"	38.30	7"	51-15/16"	*UFR1360-C-36-xxxx	(12) 1"x40"	♦	(6) 1-1/8" x 9"	583.0

* The bell run outside diameter must be provided. Contact factory for details. (See bell run illustration above.)

I = Import Casting U = Domestic Casting or Fabrication

♦ Contact factory for details.

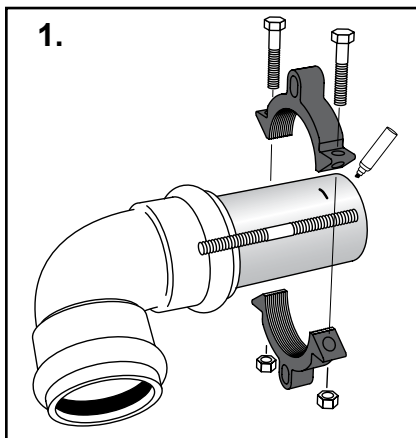
Restraint Device For IPS Class 200 PVC Fittings

NOM. PIPE SIZE	PIPE O.D. (INCHES)	A	B	CATALOGUE NUMBER	CONNECTING RODS QUANTITY AND SIZE	SIDE BOLTS QUANTITY AND SIZE	APPROX. WT. LBS.
2"	2.38	1-1/8"	6-3/8"	UFR1360-S-2-I	(2) 5/8"x11"	(2) 5/8"x3-1/2"	9.5
2-1/2"	2.88	1-1/8"	6-7/8"	UFR1360-S-25-I	(2) 5/8"x11"	(2) 5/8"x3-1/2"	10.0
3"	3.50	1-1/8"	7-5/8"	UFR1360-S-3-I	(2) 5/8"x11"	(2) 5/8"x3-1/2"	10.5
4"	4.50	1-1/8"	9-1/8"	UFR1360-S-4-I	(2) 3/4"x12"	(2) 5/8"x3-1/2"	14.0
6"	6.63	1-1/8"	11-9/16"	UFR1360-S-6-I	(2) 3/4"x12"	(2) 5/8"x3-1/2"	17.5
8"	8.63	1-1/8"	13-3/8"	UFR1360-S-8-I	(2) 3/4"x12"	(2) 3/4"x4"	26.0

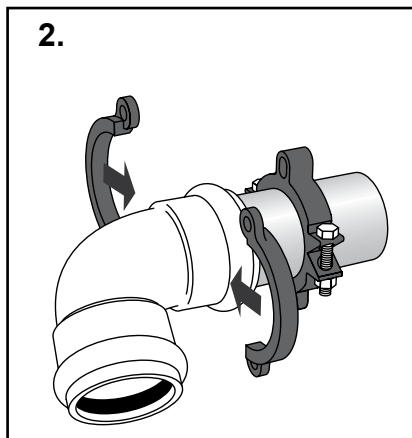
Contact factory for information on sizes larger than 8".

I = Import Casting

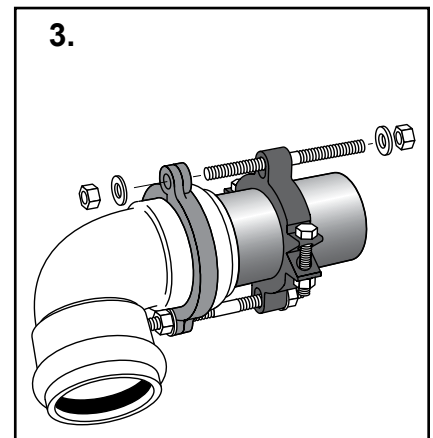
Installation Instructions



1. Install pipe into fitting. Install Series 1300 split clamping ring on the spigot end of the pipe. (Use connecting rod as a guide to position serrated restrainer.) Tighten clamping bolts evenly to the recommended torque.



2. Install split back-up ring behind gasket race of fitting. Make sure the bevel faces the gasket race. The two halves interlock at the bolt holes.



3. Insert rods through Series 1300 and backup ring. Place washers against restrainer and backup ring ears. Snug retaining nuts against washers. Do not overtighten retaining nuts.

UFR1360-C (10" & 12")

Patent No. 2732048

Whether standard C907 fittings or robust/oversized fittings, the 10" and 12" UFR1360 fits both. A simple turn of one of the gland halves on the backup ring and the inside diameter adjusts.

Proper assembly for use on standard DR18 C900 or C907 PVC bell



Size	Low End Bell Run O.D. Range
10"	12.00 - 12.50
12"	14.25 - 14.75



Proper assembly for use on robust or oversized DR18 C900 or C907 PVC bell



Size	High End Bell Run O.D. Range
10"	12.51 - 13.00
12"	14.76 - 15.50



UFR1369 (4" - 16")

Series 1369 Uni-Flange® Split Ring Restraint Device for C909 and PVC Pressure Fittings

Features:

- Ductile iron restraint and split backup ring per ASTM A536
- 360° contact and support of pipe wall
- Clamping pads and tie rod lugs are co-located for ease of installation
- Rated at full-rated pressure of any class of C909 PVC pipe, minimum 2:1 safety factor
- Black Armorguard e-coat epoxy to ensure long-lasting pipe restraint



Nom Pipe Size	Pipe O.D. (inches)	Catalogue Number	Connection Rods Number and Size	Approx. Wt. Lbs.
4"	4.8	UFR1369-C-4 (I or U)	(2) 3/4" x 17"	14.92
6"	6.9	UFR1369-C-6 (I or U)	(2) 3/4" x 17"	19.03
8"	9.05	UFR1369-C-8 (I or U)	(2) 3/4" x 17"	27.56
10"	11.1	UFR1369-C-10 (I or U)	(4) 3/4" x 24"	I = 61.65, U = 74.66
12"	13.2	UFR1369-C-12 (I or U)	(4) 3/4" x 24"	I = 76.42, U = 87.52
14"	15.3	UFR1369-C-14 (I or U)	(6) 3/4" x 24"	-
16"	17.4	UFR1369-C-16 (I or U)	(6) 3/4" x 30"	-

Specifications - Uni-Flange® Series 1390

Series 1390 Uni-Flange® Restraint Device for PVC Pipe Bell Joints

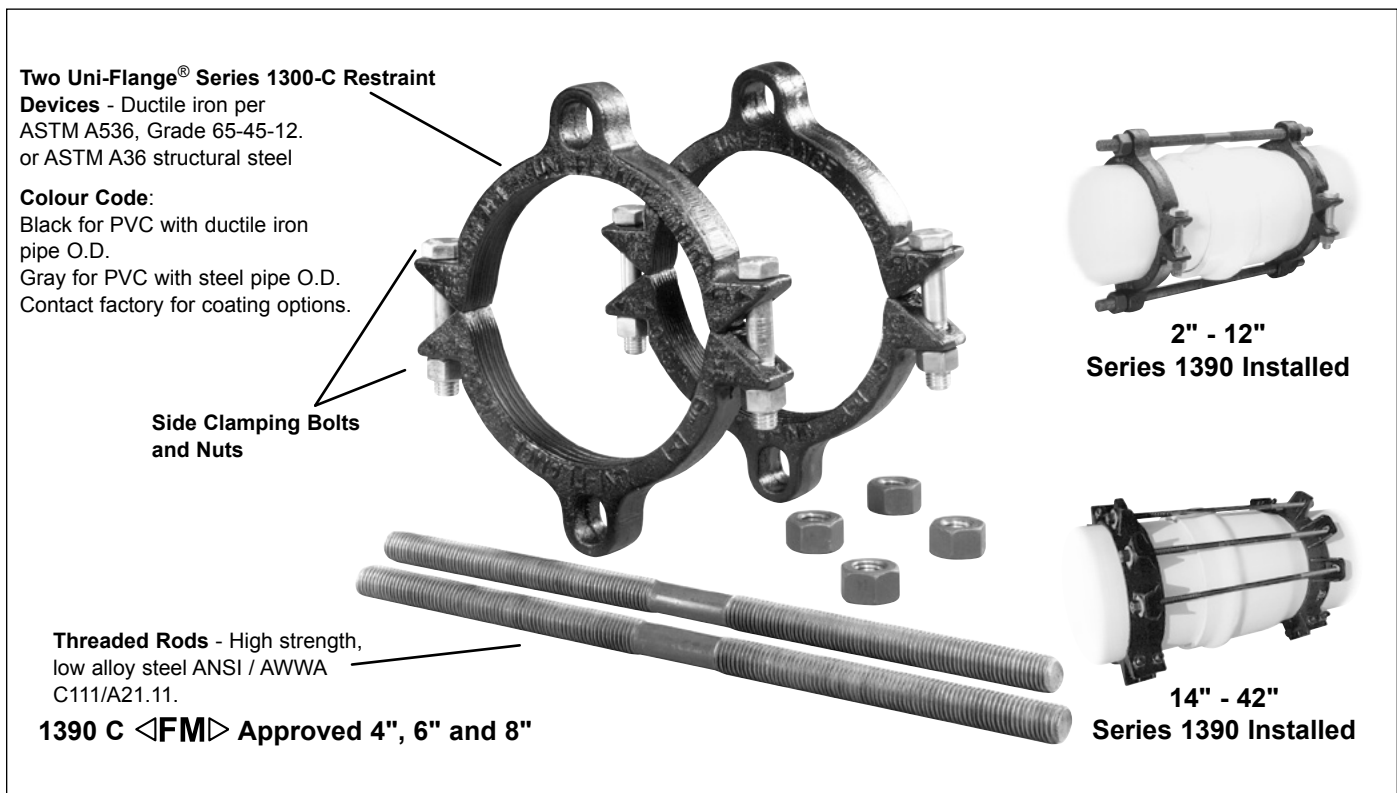
The Uni-Flange® Series 1390 offers fast, economical, guaranteed restraint of PVC pipe bell and spigot joints in new or existing installations in any soil condition. The Series 1390 eliminates the need for concrete thrust blocks and offers an alternative to "factory restrained joint" metallic pipes.

The Series 1390 consists of two Series 1300 split restraint devices. One is installed on the pipe spigot and the other behind the pipe bell. The two are connected to each other with double ended rods (provided).

Features:

- Provides restraint for new, or existing, in-ground piping systems
- 360° contact and support of the pipe wall
- Machined to exact tolerances
- Rated at full working pressure rating of any class of PVC Pipe, minimum 2:1 safety factor
- 4" through 16" "C" Style Units can be used on ductile iron pipe.

Note: 1390 restraining rods will span 2"-12" FC1 style flexible couplings when positioned to avoid the coupling bolts. Please contact the factory for other coupling applications.



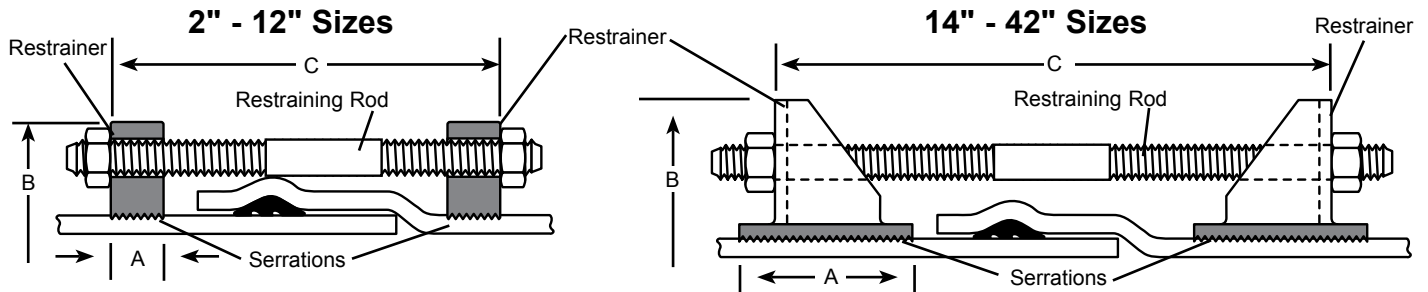
Suggested Specification - Series 1390

Restraint devices for bell and spigot joints of PVC pipe shall consist of two split restraint rings, one installed on the spigot, connected to one installed on the pipe barrel behind the bell. The restraint devices shall incorporate a series of serrations on the inside diameter to provide positive restraint, exact fit, 360° contact and support of the pipe wall. Restraint devices shall be of ductile iron, ASTM A536, Grade 65-45-12 or ASTM A36 structural steel, and connecting rods shall be of high strength, low alloy material in accordance with ANSI / AWWA C111/A21.11.

All restraint devices shall have a water working pressure rating equivalent to the full rated pressure of the PVC pipe they are installed on, with a minimum 2:1 safety factor in any nominal pipe size. Notarized certification from the manufacturer of the restraint device shall be provided with submittals. Restraint devices for bell and spigot joints of PVC pipe shall be Uni-Flange® 1390 or approved equal.

Uni-Flange® Series 1390 Pipe Restraint

Restraint Device for PVC Pipe Bell Joints



Nom. Pipe Size	PVC Pipe with Steel Pipe O.D. Style 1390-S		*PVC Pipe with Ductile Iron Pipe O.D. Style 1390-C		A	B Approx.	C Max.	Restraint Bolts / Rods		Clamping Bolts		Approx. Wt. Lbs.
	O.D.	Catalogue Number	O.D.	Catalogue Number				No.	Size	No.	Size	
2"	2.38	UFR1390-S-2-I	N/A	-	1-1/8"	6-1/4"	10"	2	5/8"x11"	4	5/8"x3-1/2"	11.5
2-1/2"	2.88	UFR1390-S-25-I	N/A	-	1-1/8"	6-7/8"	10"	2	5/8"x11"	4	5/8"x3-1/2"	12.8
3"	3.50	UFR1390-S-3-I	N/A	-	1-1/8"	7-11/16"	10"	2	5/8"x11"	4	5/8"x3-1/2"	13.5
4"	4.50	UFR1390-S-4-I	4.80	UFR1390-C-4-(I or U)	1-1/8"	9-1/8"	12"	2	3/4"x17"	4	5/8"x3-1/2"	17.0
6"	6.63	UFR1390-S-6-I	6.90	UFR1390-C-6-(I or U)	1-1/8"	11-1/8"	13"	2	3/4"x17"	4	5/8"x3-1/2"	18.5
8"	8.63	UFR1390-S-8-I	9.05	UFR1390-C-8-(I or U)	1-1/4"	14-5/8"	15"	2	3/4"x17"	4	3/4"x4"	29.0
10"	10.75	UFR1390-S-10-I	11.10	UFR1390-C-10-(I or U)	1-3/8"	16-5/8"	16"	4	3/4"x24"	4	7/8"x5"	53.0
12"	12.75	UFR1390-S-12-I	13.20	UFR1390-C-12-(I or U)	1-3/8"	19-1/4"	18"	4	3/4"x24"	4	7/8"x5"	56.5
14"	14.00	UFR1390-S-14-U	15.30	UFR1390-C-14-(I or U)	4"	22-1/2"	24"	6	3/4"x30"	8	♦	136.0
16"	16.00	UFR1390-S-16-U	17.40	UFR1390-C-16-(I or U)	4"	24-9/16"	28"	6	3/4"x30"	8	♦	147.0
18"	18.00	UFR1390-S-18-U	19.50	UFR1390-C-18-(I or U)	5"	26-11/16"	28"	8	3/4"x30"	8	1"x7"	206.0
20"	20.00	UFR1390-S-20-U	21.60	UFR1390-C-20-(I or U)	5"	29-3/16"	34"	8	3/4"x36"	♦	♦	263.0
24"	24.00	UFR1390-S-24-U	25.80	UFR1390-C-24-(I or U)	5"	33-7/8"	34"	12	3/4"x36"	♦	♦	406.0
30"	30.00	UFR1390-S-30-U	32.00	UFR1390-C-30-(I or U)	10"	40-9/10"	38"	12	1"x42"	12	♦	601.0
36"	36.00	UFR1390-S-36-U	38.30	UFR1390-C-36-(I or U)	10"	48"	38"	12	1"x42"	12	♦	672.0
42"	-	-	44.50	UFR1390-C-42-(I)	10-3/4"	57-9/16"	46"	16	1-1/4"x52"	16	1-1/8"x6"	1240.0

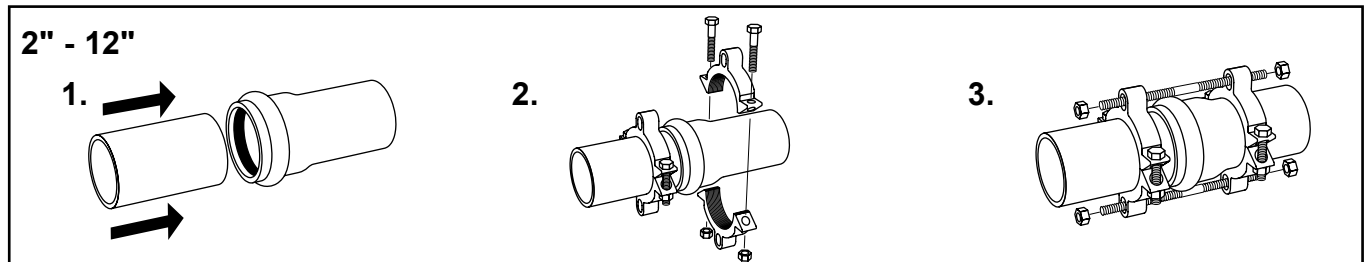
I = Import Casting U = USA Casting

Note: 14" - 42" are non-returnable and may be subject to a cancellation fee.

* 4" through 16" "C" Style Units can be used on ductile iron pipe.

♦ Contact factory for details.

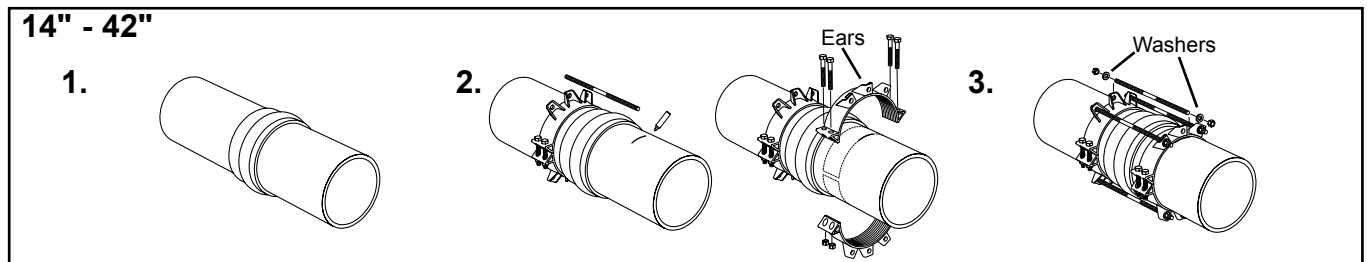
Installation Instructions



1. Assemble spigot pipe end to bell, using standard procedure.

2. Assemble Series 1390 clamping rings onto spigot pipe and just behind bell end as shown (use restraining rods as a guide to position restrainers) and tighten bolts evenly to recommended torque.

