

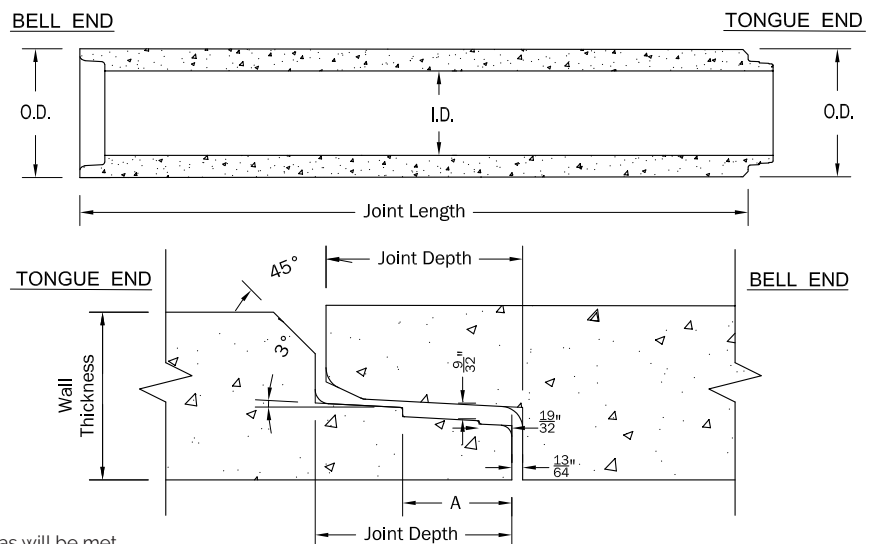


12" - 15" RCP

Tongue & Groove or Rubber Gasket
Use Heavy "C" Wall Class 5 Detail

Table of Dimensions and Weights

Pipe Inside Diameter (Inches)	Wall Thickness (Inches)	Joint Depth (Inches)	Tongue Depth "A" (Inches)	Bell Outside Diameter (Inches)	Tongue Outside Diameter (Inches)	Length (Feet)	Weight (Pounds Per Joint)
12"Ø	3"	3 35/64"	1 31/32"	18 19/64"	18 3/64"	8	1,260
15"Ø	3 1/4"	3 15/16"	2 11/64"	21 1/2"	21 1/4"	8	1,460

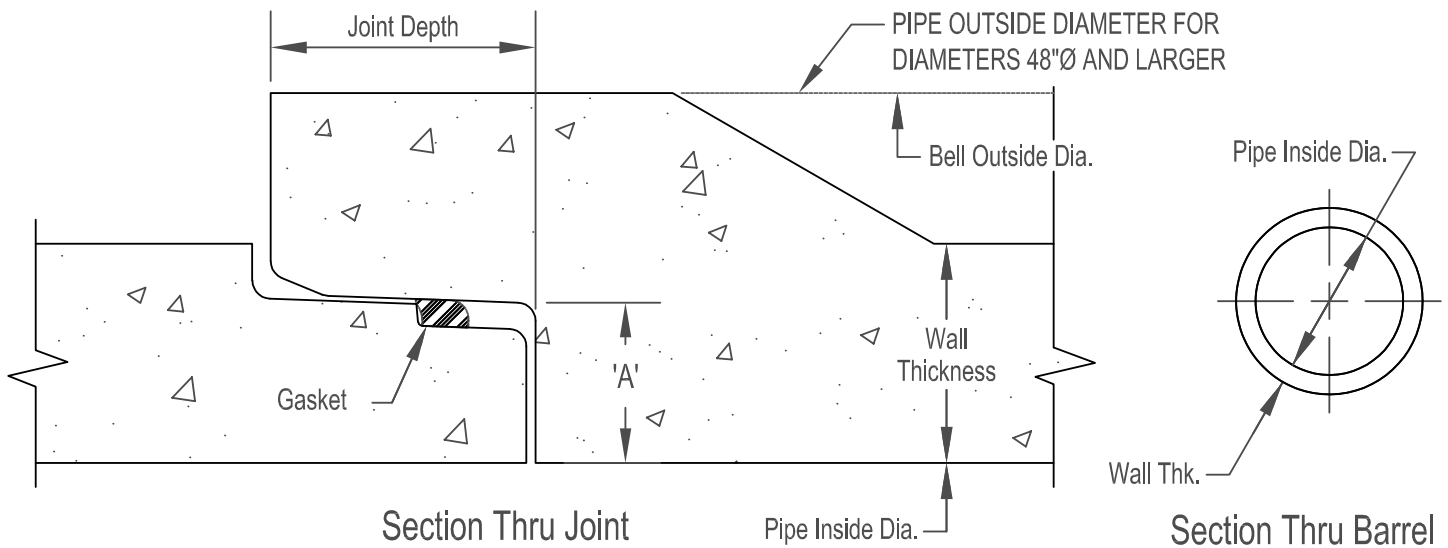


NOTES:

1. Pipe shall be made in accordance with ASTM C76 & C443.
2. Concrete strength is 6,000 PSI, per ASTM C-76, CL-5.
3. Steel reinforcing cage configuration may vary but all required areas will be met.

**18" - 84" RCP
Rubber Gasket Details**

Table Of Dimensions And Weight							
Pipe Inside Diameter (Inches)	Wall Thickness (Inches)	Joint Depth (Inches)	Bell Shoulder Depth "A" (Inches)	Bell Outside Diameter (Inches)	Pipe Outside Diameter (Inches)	Length (Feet)	Pounds Per 8' Joint
RCP with BELL							
18" Ø	3 1/4"	3 3/4"	2"	27 5/8"	24 1/2"	8'	1,960
24" Ø	3 1/4"	3 7/8"	2 11/16"	35 5/8"	30 1/2"	8'	2,580
30" Ø	3 1/2"	3 7/8"	2 7/8"	40 7/8"	37"	8'	3,270
36" Ø	4"	3 7/8"	2 11/16"	48 3/8"	44"	8'	4,520
42" Ø	5 1/4"	4 5/8"	2 15/16"	58 1/2"	52 1/2"	8'	7,080
RCP without BELL - Flush Wall Pipe							
48" Ø	5 3/4"	4 1/4"	3 1/16"	—	59 1/2"	8'	8,500
54" Ø	5 1/2"	4 1/2"	3 3/8"	—	65"	8'	8,720
60" Ø	6"	5"	3 11/16"	—	72"	8'	10,380
66" Ø	7 1/4"	5 1/2"	4"	—	79"	8'	13,960
72" Ø	7 3/4"	5 1/2"	4 25/32"	—	87 1/2"	8'	16,140
78" Ø	8 1/4"	6"	5 1/64"	—	94 1/2"	8'	18,980
84" Ø	8 3/4"	6 1/8"	5 3/32"	—	101 1/2"	8'	21,810



NOTES:

1. Pipe shall be made in accordance with ASTM C76 & C443.
2. Minimum concrete design strength, per ASTM CL-III, IV or V.
3. Steel reinforcing cage configuration may vary but all required areas will be met.

