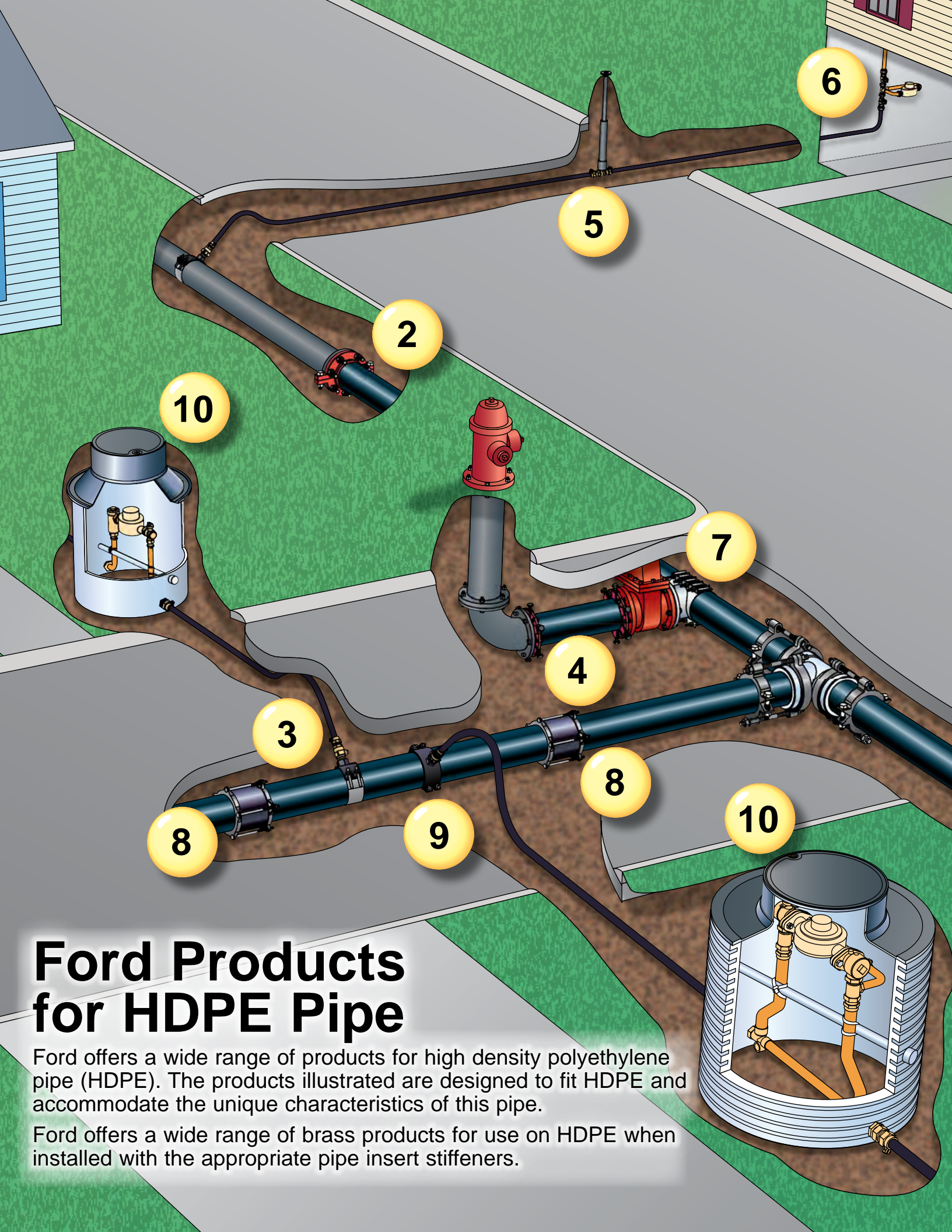


Ford HDPE Product Guide

Products
for High Density
Polyethylene Pipe

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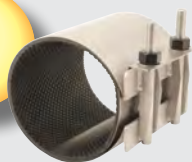


Ford Products for HDPE Pipe

Ford offers a wide range of products for high density polyethylene pipe (HDPE). The products illustrated are designed to fit HDPE and accommodate the unique characteristics of this pipe.