3. Insert threaded rods and nuts as shown and tighten nuts behind restrainers. **Do not over-tighten retaining nuts.**



1. Assemble pipe bell according to pipe manufacturer's instructions.

2. Assemble one restrainer on spigot end of pipe, and one directly behind pipe bell. Use one of the rods (provided) as a guide, and mark a line on the pipe to position serrated restrainers. Leave sufficient threads on the rod ends to fully engage nuts. Tighten clamping bolts on each side evenly, to recommended torque, ensuring the gaps between pads on both sides remain even. A torque wrench is required to ensure proper torque. The clamping pads will not touch.

3. Connect the two restrainers using all rods provided. Place a washer on the restraint rods behind / outside the restrainer ears. Tighten all retaining nuts hand-tight, then one revolution. Do not over-tighten retaining nuts. Use additional nuts and washers (not included) on inside of retainer ears if pipe joint is expected to contract.

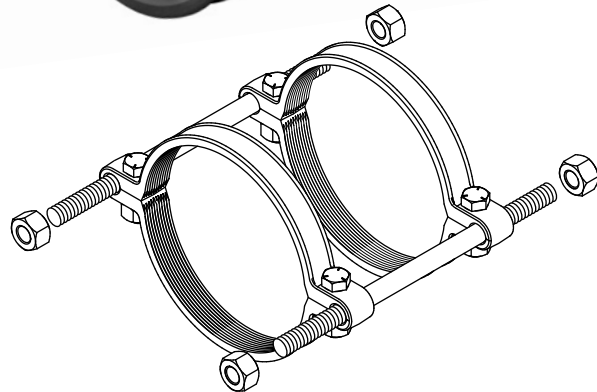
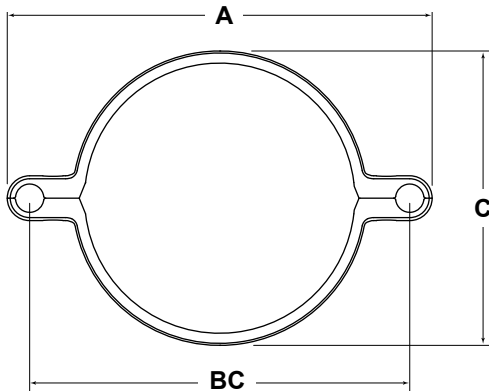
Consult the Ford Meter Box website for the most current installation instructions.

Specifications - Uni-Flange® Series 1390-P

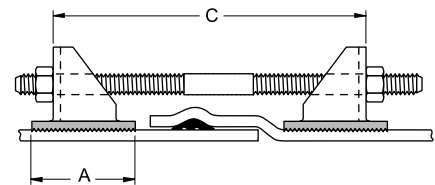
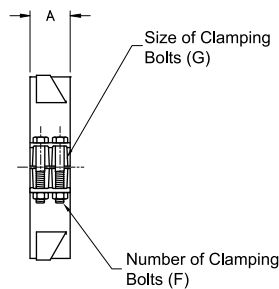
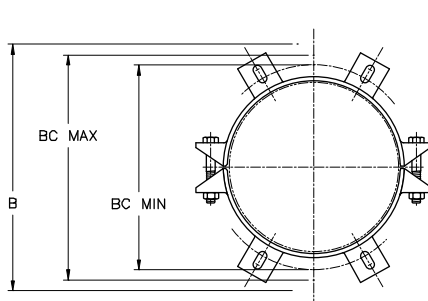
Series 1390-P Uni-Flange® Restraint Device for Sewer Pipe Bell Joints

Features:

- Specially designed for ASTM 3034 type PSM sewer pipe
- Optimized clamping bolt/tie rod location minimizes pipe wall stress, ideal for thin wall pipe
- Rods are high strength, low alloy steel per ANSI/AWWA C111/A21.11
- High-quality ductile iron construction per ASTM A536 4" – 15"
- Carbon steel per ASTM A36 18" – 36"
- Epoxy e-coat (15" and under) for superior corrosion resistance
Black shop coat on 18" and larger
- 50 PSI working pressure rating 2:1 safety factor



NOM. PIPE SIZE	SEWER PIPE STYLE 1300-P		A	BC	C	RESTRAINT RODS		CLAMPING BOLTS		APPROX. WT. LBS.
	O.D.	CATALOGUE NUMBER				No.	SIZE	No.	SIZE	
4"	4.22	UFR1390-P-4-I	8-57/64"	7-1/2"	4-59/64"	2	3/4"x17"	4	5/8"x2-1/4"	9.4
6"	6.28	UFR1390-P-6-I	10-57/64"	9-1/2"	6-63/64"	2	3/4"x17"	4	5/8"x2-1/4"	10.3
8"	8.40	UFR1390-P-8-I	13-9/64"	11-3/4"	9-3/32"	2	3/4"x17"	4	5/8"x2-1/4"	11.3
10"	10.50	UFR1390-P-10-I	15-23/64"	14"	11-29/64"	2	3/4"x17"	4	5/8"x2-1/4"	15.1
12"	12.50	UFR1390-P-12-I	18"	16-1/4"	13-29/64"	2	3/4"x17"	4	5/8"x2-1/4"	17.5



NOM. PIPE SIZE	SEWER PIPE STYLE 1300-P		A	B APPROX.	C MAX.	RESTRAINT RODS		CLAMPING BOLTS		BC MIN.	BC MAX.	APPROX. WT. LBS.
	O.D.	CATALOGUE NUMBER				No.	SIZE	No.	SIZE			
15"	15.30	UFR1390-P-15-U	4"	22-1/2"	28"	4	3/4"x30"	8	7/8"x5"	18.50	20.50	100
18"	18.70	UFR1390-P-18-U	4"	26-3/16"	28"	4	3/4"x30"	8	7/8"x7"	21.88	23.88	124
21"	22.05	UFR1390-P-21-U	4"	28-13/16"	28"	4	3/4"x36"	8	7/8"x7"	24.56	26.56	137
24"	24.80	UFR1390-P-24-U	4"	32-3/16"	28"	4	3/4"x36"	8	7/8"x7"	27.94	29.94	153
27"	27.95	UFR1390-P-27-U	4"	35-3/8"	28"	4	3/4"x36"	8	7/8"x7"	31.09	33.09	170
30"												
36"												

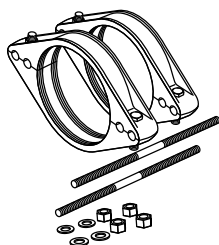
Contact factory for larger sizes. Exact pipe O.D. is required.

Uni-Flange® Pipe Restraints for AWWA C909 PVCO Pipe - Series 1399 Restraint Device

Series 1399 Uni-Flange® Restraint Device for C909 PVCO Pipe used with Mechanical Joint / *Push-On Fittings

The Uni-Flange® Series 1399 offers fast, economical, guaranteed restraint of PVC Pipe bell and spigot joints in new or existing installations in any soil condition.

Series 1399 Restrainer Split Restraint for C909 PVCO Push-on Joints (New or Existing Installations)



Nom. Pipe Size	Pipe O.D.	Pressure Rating (PSI)	Catalogue Number	No. of Rods	Rod Length	Rod Dia.	■Max Bell Dia.	Approx. Wt. (Lbs)
4"	4.80	235	UFR1399-C-4-I	2	17"	3/4"	7.25	20
6"	6.90	235	UFR1399-C-6-I	2	17"	3/4"	9.83	25
8"	9.05	235	UFR1399-C-8-I	2	17"	3/4"	11.75	35
10"	11.10	235	UFR1399-C-10-I	4	24"	3/4"	14.50	72
12"	13.20	235	UFR1399-C-12-I	4	24"	3/4"	16.58	78
14"	15.30	235	UFR1399-C-14-U	6	30"	3/4"	19.50"	170
16"	17.40	235	UFR1399-C-16-U	6	30"	3/4"	21.75"	180
18"	19.50	235	UFR1399-C-18-U	6	30"	3/4"	23.88"	194
20"	21.60	235	UFR1399-C-20-U	8	36"	3/4"	26.00"	200
24"	25.80	235	UFR1399-C-24-U	12	36"	3/4"	30.15"	324

■ **Note:** Connecting rods **WILL NOT CLEAR** a pipe bell with a maximum diameter larger than the listed measurement. These diameters do not include joint deflection. Confirm pipe bell diameter before ordering.

Suggested Specification - Series 1399

Restraint devices for bell and spigot joints of C909 PVCO pipe shall consist of split restraint rings, one installed on the spigot, connected to one installed on the pipe barrel behind the bell. The restraint devices shall incorporate a series of serrations on the inside diameter to provide positive restraint, exact fit, full contact and support of the pipe wall. Restraint devices shall be of ductile iron, per ASTM A536, Grade 65-45-12 or ASTM A36 structural steel, and connecting rods shall be of high strength, low alloy material in accordance with ANSI / AWWA C111/A21.11.

All restraint devices shall have a water working pressure rating equivalent to the full rated pressure of the C909 PVCO Pipe they are installed on, with a minimum 2:1 safety factor in any nominal pipe size. Notarized certification from the manufacturer of the restraint device shall be provided with submittals. Restraint devices for bell and spigot joints of PVC pipe shall be Uni-Flange® 1399 or approved equal.

Uni-Flange® Series 1400

Wedge Action MJ Retainer Gland Joint Restraint for Ductile Iron Pipe

WORKING PRESSURE - 3" THROUGH 16" **350 PSI**
 - 18" THROUGH 48" **250 PSI**

Actuating Screw -

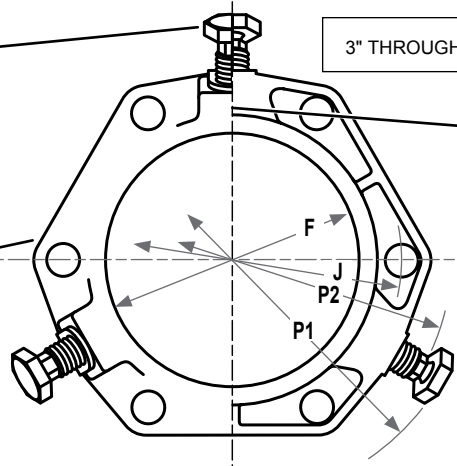
Ductile iron wedge actuating screw, with the Auto-Tork break-away head design, ensures proper torque during installation.

Gland -

Gland body is of high strength ductile iron per ASTM A536, Grade 65-45-12. Compatible with all mechanical joints conforming to ANSI / AWWA C111 / A21.11.

Colour Code:

All components black epoxy coated applied by the e-coat process.



Wedges are ductile iron and heat treated to a hardness of 370 BHN minimum.

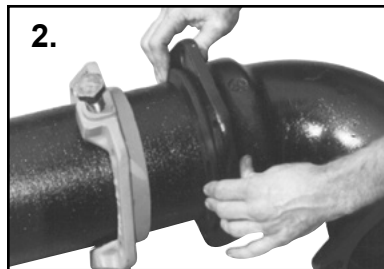
The Uni-Flange® Series 1400 offers a minimum 2:1 safety factor at the full rated pressure of the device, in all sizes, when tested in dead-end situations.

Note: UFR1400s are not to be used with plain end fittings.
 For higher pressure rating applications, see Series 2800.

Uni-Flange® Series 1400 Installation Instructions



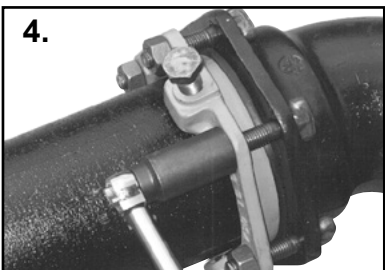
1. Clean the socket and plain end. Lubricate gasket and plain end with approved pipe lubricant meeting AWWA C111. Place the gland on the plain end with the lip extension toward the plain end, followed by the gasket with the narrow edge of the gasket toward the plain end.



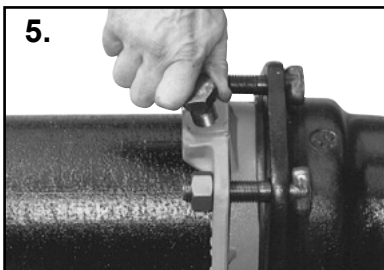
2. Insert the pipe into the socket and press the gasket firmly and evenly into the gasket recess. Keep the joint straight during assembly. (In cold conditions, it is best to warm the gasket to approximately room temperature to facilitate assembly.)



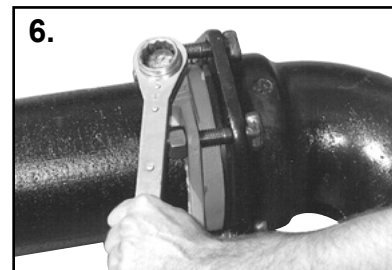
3. Push the gland toward the socket and center it around the pipe with the gland lip against the gasket. Insert T-bolts and hand tighten nuts with the gland centered around the pipe. Set deflection after joint assembly but before tightening bolts (Maximum deflection is 5° on 3" - 12", 3° on 14" - 24", 1° on 30" - 48" sizes.)



4. Tighten the T-bolts to the same torque recommended in AWWA C111 (**45-60 ft-lb on 3", 75-90 ft-lb on 4" - 24" sizes, 100-120 ft-lb on 30" - 36" sizes and 120-150 ft-lb on 42" - 48" sizes**). Tighten in an alternating manner (6 o'clock, 12 o'clock, 3 o'clock, 9 o'clock), maintaining the same gap between the gland and the MJ bell face at all points around the MJ socket. Repeat the process until all bolts are within the approximate torque range. Use of a torque wrench is strongly recommended to ensure proper torque.



5. After correct assembly of the mechanical joint, bring all wedges in contact with the pipe surface by turning all the Auto-Tork actuating screws in a clockwise direction until contact is made and screw is "hand tight."



6. Continue tightening the Auto-Tork screws in an alternating manner until all heads have twisted off.

7. Although it is not a requirement, it is always good practice to recheck T-bolt torque prior to backfilling and/or applying water pressure.

Note: The Series 1400 can be re-used or re-installed after the Auto-Tork screw heads have been twisted off. In this case, use a torque wrench to tighten the hex head of the wedge actuating screw to 75 - 110 ft-lb.
 Consult the Ford Meter Box website for the most current installation instructions.

Uni-Flange® Series 1400

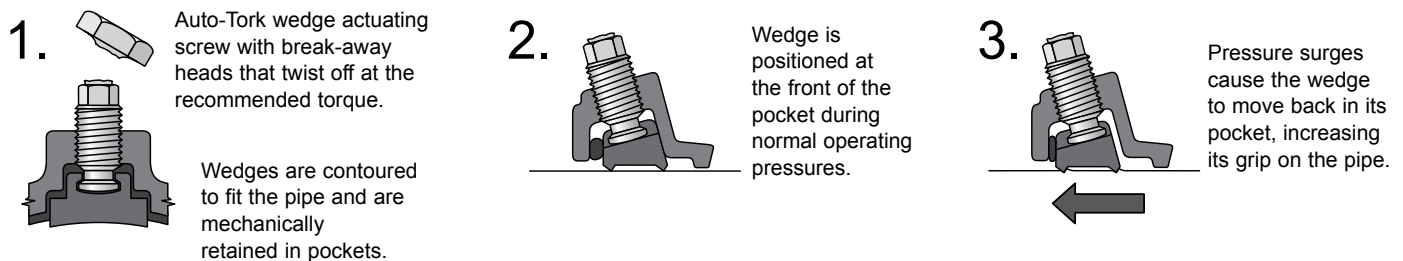
Information - Wedge Action MJ Retainer Gland for Ductile Iron Pipe

HISTORY

The Series 1400 was originally designed to provide joint restraint for ductile iron pipelines installed in areas subject to earthquakes. Its unique “controlled expansion and flexibility” feature has allowed it to withstand several major earthquakes; one as large as magnitude 7.7 in 1983 and another of magnitude 7.8 in 1993. Uni-Flange® has adapted this technology to AWWA standards and dimensions.

HOW IT WORKS

The Series 1400 is a mechanical joint restraining gland, incorporating individually actuated wedges located around the circumference of the pipe. When the specially designed wedge actuating screws are tightened, the teeth on the bottom of each wedge lock onto the pipe surface. Under normal operating conditions, this is all the restraint that is required. If external forces cause the pipe to move, the wedge teeth remain locked on the pipe and the wedge moves against the actuating screw, enclosed in its ductile iron pocket. This feature allows the joint to prevent separation yet remain resilient and flexible after assembly. In high pressure applications, or when surge pressures occur, the 1400 uses the line pressure to increase its restraining grip on the pipe. If the pressure decreases, the wedge returns to its original position and controlled expansion and flexibility are available again.



ADVANTAGES OF THE SERIES 1400

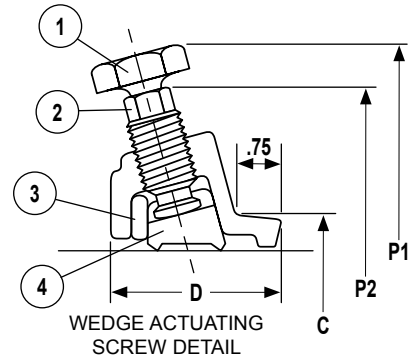
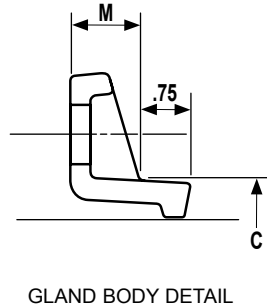
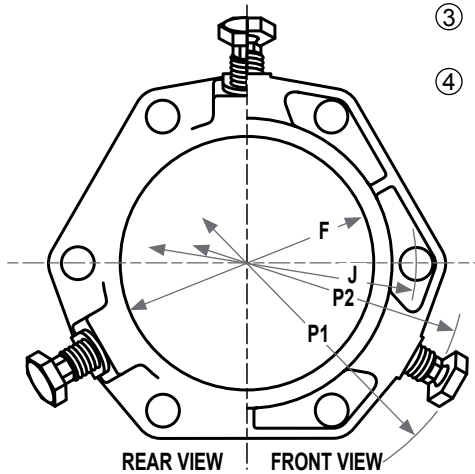
- **Eliminates** the need of costly and time consuming **concrete thrust blocks**.
- **Auto-Tork wedge actuating screws ensure proper installation.** Auto-Tork screws are designed with a break away head that twists off at the recommended torque, leaving a hex head in case future maintenance or removal is required. This gives a visual indicator and ensures correct installation every time.
- **Wedges are contoured to fit the pipe.** This provides greater surface area contact, increasing the restraint capability and distributing the restraining force. The Series 1400 can be used on any thickness or class of ductile iron pipe.
- **High Pressure Capabilities.** The Series 1400 is rated at 350 psi in 3" - 16" nominal sizes, 250 psi in 18" - 48". Minimum 2:1 safety factor in all sizes.
- **Proven Technology.** The Series 1400 design has decades of successful field service.
- **The Series 1400 Offers 5° deflection** on sizes 3"-12", 3° deflection on sizes 14"-24" and 1° deflection on 30" and 48" sizes. This advantage is provided even after installation and pressurization.
- **No special tools necessary.** Designed for use with standard mechanical joint bells conforming to AWWA C111. The same wrench used to tighten the T-bolt nuts can be used on the wedge actuating screws.
- **Wedges are mechanically retained in pockets.** The Series 1400 wedges cannot fall out! All necessary parts show up at the job site! And no parts are lost in the trench if the gland is removed from the pipe for system maintenance or relocation.
- **Used with ordinary ductile iron pipe and mechanical joint sockets.** There is no need to order, pay for, and wait for special factory fabricated parts. Totally field adaptable; no beveling, special segments, or welded rings required.
- **4" - 12" FM approved and 4" - 48" UL listed.** Contact factory for details.