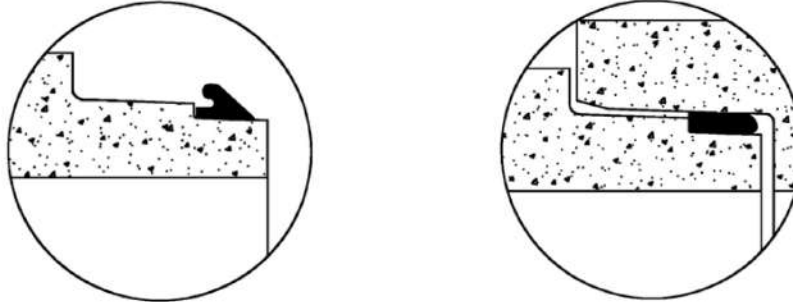
Section I - Product and Company Identification						
Material Identity (Trade Names): Concrete Pipe and Box						
Manufacturer's Name: AmeriTex Pipe			Emergency Telephone Number: 830.372.2300			
Address: 3960 Hwy 90 East Seguin, TX 75155			Telephone Number for Information: 830.372.2300			
Section II - Hazardous Ingredients/Identity Information						
Hazardous Components (Chemical Identity/Common Names)	CAS No.	OSHA PEL	ACGIH TLV	MSHA PEL	%	
Quartz (SiO ₂) $\frac{10\text{mg}/\text{M}^3}{\% \text{SiO}_2 + 2}$ (as free Crystalline Silica)						
Section III - Physical/Chemical Characteristics						
Boiling Point	N/A	Specific Gravity (H ₂ O = 1)		N/A		
Vapor Pressure (mm Hg)	N/A	Melting Point		N/A		
Vapor Density (Air = 1)	N/A	Evaporation (Butyl Acetate = 1)		N/A		
Solubility in Water:	Not Soluble					
Appearance and Odor:	Odorless Solid					
Section IV - Fire and Explosion Hazard Data						
Flash Point: Not Combustible	Flammable Limits: Not Flammable		LEL: N/A	UEL: N/A		
Extinguishing Media: This material is noncombustible. Use extinguishing media appropriate to surrounding fire.						
Unusual Fire and Explosion Hazards: None						
Section V - Reactivity Data						
Stability:	Unstable		Conditions to Avoid: None			
	Stable	X				
Incompatibility (Materials to Avoid): None						
Hazardous Decomposition or Byproducts: None						
Hazardous Polymerization: Not known to occur						
Section VI - Health Hazard Data						
Route(s) of Entry:	Inhalation?	yes	Skin?	no	Ingestion?	yes
Health Hazards: Sawing or grinding may result in release of dust particles which may cause minor irritation of the eyes or nose.						
Chronic Effects: Result in lung disease (Silicosis) if exposed to excessive amounts for prolonged periods.						
Section VI - Health Hazard Data (continued)						
Carcinogenicity:	NTP	IARC Monographs	OSHA Regulated			
	no	no	no			
Signs and Symptoms of Exposure: Irritation of the eyes and nose, shortness of breath.						
Medical Conditions Generally Aggravated by Exposure: Pre-existing lung disease such as Emphysema or Asthma.						
Emergency and First-Aid Procedures:						
Eyes: Flush eyes generously with water for 15 minutes. If irritation persists, contact a physician.						
Inhalation of Dust: Remove exposed person to fresh air and support breathing as needed. Consult a physician immediately if irritation persists.						
Section VII - Precautions for Safe Handling and Use						
Steps to Be Taken in Case Material is Released or Spilled: Sweep up and discard.						
Waste Disposal Method: Dispose of as common waste.						
Precautions to Be Taken in Handling and Storing: None						
Precautions: Wear NIOSH approved respirator and tight fitting goggles when sawing or grinding.						
Section VIII - Control Measures						
Respiratory Protection: NIOSH approved particulate respirator.						
Ventilation:	Local Exhaust:		Other:			
	Mechanical (General): In confined area.		Special:			
Skin Protection:	Eye Protection: Tight fitting safety goggles.					
Other Protective Clothing or Equipment: None						
Work/Hygienic Practices: N/A						

Disclaimer: The information contained in this Material Safety Data Sheet is based on technical data that the company believes to be accurate.



TYPE 4G & 4F

PROFILE GASKETS SINGLE STEP JOINTS



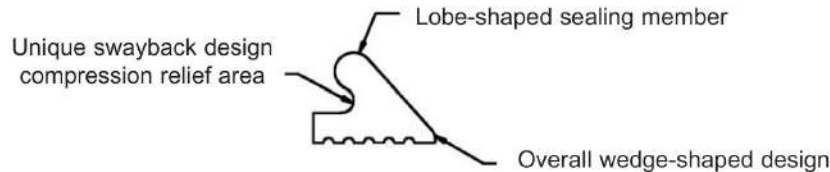
The Type 4G & 4F Profiles Employ Special Cross Section Features For The Single Step Concrete Joint Design.

Press-Seal Gasket has always been a pioneer in the development of pipe joining solutions, and our 4G and 4F Profile Gaskets are the latest in a series of design breakthroughs.

Single Step joints make concrete pipe and manhole production easier and more profitable, and the 4G and 4F make sealing of single step joints for concrete pipe and manholes reliable and economical. Press-Seal Gasket offers the Type 4G and 4F profiles in a wide variety of sizes and compounds for virtually any single step joint application. These gaskets represent years of successful use under the most demanding conditions. Our engineering department can easily determine which 4G and 4F is right for your sanitary, storm, manhole, and box culvert needs. We also offer complete joint design service for those producers interested in converting equipment to the single step design. Re-tooling to make the single step joint design makes sense for progressive producers, whether converting existing O-Ring joint equipment or purchasing new.

All Type 4G & 4F designs meet and/or exceed the Physical Property Requirements of **ASTM C-443 & ASTM C-361.**

Contact your Territory Manager or our Customer Service Department for more information.



