

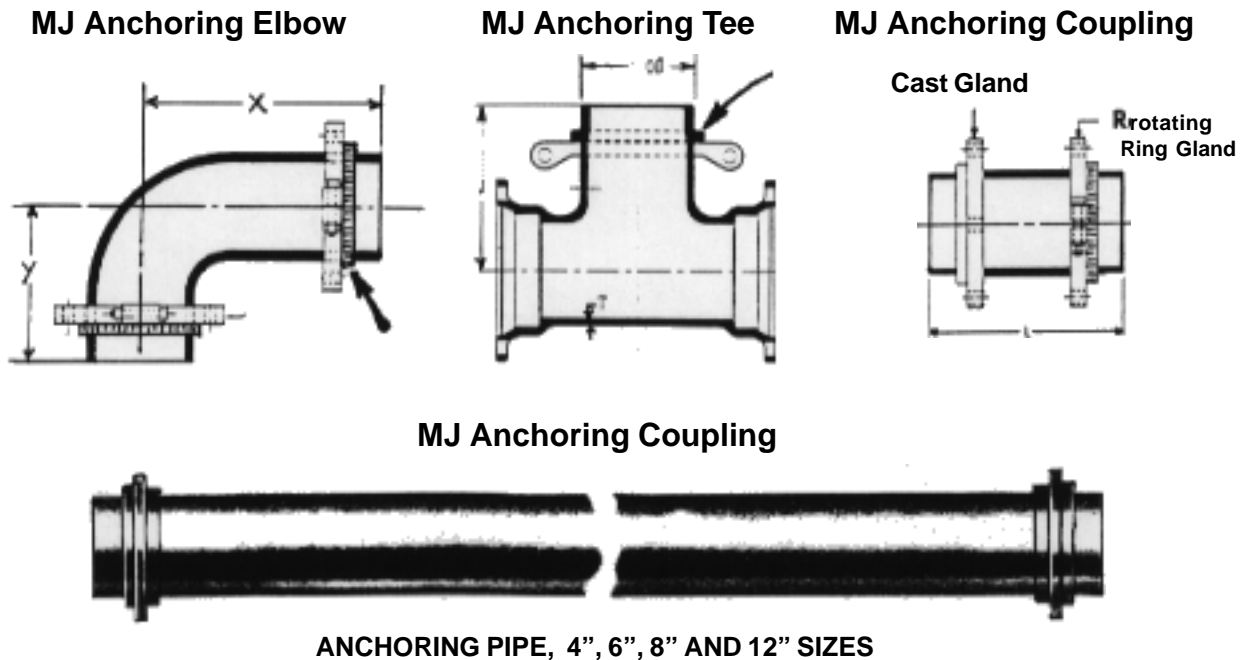


Ductile Iron Mechanical Joint Anchor Fittings MJ Adapter Design Information

About 30 years ago, in the mid 1970's, Anchor Fittings were developed for mechanical joint bell and spigot connections. Anchor fittings evolved from water-stop fittings, which also provide positive anchoring and axial restraint. Anchor fittings eliminate the need for labor consuming tie-rods, strapping and/or thrust blocking. This design keeps the pipe from separating under hydraulic pressure and/or soil movement.

The Rotating Ring Gland permits assembly to accommodate any orientation of the bolt holes in existing metal MJ pipe or fittings to which it is connected. As the tee-bolts are tightened, the Rotating Ring Gland pushes against the Stop-Shoulder, which in turn compresses the hard rubber gasket captured within the joint. The Rotating Ring Gland, in combination with the Stop-Shoulder makes a fully restrained joint, just like a back up ring pushing on a flange or water-stop. This design has been adopted for plastic pipe as a simple transition between HDPE pipe and metal DI pipe.

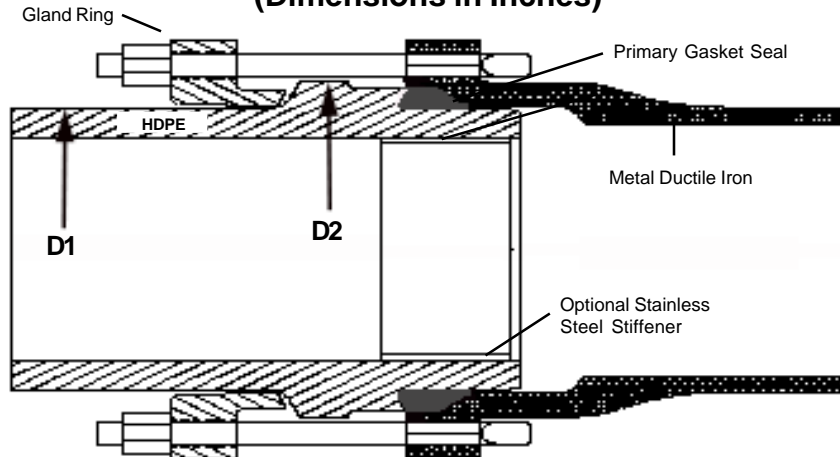
The Anchor Fitting design has been used for over three decades on Hydrant Tees, Swivel Tees, Anchor Couplings/Spools/Pipes and Anchor Elbows. *