Uni-Flange® Series 1400

Information - Wedge Action MJ Retainer Gland Joint Restraint for Ductile Iron Pipe

- ① Auto-Tork break-away head, 1-1/4" across the flat (same as 3/4" heavy hex nut)
- ② 5/8" hex-head, operating screw
- ③ Rubber spacer (positions wedge during assembly)
- ④ Wedge



Series 1400 MJ Retainer Gland for Ductile Iron Pipe

Nom. Pipe Size	Pipe O.D. (Inches)	Catalogue Number	Pressure Rating (psi)	No. of Wedges	Approx. Weight (lbs.)	P1*	P2**	C	D	F	M	J	No. of Bolt Holes
3"	3.96	UFR1400-D-3-(I or U)	350	2	6.0	11.04	9.06	4.84	2.65	4.06	0.68	6.19	4
4"	4.80	UFR1400-D-4-(I or U)	350	2	7.5	11.9	10.0	5.92	2.65	4.90	0.88	7.50	4
6"	6.90	UFR1400-D-6-(I or U)	350	3	11.0	14.0	12.1	8.02	2.65	7.00	0.88	9.50	6
8"	9.05	UFR1400-D-8-(I or U)	350	4	14.5	16.2	14.3	10.17	2.65	9.15	1.10	11.75	6
10"	11.10	UFR1400-D-10-(I or U)	350	6	22	18.2	16.3	12.22	2.75	11.20	1.10	14.00	8
12"	13.20	UFR1400-D-12-(I or U)	350	8	28	20.3	18.4	14.32	2.75	13.30	1.10	16.25	8
14"	15.30	UFR1400-D-14-(I or U)	350	10	42	22.9	20.9	16.40	3.00	15.44	1.50	18.75	10
16"	17.40	UFR1400-D-16-(I or U)	350	12	50	25.0	23.0	18.50	3.00	17.54	1.56	21.00	12
18"	19.50	UFR1400-D-18-(I or U)	250	12	67	28.1	25.8	20.60	3.05	19.64	1.65	23.25	12
20"	21.60	UFR1400-D-20-(I or U)	250	14	75	30.2	27.9	22.70	3.10	21.75	1.70	25.50	14
24"	25.80	UFR1400-D-24-(I or U)	250	16	85	34.4	32.1	26.90	3.20	25.94	1.85	30.00	16
30"	32.00	***UFR1400-D-30-(I or U)	250	20	221	40.6	38.6	33.29	3.55	32.17	2.25	36.88	20
36"	38.30	***UFR1400-D-36-(I or U)	250	24	256	46.9	44.9	39.59	3.76	38.47	2.25	43.75	24
42"	44.50	***UFR1400-D-42-(I or U)	250	28	475	53.9	53.9	45.79	5.68	44.79	2.56	50.62	28
48"	50.80	***UFR1400-D-48-(I or U)	250	32	573	60.2	60.2	52.09	5.68	51.09	2.56	57.50	32

I = Import Casting U = USA Casting

All dimensions in inches unless otherwise stated.

* Maximum O.D. of gland on pipe before break-away heads have been removed (as received).

** Maximum O.D. of gland on pipe after wedges have been activated and break-away heads have been removed.

*** 30" through 48" sizes include a Uni-Seal gasket.

Note: 4" - 12" oversized 1400 retainer glands are available for gray cast iron pipe by adding "-XL" to the end of the catalogue number. Example: UFR1400-D-6-XL. Contact factory for details.

Note: Not to be used on plain end fittings.

Uni-Flange® Series 1400

Wedge Action MJ Retainer Gland Joint Restraint for Ductile Iron Pipe

SERIES 1400 WEDGE ACTION RETAINER GLAND PACKAGED WITH ACCESSORIES



PACKAGE CONTAINS

- 1 - Series 1400 Wedge Action retainer gland.
- 1 - Set of high strength, low alloy T-bolts & nuts (AWWA C111).
- 1 - Mechanical joint gasket (AWWA C111) 3" - 24" sizes, Uni-Seal Gasket 30" - 48" sizes.

3" through 12" sizes are shrink wrapped in a weather resistant carton. 14" through 48" sizes are bulk packaged.

Series 1400-DA Retainer MJ Retainer Gland for Ductile Iron Pipe with Accessories

Nom. Pipe Size	Pipe O.D. (Inches)	Catalogue Number	No. of Wedges	Pressure Rating (psi)	Approx. Weight (lbs.)
3"	3.96	UFR1400-DA-3-(I or U)	2	350	8.0
4"	4.80	UFR1400-DA-4-(I or U)	2	350	10.5
6"	6.90	UFR1400-DA-6-(I or U)	3	350	15.5
8"	9.05	UFR1400-DA-8-(I or U)	4	350	19.8
10"	11.10	UFR1400-DA-10-(I or U)	6	350	29.5
12"	13.20	UFR1400-DA-12-(I or U)	8	350	35.0
14"	15.30	UFR1400-DA-14-(I or U)	10	350	52.0
16"	17.40	UFR1400-DA-16-(I or U)	12	350	62.0
18"	19.50	UFR1400-DA-18-(I or U)	12	250	79.0
20"	21.60	UFR1400-DA-20-(I or U)	14	250	88.0
24"	25.80	UFR1400-DA-24-(I or U)	16	250	101.0
30"	32.00	UFR1400-DA-30-(I or U)	20	250	262.0
36"	38.30	UFR1400-DA-36-(I or U)	24	250	306.0
42"	44.50	UFR1400-DA-42-(I or U)	28	250	575.0
48"	50.80	UFR1400-DA-48-(I or U)	32	250	690.0

30" thru 48" sizes include a Uni-Seal Gasket.

I = Import Casting U = USA Casting

Note: Not to be used on plain end fittings.

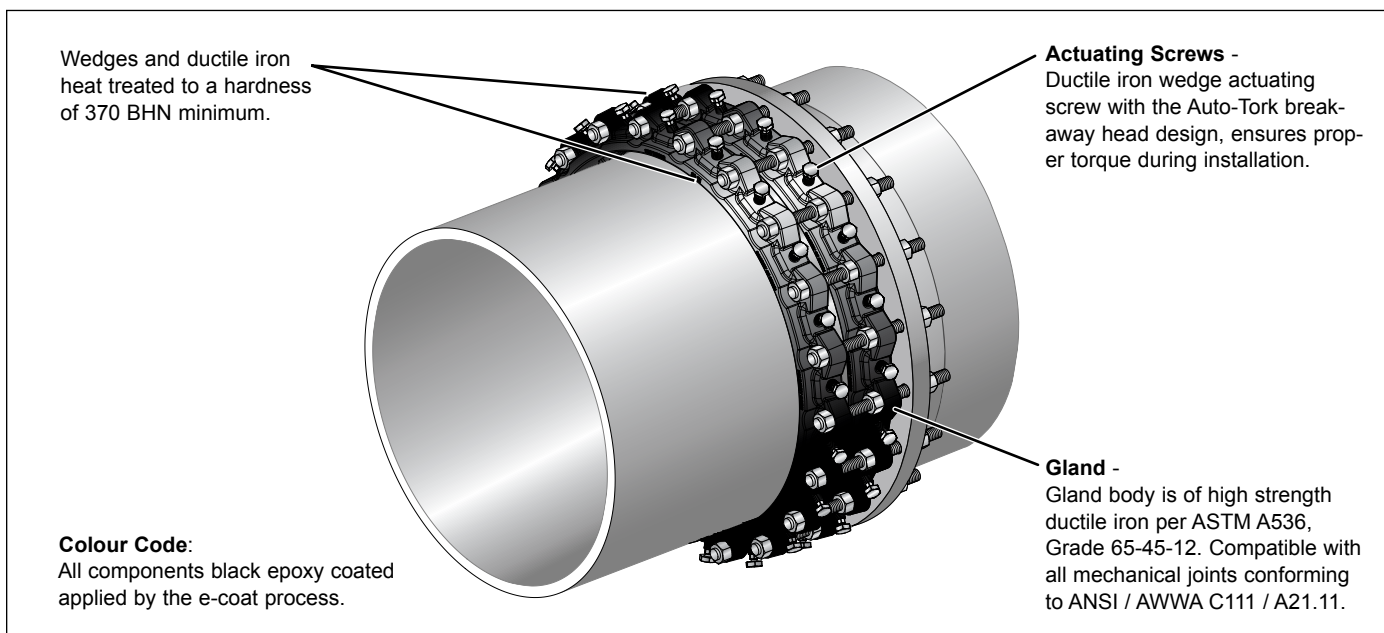
Sample Specification – Series 1400

Restraint for standardized mechanical joints shall be incorporated in the design of the follower gland and shall impart multiple points of wedge action against the pipe, increasing its resistance as the pressure increases. The assembled joint shall maintain its flexibility after burial and shall maintain its integrity by a controlled and limited expansion of each joint during the wedging action. Restraining glands shall be manufactured of high strength ductile iron conforming to the requirements of ASTM A536. Wedges shall be contoured to properly fit on the pipe and shall be manufactured of ductile iron, heat-treated to a minimum hardness of 370 BHN. Dimensions of the glands shall be such that they can be used with the standardized mechanical joint bell and tee head bolts conforming to the requirements of ANSI/AWWA C111/A21.11 and ANSI/AWWA C153/A21.53 of latest revision. Twist-off heads shall be incorporated in the design of the wedge actuating screws to ensure proper torque. All ductile iron components shall be phosphate washed and coated with an electrostatically applied, heat cured epoxy coating. The restraining device shall have a water working pressure rating of 350 psi in sizes 3" through 16" and 250 psi in sizes 18" and larger with a safety factor of at least 2:1 against separation when tested in a dead-end situation. Restraint device shall be Uni-Flange® Series 1400 or approved equal.

Uni-Flange® Series 2800

Information - Tandem Restraints for Ductile Iron Pipe for High Pressure Applications

Used in tandem, the UFR2800 allows two UFR1400 Restraints to work in unison to hold higher pressures.



Nom. Pipe Size	Pipe O.D. (Inches)	Catalogue Number	Pressure Rating (psi)	Approx. Weight (lbs.)	Catalogue Number	Approx. Weight (lbs.)	No. of Bolts	Bolt Size and Length
3"	3.96	UFR2800-D-3-(I or U)	500	12.0	UFR2800-DA-3-(I or U)	16.0	4	5/8" x 9"
4"	4.80	UFR2800-D-4-(I or U)	500	15.0	UFR2800-DA-4-(I or U)	21.0	4	3/4" x 7"
6"	6.90	UFR2800-D-6-(I or U)	500	22.0	UFR2800-DA-6-(I or U)	31.0	6	3/4" x 7"
8"	9.05	UFR2800-D-8-(I or U)	500	29.0	UFR2800-DA-8-(I or U)	39.0	6	3/4" x 7"
10"	11.10	UFR2800-D-10-(I or U)	500	44.0	UFR2800-DA-10-(I or U)	59.0	8	3/4" x 7"
12"	13.20	UFR2800-D-12-(I or U)	500	56.0	UFR2800-DA-12-(I or U)	70.0	8	3/4" x 9"
14"	15.30	UFR2800-D-14-(I or U)	450	84.0	UFR2800-DA-14-(I or U)	104.0	10	3/4" x 9"
16"	17.40	UFR2800-D-16-(I or U)	450	100.0	UFR2800-DA-16-(I or U)	124.0	12	3/4" x 9"
18"	19.50	UFR2800-D-18-(I or U)	350	134.0	UFR2800-DA-18-(I or U)	158.0	12	3/4" x 9"
20"	21.60	UFR2800-D-20-(I or U)	350	150.0	UFR2800-DA-20-(I or U)	176.0	14	3/4" x 9"
24"	25.80	UFR2800-D-24-(I or U)	350	170.0	UFR2800-DA-24-(I or U)	202.0	16	3/4" x 9"
*30"	32.00	UFR2800-D-30-(I or U)	350	442.0	UFR2800-DA-30-(I or U)	524.0	20	1" x 12"
*36"	38.30	UFR2800-D-36-(I or U)	350	512.0	UFR2800-DA-36-(I or U)	612.0	24	1" x 12"

I = Import Casting U = USA Casting

All dimensions in inches unless otherwise stated.

* 30" and 36" have threaded rods.

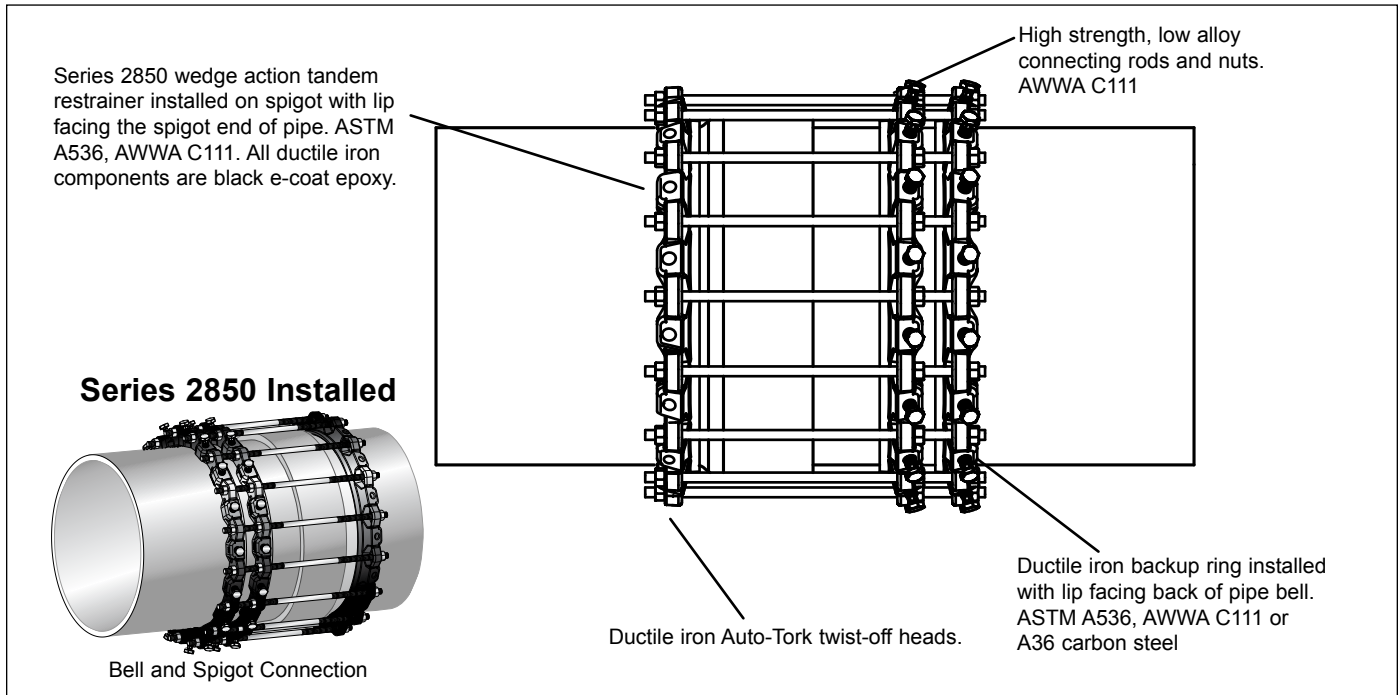
Note: Not to be used on plain end fittings.

Sample Specification – Series 2800

Tandem restraint for standardized mechanical joints shall be incorporated in the design of the follower gland and shall impart multiple points of wedge action against the pipe, increasing its resistance as the pressure increases. The assembled joint shall maintain its flexibility after burial and shall maintain its integrity by a controlled and limited expansion of each joint during the wedging action. Restraining glands shall be manufactured of high strength ductile iron conforming to the requirements of ASTM A536. Wedges shall be contoured to properly fit on the pipe and shall be manufactured of ductile iron, heat-treated to a minimum hardness of 370 BHN. Dimensions of the glands shall be such that they can be used with the standardized mechanical joint bell and tee head bolts conforming to the requirements of ANSI/AWWA C111/A21.11 and ANSI/AWWA C153/A21.53 of latest revision. Twist-off heads shall be incorporated in the design of the wedge actuating screws to ensure proper torque. All ductile iron components shall be phosphate washed and coated with an electrostatically applied, heat cured epoxy coating. The restraining device shall have a water working pressure rating of 500 psi in sizes 3" through 12" and 450 psi in sizes 14" through 16" and 350 psi in sizes 18" through 36" with a safety factor of at least 2:1 against separation when tested in a dead-end situation. Restraint device shall be Uni-Flange® Series 2800 or approved equal.

