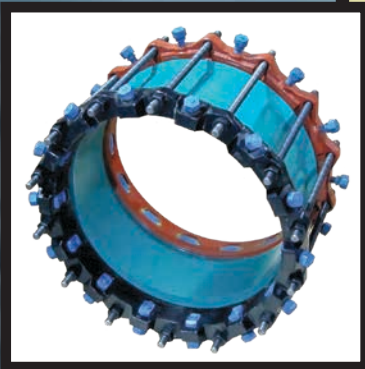
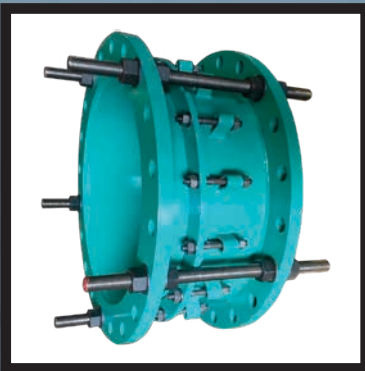




FABRICATION DIVISION





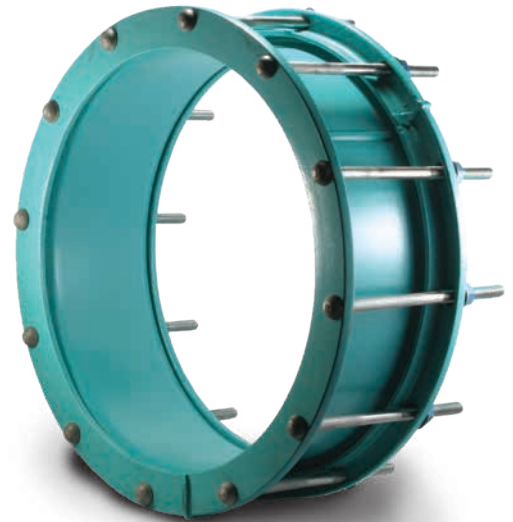
FABRICATED COUPLINGS

ROBAR Series 1800 / 1900 – Fabricated Steel Coupling

Fabricated 1800 / 1900 Non-Restrained Couplings are used to flexibly couple larger diameter pipe. Coupling is available in Epoxy or Shop-Coat configurations with choice of Stainless Steel or HSLA Steel Fasteners. The 1800 / 1900 couples a wide range of pipe together including: Steel, Ductile, PVC, HDPE, AC and CPP.

MATERIAL SPECIFICATIONS:

| | |
|-------------------------|---|
| Center Sleeve: | Carbon Steel. |
| End Rings: | Carbon Steel. |
| Gaskets: | NBR (Buna-N) Rubber. Other compounds available. |
| Fasteners and Coatings: | 1808 – Two Coats of Enamel with 5/8" HSLA Bolts 1806 – Two Coats of Enamel with 5/8" T-304 SS Bolts 1908 – Corrosion Protective Epoxy with 5/8" HSLA Bolts 1906 – Corrosion Protective Epoxy with 5/8" T-304 SS Bolts (Epoxy can be liquid C-210 or Fusion C-213) |



ROBAR Series 1840 / 1940 – Fabricated Steel Reducing Coupling

Fabricated 1840 / 1940 Non-Restrained Steel Reducing Couplings are used to flexibly couple two pipes of different nominal size.

MATERIAL SPECIFICATIONS:

| | |
|-------------------------|---|
| Center Sleeve: | Carbon Steel. |
| End Rings: | Carbon Steel. |
| Gaskets: | NBR (Buna-N) Rubber. Other compounds available. |
| Fasteners and Coatings: | 1848 – Two Coats of Enamel with 5/8" HSLA Bolts 1846 – Two Coats of Enamel with 5/8" T-304 SS Bolts 1948 – Corrosion Protective Epoxy with 5/8" HSLA Bolts 1946 – Corrosion Protective Epoxy with 5/8" T-304 SS Bolts (Epoxy can be liquid C-210 or Fusion C-213) |





FLANGED COUPLING ADAPTERS

ROBAR Series 7800 / 7900 – Fabricated Steel Flanged Coupling Adapter

Fabricated 7800 / 7900 Flange Couplings Adapters are used to flexibly adapt plain-end pipe to flange-end pipe. FCA is available in Epoxy or Shop-Coat configurations with choice of Stainless Steel or HSLA Steel Fasteners.