* References: Ductile-Iron Pipe Research Assoc., U.S. Pipe and Foundry Inc., Tyler Pipe, Clow Corp., Griffin Pipe Products, Union Foundry, Pacific States Corp., American Ductile Iron Pipe Co.



DIPS & IPS MJ Adapter With Kit Connects HDPE to Ductile Iron (Dimensions in Inches)



- Kit includes HDPE anchor fitting, standard rubber gasket, extra length T-bolts, internal stainless steel stiffener (optional), C-153 (2”-12”) or C-110 (14”-24”) heavy body ductile iron gland ring.
- All adapters are AWWA compliant at no extra charge! MJ Adapters are fully pressure rated to the DR ordered.

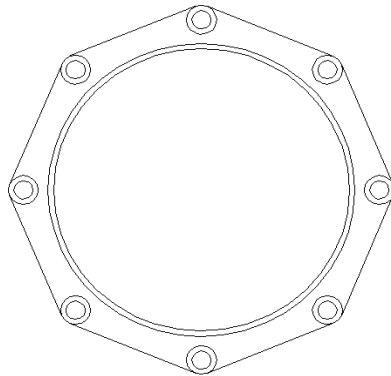
Stocked in DR-11; rebored to DR as ordered. DR-7 and DR-9 are available. - Call For Quick Quote.

Nominal Size IPS & DIPS	D1 IPS	D1 DIPS	D2	OAL	Weight (lbs)
2" IPS	2.38	-	3.50	8.00	5
3"	3.50	3.96	5.37	8.50	8
4"	4.50	4.80	6.63	8.00	11
6"	6.63	6.90	8.63	9.50	17
8"	8.63	9.05	10.75	11.50	28
10"	10.75	11.10	12.75	13.00	36
12"	12.75	13.20	15.25	13.50	46
14"	14.00	15.30	17.50	13.50	85
16"	16.00	17.40	20.00	14.50	116
18"	18.00	19.50	22.00	16.00	123
20"	20.00	21.60	24.00	16.50	164
24"	24.00	25.80	28.00	18.00	222

Notes:

*IPPI's MJ's incorporate a short nose design in order to work with most MJ butterfly valves, however it is recommended that specific valve information be supplied prior to ordering to insure proper clearance of the butterfly valve disc. MJ adapters should always be field tested for valve clearance before burial/final install. IPPI cannot be held responsible for valve interference with the MJ adapter.

**Connections to PVC may require use of a D.I. solid sleeve (not included).



Ductile Iron Mechanical Joint Gland & Accessory Pack

Kit includes extra long T-bolts, standard rubber gasket, C-153 (2"-12") or C-110 (14"-24") heavy body ductile iron gland ring.

Nominal Size	ID	Bolt Hole Circle	# of holes x dia. of bolts	T-bolt Length	Body Thickness	Weight (lbs)
2"	2.61	4.75	2 x 5/8	5.00*	1.37	4
3"	4.06	6.19	4 x 5/8	4.50*	1.37	6
4"	4.90	7.50	4 x 3/4	4.50	1.50	8
6"	7.00	9.50	6 x 3/4	5.00	1.63	11
8"	9.15	11.75	6 x 3/4	6.00	1.75	16
10"	11.20	14.00	8 x 3/4	6.00	1.75	18
12"	13.30	16.25	8 x 3/4	6.00	1.75	22
14"	15.44	18.75	10 x 3/4	7.00	2.00	48
16"	17.54	21.00	12 x 3/4	7.00	2.06	66
18"	19.64	23.25	12 x 3/4	7.00	2.13	67
20"	21.74	25.50	14 x 3/4	7.00	2.19	88
24"	25.94	30.00	16 x 3/4	7.00	2.31	106