THESE SPECIAL DESIGN FEATURES COMBINED WITH THE HIGHEST QUALITY RUBBER COMPOUNDS PROVIDE THE PRECASTER, CONTRACTOR, AND ENGINEER WITH A WATERTIGHT JOINT EVERY TIME.

Providing products and services that protect our planet's clean water supply.



PRESS-SEAL GASKET CORPORATION

P.O. Box 10482, Fort Wayne, Indiana 46852

Phone: (260) 436-0521 (800) 348-7325 Fax: (260) 436-1908 E-mail: sales@press-seal.com Web: www.press-seal.com

Type 4G and 4F gaskets are used to solve inherent problems with pre-lubricated gaskets as well as both rolling and confined O-Ring Joint Designs.

Available for Concrete Pipe, Manholes and Box Culverts.

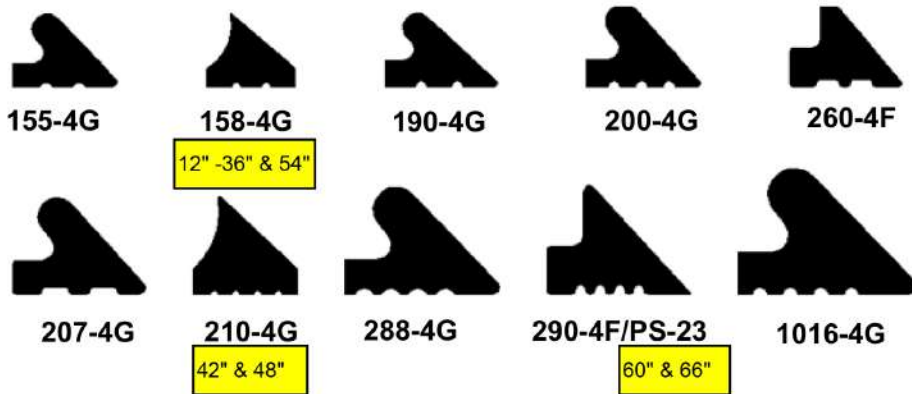
TYPE 4G AND 4F ADVANTAGES

Easier Installation

- * Less homing force required due to wedge shaped design.
- * Self centering during joining allows for easier alignment.
- * Swayback compression relief prevents joint "pushback" effect.
- * Easier to lubricate, install, and equalize.
- * Less likely to roll, pinch, or break bells.

Superior Design and Performance

- * More gasket surface contact area against joint surfaces.
- * Single step joint much easier and less expensive to produce than the confined O-Ring joint.



Type 4G & 4F gaskets meet and/or exceed the physical property requirement of ASTM C-443 & ASTM C-361

Type 4G & 4F gaskets are available in regular and oil resistant compounds.

Gasket Type	Gasket Base	Gasket Height	Annular Space
155-4G	.885	.618	.326
158-4G	.749	.622	.326
190-4G	.951	.624	.384
200-4G	.962	.700	.398
260-4G	.950	.775	.422
207-4G	1.125	.818	.450
210-4G	.880	.826	.452
288-4G	1.301	.908	.500
290-4F/PS-23	1.23	.927	.500
1016-4G	1.500	1.063	.600

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CONCRETE PIPE and MANHOLE GASKETS

DESIGN REQUIREMENTS

Design

Proper gasket design requires selection of materials, analysis of the joint configuration, and determination of the proper gasket profile.

Materials

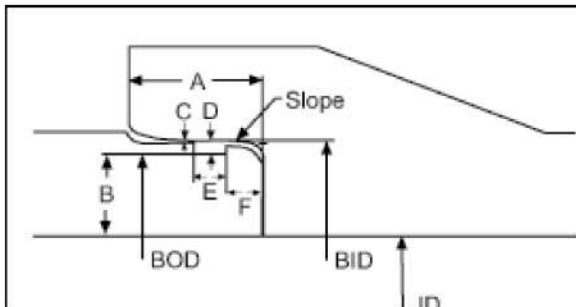
Several different rubber compounds are commonly used for concrete pipe gaskets. Selection of the appropriate compound depends on the physical properties and chemical resistance needed for the specific application. The following rubber compounds are standard materials for gasket extrusion. Special compounds are also available upon request.

