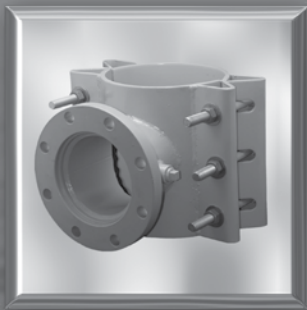
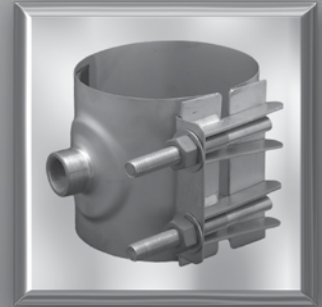
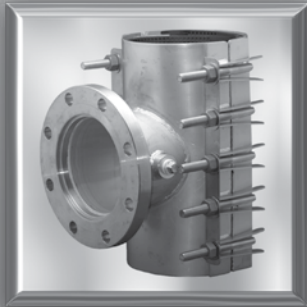


# **WATERWORKS**



**Cast and fabricated waterworks fittings.  
Proven and time tested.  
Quality you can depend on.**



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# TERMS AND CONDITIONS

**ROBAR**, as used herein, means **Robar Industries Ltd.** a British Columbia corporation, **Les Produits Industriels Robar Inc.** a Quebec corporation and **Robar Distributors Ltd.**, a British Columbia corporation.

**ENTIRE AGREEMENT.** The terms and conditions stated herein constitute the entire agreement between the parties and any contrary or additional terms and conditions shall be of no effect unless agreed to in writing by an authorized officer of ROBAR. If these terms and conditions conflict with or are added to by any terms and condition of the purchaser's order, these terms and conditions will exclusively govern and will supersede the terms and conditions of the purchaser's order. Any change in these terms and conditions must be specifically agreed to in writing and signed by an authorized officer of ROBAR before becoming binding on ROBAR.

**PRICES.** All prices are stated F.O.B. ("Ex-Works ROBAR") ROBAR's shipping warehouse and are subject to change without notice. Prices in effect at time of shipping will apply unless a prior written quotation was obtained.

**FREIGHT.** All shipments to purchaser will be freight collect or prepaid-and-charge, unless the shipment qualifies for freight allowance as stated in the Freight Allowance Policy located in the price list.

**TERMS OF PAYMENT.** All invoices are due within 30 days. A 2% prompt pay discount may be calculated on the before-tax amount and deducted if paid within 20 days from date of invoice. A service charge of 2% per month, 24% per annum will be charged on all overdue accounts.

**DELIVERIES AND DELAYS.** ROBAR shall not be held liable for any delay or default in delivery of products arising out of or resulting from any cause beyond the control of ROBAR. This includes armed conflict or economic dislocation resulting therefrom; embargoes, shortage of labor or work stoppage beyond the control of ROBAR; shortages of raw materials, fuel, energy, production facilities or transportation; civil disorders of any kind; fires; floods; disaster and accidents. If such delays exceed 45 days, ROBAR may, by written notice to the purchaser, cancel the affected order as to any products then undelivered without liability. Any claim for shortages or damage in transit must be made directly with the carrier. Any claims for shortages of parts must be made within three days of receiving shipment and only if such shortages and/or damage are noted on the carrier's Bill of Lading.

**TAXES.** All prices are stated before taxes. Taxes will be added when applicable and are the responsibility of the purchaser.

**RETURNED GOODS.** Returned goods will not be accepted without prior authorization. All goods approved for return will be subject to a restocking charge, the amount of which will be determined after an evaluation of the customer's requested return. Products made to the purchaser's specification and requiring special materials or sizing may not be returned. Ask for ROBAR's returned goods policy.

**CANCELLATION OF ORDERS.** Any orders that are canceled will be subject to charges to the extent of the amount of labour and material already expended. Cancellation of orders already in transit will not be accepted and will be subject to the Returned Goods Policy stated above.

**DISCLAIMER.** ROBAR reserves the right to furnish substitutes for materials which cannot be reasonably obtained because of reasons beyond ROBAR's control.

**TITLE AND RISK.** Title and risk of loss or damage to the goods passes to the purchaser upon delivery to the carrier regardless of who arranges or pays for the shipping.

**WARRANTY.** (see ROBAR's Limited Warranty).

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# WARRANTY

## LIMITED WARRANTY

All products manufactured and sold by ROBAR Industries Ltd. are warranted to be free from defects in material and factory workmanship for a period of one year from purchase. Under this warranty, ROBAR will, at its sole option, adjust, repair or replace the defective products or provide a full refund of the purchase price of the defective products.

ROBAR WILL NOT BE LIABLE FOR ANY CONSEQUENTIAL OR INCIDENTAL DAMAGES, LOSSES, OR EXPENSES, INCLUDING DAMAGE TO PROPERTY ARISING FROM ANY CAUSE.

All claims under this warranty must be made in writing immediately upon discovery of the product defect and sent to the Head Office of the company in Surrey, B.C., Canada. Any defective products must be held for inspection by a ROBAR representative.

ROBAR does not make any warranty of the merchantability or the fitness for a particular purpose of the products and/or parts manufactured and sold. Any references by ROBAR to the purchaser's specifications or requirements are strictly for identification purposes and the onus is entirely on the purchaser and/or the end user to select the appropriate product to fit an application. ROBAR does not warranty any products if they are used in an application other than what they are intended for or if they are misused.

This warranty is in lieu of all other warranties, whether express, implied or statutory, including any warranty of merchantability or fitness for a particular purpose. The purchaser's sole and exclusive remedy for any defective product is a claim under this warranty. This warranty may not be changed except by agreement in writing signed by an officer of ROBAR.

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## ROBAR STANDARD MATERIAL SPECIFICATIONS

The following standards are applicable to ROBAR products:

ANSI B16.5	Steel pipe flanges and flanged fittings.
ASTM A48	Standard specifications for gray iron castings.
ASTM A536	Standard specifications for ductile iron castings.
ASTM A743	Standard specifications for castings.
ASTM A781	Castings, steel and alloy, common requirements for general use.
ASTM D1330	Specifications for rubber gaskets.
ASTM F593	Stainless steel bolts, hex cap screws and studs.
ASTM F594	Stainless steel nuts.
AWWA C111	Rubber-gasket joints for ductile-iron pressure pipe and fittings.
AWWA C210	Liquid epoxy coating systems for the interior and exterior of steel water pipelines.
AWWA C213	Fusion bonded epoxy coating for the interior and exterior of steel water lines.
AWWA C219	Bolted, sleeve-type couplings for plain-end pipes.



Certified to  
NSF/ANSI 61

Only those products bearing the NSF61 logo stamp are compliant.

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# GASKET SELECTION CHART

DESCRIPTION	MAXIMUM SERVICE TEMPERATURE <sup>1,2,3</sup>				COMMON USES
	MIN		MAX		
	°C	°F	°C	°F	
SBR <sup>4</sup> (Styrene Butadiene) (Buna S)	-30°	-22°	65°	150°	Fresh water, salt water, sanitary sewage.
Nitrile (NBR) <sup>4</sup> (Acrylonitrile Butadiene) (Buna N)	-30°	-22°	70°	160°	Hydrocarbons, fats, oils, greases, chemicals <sup>4</sup> .
Neoprene® (CR) (Polychloroprene)	-30°	-22°	70°	160°	Fresh water, salt water, sanitary sewage.
EPDM (Ethylene Propylene)	-40°	-40°	125°	250°	Fresh water, salt water, sanitary sewage, hot water.
Viton® <sup>4</sup> ; Fluorel® (FPM) <sup>4</sup> (Fluorocarbon)	-30°	-22°	150°	300°	Hydrocarbons, acids, vegetable oils, petroleum, Glycol.

- Note:
1. Maximum service temperatures listed are intended as general guidelines.
  2. For service temperatures greater than those listed, consult ROBAR for specific recommendations.
  3. Minimum service temperature is not usually a meaningful parameter for piping gaskets; however, low temperatures during pipeline installation may necessitate precautions. Consult ROBAR for pertinent recommendations.
  4. Not recommended for Toluene or Benzene.

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# PIPE OUTSIDE DIAMETER CHART (OD)

NOMINAL SIZE		STEEL SIZE		DUCTILE SIZE		CAST SIZE	SEWER PIPE	ASBESTOS CEMENT SIZE			
IN.	MM.	STD. STEEL	IPS PVC	C900 C905 PVC	DUCTILE IRON	CAST IRON	SDR35	A/C ME	A/C RB CLASS 100	A/C RB CLASS 150	A/C RB CLASS 200
2.5	65	2.88									
3	75	3.50			3.80	3.96		3.74 (100) 3.84 (150)	3.93 - 3.95	4.03 - 4.13	4.17 - 4.29
4	100	4.50			4.80	5.00	4.21	4.64 (100) 4.81 (150)	4.70 - 5.26	4.97 - 5.32	5.22 - 5.57
6	150	6.63			6.90	7.10	6.28	6.91	7.05 - 7.48	7.10 - 7.43	7.23 - 7.60
8	200	8.63			9.05	9.30	8.40	9.11	9.22 - 9.75	9.39 - 9.75	9.39 - 9.81
10	250	10.75			11.10	11.40	10.50	10.89 - 11.66	11.25 - 11.83	11.85 - 12.26	11.77 - 12.31
12	300	12.75			13.20	13.50	12.50	12.99 - 13.92	13.37 - 14.10	14.10 - 14.35	14.03 - 14.55
14	350	14.00			15.30	15.65		15.07 - 16.22	15.26 - 15.89	16.41 - 16.85	16.41 - 16.95
16	400	16.00			17.40	17.80		17.15 - 18.62	17.34 - 18.03	18.62 - 19.20	18.65 - 19.30
18	450	18.00			19.50	19.92	18.70	19.90 - 22.18	20.55 - 20.65	21.26 - 22.5	19.80 - 23.14
20	500	20.00			21.60	22.06		22.12 - 24.66	22.68	22.96 - 23.64	25.02 - 25.42
24	600	24.00			25.80	26.32	24.80	26.48 - 29.62	27.15 - 27.30	28.32 - 28.75	29.98

IN.	MM.	STEEL	DUCTILE / C905	IN.	MM.	STEEL	DUCTILE / C905
30	750	30.00	32.00	48	1200	48.00	50.80
36	900	36.00	38.30	54	1370	54.00	57.56
42	1050	42.00	44.50	60	1524	60.00	61.30

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# ROBAR PRODUCT CODE TABLE

	<b>1</b>	<b>4</b>	<b>0</b>	<b>8</b>
	<u>1st Digit</u> Product Category Code	<u>2nd Digit</u> Material Code for Major Components	<u>3rd Digit</u> Special Requirements Code	<u>4th Digit</u> Fastener Material Code
0			No Special Requirements	No Fasteners
1	Coupling	Rubber	Cathodically Fitted	
2	Water Service Saddle		Special Requirements (Specify)	
3	Sewer Service Saddle			
4	Restraint Lug	Enamel Shop Coat Over Ductile Iron	Fabricated Reducing Coupling	Ductile Iron
5	Repair Clamp	Epoxy Coating Over Ductile Iron	Fabricated Long Barrel Coupling	Epoxy Coating Over Ductile Iron
6	Tapping Sleeves	Stainless Steel		Stainless Steel
7	Flange Coupling Adapter	Bronze Saddle or Wide Range Coupling		Epoxy Coating Over Mild Steel with Anodes
8	Expansion Joint	Enamel Shop Coat Over Mild Steel	Isolation Feature	High Strength Low Alloy Steel
9	SS Pipe Insert	Epoxy Coating Over Mild Steel	Wide Range Coupling	Epoxy Coating Over Mild Steel

Note: Not applicable to EBAA products.

## ROBAR Product Code:

ROBAR employs a brief product code for reasons of control and abbreviation. To interpret a code, ie "1408", read down each column and find the representative number. The number "1" in the first column represents a ROBAR coupling. The number "4" in the second column indicated that the majority of the product is made of enamel coated ductile iron. The number "0" in the third column states that there are no special requirements. The number "8" in the fourth column represents High Strength Low Alloy Steel as being the material used for the fasteners, ex. bolts, nuts, straps.

This chart will help define the quality ROBAR product best suited to fulfilling your waterworks requirements.

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# GLOSSARY

AC	Asbestos Cement
ASTM	American Society for Testing and Materials
ANODE	Made from an alloy that will generate current to protect the fitting from corrosion.
ANSI	American National Standards Institute
AWWA	American Water Works Association
BNQ	Bureau Normes De Quebec
CATHODICALLY PROTECTED	Designed for electrical continuity throughout the entire fitting. Such fittings are often used with sacrificial anodes for maximum galvanic and corrosion protection of the fitting.
CC	Corporation Thread (AWWA Taper thread)
CENTER SLEEVE	The center portion of a coupling. (Also called the barrel or center ring.)
DI	Ductile Iron
END RINGS	The part of a coupling that accepts bolts to apply thrust to the gasket creating a seal to the pipes being joined. (Also called the follower or end plate.)
EPDM	Ethylene Propylene
E/C	Electric Conductivity
HDPE	High Density Polyethylene
HSLA STEEL	High Strength Low Alloy Steel
ID	Inside Diameter
IP	Iron Pipe Thread
IPS	Iron Pipe Size
MS	Mild Steel
NBR (Buna N)	Acrylonitrile Butadiene (Rubber gasket material)
NC	National Coarse (In reference to thread pitch)
NSF	National Sanitation Foundation
OD	Outside Diameter
PSI	Pounds Per Square Inch
PVC	Polyvinyl Chloride
RB	Rough Barrel
SBR (Buna S)	Styrene Butadiene (Rubber gasket material)
SDR	Standard Dimension Ratio (Nominal pipe outside diameter/minimum wall thickness) - Generally associated with plastic pipe series.

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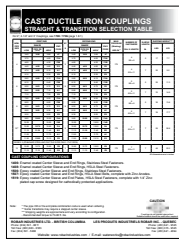
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# SECTION 1 COUPLINGS



**Straight and Transition  
Coupling Table**

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**Reducing  
Coupling Table**

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**1408 / 1406  
1408R / 1406R**

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**1506  
1506R**

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**1507  
1507R**

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**1519  
1519R**

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**Multi-Fit  
Couplings**

Page 1.7.1



**1606**

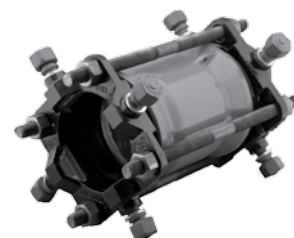
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**Fabricated Couplings**

**1808 / 1906  
1848 / 1946  
1858 / 1956**

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**EBAA 3800**

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# CAST DUCTILE IRON COUPLINGS STRAIGHT & TRANSITION SELECTION TABLE

For 2", 2-1/2" and 3" Couplings, see 1708 / 1706 (page 1.8.1)

NOM. PIPE SIZE	FIRST END				BY  X	SECOND END				MAX. PRESSURE (Working)  LBS./IN. <sup>2</sup>	NUMBER OF FASTENERS  DIA. X LENGTH	SLEEVE LENGTH  IN.	SHIPPING WEIGHT***	
	RANGE			END CODE		RANGE			END CODE				LBS.	KG.
	LOW	PIPE OD (Actual)	HIGH*			LOW	PIPE OD (Actual)	HIGH*						
4	3.45	3.50	3.60	4T	X	3.45	3.50	3.60	4T	175	4 5/8 x 8	5	17	7.7
	3.75		4.05	F3A		3.75		4.05	F3A					
	4.05		4.35	F3B		4.05		4.35	F3B					
	4.40	4.50	4.60	D3		4.40	4.50	4.60	D3		4 5/8 x 11	7	20	9.0
	4.74	4.80	5.10	A1		4.74	4.80	5.10	A1					
	5.10		5.30	E5		5.10		5.30	E5					
6	5.85	6.00	6.15	F3A	X	5.85	6.00	6.15	F3A	175	5 5/8 x 8	5	25	11.3
	6.15		6.45	F3B		6.15		6.45	F3B					
	6.50	6.63	6.70	D3		6.50	6.63	6.70	D3					
	6.86	6.90	7.10	A1		6.86	6.90	7.10	A1					
	7.15		7.35	E5		7.15		7.35	E5					
	8	7.90	8.00	8.25		F3A	X	7.90	8.00		8.25	F3A	175	6 5/8 x 8
8.25			8.55	F3B	8.25			8.55	F3B					
8.55		8.63	8.75	D3	8.55	8.63		8.75	D3	6 5/8 x 11	7	39		
8.99		9.05	9.30	A1	8.99	9.05		9.30	A1					
9.30			9.50	E5	9.30			9.50	E5					
10**		9.85	10.00	10.20	F4A	X		9.85	10.00	10.20	F4A	175		7 5/8 x 11
	10.20		10.50	F4B	10.20			10.50	F4B					
	10.60	10.75	10.90	D4	10.60		10.75	10.90	D4					
	11.10	11.10	11.40	B2	11.10		11.10	11.40	B2					
	11.55		11.75	A1	11.55			11.75	A1					
	11.90	12.00	12.10	E5	11.90		12.00	12.10	E5					
SERIES 2 (STANDARD STEEL AND DUCTILE SIZES ONLY / PVC DR18)														
10	10.60	10.75	10.90	S9	X	10.60	10.75	10.90	S9	175	7 5/8 x 11	7	49	22.3
	11.10	11.10	11.40	G8		11.10	11.10	11.40	G8					

All dimensions are in inches.

## CAST COUPLING CONFIGURATIONS:

- 1406:** Enamel coated Center Sleeve and End Rings, Stainless Steel Fasteners.
- 1408:** Enamel coated Center Sleeve and End Rings, HSLA Steel Fasteners.
- 1506:** Epoxy coated Center Sleeve and End Rings, Stainless Steel Fasteners.
- 1507:** Epoxy coated Center Sleeve and End Rings, HSLA Steel Bolts, complete with Zinc Anodes.
- 1519:** Epoxy coated Center Sleeve and End Plates, HSLA Steel Fasteners, complete with 1/4" Zinc plated cap screw designed for cathodically protected applications.

Note: \* The pipe OD or the end plate combination code is used when ordering.  
 \*\* Some transitions may require a stepped center sleeve.  
 \*\*\* Shipping weights are approximate and vary according to configuration.  
 - Recommended torque to 70-80 ft. lbs.

## CAUTION



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

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# CAST DUCTILE IRON COUPLINGS STRAIGHT & TRANSITION SELECTION TABLE

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	RANGE			END CODE		RANGE			END CODE				LBS.	KG.
	LOW	PIPE OD (Actual)	HIGH*			LOW	PIPE OD (Actual)	HIGH*						
12**	12.00		12.30	F4A	X	12.00		12.30	F4A	175	8 5/8 x 11	7	74	33.6
	12.30		12.60	F4B		12.30		12.60	F4B					
	12.60	12.75	12.90	D4		12.60	12.75	12.90	D4					
	13.20	13.20	13.60	B2		13.20	13.20	13.60	B2					
	13.80	14.00	14.10	A1		13.80	14.00	14.10	A1					
	14.10		14.35	E5		14.10		14.35	E5					
SERIES 2 (STANDARD STEEL AND DUCTILE SIZES ONLY / PVC DR18 )														
12	12.60	12.75	12.90	S9	X	12.60	12.75	12.90	S9	175	8 5/8 x 11	7	55	25.0
	13.20	13.20	13.50	G8		13.20	13.20	13.50	G8					
14	14.60		14.90	F2	X	14.60		14.90	F2	175	9 5/8 x 11	7	100	45.5
	15.30	15.30	15.70	B2		15.30	15.30	15.70	B2					
	15.80	16.00	16.25	A1		15.80	16.00	16.25	A1					
	16.40		16.80	E5		16.40		16.80	E5					
16	17.40	17.40	17.80	B2	X	17.40	17.40	17.80	B2	150	10 5/8 x 11	7	107	48.6
	17.80	18.00	18.20	A1		17.80	18.00	18.20	A1					
	18.40		18.80	E5		18.40		18.80	E5					
18	18.80		19.20	B1	X	18.80		19.20	B1	150	12 5/8 x 11	7	129	58.6
	19.10	19.50	19.70	A2		19.10	19.50	19.70	A2					
	19.70	20.00	20.25	E5		19.70	20.00	20.25	E5					
20	20.80		21.35	B1	X	20.80		21.35	B1	150	12 5/8 x 11	7	140	63.6
	21.35	21.60	21.75	A2		21.35	21.60	21.75	A2					
	21.75	22.00	22.25	E5		21.75	22.00	22.25	E5					
22	22.95		23.35	B1	X	22.95		23.35	B1	150	13 5/8 x 11	7	156	70.9
	23.45		23.85	A2		23.45		23.85	A2					
	23.75	24.00	24.25	E5		23.75	24.00	24.25	E5					
24	25.70	25.80	26.00	A2	X	25.70	25.80	26.00	A2	150	14 5/8 x 14	10	285	129.6
	26.10		26.32	E5		26.10		26.32	E5					

All dimensions are in inches.

## HOW TO ORDER:

Determine the product number (**1408, 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), the ordering code is:

1408 - 6.63" x 6.90" i.e. **1408 - 6.63 x 6.90**  
 product OD (Actual) OD (Actual) or **1408 - 6D3 x 6A1**  
 number

- Note:
- \* The pipe OD or the end plate combination code is used when ordering.
  - \*\* Some transitions may require a stepped center sleeve.
  - \*\*\* Shipping weights are approximate and vary according to configuration.
  - Recommended torque to 70-80 ft. lbs.



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

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# CAST DUCTILE IRON COUPLINGS

## REDUCING COUPLING SELECTION TABLE

NOM. PIPE SIZE	LARGE END				BY  X	SMALL END				MAX. PRESSURE (Working)  LBS./IN. 2	NUMBER OF FASTENERS  DIA. X LENGTH	SLEEVE LENGTH  IN.	SHIPPING WEIGHT**	
	RANGE			END CODE		RANGE			END CODE				LBS.	KG.
	LOW	PIPE OD (Actual)	HIGH*			LOW	PIPE OD (Actual)	HIGH*						
6	5.85		6.15	F3A	X  4	3.45	3.50	3.60	4T	175	5 5/8 x 8	5	25	11.3
	6.15		6.45	F3B		3.75		4.05	F3A					
	6.50	6.63	6.70	D3		4.05		4.35	F3B					
	6.86	6.90	7.10	A1		4.40	4.50	4.60	D3					
	7.15		7.35	E5		4.74	4.80	5.10	A1					
						5.10		5.30	E5					
8	7.90		8.25	F3A	X  6	5.85		6.15	F3A	175	6 5/8 x 8	5	34	15.5
	8.25		8.55	F3B		6.15		6.45	F3B					
	8.55	8.63	8.75	D3		6.50	6.63	6.70	D3					
	8.99	9.05	9.30	A1		6.86	6.90	7.10	A1					
	9.30		9.50	E5		7.15		7.35	E5					
10	9.85		10.20	F4A	X  8	7.90		8.25	F3A	175	7 5/8 x 11	7	51	23.2
	10.20		10.50	F4B		8.25		8.55	F3B					
	10.60	10.75	10.90	D4		8.55	8.63	8.75	D3					
	11.10	11.10	11.40	B2		8.99	9.05	9.30	A1					
	11.55		11.75	A1		9.30		9.50	E5					
	11.90		12.10	E5										
12	12.00		12.30	F4A	X  10	9.85		10.20	F4A	175	8 5/8 x 11	7	83	37.7
	12.30		12.60	F4B		10.20		10.50	F4B					
	12.60	12.75	12.90	D4		10.60	10.75	10.90	D4					
	13.20	13.20	13.60	B2		11.10	11.10	11.40	B2					
	13.80	14.00	14.10	A1		11.55		11.75	A1					
	14.10		14.35	E5		11.90		12.10	E5					
14	14.60		14.90	F2	X  12	12.00		12.30	F4A	175	9 5/8 x 11	7	111	50.5
	15.30	15.30	15.70	B2		12.30		12.60	F4B					
	15.80	16.00	16.25	A1		12.60	12.75	12.90	D4					
	16.40		16.80	E5		13.20	13.20	13.60	B2					
						13.80	14.00	14.10	A1					
						14.10		14.35	E5					

All dimensions are in inches.

