



# 1800/1900 COUPLING

## INSTALLATION GUIDE



### PIPE ENDS

1. Measure pipe diameter at 8 places 45 deg. apart. Difference between minimum and maximum measurement at the end of pipes should not exceed  $\frac{1}{8}$ " (C). If the difference is greater than  $\frac{1}{8}$ " (C), make corrections by rounding the pipe with trench jacks, or suitable wooden post and wedges. Maintain this roundness until the joint is made up and all torquing has been completed.  
**\*Refer to TABLE ON PIPE END TOLERANCES on Page 10.4.2**
2. Pipe ends must be clean and free of all oil, dirt, loose scale & rust. A thorough cleaning with a wire brush is recommended. Any seam welds on pipe ends in the vicinity of the coupling must be ground smooth.

### ASSEMBLY

3. Place an end ring on each pipe end. If the end ring(s) does not easily slip on pipe, correct pipe out-of-roundness with jacks or posts as noted above in 1.
4. The gaskets should be cleaned and inspected for any damage in shipment. **Lubricate all the faces the coupling gaskets, center sleeve bevelled ends** and the pipe with potable, NSF certified lube.
5. Place the center sleeve on one pipe end. Place gasket and other end ring on the other pipe end. The flat face of the gasket goes against the pipe OD. **Slide the center sleeve into position and center over gap between the two pipe ends.**
6. **IMPORTANT:** The clearance between the OD of the pipe ends and the ID of the center sleeve and end rings is to be distributed as evenly as possible. **No more than 1/8" gap or opening is permissible.** Wooden wedges or plastic shims may be used. These centering aids may be removed after the coupling is assembled. The wedges or shims must not project into the gasket pocket.
7. Be sure that the gasket pocket in the end ring(s) is free from wood, dirt, metal or other field debris.
8. Push end rings against gasket, and rotate one end ring until bolt holes line up.

### BOLTING UP

9. **STAINLESS STEEL NUTS SHOULD BE FIELD LUBRICATED WITH A SUITABLE ANTI GALLING COMPOUND PRIOR TO BOLT TIGHTENING.** Insert all bolts, tighten nuts finger tight. It is convenient to tighten bolts by downward wrenching. Insert bolts so nuts are on the left side of the installer, as he faces the pipe.
10. Be certain that the end ring(s) fits over the center sleeve without any interference. If necessary, wedges may be used to free the end ring(s) from the edge of the center sleeve.
11. On couplings 60" and larger, 3 or 4 installers can best tighten. Space the installers equally around the coupling, and have all installers advance in the same direction as they tighten each nut. Be certain that the end rings are parallel as the nuts are tightened. A torque-limiting wrench must be used. Tighten to 30 – 35 foot pounds all around, two or three times. Increase the wrench setting to 40 – 50 foot pounds, and continue the procedure to 75 foot pounds for 5/8" bolts and 90 foot pounds for 3/4" and larger bolts. At the maximum tightness, go around the coupling several times to assure uniform gasket pressure.
12. Before final tightening, it is good technique to strike each head with a hammer to seat all parts.
13. **AFTER FINAL TIGHTENING HAS BEEN COMPLETED,** remove all pipe roundup material.

**BOLTED SLEEVE TYPE COUPLINGS DO NOT PROVIDE PROTECTION AGAINST PULLOUT OF PIPE.**

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**Retightening of bolts:** After 24 hours, or just before filling with water, it is necessary to retighten the bolts to 75 foot pounds. Retightening is mandatory prior to back filling.

**Testing:** Test all coupled joints prior to backfill, if leaks develop during the test procedure, tighten as necessary to stop leaks. Caution should be exercised to assure that end ring, center sleeve or the bolting hardware is not overstressed during this tightening procedure.

**NOTE:** When using an external restrainer on PVC C-900/905 pipe or HDPE the restrainer must be at least 6 inches from the end of the coupling.

**CAUTION:** A pipe section should never be allowed to HANG in the coupling, either before or after making up the joint. Couplings are designed to FLOAT on pipe ends, not support the pipe.

**Pipe End Preparation:** The pipe shall be sufficiently free from indentations, projections, or roll marks for a distance 18" from the end of the pipe to make a tight joint with the rubber gasket type of coupling. For a distance of 18" from the end of the pipe, the pipe circumference shall not be more than (A) larger or (B) smaller than the outside circumference computed from the specified outside diameter. All of the out-of-roundness shall be in the form of a smooth oval that can be jacked round in such a manner that the difference between the maximum and minimum diameters shall not exceed (C).

TABLE ON PIPE END TOLERANCES

PIPE OD	(A)	(B)	(C)
	(+) TOL	(-) TOL	MIN MAX
12"-42" Follow AWWA C-219-11, Table 4 Page 14 for all applications			
44"-72"	1/8"	1/16"	1/8"
73"-96"	3/16"	1/16"	1/8"
97"-120"	1/4"	1/16"	3/16"
120" & UP	1/4"	1/16"	1/4"

- Note:
- Flanged Coupling Adapters may be installed using these instructions.
  - **INSULATING BOOT(s).** Position boot(s) over pipe end(s), then follow these instructions from the beginning.
  - **IMPORTANT. ASSEMBLY 4, above, is modified so that 1/4" opening at any one place is permitted prior to the boot(s) being inserted over the pipe ends.**
  - **BOLTED SLEEVE TYPE COUPLINGS DO NOT PROVIDE PROTECTION AGAINST PULLOUT OF PIPE.**
  - Robar follow the provisions outlined in AWWA C-219 when manufacturing **BOLTED SLEEVE TYPE COUPLINGS, FLANGED COUPLING ADAPTERS,** or related products.

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