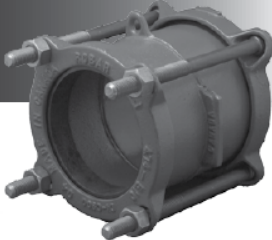


Appendix K: Brine System Pipe Coupling – Manufacturer’s Catalogue Page

CAST DUCTILE IRON COUPLING



APPLICATIONS:

██████████ / ██████████ Straight and Transition Couplings are used to make a non-restrained connection between two pipes of the same nominal size with same or different ODs. The ██████████ is supplied with Stainless Steel fasteners.

MATERIAL SPECIFICATIONS:

Center Sleeve: Cast Ductile Iron.
 End Rings: Cast Ductile Iron.
 Gaskets: SBR (Buna S) Rubber.
 Other compounds available.
 Fasteners: ██████████ - 5/8" NC HSLA Steel.
 - 5/8" NC T304 Stainless Steel.
 Nuts coated with anti-galling compound.
 Torque is 70-80 ft. lbs.
 Coating: Two coats of Enamel.


HOW TO ORDER:

Determine the product number (██████████, etc.) and the pipe OD or end plate combination for each end of the coupling (see page 1.1.1, 1.1.2), and then use the appropriate ordering code as shown in the following example.

To couple a 6" Steel pipe (6.63" OD) to a 6" C900 PVC pipe (6.90" OD), using SS Bolts the ordering code is:

██████████	-	6.63"	x	6.90"	i.e.	██████████
product		OD (Actual)		OD (Actual)	or	██████████
number						- 6.63 x 6.90
						- 6 D3 x A1

CAST DUCTILE IRON REDUCING COUPLING



APPLICATIONS:

██████████ / ██████████ Reducing Couplings are used to make a non-restrained connection between two pipes of different nominal sizes. The ██████████ is supplied with Stainless Steel fasteners.

MATERIAL SPECIFICATIONS:

Center Sleeve: Cast Ductile Iron.
 End Rings: Cast Ductile Iron.
 Gaskets: SBR (Buna S) Rubber.
 Other compounds available.
 Fasteners: ██████████ - 5/8" NC HSLA Steel.
 - 5/8" NC T304 Stainless Steel.
 Nuts coated with anti-galling compound.
 Torque is 70-80 ft. lbs.
 Coating: Two coats of Enamel.


HOW TO ORDER:

Determine the product number (██████████, etc.) and pipe OD or end plate combination for each end of the coupling (see page 1.2.1, 1.2.2), and then use the appropriate ordering code as shown in the following example.

To couple an 8" Ductile Iron pipe (9.05" OD) to a 6" C900 PVC pipe (6.90" OD) using SS Bolts, the ordering code is:

██████████	-	9.05"	x	6.90"	i.e.	██████████
product		OD (Actual)		OD (Actual)	or	██████████
number						- 9.05 x 6.90
						- 8A1 x 6A1

CAUTION




Couplings do not prevent pipe pullout.
Suitable restraint should be used when required.

1.3.1

Effective: January 1, 2015

INVESTIGATION REPORT
www.technicalafetybc.ca

Ammonia Release October 17, 2017



APPENDIX K

Page 1 of 3
Appendix

Dimensions shown in inches

Pipe and Fittings O.D. Range Chart

OBJECTIVE The Pipe O.D. Chart is intended to enable the user to quickly and effectively select the correct Coupling End Assembly Code for given nominal sizes, types and actual diameters of commonly used pipes for waterworks and effluent services.

END CODES AND PIPE DIAMETERS The Coupling End Code, otherwise known as the End Assembly Code, consists of a letter (for the Gasket Identity) and a number (for the Endplate Identity). All earlier O.D. Charts and ordering code schedules are obsolete. Your request will be filled quickly and accurately if all

information is provided to us when placing inquiries and orders. Whenever possible always specify both actual pipe O.D.'s to be coupled, and the manufacturer (i.e., Johns Manville CL 150 ACRB 18.85 O.D. x 17.40 Ductile).

LIMITATIONS AND POINTS OF SIGNIFICANCE Pipe O.D. Ranges or sizes are best estimates only. Actual diameters may vary due to manufacturing tolerances and design changes.

The use of pipe O.D. tapes is recommended to establish and verify ACTUAL diameters, which may be substantially different from manufacturers "nominal" or "average" spec-

ified values, especially for Asbestos Cement Rough Barrel (AC RB) and similar "laid up" pipe materials. Out-of-round pipes can cause fitting problems even though their O.D. tape measurement is within the required working range of the coupling.

The O.D. Range specified for a given Robar End Assembly (i.e., 21.75 to 22.25 for 20"E5) is a conservative figure which specifies the lower and upper extreme of the working capability under normal conditions, including: Pressures up to 250 psig for pipes having good surface characteristics which are well restrained and properly laid. For higher pressures, and special or unusual

requirements contact the factory. Some plastic pipes, such as polyethylene and fiberglass composites, may be soft or deformable to such an extent that a standard compression coupling gasket's seal pressure will be released by deflection of the pipe shell, resulting in leakage and failure of the joint. Stainless Steel inserts, available from Robar, may be used to counteract plastic deflection. Inserts must be carefully selected and sized to fit the O.D. of the pipe.