Uni-Flange® Series 2850 Wedge Action Restrainer

for Push-On Joints of Ductile Iron Pipe (New Installations Only)
for Higher Pressure Applications



Nom. Pipe Size	Pipe O.D. (Inches)	Catalogue Number	Pressure Rating (psi)	No. of Rods	Rod Length	Rod Diameter	*Max Bell Diameter	Approx. Weight (lbs.)
3"	3.96	UFR2850-D-3-(I or U)	500	4	14"	5/8"	5.50	18.0
4"	4.80	UFR2850-D-4-(I or U)	500	4	17"	3/4"	6.62	27.0
6"	6.90	UFR2850-D-6-(I or U)	500	6	17"	3/4"	8.62	40.0
8"	9.05	UFR2850-D-8-(I or U)	500	6	17"	3/4"	10.88	49.0
10"	11.10	UFR2850-D-10-(I or U)	500	8	17"	3/4"	13.12	78.0
12"	13.20	UFR2850-D-12-(I or U)	500	8	17"	3/4"	15.38	90.0
14"	15.30	UFR2850-D-14-(I or U)	450	10	24"	3/4"	17.88	129.0
16"	17.40	UFR2850-D-16-(I or U)	450	12	24"	3/4"	20.12	157.0
18"	19.50	UFR2850-D-18-(I or U)	350	12	24"	3/4"	22.38	189.0
20"	21.60	UFR2850-D-20-(I or U)	350	14	24"	3/4"	24.62	215.0
24"	25.80	UFR2850-D-24-(I or U)	350	16	24"	3/4"	29.12	244.0
30"	32.00	UFR2850-D-30-(I or U)	350	20	24"	3/4"	35.80	583.0
36"	38.30	UFR2850-D-36-(I or U)	350	24	24"	1"	42.60	686.0

I = Import Casting U = USA Casting

All dimensions in inches unless otherwise stated.

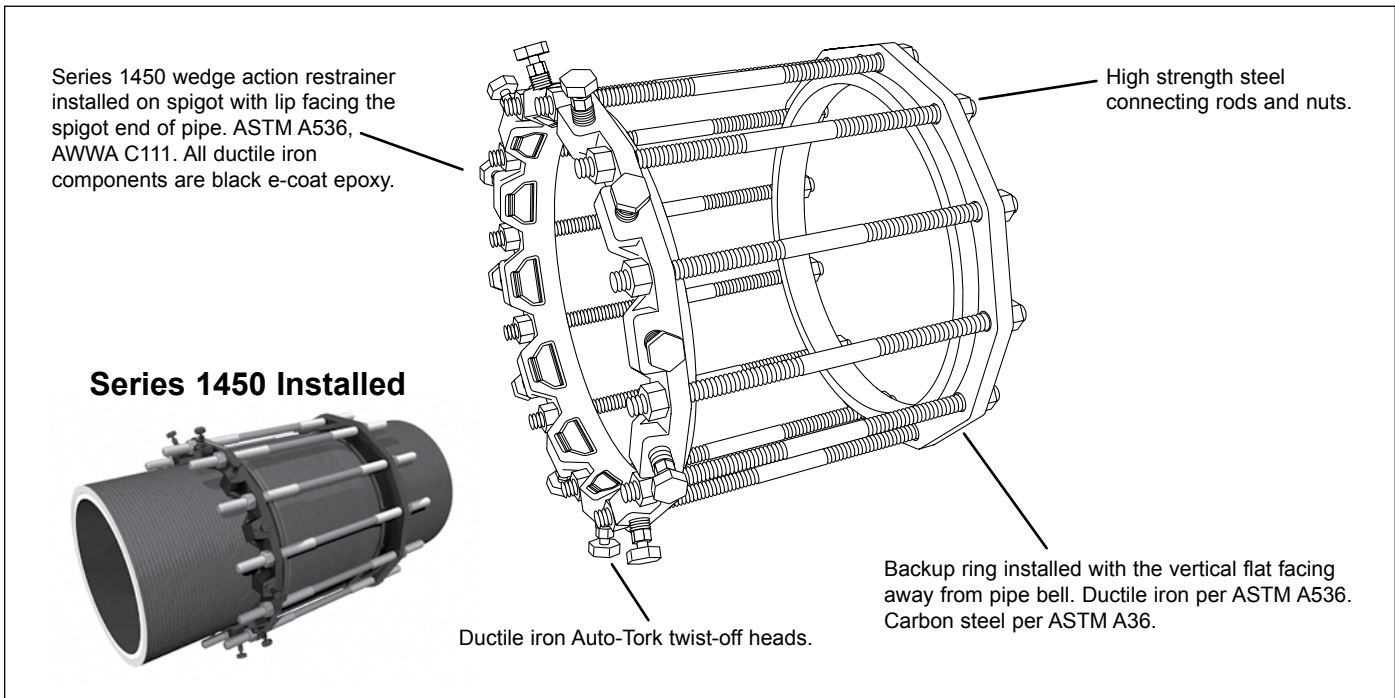
* **Note:** Connecting rods **WILL NOT CLEAR** a pipe bell with a maximum diameter larger than the listed measurement. These maximum diameters do not include joint deflection. Confirm pipe bell diameter before ordering.

Sample Specification - Series 2850

Tandem restraint for push-on bells of ductile iron pipe shall consist of a wedge action retainer gland installed on the pipe spigot, connected to a ductile iron backup ring installed behind the pipe bell. The wedge action restrainer shall be manufactured of high strength ductile iron per ASTM A536, Grade 65-45-12. Wedges shall be heat treated to a minimum BHN 370 and shall be contoured to properly fit the pipe. The heads of the wedge actuating screws shall twist off at the recommended torque, ensuring correct installation. Connecting rods and nuts shall be of high strength, low alloy material meeting ANSI / AWWA C111 / A21.11 standard. The backup ring shall be of high strength ductile iron per ASTM A536, Grade 65-45-12. Restrainers for push-on joints of ductile iron pipe shall carry a water working pressure rating of 500 psi in 3" through 12" sizes, 450 psi in 14" through 16" sizes, and 350 psi in 18" through 36" sizes, and shall be Uni-Flange® Series 2850 or approved equal.

Uni-Flange® Series 1450 Wedge Action Restrainer

For Push-On Joints of Ductile Iron Pipe (New Installations Only)



Nom. Pipe Size	Pipe O.D. (Inches)	Catalogue Number	Pressure Rating (psi)	No. of Rods	Rod Length	Rod Diameter	**Max. Bell Diameter	Approx. Weight (lbs)
3"	3.96	UFR1450-D-3-(IorU)	350	4	14"	5/8"	5.50	12.0
4"	4.80	UFR1450-D-4-(IorU)	350	4	17"	3/4"	6.62	19.5
6"	6.90	UFR1450-D-6-(IorU)	350	6	17"	3/4"	8.62	29.0
8"	9.05	UFR1450-D-8-(IorU)	350	6	17"	3/4"	10.88	34.5
10"	11.10	UFR1450-D-10-(IorU)	350	8	24"	3/4"	13.12	56.0
12"	13.20	UFR1450-D-12-(IorU)	350	8	24"	3/4"	15.38	62.0
14"	15.30	UFR1450-D-14-(IorU)	350	10	24"	3/4"	17.88	87.0
16"	17.40	UFR1450-D-16-(IorU)	350	12	24"	3/4"	20.12	107.0
18"	19.50	UFR1450-D-18-(IorU)	250	12	24"	3/4"	22.38	122.0
20"	21.60	UFR1450-D-20-(IorU)	250	14	24"	3/4"	24.62	140.0
24"	25.80	UFR1450-D-24-(IorU)	250	16	24"	3/4"	29.12	159.0
30"	32.00	* UFR1450-D-30-(IorU)	250	10	24"	1"	35.80	362.0
36"	38.30	* UFR1450-D-36-(IorU)	250	12	24"	1"	42.60	430.0
42"	44.50	UFR1450-D-42-(IorU)	250	28	52"	1-1/4"	49.25	1350
48"	50.80	UFR1450-D-48-(IorU)	250	32	52"	1-1/4"	56.13	1570

I = Import Casting U = USA Casting

All dimensions in inches unless otherwise stated.

* Backup ring is steel for 30" and 36".

** NOTE: Connecting rods **WILL NOT CLEAR** a pipe bell with a maximum diameter larger than the listed measurement. These maximum diameters do not include joint deflection. Confirm pipe bell diameter before ordering.

Sample Specification - Series 1450

Restraint for push-on bells of ductile iron pipe shall consist of a wedge action retainer gland installed on the pipe spigot, connected to a ductile iron or steel backup ring installed behind the pipe bell. The wedge action restrainer shall be manufactured of high strength ductile iron per ASTM A536, Grade 65-45-12. Wedges shall be heat treated to a minimum BHN 370 and shall be contoured to properly fit the pipe. The heads of the wedge actuating screws shall twist off at the recommended torque, ensuring correct installation. Connecting rods and nuts shall be of high strength, low alloy material meeting ANSI / AWWA C111 / A21.11 or high strength steel per ASTM A193, grade B7 standard. The backup ring shall be of ductile iron per ASTM A536, Grade 65-45-12 or carbon steel per ASTM A36. Restrainers for push-on joints of ductile iron pipe shall carry a water working pressure rating of 350 psi in 3" through 16" sizes, 250 psi in 14" through 48" sizes, and shall be Uni-Flange® Series 1450 or approved equal.

Uni-Flange® Series 1450 Wedge Action Restrainer

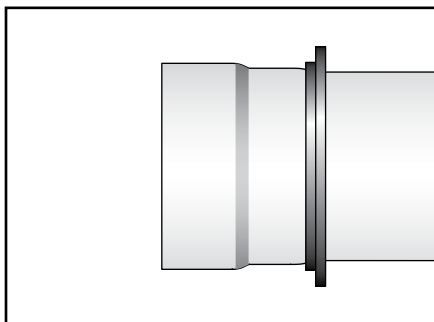
For Push-On Joints of Ductile Iron Pipe (New Installations Only)

The 1450 consists of a Series 1400 wedge action retainer gland installed on the pipe spigot, connected with high strength steel rods to a backup ring that seats behind the pipe bell. It offers the following advantages:

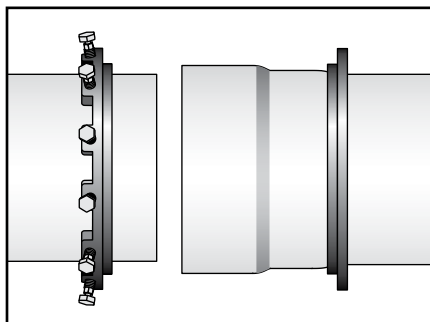
- Fast, economical restraint of push-on pipe bells. There is no need for special (and expensive) “factory restrained joint” pipe.
- High pressure capabilities. Rated at 350 psi in 3" through 16" sizes, and 250 psi in 18" through 48" sizes. Minimum 2:1 safety factor at full rated pressure. For higher pressure rating applications, see Series 2800.
- Recommended for any thickness class or pressure class of ductile iron pipe. The contoured wedges of the 1400 component fit the pipe properly and spread the restraining force around the circumference of the pipe to maximize performance. There is no point loading of the pipe.

Installation Instructions

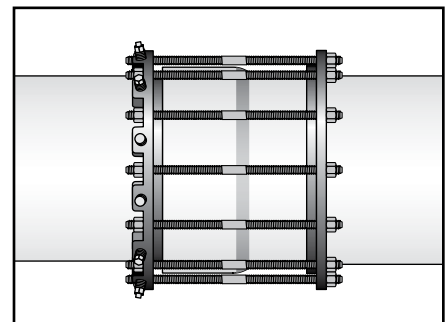
1. Install the backup ring behind the bell, with the vertical flat of the gland facing away from the pipe bell.
2. Place the Series 1400 wedge action retainer gland on the pipe spigot with the lip extension toward the bell.
3. Assemble the push-on joint of pipe per the pipe manufacturer's instructions.
4. Using a connecting rod (supplied) as a measuring tool, position the 1400 on the pipe spigot so that several threads of the connecting rod will extend through the bolt holes of the 1400 when it is connected to the backup ring.
5. Align the gland and 1400 and install the rods and nuts in each of the bolt holes.
6. Activate the 1400 restraint by tightening the Auto-Tork wedge actuating screws in a clockwise manner until they are all in contact with the pipe surface. Continue tightening in an alternating manner until all of the Auto-Tork heads twist off.
7. Tighten the nuts on the connecting rods until the backup ring is seated firmly against the back of the pipe bell. Do not over-tighten.



Install the backup ring behind the bell with the vertical flat of the gland facing away from the bell.



Place the Series 1400 wedge action retainer gland on the spigot with the lip extension toward the bell. Assemble the push-on joint per the pipe manufacturer's instructions.



Align the gland and 1400 and install the rods and nuts in each of the bolt holes. Tighten the Auto-Tork wedge actuating screws in an alternating manner until the heads twist off. Tighten the connecting rod nuts until the backup ring seats against the bell.

Consult the Ford Meter Box website for the most current installation instructions.

Information - Uni-Flange® Series 1500

Features of Uni-Flange® Series 1500

Actuating Screws -

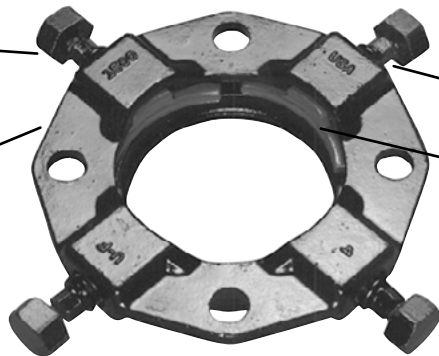
Ductile iron per ASTM A536, Grade 65-45-12, with the Auto-Tork break-away head design, ensures proper torque during installation.

Gland -

Ductile iron per ASTM A536, Grade 65-45-12. Compatible with all mechanical joints conforming to ANSI / AWWA C111 / A21.11.

Finish -

Black e-coat epoxy with red top coat.



A supplemental plastic stop ring will be provided on sizes 4" - 8". Remove for use on IPS PVC or steel pipe.

Safety stop ensures ring segments can never be over-tightened.

Ring Segments -
Ductile iron per ASTM A536.

The Uni-Flange® Series 1500 offers a minimum 2:1 safety factor at the full rated pressure of the PVC pipe on which it is installed, in all sizes, when tested in dead-end situations.

Sample Specification - Series 1500

Restraint for PVC pipe joined with standardized mechanical joint fittings shall be incorporated in the design of the follower gland and shall provide full circle contact and support of the pipe wall. Restraint shall be accomplished by a series of ring segments mechanically retained inside the gland housing and designed to grip the pipe wall in an even and uniform manner. Restraining ring segments shall be actuated by bolts featuring Auto-Tork twist off heads to ensure proper installation torque is applied. A safety stop on the Auto-Tork bolt shall limit the force applied to the ring segment against the pipe. All components of the restrainer, including the gland, bolts, and restraint segments shall be of high strength ductile iron, ASTM A536. Restraining devices shall be UL Listed / FM Approved on AWWA C900 PVC pipe and shall be certified by a third party testing laboratory as meeting or exceeding ASTM F1674-96 "Standard Test Method for Joint Restraint Devices for PVC Pipe." Restraining devices shall be manufactured by a facility independently certified to ISO 9001 quality standard and shall be Ford / Uni-Flange® Series 1500 or approved equal.

ADVANTAGES OF THE SERIES 1500

- **Full support of the pipe wall** - The Series 1500 can be used on any thickness class of AWWA C900 PVC pipe without point loading.

- **UL / FM / ASTM / ISO 9001** - The Series 1500 is UL listed and FM approved for PVC pipe. It has also been tested to and exceeds the requirements of ASTM F1674 "Standard Test Method for Joint Restraint Products for Use with PVC Pipe." It is manufactured by Ford Meter Box, certified by UL to ISO 9001 quality standard.

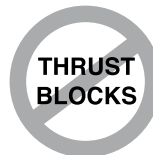
- **Versatility** - 3" - 12" sizes can be used on C909 PVCO, C900 PVC and IPS PVC per ASTM A2241, and can also be used on SDR35 as long as a SO-EZ gasket is used.

- **Correct Installation every time** - The Series 1500 features Auto-Tork actuating screws with heads specially designed to twist off at the correct installation torque, leaving a hex head in case future system maintenance or removal is required. This feature offers a visual indicator of correct installation. A special "assurance stop" is built into the bolt. After the Auto-Tork feature has been engaged, the bolt cannot be tightened further so there is never any danger of pipe damage.

- **Restraining segments are mechanically retained in pockets** so they cannot fall out. All parts arrive on the job site.

- **Eliminates the need for concrete thrust blocks** - When you use the Series 1500, there is no need to pour expensive and time consuming concrete thrust blocks. The Series 1500 offers guaranteed joint restraint, in any soil condition, in a matter of minutes.

- **E-coat epoxy coating** standard on all sizes.



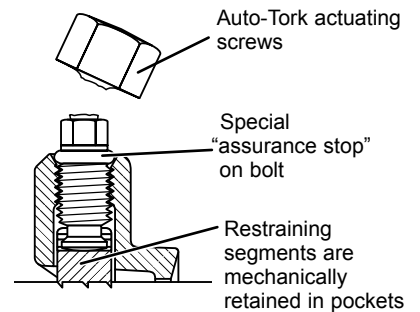
Information - Uni-Flange® Series 1500

Features of Uni-Flange® Series 1500

HOW IT WORKS

The Series 1500 is a mechanical joint restraining gland. It performs two functions during installation; gasket sealing and thrust restraint.

- **Gasketed Seal** - As with a standard mechanical joint, the gasket seal is made first. This is accomplished by tightening the T-head bolts / nuts that connect the Series 1500 to the mechanical joint fitting. The Series 1500 can be used with any mechanical joint bell conforming to ANSI / AWWA C110 / A21.10, ANSI / AWWA C111/ A21.11, or ANSI / AWWA C153 / A21.53.



- **Thrust Restraint** - The Series 1500 incorporates a series of ductile iron restraint segments that fit in pockets around the inner surface of the specially designed gland housing. These segments are contoured to fit each pipe size and have integrally cast restraint edges along their bottom surface. After the seal is made, the Auto-Tork segment actuating screws are tightened. This locks the restraint segments onto the pipe surface, providing complete and total thrust restraint for the joint.

The restraint segments of the 1500 are the key to the design. They spread the restraining force, offering even distribution and support of the pipe. This is important with PVC pipe, especially for thinner wall classes. The restraint segments are designed with a "slot" at the top, which accepts the channeled foot of the activating bolt, so they cannot fall out of their pockets. The Series 1500 meets or exceeds the capabilities of "factory restrained joint pipe" at a fraction of the cost.



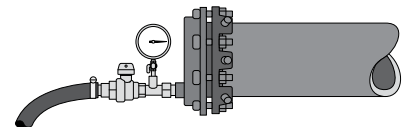
The unique design of the Series 1500 offers even distribution and support of the pipe wall. This design utilizes **Ring Segments** and is an exclusive feature of the Series 1500.

TESTING

The Series 1500 has successfully passed the rigorous quality assurance and pressure tests required by UL, Factory Mutual Research Corporation, and ASTM F-1674. These include the following tests conducted on AWWA C900 PVC pipe, DR18:

- All sizes tested to a minimum of 755 PSI
- 1,000 hours at 500 PSI
- Over 1,000,000 cycles oscillating between 94 PSI to 188 PSI

All of these tests were against exposed end caps, the most severe test of a restraining device. Contact The Ford Meter Box Company, Inc. for copies of these tests.