- **Polyisoprene (IR)** - Properties are similar to those of natural rubber. Low cost; 1.0-3.5 ksi tensile strength; 300-750% elongation; (-)60-180°F temperature range; excellent compression set and rebound rating; excellent cracking, tear, abrasion, water, acid and impact resistance.
- **Neoprene (chloroprene) (CR)** - Very good ozone, cracking and sunlight resistance; 0.5-2.5 ksi tensile strength; 100-800% elongation; (-)80-300°F temperature range; excellent flame, abrasion, impact, oxidation and acid resistance; good water, petroleum and hydrocarbon oil resistance.
- **Nitrile (NBR)** - Excellent water, tear, abrasion, hydrocarbon oil and petroleum resistance; 1.0-2.5 ksi tensile strength; 400-650% elongation; (-)40-300°F temperature range; excellent compression set.

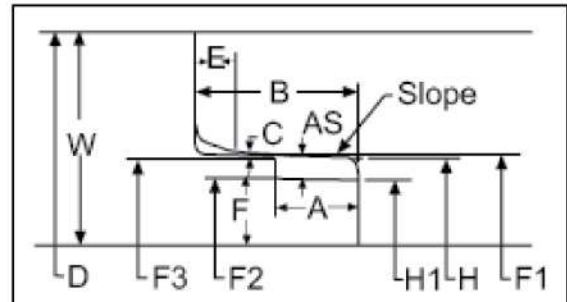
Joint Configuration

Each gasket is designed specifically to fit the joint configuration provided by the pipe supplier. As a minimum, the following dimensional information must be supplied for joint evaluation and gasket design:

O-Ring Joint



Single Offset Joint



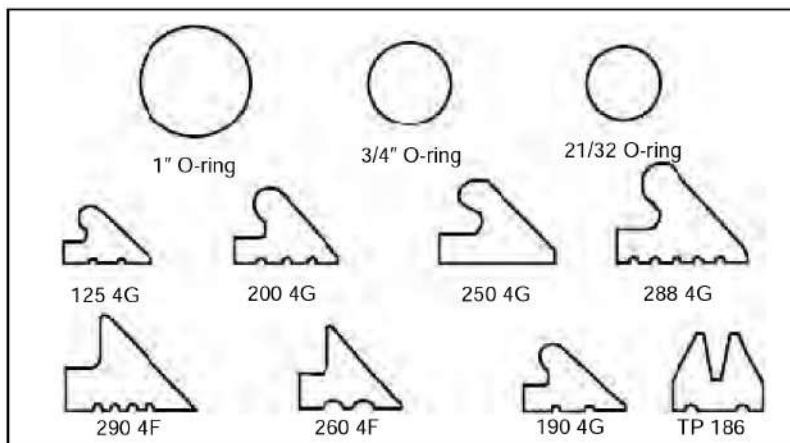
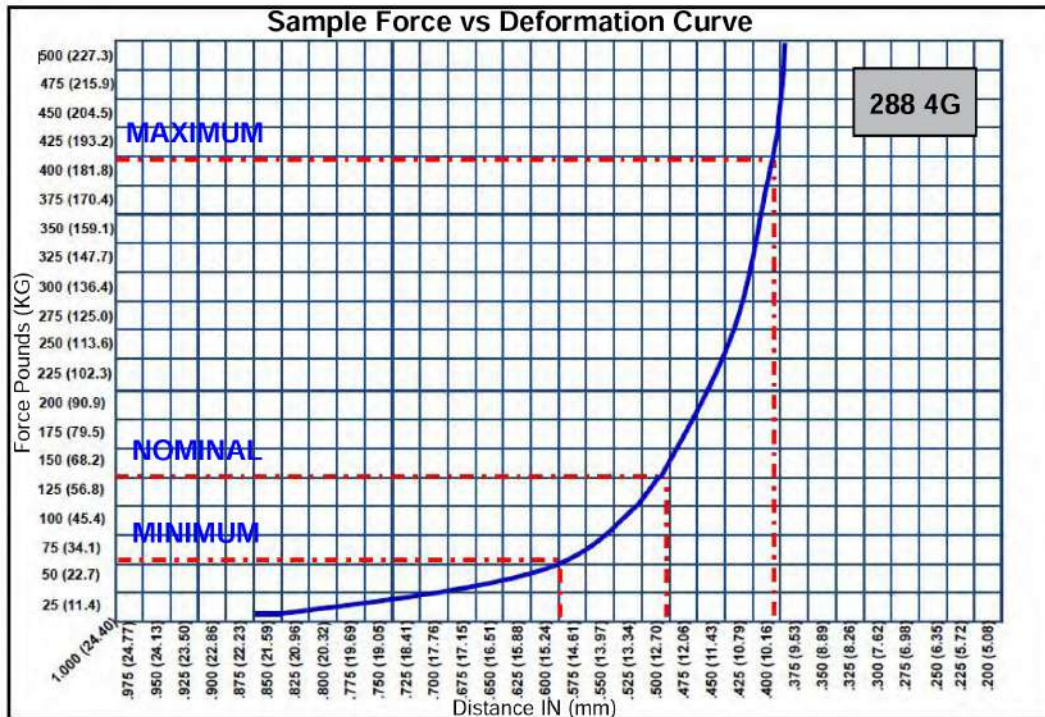
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CONCRETE PIPE and MANHOLE GASKETS

