

Section 7

HDPE Series

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HDPE Series

Shurjoint offers a series HDPE couplings and adapters for joining HDPE pipe. The use of HDPE (high density polyethylene) pipe continues to grow in popularity as its benefits over traditional materials are realized in a variety of service applications. The benefits of an HDPE pipe system include a longer service life, increased flexibility, reduced weight, increased resistance to corrosion, chemicals, and fatigue, as well as superior flow characteristics. HDPE is now commonly used in service applications including municipal water and waste water, water distribution and transport, mining, slurry and many other general and industrial applications.

Shurjoint HDPE couplings provide a fast and easy way to mechanically join HDPE pipe. A series of sharply machined teeth securely grip the pipe as the bolts are tightened, resulting in a leak-free joint. The **Shurjoint** joining method eliminates the need for costly heat fusion equipment. The highly restrained joint allows long lengths of pipe to be pulled from one area to another. With the removal of a few bolts one can easily access the system for cleaning, maintenance, changes and or system expansion.

Shurjoint HDPE couplings are designed to join IPS HDPE pipe, DR32.5 to 7.3, conforming to ASTM D2513, D3350 and/ or ANSI/AWWA C901, and ISO HDPE pipe, SDR 9 to 26, conforming to ISO 4427-1/2.

As the ductile iron coupling is much stronger than HDPE pipe itself, pressure ratings of HDPE couplings are determined by the pressure rating of HDPE pipe used. Pressure ratings of HDPE pipe vary depending on DR or SDR (standard dimension ratio) and design stress of the material.



Pressure Ratings (psi) - IPS Size

Pipe Dimension Ratio (DR)	PE4710 PE100	PE3608 PE3408
DR 7.3	317	265
DR 9	250	200
DR 11	200	160
DR 13.5	160	130
DR 17	125	100
DR 21	100	80
DR 26	80	65
DR 32.5	63	50

Design stress: PE4710 1000 psi, PE3608 & 3408 800 psi

$$DR \text{ (Pipe Dimension Ratio)} DR = \frac{D}{t}$$

Where:

D = pipe outside diameter, in
t = pipe minimum wall thickness, in

Pressure Ratings (Bar) - ISO Size

Pipe Dimension Ratio (SDR)	PE100	PE80
SDR 9	20	16
SDR 11	16	10
SDR 17	10	6.3
SDR 26	6.3	4

Design Stress: PE100 8.0 MPa, PE80 5.0 MPa

$$SDR \text{ (Standard Dimension Ratio)} SDR = \frac{D}{t}$$

Where:

D = pipe outside diameter, mm
t = pipe minimum wall thickness, mm

How to install



Marking: Use a marker and measuring tape to place "Gasket Centering Marks" and "Coupling Centering Marks" on each pipe end per the installation instructions.



Install Gasket: Place a gasket over the pipe ends and center the gasket in between the first set gasket centering marks. The pipe ends should always be butted against each other.



Mount Housings: Place the housings over the gasket, ensure the gasket stays centered between the first set marks made on the pipe ends and the housings are properly centered between the second set coupling center marks. Also make sure that housing tongue and groove (T&G) mate correctly.



Tighten Nuts: Tighten nuts alternately and equally until the bolt pads meet and make metal-to-metal contact. Repeated alternate tightening will reduce tightening torque considerably. Tighten nuts by another one quarter to one half turn to make sure the bolts and nuts are snug and secure.

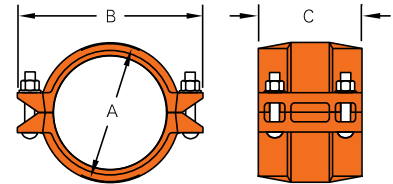


Refer to the **Shurjoint** installation instruction manual for complete instructions. **Shurjoint** HDPE couplings are not intended for use on PVC, PP or other materials. Do not use standard soap based lubricant on HDPE pipe. **Shurjoint** recommends the use of a silicone based lubricant with the HDPE series. In order to avoid injuries from the sharp machined teeth, wear gloves when handling.

Model

H305 HDPE Coupling

The **Shurjoint** Model H305 HDPE Couplings feature four bolt housings and a series of sharply machined teeth which securely grip the pipe as the bolts and nuts are tightened. The result is a leak-tight joint that is as strong as or stronger than the pipe itself. The H305 also features a contoured housing with integral ramps along the outside diameter to help the coupling slide over most obstacles during the relocation of pipe runs.