### CAST COUPLING CONFIGURATIONS:

- 1406R:** Enamel coated Center Sleeve and End Rings, Stainless Steel Fasteners.  
**1408R:** Enamel coated Center Sleeve and End Rings, HSLA Steel Fasteners.  
**1506R:** Epoxy coated Center Sleeve and End Rings, Stainless Steel Fasteners.  
**1507R:** Epoxy coated Center Sleeve and End Rings, Epoxy coated HSLA Steel Fasteners, complete with Zinc Anodes.  
**1519R:** Epoxy coated Center Sleeve and End Rings, Epoxy coated HSLA Steel Fasteners, complete with 1/4" Zinc plated cap screw designed for cathodically protected applications.

Note: \* The pipe OD or the end plate combination code is used when ordering.  
 \*\* Shipping weights are approximate and vary according to configuration.  
 - Recommended torque to 70-80 ft lbs.



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

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# CAST DUCTILE IRON COUPLINGS

## REDUCING COUPLING SELECTION TABLE

NOM. PIPE SIZE	LARGE END				BY  X	SMALL END				MAX. PRESSURE (Working)  LBS./IN. <sup>2</sup>	NUMBER OF FASTENERS  DIA. X LENGTH	SLEEVE LENGTH  IN.	SHIPPING WEIGHT**	
	RANGE			END CODE		RANGE			END CODE				LBS.	KG.
	LOW	PIPE OD (Actual)	HIGH*			LOW	PIPE OD (Actual)	HIGH*						
16					X  14	14.60		14.90	F2	150	10 5/8 x 11	7	124	56.4
	17.40	17.40	17.80	B2		15.30	15.30	15.70	B2					
	17.80	18.00	18.20	A1		15.80	16.00	16.25	A1					
	18.40		18.80	E5		16.40		16.80	E5					
18	18.80		19.20	B1	X  16	17.40	17.40	17.80	B2	150	12 5/8 x 11	7	124	60.0
	19.10	19.50	19.70	A2		17.80	18.00	18.20	A1					
	19.70	20.00	20.25	E5		18.40		18.80	E5					
20	20.80		21.35	B1	X  16	17.40	17.40	17.80	B2	150	12 5/8 x 11	7	161	73.2
	21.35	21.60	21.75	A2		17.80	18.00	18.20	A1					
	21.75	22.00	22.25	E5		18.40		18.80	E5					
20	20.80		21.35	B1	X  18	18.80		19.20	B1	150	12 5/8 x 11	7	156	70.9
	21.35	21.60	21.75	A2		19.10	19.50	19.70	A2					
	21.75	22.00	22.25	E5		19.70	20.00	20.25	E5					
22	22.95		23.35	B1	X  16	17.40	17.40	17.80	B2	150	13 5/8 x 11	7	272	123.6
	23.45		23.85	A2		17.80	18.00	18.20	A1					
	23.75	24.00	24.25	E5		18.40		18.80	E5					
22	22.95		23.35	B1	X  18	18.80		19.20	B1	150	13 5/8 x 11	7	268	121.8
	23.45		23.85	A2		19.10	19.50	19.70	A2					
	23.75	24.00	24.25	E5		19.70	20.00	20.25	E5					
22	22.95		23.35	B1	X  20	20.80		21.35	B1	150	13 5/8 x 11	7	275	125
	23.45		23.85	A2		21.35	21.60	21.75	A2					
	23.75	24.00	24.25	E5		21.75	22.00	22.25	E5					
24	25.70	25.80	26.00	A2	X  22	22.95		23.35	B1	150	14 5/8 x 14	10	300	136.4
	26.10		26.32	E5		23.45		23.85	A2					
						23.75	24.00	24.25	E5					

All dimensions are in inches.

### HOW TO ORDER:

Determine the product number (**1408R, 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 a 6" Steel pipe (6.63" OD) to a 6" C900 PVC pipe (6.90" OD), the ordering code is:

1408R - 9.05" x 6.90" i.e. **1408R - 9.05 x 6.90**  
 product OD (Actual) OD (Actual) or **1408R - 8A1 x 6A1**  
 number

Note: \* The pipe OD or the end plate combination code is used when ordering.  
 \*\* Shipping weights are approximate and vary according to configuration.  
 - Recommended torque to 70-80 ft lbs.  
 - Restraint is strongly recommended for reducing couplings.

### CAUTION



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

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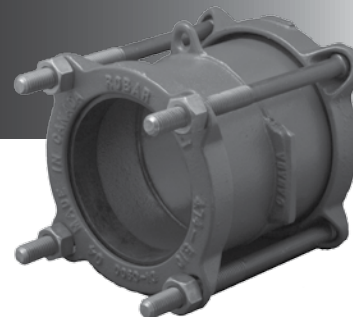
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# 1408 / 1406

## CAST DUCTILE IRON COUPLING



### APPLICATIONS:

ROBAR **1408 / 1406** Straight and Transition Couplings are used to make a non-restrained connection between two pipes of the same nominal size with same or different OD's. The **1406** 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: **1408** - 5/8" NC HSLA Steel.  
**1406** - 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 (**1406**, 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:

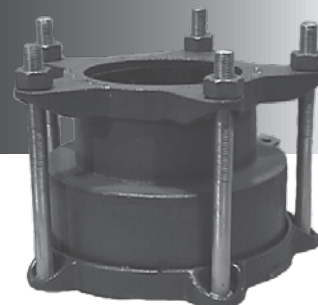
**1406** - 6.63" x 6.90" i.e. **1406 - 6.63 x 6.90**  
product OD (Actual) OD (Actual) or **1406 - 6 D3 x A1**  
number

Note: - The 1408 / 1406 are NSF61 compliant. Only those products bearing the NSF61 logo stamp are compliant.



# 1408R / 1406R

## CAST DUCTILE IRON REDUCING COUPLING



### APPLICATIONS:

ROBAR **1408R / 1406R** Reducing Couplings are used to make a non-restrained connection between two pipes of different nominal sizes. The **1406R** 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: **1408R** - 5/8" NC HSLA Steel.  
**1406R** - 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 (**1406R**, 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:

**1406R** - 9.05" x 6.90" i.e. **1406R - 9.05 x 6.90**  
product OD (Actual) OD (Actual) or **1406R - 8A1 x 6A1**  
number

Note: - The 1408R / 1406R are NSF61 compliant. Only those products bearing the NSF61 logo stamp are compliant.



### CAUTION



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

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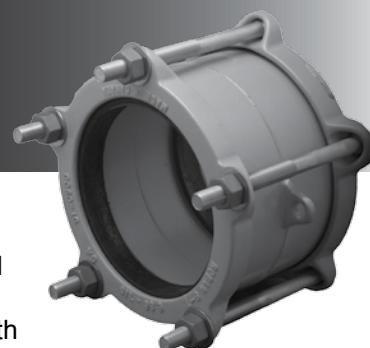
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# 1506

## CAST DUCTILE IRON COUPLING



### APPLICATIONS:

ROBAR **1506** Straight and Transition couplings are used to make a non-restrained connection between two pipes of the same nominal size but with same or different ODs. Used in areas where corrosion is a factor, the **1506** body is Epoxy coated 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 T304 Stainless Steel.  
 Nuts coated with anti-galling compound.  
 Torque is 70-80 ft. lbs.  
 Coating: Corrosion Protective Epoxy coating.

### HOW TO ORDER:

Determine the product number (**1506**) 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:

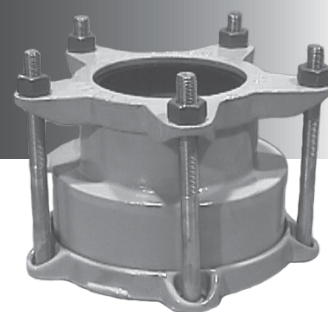
**1506** - 6.63" x 6.90" i.e. **1506 - 6.63 x 6.90**  
 product OD (Actual) OD (Actual) or **1506 - 6 D3 x A1**  
 number

Note: - The 1506 is NSF61 compliant. Only those products bearing the NSF61 logo stamp are compliant.



# 1506R

## CAST DUCTILE IRON REDUCING COUPLING



### APPLICATIONS:

ROBAR **1506R** Straight and Transition couplings are used to make a non-restrained connection between two pipes of the different nominal sizes. Used in areas where corrosion is a factor, the **1506R** body is Epoxy coated 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 T304 Stainless Steel.  
 Nuts coated with anti-galling compound.  
 Torque is 70-80 ft. lbs.  
 Coating: Corrosion Protective Epoxy coating.

### HOW TO ORDER:

Determine the product number (**1506R**) 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:

**1506R** - 9.05" x 6.90" i.e. **1506R - 9.05 x 6.90**  
 product OD (Actual) OD (Actual) or **1506R - 8A1 x 6A1**  
 number

Note: - The 1506R is NSF61 compliant. Only those products bearing the NSF61 logo stamp are compliant.



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

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# 1507

## CAST DUCTILE IRON COUPLING COMPLETE WITH ANODES

### APPLICATIONS:

ROBAR **1507** Straight and Transition Couplings are used to make a non-restrained connection between two pipes of the same nominal size but with same or different OD's. Used in areas where corrosion is a factor, the **1507** body and fasteners are Epoxy coated. Zinc anodes are supplied with this coupling.



### 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, Epoxy coated bolts.  
Torque is 70-80 ft. lbs.  
Coating: Corrosion Protective Epoxy coating.  
Anodes: Zinc 300 grams minimum.

### HOW TO ORDER:

Determine the product number (**1507**) 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 MS Bolts with anodes, the ordering code is:

**1507** - 6.63" x 6.90" i.e. **1507 - 6.63 x 6.90**  
product OD (Actual) OD (Actual) or **1507 - 6 D3 x A1**  
number

Note: - The 1507 is NSF61 compliant. Only those products bearing the NSF61 logo stamp are compliant.  
- Coupling nuts are not Epoxy coated. We ensure continuity by removing the Epoxy coating from the underside of the bolt head and bolt head bearing surface of the end ring.



# 1507R

## CAST DUCTILE IRON REDUCING COUPLING COMPLETE WITH ANODES

### APPLICATIONS:

ROBAR **1507R** Reducing Couplings are used to make a connection between two pipes of different nominal sizes. Used in areas where corrosion is a factor, the **1507R** body and fasteners are Epoxy coated. Zinc anodes are supplied with this coupling.



### 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, Epoxy coated bolts.  
Torque is 70-80 ft. lbs.  
Coating: Corrosion Protective Epoxy coating.  
Anodes: Zinc 300 grams minimum.

### HOW TO ORDER:

Determine the product number (**1507R**) 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 MS Bolts with anodes, the ordering code is:

**1507R** - 9.05" x 6.90" i.e. **1507R - 9.05 x 6.90**  
product OD (Actual) OD (Actual) or **1507R - 8A1 x 6A1**  
number

Note: - The 1507R is NSF61 compliant. Only those products bearing the NSF61 logo stamp are compliant.  
- Coupling nuts are not Epoxy coated. We ensure continuity by removing the Epoxy coating from the underside of the bolt head and bolt head bearing surface of the end ring.



### CAUTION



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

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# 1519

## CAST DUCTILE IRON COUPLING CATHODICALLY FITTED

### APPLICATIONS:

ROBAR **1519** non-restrained Couplings are specially designed (cathodically fitted) to allow for electrical continuity throughout the entire fitting. Sacrificial anodes (not supplied) are recommended to protect the coupling assembly as long as "continuity" is maintained between the coupling components. To ensure "isolation" between metal pipes, the use of ROBAR **1180** Rubber Isolation Boot is recommended. (See "ROBAR **1180** Rubber Isolation Boot", page 1.10.1). Isolation Boots are available in Straight, Transition or Reducing styles.



### 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, Epoxy coated bolts.  
1/4" Zinc plated cap screws.  
Torque is 70-80 ft. lbs.  
Coating: Corrosion Protective Epoxy coating.

### HOW TO ORDER:

Determine the product number (**1519**) 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" DI pipe (6.90" OD), using MS Bolts and set screws the ordering code is:

**1519** - 6.63" x 6.90" i.e. **1519 - 6.63 x 6.90**  
product OD (Actual) OD (Actual) or **1519 - 6 D3 x A1**  
number

Note: - The 1519 is NSF61 compliant. Only those products bearing the NSF61 logo stamp are compliant.  
- Coupling nuts are not Epoxy coated. We ensure continuity by removing the Epoxy coating from the underside of the bolt head and bolt head bearing surface of the end ring.

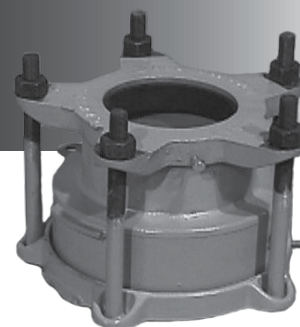


# 1519R

## CAST DUCTILE IRON REDUCING COUPLING CATHODICALLY FITTED

### APPLICATIONS:

ROBAR **1519R** Reducing Couplings are used to make a non-restrained connection between two pipes of different nominal sizes. They are specially designed (cathodically fitted) to allow for electrical continuity throughout the entire fitting. Sacrificial anodes (not supplied) are recommended to protect the coupling assembly as long as "continuity" is maintained between the coupling components. To ensure "isolation" between metal pipes, the use of ROBAR **1180** Rubber Isolation Boot is recommended. (See "ROBAR **1180** Rubber Isolation Boot" product information sheet, page 1.10.1). Isolation Boots are available in Straight, Transition or Reducing styles.



### 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, Epoxy coated bolts.  
1/4" Zinc plated cap screws.  
Torque is 70-80 ft. lbs.  
Coating: Corrosion Protective Epoxy coating.

### HOW TO ORDER:

Determine the product number (**1519R**) and the 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 a 8" Steel pipe (8.63" OD) to a 6" DI pipe (6.90" OD), using MS Bolts and set screws the ordering code is:

**1519R** - 8.63" x 6.90" i.e. **1519R - 8.63 x 6.90**  
product OD (Actual) OD (Actual) or **1519R - 8D3 x 6A1**  
number

Note: - The 1519 is NSF61 compliant. Only those products bearing the NSF61 logo stamp are compliant.  
- Coupling nuts are not Epoxy coated. We ensure continuity by removing the Epoxy coating from the underside of the bolt head and bolt head bearing surface of the end ring.



### CAUTION



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

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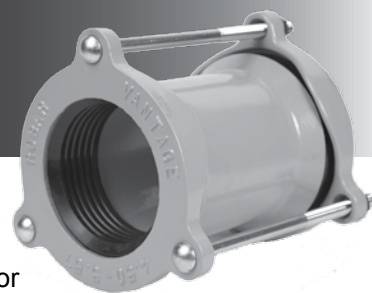
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# 1996

## VANTAGE COUPLING



### APPLICATIONS:

ROBAR **Vantage** couplings can be used to couple dissimilar OD's in the same nominal size group. The **Vantage** coupling comes with a stab-fit design, allowing for use on Ductile, Steel, PVC, HDPE, and AC pipe.

### MATERIAL SPECIFICATIONS:

Center Sleeve: Carbon Steel.  
End Rings: Cast Ductile Iron.  
Gaskets: NBR.  
Fasteners: **1998** - 5/8" NC HSLA Steel.  
**1996** - 5/8" T304 Stainless Steel.  
Nuts coated with anti-galling compound.  
Torque is 70 ft. lbs.  
Coating: **1898 / 1896** - 2 coats of Enamel.  
**1998 / 1996** - Corrosion Protective Epoxy coating.

### HOW TO ORDER:

Determine the product number (**1996**, etc.), and order the nominal size you require and then use the appropriate ordering code as shown in the example.

To couple 6" steel pipe (6.63"OD) to a 6" ductile pipe (6.90"), using SS bolts and epoxy coating, the ordering code is:

**1996** x 6" i.e. **1996 x 6**  
product coupling  
number range

NOMINAL SIZE	WORKING RANGE	BARREL LENGTH	NO. OF BOLTS	WEIGHT LBS.
4	4.50 - 5.60	8	3	25
6	6.63 - 7.60	8	3	32
8	8.63 - 9.80	8	3	41
10	10.75 - 12.14	12	4	82
12	12.75 - 14.12	12	4	116

*All dimensions are in inches.*

**Coupling rated for 175 PSI working pressure.**

### CAUTION



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

Note: - The use of a pipe insert is required when installing coupling on HDPE.

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# 1708 / 1706

## CAST DUCTILE IRON COUPLING RAPID-FIT



### APPLICATIONS:

ROBAR  IPF

ROBAR **1708 / 1706** couplings are used to make a "Stab Fit" non-restrained connection between two pipes of the same nominal size. The **1706** is fusion bonded epoxy with stainless steel fasteners. The Rapid-Fit has a 4" body.

### MATERIAL SPECIFICATIONS:

Center Sleeve: Cast Ductile Iron.  
End Rings: Cast Ductile Iron.  
Gaskets: EPDM Grade E/WA.  
Fasteners: **1708** - 12mm Dacromet.  
**1706** - 12mm T304 Stainless Steel.  
Torque is 65 ft. lbs.  
Coating: Fusion Bonded Epoxy.

NOMINAL SIZE	WORKING RANGE	WEIGHT LBS.	NO. OF BOLTS
2"	2.32" - 2.87"	9.5	4
2½"	2.83" - 3.35"	11.3	4
3"	3.46" - 4.06"	12.0	4
4"	4.25" - 5.04"	12.4	4
6"	6.26" - 7.17"	19.0	4
8"	8.58" - 9.25"	22.0	4
10"	10.67" - 11.38"	31.5	6
12"	12.68" - 13.39"	35.8	6

### HOW TO ORDER:

Determine the product number (**1708, etc.**) and the pipe OD 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:

**1706** x 6" i.e. **1706 x 6**  
product coupling  
number size

Note: - Working pressure up to 175 PSI.  
- Lubricate Stainless Steel Bolts to prevent 'galling' of the Nuts.



# 1718 / 1716

## CAST DUCTILE IRON COUPLING RAPID-FIT PLUS



### APPLICATIONS:

ROBAR  IPF

ROBAR **1718 / 1716** couplings are used to make a "Stab Fit" non-restrained connection between two pipes of the same nominal size but dissimilar OD's. The 1716 is fusion bonded epoxy with stainless steel fasteners. The Rapid Fit Plus has an 8" long body and a greater working range.

### MATERIAL SPECIFICATIONS:

Center Sleeve: Cast Ductile Iron.  
End Rings: Cast Ductile Iron.  
Gaskets: EPDM Grade E/WA.  
Fasteners: **1718** - 19mm Dacromet.  
**1716** - 19mm T304 Stainless Steel.  
(use 15/16" socket)  
Torque is 80 ft. lbs.  
Coating: Fusion Bonded Epoxy.

COUPLING RANGES			
4"	=	4.21"	- 5.28"
6"	=	6.22"	- 7.56"
8"	=	8.58"	- 9.92"

### HOW TO ORDER:

Determine the product number (**1718, etc.**) and the pipe OD 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" Class 150 AC pipe (7.43" OD), using MS Bolts the ordering code is:

**1718** x 6" i.e. **1718 x 6**  
product coupling  
number size

### CAUTION



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

Note: - Lubricate Stainless Steel Bolts to prevent 'galling' of the Nuts.

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# 1728 / 1726

## CAST DUCTILE IRON COUPLING MULTI-FIT



### APPLICATIONS:

ROBAR  POWERSEAL

ROBAR **1728 / 1726** couplings are used to make a non-restrained connection between two pipes of the same nominal size but with same or different ODs. Up to 175 PSI working pressure. Angular deflection up to 8°. Stab Fit.

### MATERIAL SPECIFICATIONS:

Center Sleeve: Cast Ductile Iron.  
End Rings: Cast Ductile Iron.  
Gaskets: Nitrile Butadiene Rubber (NBR).  
Fasteners: **1728** - 5/8" Low Alloy Steel.  
**1726** - 5/8" T304 Stainless Steel.  
Torque is 70-80 ft. lbs.  
Coating: Fusion Bonded Epoxy Coated.

### HOW TO ORDER:

Determine the product number (**1728**) and order the nominal size you require (see 1736AS chart below) and then use the appropriate ordering code as shown in the example.

To couple (using mild steel fasteners), a 4" steel pipe (4.50" OD) to an 4" AC pipe (5.25" OD), the ordering code is:

**1728** x 4" i.e. **1728 x 4**  
product coupling  
number range

(See ordering chart below)

Note: - Lubricate Stainless Steel Bolts to prevent 'galling' of the Nuts.



# 1736AS

## CAST STAINLESS STEEL COUPLING MULTI-FIT PLUS



### APPLICATIONS:

ROBAR  POWERSEAL

ROBAR **1736AS** are 100% Stainless Steel couplings used to make a non-restrained connection between two pipes of the same nominal size but with same or different ODs. Up to 175 PSI working pressure. Angular deflection up to 8°. Stab Fit.

### MATERIAL SPECIFICATIONS:

Center Sleeve: T304 Stainless Steel.  
End Rings: T304 Stainless Steel.  
Gaskets: Nitrile Butadiene Rubber (NBR).  
Fasteners: 5/8" T304 Stainless Steel.  
Torque is 70-80 ft. lbs.

### HOW TO ORDER:

Determine the product number (**1736AS**) and order the nominal size you require (see below) and then use the appropriate ordering code as shown in the example.

To couple a 6" steel pipe (6.63" OD) to a 6" ductile pipe (6.90" OD), the ordering code is:

**1736AS** x 6" i.e. **1736AS x 6**  
product coupling  
number range

PIPE SIZES		PIPE OD RANGES		WEIGHTS		BARREL LENGTH		BOLT QTY
IN.	MM.	IN.	MM.	LBS.	KG.	IN.	MM.	
4	100	4.20 - 5.33	112 - 135	25	11	6	150	4
6	150	6.25 - 7.45	166 - 189	35	16	6	150	5
8	200	8.40 - 9.79	217 - 249	50	23	10	250	6
10	250	10.70 - 12.12	272 - 308	57	26	10	250	7
12	300	12.75 - 14.38	325 - 365	65	30	10	250	8

Note: - Lubricate Stainless Steel Bolts to prevent 'galling' of the Nuts.