MATERIAL SPECIFICATIONS:

| | |
|-------------------------|---|
| Center Sleeve: | Carbon Steel. |
| Flange: | AWWA C207 Class D – ANSI 1021 150 lb. drilling. Class E or F Flanges available. |
| End Rings: | Carbon Steel. |
| Gaskets: | NBR (Buna-N) Rubber. Other compounds available. |
| Fasteners and Coatings: | 7808 – Two Coats of Enamel with 5/8" HSLA Bolts 7806 – Two Coats of Enamel with 5/8" T-304 SS Bolts 7908 – Corrosion Protective Epoxy with 5/8" HSLA Bolts 7906 – Corrosion Protective Epoxy with 5/8" T-304 SS Bolts (Epoxy can be liquid C-210 or Fusion C-213) |

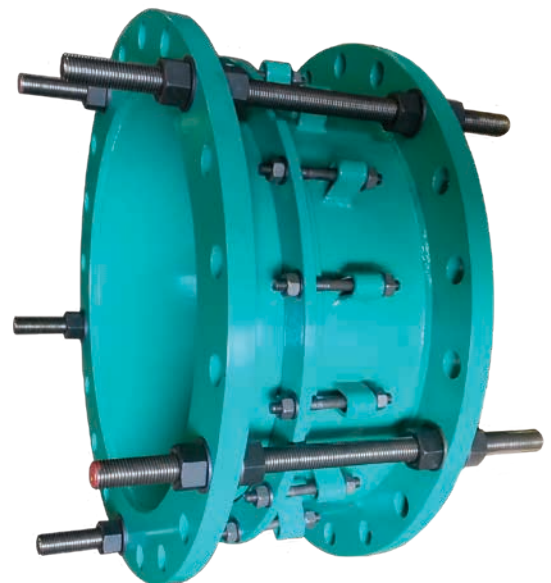


ROBAR Series 7800DJ / 7900DJ – Fabricated Steel Dismantling Joint

Robar Dismantling Joints are a three section flanged coupling that allow for longitudinal adjustments needed for future modifications and adjustments. Once bolted in place, this fitting can be adjusted to the necessary lay length of the space required. The Dismantling Joint then provides an easier way to do maintenance or repairs on a flanged pipe system.

MATERIAL SPECIFICATIONS:

| | |
|-------------------------|---|
| Flange Spool: | AWWA C207 Class D – ANSI 1021 150 lb. drilling. Class E or F Flanges available. |
| End Ring & Body: | 4"-12" Cast Ductile Iron, 14" and larger Carbon Steel ASTM A36. 4"-12" available in Carbon Steel as well. |
| Gaskets: | NBR Rubber. Other compounds available. |
| Tie Rods: | ASTM A193 Gr B7 per M11. Stainless steel is available. |
| Fasteners and Coatings: | 7808DJ – Two Coats of Enamel with 5/8" HSLA Bolts 7806DJ – Two Coats of Enamel with 5/8" T-304 SS Bolts 7908DJ – Corrosion Protective Epoxy with 5/8" HSLA Bolts 7906DJ – Corrosion Protective Epoxy with 5/8" T-304 SS Bolts (Epoxy can be liquid C-210 or Fusion C-213) |