Ford offers a wide range of brass products for use on HDPE when installed with the appropriate pipe insert stiffeners.

1



Repair Clamps - FSP1, FSP2, FSP3, FP1, FP2 and FP3 Series

Provides full coverage support when repairing cracks, breaks or holes in HDPE pipe water lines. (Catalog Section L)

2



Adapter Flanges - Uni-Flange® UFA900 Series

Joins plain end HDPE pipe to mating flanges while providing positive thrust restraint. (Catalog Section U)

3



Corporation Stops

Used to control the flow of water through an HDPE customer service line pipe. (Catalog Section A)

4



Pipe Restraints - Uni-Flange® UFR1500/UFR1500R Series

A Mechanical Joint Restraint that seals the gasket while providing thrust restraint. (Catalog Section U)

5



Curb Stops

Used as a water service valve located in a water service line pipe between the water main and the home or building. (Catalog Section G)

6



Meter Setters

Designed with standard meter spacing, Ford offers a wide variety of indoor and outdoor settings that set the meter in the correct position and allow for easy change-outs of meters in a live service line. (Catalog Sections B and F)

7



Tapping Sleeves - FASTP, FTSSP, FTSP and FTSCP Series

For tapping HDPE water mains, Ford offers both a stainless steel and carbon steel flange on tapping sleeves. (Catalog Section AA)

8



Couplings - FC1, FC2A, FC2W and FRC Series

Pipe couplings for HDPE pipe. (Catalog Section M)

9



Service Saddles - FCP202, FS313, FS323, FSP313, FSP323 and FSP333 Series

For tapping HDPE water mains, Ford offers both ductile iron and stainless steel saddles. (Catalog Section AA)

10



Plastic Pit Setters

Fast and simple method for setting outdoor meters in cold to moderate climates. (Catalog Section FA)



FORD METER BOX PRODUCTS FOR HDPE PIPE

HDPE

High Density Polyethylene (HDPE) pipe is much more flexible than PVC pipe and expands and contracts with temperature and pressure variations. The expansion/contraction of the pipe is due to the high coefficient of thermal expansion (from AWWA M23, PVC Pipe – Design & Installation) and the flexibility of the pipe. Because the water and ambient temperature affects the diameter of the pipe, our products are recommended to be used in underground applications where the water temperature flowing through the pipe remains between 55° F and 85° F.

BRASS - COMPRESSION PRODUCTS

Ford brass compression fittings (properly sized) will fit 1/2", 3/4", 1", 1-1/4", 1-1/2" and 2" HDPE. If properly installed according to the Ford Meter Box instructions, and maintained under normal waterworks service conditions, Ford compression fittings are suitable and recommended for HDPE pipe with a wall thickness no less than DR11 and with the use of properly sized insert stiffeners. Proper installation also includes, but is not limited to, a smooth and supportive trench bed, a proper backfill material and a proper backfill procedure to minimize pipe deflection. Ford offers insert stiffeners for 1/2" through 2" HDPE that was manufactured in accordance with ANSI/AWWA C906.

BELLEVILLE WASHERS

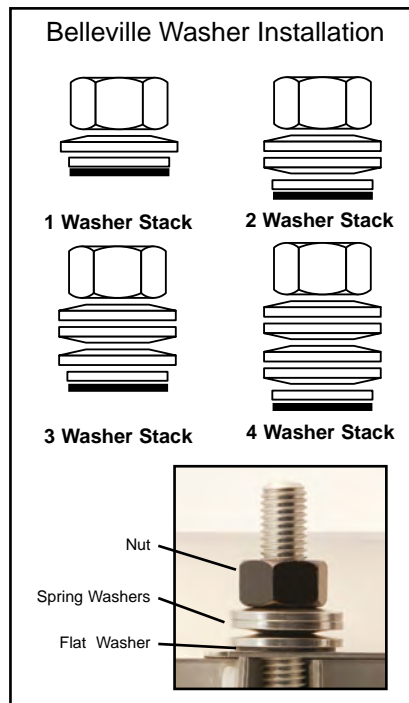
Belleville Washers, also referred to as spring washers, are used on repair clamps, tapping sleeves and some saddles when installed on HDPE pipe to address outside diameter variations when the pipe expands and contracts, promoting consistent gasket compression. The Belleville washers are made of 17-7 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 diameter. During initial installation, the Belleville washer(s) will compress. As the pipe diameter constricts, the washer(s) will decompress (or spring back) to a cupped shape, keeping consistent force on the components to maintain the gasket compression.