### CAUTION



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

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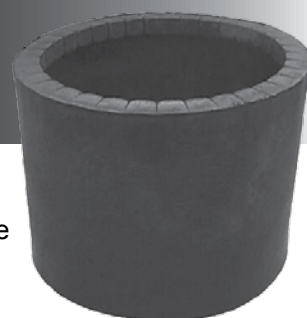
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# 1180

## RUBBER ISOLATING BOOT



### APPLICATIONS:

ROBAR **1180** Isolating Boots are used in conjunction with ROBAR couplings to separate pipe ends in cathodically protected systems. Can also be used to increase the OD of an existing pipe by 1/4". Isolating Boots are 6" long.

### MATERIAL SPECIFICATIONS:

Boot: SBR (Buna S) Rubber compounded for water service and high dielectric value.

### HOW TO ORDER:

Determine the product number (**1180**) and actual OD of the pipe to be isolated and then use the appropriate ordering code as shown in the following example.

For a 6" Ductile Iron Pipe (6.90" OD), the ordering code is:

**1180** - 6.90" i.e. **1180 - 6.90**  
product OD (Actual)  
number



# 1410 / 1510

## CAST DUCTILE IRON COUPLING END CAPS



### APPLICATIONS:

ROBAR **1410 / 1510** End Caps are used in conjunction with a standard ROBAR Coupling (ordered separately) for the purpose of:

- Temporary stops for mains to be extended in future.
- Blind ending sections of main for testing.

The 2" IP outlet allows for:

- A 'take off' of 2" (or less) from the main.
- Air relief or overflow - top mount.
- Blow off or drainage - bottom mount.
- Chlorinating of lines.

NOMINAL PIPE SIZE	CAP OD	END ASSEMBLY	OUTLET PLUG QUANTITY	APPROXIMATE SHIPPING WEIGHT	
				LBS.	KG.
4	5.10	4A1	1	3.0	1.4
6	7.10	6A1	1	5.0	2.3
8	9.30	8A1	1	6.8	3.0
10	11.40	10B2	2	15.0	6.8
12	13.60	12B2	2	23.8	10.8

*All dimensions are in inches.*

Cap: Cast Ductile Iron  
Plug: Cast Iron - 2" IP square head.  
Coating: **1410** - Two coats of Enamel.  
**1510** - Corrosion Protective Epoxy coated.

### HOW TO ORDER:

Determine the product number (**1410** or **1510**), nominal pipe size (see table above), and then use the appropriate ordering code as shown in the following example.

For an enamel coated 8" End Cap, the ordering code is:

**1410** - 8" i.e. **1410 - 8**  
product nominal  
number pipe size

Note: - End capped couplings must be suitably blocked or restrained to resist hydraulic end thrust.

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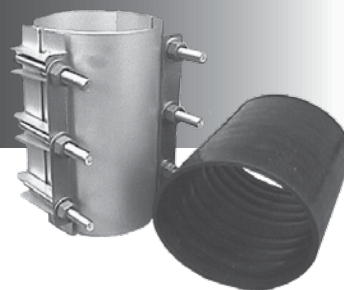
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# 1606

## FABRICATED STAINLESS STEEL COUPLING



### APPLICATIONS:

ROBAR **1606** Couplings are used to make a non-restrained connection between pipes of the same outside diameter. This coupling is fabricated with a range of .30" (pipe OD  $\pm$  .15") and therefore is best suited for smooth pipe with a uniform outside diameter (ex. Steel, PVC, Ductile Iron and HDPE).

### MATERIAL SPECIFICATIONS:

Body: T304 Stainless Steel, also available in T316 Stainless Steel\*.  
 Gaskets: SBR (Buna S) Rubber. Other compounds available.  
 Fasteners: 5/8" NC T304 Stainless Steel\*. Nuts coated with anti-galling compound. Torque is 70-80 ft. lbs.

### HOW TO ORDER:

Determine the product number (**1606**), number of sections, actual pipe OD, coupling width (see chart below), and then order by using appropriate ordering code as shown in the following example.

If a two section (Style 2) coupling is required with a 12" body length, for a 10" Steel pipe (10.75" OD), the ordering code is:

**1606** - 2 - 10.75" x 12" i.e. **1606 - 2 - 10.75 x 12**  
 product number number of sections OD (Actual) x coupling width

NOMINAL PIPE SIZE	MAX. PRESSURE (Working)  LBS./IN. <sup>2</sup>	APPROXIMATE SHIPPING WEIGHT (LBS.)					
		STYLE 1 6" SHELL	STYLE 1 12" SHELL	STYLE 2 12" SHELL	STYLE 3 12" SHELL	STYLE 3 18" SHELL	STYLE 3 24" SHELL
4	150	6 lbs.	11	16			
6	150	7 lbs.	12	17			
8	150	8 lbs.	13	18			
10	150		14	19			
12	150		16	24			
14	125		18	25			
16	100				34	46	68
18	100	35			46	69	
20	100	37			48	72	
22	100	39			50	78	
24	100	41			52	84	

*All dimensions are in inches.*

**Available only in 6" increments.**

- Note:
- \* Refers to chemically treating Stainless Steel after welding ("Pickled/Passivated") to return it to its original appearance.
  - Other sizes and pressure ratings are available. Please contact ROBAR's Technical Sales Department for additional information.
  - Bolt Torque limit for all sizes is 80 ft./lbs.
  - Maximum working pressures are achieved with smooth OD pipes and with careful installation. Rough pipe surfaces and careless installation will reduce attainable pressures.
  - ROBAR **9626** Adjustable Stainless Steel Inserts are recommended for use on Polyethylene Pipe.
  - Refer to standards page.
  - 4.80" is the minimum OD **1606** Couplings can be sized to fit.
  - AWWA C219 does not apply to this coupling.

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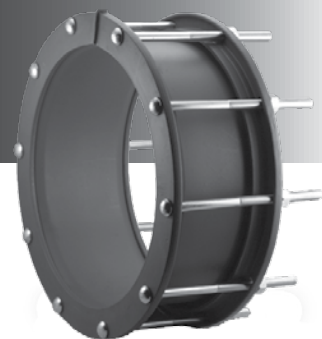
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# 1808 / 1906

## FABRICATED STEEL COUPLING - SERIES 200



### APPLICATIONS:

ROBAR  BAKER

Fabricated **1808 / 1906** Non-Restraining Couplings are used to flexibly couple larger diameter pipe. The **1906** is Epoxy coated with stainless steel fasteners. 4" through 120" available. Can be used to couple concrete pressure pipe together.

### MATERIAL SPECIFICATIONS:

Center Sleeve: Mild Steel.  
 End Rings: Mild Steel.  
 Gaskets: SBR (Buna S) Rubber.  
 Other compounds available.  
 Fasteners: **1808** - 5/8" NC HSLA Steel.  
**1906** - 5/8" Stainless Steel.  
 Nuts coated with anti-galling compound.  
 Torque is 70-80 ft. lbs.  
 Coating: **1808** - Shop Coat.  
**1906** - Epoxy coated - liquid or fusion.

### HOW TO ORDER:

Determine the product number (**1808**), actual pipe OD, Center Sleeve thickness, Center Sleeve length and then use the appropriate ordering code (see chart below), as shown in the following example.

To couple an 18" Steel pipe (18.00" OD) with a 7" long by 1/4" thick Center Sleeve with shop coat and MS bolts, the ordering code is:

**1808** - 18.00" - 1/4" x 7"  
 product OD (Actual) thickness sleeve  
 number length

i.e. **1808 - 18.00 - 1/4 x 7**

**Couplings can be manufactured for any diameter. Examples below are Ductile and Steel OD's only. Couplings listed are for common sizes. Please contact ROBAR for sizes not listed below.**

NOMINAL PIPE SIZE	OD PIPE	CENTER SLEEVE T x L	FASTENERS NO. x DIA. x LENGTH	APPROXIMATE SHIPPING WEIGHT	
				LBS.	KG.
16	16.00	1/4 x 7	10 - 5/8 x 11	74	33.6
	16.00	1/4 x 10	10 - 5/8 x 14	88	40.0
	17.40	3/8 x 7	10 - 5/8 x 11	87	39.6
	17.40	3/8 x 10	10 - 5/8 x 14	107	48.6
18	18.00	1/4 x 7	10 - 5/8 x 11	81	36.8
	18.00	1/4 x 10	10 - 5/8 x 14	97	44.1
	19.50	3/8 x 7	12 - 5/8 x 11	96	43.6
	19.50	3/8 x 10	12 - 5/8 x 14	118	53.6
20	20.00	1/4 x 7	12 - 5/8 x 11	90	40.9
	20.00	1/4 x 10	12 - 5/8 x 14	108	49.1
	21.60	3/8 x 7	12 - 5/8 x 11	107	48.6
	21.60	3/8 x 10	12 - 5/8 x 14	132	60.0
24	24.00	1/4 x 7	14 - 5/8 x 11	107	48.6
	24.00	1/4 x 10	14 - 5/8 x 14	128	58.2
	25.80	3/8 x 7	14 - 5/8 x 11	127	57.7
	25.80	3/8 x 10	14 - 5/8 x 14	156	70.9
30	30.00	1/4 x 7	16 - 5/8 x 11	130	58.9
	30.00	1/4 x 10	16 - 5/8 x 14	157	71.2
	32.00	3/8 x 7	16 - 5/8 x 11	156	71.2
	32.00	3/8 x 10	16 - 5/8 x 14	192	87.1
36	36.00	1/4 x 7	18 - 5/8 x 11	155	70.30
	36.00	1/4 x 10	18 - 5/8 x 14	185	83.9
	38.30	3/8 x 7	18 - 5/8 x 11	185	83.9
	38.30	3/8 x 10	18 - 5/8 x 14	203	92.1

*All dimensions are in inches.*

### CAUTION



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

Note: - ROBAR inventories couplings in sizes 16" through 36" in both 1/4" and 3/8" thicknesses. A 1/4" thickness sleeve is used for Steel pipe OD's and 3/8" thickness sleeve is used for Ductile / C900 pipe OD's.  
 - Couplings are fabricated to exact OD's.  
 - Contact ROBAR for working pressures.

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# 1848 / 1946

## SERIES 220

### FABRICATED STEEL REDUCING COUPLING



#### APPLICATIONS:

ROBAR  BAKER

Fabricated **1848 / 1946** Non-Restraining Steel Reducing Couplings are used to flexibly couple two pipes of different nominal size.

#### MATERIAL SPECIFICATIONS:

Center Sleeve: Mild Steel.  
 End Rings: Mild Steel.  
 Gaskets: SBR (Buna S) Rubber. Other compounds available.  
 Fasteners: **1848** - 5/8" NC HSLA Steel. **1946** - T304 NC Stainless Steel. Nuts coated with anti-galling compound. Torque is 70-80 ft. lbs.  
 Coating: **1848** - Shop Coat. **1946** - Epoxy Coat - liquid or fusion. (AWWA C210 or C213)

#### HOW TO ORDER:

Determine the product number (**1848**, etc.), actual pipe OD of both pieces of pipe, Center Sleeve thickness, Center Sleeve length and then use the appropriate ordering code, as shown in the following example.

To couple a 16" Ductile pipe (17.40" OD) to a 16" Steel pipe with a 10" long by 1/4" thick Center Sleeve, the ordering code is:

<b>1848</b>	-	17.40"	x	16.00"	-	1/4"	x	10"
product		OD (Actual)		OD (Actual)		thickness		sleeve
number								length

i.e. **1848 - 17.40 x 16.00 - 1/4 x 10**

Note: - Reducing couplings are available with minimum barrel lengths of 10". - Contact ROBAR for working pressures.



# 1858 / 1956

## SERIES 208

### FABRICATED STEEL LONG SLEEVE COUPLING



#### APPLICATIONS:

ROBAR  BAKER

Fabricated **1858 / 1956** Long Sleeve Couplings are used to join large pipe gaps with the same OD's.

#### MATERIAL SPECIFICATIONS:

Center Sleeve: Mild Steel.  
 End Rings: Mild Steel.  
 Gaskets: SBR (Buna S) Rubber. Other compounds available.  
 Fasteners: **1858** - 5/8" NC HSLA Steel. **1956** - T304 Stainless Steel. Nuts coated with anti-galling compound. Torque is 70-80 ft. lbs.  
 Coating: **1858** - Shop Coat. **1956** - Epoxy Coated - liquid or fusion. (AWWA C210 or C213)

#### HOW TO ORDER:

Determine the product number (**1858**, etc.), actual pipe OD of both pieces of pipe, Center Sleeve thickness, Center Sleeve length and then use the appropriate ordering code, as shown in the following example.

To couple a 16" Ductile pipe (17.40" OD) to a 16" Ductile pipe with a 24" long by 1/4" thick Center Sleeve, the ordering code is:

<b>1858</b>	-	17.40"	x	17.40"	-	1/4"	x	24"
product		OD (Actual)		OD (Actual)		thickness		sleeve
number								length

i.e. **1858 - 17.40 x 17.40 - 1/4 x 24**

Note: - Please contact ROBAR for special lengths and dimensions. - Contact ROBAR for working pressures.

#### CAUTION



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

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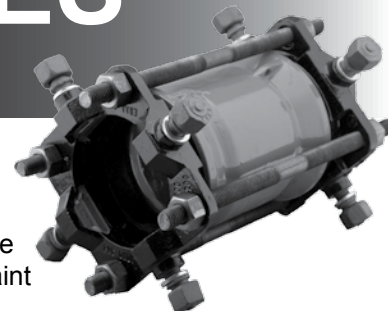
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# EBAA 3800 SERIES

## RESTRAINED COUPLING



### APPLICATIONS:

ROBAR  EBAA

The **3800** Series Restrained Coupling is used for joining and restraining two plain end pipes of the same or dissimilar materials (Ductile Iron pipe, PVC pipe, Steel pipe and/or High Density Polyethylene Pipe (HDPE\*)). The coupling provides axial restraint to the rated pressure listed below, with a minimum factor of safety of 2:1. The **3800** Series Coupling is an economical alternative to the harnessing of unrestrained repair type couplings. The **3800** Series Coupling meets or exceeds AWWA C219 standards.

### MATERIAL SPECIFICATIONS:

Center Sleeve: ASTM A536 Ductile Iron.  
End Rings: ASTM A536 Ductile Iron.  
Gaskets: SBR (Buna S) Rubber.  
Fasteners: Corrosion Resistant, HSLA steel bolts & nuts.  
Torque is 60-75 ft. lbs.  
Coating: Fusion Bonded Epoxy coating on Sleeve

### HOW TO ORDER:

Determine the product number (**3806**) and the OD for each end of the coupling 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), the ordering code is:

**3806** - 6.63" x 6.90"  
product OD (Actual) OD (Actual)  
number

i.e. **3806 - 6.63 x 6.90**

NOMINAL PIPE SIZE	SERIES NO.	APPROXIMATE SHIPPING WEIGHT LBS. KG.		NO. OF WEDGES	DESIGN DEFLECTION	BARREL LENGTH	NO. OF THRUST BOLTS	DIA. OF THRUST BOLTS
4	3804	36	16	2	5°	7.5	4	3/4 x 14
6	3806	50	23	4			6	
8	3808	68	31	4			6	
10	3810	85	39	6			8	
12	3812	104	47	6			8	

*All dimensions are in inches.*

### PRESSURE RATINGS (PSI)

				HDPE Pipe			C900 PVC Pipe		
NOMINAL PIPE SIZE	SERIES NO.	DUCTILE IRON PIPE	STEEL PIPE	DR 11 CLASS 160	DR 13.5 CLASS 130	DR17 CLASS 100	DR14 CLASS 200	DR 18 CLASS 150	DR 25 CLASS 100
4	3804	250	250	160	130	100	200	150	100
6	3806	250	250	160	130	100	200	150	100
8	3808	250	250	160	130	100	200	150	100
10	3810	250	250	160	130	100	200	150	100
12	3812	250	250	160	130	100	200	150	100

Note: \* A pipe wall stiffening insert is required for use on HDPE pipe. The stiffener must be sized to encompass the entire bearing length of the restraint devices.

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# SECTION 2 SERVICE SADDLES



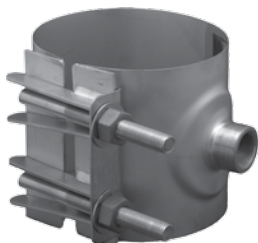
**2408**  
**2508**

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**2406**  
**2506**

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**2616**  
**2626**  
**2636**

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**2706**

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# 2408 / 2508

## CAST DUCTILE IRON SERVICE SADDLE



### APPLICATIONS:

ROBAR **2408 / 2508** Service Saddles are used to take a service outlet off a transmission or distribution line. The **2408** Service Saddle is recommended for use on Ductile Iron pipe and Steel pipe. Not suitable for Plastic pipe. The **2408** comes with shop coat and the **2508** comes fusion bonded epoxy. Both saddles come with low alloy steel straps.

### MATERIAL SPECIFICATIONS:

Saddle Body: Cast Ductile Iron body.  
Gaskets: SBR (Buna S) Rubber.  
Other compounds available.  
Saddle Straps: 5/8" NC Low Alloy Steel, U-bolt.  
Fasteners: 5/8" NC HSLA. Zinc plated.  
Torque is 70-80 ft. lbs.  
Coating: **2408** - Two coats of Enamel.  
**2508** - Fusion Bonded Epoxy.

Designed for tapping into Steel, Ductile Iron and Cast Iron pipe. Saddle straps and bodies are shaped to evenly and safely distribute the clamping load to the pipe. When tightened, they conform to the various diameters in each nominal size of pipe within specified working range. Refer to the ROBAR OD Chart (see page 0.6.1) for various pipe diameters.

### HOW TO ORDER:

Determine the product number (**2408**, etc.), the nominal pipe size, outlet size, outlet thread, and strap style, and then use the appropriate ordering code as shown in the following example:

If a 6" Double strap saddle is required with a 2" CC tap to fit 6" Ductile pipe (6.90"OD), the ordering code is:

**2408** - 6" x 2 - CC - DS  
product nomi- tap - CC - DS  
number nal size style strap  
pipe style

i.e. **2408 - 6 x 2 - CC - DS**

NOMINAL PIPE SIZE	WORKING RANGE		OUTLET SIZES AWWA (CC) OR IRON PIPE (IP)	STRAP STYLE		APPROXIMATE SHIPPING WEIGHT	
	LOW	HIGH		SINGLE (SS)	DOUBLE (DS)	LBS.	KG.
4	4.50	5.40	3/4 - 2	SS		5.0	2.3
					DS	6.5	2.9
6	6.62	7.50	3/4 - 2	SS		6.0	2.7
					DS	8.5	3.9
8	8.62	9.62	3/4 - 2	SS		6.5	2.9
					DS	10.0	4.5
10	10.75	12.12	3/4 - 2	SS		7.5	3.4
					DS	11.5	5.2
12	12.75	14.38	3/4 - 2	SS		11.5	5.2
					DS	12.5	5.7

*All dimensions are in inches.*

Note: - The **2408** is NSF61 compliant. Only those products bearing the NSF61 logo stamp are compliant.  
- Alternative gasket materials are available. Refer to the Gasket Selection Chart and contact ROBAR for pricing and delivery.



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# 2406 / 2506

## CAST DUCTILE IRON SERVICE SADDLE



### APPLICATIONS:

ROBAR **2406 / 2506** Service Saddles are used to take a service outlet off a transmission or distribution line. The **2406 / 2506** are suitable for use on C900 pipe due to their wide strap configuration. The **2406** comes with shop coat and the **2506** comes with fusion bonded epoxy coated. The **2406 / 2506** comes with Stainless Steel straps.

### MATERIAL SPECIFICATIONS:

Saddle Body: Cast Ductile Iron body.  
 Gaskets: SBR (Buna S) Rubber.  
 Other compounds available.  
 Saddle Straps: 1/2" NC T304 Stainless Steel\*.  
 Fasteners: 1/2" T304 Stainless Steel\*.  
 Nuts coated with anti-galling compound.  
 Torque is 45 ft/lbs.  
 Coating: **2406** - Two coats of Enamel.  
**2506** - Fusion Bonded Epoxy.

### HOW TO ORDER:

Determine the product number (**2406, etc.**), the nominal pipe size, outlet size, outlet thread, and strap style, and then use the appropriate ordering code as shown in the following example:

If a 6" Double strap saddle is required with a 2" CC tap to fit 6" Ductile pipe (6.90"OD), the ordering code is:

**2406** - 6" x 2 - CC - DS  
 product nominal tap tap strap  
 number pipe size style style

i.e. **2406 - 6 x 2 - CC - DS**

Designed for tapping into Steel, Ductile Iron, Cast Iron and C900 PVC pipe. Saddle straps and bodies are shaped to evenly and safely distribute the clamping load to the pipe. When tightened, they conform to the various diameters in each nominal size of pipe within specified working range. Refer to the ROBAR OD Chart (see page 0.6.1) for various pipe diameters.

NOMINAL PIPE SIZE	WORKING RANGE		OUTLET SIZES AWWA (CC) OR IRON PIPE (IP)	STRAP STYLE		APPROXIMATE SHIPPING WEIGHT	
	LOW	HIGH		SINGLE (SS)	DOUBLE (DS)	LBS.	KG.
2	2.38	2.56	3/4 - 2	SS		2.0	0.9
3	3.25	3.54	3/4 - 1	SS		2.5	1.1
4	4.50	5.40	3/4 - 2	SS		5.0	2.3
					DS	6.5	2.9
6	6.62	7.50	3/4 - 2	SS		6.0	2.7
					DS	8.5	3.9
8	8.62	9.62	3/4 - 2	SS		6.5	2.9
					DS	10.0	4.5
10	10.75	12.12	3/4 - 2	SS		7.5	3.4
					DS	11.5	5.2
12	12.75	14.38	3/4 - 2	SS		11.5	5.2
					DS	12.5	5.7

*All dimensions are in inches.*

Note: \* Refers to chemically treating Stainless Steel after welding ("Pickled/Passivated") to return it to its original appearance.  
 - The **2406** is NSF61 compliant. Only those products bearing the NSF61 logo stamp are compliant.  
 - Alternative gasket materials are available. Refer to the Gasket Selection Chart and contact ROBAR for pricing and delivery.



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# 2616 / 2626 / 2636

## FABRICATED STAINLESS STEEL SERVICE SADDLE - SERIES 2606

### APPLICATIONS:

ROBAR **2606** Service Saddles are used to take a service outlet off any transmission or distribution supply line. Especially recommended for Plastic pipe or where corrosion is a factor. Can be used on Ductile, Steel, HDPE, and AC pipe.

### MATERIAL SPECIFICATIONS:

Saddle Body: T304 Stainless Steel, fully passivated\*.  
Gasket: SBR (Buna S) Rubber.  
Other compounds available\*\*.  
Fasteners: 5/8" NC T304 Stainless Steel studs,  
rolled threads, fully passivated\*.  
Nuts coated with anti-galling compound.  
Torque is 70-80 ft. lbs.

### HOW TO ORDER:

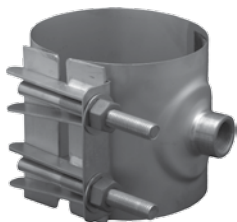
Determine the product number (**2616, etc.**), the actual OD, (see Table on pages 2.3.2, 2.3.3 and 2.3.4), outlet size, outlet thread, and bolt style, and then use the appropriate ordering code as shown in the following examples. If a double bolt (DB) saddle with a 3/4" cc tap is required on a 6" Ductile Iron pipe (6.90), the ordering code is:

<b>2616</b>	-	7.00"	x	3/4"	-	CC	-	DB
product		high limit of		outlet		outlet		bolt style
number		range		size		thread		

i.e. **2616 - 7.00 x 3/4 - CC - DB**

### OPTIONS:

- 2 1/2" and 3" IP outlets are available on nominal sizes 6" and larger on **2626** and **2636** saddles only.
- Saddle body can be made wider if required.