DESIGN ANALYSIS

Each gasket profile is analyzed for its overall performance with regard to the specified joint configuration. This evaluation includes determination of the nominal, minimum and maximum joint opening and the respective deformations at these distances. Each gasket is then tested at our research laboratory and the resulting forces at these deformations provided as a force-deformation curve. These forces are evaluated for minimum sealing force and maximum bell force to prevent leaking or bell cracking.



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CONCRETE PIPE and MANHOLE GASKETS

SEALING PERFORMANCE

All profile gaskets for concrete pipe are designed to meet the physical requirements of ASTM C 443 - *Standard Specification for Joints for Circular Concrete Sewer and Culvert Pipe, Using Rubber Gaskets* and ASTM C 1619 - *Standard Specification for Elastomeric Seals for Joining Concrete Structures*. O-ring gaskets for concrete pipe meet the physical requirements of ASTM C 361- *Standard Specification for Reinforced Concrete Low-Head Pressure Pipe*. In addition to the physical property tests required for the rubber, each standard also includes optional plant hydrostatic testing to 13 psi for C 443 and C 1619 pipe and up to 120% of the internal working pressure for C 361 pipe.

Field testing is performed to the pressures indicated in the local project requirements. Testing is accomplished in accordance with the respective ASTM standards covering vacuum (negative air pressure), air or hydrostatic testing. As a minimum, all Press-Seal Corporation concrete pipe gaskets will meet or exceed field test pressures of 13 psi. Gaskets with ratings greater than 13 psi can be designed upon request.

PHYSICAL PROPERTIES TESTING

Press-Seal Corporation maintains a full-time internal testing laboratory for evaluating compound materials and extruded cross-sections. As a minimum, each gasket is tested and certified to the following requirements:

Physical Requirements for Elastomeric Seals for Concrete Pipe Meeting ASTM C-1619 CLASS C		
Tests	Limits	Units
Tensile Strength, minimum	1200	psi
Elongation, minimum	350	%
Hardness, Type A durometer	30 to 70	durometer
Low-Temperature Hardness, max. increase	15	durometer
Compression Set, maximum	25	%
Ozone Resistance	no cracks	
Accelerated Aging:		
Tensile Strength, max. decrease	15	%
Elongation, max. decrease	20	%
Hardness, max. decrease	8	durometer
After Water Immersion:		
Volume, max. increase	5	%

Additional physical requirements for specialty compounds can be provided for review and approval.

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GULF STATES LUBE
PIPE JOINT LUBRICANT
100% Pure Vegetable Soap
Certified to ANSI/NSF 61



Benefits

- No mixing necessary
- Will not deteriorate rubber or plastic gaskets
- Suitable for all types of pipelines, including potable water pipelines.
- Will not support bacteria
- Water soluble
- Contains no petroleum.
- The product is non-toxic and contains no carcinogens

Application

- Clean all joint surfaces. For "O" ring Gaskets, lubricate thoroughly before positioning in recess. For Profile Gaskets, position gasket in recess/offset and lubricate exposed gasket area.
- Apply an even amount of Gulf States Lube to the inside of bell and outside of spigot.
- Assemble the joints according to pipe manufacturer's directions. Proper installation procedures are important for successful coupling.

