

DUR O LOK®



DUR O LOK® couplings are all-purpose, lightweight connectors designed to replace ANSI series 150 - 2500 flanges.

BETE

DUR O LOK®

The Light Weight, Threadless, Boltless Coupling Alternative

The performance superiority and space and weight provided by DUR O LOK® Couplings will make them the preferred choice in many pipe-connecting applications.

DUR O LOK® couplings are all-purpose, lightweight connectors designed to replace ANSI series 150 - 2500 flanges. The design of DUR O LOK® couplings ensures reliable operation over a wide range of temperatures. DUR O LOK® couplings have been used in refinery applications for many years and are specified by UOP for use in CCR™ Platforming™, Oleflex™ and Sorbex™ processing units, as well as in Optimix™ FCC feed nozzles.

DUR O LOK® pipe couplings are designed to reduce maintenance, reduce materials costs, and reduce space requirements for pipe racks

Features:

- **Compact - length and outside diameter reduced by 30% - 50%**, compared to flanges. Allows double the number of pipes per rack. Provides improved external flow distribution for immersed couplings. Reduces shadowing for couplings used in process vessels.
- **Light weight - weight reduced by 60% - 90%**, compared to flanges
- **Simple - Number of parts reduced by 55% - 75%** per connection, compared to flanges.
- **Fast - Save up to 10-15 minutes** to make or break each connection.
- **Non-restrictive - Full port inside diameter** eliminates pressure drop and allows "pigging".
- **Smooth interior bore - Minimizes flow disturbances.** Eliminates attrition in catalyst and other solids conveying applications.
- **Boltless and threadless - No wrenches required.** No torque measurements required. No bolt holes to align. No need to tighten connections after thermal cycling. Simplifies painting and insulating.
- **Self-energized seal** - Sealing force increases with pressure. Less chance of leaks.
- **Thermally stable** - Design minimizes thermal expansion effects on sealing. Tolerates very rapid changes of external or internal temperatures.
- **No interference fits or metal-to-metal sealing** - Higher reliability. Less susceptible to damage.

CCR™ Platforming® process, which produces high-octane gasoline or petrochemical precursors; C, Oleflex® process, which produces polymer-grade propylene from propane feedback; C, Oleflex® processes, which separate, convert and upgrade C, olefin streams to produce MTBE, acetylene-free crude butadiene, butene-1, isobutylene, and completely saturated LPG; Sorbex® processes, which separate components from mixtures by liquid-phase adsorption; Parex® process, which recovers high-purity para-xylene from streams containing mixed xylene isomers and other aromatic and non-aromatic impurities; Molex® process, which separates paraffins from branched chain and cyclic hydrocarbons; MX-Sorbex® process, which recovers meta-xylene from streams containing mixed A8 isomers.

Save Time and Money with Fast, Simple, Lightweight DUR O LOK[®] Pipe Couplings



The DUR O LOK[®] wedge system

The heart of the DUR O LOK[®] design is the system of wedge-shaped, circumferential teeth located on the outside diameter of the hubs and on the inside diameter of the mating split coupler. The wedging action of the teeth compresses the gasket and brings the hubs ends into contact with each other. The outside diameter of the split coupler is tapered. A ring

with a tapered inside diameter slides over the split ring segments, forcing them together and holding them firmly in place. The tapered retaining ring is secured with a set screw. The entire connection process can be accomplished in less than a minute, without wrenches.



Patented and patents pending

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Heavy Duty Couplings Don't Have to Weigh a Ton



DUR O LOK® / Flange - Weight and Dimension Comparison

DUR O LOK®					Weld Neck Flanges			
Pipe Size	Pipe Schedule	Overall Diameter (in.)	Overall Length (in.)	Approx Weight (lb.)	Flange Class	Flange OD (in.)	Flange Assembly Length (in.)	Flange Assembly Weight (lb.)
1	80	2.5	3.5	2.23	2500	6.25	7.0	26.6
1.25	80	2.85	3.5	2.73	600	5.25	5.2	13.1
1.5	XXS	3	4	4.67	2500	8	8.8	57.0
2	80	3.5	5	5.2	2500	9.25	10.0	83.3
2.5	160	3.95	6	8.43	600	7.5	6.2	38.0
3	80	4.95	6.5	11.21	1500	10.5	9.2	102.5
3.5	80	5.45	7	13.63	600	9	6.8	63.2
4	160	5.95	7.5	21.08	2500	14	15.0	301.2
6	80	7.95	9.5	35.84	600	14	9.2	173.5
8	80	9.95	11	56.63	600	16.5	10.5	259.1

DUR O LOK®

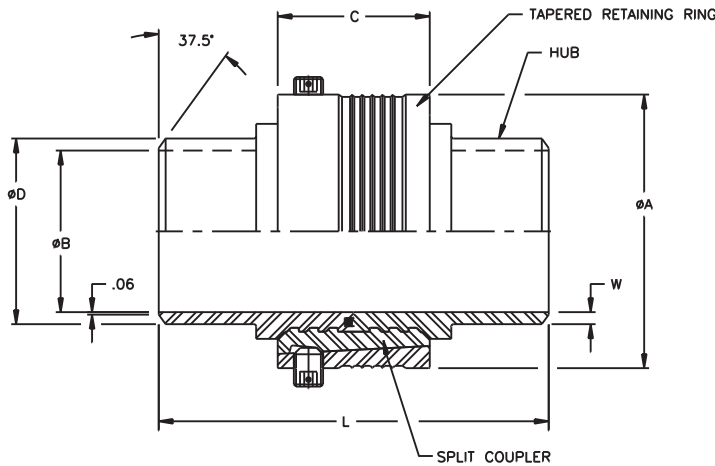
Compact Pipe Coupling

DUR O LOK® Materials

- Carbon steel - A234
- Stainless steel - 304, 316, 321, 347
- Other materials available
- Material traceability available