**2616** (1 Section)

- Single bolt closure (SB) on 4" through 8" nominal pipe sizes. 3/4" & 1" only.
- Double bolt closures (DB) on 2" through 12" nominal pipe sizes.



**2626** (2 Sections)

- Double (DB) bolt closures on 4" through 18" nominal pipe sizes.



**2636** (3 Sections)

- Double (DB) bolt closures on 16" through 30" nominal pipe sizes.

Note: \* Refers to chemically treating Stainless Steel after welding ("Pickled/Passivated") to return it to its original appearance.  
\*\* Alternative gasket materials are available. Refer to the Gasket Selection Chart (see page 0.5.1) and contact ROBAR for pricing and Delivery.  
- The **2616 / 2626 / 2636** are NSF61 compliant. Only those products bearing the NSF61 logo stamp are compliant.  
- Please contact ROBAR with your special requirements to determine availability, price and delivery.



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# 2616

## FABRICATED STAINLESS STEEL SERVICE SADDLE - SERIES 2606

2616 SERVICE SADDLE CHART											
NOMINAL PIPE SIZE	OUTLET SIZES AWWA (CC) OR IRON PIPE (IP)	BOLT STYLE		SADDLE WIDTH	APPROXIMATE SHIPPING WEIGHT			WORKING RANGE			
		SINGLE (SB)	DOUBLE (DB)		PIPE						
					LBS.	KG.		LOW	OD	HIGH*	
2	3/4 - 1 1/2**		DB	6.0	1.5	0.7		2.30	2.38	2.50	
								2.50			2.70
2.5	3/4 - 1 1/2**		DB	6.0	1.8	0.8		2.70	2.88	2.90	
								2.90			3.15
								3.15			3.40
3	3/4 - 1 1/2**		DB	6.0	2.0	0.9		3.40	3.50	3.80	
								3.65			3.90
								3.90			4.10
4	3/4 - 1	SB		4.8	2.5	1.1		4.00		4.40	
	3/4 - 1		DB	6.0	3.3	1.5		4.40	4.50	4.80	
				4.80	4.80	5.20					
	1 1/4 - 2			8.0		3.9		1.6		5.20	5.60
				5.60				6.00			
6	3/4 - 1	SB		4.8		3.0	1.4		6.00		6.40
			DB	6.0	3.8	1.7	6.40		6.63	6.80	
	3/4 - 1				6.60	6.90	7.00				
				6.80	7.20						
	1 1/4 - 2			8.0	4.0		1.8			7.20	7.60
8	3/4 - 1	SB		4.8	3.5		1.6		7.60		8.00
			DB	6.0	4.8	2.2	8.00			8.40	
	3/4 - 1				8.40	8.63	8.80				
				8.60	9.05		9.05				
				9.00			9.40				
	1 1/4 - 2			8.0			5.0		2.3	9.20	9.60
10	3/4 - 1		DB	6.0		5.8	2.5		9.60		10.00
						10.00			10.40		
						10.40	10.75		10.80		
						10.70			11.10	11.10	
	1 1/4 - 2				10.90	11.30					
					10.90					11.30	
					11.10		11.50				
					11.60		12.00				
12	3/4 - 1		DB	6.0	6.8	3.0		12.00		12.40	
						12.40		12.75	12.80		
	1 1/4 - 2		8.0	7.0	3.2	12.75			13.20	13.20	
						13.10					13.50
						13.60					14.00

Note: \* The high limit of the range is used in the ordering code.

\*\* 1-1/4" IP and 1-1/2" IP outlets only.

- The **2616** is NSF61 compliant. Only those products bearing the NSF61 logo stamp are compliant.

- This product can be manufactured to your specifications. For ranges and configurations other than those listed, contact ROBAR.

All dimensions are in inches.



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# 2626

## FABRICATED STAINLESS STEEL SERVICE SADDLE - SERIES 2606

### 2626 SERVICE SADDLE CHART

NOMINAL PIPE SIZE	OUTLET SIZES** AWWA (CC) OR IRON PIPE (IP)	SADDLE WIDTH	APPROXIMATE SHIPPING WEIGHT		WORKING RANGE		
			LBS.	KG	PIPE		
					LOW	OD	HIGH*
4	3/4 - 1	6.0	3.5	1.6	4.45	<b>4.50</b>	5.25
					4.74	<b>4.80</b>	5.54
	1 1/4 - 2	8.0	4.0	1.8	5.35		6.15
					5.90		6.70
6	3/4 - 1	6.0	4.0	1.8	6.40	<b>6.63</b>	7.20
					6.85	<b>6.90</b>	7.65
	1 1/4 - 3	8.0	4.8	2.2	7.05		7.85
8	3/4 - 1	6.0	5.0	2.3	7.95	<b>8.63</b>	8.75
					8.40	<b>9.05</b>	9.20
	1 1/4 - 3	8.0	5.5	2.5	9.00		9.80
					9.30		10.10
10	3/4 - 1	6.0	6.5	3.0	10.00	<b>10.75</b>	10.80
					10.70	<b>11.10</b>	11.50
	1 1/4 - 3	8.0	7.0	3.2	11.05		11.85
					11.40		12.20
12	3/4 - 1	6.0	8.0	3.6	12.00	<b>12.75</b>	12.80
					12.70	<b>13.20</b>	13.50
					13.10		13.90
	1 1/4 - 3	8.0	8.5	3.9	13.40		14.20
					13.70	<b>14.00</b>	14.50
14	3/4 - 1	6.0	8.5	3.9	14.00		14.80
					14.95	<b>15.30</b>	15.75
	1 1/4 - 3	8.0	9.0	4.1	15.75		16.55
16	3/4 - 1	6.0	9.8	4.4	15.60	<b>16.00</b>	16.40
					16.40		17.20
	1 1/4 - 3	8.0	10.3	4.7	17.20	<b>17.40</b>	18.00
18	3/4 - 1	6.0	10.8	4.9	17.60	<b>18.00</b>	18.40
					18.00		18.80
					18.40		19.20
					18.80		19.60
	1 1/4 - 3	8.0	11.2	5.1	19.20	<b>19.50</b>	20.00

*All dimensions are in inches.*

Note: \* The high limit of the range is used in the ordering code.

\*\* 2 1/2" and 3" IP outlets available on nominal sizes 6" and above.

- The **2626** is NSF61 compliant. Only those products bearing the NSF61 logo stamp are compliant.

- This product can be manufactured to your specifications. For ranges and configurations other than those listed, contact ROBAR.



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# 2636

## FABRICATED STAINLESS STEEL SERVICE SADDLE - SERIES 2606

### 2636 SERVICE SADDLE CHART

NOMINAL PIPE SIZE	OUTLET SIZES AWWA (CC) OR IRON PIPE (IP)	SADDLE WIDTH	APPROXIMATE SHIPPING WEIGHT DOUBLE BOLT		WORKING RANGE		
			LBS.	KG.	PIPE		
					LOW	OD	HIGH*
16	3/4 - 1	6	10.8	4.9	15.92	<b>16.00</b>	17.12
	1 1/4 - 3	8	11.3	5.1	16.25		17.45
18	3/4 - 1	6	11.8	5.4	17.10	<b>17.40</b>	18.30
	1 1/4 - 3	8	12.2	5.5	17.50	<b>18.00</b>	18.70
20	3/4 - 1	6	12.8	5.8	19.20	<b>19.50</b>	20.40
	1 1/4 - 3	8	13.2	6.0	21.40	<b>21.60</b>	22.60
24	3/4 - 1	6	12.8	5.8	22.80		24.00
	1 1/4 - 3	8	13.2	6.0	23.45	<b>24.00</b>	24.65
26-30	3/4 - 1	6	13.2	6.0	24.45		25.65
					25.50	<b>25.80</b>	26.70
					28.25		29.45
	1 1/4 - 3	8	14.0	6.35	29.40	<b>30.00</b>	30.60
					29.85		31.05
					30.85		32.05
					31.50	<b>32.00</b>	32.70

All dimensions are in inches.

Note: \* The high limit of the range is used in the ordering code.  
- The **2636** is NSF61 compliant. Only those products bearing the NSF61 logo stamp are compliant.  
- This product can be manufactured to your specifications. For ranges and configurations other than those listed, contact ROBAR.



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# 2706

## CAST BRONZE SERVICE SADDLE



### APPLICATIONS:

ROBAR **2706** Service Saddles are used to take a service outlet off a transmission or distribution line. Waterworks Bronze and passivated T304 Stainless Steel are “noble” materials which are closely related to each other near the top of the Galvanic Scale of corrosion resistance. Unlike pairs of widely dissimilar metals, they will both exhibit long life in most ‘hot’ soil environments. Can be used on PVC-C900, Ductile, Iron, Steel, HDPE and AC pipe.

### MATERIAL SPECIFICATIONS:

Saddle Body: Cast Bronze.  
Gasket: SBR (Buna S) Rubber.  
Saddle Straps: T304 Stainless Steel, rolled threads, fully passivated\*.  
Fasteners: 1/2" NC T304 Stainless Steel.  
Nuts coated with anti-galling compound.  
Torque is 45 ft. lbs.

### HOW TO ORDER:

Determine the product number (**2706**), the actual OD (see Table on page 2.4.2), outlet size, outlet thread, and strap style, and order by using appropriate ordering code as shown in the following example:

If a 6" Double strap (DS) Saddle with a 3/4" CC tap is required for a 6" Ductile Iron pipe (6.90" OD), the ordering code is:

<b>2706</b>	-	7.45"	x	3/4"	-	CC	-	DS
product		high		outlet		outlet		strap style
number		end		size		thread		

i.e. **2706 - 7.45 x 3/4 - CC - DS**

If a 12" Double strap (DS) Saddle with a 2" IP tap is required for a 12" C900 PVC pipe (13.20" OD), the ordering code is:

<b>2706</b>	-	13.30"	x	2"	-	IP	-	DS
product		high		outlet		outlet		strap
number		end		size		thread		style

i.e. **2706 - 13.30 x 2 - IP - DS**

Note: Some saddles have more than one strap size available. Please specify what range you require by stating the high end (H=\_\_\_) as shown in the above example.

Note: \* Refers to chemically treating Stainless Steel after welding ("Pickled/Passivated") to return it to its original appearance.  
- The **2706** is NSF61 compliant. Only those products bearing the NSF61 logo stamp are compliant.



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# 2706

## CAST BRONZE SERVICE SADDLE

ROBAR 2706 Service Saddles are strong and resist corrosion. They fit pipes from Standard Steel size to Rough Barrel Asbestos Cement size. Flexible straps adapt readily to the pipe, evenly distributing load and easing installation.

**2706 SERVICE SADDLE CHART**

NOMINAL PIPE SIZE	WORKING RANGE		OUTLET SIZES AWWA (CC) OR IRON PIPE (IP)	STRAP STYLE		APPROXIMATE SHIPPING WEIGHT	
	LOW	HIGH*		SINGLE (SS)	DOUBLE (DS)	LBS.	KG.
4	4.50	4.80	3/4 - 1	SS		2.0	0.9
			1 1/4 - 2			3.0	1.2
			3/4 - 2		DS	3.5	1.6
6	6.60	7.45	3/4 - 2	SS		2.8	1.3
			1 1/4 - 2			3.3	1.5
	7.10	7.60	3/4 - 2		DS	6.3	2.9
8	8.60	9.80	3/4 - 1	SS		3.3	1.5
			3/4 - 2		DS	6.5	3.0
10	10.70	11.20	3/4 - 2		DS	7.3	3.3
	11.10	12.30					
12	12.70	13.30	3/4 - 2		DS	8.8	4.0
	13.10	14.55					
14	15.10	15.70	3/4 - 2		DS	8.8	4.0
	15.20	16.85					
16	17.20	18.40	3/4 - 2		DS	9.3	4.2
	17.40	19.00					
18-20	18.60	20.40	3/4 - 2		DS	11.4	5.1
	19.50	21.30					
	19.70	21.50					
	21.00	22.80					
24	24.60	25.60	3/4 - 2		DS	14.0	6.1
	25.65	26.50					
	26.55	27.55					
	27.60	28.55					
	29.60	30.50					

*All dimensions are in inches.*

- Note:
- \* The high limit of the range is used in the ordering code.
  - The **2706** is NSF61 compliant. Only those products bearing the NSF61 logo stamp are compliant.
  - Recommended torque: 45 ft. lbs.
  - Saddles complete with flat washers.
  - Alternative gasket materials are available. Refer to the Gasket Selection Chart (see page 0.5.1) and contact ROBAR for pricing and delivery.



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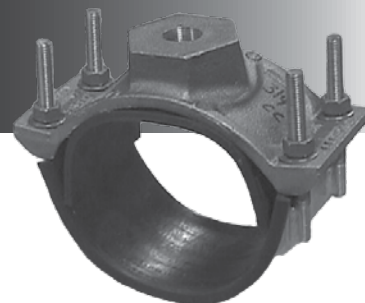
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# 2786

## CAST BRONZE ISOLATING SADDLE



### APPLICATIONS:

ROBAR **2786** Isolating Saddles are used to electrically isolate an outlet or service line from a main distribution line. Primarily used in cathodically protected systems or to separate dissimilar metals. Waterworks Bronze and passivated T304 Stainless Steel are “noble” materials which are closely related to each other near the top of the Galvanic Scale of corrosion resistance. Unlike pairs of widely dissimilar metals, they will both exhibit long life in most ‘hot’ soil environments.

### MATERIAL SPECIFICATIONS:

Saddle Body: Cast Bronze.  
Gaskets: SBR (Buna S) Rubber. Body and Strap.  
Strap & Armor: T304 Stainless Steel, fully passivated\*.  
Fasteners: 1/2" NC T304 Stainless Steel.  
Rolled threads.  
Nuts coated with anti-galling compound.  
Torque is 45 ft. lbs.

### ELECTRICAL SPECIFICATIONS:

Conditions: Laboratory, torque level 45 ft. lbs.  
Resistance: 800 Mega ohms @ 10,000 volts DC.  
Breakdown Voltage: Minimum 12,000 volts DC.

### HOW TO ORDER:

Determine the product number (**2786**), the actual OD, outlet size and outlet thread, and then use the appropriate ordering code as shown in the following example.

If an Isolating Saddle with a 3/4" CC outlet is required for 6" Standard Ductile pipe (6.90" OD) the ordering code is:

**2786** - 6.90" x 3/4" - CC  
product OD (Actual) outlet outlet  
number size thread

i.e. **2786 - 6.90 x 3/4 - CC**

### 2786 ISOLATING SADDLE CHART

NOMINAL PIPE SIZE	WORKING RANGE		APPROXIMATE SHIPPING WEIGHT	
	LOW	HIGH	LBS.	KG.
4	4.50	5.30	6.7	2.3
6	6.60	7.40	7.2	3.2
8	8.60	9.40	7.5	3.4
10	10.70	11.50	8.0	3.6
12	12.70	13.50	9.2	4.2
14	13.80	15.70	10.2	4.6
	15.20	16.00	10.5	4.8
16	17.20	18.00	11.0	5.0

*All dimensions are in inches.*

Note: \* Refers to chemically treating Stainless Steel after welding (“Pickled/Passivated”) to return it to its original appearance.  
- The **2786** is designed to be installed with a maximum torque of 45 ft. lbs. This enables the saddle to perform to its maximum electrical isolating capability.

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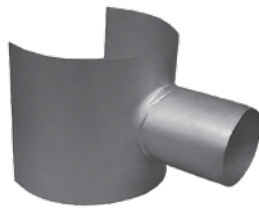
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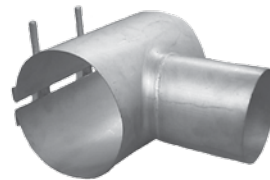
# SECTION 3

## SEWER SADDLES



**3606**

Page 3.1.1



**3626**

**3696**

Page 3.1.1

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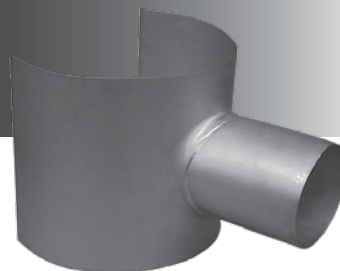
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# 3606

## STAINLESS STEEL SEWER SADDLE



### APPLICATIONS:

ROBAR **3606** Sewer Saddles are used to make a 4" inlet branch to a gravity main sewer line (4" - 4.50" OD is standard). Particularly suited for High Density Polyethylene pipe. Strapping material is not included with product.

### MATERIAL SPECIFICATIONS:

Body: T304 Stainless Steel, fully passivated\*.  
Gaskets: 7.5" x 7.5" x .5" Neoprene.  
Fasteners: Not included.

### HOW TO ORDER:

Determine the product number (**3606**), the OD of sewer main and the actual OD of the branch, then order by using the appropriate ordering code as shown in the following example.

If a 4" branch (4.50" OD) off of a 12" HDPE sewer main is required, the ordering code is:

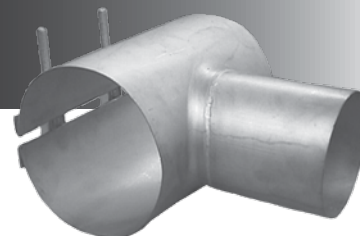
**3606** - 12.75" x 4.50" i.e. **3606 - 12.75 x 4.50**  
product main OD branch OD  
number

Note: \* Refers to chemically treating Stainless Steel after welding ("Pickled/Passivated") to return it to its original appearance.  
- Standard branch outlet is 4" nominal (4.63" OD) accepts 4.50" OD.  
- Special designs, lengths or diameters may be obtained from the factory on request.



# 3626 / 3696

## STAINLESS STEEL SEWER SADDLE



### APPLICATIONS:

ROBAR **3626 / 3696** Sewer Saddles are used to make a 4" inlet branch to a main sewer line (4" - 4.50" OD is standard). Particularly suited for High Density Polyethylene pipe.

### MATERIAL SPECIFICATIONS:

Body: T304 Stainless Steel, fully passivated\*.  
Gaskets: 7.5" x 7.5" x .5" Neoprene.  
Fasteners: 1/2" NC T304 Stainless Steel Studs and washers.  
Nuts coated with anti-galling compound.  
Torque is 45 ft. lbs.

### HOW TO ORDER:

Determine the product number (**3626, etc.**), the OD of sewer main and the actual OD of the branch, then order by using the appropriate ordering code as shown in the following example.

If a 4" branch (4.50" OD) off of a 12" HDPE sewer main is required, the ordering code is:

**3626** - 12.75" x 4.50" i.e. **3626 - 12.75 x 4.50**  
product main OD branch OD  
number

**3626** - Outlet is opposite to closure.

**3696** - Outlet is 90° to closure.

Note: \* Refers to chemically treating Stainless Steel after welding ("Pickled/Passivated") to return it to its original appearance.  
- Standard branch outlet is 4" nominal (4.63" OD) accepts 4.50" OD.  
- Special designs, lengths or diameters may be obtained from the factory on request.

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# 4499

## CAST DUCTILE IRON RESTRAINT LUG



### APPLICATIONS:

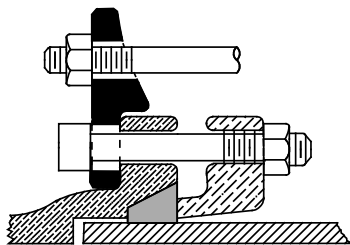
ROBAR **4499** Restraint Lugs are designed for use on Mechanical Joint Fittings to prevent pull-out.

### MATERIAL SPECIFICATIONS:

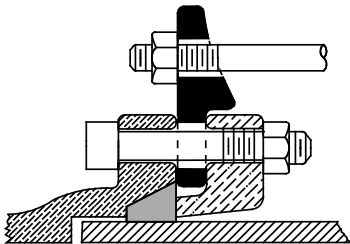
Cast Ductile Iron with Shop Coat Enamel.

### HOW TO ORDER:

Specify ROBAR Product Number (**4499**).



SDR 26 INSTALLATION



C900 OR DR 18 INSTALLATION

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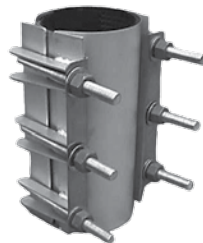
# SECTION 5 REPAIR CLAMPS

“The Original Repair Clamp”



**5616**

Page 5.1.1



**5626**

Page 5.1.1



**5636**

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**5606**

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**5696**

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# 5616 / 5626 / 5636

## STAINLESS STEEL REPAIR CLAMP - 5600 SERIES

### APPLICATIONS:

ROBAR **5600** Series Repair Clamps are used to effectively repair holes or breaks in water mains.

### MATERIAL SPECIFICATIONS:

Shell: T304 Stainless Steel, fully passivated\*.  
Sidebar: T304 Stainless Steel, fully passivated\*.  
Armor: T304 Stainless Steel, fully passivated\*.  
Gasket: SBR (Buna S) Rubber.  
Fasteners: 5/8" NC T304 Stainless steel.  
Nuts coated with anti-galling compound.  
Torque is 70-80 ft. lbs.

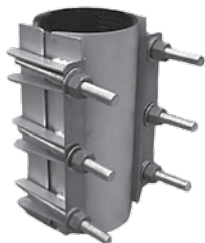
### OPTIONS:

- Outlet taps: 3/4" to 2" IP or 3/4" to 2" CC.
- Other steel and rubber material specifications.
- Multiple sections other than those specified below.



**5616 (Style 1)**

- 1 Section sizes 3" - 12".



**5626 (Style 2)**

- 2 Sections sizes 4" - 16".



**5636 (Style 3)**

- 3 Sections sizes 12" - 30".

### HOW TO ORDER:

Determine the product number (**5616, etc.**), high limit number (see pages 5.1.2, 5.1.3 and 5.1.4), length of clamp and outlet size if any and then order by using the appropriate ordering code as shown in the following example.

For a one section (**Style 1**) clamp, 8" long, for a pipe with an OD of between (6.85" - 7.25"), the ordering code is:

<b>5616</b>	-	7.25"	x	8"
product		high limit of		clamp
number		range		width

i.e. **5616 - 7.25 x 8**

As above but with a 3/4" cc outlet: **5616 - 7.25 - 8 x 3/4 CC**

For a two section (**Style 2**) clamp, 12" long, for a pipe with an OD of between (7.05" - 7.85"), the ordering code is:

<b>5626</b>	-	7.85"	x	12"
product		high limit of		clamp
number		range		width

i.e. **5626 - 7.85 x 12**

As above but with a 3/4" cc outlet: **5626 - 7.85 - 12 x 3/4 CC**

For a three section (**Style 3**) clamp, 16" long, for a pipe with an OD of between (21.40" - 22.60"), the ordering code is:

<b>5636</b>	-	22.60"	x	16"
product		high limit of		clamp
number		range		width

i.e. **5636 - 22.60 x 16**

As above but with a 3/4" cc outlet: **5636 - 22.60 - 16 x 3/4 CC**

ROBAR IS THE ORIGINAL DEVELOPER AND PATENT HOLDER OF THE "ALL STAINLESS REPAIR CLAMP".