IMPORTANT: Suggestions for the use of this product are based on tests believed to be reliable. However, the user should determine suitability for the intended use by his/her own evaluation. Because the use of this material is beyond our control, neither the seller nor the manufacturer shall be liable for any injury, loss or damage, direct or consequential, arising out of the use or inability to use this product. Seller and manufacturer's sole obligation shall be replacement of material proved to be defective.

Storage and Handling

The Gulf States Lube should be stored in the manufacturer's containers until ready to use. The product is packaged in 3.5 gallon pails-64 per pallet, and 1 gallon pails-144 per pallet.

CAUTION: Eye irritant. In case of contact with eyes, flush with water for 15 minutes. Rinse off skin with water. If irritation persists, consult a physician.

Preparation & Jointing

Doing This



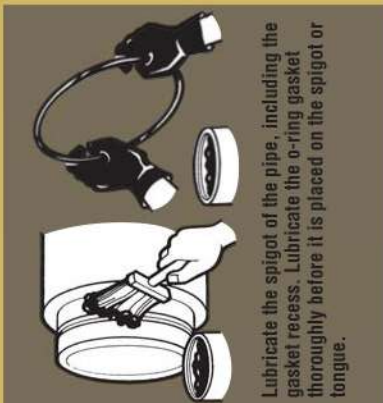
Carefully clean all dirt and foreign substances from the jointing surfaces of the bell or groove end of pipe.



Lubricate bell jointing surface liberally. Use a brush, cloth, sponge or gloves to cover entire surface. Only approved lubricant should be used.



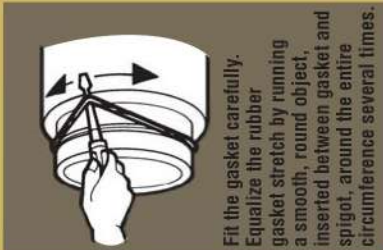
Carefully clean spigot or tongue end of pipe, including the gasket recess.



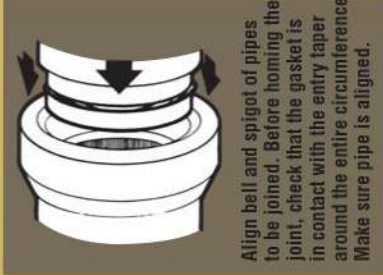
Lubricate the spigot of the pipe, including the gasket recess. Lubricate the o-ring gasket thoroughly before it is placed on the spigot or tongue.



Place a clean, dry offset gasket onto a clean, dry spigot. Lubricate the gasket once it is placed on the spigot.

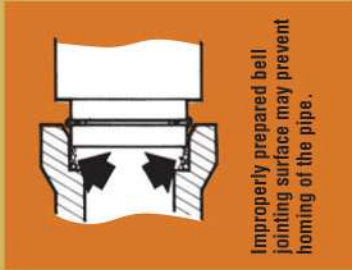


Fit the gasket carefully. Equalize the rubber gasket stretch by running a smooth, round object, inserted between gasket and spigot, around the entire circumference several times.



Align bell and spigot of pipes to be joined. Before homing the joint, check that the gasket is in contact with the entry taper around the entire circumference. Make sure pipe is aligned.

Prevents This



Improperly prepared bell jointing surface may prevent homing of the pipe.



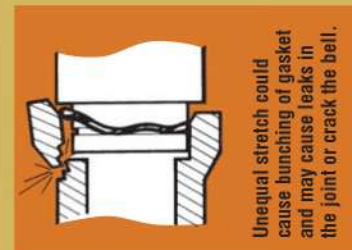
A bell not lubricated or improperly lubricated may cause gasket to roll and possibility damage the bell.



Improperly prepared spigot and gasket recess may prevent gasket from sealing properly.



Gasket may twist out of recess, and excessive force will be required to push the pipe to the home position if lubricant is insufficient.



Unequal stretch could cause bunching of gasket and may cause leaks in the joint or crack the bell.



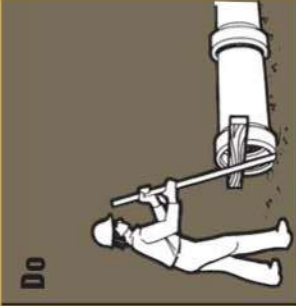
Improper alignment can dislodge gasket causing leaks or possibly break the bell.

Jointing Procedures

Small Pipe



Do Wedge bar against a wood block placed horizontally across the bell end of the pipe. Pressure on the bar pushes the pipe into the home position.