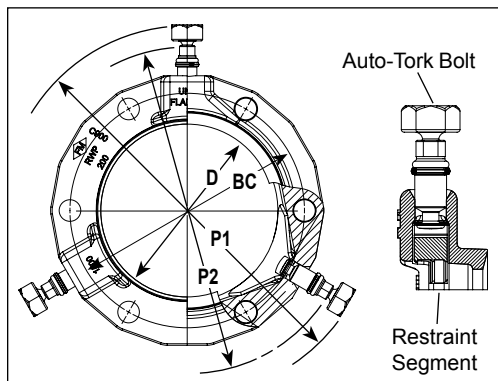


Uni-Flange® Series 1500 and 1500R

MJ Retainer Gland Joint Restraint for PVC Pipe

MATERIAL SPECIFICATIONS:

- Gland Body:** Ductile iron per ASTM A536, Grade 65-45-12. May be used with all mechanical joint bells conforming to ANSI / AWWA C111 standard.
- Auto-Tork Screws:** Ductile iron per ASTM A536, Grade 65-45-12. Designed to twist off at approximately 65 ft-lb.
- Restraint Segments:** Ductile iron per ASTM A536, hardened.



Pipe Pressure Rating for C900, IPS PVC, C905, C909 and *SDR35 Pipe Sizes 3" - 36"

C900			ASTM D2241		C905		C909		*SDR35
DR25	DR18	DR14	SDR26	SDR21	DR18	DR25	PC165	PC235	50 PSI
165 PSI	235 PSI	305 PSI	160 PSI	200 PSI	235 PSI	165 PSI	165 PSI	235 PSI	50 PSI

*Note: UFR1500s with a SO-EZ NBR (Buna-N) Gasket can be used on SDR35 sewer pipe.

P1 - Maximum O.D. of gland on pipe before Auto-Tork heads are removed (as shipped).
P2 - Maximum O.D. of gland installed on pipe after Auto-Tork heads are removed.

Rapid Install Design for C900, C909, IPS PVC and *SDR35

NOM. PIPE SIZE	PIPE O.D. (INCHES)	CATALOGUE NUMBER	NO. OF RESTRAINT SEGMENTS	APPROX. WEIGHT (LBS.)	P1	P2		BC	D
						C900 C909	IPS		
*4"	4.50-4.80	UFR1500R-4-U	2	8.06	13.00"	10.25"	9.25"	7.50"	4.90"
*6"	6.63-6.90	UFR1500R-6-U	3	11.37	15.13"	12.17"	11.90"	9.50"	7.00"

Domestic Series 1500 for C900, C905, C909, IPS PVC and *SDR35

NOM. PIPE SIZE	PIPE O.D. (INCHES)	CATALOGUE NUMBER	NO. OF RESTRAINT SEGMENTS	APPROX. WEIGHT (LBS.)	P1	P2		BC	D
						C900 C905 C909	IPS		
3"	3.50	UFR1500-3-U	2	7.0	11.50	-	9.11	6.19	4.06
* 4"	4.22 - 4.80	UFR1500-4-U	4	11.0	13.00	10.25	9.95	7.50	4.90
* 6"	6.28 - 6.90	UFR1500-6-U	6	15.0	15.13	12.17	11.90	9.50	7.00
* 8"	8.40 - 9.05	UFR1500-8-U	6	18.0	17.25	14.15	13.73	11.75	9.15
*10"	10.50 - 11.10	UFR1500-10-U	8	26.0	19.38	16.40	16.08	14.00	11.20
*12"	12.50 - 13.20	UFR1500-12-U	8	29.0	21.50	18.28	17.83	16.25	13.30
14"	15.30	UFR1500-C-14-U	10	47.0	23.6	22.7	-	18.75	15.44
16"	17.40	UFR1500-C-16-U	12	62.0	26.2	25.3	-	21.00	17.54
18"	19.50	UFR1500-C-18-U	12	78.0	28.3	27.4	-	23.25	19.64
20"	21.60	UFR1500-C-20-U	14	95.0	30.4	29.5	-	25.50	21.74
24"	25.80	UFR1500-C-24-U	16	125.0	34.6	33.7	-	30.00	25.94
30"	32.00	UFR1500-C-30-U	20	140.0	40.79	38.06	-	36.88	32.30
36"	38.30	UFR1500-C-36-U	24	198.0	46.84	44.40	-	43.75	38.62

Imported Series 1500 for C900, C905, C909, IPS PVC and *SDR35

NOM. PIPE SIZE	PIPE O.D. (INCHES)	CATALOGUE NUMBER	NO. OF RESTRAINT SEGMENTS	APPROX. WEIGHT (LBS.)	P1	P2		BC	D
						C900 C905 C909	IPS		
3"	3.50	UFR1500-3-I	2	7.0	11.50	-	9.11	6.19	4.06
* 4"	4.22 - 4.80	UFR1500-4-I	2	9.1	13.00	10.25	9.95	7.50	4.90
* 6"	6.28 - 6.90	UFR1500-6-I	3	11.3	15.13	12.17	11.90	9.50	7.00
* 8"	8.40 - 9.05	UFR1500-8-I	4	15.0	17.25	14.15	13.73	11.75	9.15
*10"	10.50 - 11.10	UFR1500-10-I	8	26.0	19.38	16.40	16.08	14.00	11.20
*12"	12.50 - 13.20	UFR1500-12-I	8	29.0	21.50	18.28	17.83	16.25	13.30
14"	15.30	UFR1500-C-14-I	10	47.0	23.6	22.7	-	18.75	15.44
16"	17.40	UFR1500-C-16-I	12	62.0	26.2	25.3	-	21.00	17.54
18"	19.50	UFR1500-C-18-I	12	78.0	28.3	27.4	-	23.25	19.64
20"	21.60	UFR1500-C-20-I	14	95.0	30.4	29.5	-	25.50	21.74
24"	25.80	UFR1500-C-24-I	16	125.0	34.6	33.7	-	30.00	25.94
30"	32.00	UFR1500-C-30-I	20	140.0	40.79	38.06	-	36.88	32.30
36"	38.30	UFR1500-C-36-I	24	198.0	46.84	44.40	-	43.75	38.62

Uni-Flange® Series 1500 and 1500R

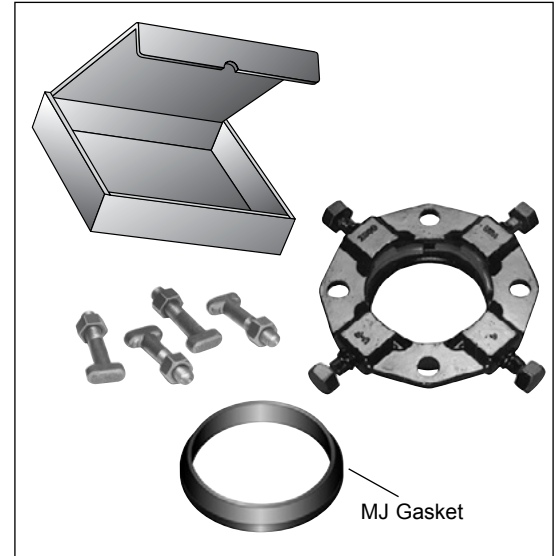
MJ Retainer Gland Joint Restraint for PVC Pipe (Packaged with Accessories)

MJ Gasket Kit

The Uni-Flange® Series 1500 packaged with accessories is a convenient way to deliver all the components required to install a Series 1500 restraint. Sizes 4" through 12" are shipped shrink wrapped in a weather resistant carton. 14" through 36" sizes are bulk packaged.

Pipe Pressure Rating for C900, IPS PVC, C905, and C909 3" - 36"

C900			C905		C909	
DR25	DR18	DR14	DR18	DR25	PC165	PC235
165 PSI	235 PSI	305 PSI	235 PSI	165 PSI	165 PSI	235 PSI



Rapid Install Design for C900 and C909

NOM. PIPE SIZE	PIPE O.D. (INCHES)	CATALOGUE NUMBER	NO. OF RESTRAINT SEGMENTS	APPROX. WEIGHT (LBS.)
4"	4.80	UFR1500R-CA-4-U	2	12.50
6"	6.90	UFR1500R-CA-6-U	3	18.00

Series 1500-CA For C900 and C909 Packaged with Accessories 4" - 36"

NOM. PIPE SIZE	PIPE O.D. (INCHES)	CATALOGUE NUMBER AWWA C905 PVC PIPE	NO. OF RESTRAINT SEGMENTS	APPROX. WEIGHT (LBS.)
*4"	4.80	UFR1500-CA-4-U	4	14.2
*6"	6.90	UFR1500-CA-6-U	6	20.1
*8"	9.02	UFR1500-CA-8-U	6	24.3
*10"	11.10	UFR1500-CA-10-U	8	33.0
*12"	13.20	UFR1500-CA-12-U	8	37.3
14"	15.30	UFR1500-CA-14-U	10	56.1
16"	17.40	UFR1500-CA-16-U	12	71.4
18"	19.50	UFR1500-CA-18-U	12	89.2
20"	21.60	UFR1500-CA-20-U	14	102.8
24"	25.80	UFR1500-CA-24-U	16	140.6
30"	32.00	UFR1500-CA-30-U	20	179.0
36"	38.30	UFR1500-CA-36-U	24	237.7

Imported Series 1500-CA For C900 and C909 Packaged with Accessories 4" - 36"

NOM. PIPE SIZE	PIPE O.D. (INCHES)	CATALOGUE NUMBER AWWA C905 PVC PIPE	NO. OF RESTRAINT SEGMENTS	APPROX. WEIGHT (LBS.)
*4"	4.80	UFR1500-CA-4-I	2	14.2
*6"	6.90	UFR1500-CA-6-I	3	20.1
*8"	9.02	UFR1500-CA-8-I	4	24.3
*10"	11.10	UFR1500-CA-10-I	8	33.0
*12"	13.20	UFR1500-CA-12-I	8	37.3
14"	15.30	UFR1500-CA-14-I	10	56.1
16"	17.40	UFR1500-CA-16-I	12	71.4
18"	19.50	UFR1500-CA-18-I	12	89.2
20"	21.60	UFR1500-CA-20-I	14	102.8
24"	25.80	UFR1500-CA-24-I	16	140.6
30"	32.00	UFR1500-CA-30-I	20	179.0
36"	38.30	UFR1500-CA-36-I	24	237.7

4" - 36" sizes include a Mechanical Joint gasket

Uni-Flange® Series 1500 and 1500R

MJ Retainer Gland Joint Restraint for PVC Pipe (Packaged with Accessories)

1500-S with Transition Gasket Kit

The Uni-Flange® Series 1500 packaged with accessories is a convenient way to deliver all the components required to install a Series 1500 restraint. Sizes 3" through 12" are shipped shrink wrapped in a weather resistant carton.

Pipe Pressure Rating for IPS PVC Pipe Sizes 3" - 12"

ASTM D2241		
SDR17	SDR21	SDR26
250 PSI	200 PSI	160 PSI

Rapid Install Design - ASTM D2241 IPS PVC Only

NOM. PIPE SIZE	PIPE O.D. (INCHES)	CATALOGUE NUMBER	NO. OF RESTRAINT SEGMENTS	APPROX. WEIGHT (LBS.)
4"	4.50	UFR1500R-SA-4-U	2	12.50
6"	6.63	UFR1500R-SA-6-U	3	18.00

Domestic Series 1500-SA for IPS PVC Packaged with Accessories 3" - 12"

NOM. PIPE SIZE	PIPE O.D. (INCHES)	CATALOGUE NUMBER	NO. OF RESTRAINT SEGMENTS	APPROX. WEIGHT (LBS.)
3"	3.50	UFR1500-SA-3-U	2	12.00
4"	4.50	UFR1500-SA-4-U	4	14.20
6"	6.63	UFR1500-SA-6-U	6	20.10
8"	8.63	UFR1500-SA-8-U	6	25.00
10"	10.75	UFR1500-SA-10-U	8	33.00
12"	12.75	UFR1500-SA-12-U	8	38.00

Imported Series 1500-SA for IPS PVC Packaged with Accessories 3" - 12"

NOM. PIPE SIZE	PIPE O.D. (INCHES)	CATALOGUE NUMBER	NO. OF RESTRAINT SEGMENTS	APPROX. WEIGHT (LBS.)
3"	3.50	UFR1500-SA-3-I	2	10.70
4"	4.50	UFR1500-SA-4-I	2	12.50
6"	6.63	UFR1500-SA-6-I	3	18.00
8"	8.63	UFR1500-SA-8-I	4	23.00
10"	10.75	UFR1500-SA-10-I	8	33.00
12"	12.75	UFR1500-SA-12-I	8	38.00

PACKAGE CONTAINS

- 1 - Series 1500 retainer gland
- 1 - Set of high strength, low alloy T-bolts & nuts (AWWA C111)
- 1 - Transition Gasket

Pipe Pressure Rating for C900, IPS PVC, C909 and *SDR35 Pipe Sizes 3" - 12"

C900			ASTM D2241		C909		*SDR35
DR25	DR18	DR14	SDR26	SDR21	PC150	PC235	
165 PSI	235 PSI	305 PSI	160 PSI	200 PSI	150 PSI	235 PSI	60 PSI

*Note: SDR35 sewer applications require NBR (Buna-N) gasket, add "-N" to catalogue number. Example: UFR1500-ZA-6-N-U. Contact factory for pricing.

Rapid Install Design for C900, IPS PVC and *SDR35

NOM. PIPE SIZE	PIPE O.D. (INCHES)	CATALOGUE NUMBER	NO. OF RESTRAINT SEGMENTS	APPROX. WEIGHT (LBS.)
4"	4.50-4.80	UFR1500R-ZA-4-U	2	12.50
6"	6.63-6.90	UFR1500R-ZA-6-U	3	18.00

NOM. PIPE SIZE	PIPE O.D. (INCHES)	CATALOGUE NUMBER DI SIZE PVC, IPS PVC PIPE OR SDR35 SEWER PIPE	NO. OF RESTRAINT SEGMENTS	APPROX. WEIGHT (LBS.)
3"	3.50	UFR1500-ZA-3-U	2	10.70
*4"	4.22 - 4.80	UFR1500-ZA-4-U	4	12.50
*6"	6.28 - 6.90	UFR1500-ZA-6-U	6	18.00
*8"	8.40 - 9.05	UFR1500-ZA-8-U	6	25.00
*10"	10.50 - 11.10	UFR1500-ZA-10-U	8	33.00
*12"	12.50 - 13.20	UFR1500-ZA-12-U	8	38.00

NOM. PIPE SIZE	PIPE O.D. (INCHES)	CATALOGUE NUMBER DI SIZE PVC, IPS PVC PIPE OR SDR35 SEWER PIPE	NO. OF RESTRAINT SEGMENTS	APPROX. WEIGHT (LBS.)
3"	3.50	UFR1500-ZA-3-I	2	10.70
*4"	4.22 - 4.80	UFR1500-ZA-4-I	2	12.50
*6"	6.28 - 6.90	UFR1500-ZA-6-I	3	18.00
*8"	8.40 - 9.05	UFR1500-ZA-8-I	4	23.00
*10"	10.50 - 11.10	UFR1500-ZA-10-I	8	33.00
*12"	12.50 - 13.20	UFR1500-ZA-12-I	8	38.00

PACKAGE CONTAINS

- 1 - Series 1500 retainer gland
- 1 - Set of high strength, low alloy T-bolts & nuts (AWWA C111)
- 1 - SO-EZ Gasket

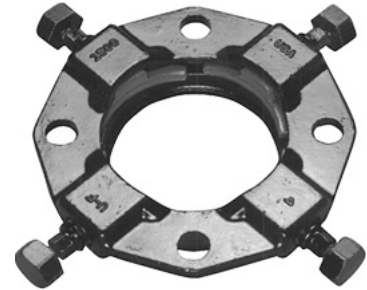
Uni-Flange® Pipe Restraints for AWWA C909 PVC Pipe - Series 1559 Restraint Device

MJ Retainer Gland Joint Restraint for C909 PVC Pipe

THRUST RESTRAINT

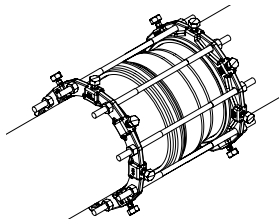
The Series 1559 restraint glands (UFR1500) incorporate a series of ductile iron restraint segments that fit in pockets around the inner surface of the specially designed gland housing. These segments are contoured to fit each pipe size and have integrally cast restraint edges along their bottom surface. After the seal is made, the Auto-Tork segment actuating screws are tightened. This locks the restraint segments onto the pipe surface, providing complete and total thrust restraint for the joint.

The restraint segments of the 1559 are the key to the design. They spread the restraining force, offering even distribution and support of the pipe. This is important with PVC pipe, especially for thinner wall classes. The restraint segments are designed with a "slot" at the top, which accepts the channeled foot of the activating bolt, so they cannot fall out of their pockets. The Series 1559 meets or exceeds the capabilities of "Factory Restrained Joint Pipe" at a fraction of the cost.



The unique design of the Series 1559 restraint glands offers even distribution and support of the pipe wall. This design utilizes **Ring Segments** and is an exclusive feature of the Series 1559.

Series 1559 Restraint for C909 PVC Bell Joints (New Installations Only)



Nom. Pipe Size	Pressure Rating (psi)	Catalogue Number	No. of Rods	Rod Length	Rod Dia.	*Max Bell Dia.	Approx. Weight (Lbs)
4"	235	UFR1559-C-4-(I or U)	4	17"	5/8"	6.62"	25
6"	235	UFR1559-C-6-(I or U)	6	17"	5/8"	8.62"	33
8"	235	UFR1559-C-8-(I or U)	6	17"	5/8"	10.88"	45
10"	235	UFR1559-C-10-(I or U)	8	24"	5/8"	13.12"	58
12"	235	UFR1559-C-12-(I or U)	8	24"	5/8"	15.38"	62
14"	235	UFR1559-C-14-(I or U)	10	30"	3/4"	17.88"	120
16"	235	UFR1559-C-16-(I or U)	12	30"	3/4"	20.12"	130
18"	235	UFR1559-C-18-(I or U)	12	30"	3/4"	22.38"	196

* **Note:** Connecting rods **WILL NOT CLEAR** a pipe bell with a maximum diameter larger than the listed measurement. These diameters do not include joint deflection. Confirm pipe bell diameter before ordering.