* Indicates hex head bolts



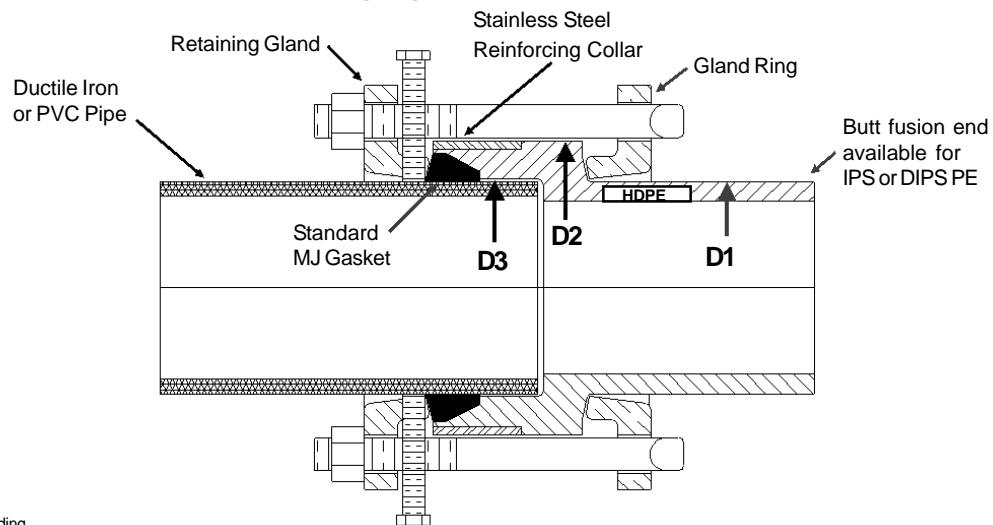
IPS & DIPS Bell MJ Adapter With Kit Connects HDPE to Plain End Ductile Iron or PVC (Dimensions in Inches)

This kit enables HDPE pipe to be fitted with a bell end in order to accept ductile iron pipe or DIPS OD PVC pipe (can also accept sizes 2” through 16” IPS OD PVC pipe by using a transition gasket)*.

This fitting eliminates the need for a ductile iron solid sleeve when making this connection. Bell MJ Adapters are fully pressure rated for DR ordered and are AWWA compliant at no extra charge.

- Kit includes the HDPE Bell MJ fitting with stainless steel reinforcing collar, C-153 (2”-12”) or C-110 (14”-24”) heavy body ductile iron gland ring, gasket and extra length T-bolts**.
- Retaining glands are available for ductile iron pipe or PVC pipe and are sold separately. IPS transition gaskets are also available through 16” and sold separately.

(See following page for Bell Adapter accessories.)



Patent application pending

Nominal Size IPS & DIPS	D1 IPS	D1 DIPS	D2	D3	OAL
2"	2.38	2.50	3.50	2.56	8.00
3"	3.50	3.96	5.56	4.06	8.50
4"	4.50	4.80	6.63	4.93	8.63
6"	6.63	6.90	8.63	7.03	10.25
8"	8.63	9.05	10.75	9.15	12.00
10"	10.75	11.10	12.75	11.23	12.50
12"	12.75	13.20	15.30	13.33	12.75
14"	14.00	15.30	18.00	15.47	13.50
16"	16.00	17.40	20.00	17.57	13.75
18"	18.00	19.50	22.00	19.67	13.75
20"	20.00	21.60	24.00	21.77	15.00
24"	24.00	25.80	28.00	25.97	16.00

**Connections to 14” & 16” IPS PVC require two piece retaining gland (not shown). 18” and larger IPS PVC not recommended.
**Sizes larger than 12” require customer supplied All-Thread and nuts. 9” long T-bolts are included with all kits 12” and smaller.
Other sizes and DR’s not listed are available - Call For Quick Quote

1-800-499-6927

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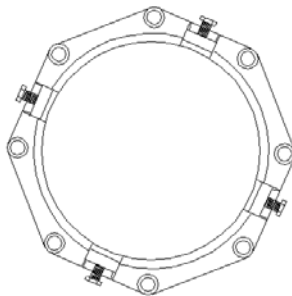
www.indpipe.net



Additional Accessories for Bell MJ Adapter

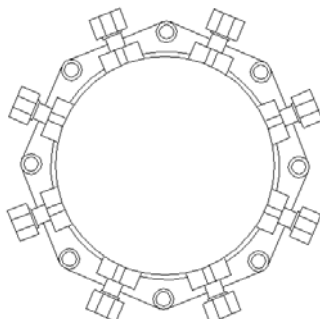
(Dimensions in Inches)

