

## C306 REDUCING COUPLING



For pressure rating, listing, and approval information, refer to data sheet or visit SHURJOINT website [www.shurjoint.com](http://www.shurjoint.com) for details or contact your SHURJOINT representatives.

The Model C306 Reducing Coupling allows direct reduction on a piping run and eliminates the need for a concentric reducer and couplings. The epoxy coated ductile iron coupling housings help to eliminate galvanic local cell and stray current problems. The specially designed rubber gasket prevents the smaller pipe from telescoping into the larger pipe during vertical installation.

Applicable copper tubing:

- 1) ASTM B-88 Type K, Type L, and Type M Seamless copper water tube.
- 2) ASTM B306 Copper Drainage Tuber (DWV).



C306 couplings should always be installed so that the coupling bolt pads make metal to metal contact.

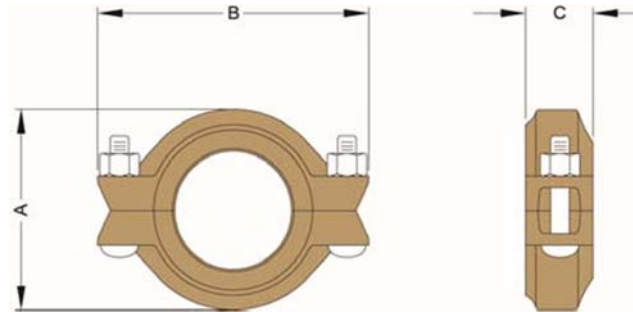


### Roll Set

As copper tubing is thinner than carbon steel pipe, always use a roll set specifically designed for use on copper tubing.

### material specification

- **Housing:**  
Ductile Iron to ASTM A536, Gr. 65-45-12, min. tensile strength 65,000 psi (448MPa).
- **Surface Finish:**  
Epoxy coated in copper color.
- **Rubber Gasket:**  
Grade E-pw EPDM (Color code: Double Green stripe) certified under NSF/ANSI 61 and NSF/ANSI 372 for potable water service to +180°F (+82°C). Also good for services for water with acid, water with chlorine or chloramines, deionized water, seawater and waste water, dilute acids, oil-free air and many chemicals.  
Maximum Temperature Range: -30°F (-34°C) to +230°F (+110°C).
- **Bolts & Nuts:**  
Heat treated carbon manganese steel track bolts to ASTM A449-83a (or A183 Gr. 2), minimum tensile strength 110,000 psi (758 MPa), Zinc electroplated, with heavy-duty hexagonal nuts to ASTM A563.



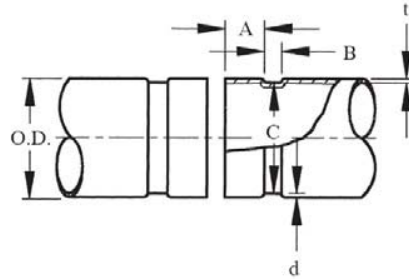
Model C306 Reducing Coupling

Nominal Size	Pipe O.D.	Max. Working Pressure (CWP)*	Max. End Load (CWP)	Pipe End Separation	Deflection		Dimensions			Bolts Size	Weight
					Deg. Per Coupling	Pipe	A	B	C		
in	in	PSI	lbs	in	(°)	in/ft	in	in	in	in	lbs
mm	mm	Bar	kN	mm		mm/m	mm	mm	mm		kg
2½ x 2	2.625 x 2.215	300	1622	0.06	1° - 22'	0.29	3.7	5.55	1.77	½ x 3	2.9
65 x 50	66.7 x 54.0	20	6.98	1.6		24.0	94	141	45		1.3
3 x 2	3.125 x 2.125	300	2300	0.06	1° - 09'	0.24	4.21	5.98	1.77	½ x 3	3.3
80 x 50	79.4 x 54.0	20	9.89	1.6		20.0	107	152	45		1.5
3 x 2½	3.125 x 2.625	300	2300	0.06	1° - 09'	0.24	4.21	5.98	1.77	½ x 3	3.0
80 x 65	79.4 x 66.7	20	9.89	1.6		20.0	107	152	45		1.4
4 x 2½	4.125 x 2.625	300	4007	0.06	0° - 53'	0.18	5.2	7.2	1.77	½ x 3	4.2
100 x 65	104.8 x 66.7	20	17.23	1.6		15.0	132	183	45		1.9
4 x 3	4.125 x 3.125	300	4007	0.06	0° - 53'	0.18	5.2	7.2	1.77	½ x 3	4.0
100 x 80	104.8 x 79.4	20	17.23	1.6		15.0	132	183	45		1.8
5 x 4	5.125 x 4.125	300	6186	0.06	0° - 42'	0.15	6.3	8.82	1.77	⅝ x 3½	5.5
125 x 100	130.2 x 104.8	20	26.60	1.6		12.0	160	224	45		2.5
6 x 4	6.125 x 4.125	300	8835	0.06	0° - 36'	0.13	7.28	9.88	1.77	⅝ x 3½	7.3
150 x 100	155.6 x 104.8	20	37.99	1.6		10.3	185	251	45		3.3