H305 - IPS Size

Nominal Size	Pipe O.D.	Dimensions			Bolt		Weight
		A	B	C	No.	Size	
in	in	in	in	in		in	Lbs
mm	mm	mm	mm	mm			Kgs
2	2.375	3.39	5.24	4.57	4	½ x 2¾	5.7
50	60.3	86	133	116	4	½ x 3	2.6
3	3.500	4.61	6.50	4.57	4	½ x 3	7.9
80	88.9	117	165	116	4	½ x 3	3.6
4	4.500	5.75	7.95	5.75	4	½ x 3	11.4
100	114.3	146	202	146	4	½ x 3	5.2
5	5.563	6.66	8.25	4.63	4	½ x 3	9.9
125	141.3	169	210	118	4	½ x 3	4.5
6	6.625	7.87	10.75	5.87	4	¾ x 3½	18.0
150	168.3	200	273	149	4	¾ x 3½	8.2
8	8.625	10.39	13.11	6.02	4	¾ x 3½	28.4
200	219.1	264	333	153	4	¾ x 3½	12.9
10	10.750	12.52	15.71	6.50	4	¾ x 4¾	43.6
250	273.0	318	399	165	4	¾ x 4¾	19.8
12	12.750	14.37	17.80	7.09	4	¾ x 4¾	56.1
300	323.9	365	452	180	4	¾ x 4¾	25.5
14	14.000	16.26	19.25	10.08	4	1 x 4½	90.6
350	355.6	413	489	256	4	1 x 4½	41.2
16	16.000	18.39	21.30	10.08	4	1 x 4½	97.2
400	406.4	467	541	256	4	1 x 4½	44.2
18	18.000	20.28	23.43	10.08	4	1 x 4½	111.1
450	457.2	515	595	256	4	1 x 4½	50.5
20	20.000	22.36	25.63	10.08	4	1 x 4½	136.0
500	508.0	568	651	256	4	1 x 4½	61.8

* Shurjoint recommends the use of a silicone based lubricant for the HDPE series.

H305 - ISO Size

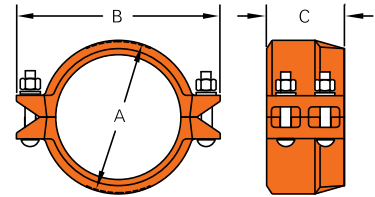
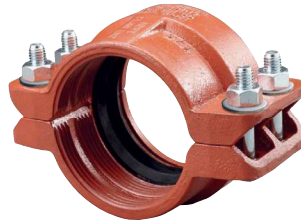
Pipe O. D.		Dimensions			Bolt		Weight
Min.	Max.	A	B	C	No.	Size	
mm	mm	mm	mm	mm		mm	Kgs
50	50.5	72	115	105	4	M10 x 55	1.5
63	63.6	85	128	105	4	M10 x 55	1.9
75	75.7	97	140	105	4	M10 x 55	2.4
90	90.9	113	169	105	4	M12 x 75	3.3
110	111.0	139	181	112	4	M12 x 75	4.1
140	141.3	169	210	118	4	M12 x 75	4.5
160	161.5	190	232	118	4	M12 x 97	5.6
180	181.7	211	253	118	4	M12 x 97	7.5
200	201.8	236	305	127	4	M16 x 90	9.4
225	226.4	261	330	127	4	M16 x 90	11.3
250	252.3	289	351	134	4	M16 x 110	12.7
280	281.7	319	406	134	4	M20 x 120	18.4
315	317.9	354	438	134	4	M20 x 120	16.7
355	357.2	412	489	256	4	M24 x 110	41.2
400	402.4	462	540	256	4	M24 x 110	44.2
450	452.7	515	595	256	4	M24 x 110	57.7

* Shurjoint recommends the use of a silicone based lubricant for the HDPE series.

Model

H307 HDPE Transition Coupling

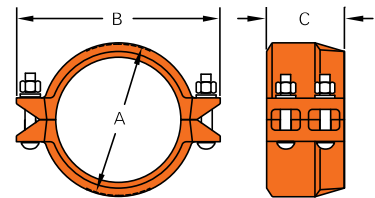
The Shurjoint Model H307 transition coupling provides for a fast, easy and direct transition from HDPE pipe and or fittings to grooved end steel pipe (IPS).