Proper restraint of pipes, especially plastic pipes, is necessary to resist pull out, due to pressure, temperature and surge effects, among other forces.

PIPE NOMINAL SIZE TYPE	4"			6"			8"			10"		
	PIPE O.D. RANGE	END CODE	CPLG. O.D. RANGE	PIPE O.D. RANGE	END CODE	CPLG. O.D. RANGE	PIPE O.D. RANGE	END CODE	CPLG. O.D. RANGE	PIPE O.D. RANGE	END CODE	CPLG. O.D. RANGE
STEEL	4.50	4"D3	4.40-4.60	6.625	6"D3	6.50-6.70	8.625	8"D3	8.55-8.75	10.75	10"D4	10.60-10.90
DRISCO 7600	4.50	4"D3	4.40-4.60	6.625	6"D3	6.50-6.70	8.625	8"D3	8.55-8.75	10.75	10"D4	10.60-10.90
SCLAIRPIPE POLYETHYLENE	4.50 I.P.S. 4.37 MET.	4"D3 4"F3	4.40-4.60 4.25-4.50	6.625 I.P.S. 6.36 MET.	6"D3 6"F3	6.50-6.70 6.05-6.30	8.625 I.P.S. 7.93 MET.	8"D3 8"F3	8.55-8.75 7.80-8.00	9.90 MET.	10"F4	9.80-10.10
DRISCO 45, 60, 80, 100, 130, 145, 1600	4.50	4"D3	4.40-4.60	6.625	6"D3	6.50-6.70	8.625	8"D3	8.55-8.75	9.842	10"F4	9.80-10.10
CAST IRON (new) DUCTILE IRON	4.80	4"A2	4.74-4.80	6.90	6"A1	6.86-7.10	9.05	8"A2	8.9-9.10	11.10	10"B2	11.10-11.40
CAST IRON (old) BRITISH CANADIAN	4.80 5.00	4"A1	4.74-5.10	6.98 7.10	6"A1	6.86-7.10	9.14 9.30	8"A1	9.10-9.30	11.26 11.40	10"B2	11.10-11.40
ASBESTOS CEMENT												
CL 100 ME ATLAS & CAPCO	4.64	4"D2	4.64-4.70	6.91	6"A1	6.86-7.10	9.11	8"A1	9.10-9.30	11.24	10"B2	11.10-11.40
J.M.				6.91	6"A1	6.86-7.10	9.11	8"A1	9.10-9.30	10.89	10"D4	10.60-10.90
CL 150 ME ATLAS, CAPCO & J.M.	4.81	4"A1	4.74-5.10	6.91	6"A1	6.86-7.10	9.11	8"A1	9.10-9.30	11.66	10"A1	11.55-11.75
CL 200 ME ATLAS	4.81	4"A1	4.74-5.10	6.91	6"A1	6.86-7.10	9.11	8"A1	9.10-9.30	11.66	10"A1	11.55-11.75
CAPCO & J.M.	4.81	4"A1	4.74-5.10	6.91	6"A1	6.86-7.10	9.11	8"A1	9.10-9.30	11.66	10"A1	11.55-11.75
CL 100 RB ATLAS	4.90	4"A1	4.74-5.10	7.10	6"A1	6.86-7.10	9.30	8"E5	9.30-9.50	11.43	10"B2	11.10-11.40
CAPCO	4.79-5.26	4"A1 4"E5	4.74-5.10 5.10-5.30	7.05-7.40	6"A1 6"E5	6.86-7.10 7.15-7.35	9.22-9.57	8"A1 8"E5	9.10-9.30 9.30-9.50	11.25-11.77	10"B2 10"A1	11.10-11.40 11.55-11.75
J.M.				7.13-7.48	6"E5	7.15-7.35	9.40-9.7	8"E5	9.30-9.50	11.31-11.83	10"B2 10"A1	11.10-11.40 11.55-11.75
CL 150 RB ATLAS	5.00	4"A1	4.74-5.10	7.10	6"A1	6.86-7.10	9.39	8"E5	9.30-9.50	11.85	10"E5	11.90-12.10
CAPCO	5.00	4"A1	4.74-5.10	7.20	6"E5	7.15-7.35	9.40	8"E5	9.30-9.50	11.92	10"E5	11.90-12.10
J.M.	4.97-5.32	4"A1 4"E5	4.74-5.10 5.10-5.30	7.13-7.43	6"E5	7.15-7.35	9.40-9.75	8"E5	9.30-9.50	11.96-12.26	10"E5	11.90-12.10

Proper restraint of pipes, especially plastic pipes, is necessary to resist pull out, due to pressure, temperature and surge effects, among other forces.