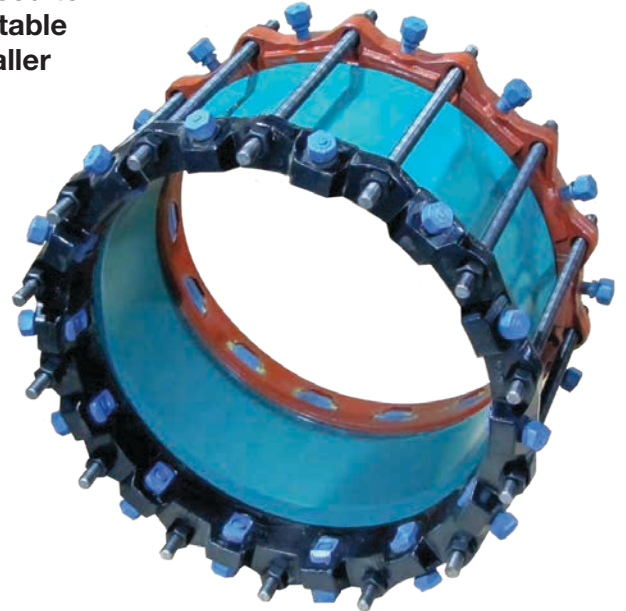




RESTRAINED COUPLINGS & FLANGE ADAPTERS

ROBAR Series 1800RSC / 1900RSC – Fabricated Steel Restrained Coupling

Fabricated 1800RSC / 1900RSC Restrained Couplings are used to join plain end pipe with a flexible restrained connection. Suitable for use on PVC and Ductile Iron pipe. Sizes 14”-48”. For smaller sizes see the EBAA 3800 Series Restrained Coupling.



MATERIAL SPECIFICATIONS:

- Centre Sleeve: Carbon Steel per ASTM A36.
- Restraint Gland: EBAA 1100 Series for Ductile Iron connection & EBAA 2000 Series for a C905 connection.
ASTM A536 Ductile Iron.
- Gaskets: EBAA-Seal™ Mechanical Joint-SBR.
- Tie Rods: 1908RSC – ASTM A193 Gr B7.
1906RSC – T-304 Stainless Steel material.
- Coating: Barrel – Fusion Bonded Epoxy per AWWA C213.
End Gland – Mega Bond.

ROBAR 7906RFCA – Fabricated Restrained Flange Adapter

The Robar 7908RFCA/7906RFCA Restrained Flange Coupling Adapter allows for a fully restrained flexible joint to adapt from a flange to Ductile Iron pipe or C905 PVC pipe for 14” thru 48”.

MATERIAL SPECIFICATIONS:

- Centre Sleeve: Carbon Steel per ASTM A36.
- Flange: AWWA C-207 class D – ANSI 1021 150 lb. drilling.
- Restraint Gland: EBAA 1100 Series for Ductile Iron connection.
EBAA 2000PV Series for C905 PVC connection.
ASTM A536 Ductile Iron Construction.
- Gasket: EBAA-Seal™ Mechanical Joint - SBR.
- Tie Rods: 7908RFCA – ASTM A193 Gr B7 Tie Rod.
7906RFCA – T-304 Stainless Steel material. T-316 SS available.
- Coating: Sleeve and flange – Fusion Bonded Epoxy per AWWA C-213.
End Gland – Mega Bond epoxy.



Note:
150 PSI working pressure.
Contact Robar for higher working pressures.



EXPANSION JOINTS

ROBAR 8088 / 8806 / 8908 / 8906 – Fabricated Steel Expansion Joint

ROBAR 8808 Expansion Joints are used in Steel pipelines where large longitudinal pipe movements are concentrated. Use for piping water, gas, oil and various chemicals.