INSERTS

Inserts, or pipe stiffeners, are required when restraints or couplings are installed on HDPE pipe. The force exerted by restraints and couplings on the pipe wall can cause the pipe diameter to constrict, which could allow restraint and sealing issues. Because restraints and couplings are generally installed closer to the ends of pipe, the pipe could also toe-in, which makes creating a seal difficult, if not impossible, because the pipe is pushed away from the gasket. An insert supports the pipe wall, allowing the restraint or coupling to perform properly. Both styles (wedge and solid) are acceptable for use with our products. Inserts should be installed according to the manufacturer's instructions.

NOTE: All Ford products identified for use on HDPE pipe have been tested to ensure they will be watertight at pressures up to the rated pressure of the pipe. Ford has no opinion as to the suitability of its products, or of their effect on HDPE pipe over the service lifetime of the HDPE pipe. Please consult the manufacturer of the HDPE pipe concerning its long term performance. Only products specifically identified for use on HDPE should be used on HDPE.

CAUTION: Products that are not recommended for HDPE pipe should not be used on HDPE.



SUMMARY OF FORD METER BOX PRODUCTS APPROVED FOR HDPE:

LISTED WITHIN CATALOG SECTIONS A, B, C, E, F, FA, G, H, I, AND J

Note: Ford brass compression fittings are available to fit 1/2", 3/4", 1", 1-1/4", 1-1/2" and 2" HDPE. These compression fittings are suitable and recommended for HDPE pipe with a wall thickness no less than DR11 and with the use of properly sized insert stiffeners, listed in price book.

SPECIFIC PIPE PRODUCTS THAT REQUIRE / INCLUDE BELLEVILLE WASHERS

CATALOG SECTION AA

FASTP Tapping Sleeve
FTSP and FTSCP Tapping Sleeve
FTSSP Tapping Sleeve
FCP202 Saddle
*FS313 and FS323
FSP3x3 Saddle

CATALOG SECTION L

FSP Repair Clamp
FP Repair Clamp

- Notes:
- 1) Most products in Catalog Sections AA and L require a specific catalog number to ensure that Belleville washers are included and products are sized to the correct pipe diameter.
 - 2) Tapping Sleeves and Repair Clamps for HDPE are sized differently from standard products.
 - 3) FSP-style repair clamps are recommended over FP-clamps.
 - 4) The FASTP tapping sleeve is recommended for 12" and smaller nominal size tapping sleeves.

Caution: Ford Meter Box does not recommend size-on-size tapping sleeves for HDPE.

* Sizes 12" and under are approved for HDPE pipe without Belleville washers.

SPECIFIC PIPE PRODUCTS THAT DO NOT REQUIRE BELLEVILLE WASHERS, BUT DO REQUIRE PROPERLY SIZED INSERT STIFFENERS

CATALOG SECTION M AND N

All couplings

CATALOG SECTION U

RFAP Restrained Flange Adapter
UFA900 Flange Adapter
UFR1300 Restraint
UFR1309 Restraint
UFR1500 Restraint
UFR1500R Restraint

- Notes:
- 1) Products in catalog sections M, N and U require the use of specifically sized inserts suitable in diameter, length and strength to fully support the pipe.
 - 2) See catalog sections A, G or J (3/4" - 2") and M or N (3" - 36") for a full line of stainless steel inserts.