Retaining Glands For Ductile Iron Pipe



Nominal Size	Bolt Hole Circle	# of holes x dia. of hole	Weight (lbs)
3"	6.19	4 x 3/4	7
4"	7.50	4 x 7/8	9
6"	9.50	6 x 7/8	12
8"	11.75	6 x 7/8	16
10"	14.25	8 x 7/8	26
12"	16.25	8 x 7/8	32
14"	18.75	10 x 7/8	52
16"	21.00	12 x 7/8	59
18"	23.25	12 x 7/8	62
20"	25.50	14 x 7/8	71
24"	30.00	16 x 7/8	93

Retaining Glands For IPS and DIPS PVC Pipe



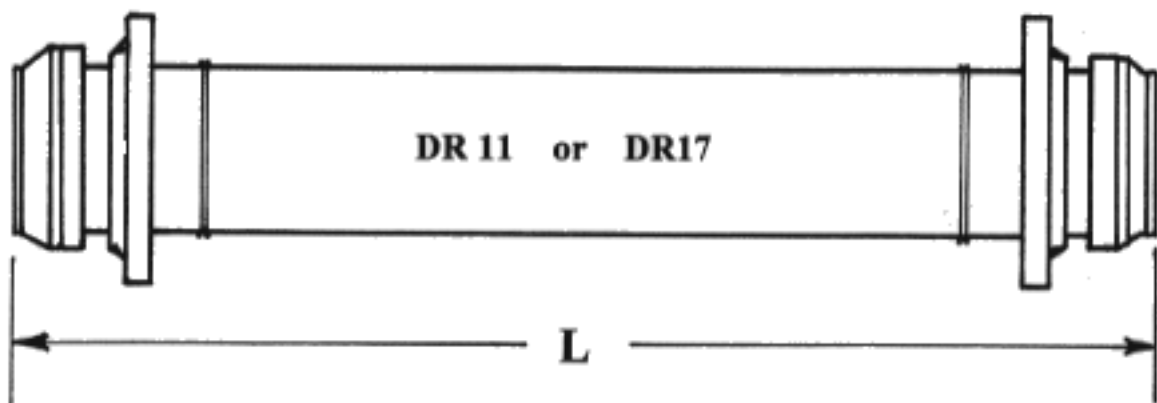
Nominal Size	Bolt Hole Circle	# of holes x dia. of hole	Weight (lbs)
3"	6.19	4 x 3/4	5
4"	7.50	4 x 7/8	7
6"	9.50	6 x 7/8	12
8"	11.75	6 x 7/8	16
10"	14.25	8 x 7/8	22
12"	16.25	8 x 7/8	28
**14"	18.75	10 x 7/8	45
**16"	21.00	12 x 7/8	52
*18"	23.25	12 x 7/8	62
*20"	25.50	14 x 7/8	75
*24"	30.00	16 x 7/8	97

Pricing does not include nuts, bolts, gaskets or other accessories. Retaining glands for 14" and 16" IPS PVC are a dual gland style restraint (pic. not shown). Data is available upon request. Retaining glands are currently not available for IPS sized PVC pipe in sizes larger than 16".



6” DIPS Hydrant Anchor Spool and Coupler Pipe

Anchoring pipe can be supplied in any length from 1.5 feet to 20 feet, in order to accommodate installation requirements. It is furnished with a DIMJA kit on each end. The gland-rings are rotatable for easy alignment with existing bolt-hole patterns on fittings, pipe or hydrants. When properly assembled and tightened against the stop-shoulder/collar, it provides a restrained joint! The assembly can be made in DR 11 or DR 17 pipe. The assembly is fully pressure rated.