\*Working pressure is for connection with roll-grooved Type K copper tubing. Pressure ratings for use on Type L, Type M, and Type DWV copper tubing can be found on Shurjoint publication [B-43](#).

Notes / Options: Couplings with rubber gaskets are likely to function as an insulator. Where electrical continuity is required, the Shurjoint Model 96 Continuity Clip will restore electrical continuity to the system. The continuity clip satisfies IEE Wiring Regulations.

**COPPER TUBING ROLL GROOVE SPECIFICATIONS**



1	2	3	4	5	6	7	8
Nominal Size	Pipe O.D. Basic Size	Gasket Seat A ±0.79 / ±0.03	Groove Width B ±0.79 / ±0.03	Groove Dia. C +0/-0.51 / +0/-0.02	Groove Depth (ref.) d	Min. Allowed Wall Thick. t	Max. Allowed Flare Dia.
in	in	in	in	in	in	in	in
mm	mm	mm	mm	mm	mm	mm	mm
2	2.125	0.610	0.300	2.029	0.048	0.064	2.220
50	54.0	15.5	7.6	51.5	1.2	1.6	56.4
2½	2.625	0.610	0.300	2.525	0.050	0.065	2.720
65	66.7	15.5	7.6	64.1	1.3	1.7	69.1
3	3.125	0.610	0.300	3.025	0.050	DWV	3.220
80	79.4	15.5	7.6	76.8	1.3		81.8
4	4.125	0.610	0.300	4.019	0.053	DWV	4.220
100	104.8	15.5	7.6	102.1	1.4		107.2
5	5.125	0.610	0.300	4.999	0.053	DWV	5.220
125	130.2	15.5	7.6	127.0	1.4		132.6
6	6.125	0.610	0.300	5.999	0.063	DWV	6.220
150	155.6	15.5	7.6	152.3	1.6		158.0

**Nominal Size (Column 1):**

Nominal drawn copper tubing size to ASTM B-88.

**Pipe OD (Column 2):**

Maximum allowable tolerances from square cut ends are 0.03" for 2" thru 3"; 0.045" for 4" thru 6"; and 0.060" for sizes 8".

**Gasket Seating Surface (Column 3):**

The gasket seating surface shall be free from deep scores, marks, or ridges that would prevent a positive seal.

**Groove Width (Column 4):**

Groove width is to be measured between vertical flanks of the groove side walls.

**Groove Diameter (Column 5):**

The 'C' diameters are average values. The groove must be of uniform depth around the entire pipe circumference.

**Groove Depth (Column 6):**

The 'd' is for reference use only. The groove dimension shall be determined by the groove diameter 'C'.

**Minimum Wall Thickness (Column 7):**

The DWV pipe (ASTM B-306) is minimum wall thickness that may be roll grooved.

**Flare Diameter (Column 8):**

The pipe end that may flare when the groove is rolled shall be within this limit when measured at the extreme end of the pipe.

## General note

- Maximum Working Pressure (CWP) listed is the maximum cold water pressure for general piping services tested to ASTM F1476 and or AWWA C606 methods. Figures listed are based on roll- or cut-grooved standard wall carbon steel pipe. For other pipe schedules or pipe materials, contact Shurjoint for additional information.
- Max. End Load is calculated based on the maximum working pressure (CWP).
- Listed and or Approved Pressures are pressure ratings for fire protection systems, tested and approved by various approval bodies. Please always refer to the latest approval data posted on the Shurjoint website.
- Field Joint Test: For one time only, the system may be tested hydrostatically at 1½ times the maximum working pressure listed (AWWA C606 5.2.3).
- Warning: Piping systems must always be depressurized and drained before attempting disassembly and or removal of any components.
- The 10 Year Limited Warranty applies to manufacturing defects only and does not cover severe service/temperature applications or wear parts.
- Shurjoint reserves the right to change specifications, designs and or standard without notice and without incurring any obligations.