ALWAYS SPECIFY "ROBAR" WHEN ORDERING REPAIR CLAMPS.

Note: \* Refers to chemically treating Stainless Steel after welding ("Pickled/Passivated") to return it to its original appearance.  
- Prices for special designs, lengths or diameters may be obtained from the factory on request.  
- If tapped outlets are required, add outlet price from price list.  
- EC Pads available upon request.

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# 5616

## STAINLESS STEEL REPAIR CLAMP - STYLE 1

5616 REPAIR CLAMP CHART								
NOMINAL PIPE SIZE	WORKING RANGE			APPROXIMATE SHIPPING WEIGHT (LBS.)				
				LENGTH OF CLAMP (Common Sizes)				
	LOW	PIPE OD	HIGH*	6"	8"	12"	16"	24"
3	3.45	3.50	3.85	5.0	7.0	9.5	12.5	20.0
	3.95		4.35					
4	4.45	4.50	4.85	5.5	7.5	10.5	13.8	21.3
	4.74		5.14					
	5.05		5.45					
	5.35		5.75					
6	5.95	6.63	6.35	6.3	8.3	12.0	15.8	24.0
	6.40		6.80					
	6.60		7.00					
	6.80	6.90	7.20					
	6.85		7.25					
	7.05		7.45					
	7.40		7.80					
8	7.95	8.63	8.35	7.0	9.3	13.0	17.0	26.5
	8.40		8.80					
	8.60		9.00					
	8.90	9.05	9.30					
	9.00		9.40					
	9.30		9.70					
10	9.75	10.75	10.15		10.3	14.3	17.8	28.5
	10.50		10.90					
	10.70		11.10					
	11.05	11.10	11.45					
	11.40		11.80					
	11.70		12.10					
12	12.00	12.75	12.40		12.3	16.3	21.3	33.3
	12.55		12.95					
	12.70		13.10					
	13.10	13.20	13.50					
	13.40		13.80					
	13.70		14.10					

All dimensions are in inches.

### HOW TO ORDER:

See HOW TO ORDER on page 5.1.1.

Note: \* The high limit of the range is used in the ordering code.  
- 3/4" - 2" IP or CC outlets are available for an additional cost.  
- Longer repair clamps are available. Please contact ROBAR for more information.

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# 5626

## STAINLESS STEEL REPAIR CLAMP - STYLE 2

5626 REPAIR CLAMP CHART							
NOMINAL PIPE SIZE	WORKING RANGE			APPROXIMATE SHIPPING WEIGHT (LBS.)			
				LENGTH OF CLAMP (Common Sizes)			
	LOW	PIPE OD	HIGH*	8"	12"	16"	24"
4	4.45	<b>4.50</b>	5.25	10.8	16.0	21.0	32.3
	4.74	<b>4.80</b>	5.54				
	5.35		6.15				
	5.90		6.70				
6	6.40	<b>6.63</b>	7.20	11.3	17.0	21.5	34.5
	6.85	<b>6.90</b>	7.65				
	7.05		7.85				
8	7.95	<b>8.63</b>	8.75	12.5	18.3	23.5	36.8
	8.40	<b>9.05</b>	9.20				
	9.00		9.80				
	9.30		10.10				
10	10.00	<b>10.75</b>	10.80	13.8	19.3	25.0	38.5
	10.70	<b>11.10</b>	11.50				
	11.05		11.85				
	11.40		12.20				
12	12.00	<b>12.75</b>	12.80	15.8	23.5	28.3	46.8
	12.70	<b>13.20</b>	13.50				
	13.10		13.90				
	13.40		14.20				
14	13.70	<b>14.00</b>	14.50	16.5	24.5	29.8	48.8
	14.00		14.80				
	14.95	<b>15.30</b>	15.75				
16	15.75	<b>16.00</b>	16.55	18.0	26.0	31.0	50.6
	17.20	<b>17.40</b>	18.00				

*All dimensions are in inches.*

### HOW TO ORDER:

See HOW TO ORDER on page 5.1.1.

Note: \* The high limit of the range is used in the ordering code.  
 - 3/4" - 2" IP or CC outlets are available for an additional cost.  
 - Longer repair clamps are available. Please contact ROBAR for more information.

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# 5636

## STAINLESS STEEL REPAIR CLAMP

### 5636 REPAIR CLAMP CHART

NOMINAL PIPE SIZE	WORKING RANGE			APPROXIMATE SHIPPING WEIGHT (LBS.)			
				LENGTH OF CLAMP (Common Sizes)			
	LOW	PIPE OD	HIGH*	8"	12"	16"	24"
12	12.80	<b>13.20</b>	14.00	18.5	31.0	40.5	62.5
	13.65	<b>14.00</b>	14.85				
14	14.85	<b>15.30</b>	16.05	20.0	33.0	43.0	65.5
	15.92	<b>16.00</b>	17.12				
16	16.25		17.45	22.5	34.0	45.5	67.5
	17.10	<b>17.40</b>	18.30				
18	17.40	<b>18.00</b>	18.60	23.0	34.5	46.0	69.0
	19.20	<b>19.50</b>	20.40				
20	21.40	<b>21.60</b>	22.60	24.0	37.0	48.0	72.0
	22.80		24.00				
	23.45	<b>24.00</b>	24.65				
24	24.45		25.65	28.0	41.0	52.0	84.0
	25.50	<b>25.80</b>	26.70				
	28.25		29.45				
30	29.40	<b>30.00</b>	30.60	34.0	46.0	51.0	89.0
	29.85		31.05				
	30.85		32.05				
	31.50	<b>32.00</b>	32.70				

*All dimensions are in inches.*

#### HOW TO ORDER:

See HOW TO ORDER on page 5.1.1.

Note: \* The high limit of the range is used in the ordering code.  
- 3/4" - 2" IP or CC outlets are available for an additional cost.  
- Longer repair clamps are available. Please contact ROBAR for more information.

#### ROBAR INDUSTRIES LTD. - BRITISH COLUMBIA

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Fax: (604) 591 - 5288

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# 5606

## STAINLESS STEEL REPAIR CLAMP

### APPLICATIONS:

ROBAR **5606** Single Section Repair Clamps are used to repair small holes or breaks in water mains. The **5606** has a full wrap gasket.



### MATERIAL SPECIFICATIONS:

Shell: T304 Stainless Steel, fully passivated\*.  
Sidebar: T304 Stainless Steel, fully passivated\*.  
Armor: T304 Stainless Steel, fully passivated\*.  
Gasket: SBR (Buna S) Rubber.  
Fasteners: 1/2" NC T304 Stainless steel.  
Nuts coated with anti-galling compound.  
Torque is 45 ft. lbs.

### HOW TO ORDER:

Determine the product number (**5606**), high limit of range (see table below) and length of clamp and then order by using appropriate ordering code as shown in the following example.

For a 12" long clamp on a pipe with an OD of between (6.85" - 7.10"), the ordering code is:

**5606** - 7.10" x 12"  
product high limit of clamp  
number range width

i.e. **5606 - 7.10 x 12**

### 5606 REPAIR CLAMP CHART

NOMINAL PIPE SIZE	WORKING RANGE		APPROXIMATE SHIPPING WEIGHT (LBS.)			
			LENGTH OF CLAMP (Common Sizes)			
	LOW	HIGH	4"	6"	8"	12"
2	2.12	2.37	1.0	1.8	2.0	3.1
	2.25	2.50				
	2.37	2.62				
	2.63	2.88				
	2.87	3.12				
3	3.25	3.50	1.5	2.5	3.0	4.5
	3.50	3.75				
	3.74	3.99				
4	4.45	4.70	1.8	3.0	4.5	5.3
	4.75	5.00				
6	6.58	6.83	2.5	3.8	5.0	7.5
	6.85	7.10				
8	8.58	8.83	2.8	4.5	5.5	8.3
	9.00	9.25				

*All dimensions are in inches.*

Note: \* Refers to chemically treating Stainless Steel after welding ("Pickled/Passivated") to return it to its original appearance.  
- Prices for special designs, lengths or diameters may be obtained from the factory on request.

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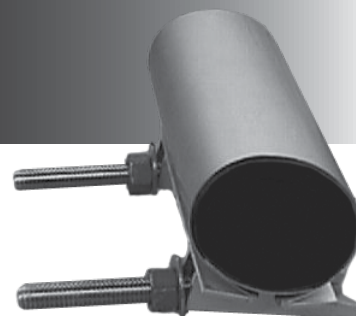
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# 5696

## STAINLESS STEEL REPAIR CLAMP



### APPLICATIONS:

ROBAR **5696** Single Section Repair Clamps are used to repair small punctures, pinholes and splits which do not require the full wrap-around gasket provided by the **5606** repair clamp.

### MATERIAL SPECIFICATIONS:

Shell: T304 Stainless Steel, fully passivated\*.  
Sidebar: T304 Stainless Steel, fully passivated\*.  
Gasket: SBR (Buna S) Rubber.  
Fasteners: 1/2" NC T304 Stainless steel.  
Nuts coated with anti-galling compound.  
Torque is 45 ft. lbs.

### HOW TO ORDER:

Determine the product number (**5696**), high limit of range (see table below) and length of clamp and then order by using appropriate ordering code as shown in the following example.

For a 12" long clamp on a pipe with an OD of between (6.63" - 6.88"), the ordering code is:

**5696** - 6.88" x 12"  
product high limit of clamp  
number range width

i.e. **5696 - 6.88 x 12**

### 5696 REPAIR CLAMP CHART

NOMINAL PIPE SIZE	WORKING RANGE		APPROXIMATE SHIPPING WEIGHT (LBS.)			
			LENGTH OF CLAMP (Common Sizes)			
	LOW	HIGH	4"	6"	8"	12"
2	1.90	2.15	1.0	1.8	2.0	3.1
	2.00	2.25				
	2.25	2.50				
	2.37	2.62				
	2.87	3.12				
3	3.12	3.37	1.3	2.0	2.5	3.8
	3.50	3.75				
4	4.12	4.37	1.5	2.5	3.0	4.5
	4.50	4.75				
6	6.12	6.37	2.0	3.3	4.0	6.0
	6.63	6.88				
8	8.63	8.88	2.5	3.8	5.0	7.5

*All dimensions are in inches.*

Note: \* Refers to chemically treating Stainless Steel after welding ("Pickled/Passivated") to return it to its original appearance.  
- Prices for special designs, lengths or diameters may be obtained from the factory on request.

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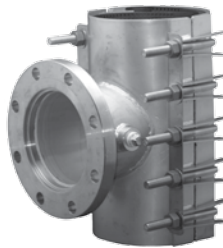


# SECTION 6 TAPPING SLEEVES



**6404**  
**6506**

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**6606**

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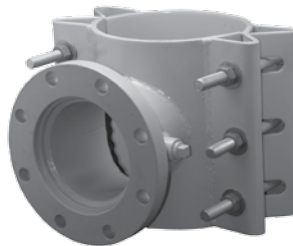
**6626**

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**6636AS**

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# 6404 / 6506

## CAST DUCTILE IRON TAPPING SLEEVE



### APPLICATIONS:

ROBAR **6404 / 6506** Tapping Sleeves are used to make a branch outlet off a main supply line on Ductile or Cast Iron pipe only. The outside diameters of Ductile Iron and Cast Iron are within the working range of this tapping sleeve.

### MATERIAL SPECIFICATIONS:

Body: Cast Ductile Iron.  
 Flange: Cast Ductile Iron, 150 lb. Drilling.  
 Gaskets: NBR (Buna N) Rubber, c/w O-Ring.  
 Fasteners: **6404** - 3/4" NC Cast Ductile bolts.  
**6506** - 3/4" NC T304 Stainless Steel.  
 Nuts coated with anti-galling compound.  
 Torque is 75-80 ft. lbs.  
 Test Plug: 3/4" NPT Mild Steel.  
 Coating: **6404** - Two coats of Enamel.  
**6506** - Corrosion Protective Epoxy coating.

### HOW TO ORDER:

Determine the product number (**6404, etc.**), nominal main size, nominal outlet size and actual main OD, and then order by using the appropriate ordering code (see table below) as shown in the following example.

If an Epoxy coated Tapping sleeve with Stainless Steel fasteners is required to install a 6" outlet on an 8" Ductile Iron water pipe (9.05" OD), the ordering code is:

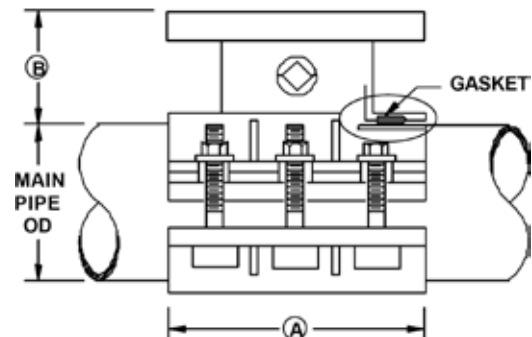
6506 - 8" x 6" - 9.05"  
 product nom. main nom. outlet actual main  
 number size size OD

i.e. **6506 - 8 x 6 - 9.05**

NOMINAL PIPE SIZE	ORDERING CODE*	APPROXIMATE SHIPPING WEIGHT		WORKING RANGE
		LBS.	KG.	
4 x 4	PN - 4" x 4" x OD	39	17.1	4.74 - 5.10
6 x 4	PN - 6" x 4" x OD	45	20.4	6.86 - 7.10
6 x 6	PN - 6" x 6" x OD	51	23.1	6.86 - 7.10
8 x 4	PN - 8" x 4" x OD	64	29.0	8.99 - 9.30
8 x 6	PN - 8" x 6" x OD	68	30.9	8.99 - 9.30
8 x 8	PN - 8" x 8" x OD	80	36.4	8.99 - 9.30

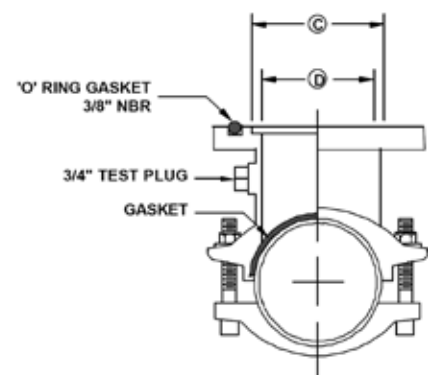
Note: \*PN stands for the Product Number (**6404, etc.**).

All dimensions are in inches.



NOMINAL PIPE SIZE	OUTLET SIZE	A SLEEVE LENGTH	B FLANGE HEIGHT	C SPIGOT OD	D BRANCH ID	NUMBER OF BOLTS	BOLT SIZE
4	4	8	3 5/8	5 1/32	4 3/8	6	3/4
6	4	8 1/2	3 5/8	5 1/32	4 3/8	6	3/4
	6	8 1/2	3 5/8	7 1/32	6 3/8	6	3/4
8	4	9 1/2	3 3/4	5 1/32	4 3/8	6	3/4
	6	9 1/2	3 3/4	7 1/32	6 3/8	6	3/4
	8	9 1/2	3 3/4	9 1/32	8 3/8	6	3/4

All dimensions are in inches.



Note: - Not recommended for use on Plastic pipe (PVC or HDPE) or Asbestos Cement pipe.

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# 6606

## STAINLESS STEEL TAPPING SLEEVE

### APPLICATIONS:

ROBAR **6606** Tapping Sleeves are used for "WET" or "HOT" tapping. Available for pipe diameters from 4" to 24". Outlet options include size on size for 4", 6", 8", 10" and 12" nominal pipe. Used on Steel, Ductile Iron, C900, A/C pipe. **Note:** Not for use on Concrete Cylinder pipe or hot tapping on HDPE.

### MATERIAL SPECIFICATIONS:

Shell:	T304 Stainless Steel, fully passivated*.
Fasteners:	5/8" NC T304 Stainless Steel. Nuts coated with anti-galling compound. Torque is 70-80 ft. lbs.
Gaskets:	Ringseal: NBR (Buna N) Rubber. Liner: SBR (Buna S) Rubber. Full wrap around.
Test Plug:	3/4" NPT Stainless Steel.
Flange:	T304 Stainless Steel*, 150 lb. Drilling. Machine to spigot alignment.
Outlet Pipe:	T304 Stainless Steel, fully passivated*.

Available with Bolt Brackets. Contact ROBAR for more information.

TAPPING SLEEVE DATA						
NOMINAL OUTLET SIZE	A	B	C (DIA.)	D (DIA.)	BOLT QTY.	BOLT SIZE
4	12	4	5 1/32	4 1/2	8	5/8
6	16	4 1/2	7 1/32	6 1/2	10	5/8
8	20	5	9 1/32	8 1/2	14	5/8
10	20	5 1/2	11 1/32	10 7/16	14	5/8
12	24	5 3/4	13 1/32	12 7/16	16	5/8

All dimensions are in inches.

NOMINAL PIPE SIZE	BY X	OUTLET SIZE	FITTING LENGTH	NUMBER OF BOLTS	APPROXIMATE SHIPPING WEIGHT		WORKING RANGE	
					LBS.	KG.	LOW	HIGH
4	X	3	12	8	33	15.0	4.70	4.95
		4**			36	16.4	4.95	5.20
6	X	3	12	8	36	16.4	6.40	6.80
		4			39	17.7	6.80	7.20
		6**	16	10	43	19.6	7.20	7.60
							6.75	7.00
8	X	3	12	8	40	18.2	6.85	7.10
		4			43	19.6	7.00	7.25
		6	16	10	47	21.4	7.25	7.50
		8**	20	14	64	29.1	6.75	7.00
							6.85	7.10
							7.00	7.25

All dimensions are in inches.

Note: \* Refers to chemically treating Stainless Steel after welding ("Pickled/Passivated") to return it to its original appearance.  
\*\* For size on size tapping an undersize cutter is used.  
- The **6606** is NSF61 compliant. Only those products bearing the NSF61 logo stamp are compliant.



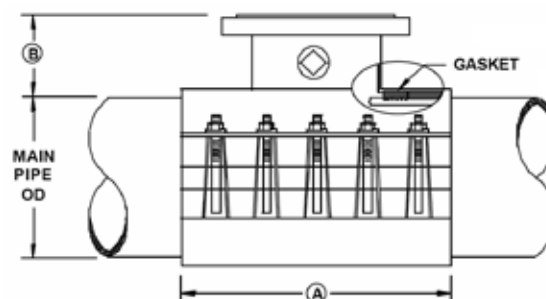
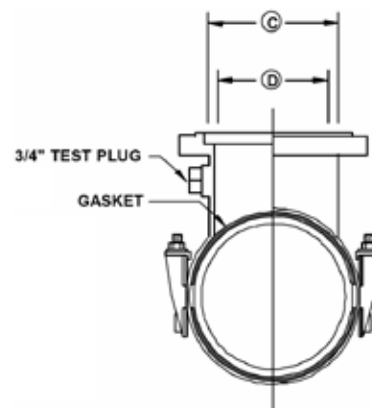
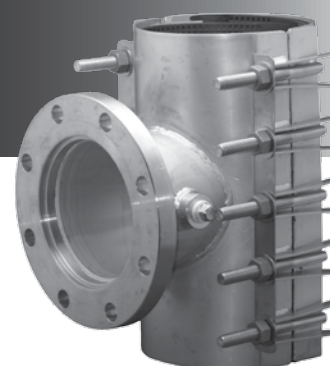
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# 6606

## STAINLESS STEEL TAPPING SLEEVE

NOMINAL PIPE SIZE	BY X	OUTLET SIZE	FITTING LENGTH	NUMBER OF BOLTS	APPROXIMATE SHIPPING WEIGHT		WORKING RANGE	
					LBS.	KG.	LOW	HIGH
10	X	3	12	8	43	19.6	10.55	10.95
		4			46	20.9		
		6	16	10	50	22.7		
		8			68	30.9		
		10	20	14	73	33.2		
12	X	3	12	8	46	20.9	12.15	12.55
		4			49	22.3		
		6	16	10	53	24.1		
		8			72	32.7		
		10	20	14	77	35.0		
		12			111	50.5		
14	X	3	12	8	67	30.5	15.10	15.50
		4			70	31.8		
		6	16	10	74	33.6		
		8			93	42.3		
		10	20	14	98	44.6		
		12			132	60.0		
16	X	3	12	8	71	32.3	17.20	17.60
		4			75	34.1		
		6	16	10	79	35.9		
		8			100	45.5		
		10	20	14	105	47.7		
		12			141	64.1		
18	X	3	12	12	74	33.6	19.30	19.70
		4			77	35		
		6	16	15	81	36.8		
		8			103	46.8		
		10	20	21	108	49.1		
		12			144	65.5		
20	X	3	12	12	84	38.2	21.40	21.80
		4			87	39.6		
		6	16	15	91	41.4		
		8			115	52.3		
		10	20	21	120	54.6		
		12			158	71.8		
24	X	3	12	12	90	40.9	23.20	23.60
		4			93	42.3		
		6	16	15	97	44.1		
		8			121	55.0		
		10	20	21	127	57.7		
		12			167	75.9		

All dimensions are in inches.

### HOW TO ORDER:

Determine the product number (**6606**), nominal main size, nominal outlet size, high limit number (see table above), and then order using the appropriate ordering code as shown in the following example. If a Stainless Steel Tapping Sleeve, with a 6" nominal outlet is required for a 12" nominal diameter Ductile Iron pipe (13.20" OD), the ordering code is:

**6606** - 12" x 6" - 13.40" i.e. **6606 - 12 x 6 - 13.40**  
 product nom. main nom. outlet high end of  
 number size size range

**6606** Tapping Sleeves come in 3 sections for nominal pipe sizes of 18" - 24".

Note: - Contact ROBAR for Bolt Bracket closures.  
 - For sizes not listed above, call ROBAR for availability.  
 - The working range displayed is only a guideline, other ranges are available.



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# 6626

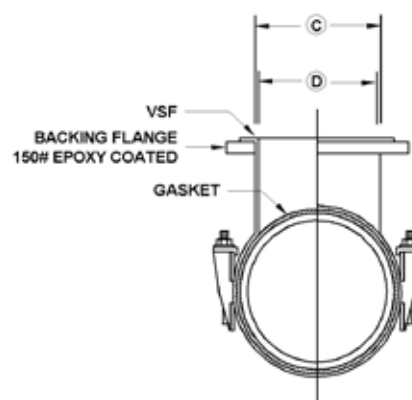
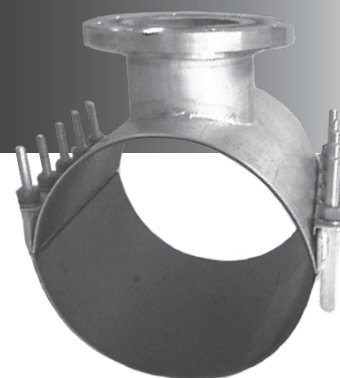
## STAINLESS STEEL OUTLET SLEEVE

### APPLICATIONS:

ROBAR **6626** Outlet Sleeves are used for "DRY TAP" applications. Outlet options are 3" through 12" including size on size for 6" and 8". Particularly suited for use on High Density Polyethylene (HDPE).