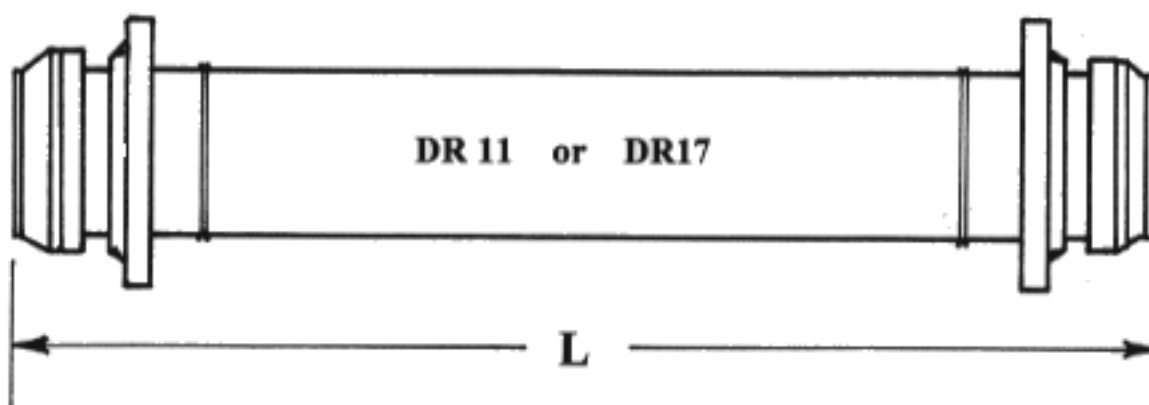
Length

- 18"
- 24"
- 30"
- 36"
- 48"
- 60"
- 96"
- 120"
- 144"
- 180"
- 240"



8” DIPS Hydrant Anchor Spool and Coupler Pipe

Anchoring pipe can be supplied in any length from 1.5 feet to 20 feet, in order to accommodate installation requirements. It is furnished with a DIMJA kit on each end. The gland-rings are rotatable for easy alignment with existing bolt-hole patterns on fittings, pipe or hydrants. When properly assembled and tightened against the stop-shoulder/collar, it provides a restrained joint! The assembly can be made in DR 11 or DR 17 pipe. The assembly is fully pressure rated.



Length

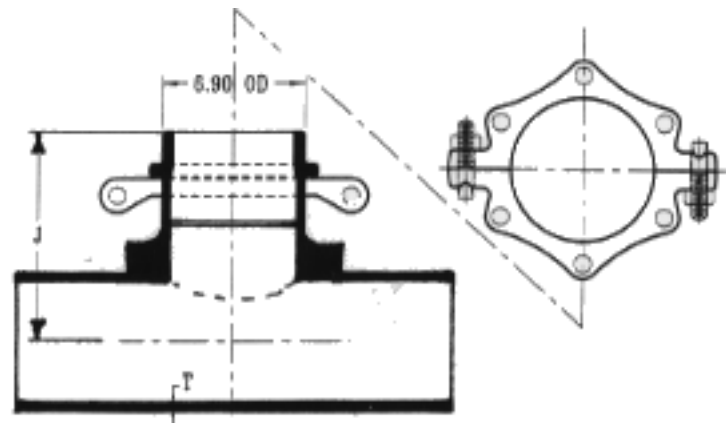
- 18”
- 24”
- 30”
- 36”
- 48”
- 60”
- 96”
- 120”
- 144”
- 180”
- 240”



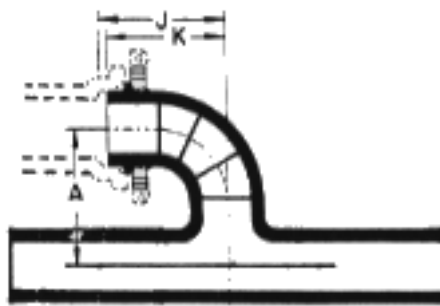
Hydrant Tees, Swivel Tees, Parallel Tees

The hydrants may be connected to the water main by several means. A few of the fabricated fittings used to connect hydrants in various situations are shown here. These fittings are fabricated in our shop and shipped to the field for installation. Call or fax for a Quick-Quote on distributor net pricing and delivery of these components.