I = Import Casting U = USA Casting

Sample Specification - Series 1559

Restraint for C909 PVC pipe joined with standardized mechanical joint fittings shall be incorporated in the design of the follower gland and shall provide full circle contact and support of the pipe wall. Restraint shall be accomplished by a series of ring segments mechanically retained inside the gland housing and designed to grip the pipe wall in an even and uniform manner. Restraining ring segments shall be actuated by bolts featuring Auto-Tork twist off heads to ensure proper installation torque is applied. A safety stop on the Auto-Tork bolt shall limit the force applied to the ring segment against the pipe. All components of the restrainer, including the gland, bolts, and restraint segments shall be of high strength ductile iron, ASTM A536, Grade 65-45-12. Restraining devices shall be manufactured by a facility independently certified to ISO 9001 quality standard and shall be Ford / Uni-Flange® Series 1559 or approved equal.

SO-EZ Gasket*

Gasket for Mechanical Joint Connections

Sizes 3" - 12"

The SO-EZ Gasket simplifies mechanical joint installations and can be used on any mechanical joint gland meeting AWWA C111. The design and flexibility of the gasket permits compression to pipe ODs of IPS PVC, C900 PVC, Ductile Iron, and *SDR35 (must use NBR (Buna-N) on SDR35) all with just one gasket.

How it works:

The key to this amazing gasket is that it snaps onto the MJ gland, rather than manually forcing it into the MJ socket. As the gland and gasket are engaged to the valve or fitting, the design of the gasket centers and maintains alignment of the pipe and the gland/gasket during assembly. Proper tightening of the Tee-Bolts and proper lubrication ensures excellent gasket compression within the MJ socket and against the pipe.

Features:

- Snaps to MJ Gland or MJ Restraint Gland
- SBR rubber is NSF Standard 61 Approved
- Gasket maintains alignment of pipe and gland/gasket assembly
- Gland/Gasket Assembly can be loosely pre-assembled to the MJ fitting above ground for a stab-fit insertion
- For use with IPS PVC, C900 PVC and ductile iron pipe sizes 3" - 12"



Catalogue Number	Description
SO-EZ-3	3" SO-EZ Gasket for Mechanical Joint Connection
SO-EZ-4	4" SO-EZ Gasket for Mechanical Joint Connection
SO-EZ-6	6" SO-EZ Gasket for Mechanical Joint Connection
SO-EZ-8	8" SO-EZ Gasket for Mechanical Joint Connection
SO-EZ-10	10" SO-EZ Gasket for Mechanical Joint Connection
SO-EZ-12	12" SO-EZ Gasket for Mechanical Joint Connection
SO-EZ-3-AK	3" SO-EZ Gasket Packaged with T-Bolts and Nuts
SO-EZ-4-AK	4" SO-EZ Gasket Packaged with T-Bolts and Nuts
SO-EZ-6-AK	6" SO-EZ Gasket Packaged with T-Bolts and Nuts
SO-EZ-8-AK	8" SO-EZ Gasket Packaged with T-Bolts and Nuts
SO-EZ-10-AK	10" SO-EZ Gasket Packaged with T-Bolts and Nuts
SO-EZ-12-AK	12" SO-EZ Gasket Packaged with T-Bolts and Nuts
SO-EZ-3-MJPACK	3" SO-EZ Gasket Packaged with T-Bolts/Nuts and Standard MJ Gland
SO-EZ-4-MJPACK	4" SO-EZ Gasket Packaged with T-Bolts/Nuts and Standard MJ Gland
SO-EZ-6-MJPACK	6" SO-EZ Gasket Packaged with T-Bolts/Nuts and Standard MJ Gland
SO-EZ-8-MJPACK	8" SO-EZ Gasket Packaged with T-Bolts/Nuts and Standard MJ Gland
SO-EZ-10-MJPACK	10" SO-EZ Gasket Packaged with T-Bolts/Nuts and Standard MJ Gland
SO-EZ-12-MJPACK	12" SO-EZ Gasket Packaged with T-Bolts/Nuts and Standard MJ Gland

* SDR35 sewer applications require NBR (Buna-N) gasket, add "-N" to end of catalogue number.

Example: SO-EZ-6-N

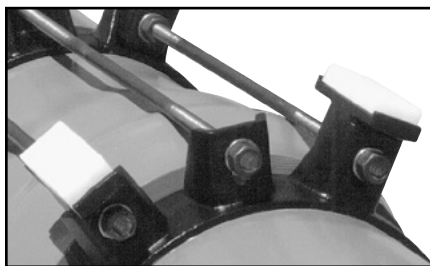
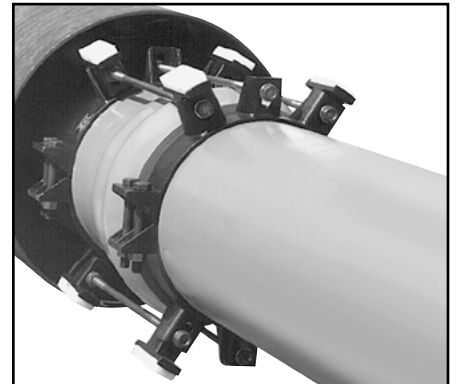
Information - Restrained Casing Spacers

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.

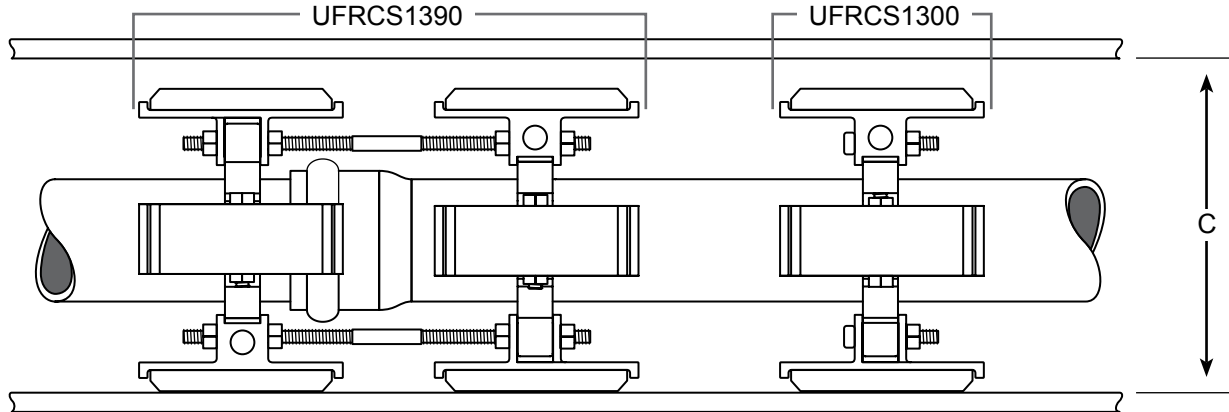


SLIPPERY & TOUGH !!

- 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 continuous 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 108 for installation and pressure requirements.

Specifications



Dimensions

NOM. PIPE SIZE	ACTUAL PIPE O.D. (IN.)	1390 RESTRAINT ROD		C MIN. CASING SIZE (I.D.)
		NUMBER	SIZE	
4"	4.80	2	3/4"x17"	12.4"
6"	6.90	2	3/4"x17"	14"
8"	9.05	2	3/4"x17"	17.9"
10"	11.10	4	3/4"x24"	21.5"
12"	13.20	4	3/4"x24"	23"
14"	15.30	6	3/4"x30"	27"
16"	17.40	6	3/4"x30"	30"
18"	19.50	8	3/4"x30"	31"
20"	21.60	8	3/4"x36"	33"
24"	25.80	12	3/4"x36"	39"
30"	32.00	10	1"x48"	44.3"
36"	38.30	12	1"x48"	51.8"

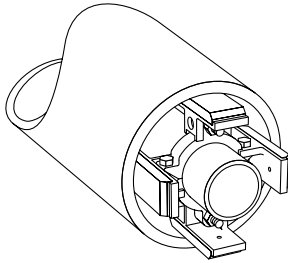
* Working pressure rating for the restrained carrier pipe is a minimum 2:1 safety factor on all sizes.
 Note: Restrained Casing Spacers are also available for PVC pipe with steel equivalent OD (IPS) and up to 36" at a reduced pressure rating. Contact Ford Meter Box for details.

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)
Colour 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

Restrained Casing Spacers

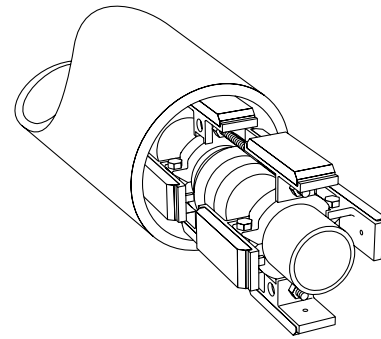
For Support of 4", 6" and 8" Pipe Barrel and Pipe Bell Joint



CASING SPACER FOR SUPPORT OF PIPE BARREL

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

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

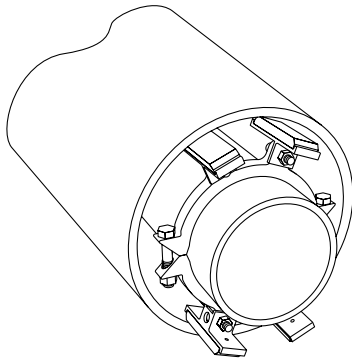


RESTRAINED CASING SPACER FOR PIPE BELL JOINT

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

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

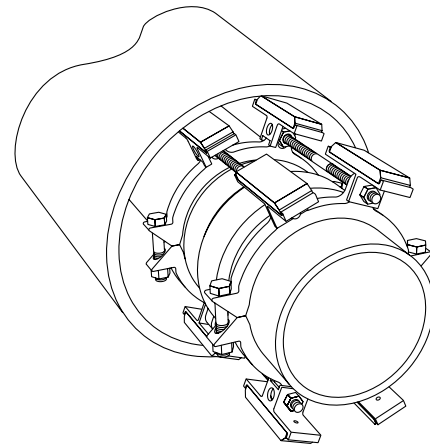
For Support of 10" and 12" Pipe Barrel and Pipe Bell Joint



CASING SPACER FOR SUPPORT OF PIPE BARREL

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

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



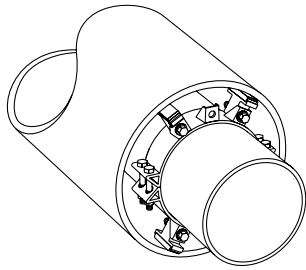
RESTRAINED CASING SPACER FOR PIPE BELL JOINT

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

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

Restrained Casing Spacers

For Support of 14" through 24" Pipe Barrel and Pipe Bell Joint

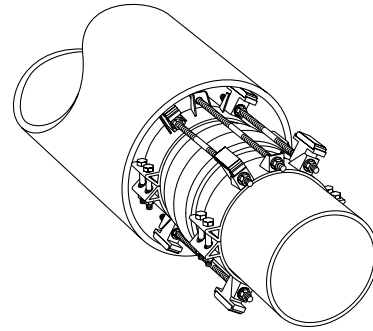


**CASING SPACER FOR
SUPPORT OF PIPE BARREL**

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

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

UFRCS1300-C-U style is available in sizes 30" - 36".



**RESTRAINED CASING SPACER FOR
PIPE BELL JOINT**

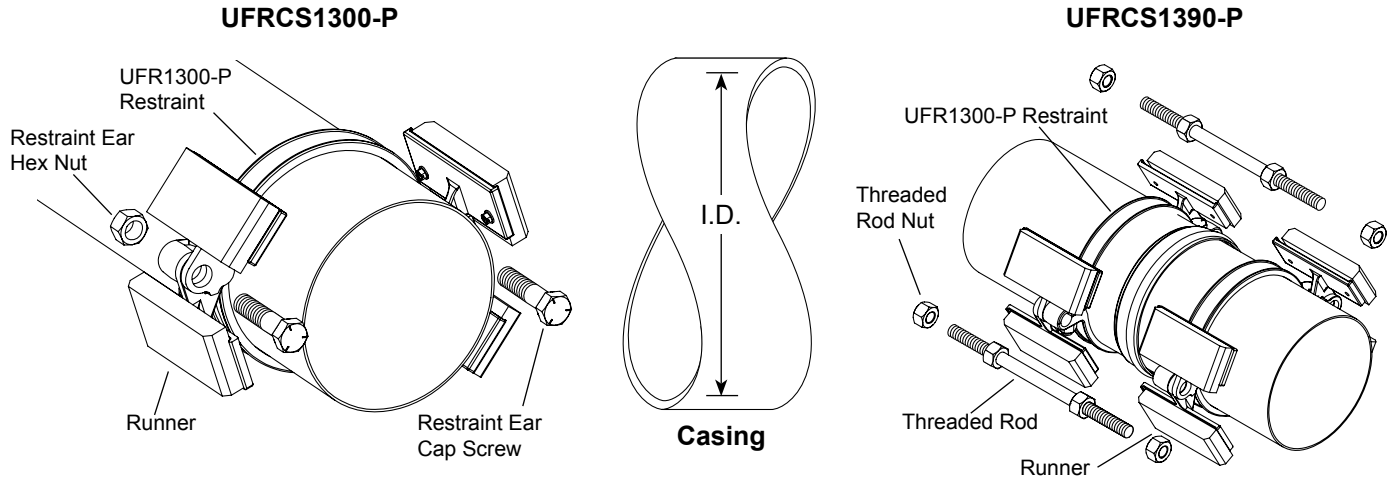
NOM. PIPE SIZE	PIPE O.D. (INCHES)	CATALOGUE NUMBER	NUMBER OF RUNNERS	APPROX. SHIPPING WEIGHT
14"	15.30	UFRCS1390-C-14-(lorU)	8	170.9
16"	17.40	UFRCS1390-C-16-(lorU)	8	183.8
18"	19.50	UFRCS1390-C-18-(lorU)	8	240.0
20"	21.60	UFRCS1390-C-20-(lorU)	8	292.0
24"	25.80	UFRCS1390-C-24-(lorU)	8	432.0

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

UFRCS1390-C-U style is available in sizes 30" - 36".

Restrained Casing Spacers for Sewer Pipe

For Support of 4" through 12" Pipe Barrel and Pipe Bell Joint



CASING SPACER FOR SUPPORT OF PIPE BARREL - UFRCS1300-P

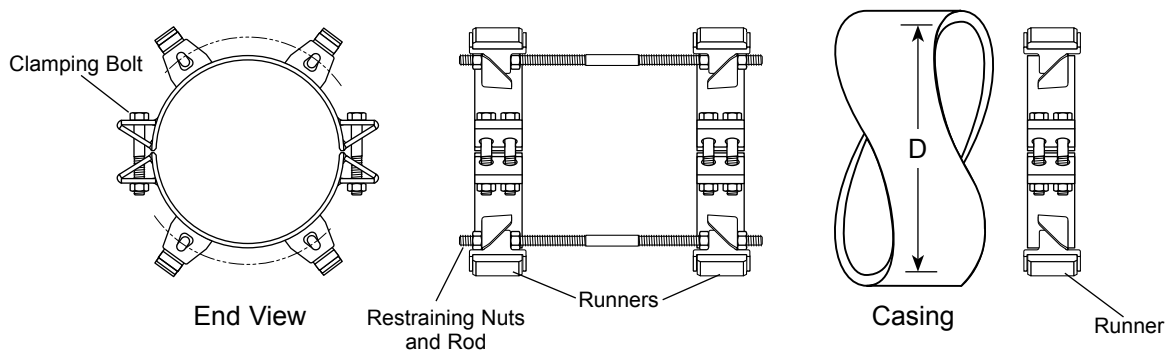
NOM. PIPE SIZE	ACTUAL PIPE O.D.	CATALOGUE NUMBER	APPROX. SHIPPING WEIGHT	MIN. CASING SIZE (ID)	RUNNER QTY.
4"	4.22"	UFRCS1300-P-4-I	11.0	10-1/2"	4
6"	6.28"	UFRCS1300-P-6-I	11.0	12-1/8"	4
8"	8.40"	UFRCS1300-P-8-I	12.0	14-1/2"	4
10"	10.50"	UFRCS1300-P-10-I	14.0	16-3/4"	4
12"	12.50"	UFRCS1300-P-12-I	15.5	19-1/8"	4

RESTRAINED CASING SPACER FOR PIPE BELL JOINT - UFRCS1390-P

NOM. PIPE SIZE	ACTUAL PIPE O.D.	CATALOGUE NUMBER	APPROX. SHIPPING WEIGHT	MIN. CASING SIZE (ID)	RUNNER QTY.
4"	4.22"	UFRCS1390-P-4-I	23.0	10-1/2"	8
6"	6.28"	UFRCS1390-P-6-I	24.0	12-1/8"	8
8"	8.40"	UFRCS1390-P-8-I	26.0	14-1/2"	8
10"	10.50"	UFRCS1390-P-10-I	30.0	16-3/4"	8
12"	12.50"	UFRCS1390-P-12-I	32.5	19-1/8"	8

Restrained Casing Spacers for Sewer Pipe

For Support of 15" through 24" Pipe Barrel and Pipe Bell Joint



CASING SPACER FOR SUPPORT OF PIPE BARREL - UFRCS1300-P

NOM. PIPE SIZE	O.D.	CATALOGUE NUMBER	D MIN CASING SIZE (I.D.)	RUNNER QTY.	APPROX. WT. LBS.
15"	15.30	UFRCS1300-P-15-U	26"	4	50.0
18"	18.70	UFRCS1300-P-18-U	30"	4	62.0
21"	22.05	UFRCS1300-P-21-U	32"	4	68.5
24"	24.80	UFRCS1300-P-24-U	36"	4	76.5
27"	27.95	UFRCS1300-P-27-U	38-1/2"	4	85.0
30"	32.00	UFRCS1300-P-30-U	Contact Factory		
36"	38.30	UFRCS1300-P-36-U			

Contact factory for larger sizes. Exact pipe and bell OD are required.

RESTRAINED CASING SPACER FOR PIPE BELL JOINT - UFRCS1390-P

NOM. PIPE SIZE	O.D.	CATALOGUE NUMBER	D MIN CASING SIZE (I.D.)	RUNNER QTY.	APPROX. WT. LBS.
15"	15.30	UFRCS1390-P-15-U	26"	4	132
18"	18.70	UFRCS1390-P-18-U	30"	4	156
21"	22.05	UFRCS1390-P-21-U	32"	4	169
24"	24.80	UFRCS1390-P-24-U	36"	4	185
27"	27.95	UFRCS1390-P-27-U	38-1/2"	4	170
30"	32.00	UFRCS1390-P-30-U	Contact Factory		
36"	38.30	UFRCS1390-P-36-U			

Contact factory for larger sizes. Exact pipe and bell OD are required.