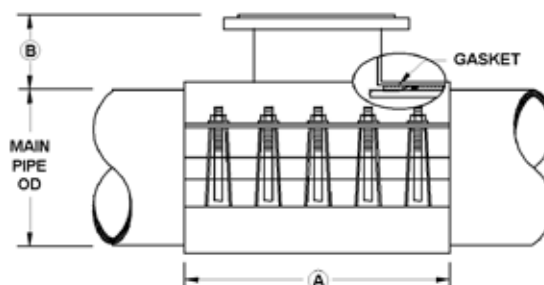
### MATERIAL SPECIFICATIONS:

Shell: T304 Stainless Steel, fully passivated\*.  
Fasteners: 5/8" NC T304 Stainless Steel, Rolled threads. Nuts coated with anti-galling compound. Torque is 70-80 ft. lbs.  
Gaskets: Ringseal: NBR (Buna N) Rubber.  
Liner: SBR (Buna S) Rubber. Full wrap around.  
Flange: 4" - 6" T304 Stainless Steel, 150 lb. Drilling.  
8" - 12" ASTM A-7 Mild Steel Plate (Vanstone Flange) with Corrosion Protective Epoxy coating, 150 lb. Drilling (Option: T304 Stainless Steel).  
Outlet: T304 Stainless Steel\*.



OUTLET SLEEVE DATA						
NOMINAL OUTLET SIZE	A	B	C (DIA.)	D (DIA.)	BOLT QTY.	BOLT SIZE
3	12	4	3.25	3	8	5/8
4	12	4	4.25	4	8	5/8
6	16	4.5	6.25	6	10	5/8
8	20	5	8.25	8	14	5/8
10	20	5.5	10.25	10	14	5/8
12	24	5.75	12.25	12	16	5/8
14	28	7.13	14.25	14	18	5/8
16	32	7.75	16.25	16	20	5/8
18	36	8.25	18.25	18	24	5/8
20	40	8.50	20.25	20	28	5/8

All dimensions are in inches.



NOMINAL PIPE SIZE	BY X	OUTLET SIZE	FITTING LENGTH	NUMBER OF BOLTS	APPROXIMATE SHIPPING WEIGHT		WORKING RANGE	
					LBS.	KG.	LOW	HIGH
4	X	3	12	8	33	15.0	4.70	4.95
		4			36	16.4	4.95	5.20
6	X	3	12	8	36	16.4	6.40	6.80
		4			39	17.7	6.80	7.20
		6	16	10	43	19.6	7.20	7.60
							6.75	7.00
8	X	3	12	8	40	18.2	6.85	7.10
		4			43	19.6	7.00	7.25
		6	16	10	47	21.4	7.25	7.50
							8.40	8.80
		8	20	14	64	29.1	8.80	9.20
							9.20	9.60

All dimensions are in inches.

Note: \* Refers to chemically treating Stainless Steel after welding ("Pickled/Passivated") to return it to its original appearance.  
- For size on size tapping an undersize cutter is used.

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# 6626

## STAINLESS STEEL OUTLET SLEEVE

NOMINAL PIPE SIZE	BY X	OUTLET SIZE	FITTING LENGTH	NUMBER OF BOLTS	APPROXIMATE SHIPPING WEIGHT		WORKING RANGE	
					LBS.	KG.	LOW	HIGH
10	X	3	12	8	43	19.6	10.55	10.95
		4			46	20.9		
		6	16	10	50	22.7		
		8			68	30.9		
		10	20	14	73	33.2		
12	X	3	12	8	46	20.9	12.15	12.55
		4			49	22.3		
		6	16	10	53	24.1		
		8			72	32.7		
		10	20	14	77	35.0		
		12			111	50.5		
14	X	3	12	8	67	30.5	15.10	15.50
		4			70	31.8		
		6	16	10	74	33.6		
		8			93	42.3		
		10	20	14	98	44.6		
		12			132	60.0		
16	X	3	12	8	71	32.3	17.20	17.60
		4			75	34.1		
		6	16	10	79	35.9		
		8			100	45.5		
		10	20	14	105	47.7		
		12			141	64.1		
18	X	3	12	12	74	33.6	19.30	19.70
		4			77	35		
		6	16	15	81	36.8		
		8			103	46.8		
		10	20	21	108	49.1		
		12			144	65.5		
20	X	3	12	12	84	38.2	21.40	21.80
		4			87	39.6		
		6	16	15	91	41.4		
		8			115	52.3		
		10	20	21	120	54.6		
		12			158	71.8		
24	X	3	12	12	90	40.9	23.20	23.60
		4			93	42.3		
		6	16	15	97	44.1		
		8			121	55.0		
		10	20	21	127	57.7		
		12			167	75.9		

*All dimensions are in inches.*

### HOW TO ORDER:

Determine the product number (**6626**), nominal main size, nominal outlet size and the high limit number (see table above) and then order by using the appropriate ordering code as shown in the following example. If a Stainless Steel Outlet Sleeve, with a 6" nominal outlet is required for a 12" nominal diameter HDPE pipe (12.75" OD), the ordering code is:

**6626** - 12" x 6" - 12.95" i.e. **6626 - 12 x 6 - 12.95**  
 product nom. main nom. outlet high end of  
 number size size range

**6626** Tapping Sleeves come in 3 sections for nominal pipe sizes of 18" - 24".

Note: - For sizes not listed above, call ROBAR for availability.  
 - The working range displayed is only a guideline, other ranges are available.

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# 6636AS

## ABANDON SERVICE SLEEVE



### APPLICATIONS:

ROBAR **6636AS** Abandon Service Sleeves are used to seal off abandoned or decommissioned 3/4" and 1" main stops. Allows for no disruption in water service. No re-chlorination of lines due to atmospheric exposure. Simply install over existing main stop. Available in bolt bracket style or lifter bar style.

### MATERIAL SPECIFICATIONS:

Shell: T304 Stainless Steel, fully passivated\*.  
Fasteners: 5/8" NC T304 Stainless Steel. Nuts coated with anti-galling compound. Torque is 70-80 ft. lbs.  
Gaskets: Ringseal: NBR (Buna N) Rubber.  
Liner: SBR (Buna S) Rubber.  
Outlet Pipe: T304 Stainless Steel, fully passivated\*.

NOMINAL PIPE SIZE	BY X	OUTLET SIZE	WORKING RANGE		FITTING LENGTH	NUMBER OF BOLTS
			LOW	HIGH		
4	X	3	4.70 4.95	4.95 5.20	12	8
6	X	3	6.40 6.80 7.20	6.80 7.20 7.60	12	8
8	X	3	8.40 8.80 9.20	8.80 9.20 9.60	12	8
10	X	3	10.55 10.90 11.30 11.90	10.95 11.30 11.70 12.30	12	8
12	X	3	12.15 15.55 13.00 13.40 13.80	12.55 12.95 13.40 13.80 14.20	12	8
14	X	3	15.10 15.50 15.80 16.20	15.50 15.90 16.20 16.80	12	8
16	X	3	17.20 17.40 17.80 18.40 18.80	17.60 17.80 18.20 18.80 19.20	12	8
18	X	3	19.30 19.80 20.20	19.70 20.20 20.60	12	12
20	X	3	21.40 22.00 22.60	21.80 22.40 23.00	12	12
24	X	3	23.20 23.80 25.60	23.60 24.20 26.00	12	12

*All dimensions are in inches.*

### HOW TO ORDER:

Determine the product number (**6636AS**), the nominal main size, the nominal outlet size and the actual main pipe OD, and then use the appropriate ordering code as shown in the following example.

To fit an Abandon Service Sleeve over 8" C900 pipe (9.05"OD) that has a 3/4" main stop attached, the ordering code would be:

**6636AS** - 8" x 3" - 9.05" i.e. **6636AS - 8 x 3 - 9.05**  
product nom. main nom. outlet actual main  
number size size OD

Note: \* Refers to chemically treating Stainless Steel after welding ("Pickled/Passivated") to return it to its original appearance.  
- The high limit of the range is used in the ordering code.  
- Other sizes and variations available on request.

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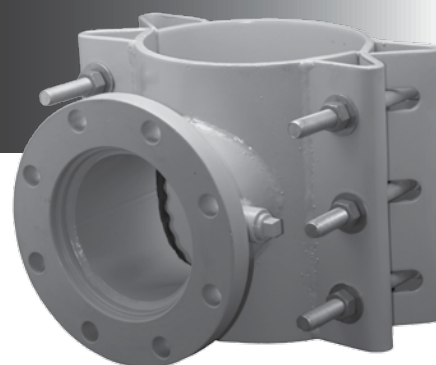
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# 6808 / 6806 / 6906

## MILD STEEL TAPPING SLEEVE

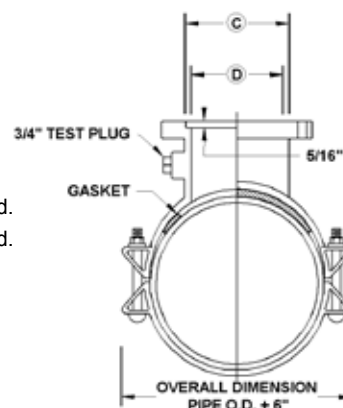


### APPLICATIONS:

ROBAR **6808** / **6906** / **6906** Tapping Sleeves are used to make a branch outlet off a main supply line on Steel, Ductile Iron, Cast Iron, Asbestos Cement and C900 pipe. Not recommended for Concrete Pressure pipe or HDPE.

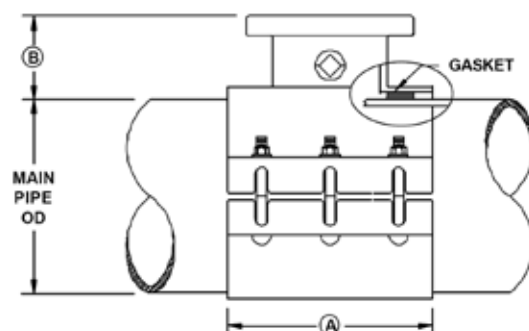
### MATERIAL SPECIFICATIONS:

Body:	Shell: Mild Steel 3/8" Plate. Outlet Pipe: Schedule 40 Mild Steel or equivalent.
Flange:	Forged Steel, drilled and faced per ANSI 150 lb. standards. Flat face recessed for tapping valve, per MSS standard SP-60. Options available.
Fasteners:	<b>6808</b> - 3/4" NC HSLA. <b>6806</b> - 3/4" NC T304 Stainless Steel. Nuts coated with anti-galling compound. <b>6906</b> - 3/4" NC T304 Stainless Steel. Nuts coated with anti-galling compound. Torque is 80 ft. lbs.
Gaskets:	NBR (Buna N) Rubber.
Test Plug:	3/4" NPT Mild Steel.
Coatings:	<b>6808</b> - Enamel coated. <b>6806</b> - Enamel coated. <b>6906</b> - Corrosion Protective Epoxy coating.



TAPPING SLEEVE DATA						
NOMINAL OUTLET SIZE	A	B	C (DIA.)	D (DIA.)	BOLT QTY.	BOLT SIZE
4	12	5.19	5.06	4	6	3/4
6	12	5.63	7.06	6	6	3/4
8	16	6.00	9.06	8	8	3/4
10	20	6.50	11.06	10	10	3/4
12	20	6.75	13.06	12	10	3/4

All dimensions are in inches.



### HOW TO ORDER:

Determine the product number (**6808**, etc.), nominal main size, nominal outlet size and the high limit number (see table above) and then order using the appropriate ordering code as shown in the following example.

If an Enamel coated mild steel tapping sleeve is required to install a 8" outlet on a 12" Ductile Iron pipe (13.20" OD), the ordering code is:

**6808** - 12" x 8" - 13.30" i.e. **6808 - 12 x 8 - 13.30**  
product nom. main nom. outlet high end  
number size size

Note: - The **6806** / **6906** are NSF61 compliant. Only those products bearing the NSF61 logo stamp are compliant.



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# 6808 / 6806 / 6906

## MILD STEEL TAPPING SLEEVE

NOMINAL PIPE SIZE	BY X	OUTLET SIZE	FITTING LENGTH	NUMBER OF BOLTS	APPROXIMATE SHIPPING WEIGHT		WORKING RANGE	
					LBS.	KG.	LOW	HIGH
6	X	4	12	6	50	23	6.90	7.20
		6**			50	23		
8	X	4	12	6	65	29	8.50	8.90
		6			80	36	8.90	9.30
		8**	16	8	90	41	9.30	9.70
10	X	4	12	6	68	31	9.70	10.10
		6			70	32	10.10	10.50
		8	16	8	92	42	10.50	10.90
		10**	20	10	118	54	10.90	11.30
12	X	4	12	6	92	42	11.30	11.70
		6			100	45	11.70	12.10
		8	16	8	115	52	12.10	12.50
		10	20	10	130	59	12.50	12.90
		12**			170	77	12.90	13.30
14	X	4	12	6	95	43	13.30	13.60
		6			102	46	13.60	14.05
		8	16	8	124	56	14.05	14.50
		10	20	10	150	68	14.50	14.95
		12	20	10	200	91	14.95	15.40
16	X	4	12	6	105	47	15.40	15.75
		6			114	52	15.75	16.15
		8	16	8	136	62	16.15	16.60
		10	20	10	162	74	16.60	17.05
		12			212	96	17.05	17.50
18	X	4	12	6	108	49	17.50	17.85
		6			114	52	17.85	18.30
		8	16	8	136	62	18.30	18.75
		10	20	10	162	74	18.75	19.20
		12			212	96	19.20	19.65
20 - 22	X	4	12	6	132	60	19.65	19.95
		6			154	70	19.95	20.40
		8	16	8	180	82	20.40	20.90
		10	20	10	230	105	20.90	21.40
		12			255	116	21.40	21.90
24	X	4	12	6	137	62	21.90	22.15
		6			159	72	22.15	22.70
		8	16	8	185	84	22.70	23.25
		10	20	10	235	107	23.25	23.60
		12			260	118	23.60	24.15

All dimensions are in inches.

For a 4" tapping sleeve, consider using a **6606**, **6404** or **6506**.

Note: \* The high limit of the range is used in the ordering code.

\*\* When ordering size on size Tapping Sleeves, a 1/2" undersize cutter is required. Size on size for steel size is unavailable.

- Other working ranges are available on request.

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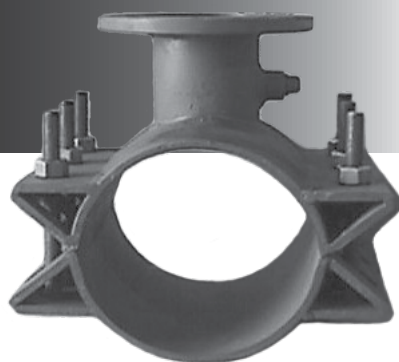
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# 6828 / 6926 SERIES 428

## MILD STEEL TAPPING SLEEVE



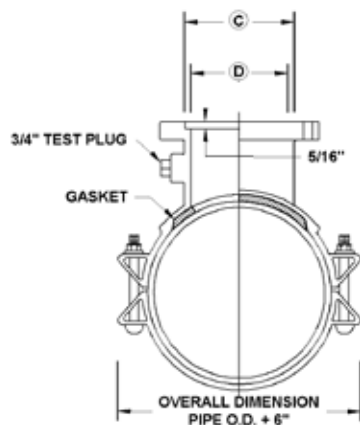
### APPLICATIONS:

ROBAR  BAKER

ROBAR **6828 / 6926** Tapping Sleeves are used to make a branch outlet off a main supply line on Steel, Ductile Iron, Cast Iron and Asbestos Cement pipe.

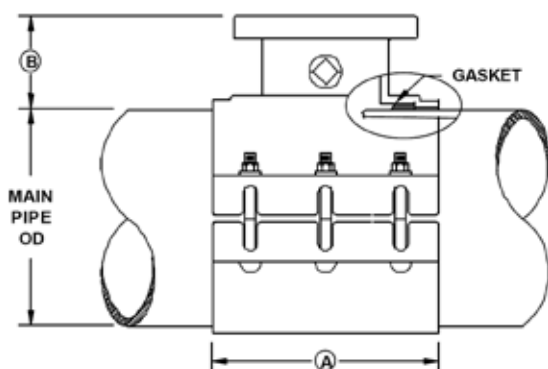
### MATERIAL SPECIFICATIONS:

Body: Carbon Steel plate.  
 Flange: Drilled and faced per ANSI 150 lb. standards. Flat face recessed for tapping valve, per MSS standard SP-60. 300 lb. drilling available.  
 Fasteners: **6828** - 3/4" NC Low alloy.  
**6926** - 3/4" NC T304 Stainless Steel. Nuts coated with anti-galling compound. Torque is 75-80 ft. lbs.  
 Gaskets: NBR (Buna N) Rubber.  
 Coatings: **6828** - Shop paint.  
**6926** - Corrosion Protective Epoxy coating.



TAPPING SLEEVE DATA						
NOMINAL OUTLET SIZE	A	B	C (DIA.)	D (DIA.)	BOLT QTY.	BOLT SIZE
4	12	5.25	5.03	4.50	6	3/4
6	12	5.63	7.03	6.50	6	3/4
8	16	6.00	9.03	8.50	8	3/4
10	20	6.50	11.03	10.44	10	3/4
12	20	6.75	13.03	12.44	10	3/4
14	24	7.13	See Note Below		12	3/4
16	28	7.75			14	3/4
18	32	8.25			16	3/4
20	36	8.50			18	3/4

All dimensions are in inches.



### HOW TO ORDER:

Determine the product number (**6828**, etc.), the nominal main size, the nominal outlet size and the actual main pipe OD, and then use the appropriate ordering code as shown in the following example.

For a 16" Ductile Iron (17.40" OD) main, with an 8" branch in a corrosive ground condition (i.e. Epoxy coated with Stainless Steel bolts), the ordering code is:

**6926** - 16" x 8" - 17.40" i.e. **6926 - 16 x 8 - 17.40**  
 product nom. main nom. outlet actual main  
 number size size OD

Note: - Flange outlets 14" and larger are designed to fit specific tapping valves of various manufacturers. Specify valve manufacturer when ordering branches 14" and larger.

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# SECTION 7

## FLANGED COUPLING ADAPTERS



**7404**  
**7406**  
**7506**

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**7808**  
**7906**

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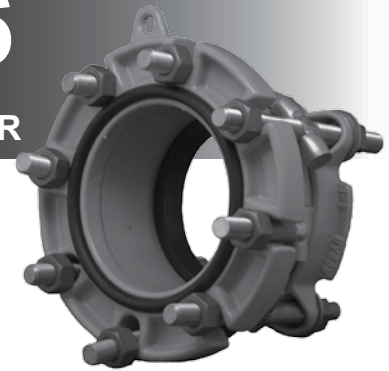
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# 7404 / 7406 / 7506

## CAST DUCTILE IRON FLANGED COUPLING ADAPTER



### APPLICATIONS:

ROBAR **7404 / 7406 / 7506** Flanged Coupling Adapters are used to flexibly adapt plain end pipe to flanged end.

### MATERIAL SPECIFICATIONS:

Flanged Body: Cast Ductile Iron, Class "D", C-207, with ANSI 150 lbs. drilling.  
End Ring: Cast Ductile Iron.

Gaskets:

Flange: NBR (Buna N) Rubber.

Coupling: SBR (Buna S) Rubber.\*\*

Fasteners: **7404** - 5/8" NC Cast Ductile Iron, or Low Alloy Steel.

**7406** - 5/8" Stainless Steel fasteners, fully passivated\*.

**7506** - 5/8" Stainless Steel fasteners, fully passivated\*.

Nuts coated with anti-galling compound.

Torque is 70-80 ft. lbs.

Coatings: **7404** - Two coats of Enamel.

**7406** - Two coats of Enamel.

**7506** - Epoxy coated Body and End Ring.

### HOW TO ORDER:

Determine the product number (**7404**, etc.), nominal pipe OD, the actual OD (see table below) and then use the appropriate ordering code as shown in the following example.

For a standard FCA required for 6" C900 PVC pipe (6.90" OD), the ordering code is:

**7404** - 6" - 6.90" i.e. **7404 - 6 - 6.90**  
product nom. OD actual OD or **7404 - 6 - A1**  
number size

NOMINAL PIPE SIZE	WORKING RANGE			END CODE	NUMBER OF FASTENERS	APPROXIMATE SHIPPING WEIGHT	
	LOW	OD	HIGH			LBS.	KG.
4	3.45	3.50	3.60	4T	4 - 5/8 X 7-1/4 Cross Bolt 4 - 5/8 x 4-1/8 T-Bolt 12 - 5/8" Nuts	19	8.6
	3.75		4.05	F3A			
	4.05		4.35	F3B			
	4.40	4.50	4.60	D3			
	4.74	4.80	5.10	A1			
	5.10		5.30	E5			
6	5.85		6.15	F3A	4 - 3/4 x 8 Cross Bolt 4 - 3/4 x 4-1/4 T-Bolt 12 - 3/4" Nuts	30	13.6
	6.15		6.45	F3B			
	6.50	6.63	6.70	D3			
	6.86	6.90	7.10	A1			
	7.15		7.35	E5			
8	7.90		8.25	F3A	4 - 3/4 x 8 Cross Bolt 4 - 3/4 x 4-1/4 T-Bolt 12 - 3/4" Nuts	38	17.2
	8.25		8.55	F3B			
	8.55	8.63	8.75	D3			
	8.99	9.05	9.30	A1			
	9.30		9.50	E5			
10	10.60	10.75	10.90	10T	6 - 7/8 x 9-3/8 Cross Bolt 6 - 7/8 x 5-1/8 T-Bolt 18 - 7/8" Nuts	56	25.4
	11.10	11.10	11.40	B2			
	11.55		11.75	A1			
	11.90		12.10	E5			
12	12.60	12.75	12.90	12T	6 - 7/8 x 9-3/8 Cross Bolt 6 - 7/8 x 5-1/8 T-Bolt 18 - 7/8" Nuts	72	32.6
	13.20	13.20	13.50	B2			
	13.80		14.10	A1			
	14.10		14.35	E5			

*All dimensions are in inches.*

Note: \* Refers to chemically treating Stainless Steel after welding ("Pickled/Passivated") to return it to its original appearance.

\*\* Other compounds available. Contact ROBAR for price and delivery.

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# 7808 / 7806 / 7906

## FABRICATED STEEL FLANGED COUPLING ADAPTER



### APPLICATIONS:

ROBAR  BAKER

ROBAR **7808 / 7806 / 7906** Flanged Coupling Adapters are used to flexibly adapt plain end pipe to flanged end.

### MATERIAL SPECIFICATIONS:

Center Sleeve: Carbon Steel  
Flange: C207 Class D – ANSI 1021 150 lb. drilling..  
Class E or F Flanges available.  
End Ring: Mild Steel.  
Gaskets: SBR (Buna S) Rubber\*\*.  
Fasteners: **7808** - 5/8" NC Low Alloy fasteners.  
**7806** - 5/8" Stainless Steel fasteners, fully passivated\*.  
**7906** - 5/8" Stainless Steel fasteners, fully passivated\*.  
Nuts coated with anti-galling compound.  
Torque is 70-80 ft. lbs.  
Coatings: **7808** - Two coats on enamel.  
**7806** - Two coats on enamel.  
**7906** - Epoxy coated Center Sleeve and End Rings.

### HOW TO ORDER:

Determine the product number (**7808**, etc.), nominal flange size, actual pipe OD and then use the appropriate ordering code as shown in the following example.