Do Mechanical pipe pullers or "come-along" devices are anchored to an installed pipe section several sections back and connected by a cross beam to the section to be installed. By mechanical force, the joint is brought into the home position.



Do Join by placing a dead man blocking inside the installed pipe several sections back from the last installed section. This is connected to a wooden cross beam placed across the bell end of the pipe section being installed by a chain or cable and mechanical pipe puller. By mechanical force, the joint is brought into home position.



Don't Shoving pipe sections together with excavating equipment should be avoided unless provisions are made to prevent localized overstraining of the pipe joint.

Backfilling



Do Approved backfill material should be placed carefully along the pipe and compacted under the haunches. Material should be brought up evenly in layers on both sides of the pipe.



Don't Backfill material should not be bulldozed into the trench or dropped directly on the pipe. Material should be placed in such a manner so as not to displace or damage the installed pipe.



Do Backfill material should be readily compactible and job not contain large stones, boulders, frozen lumps or other objectionable material. Backfill should be placed and compacted in layers as specified.

Medium Pipe

Backfilling Around Pipe

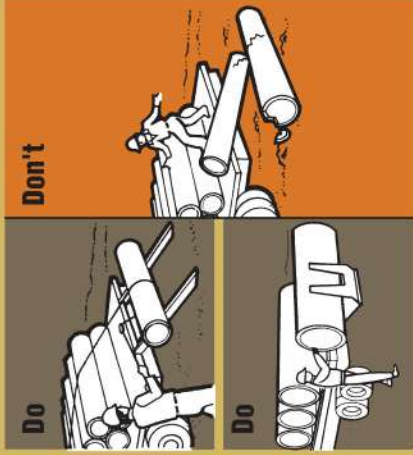
Large Pipe

Final Backfill

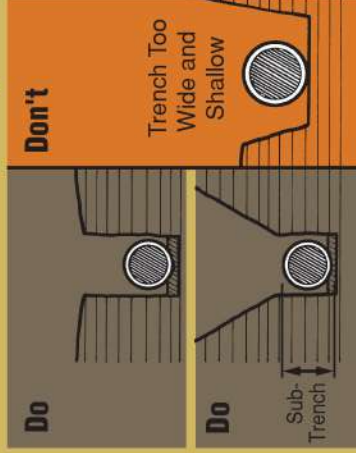


Don't

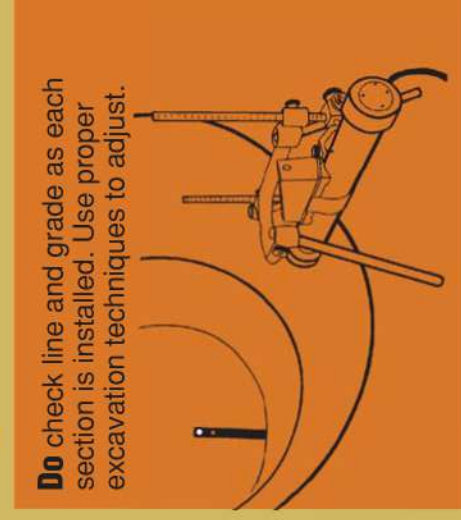
Unloading



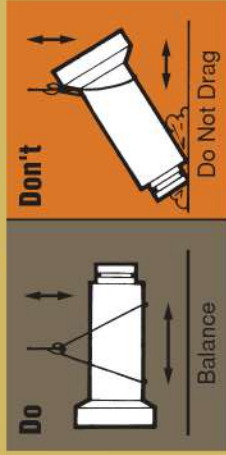
Excavation & Foundation Preparation



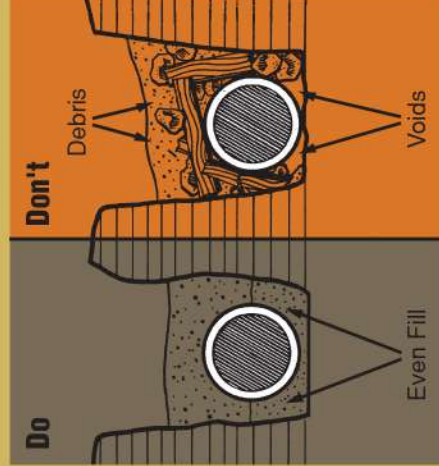
Alignment Line & Grade



Handling



Pipe Bedding



Stockpiling