H307 - IPS Size

Nominal Size	Pipe O.D.	Dimensions			Bolt		Weight
		A	B	C	No.	Size	
in	in	in	in	in			Lbs
mm	mm	mm	mm	mm		in	Kgs
2	2.375	3.39	5.79	3.11	4	½ x 2¾	4.4
50	60.3	86	147	79			2.0
3	3.500	4.49	6.89	3.11	4	½ x 3	5.9
80	88.9	114	175	79			2.7
4	4.500	5.75	8.23	3.74	4	½ x 3	8.4
100	114.3	146	209	95			3.8
6	6.625	8.00	11.02	3.74	4	¾ x 3½	12.5
150	168.3	203	280	95			5.7
8	8.625	10.51	13.46	4.25	4	¾ x 3½	21.3
200	219.1	267	342	108			9.7
10	10.750	12.64	16.69	5.00	4	¾ x 4¾	35.2
250	273.0	321	424	127			16.0
12	12.750	14.76	19.02	5.00	4	¾ x 4¾	43.1
300	323.9	375	483	127			19.6

* Shurjoint recommends the use of a silicone based lubricant for use with the HDPE series.



H307 - ISO Size

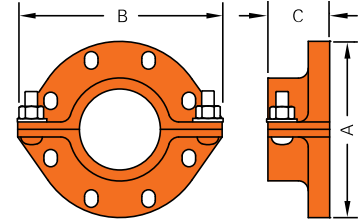
Pipe O.D.		Dimensions			Bolt		Weight
HDPE	IPS	A	B	C	No.	Size	
mm	mm	mm	mm	mm		mm	Kgs
63.0	60.3	86	146	73	4	M10 x 55	1.5
75.0	73.0	97	159	73	4	M10 x 55	1.9
90.0	88.9	114	178	73	4	M12 x 75	2.3
110.0	114.3	144	203	76	4	M12 x 75	2.8
160.0	165.1	194	254	76	4	M12 x 97	6.2
160.0	168.3	198	257	76	4	M12 x 97	6.2
200.0	219.1	256	321	85	4	M16 x 90	6.4
250.0	273.0	321	394	97	4	M20 x 120	11.9
315.0	323.9	375	451	97	4	M20 x 120	12.7

* Shurjoint recommends the use of a silicone based lubricant for the HDPE series.

Model

H312 HDPE Flange Adapter

The Shurjoint Model H312 HDPE flange adapter provides for the direct transition from HDPE pipe and or fittings to ANSI Class 125 or 150 flanged components.

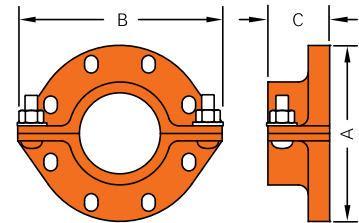


H312 - IPS Size / ANSI Class 125/150

Nominal Size	Pipe O.D.	Dimensions			Draw Bolt / Nut		Flange Bolt / Nut *		Weight
		A	B	C	No.	Size	No.	Size	
in	in	in	in	in		in		in	Lbs
mm	mm	mm	mm	mm					Kgs
3	3.500	7.75	8.86	3.10	2	5/8 x 2 1/2	4	5/8	10.6
80	88.9	197	225	79					4.8
4	4.500	9.00	10.25	3.10	2	5/8 x 2 1/2	8	5/8	15.0
100	114.3	229	260	79					6.8
6	6.625	11.00	12.25	3.75	2	5/8 x 2 1/2	8	3/4	21.5
150	168.3	279	311	95					9.8
8	8.625	13.50	14.75	3.42	2	3/4 x 2 3/8	8	3/4	28.8
200	219.1	343	375	87					13.1
10	10.750	16.00	21.00	4.25	4	3/4 x 2 3/8	12	7/8	42.9
250	273.0	406	533	108					19.5
12	12.750	19.02	24.00	4.25	4	3/4 x 2 3/8	12	7/8	51.5
300	323.9	483	610	108					23.4

* Shurjoint recommends the use of a silicone based lubricant for use with the HDPE series.

* Flange bolts and nuts are to be supplied by installer.



H312 - ISO Size / PN 10 / PN 16

Pipe O.D.		Dimensions			Draw Bolt / Nut		Flange Bolt / Nut *		Weight
HDPE	Steel	A	B	C	No.	Size	No.	Size	
mm	mm	mm	mm	mm		mm		mm	Kgs
63	60.3	165	197	79	2	M16 x 54	4	M16	4.3
90	88.9	200	241	79	2	M16 x 54	8	M16	4.8
110	114.3	220	260	79	2	M16 x 54	8	M16	6.8
160	165.1	285	330	82	2	M20 x 60	8	M20	9.8
200	219.1	340	400	108	2	M20 x 60	12 (PN 16)	M20	13.1
250	273.0	405	533	108	4	M24 x 100	12	M24	19.5
315	323.9	460	587	108	4	M24 x 100	12	M24	28.5

* Shurjoint recommends the use of a silicone based lubricant for use with the HDPE series.

* Flange bolts and nuts are to be supplied by installer.