To couple a 16" OD Steel pipe (16.00" OD) to a 16" flanged connection, the ordering code is:

**7808** - 16" - 16.00" i.e. **7808 - 16 - 16.00**  
product nom. flange actual  
number size OD

NOMINAL PIPE SIZE	OD OF FLANGE	NUMBER OF BOLTS	DIAMETER OF FLANGE BOLT CIRCLE	DIAMETER OF FLANGE BOLTS	THICKNESS OF FLANGE
14	21.00	12	18.75	1.000	0.938
16	23.50	16	21.25	1.125	1.000
18	25.00	16	22.75	1.125	1.062
20	27.50	20	25.00	1.125	1.125
24	32.00	20	29.50	1.250	1.250
30	38.75	28	36.00	1.250	1.375
36	46.00	32	42.75	1.500	1.625
42	53.00	36	49.50	1.500	1.750
48	59.50	44	56.00	1.500	1.875

*All dimensions are in inches.*

For sizes not listed above, contact ROBAR for availability.

Note: \* Refers to chemically treating Stainless Steel after welding ("Pickled/Passivated") to return it to its original appearance.

\*\* Other compounds available. Contact ROBAR for price and delivery.

- When ordering, specify maximum working pressure.

- No flange bolts or gaskets supplied.

- Special coatings, gasket, flanges, fastener materials and isolating boots are available.

- For price and availability, contact ROBAR and specify the pipe and flange sizes to be coupled along with any special requirements.

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# SECTION 8 EXPANSION JOINTS



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**8806**

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# 8808 / 8806 / 8906

## FABRICATED STEEL EXPANSION JOINT



### APPLICATIONS:

ROBAR  BAKER

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.

Fasteners: **8808** - 5/8" electro-galvanized bolts.

**8806** - 5/8" T-316 Stainless Steel bolts.

**8906** - 5/8" T-316 Stainless Steel bolts. Nuts coated with anti-galling compound.

Torque is 70-80 ft. lbs.

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.

Coating: **8808** - Two coats of Enamel.

**8806** - Two coats of Enamel.

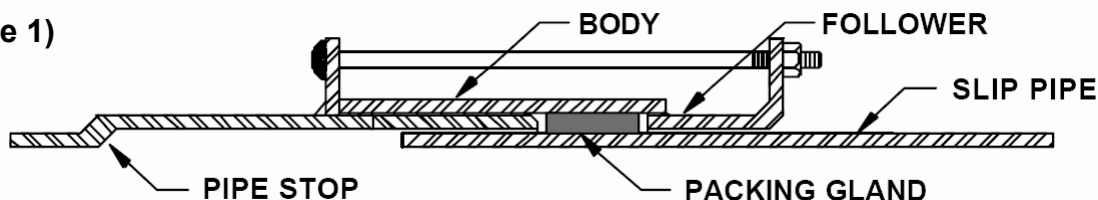
**8906** - Corrosion Protective Epoxy.

### INSTALLATION:

The Expansion Joint may be contracted to 26-1/4" length or fully expanded to 36-1/4" length. The installer sets the length between these two extremes. The Slip Pipe is welded to one pipe in the line, and the joint Body is welded to the other pipe. Care should be taken to protect the gasket-bearing surfaces from corrosion or undue wear from line content or environment.

#### 8808-1 (Style 1)

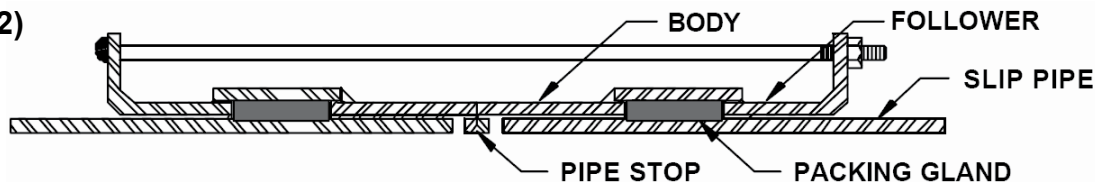
8906-1



Construction: 8808-1 (Style 1) Expansion Joint is designed to satisfy the requirements of most applications. This style allows for up to 10" of longitudinal pipe movement, has one Slip Pipe and a single Packing Gland with no Limit Rods (see material specifications page 0.4.1).

#### 8808-2 (Style 2)

8906-2



Construction: 8808-2 (Style 2) Similar to details of Style 1 Expansion Joint except that it has two Slip Pipes and two Packing glands. When the Joint Body is anchored, this style of Expansion Joint allows 4" of pipe movement at each end, for a total of 8".

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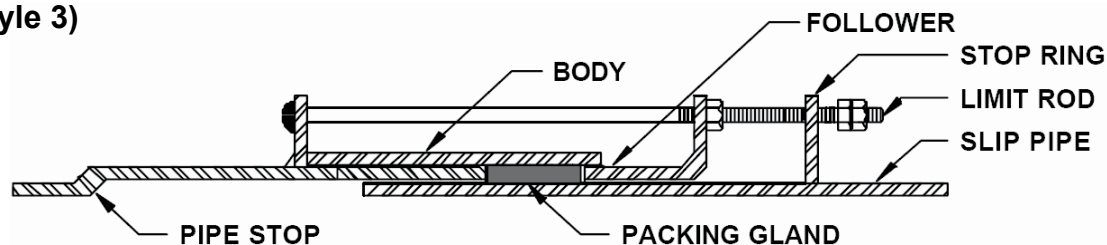
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# 8808 / 8806 / 8906

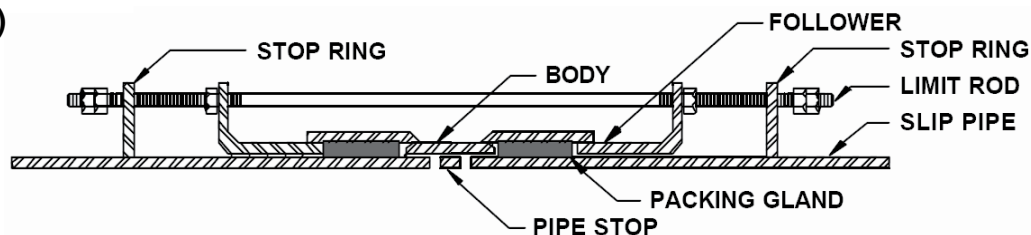
## FABRICATED STEEL EXPANSION JOINT

### 8808-3 (Style 3) 8906-3



Construction: Similar to details of Style 1 Expansion Joint except that a Stop Ring is welded to the Slip Pipe, and the regular bolts are extended through this ring. A set of double nuts engages the Stop Ring to limit the Slip Pipe from pulling out of the joint.

### 8808-4 (Style 4) 8906-4



Construction: Similar to details of Style 2 Expansion Joints except that this style has two Stop Rings welded on the Slip pipes. As with Style 3, a set of double nuts engages each Stop Ring to limit the Slip Pipes from pulling out of the joint.

#### INFORMATION REQUIRED FOR ORDERING:

1. Total quantity required.
2. Type of pipe, wall thickness and exact OD of pipe.
3. Type and Style of Expansion Joint.
4. Service or line content - water, gas, sewage, etc.
5. Maximum working and test pressures (PSI).
6. Calculated movement at each joint, and frequency.
7. Minimum and maximum temperature ranges.
8. End preparation of pipe where Expansion Joint is required (flanged, beveled for welding, etc.).

#### HOW TO ORDER:

Determine the product number (**8808, etc.**), the Expansion Joint style (Style 1, 2, 3, or 4), the exact pipe OD, the pipe ends required and then use the appropriate ordering code as shown in the following example.

For a 24" OD pipe on which 6" pipe movement is expected and you want beveled ends, the ordering code is:

**8808** - 1 - 24.00" i.e. **8808 - 1 - 24.00 Bevel x Bevel**  
product style OD (Actual)  
number

Note: - All expansion joints are built to order. Allow for longer than normal delivery time.

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# SECTION 9 MISCELLANEOUS



**Drilling Machine**  
**9010**

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**Meter Coupling**  
**9440**  
**9540**  
**9470**

Page 9.2.1



**Inserts**  
**9626**

Page 9.3.1



**SlikStyx**

Page 9.4.1



**Horseshoes**  
**9999**

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# 9010

## DRILLING MACHINE



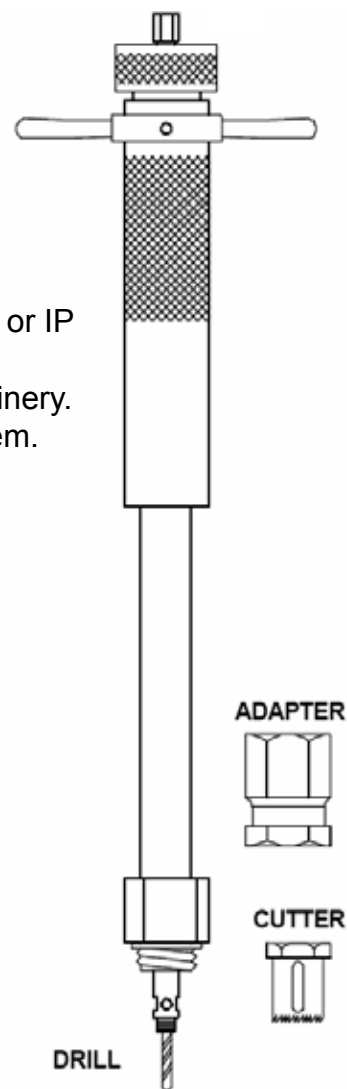
### NEW MODEL - NO EXTENSION REQUIRED:

The **9010** Drill Master is the result of 30 years of revisions to the original Dan-Dee drilling machine. It is made of the finest non-corrosive materials, with each machine being individually inspected prior to shipment. Its light weight, versatility, and ease of operation have made it a favorite of installers within the Waterworks Industry.

FOR DRILLING DI, CI, A/C, STEEL AND PLASTIC MAINS.

### TYPE **9010**:

- A compact tool that drills mains for 3/4", 1", 1-1/4", 1-1/2" and 2" CC or IP Taps. (See manufacturer's notes.)
- Completes the operation before you can set up older, heavier machinery.
- Removes the coupon from the pipe - No drillings in your water system.
- For tapping (Hot & Dry) DI, CI, A/C, Steel and Plastic mains.
- Basic machine includes: ratchet wrench, pilot drill, allen wrench and carrying case. (See page 9.1.2)
- Machine weight: 7 lbs. Shipping weight w/carrying case: 17 lbs.



Note:

- The **9010** is not recommended for use on any fluid distribution system other than water.
- The use of mechanical assist tools such as drill motors or impact hammers is not recommended, as such use may bind the cutter and possibly break the stainless steel shaft.
- Avoid the drilling of pipes with pressures in excess of 175 PSI, as higher pressures may blow out seals.
- Observe all accepted safety precautions when operating machine.

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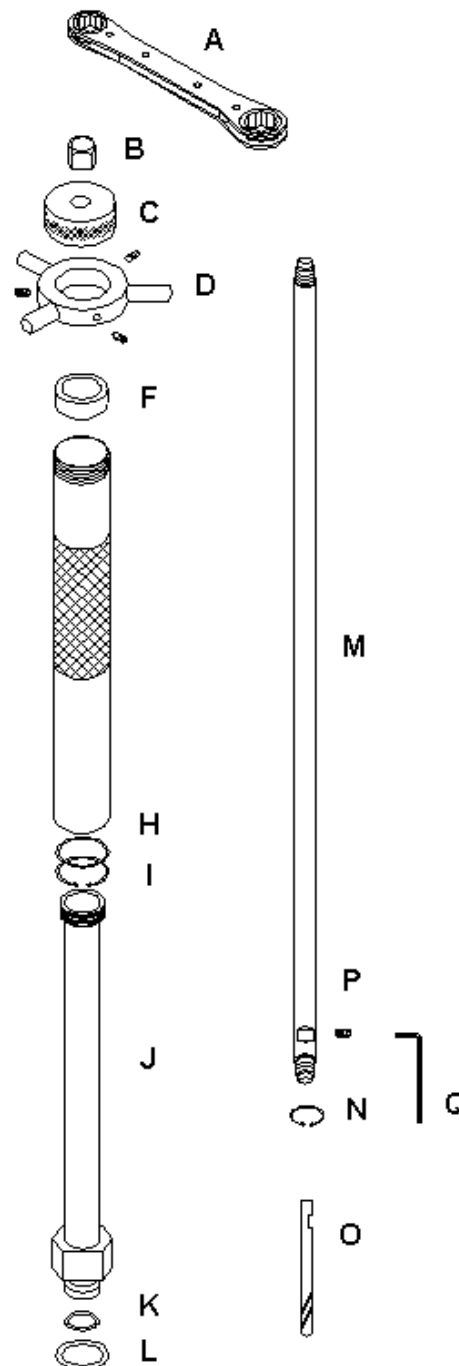
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# 9010

## DRILLING MACHINE

APAC PART DESCRIPTION		
PART NUMBER	DESCRIPTION	
9010	Drilling Machine - Manual operation c/w Carrying Case	
902-048	1 1/2" Adapter for corp. stops with compression outlets	
902-049	2" Adapter for corp. stops with compression outlets	
902-050	3/4" Adapter for corp. stops with compression outlets	
902-051	3/4" IP Adapter	
902-052	1" Adapter for corp. stops with compression outlets	
902-053	1" IP Adapter	
902-054	1 1/4" Adapter for corp. stops with compression outlets	
902-055	1 1/4" IP Adapter	
902-056	1 1/2" Copper Adapter *Not common	
902-057	1 1/2" IP Adapter	
902-058	2" Copper Adapter *Not common	
902-059	2" IP Adapter	
903-071	11/16" Hole Saw (for 3/4" high speed)	
903-072	7/8" Hole Saw (for 1" high speed)	
903-073	1 1/8" Hole Saw (for 1 1/4" high speed)	
903-074	1 3/8" Hole Saw (for 1 1/2" high speed)	
903-075	1 7/8" Hole Saw (for 2" high speed)	
905-040	11/16" Hole Saw (for 3/4" Carbide tipped)	
905-041	7/8" Hole Saw (for 1" Carbide tipped)	
905-042	1 1/8" Hole Saw (for 1 1/4" Carbide tipped)	
905-043	1 3/8" Hole Saw (for 1 1/2" Carbide tipped)	
905-044	1 7/8" Hole Saw (for 2" Carbide tipped)	
A	908-080	Ratchet Wrench
B	908-081	Shaft Drive Nut
C	908-082	Brass Bearing Cap
F	908-085	Thrust Bearing
H	908-087	Teflon Wiper
I	908-088	Metal Snap Ring
J	908-089	Brass Body
K	908-090	O-Ring Packing
L	908-091	Gasket (machine to adapter)
M	908-092	SS Shaft
N	908-093	Shaft Snap Ring
O	908-094	Pilot Drill
P	908-095	Set Screw
Q	908-096	Allen Wrench
	908-097	Shell Cutter Bushing



Note: - Shell Cutter Bushing is required for using 1-1/2" and 2" Hole Saw Cutters.

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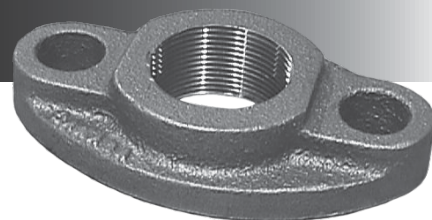
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# 9440 / 9450 / 9470

## METER COUPLING



### APPLICATIONS:

ROBAR **9440 / 9450 / 9470** Meter Coupling Flanges are used to mate with Flanged Water Meters.

### MATERIAL SPECIFICATIONS:

Body: **9440** - Cast Ductile Iron.  
**9450** - Cast Ductile Iron.  
**9470** - 85-5-5-5 Brass.  
O-Ring: NBR (Buna N) Rubber.  
Coating: **9440** - Two coats of Enamel.  
**9450** - Corrosion Protective Epoxy coating.  
**9470** - Not coated. (Waterworks Bronze)

NOMINAL SIZE	PRODUCT NUMBER	APPROXIMATE SHIPPING WEIGHT	
		LBS.	KG.
1 1/2	9440	2.25	1.1
	9450	2.25	1.1
	9470	2.07	1.2
2	9440	2.75	1.3
	9450	2.75	1.3
	9470	3.00	1.4

*All dimensions are in inches.*

### HOW TO ORDER:

Determine the product number (**9440**, etc.) and nominal size and then use the appropriate ordering code (see table above) as shown in the following example.

For a 2" Meter Flange in Enamel coated Ductile Iron, the ordering code is:

**9440** - 2 i.e. **9440 - 2**  
product size  
number

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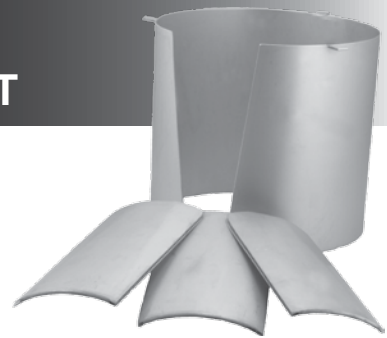
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# 9626

## STAINLESS STEEL ADJUSTABLE INSERT



### APPLICATIONS:

ROBAR **9626** Adjustable Inserts are for use on thin wall PVC or High Density Polyethylene pipe, to add hoop strength to pipe when using ROBAR couplings, repair clamps or restraining devices. When using restraint, be sure the length is long enough to be within the restraint length.

### MATERIAL SPECIFICATIONS:

T304 stainless steel, fully passivated\*.

### HOW TO ORDER:

Determine the product number (**9626**) and exact Inside Diameter of PVC or High Density Polyethylene pipe and the insert length (6", 8" or 12") and then order by using the appropriate ordering code as shown in the following example.

For an 8" long insert required for a 6" DR17 High Density Polyethylene pipe (5.798" ID), the ordering code is:

**9626**     -     5.798"     x     8"     i.e. **9626 - 5.798 x 8**  
product     inside     insert  
number     diameter     length

4" - 14" inserts are fabricated in 16 gauge T-304 Stainless Steel.

16" and larger inserts are fabricated in 12 gauge T-304 Stainless Steel.

POLYETHYLENE PIPE / IRON PIPE SIZES								
NOMI- NAL PIPE OD	DR 32.5		DR 21		DR 17		DR 11	
	AVG. INSIDE DIAMETER	MIN. WALL THICKNESS	AVG. INSIDE DIAMETER	MIN. WALL THICKNESS	AVG. INSIDE DIAMETER	MIN. WALL THICKNESS	AVG. INSIDE DIAMETER	MIN. WALL THICKNESS
4"			4.046	0.214	3.938	0.265	3.633	0.409
6"	6.193	0.204	5.957	0.315	5.798	0.39	5.349	0.602
8"	8.063	0.265	7.754	0.411	7.55	0.507	6.963	0.784
10"	10.048	0.331	9.665	0.512	9.41	0.632	8.679	0.977
12"	11.919	0.392	11.463	0.607	11.16	0.75	10.293	1.159
14"	13.086	0.431	12.586	0.667	12.253	0.824	11.301	1.273
16"	14.957	0.492	14.385	0.762	14.005	0.941	12.915	1.455
18"	16.826	0.554	16.183	0.857	15.755	1.059	14.532	1.636
20"	18.696	0.615	17.982	0.952	17.507	1.176	16.146	1.818
22"	20.565	0.677	19.778	1.048	19.257	1.294	17.76	2.000
24"	22.435	0.738	21.577	1.143	21.007	1.412	19.374	2.182

*All dimensions are in inches.*

Note:     \* Refers to chemically treating Stainless Steel after welding ("Pickled/Passivated") to return it to its original appearance.  
             - **9626** Adjustable inserts are available for 5.95" ID and larger. Fixed inserts are available from 3.50" ID. Exact ID is required for fixed inserts.  
             - Larger sizes are available upon request.

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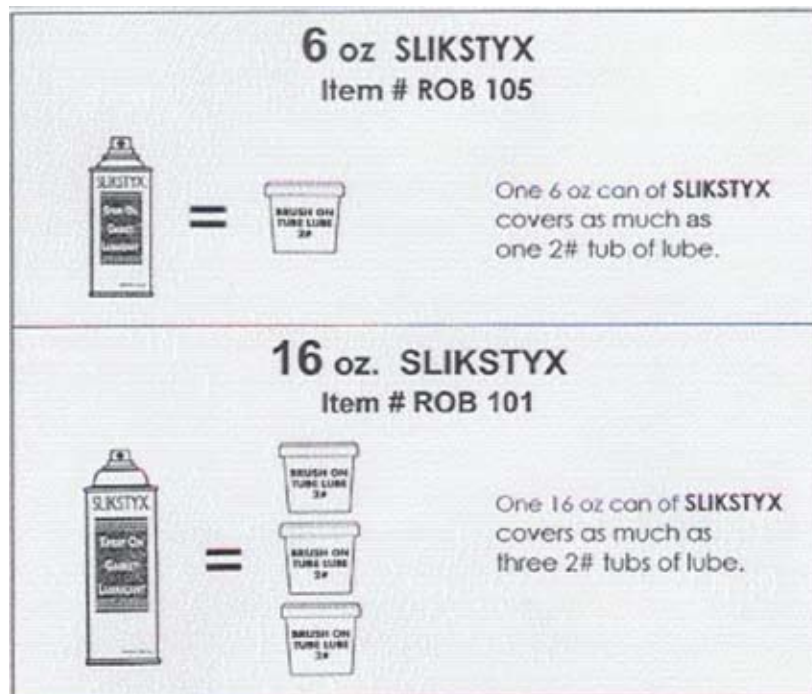


# SLIKSTYX



The first Spray-On lubricant for all gasketed pipes:

- Works in all temperature extremes and conditions.
- Convenient & Efficient.
- Less Mess - Just point and shoot.
- No Waste - You don't lose any lubricant due to dropping or contamination.
- Cost Savings - Nearly 3 times the coverage as conventional lube.
- Bright Colour - Sprays on yellow so you can see the area lubricated.



Note: - SLIKSTYX is NSF61 compliant. Only those products bearing the NSF61 logo stamp are compliant.