The Ford SIMTAP™ Drilling Machine

Information

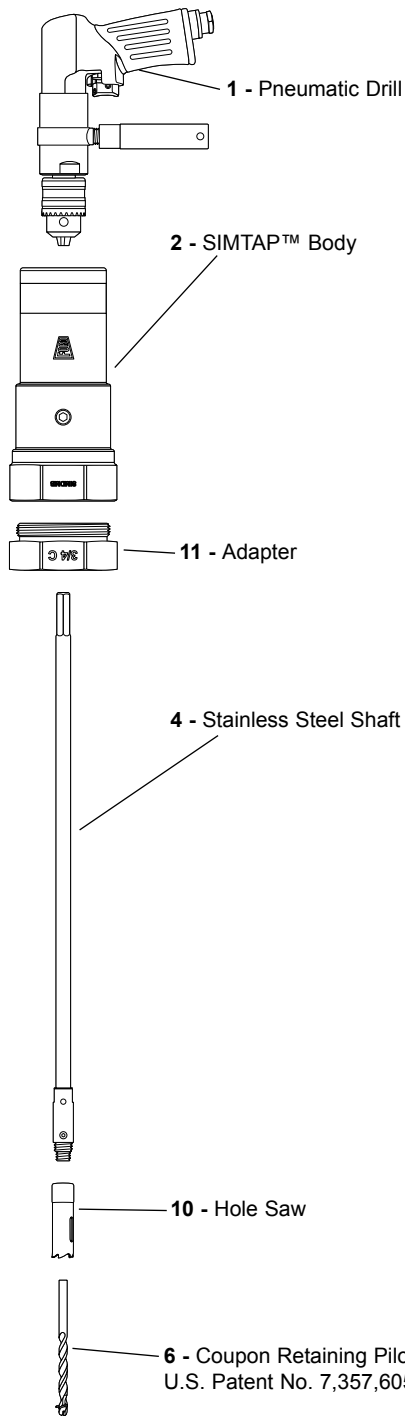


The Ford SIMTAP Complete Drilling Machine Kit includes:

- The Drilling Machine
- Adapters for 3/4" through 2" Corporation Stops
- Pneumatic Drill
- Stainless Steel Shaft
- Coupon Retaining Pilot Bit
- Two Coupon Extractors
- Set of four Hole Saws
- Carrying Case



The Ford SIMTAP™ Drilling Machine



SIMTAP™ KITS

Catalogue Number	Description
SIMDMK-NL	Complete SIMTAP™ Drilling Machine with Pneumatic Drill (includes items 1-11) (28.68 lbs)
SIMDMK-LD-NL	The SIMTAP™ Drilling Machine Kit less Pneumatic Drill (includes items 2-11) (25.08 lbs)
SIMDMK-B-NL	The SIMTAP™ Drilling Machine Base Kit (includes items 2-8) (13.4 lbs)

COMPONENT PARTS

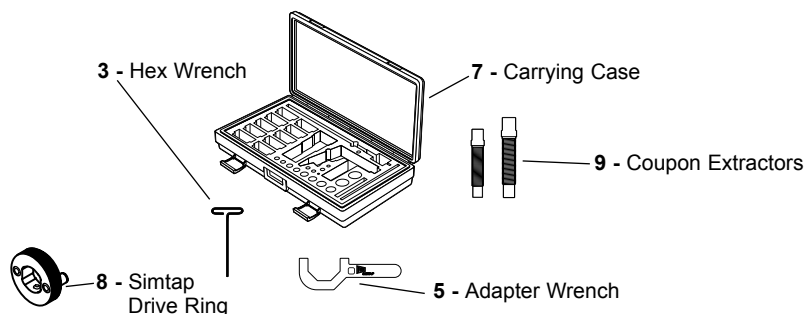
Ref. No.	Catalogue Number	Description
1	SIMAD	Pneumatic Drill
2	SIMDMB-NL	SIMTAP™ Drilling Machine Body with bleed-off port (combination body and 2" flare copper thread adapter)
3	SIMHW	Pilot Drill Hex Wrench
4	SIMDMBB-SS-NL	Stainless Steel Shaft with Dual Arbor
5	SIMDMAW	Adapter Wrench
6	SIMDMPD-NL	1/4" Coupon Retaining Pilot Bit
7	SIMDMTB	SIMTAP™ Drilling Machine Carrying Case
8	*SIMDRIVE-SS-NL	Simtap Drive Ring for use with 1-1/2" & 2" Hole Saws
9	SIMCE1-SS-NL	1/2" Coupon Extractor
	SIMCE2-SS-NL	5/8" Coupon Extractor
10	SIMDMHS-3-NL	11/16" Hole Saw
	SIMDMHS-4-NL	7/8" Hole Saw
	SIMDMHS-6-NL	1-3/8" Hole Saw
	SIMDMHS-7-NL	1-7/8" Hole Saw
11	SIMDMA1-3-NL	3/4" Iron Pipe Thread Adapter (Red)
	SIMDMA2-3-NL	3/4" Flare Copper Thread Adapter (Purple)
	SIMDMA1-4-NL	1" Iron Pipe Thread Adapter (Turquoise)
	SIMDMA2-4-NL	1" Flare Copper Thread Adapter (Grey)
	SIMDMA6-4-Q-NL	1" PEP Quick Joint Thread Adapter (Blue)
	SIMDMA1-6-NL	1-1/2" Iron Pipe Thread Adapter (Brown)
	SIMDMA2-6-NL	1-1/2" Flare Copper Thread Adapter (Orange)
	SIMDMA4-6-Q-NL	1-1/2" CTS Quick Joint Thread Adapter (Green)
	SIMDMA1-7-NL	2" Iron Pipe Thread Adapter (Gold)
	SIMDMA4-7-Q-NL	2" CTS Quick Joint Thread Adapter (Yellow)

* Requires newer model boring bar with flats and dimple / detent

Optional Items

CATALOGUE NUMBER	DESCRIPTION
SIMDMA6-3-Q-NL	3/4" PEP Quick Joint Thread Adapter (Aqua)
SIMDMA1-5-NL	1-1/4" Iron Pipe Thread Adapter (Black)
SIMDMA2-5-NL	1-1/4" Flare Copper Thread Adapter (Pink)
SIMDMA4-5-Q-NL	1-1/4" CTS Quick Joint Thread Adapter (Silver)
SIMDMA1-8-NL	2-1/2" Iron Pipe Thread Adapter (Silver)
SIMDMHS-5-NL	1-1/8" Hole Saw
SIMDMSC-3-PVC-NL	11/16" Shell Cutter for PVC (Asbestos Cement)
SIMDMSC-4-PVC-NL	7/8" Shell Cutter for PVC (Asbestos Cement)
SIMDMSC-5-PVC-NL	1-1/8" Shell Cutter for PVC (Asbestos Cement)
SIMDMSC-6-PVC-NL	1-3/8" Shell Cutter for PVC (Asbestos Cement)
SIMDMSC-7-PVC-NL	1-7/8" Shell Cutter for PVC (Asbestos Cement)
**SIMDMSC-6-PVC-HDPE-NL	1-3/8" Shell Cutter for PVC or HDPE
**SIMDMSC-7-PVC-HDPE-NL	1-7/8" Shell Cutter for PVC or HDPE
SIMDMBB-285-SS-NL	Stainless Steel Shaft with Dual Arbor - 28-1/2" Long
SIMDMPD-5-5-NL	1/4" Coupon Retaining Pilot Bit - 5-1/2" Long for HDPE

** Requires 5-1/2" long pilot bit (SIMDMPD-5-5-NL).



SIMTAP™ Options

CUTTING TOOLS

To select a cutting tool, choose the proper column for the type of water main, and select the nominal hole size. The proper cutting tool catalogue number is in the far left column.

Catalogue Number	Description	Corp Stop Size	Type of Water Main (Nominal Hole Size)			
			PVC	Iron	Asbestos Cement	**HDPE
SIMDMHS-3-NL	11/16" Hole Saw	3/4"	-	3/4"	3/4"	-
SIMDMHS-4-NL	7/8" Hole Saw	1"	-	1"	1"	-
SIMDMHS-5-NL	1-1/8" Hole Saw	1-1/4"	-	1-1/4"	1-1/4"	-
SIMDMHS-6-NL	1-3/8" Hole Saw	1-1/2"	-	1-1/2"	1-1/2"	-
SIMDMHS-7-NL	1-7/8" Hole Saw	2"	-	2"	2"	-
SIMDMSC-3-PVC-NL	11/16" Shell Cutter for PVC	3/4"	3/4"	-	3/4"	3/4"
SIMDMSC-4-PVC-NL	7/8" Shell Cutter for PVC	1"	1"	-	1"	1"
SIMDMSC-5-PVC-NL	1-1/8" Shell Cutter for PVC	1-1/4"	1-1/4"	-	1-1/4"	1-1/4"
SIMDMSC-6-PVC-NL	1-3/8" Shell Cutter for PVC	1-1/2"	1-1/2"	-	1-1/2"	1-1/2"
SIMDMSC-7-PVC-NL	1-7/8" Shell Cutter for PVC	2"	2"	-	2"	2"
**SIMDMSC-6-PVC-HDPE-NL	1-3/8" Shell Cutter for PVC or HDPE	1-1/2"	1-1/2"	-	1-1/2"	1-1/2"
**SIMDMSC-7-PVC-HDPE-NL	1-7/8" Shell Cutter for PVC or HDPE	2"	2"	-	2"	2"

** See tables below when tapping HDPE pipe and choose the appropriate cutter based on wall thickness. When using the SIMDMSC-x-PVC-HDPE-NL, the SIMDMPD-5-5-NL drill bit must also be used.

Highlighted cells indicate the need for an HDPE shell cutter (SIMDMSC-x-PVC-HDPE-NL).

HDPE Ductile Iron Pipe Size (PE4710) Wall Thickness

Nominal Size	Avg. OD	DR7	DR9	DR11	DR13.5	DR17	DR21	DR26	DR32.5
4	4.80	0.69	0.53	0.44	0.36	0.28	0.23	0.19	0.15
6	6.90	0.95	0.77	0.63	0.51	0.41	0.33	0.27	0.51
8	9.05	1.29	1.01	0.82	0.67	0.53	0.43	0.35	0.28
10	11.10	1.59	1.23	1.01	0.82	0.65	0.53	0.43	0.34
12	13.20	1.89	1.47	1.20	0.98	0.78	0.63	0.51	0.41
14	15.30	2.19	1.70	1.39	1.13	0.90	0.73	0.59	0.47
16	17.40	2.49	1.93	1.58	1.29	1.02	0.83	0.67	0.54
18	19.50	2.79	2.17	1.77	1.44	1.15	0.93	0.75	0.60
20	21.60	-	2.40	1.96	1.60	1.27	1.03	0.83	0.67
24	25.80	-	2.87	2.35	1.91	1.52	1.23	0.99	0.79
30	32.00	-	-	2.91	2.37	1.88	1.52	1.23	0.99
36	38.30	-	-	-	2.84	2.25	1.82	1.47	1.18
42	44.50	-	-	-	-	2.62	2.12	1.71	1.37
48	50.80	-	-	-	-	2.99	2.42	1.95	1.56

HDPE Steel Pipe Size (PE4710) Wall Thickness

Nominal Size	Avg. OD	DR7	DR9	DR11	DR13.5	DR17	DR21	DR26	DR32.5
4	4.50	0.64	0.50	0.41	0.33	0.27	0.21	0.17	0.14
6	6.63	0.95	0.74	0.60	0.49	0.39	0.32	0.26	0.20
8	8.63	1.23	0.96	0.78	0.64	0.51	0.41	0.33	0.27
10	10.75	1.54	1.19	0.98	0.80	0.63	0.51	0.41	0.33
12	12.75	1.82	1.42	1.16	0.94	0.75	0.61	0.49	0.39
14	14.00	2.00	1.56	1.27	1.04	0.82	0.67	0.54	0.43
16	16.00	2.29	1.78	1.46	1.19	0.94	0.76	0.62	0.49
18	18.00	2.57	2.00	1.64	1.33	1.06	0.86	0.69	0.55
20	20.00	2.86	2.22	1.82	1.48	1.18	0.95	0.77	0.62
24	24.00	3.43	2.67	2.18	1.78	1.41	1.14	0.92	0.74
26	26.00	-	2.89	2.36	1.93	1.53	1.24	1.00	0.80
28	28.00	-	3.11	2.55	2.07	1.65	1.33	1.08	0.86
30	30.00	-	3.33	2.73	2.22	1.77	1.43	1.15	0.92
36	36.00	-	-	3.27	2.67	2.12	1.71	1.39	1.11
42	42.00	-	-	-	-	2.47	2.00	1.62	1.29
48	48.00	-	-	-	-	2.82	2.29	1.85	1.48
54	54.00	-	-	-	-	3.18	2.57	2.08	1.62

SIMTAP™ ADAPTERS

To select an adapter, choose the proper column for the corporation body outlet thread type. The catalogue number for the proper adapter is in the far left column.

Catalogue Number	Description	Colour	Wt. Lbs.
SIMDMA1-3-NL	3/4" Iron Pipe Thread Adapter	Red	1.41
SIMDMA1-4-NL	1" Iron Pipe Thread Adapter	Turquoise	1.37
SIMDMA1-5-NL	1-1/4" Iron Pipe Thread Adapter	Black	1.28
SIMDMA1-6-NL	1-1/2" Iron Pipe Thread Adapter	Brown	1.15
SIMDMA1-7-NL	2" Iron Pipe Thread Adapter	Gold	0.92
SIMDMA1-8-NL	2-1/2" Iron Pipe Thread Adapter	Silver	0.89
SIMDMA2-3-NL	3/4" Flare Copper Thread Adapter	Purple	1.41
SIMDMA2-4-NL	1" Flare Copper Thread Adapter	Grey	1.28
SIMDMA2-5-NL	1-1/4" Flare Copper Thread Adapter	Pink	1.24
SIMDMA2-6-NL	1-1/2" Flare Copper Thread Adapter	Orange	0.98
* Use SIMDMB-NL	2" Flare Copper Thread Adapter	-	-
SIMDMA4-5-Q-NL	1-1/4" CTS Quick Joint Thread Adapter	Silver	1.26
SIMDMA4-6-Q-NL	1-1/2" CTS Quick Joint Thread Adapter	Green	1.09
SIMDMA4-7-Q-NL	2" CTS Quick Joint Thread Adapter	Yellow	0.90
SIMDMA6-3-Q-NL	3/4" PEP Quick Joint Thread Adapter	Aqua	0.90
SIMDMA6-4-Q-NL	1" PEP Quick Joint Thread Adapter	Blue	1.20

* For 2" Flare Copper, use the SIMTAP™ body without an adapter.

The SIMTAP™ is compatible with all corporation stops complying with the AWWA C800 Standard. The SIMTAP™ also works on Ball Corporation Stops and most other valve types. Consult with factory for non-standard valve applications and adapter availability.