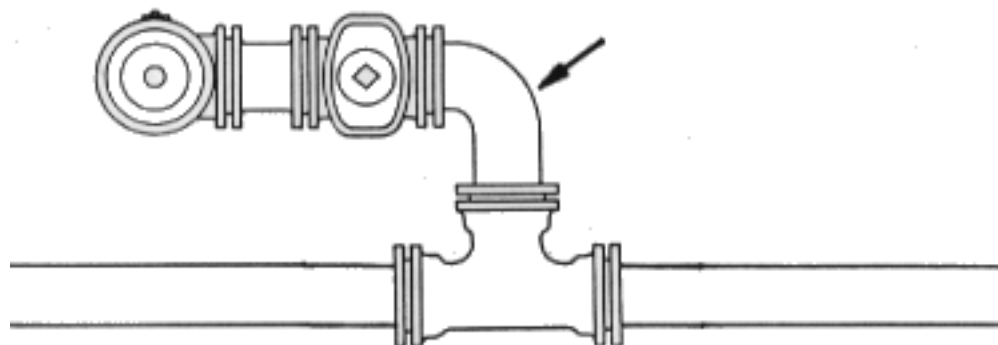
Hydrant Tee / Swivel Tee



Parallel Tee



Anchoring Elbow

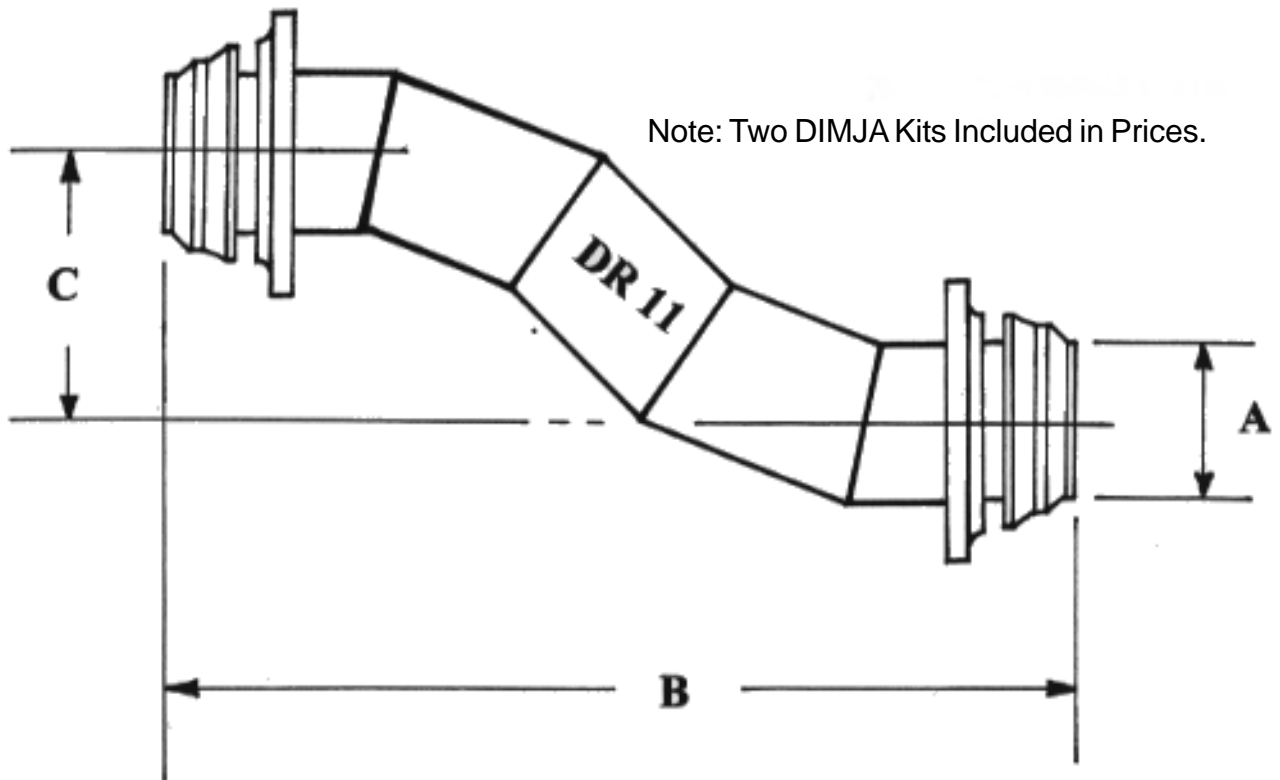




Hydrant Offset and Grade-Level Spool

This fitting component is a valuable addition to the HDPE fitting system. Like other anchor fittings, it saves time and money by eliminating thrust-blocks and restraining tie-rods.

- The offset provides vertical and horizontal adjustment and eliminates hydrant extension kits.
- Designed with 12" and 24" center to center - providing up to 48" vertical adjustment.
- The “bury-line” will be locked to that grade level.
- Provides a restrained joint.
- Fits all Hydrants with a 6" DIPS-MJ inlet.
- Anchor Fitting provided on each end.
- Rotating Gland Ring allows easy alignment with fixed position bolt-holes.



Description	A	B	C
6" DIPS x 12" Offset:	6.90"	37.5"	12"
6" DIPS x 24" Offset:	6.90"	49.7"	24"