DRISCO 45, 60, 80, 100, 130, 145, 1600	12.402	12"F4	12.35-12.60	13.976	12"A1	13.80-14.10	15.74	14"B2	15.30-15.70	17.71	16"B2	17.40-17.80
CAST IRON (new) DUCTILE IRON	13.20	12"B7	13.20-13.50	15.30	14"B2	15.30-15.70	17.40	16"B2	17.40-17.80	19.50	18"A2	19.10-19.70
CAST IRON (old) BRITISH CANADIAN	13.60 13.50	12"B2 12"B7	13.45-13.65 13.20-13.50	15.72 15.65	14"B2	15.30-15.70	17.84 17.80	16"A1 16"B2	17.80-18.20 17.40-17.80	19.92	18"E5	19.70-20.25
ASBESTOS CEMENT												
CL 100 ME ATLAS & CAPCO	13.44	12"B7	13.20-13.50	15.07			17.15			19.90	18"E5	19.70-20.25
J.M.	12.99	12"C3	12.90-13.20	15.07			17.15			19.90	18"E5	19.70-20.25
CL 150 ME ATLAS, CAPCO & J.M.	13.92	12"A1	13.80-14.10	16.22	14"A1	15.80-16.25	18.46	16"E5	18.40-18.80	20.94	20"B1	20.80-21.35
CL 200 ME ATLAS	13.92	12"A1	13.80-14.10	16.22	14"A1	15.80-16.25	18.62	16"E5	18.40-18.80	19.29	18"A2	19.10-19.70
CAPCO & J.M.	13.92	12"A1	13.80-14.10	16.22	14"A1	15.80-16.25	18.46	16"E5	18.40-18.80	22.18	20"E5	21.75-22.25
CL 100 RB ATLAS	13.70			15.26	14"B2	15.30-15.70	17.34	16"B2	17.40-17.80	20.58		
CAPCO	13.37-14.04	12"B7 12"A1	13.20-13.50 13.80-14.10	15.36-15.80	14"B2	15.30-15.70	17.50-17.94	16"B2 16"A1	17.40-17.80 17.80-18.20	20.55		
J.M.	13.43-14.10	12"B7 12"A1	13.20-13.50 13.80-14.10	15.45-15.89	14"B2 14"A1	15.30-15.70 15.80-16.25	17.50-18.03	16"B2 16"A1	17.40-17.80 17.80-18.20	20.65 20.65		
CL 150 RB ATLAS	14.11	12"E5	14.10-14.35	16.41	14"E5	16.40-16.80	18.65	16"E5	18.40-18.80	21.26	20"B1	20.80-21.35
CAPCO	14.20	12"E5	14.10-14.35	16.50	14"E5	16.40-16.80	18.62-18.97	16"E5	18.40-18.80	21.30	20"B1	20.80-21.35
J.M.	14.20-14.50	12"E5	14.10-14.35	16.50-16.85	14"E5	16.40-16.80	18.85-19.20	18"B1	18.80-19.20	21.43-22.56	20"A2 20"E5	21.35-21.75 21.75-22.25
CL 200 RB ATLAS	14.11	12"E5	14.10-14.35	16.41	12"E5	16.40-16.80	18.65	16"E5	18.40-18.80	19.80	18"E5	19.70-20.25
CAPCO	14.03-14.38	12"E5	14.10-14.35	16.44-16.88	14"E5	16.40-16.80	18.74-19.19	18"B1	18.80-19.20	22.54		
J.M.	14.20-14.55	12"E5	14.10-14.35	16.50-16.95	14"E5	16.40-16.80	18.85-19.30	18"B1	18.80-19.20	22.71-23.14	22"B1	22.95-23.35
WOODSTAVE	14.25	12"E5	14.10-14.35	16.25	14"A1	15.80-16.25	18.50	16"E5	18.40-18.80			SPECIFY PIPE O.D.

(For 20", 22", 24" sizes see over)

CAST COUPLING INSTALLATION INSTRUCTIONS

CAST COUPLINGS

INSTALLATION INSTRUCTIONS

1. Select correct coupling center ring and end assemblies by using the O.D. Range Chart. A direct reading O.D. Tape is useful for confirming pipe diameters.
2. Remove any pipe wrap to assure that the gasket seals directly on the pipe's surface.
3. Ensure the pipe surface is clean and free of defects.
4. Ensure pipes are in line when the coupling is installed. Pipe deflection after installation should be contained to a minimum. For more details, contact Technical Sales Department.
5. Position the coupling equidistant over the joint.
6. Tighten nuts evenly to a recommended torque of 70-80 ft. lb. Alternating the bolts on large couplings helps to keep them from creeping.
7. When using Isolating Boots, refer to the Isolating Boot O.D. Chart for correct end plate and gasket combinations. Position the end assembly on the pipe before installing the boot.
8. Pressure test line prior to backfilling.
9. couplings should be restrained when there are differences in the two pipe outside diameters. couplings should not be used as restraining devices.
10. Proper restraint of pipes, especially plastic pipes, is necessary to resist pull-out due to pressure, temperature, deflection, ground settlement and surge effects among other forces.
11. Flexible pipes, such as Polyethylene, tend to deform under compression coupling gasket sealing loads. Adjustable Inserts may be used to provide internal pipe support and so eliminate excessive wall deflection.

Note: reserves the right to change the above instructions without notice.

June 25, 1990