Drilling Machine Adapters

Recommended Drilling Machine Adapters

SIZE	FORD CORPORATION STOP NUMBER	OUTLET THREAD	MUELLER		ROMAC	RIDGID	REED	FORD	
			E-4 & E-5	D-4 & D-5	TAMPATE TOO	MLT3401	DM1100	MODEL 77	SIMTAP
FLARE COPPER THREAD OUTLET									
1/2"	F600-1, F700-1, F1000-1(-Q), F1100-1	1/2" Fl. Copper	63796	-	-	-	-	DMA2-1-NL	-
5/8"	F600-2, F1000-2(-Q)	5/8" Fl. Copper	-	-	-	-	-	DMA2-2-NL	-
5/8"x3/4"	F600-23, F1000-23	3/4" Fl. Copper	52019	37902	351-05-506	92097	08423	DMA2-3-NL	SIMDMA2-3-NL
3/4"	F600-3, F700-3, F1000-3(-Q), F1100-3(-Q), FB600-3, FB700-3, FB1000-3(-Q), FB1100-3(-Q)	3/4" Fl. Copper	52019	37902	351-05-506	92097	08423	DMA2-3-NL	SIMDMA2-3-NL
3/4"	F1001-3, F1101-3, F1002-3, F1102-3, FB1001-3, FB1101-3, FB1002-3, FB1102-3	1" Fl. Copper	36750	37903	351-05-508	92102	08424	DMA2-4-NL	SIMDMA2-4-NL
3/4"x1"	F600-34, F700-34, F1000-34(-Q), F1100-34, FB600-34, FB700-34, FB1000-34, FB1100-34	1" Fl. Copper	36750	37903	351-05-508	92102	08424	DMA2-4-NL	SIMDMA2-4-NL
1"	F600-4, F700-4, F1000-4(-Q), F1100-4(-Q), FB600-4, FB700-4, FB1000-4(-Q), FB1100-4(-Q)	1" Fl. Copper	36750	37903	351-05-508	92102	08424	DMA2-4-NL	SIMDMA2-4-NL
3/4"x1"	F1001-34, F1101-34, F1002-34, F1102-34	1-1/4" Fl. Copper	45385	37904	351-05-510	92107	-	DMA2-5-NL	SIMDMA2-5-NL
1"	F1001-4, F1101-4, F1002-4, F1102-4, FB1001-4, FB1101-4, FB1002-4, FB1102-4	1-1/4" Fl. Copper	45385	37904	351-05-510	92107	-	DMA2-5-NL	SIMDMA2-5-NL
1"x1-1/4"	F600-45, F700-45, F1000-45, F1100-45, FB600-45, FB700-45, FB1000-45, FB1100-45	1-1/4" Fl. Copper	45385	37904	351-05-510	92107	-	DMA2-5-NL	SIMDMA2-5-NL
1-1/4"	FB600-5, FB700-5	1-1/4" Fl. Copper	45385	37904	351-05-510	92107	-	DMA2-5F-SS-NL	SIMDMA2-5-NL
	FB1000-5, FB1100-5	1-1/4" Fl. Copper	45385	37904	351-05-510	92107	-	DMA2-5-NL	SIMDMA2-5-NL
	FB1001-5, FB1101-5	1-1/2" Fl. Copper	501947	37905	351-05-512	92112	08425	DMA2-6F-NL	SIMDMA2-6-NL
	FB1002-5, FB1102-5	1-1/2" Fl. Copper	501947	37905	351-05-512	92112	08425	DMA2-6-NL	SIMDMA2-6-NL
1-1/4"x1-1/2"	FB600-56, FB700-56, FB1000-56, FB1100-56	1-1/2" Fl. Copper	501947	37905	351-05-512	92112	08425	DMA2-6-NL	SIMDMA2-6-NL
1-1/2"	FB600-6, FB700-6, FB1000-6, FB1100-6, FB1002-6, FB1102-6	1-1/2" Fl. Copper	501947	37905	351-05-512	92112	08425	DMA2-6-NL	SIMDMA2-6-NL
	FB1001-6, FB1101-6	2" Fl. Copper	508201	37906	351-05-516	92117	08426	DMA2-7-NL	**See Note
1-1/2"x2"	FB600-67, FB700-67, FB1000-67, FB1100-67	2" Fl. Copper	508201	37906	351-05-516	92117	08426	DMA2-7-NL	**See Note
2"	FB600-7, FB700-7, FB1000-7, FB1100-7, FB1001-7, FB1101-7, FB1002-7, FB1102-7	2" Fl. Copper	508201	37906	351-05-516	92117	08426	DMA2-7-NL	**See Note
MALE IRON PIPE THREAD OUTLET									
1/2"	F400-1, F500-1	1/2" MIP	36967	-	-	-	-	DMA1-1-NL	-
	F800-1, F900-1	3/4" MIP	36919	36910	351-05-406	-	-	DMA1-3-NL	SIMDMA1-3-NL
1/2"x3/4"	F400-13, F500-13	3/4" MIP	36919	36910	351-05-406	-	-	DMA1-3-NL	SIMDMA1-3-NL
5/8"	F800-2	3/4" MIP	36919	36910	351-05-406	-	-	DMA1-3-NL	SIMDMA1-3-NL
3/4"	F400-3, F500-3, FB400-3, FB500-3	3/4" MIP	36919	36910	351-05-406	-	-	DMA1-3-NL	SIMDMA1-3-NL
	F800-3, F900-3, FB800-3, FB900-3	1" MIP	36917	36911	351-05-408	-	-	DMA1-4-NL	SIMDMA1-4-NL
3/4"x1"	F400-34, FB400-34	1" MIP	36917	36911	351-05-408	-	-	DMA1-4-NL	SIMDMA1-4-NL
1"	F400-4, F500-4, FB400-4, FB500-4	1" MIP	36917	36911	351-05-408	-	-	DMA1-4-NL	SIMDMA1-4-NL
	F800-4, F900-4, FB800-4, FB900-4	1-1/4" MIP	36928	36912	351-05-410	-	-	DMA1-5-NL	SIMDMA1-5-NL
1-1/4"	FB400-5, FB500-5	1-1/4" MIP	36928	36912	351-05-410	-	-	DMA1-5F-SS-NL	SIMDMA1-5-NL
	FB800-5, FB900-5	1-1/2" MIP	501948	36913	351-05-412	-	08428	DMA1-6-NL	SIMDMA1-6-NL
1-1/2"	FB400-6, FB500-6	1-1/2" MIP	501948	36913	351-05-412	-	08428	DMA1-6-NL	SIMDMA1-6-NL
	FB800-6, FB900-6	2" MIP	508200	36525	351-05-416	-	08429	DMA1-67-NL	SIMDMA1-7-NL
2"	FB400-7, FB500-7	2" MIP	508200	36525	351-05-416	-	08429	DMA1-7-NL	SIMDMA1-7-NL
	FB800-7, FB900-7	2-1/2" MIP	-	36526	351-05-420	-	-	DMA1-78-NL	SIMDMA1-8-NL
FEMALE IRON PIPE THREAD OUTLET									
1/2"	F1700-1	1/2" FIP	36967	-	-	-	-	-	-
3/4"	F1600-3, F1700-3, FB1600-3, FB1700-3	3/4" FIP	36920	33556	351-05-606	-	-	-	-
3/4"x1"	FB1600-34, FB1700-34	1" FIP	36918	36323	351-05-608	-	-	DMA8-4-NL	-
1"	F1600-4, F1700-4, FB1600-4, FB1700-4	1" FIP	36918	36323	351-05-608	-	-	DMA8-4-NL	-
1"x1-1/4"	FB1600-45, FB1700-45	1-1/4" FIP	36733	36195	351-05-610	-	-	-	-
1-1/4"	FB1600-5, FB1700-5	1-1/4" FIP	36733	36195	351-05-610	-	-	-	-
1-1/4"x1-1/2"	FB1600-56, FB1700-56	1-1/2" FIP	503435	36196	351-05-612	-	-	DMA8-6-SS-NL	-
1-1/2"	FB1600-6, FB1700-6	1-1/2" FIP	503435	36196	351-05-612	-	-	DMA8-6-SS-NL	-
1-1/2"x2"	FB1600-67, FB1700-67	2" FIP	78907	36188	351-05-616	-	-	DMA8-7-SS-NL	-
2"	FB1600-7, FB1700-7	2" FIP	78907	36188	351-05-616	-	-	DMA8-7-SS-NL	-
2"x2-1/2"	FB1600-78, FB1700-78	2-1/2" FIP	-	-	-	-	-	-	-
SPECIAL THREAD OUTLET									
3/4"	F1001-3-Q, F1101-3-Q, FB1001-3-Q, FB1101-3-Q	3/4" Special Thread	508919	508917	-	-	08423	DMA6-3-Q-NL	SIMDMA6-3-Q-NL
1"	F1001-4-Q, F1101-4-Q, FB1001-4-Q, FB1101-4-Q	1" Special Thread	508920	508918	-	-	08424	DMA6-4-Q-NL	SIMDMA6-4-Q-NL
1-1/4"	FB1000-5-Q, FB1100-5-Q	1-1/4" Special Thread	-	-	-	-	-	*DMA4-5F-Q-SS-NL	SIMDMA4-5-Q-NL
1-1/2"	FB1000-6-Q, FB1100-6-Q	1-1/2" Special Thread	501949	507644	351-05-712	92157	08431	DMA4-6-Q-NL	SIMDMA4-6-Q-NL
2"	FB1000-7-Q, FB1100-7-Q	2" Special Thread	508199	507645	351-05-716	92162	08432	DMA4-7-Q-NL	SIMDMA4-7-Q-NL

* Requires DMBB-67-SS-NL Boring Bar

**Use the SIMTAP Drilling Machine Body without an adapter

Drilling Machine Adapters

Recommended Drill Sizes

For installation of Corporation Stops in Service Clamps or Saddles with a Drilling Machine

CORPORATION STOP SIZE	1/2"	5/8"	5/8"x3/4"	3/4"	3/4"x1"	1"	1-1/4"	1-1/2"	2"
Maximum Drill size for Stop with AWWA thread inlet	7/16"	9/16"	9/16"	11/16"	11/16"	15/16"	1-3/16"	1-7/16"	1-7/8"
Maximum Drill size for Stop with iron pipe thread inlet	7/16"	-	-	11/16"	11/16"	7/8"	1-3/16"	1-7/16"	1-7/8"

Recommended Tapping Machine Adapters

SIZE	FORD CORPORATION NUMBER	OUTLET THREADS	MUELLER			REED	RIDGID
			B-100 & B-101	B	A-2 & A-3	TM100	MLT3401
5/8"x3/4"	F1000	3/4" Fl. Copper	680600	680600	680600	98423	92182
3/4"	F (or FB) 1000, 1100	3/4" Fl. Copper	680600	680600	680600	98423	92182
3/4"	F (or FB) 1001, 1101, 1002, 1102	1" Fl. Copper	680601	680601	680601	98424	92187
3/4"x1"	F (or FB) 1000, 1100	1" Fl. Copper	680601	680601	680601	98424	92187
1"	F (or FB) 1000, 1100	1" Fl. Copper	680601	680601	680601	98424	92187
3/4"x1"	F1001, 1101, 1002, 1102	1-1/4" Fl. Copper	680602	-	680602	-	-
1"	F (or FB) 1001, 1101, 1002, 1102	1-1/4" Fl. Copper	680602	-	680602	-	-
1"x1-1/4"	F (or FB) 1000, 1100	1-1/4" Fl. Copper	680602	-	680602	-	-
1-1/4"	FB1000, 1100	1-1/4" Fl. Copper	680602	-	680602	-	-
1-1/4"	FB1001, 1101, 1002, 1102	1-1/2" Fl. Copper	-	-	88640	-	-
1-1/4"x1-1/2"	FB1000, 1100	1-1/2" Fl. Copper	-	-	88640	-	-
1-1/2"	FB1000, 1100, 1002, 1102	1-1/2" Fl. Copper	-	-	88640	-	-
1-1/2"	FB1001, 1101	2" Fl. Copper	-	-	88640	-	-
1-1/2"x2"	FB1000, 1100	2" Fl. Copper	-	-	88641	-	-
2"	FB1000, 1100	2" Fl. Copper	-	-	88641	-	-
2"	FB1001, 1101, 1002, 1102	2" Fl. Copper	-	-	88641	-	-
SPECIAL ADAPTERS							
3/4"	F (or FB) 1001-3-Q, 1101-3-Q	Special Thread	680688	-	-	98423	-
1"	F (or FB) 1001-4-Q, 1101-4-Q	Special Thread	680689	-	680689	98424	-
1-1/2"	FB1000-6-Q, 1100-6-Q	Special Thread	-	-	680421	-	-
2"	FB1000-7-Q, 1100-7-Q	Special Thread	-	-	680422	-	-

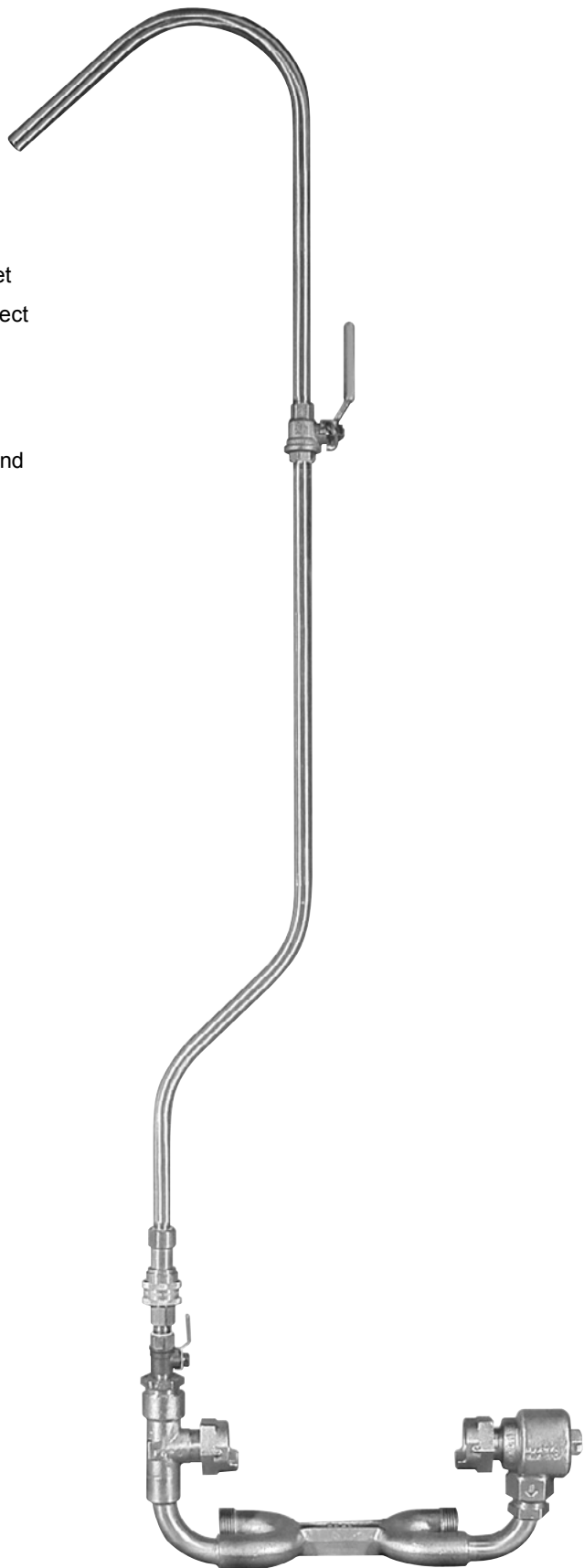
WARNING: Some tapping machine adapters, furnished by the tapping machine manufacturers, are not threaded all the way to the bottom of the adapter. This can cause problems when installing Ford Pack Joint and Grip Joint style corporation stops. If your adapter is **not** threaded to the bottom, a free washer-type screw plug adapter is available from Ford.

Ford Retrosetter Sampling Station

Converts an existing meter setting into a sampling station

1. Remove meter
2. Connect Retrosetter to existing meter nuts
3. Reinstall meter into Retrosetter
4. Ready for sampling

- Male quick disconnect assembly can be located on inlet or outlet
- Reusable protective vinyl cover installed on male quick disconnect
- Easy attachment of the 36" extension pipe with a female quick disconnect (sold separately)
- Available in 5/8", 5/8"x3/4" and 1" meter sizes
- All Ford brass components conform to AWWA C800 (ASTM B62 and ASTM B584, UNS/CDA No. C89833).



O.D. Chart

PIPE SIZE	PVC/HDPE	PVC/HDPE	DUCTILE / CAST IRON			ASBESTOS-CEMENT			STEEL		COPPER
	(Steel Size)	C900/C905	Classes		O.D.	Class	Machined End O.D.	Rough Barrel O.D. Min - Max	Type	O.D.	O.D.
	O.D.	O.D.	Pit	Spun							
1/2"	.84								STD.	.84	.625
3/4"	1.05								STD.	1.05	.875
1"	1.32								STD.	1.32	1.125
1-1/4"	1.66								STD.	1.66	1.375
1-1/2"	1.90								STD.	1.90	1.625
2"	2.38				2.50				STD.	2.38	2.125
2-1/2"	2.88								STD.	2.88	2.625
3"	3.50		A		3.80	100	3.74	4.00	O.D.	3.00	3.125
			B, C, D	50 - 350	3.96	150	3.84	4.10	STD.	3.50	
						200	3.84	4.29			
3-1/2"								STD.	4.00	3.625	
4"	4.50	4.80	A	50 - 350	4.80	100	4.64	4.79 - 5.14	O.D.	4.00	4.125
			B, C, D		5.00	150	4.81	4.97 - 5.27	STD.	4.50	
						200	4.81	5.22 - 5.57			
4-1/2"								STD.	5.00		
5"								STD.	5.56	5.125	
6"	6.63	6.90	A	50 - 350	6.90	100	6.91	7.05 - 7.40	O.D.	6.00	6.125
			B, C, D,		7.10	150	6.91	7.07 - 7.37	STD.	6.63	
			E, F		7.22	200	6.91	7.26 - 7.56			
7"								STD.	7.63		
8"	8.63	9.05	A, B,	50 - 300	9.05	100	9.11	9.22 - 9.57	O.D.	8.00	
			C, D,	350	9.30	150	9.11	9.27 - 9.57	STD.	8.63	
			E, F		9.42	200	9.11	9.39 - 9.74			
9"								STD.	9.63		
10"	10.75	11.10	A, B,	50 - 200	11.10	100	11.24	11.42 - 11.77	O.D.	10.00	
			C, D,	250 - 350	11.40	150	11.66	11.82 - 12.12	STD.	10.75	
			E, F		11.60	200	11.66	11.77 - 12.12			
12"	12.75	13.20	A, B,	50 - 200	13.20	100	13.44	13.69 - 14.04	O.D.	12.00	
			C, D,	250 - 350	13.50	150	13.92	14.08 - 14.38	STD.	12.75	
			E, F		13.76	200	13.92	14.03 - 14.38			
14"	14.00	15.30	A, B,	50 - 100	15.30	100	15.07	15.40 - 15.80	STD.	14.00	
			C, D,	150 - 300	15.65	150	16.22	16.38 - 16.73			
			E, F		15.98	200	16.22	16.48 - 16.88			
16"	16.00	17.40	A, B,	50 - 100	17.40	100	17.14	17.54 - 17.94	STD.	16.00	
			C, D,	150 - 300	17.80	150	18.46	18.62 - 18.97			
			E, F		18.16	200	18.46	18.79 - 19.19			
18"	18.00	19.50	A, B	50 - 100	19.50	100	19.90	20.44	STD.	18.00	
			C, D	150 - 250	19.92	150	20.94	21.20			
						200	22.18				
20"	20.00	21.60	A, B,	50 - 100	21.60	100	22.12	22.50	STD.	20.00	
			C, D	150 - 250	22.06	150	23.28	23.54			
						200	24.66				
22"								STD.	22.00		
24"	24.00	25.80	A, B,	50 - 100	25.80	100	26.48	27.17	STD.	24.00	
			C, D	150 - 250	26.32	150	27.96	28.22			
						200	29.62				
30"	30.00	32.00	A		31.74				STD.	30.00	
			B	50 - 350	32.00						
			C		32.40						
			D		32.74						
36"	36.00	38.30	A		37.96				STD.	36.00	
			B	50 - 350	38.30						
			C		38.70						
			D		39.16						
42"		44.50	A		44.20				STD.	42.00	
			B	50 - 350	44.50						
			C		45.10						
			D		45.58						
48"		50.80	A		50.50				STD.	48.00	
			B	50 - 350	50.80						
			C		51.40						
			D		51.98						
54"			A		56.66				STD.	54.00	
			B		57.10						
				50 - 350	57.56						
			C		57.80						
60"			D		58.40				STD.	60.00	
				50 - 350	61.61						
			A		62.80						
			B		63.40						
			C		64.20						
			D		64.82						

Note: Due to variations in outside diameters and specifications, dimensions listed above are approximate. For this reason, determine the pipe O.D. before ordering.

Products Catalogue

The Ford Meter Box Company, Inc.

Warranty

All merchandise is warranted to be free from defects in material and factory workmanship for one year from date of shipment from our factory. We will provide, free of charge, new products in equal quantities for any that prove defective within one year from date of shipment from our factory. Manufacturer shall not be liable for any loss, damage, or injury, direct or consequential, arising out of the use of or the inability to use the product. Before using, user shall determine the suitability of the product for user's intended use and user assumes all risk and liability whatever in connection therewith. No claims for labor or consequential damage will be allowed. The foregoing may not be changed except by agreement signed by an officer of the manufacturer.

No other warranties are applicable or may be implied, including the implied warranty of merchantability and the implied warranty of fitness for particular purpose and any warranty relating to infringement or the like, all of which are disclaimed.

Please Note:

Consult The Ford Meter Box Company, Inc. website (www.fordmeterbox.com) for the most recent catalogue information. The Ford Meter Box Company considers the information in this catalogue to be correct at the time of publication. Items and option availability, including specifications, are subject to change without notice. Please verify that your product information is current.



The Ford Meter Box Co., Inc. 775 Manchester Avenue, P.O. Box 443, Wabash, Indiana, USA 46992-0443
Telephone: 260-563-3171 Overseas FAX: 260-563-0167 www.fordmeterbox.com