DUR O LOK® Quality

- Designed to ASME Section VIII, ANSI B31.1 and ANSI B31.3
- Quality assurance to ISO 9001



DUR O LOK® Pipe Couplings - Dimensions (inches) and Ratings (PSI)

Pipe Size	Pipe Sched.	"D" Pipe O.D.	"B" Pipe I.D.	"A" Overall Diameter	"C" Tapered Ring length	"L" Overall Length	"W" Nominal Wall	Approx. Weight (lbs.)	Pressure Rating (PSI)*	
									Carbon Steel	304 Stainless Steel
1	40	1.315	1.049	2.5	1.45	3.50	0.133	2.09	2850	3025
	80	1.315	0.957	2.5	1.45	3.50	0.179	2.23	3950	4175
1 1/4	40	1.660	1.380	2.85	1.45	3.50	0.140	2.52	2350	2475
	80	1.660	1.278	2.85	1.45	3.50	0.191	2.73	3275	3475
1 1/4	160	1.660	1.160	2.85	1.45	3.50	0.250	2.96	4400	4675
1 1/2	40	1.900	1.610	3.00	1.95	4.00	0.145	3.44	2100	2225
	80	1.900	1.500	3.00	1.95	4.00	0.200	3.74	2975	3150
1 1/2	160	1.900	1.338	3.00	1.95	4.00	0.281	4.15	4225	4575
	xxs	1.900	1.100	3.00	1.95	4.00	0.400	4.67	6175	6850
2	40	2.375	2.067	3.50	1.95	5.00	0.154	4.63	1775	1875
	80	2.375	1.939	3.50	1.95	5.00	0.218	5.20	2575	2725
2	160	2.375	1.687	3.50	1.95	5.00	0.344	6.21	4225	4475
2 1/2	40	2.875	2.469	3.95	1.95	6.00	0.203	6.32	1950	2050
	80	2.875	2.323	3.95	1.95	6.00	0.276	7.26	2700	2850
2 1/2	160	2.875	2.125	3.95	1.95	6.00	0.375	8.43	3600	3800
3	10	3.500	3.260	4.95	1.95	6.50	0.120	8.00	900	975
	40	3.500	3.068	4.95	1.95	6.50	0.216	9.76	1675	1775
3	80	3.500	2.900	4.95	1.95	6.50	0.300	11.21	2375	2525
	160	3.500	2.624	4.95	1.95	6.50	0.438	13.41	3600	3800
3 1/2	40	4.000	3.548	5.45	1.95	7.00	0.226	11.64	1525	1625
	80	4.000	3.364	5.45	1.95	7.00	0.318	13.63	2200	2325
4	10	4.500	4.260	5.95	1.95	7.50	0.120	10.51	700	750
	40	4.500	4.026	5.95	1.95	7.50	0.237	13.75	1425	1500
4	80	4.500	3.826	5.95	1.95	7.50	0.337	16.37	2075	2175
	120	4.500	3.624	5.95	1.95	7.50	0.438	18.88	2725	2900
4	160	4.500	3.438	5.95	1.95	7.50	0.531	21.08	3150	3325
5	40	5.563	5.047	6.95	2.95	8.50	0.258	22.19	1250	1325
	80	5.563	4.813	6.95	2.95	8.50	0.375	26.55	1850	1950
6	40	6.625	6.065	7.95	2.95	9.50	0.280	28.24	1125	1200
	80	6.625	5.761	7.95	2.95	9.50	0.432	35.84	1775	1900
8	40	8.625	7.981	9.95	2.95	11.00	0.322	43.03	1000	1050
	80	8.625	7.625	9.95	2.95	11.00	0.500	56.63	1425	1500

*Per Appendix 24 of the 1988 ASME Code, Section VIII, Div. 1. Maximum Temperature: 400°F (204°C) with viton o-ring, 450°F (232°C) with silicon rubber o-ring. Gaskets with higher temperature ratings available.

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DUR O LOK® Quote Information

Thank you for your inquiry about DUR O LOK® couplings. Please provide the information below to assist us in supplying the right coupling for your application.

Customer Information:

Name: _____
Company: _____
Address: _____

City: _____ State: _____ Zip: _____ Country: _____
Phone: _____ Fax: _____ e-mail: _____

I am interested in the DUR O LOK® couplings because: *(check all that apply)*

- I want to save space
- I want to save weight
- I want to simplify my piping
- I'm attracted to the unique seal benefits
- I want to save maintenance time
- Other _____

Piping Service Requirements:

temperature: _____
pressure: _____
material transported: _____
industry: _____
application or process: _____
external loading (shear, bending, torsion, etc) and magnitude: _____

Coupling Requirements:

pipe size: _____
schedule: _____
material: _____
number required _____
code requirements _____

Seal:

- Viton O-ring (400°F max)
- Silicone rubber O-ring (450°F max)
- Grafoil® flat gasket (1500°F max)

Notes: carbon steel couplings are supplied with black oxide finish.