MATERIAL SPECIFICATIONS:

| | |
|-------------------------|--|
| Flanges & Slip Pipe: | Stainless Steel or Chrome Plated Mild Steel Slip Pipes are recommended for most permanent applications. |
| Packing: | Standard packing SBR Rubber / Jute, special packings are available. |
| End Preparation: | Plain end – Bevelled for welding. Flanged end – C207 Class D – ANSI 150 lb. drilling, other flanges available. Grooved end also available. |
| Gaskets: | NBR (Buna-N) Rubber. |
| Fasteners and Coatings: | 8808 – Two Coats of Enamel with 5/8" electro-galvanized Bolts 8806 – Two Coats of Enamel with 5/8" T-316 SS Bolts 8908 – Corrosion Protective Epoxy with 5/8" electro-galvanized Bolts 8906 – Corrosion Protective Epoxy with 5/8" T-316 SS Bolts |



ROBAR 1900RSCHH – HDPE Restrained Coupling

The Robar 1900RSCHH universal wide-range restrained mechanical couplings allow for plain end connections between HDPE plain ended pipes of the same or different outside diameters.

MATERIAL SPECIFICATIONS:

- Used for *HDPE connections
- 1.25" working range on pipe OD
- Installation requires only a torque wrench
- Wide working range makes the 1900RSCHH easy to install even on out-of-round pipes
- Dynamically restrain axial movement of pipes by incorporating "Connex Gripping" technology
- Allow angular deflection before and after installation
- Can be customised to join & restrain †ductile & PVC to HDPE
- 1900RSCHH is NSF61 epoxy coated
- Tie rods are ASTM A193 Gr B7, meeting the requirements of AWWA M-11 for load ratings (stainless available on request)
- Restrained Coupling Adapter meets or exceeds the applicable requirements of:

AWWA C219
ASTMD2000



* Robar pipe inserts must be used.

† Contact your Sales Rep for details.



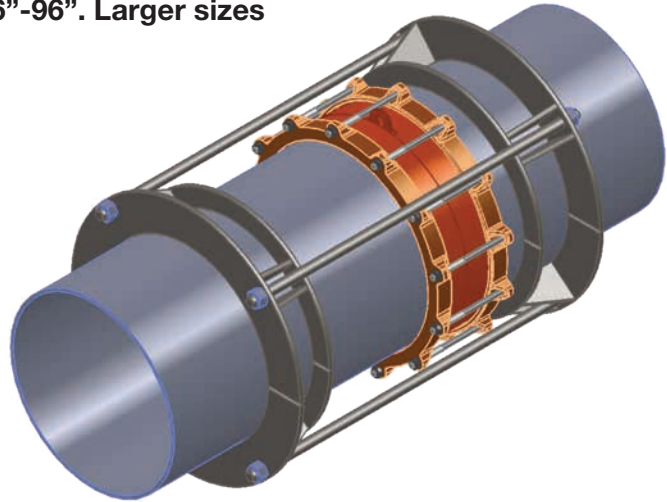
M-11 HARNESS

ROBAR M-11 Harness – for Steel Pipe

Joint Harness specified per AWWA M-11 are designed to restrain flexible couplings on steel pipelines. The harnesses will be supplied bare steel to allow for field welding into place. Sizes available 6”-96”. Larger sizes available on request.

MATERIAL SPECIFICATIONS:

- Restraint Rings: Carbon Steel per ASTM A193 grade B7.
Tie Rods: ASTM A193 grade B7.
Stainless steel available on request.
Twice as many rods required.
Coating: Bare, shop blasted.
Pressure: Design pressures from 50 PSI - 250 PSI.
Detailed in the AWWA M-11 manual.



*A fully integrated foundry and manufacturing facility.
Designing, Engineering and Manufacturing.*

ROBAR INDUSTRIES LTD.

SURREY

12945 – 78th Avenue
Surrey, BC V3W 2X8
Telephone 604.591.8811
Toll Free 1.800.663.6553
Fax 604.591.5288

SAINT-BRUNO-DE-MONTARVILLE

1475 rue Marie-Victorin
St-Bruno-De-Montarville, QC J3V 6B7
Téléphone 450.441.7525
Sans Frais 1.800.315.9525
Télécopieur 450.441.4894