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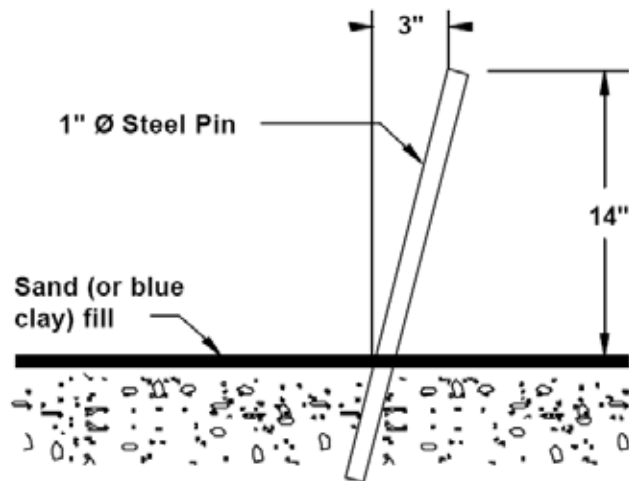
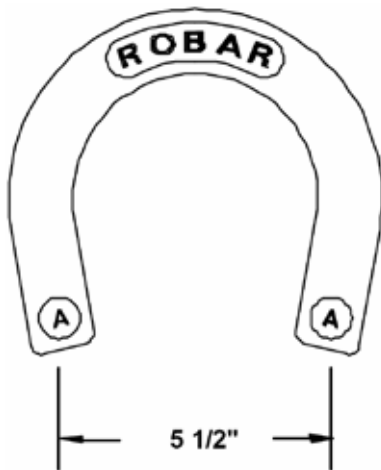
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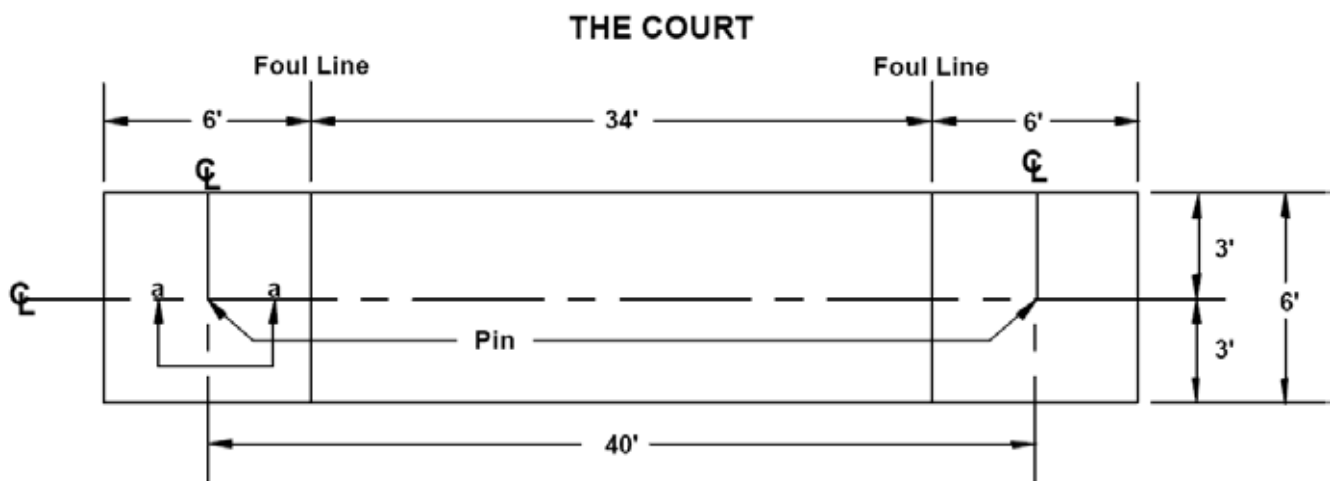


# 9999

## CAST DUCTILE IRON RECREATIONAL HORSESHOES



Maximum Weight is 2-1/2 LBS.  
Two pairs of shoes in a set.  
Each pair is identified as "A" or "B".



Note: - Pins not supplied by ROBAR.

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# SECTION 10 INSTALLATION INSTRUCTIONS



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**1800 / 1900**

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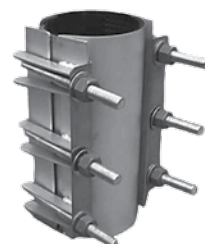
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**6606**

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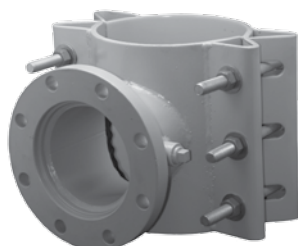
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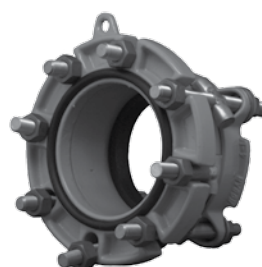
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# 1400 / 1500 COUPLING

## INSTALLATION GUIDE



1. Visually inspect the coupling to ensure it is of the required outside diameter for the desired application. Make sure the coupling is complete and there are no missing nuts, bolts or washers.
2. Clean the pipe ends to ensure that all dirt and irregularities have been removed.
3. Disassemble the coupling and slide the appropriate end rings over the appropriate pipe.
4. Lubricate the coupling gaskets and the pipe with potable, NSF certified lube. ROBAR recommends SLIKSTYX.
5. Slide the appropriate gasket over the pipe. The tapered end must face the pipe ends.
6. Slide the center ring over the pipe, and position the center ring over the pipe gap.  
Note: For minimum and maximum pipe gaps refer to AWWA C-219.
7. Push the gaskets and end rings into position against the center rings. Be sure to maintain an equal spacing between the 2 pipe sections.
8. Slide the bolts into place and tighten nuts using a torque wrench. Torque each bolt alternating between bolts in a “star” pattern to 80 lbs. ft.
9. Pressure test the pipeline prior to backfilling.

### CAUTION



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

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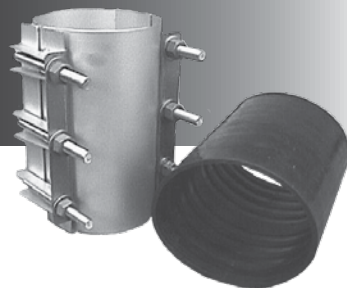
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# 1606 COUPLING

## INSTALLATION GUIDE



1. Check to ensure that the OD of the pipe corresponds with the coupling being installed.
2. Ensure that the pipe surface is clean and free of irregularities.
3. Lubricate pipes and the inside of the gasket to aid the installation procedure and to allow the gasket to seat more uniformly on the pipe.
4. Slide the gasket onto one of the pipes being coupled.
5. Line up the two lengths of pipe and slide the gasket, centering the gasket over the joint.
6. Ensure that the pipes are in line when the coupling is installed. Any deflection should be achieved after installation and should be kept to a minimum. For more details contact ROBAR's Technical Sales Department. Pipe gap should be kept below 1".
7. Lubricate the outside of the gasket to allow the stainless steel shell to slide smoothly over the gasket during the torquing procedure. ROBAR recommends NSF61 certified SLIKSTYX.
8. Install the stainless steel shell over the gasket, sliding the lifter bar(s) over and behind the lugs.
9. Tighten nuts in random sequence and in uniform steps up to approximately 75-80 ft. lbs. of torque.
10. Pressure test line prior to backfilling.
11. For recommended working pressures and specifications, consult the ROBAR **1606** Product

ROBAR Adjustable Inserts are recommended on flexible plastic pipe, such as Polyethylene, to provide internal pipe support.

### CAUTION



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

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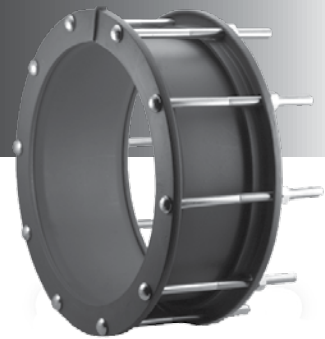
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# 1800 / 1900 COUPLING

## INSTALLATION GUIDE



1. Visually inspect the coupling to ensure it is of the required outside diameter for the desired application. Make sure the coupling is complete and there are no missing nuts, bolts or washers.
2. Clean the pipe ends to ensure that all dirt and irregularities have been removed.
3. Disassemble the coupling and slide the appropriate end rings over the appropriate pipe.
4. Lubricate the coupling gaskets and the pipe with potable, NSF certified lube. ROBAR recommends SLIKSTYX.
5. Slide the appropriate gasket over the pipe. The tapered end must face the pipe ends.
6. Slide the center ring over the pipe, and position the center ring over the pipe gap.  
Note: For minimum and maximum pipe gaps refer to AWWA C-219.

**IMPORTANT:** The clearance between the OD of the pipe and the ID of the center ring and end rings must be distributed as evenly as possible. **No more than a 1/8" gap or opening is permissible.** Wooden wedges or plastic shims may be used to help center the center ring. These centering aids may be removed after the coupling is assembled. The wedges or shims must not project into the gasket pocket.

7. Push the gaskets and end rings into position against the center rings. Be sure to maintain an equal spacing between the 2 pipe sections.
8. Slide the bolts into place and tighten nuts using a torque wrench. Torque each bolt alternating between bolts in a "star" pattern to 80 lbs. ft.
9. Pressure test the pipeline prior to backfilling.

### CAUTION



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

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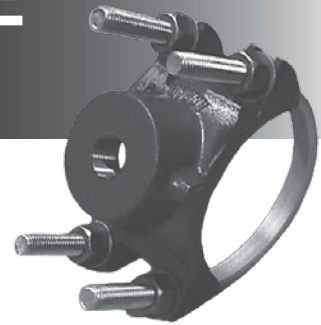
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# 2408 SERVICE SADDLE

## INSTALLATION GUIDE



1. Visually inspect the Service Saddle to ensure it is the required nominal and outlet size for the desired application. Make sure that the saddle is complete and that there are no missing nuts or washers.
2. Completely remove straps from the saddle body and check the fit of the saddle on the pipe. Note: **2408** Saddles are designed for use on RIGID PIPE ONLY ( DI, Steel, A/C).
3. Clean the entire circumference of the pipe where the saddle is to be installed. Make sure to clean the threads with a wire brush to remove any sand or dirt. Lubricate the saddle gasket with a potable, NSF certified lube. ROBAR recommends SLIKSTYX.
4. Position the saddle on the pipe and install the straps. Hand tighten the nuts while making sure that the straps are positioned evenly. Be sure to avoid rotating the saddle once this has been done. Using a torque wrench, tighten the nuts evenly and incrementally in a cross pattern to 45 ft. lbs. A cross pattern tightening method allows for even and positive gasket seating.

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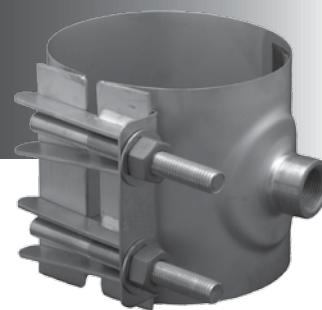
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# 2606 SERIES

## INSTALLATION GUIDE



1. Visually inspect the Service Saddle to ensure it is the required nominal and outlet size for the desired application. Make sure that the saddle is complete and that there are no missing nuts, washers or lifter bar(s).
2. Open section (or sections) of saddle by backing off the nuts to end of the bolts. To avoid loss or misplacement of these components and to ease installation, do not completely remove nuts.
3. Clean the entire circumference of the pipe where the saddle is to be installed. Make sure to clean the threads with a wire brush. Galling WILL occur if there is sand or dirt on the threads, leaving the impression that the correct torque level has been reached. Lubricate the saddle gasket with a potable, NSF certified lube. ROBAR recommends SLIKSTYX.
4. **2616** (Style 1) - Position the saddle on the pipe. Snap the lifter bar into position. Hand tighten the saddle onto the pipe. Be sure to avoid rotating the saddle once this has been done. Using a torque wrench, tighten the nuts incrementally to the specified torque value as marked on the saddle. Be sure to alternate between studs while tightening.

### TORQUE VALUES

Sizes 4" - 8" Ring Gasket: 65 ft-lbs.

Sizes 10" - 12" Ring Gasket: 80 ft-lbs.

All Sizes Boss-Pad Gasket: 80 ft-lbs.

5. **2626 / 2636** (Style 2 & 3) - Position the outlet section of the saddle on pipe. Snap the lifter bars into position and hand tighten the saddle onto the pipe. Be sure to avoid rotating the saddle once this has been done. Using a torque wrench, tighten the nuts incrementally and in a crossing pattern to the specified torque value marked on the saddle. Make every effort to maintain an equal distance between the saddle sections.

### TORQUE VALUES

Sizes 4" - 8" Ring Gasket: 65 ft-lbs.

Sizes 10" and above Ring Gasket: 80 ft-lbs.

All Sizes Boss-Pad Gasket: 80 ft-lbs.

6. Once torque has been achieved, inspect for proper fit and positioning. Install the main stop using Teflon tape. DO NOT over tighten the main stop as this will distort the outlet. Check for leaks. If leak occurs, remove saddle and re-install. Do not over tighten. If for any reason the gasket has been damaged, do not use.
7. Once the main stop has been installed into the saddle and the branch line has been successfully pressurized, DO NOT BEND or EXERT EXTERNAL PRESSURE on pipe leading to the saddle. Any slight distortion on the saddle shell (near outlet) is considered a bad installation. Be sure to re-tighten saddle to specified torque values after tapping operation and before backfilling.

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# 2706 SERVICE SADDLE

## INSTALLATION GUIDE



1. Visually inspect the Service Saddle to ensure it is the required nominal and outlet size for the desired application. Make sure that the saddle is complete and that there are no missing nuts or washers.
2. Completely remove straps from the saddle body and check the fit of the saddle body on the pipe. The saddle should not sit "proud" on the pipe and the saddle ears should not dig into the pipe.
3. Clean the entire circumference of the pipe where the saddle is to be installed. Make sure to clean the threads with a wire brush. Galling WILL occur if there is sand or dirt on the threads, leaving the impression that the correct torque level has been reached. Lubricate the saddle gasket with a potable, NSF certified lube. ROBAR recommends SLIKSTYX.
4. Position the saddle on the pipe and install the straps. Hand tighten the nuts while making sure that the straps are positioned evenly. Be sure to avoid rotating the saddle once this has been done. Using a cross pattern, tighten the nuts evenly and incrementally to 45 ft. lbs. A cross pattern tightening method allows for even and positive gasket seating.
5. Once torque has been achieved, inspect for proper fit and positioning. Install the main stop using Teflon Tape. Check for leaks. Be sure to re-tighten the saddle to 45 ft. lbs. after tapping operation and before backfilling.

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# 5616 REPAIR CLAMP

## INSTALLATION GUIDE



*A standard feature of the 5616 (Style 1) ROBAR Repair Clamp is its ease of installation. All Robar Repair Clamps are pre-formed at the factory, allowing for easy installation.*

1. Remove the clamp from its box. Ensure it has the required outside diameter for the desired application. Visually inspect the repair clamp to make certain there are no missing nuts, washers, or lifter bars.
2. Open the clamp by backing off the nuts to the end of the bolts. To avoid loss or misplacement of components, do not completely remove the nuts.
3. Clean the pipe over the entire circumference where the clamp is to be installed. Be sure that there is no foreign debris (pebbles or dirt) on the clamp gasket or pipe. Lubricate the entire clamp gasket with a potable, NSF certified lube. ROBAR recommends SLIKSTYX.
4. A minimum of 4" of clamp is recommended beyond each side of the repair area. (i.e. If a 4" longitudinal crack is being repaired, a 12" long clamp is recommended). Also, a small hole can be drilled at each end of the crack to prevent it from spreading.
5. Slide the bolts under and around the pipe until the bolts point upwards.
6. Grasp the lifter bar on the bolts and pull it up and out until it snaps into position over the receiver lugs. Ensure that the gasket is not folded over. Tighten the nuts slightly by hand to prevent the lifter bar from lifting.
7. Tighten the nuts, using a torque wrench, evenly and incrementally. Start in the center, and move outward. Torque each nut to 80 lbs. ft.

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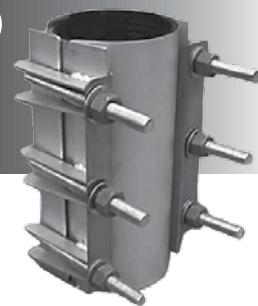
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# 5626 REPAIR CLAMP

## INSTALLATION GUIDE



*A standard feature of the 5626 (Style 2) ROBAR Repair Clamp is its ease of installation. All Robar Repair Clamps are pre-formed at the factory, allowing for easy installation.*

1. Remove the clamp from its box. Ensure it has the required outside diameter for the desired application. Visually inspect the clamp to make certain there are no missing nuts, washers, or lifter bars. Unscrew all the nuts to the end of the bolts and separate the 2 sections. To avoid misplacing any components, do not completely remove the nuts.
2. Clean the pipe over the entire circumference where the clamp is to be installed. Be sure that there is no foreign debris (pebbles or dirt) on the clamp gasket or pipe. Lubricate the entire clamp gasket with a potable, NSF certified lube. ROBAR recommends SLIKSTYX.
3. A minimum of 4" of clamp is recommended beyond each side of the repair area. (i.e. If a 4" longitudinal crack is being repaired, a 12" long clamp is recommended). Also, a small hole can be drilled at each end of the crack to prevent it from spreading.
4. Drop the lug section of the clamp onto the pipe. Make sure the tapered gasket ends are not folded over.
5. Slide the bolt section of the clamp underneath the pipe. Gently grasp both lifter bars and pull up and outwards until they snap into place over the receiver lugs. The gaskets should remain flat along the pipe and free to move into position.
6. Tighten the nuts, using a torque wrench, evenly and incrementally. Start in the center, and move outward, criss-crossing between sections. Be sure to maintain an equal distance between the clamp sections. Torque each nut to 80 lbs. ft.

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# 5636 REPAIR CLAMP

## INSTALLATION GUIDE



*A standard feature of the 5636 (Style 3) ROBAR Repair Clamp is its ease of installation. All Robar Repair Clamps are pre-formed at the factory, allowing for easy installation.*

1. Remove the clamp from its box. Ensure it has the required outside diameter for the desired application. Visually inspect the clamp to make certain there are no missing nuts, washers, or lifter bars.
2. Assemble the clamp sections together, leaving one section open to wrap around the pipe. Be sure to leave a 1" - 1-1/2" gap between the clamp sections.
3. Clean the pipe over the entire circumference where the clamp is to be installed. Be sure that there is no foreign debris (pebbles or dirt) on the clamp gasket or pipe. Lubricate the entire clamp gasket with a potable, NSF certified lube. ROBAR recommends SLIKSTYX.
4. A minimum of 4" of clamp is recommended beyond each side of the repair area. (i.e. If a 4" longitudinal crack is being repaired, a 12" long clamp is recommended). Also, a small hole can be drilled at each end of the crack to prevent it from spreading.
5. Wrap the clamp around the pipe, making sure not to fold over the tapered gasket ends.
6. Grasp the lifter bar on the bolts and pull it up and out until it snaps into position over the receiver lugs. Tighten the nuts slightly by hand to prevent the lifter bar from lifting.
7. Tighten the nuts, using a torque wrench, evenly and incrementally. Start in the center, and move outward, criss-crossing between sections. Be sure to maintain an equal distance between the 3 clamp sections. Torque each nut to 80 lbs. ft.

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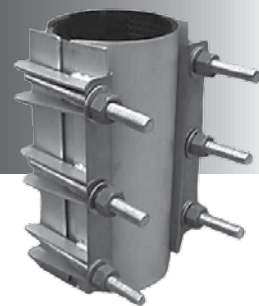
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# 5626 / 5636EZ REPAIR CLAMP

## INSTALLATION GUIDE



*A standard feature of the 5626 / 5636 (Style 2 & 3) ROBAR Repair Clamp is its ease of installation. All Robar Repair Clamps are pre-formed at the factory, allowing for easy installation.*

1. Remove the clamp from its box. Ensure it has the required outside diameter for the desired application. Visually inspect the clamp to make certain there are no missing nuts, washers, or lifter bars.
2. Clean the pipe over the entire circumference where the clamp is to be installed. Be sure that there is no foreign debris (pebbles or dirt) on the clamp gasket or pipe. Lubricate the entire clamp gasket with a potable, NSF certified lube. ROBAR recommends SLIKSTYX.
3. A minimum of 4" of clamp is recommended beyond each side of the repair area. (i.e. If a 4" longitudinal crack is being repaired, a 12" long clamp is recommended). Also, a small hole can be drilled at each end of the crack to prevent it from spreading.
4. Slide the bolts on the open end of the clamp under and around the pipe until the bolts point upwards.
5. Grasp the lifter bar on the bolts and pull it out and up until it snaps into position over the receiver lugs. Tighten the nuts slightly by hand to prevent the lifter bar from lifting during rotation.
6. Rotate the repair clamp in the direction of the arrow. This will ensure that the gasket is properly seated and not folded over.
7. Tighten the nuts, using a torque wrench, evenly and incrementally. Start in the center, and move outward, criss-crossing between sections. Be sure to maintain an equal distance between the clamp sections. Torque each nut to 80 lbs. ft.

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# 6400 / 6500

## INSTALLATION GUIDE



*All ROBAR Tapping Sleeves are leak tested at the factory prior to shipping.*

1. Visually inspect the Tapping Sleeve to ensure it is of the required outside diameter and outlet size for the desired application. Make sure the Tapping Sleeve is complete and there are no missing nuts, bolts or washers.
2. Clean the pipe over the entire circumference where the sleeve is to be installed. Be sure that there is no foreign debris (pebbles or dirt) on the clamp gasket or pipe. Lubricate the sleeve gasket with a potable, NSF certified lube. ROBAR recommends SLIKSTYX.
3. Place the flange section of the sleeve on the pipe and slide it into position.
4. Slide the back section(s) over the back of the pipe and into position. Insert the bolts into corresponding bolt holes and tighten the nuts by hand. Be sure to maintain an equal gap between the tapping sleeve sections.
5. Tighten each nut, starting in the center, moving outward while alternating between the sleeve sections. Torque each nut to 80 lbs. ft.
6. Mount the tapping valve to the flange. An O-Ring gasket is supplied with the tapping sleeve, eliminating the need for a flange gasket. Be sure to support or block the valve.
7. Connect the tapping machine. Pressure test the tapping sleeve prior to cutting into the pipe. Testing can either be done through the tapping machine or through the 3/4" test plug. When testing through the test plug, before testing apply sufficient Teflon tape when resealing the 3/4" plug.
8. Proceed with the tapping operation. Prior to backfilling, be sure to double check the torque levels on each nut.

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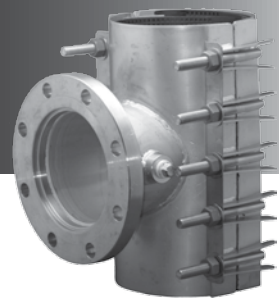
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# 6606

## INSTALLATION GUIDE



*All ROBAR Tapping Sleeves are leak tested at the factory prior to shipping.*

1. Visually inspect the tapping sleeve to ensure it is of the required outside diameter and outlet size for the desired application. Make sure the tapping sleeve is complete and there are no missing nuts, bolts or washers.
2. Separate the 2 sections of the tapping sleeves for sleeves 4" - 16" nominal OD. Remove the nuts, washers and lifter bars and be careful not to misplace them. Larger OD tapping sleeves are supplied with 3 sections. For a 3 section sleeve, loosely assemble the 2 back sections. Be sure to leave a 1" - 1-1/2" gap between the 2 sections.
3. Clean the pipe over the entire circumference where the sleeve is to be installed. Be sure that there is no foreign debris (pebbles or dirt) on the clamp gasket or pipe. Lubricate the entire sleeve gasket with a potable, NSF certified lube. ROBAR recommends SLIKSTYX.
4. Place the flange section of the sleeve on the pipe and slide it into position. Be sure that tapered gasket ends are not folded over.
5. Slide the back section(s) over the back of the pipe and into position, lining up the bolts with the receiver lugs. Verify that the gasket are lying flat on the pipe and are not folded over.
6. Install the lifter bars, followed by the stainless steel washers and nuts. Be sure to maintain equal gaps between the sleeve sections when tightening the bolts. Tighten each nut, starting in the center, moving outward while alternating between the sleeve sections. Torque each nut to 80 lbs. ft.
7. Mount the tapping valve to the flange. Be sure to support or block the valve.
8. Connect the tapping machine. Pressure test the tapping sleeve prior to cutting into the pipe. Testing can either be done through the tapping machine or through the 3/4" test plug. When testing through the test plug, before testing apply sufficient Teflon tape when resealing the 3/4" plug.
9. Proceed with the tapping operation. Prior to backfilling, be sure to double check the torque levels on each nut.

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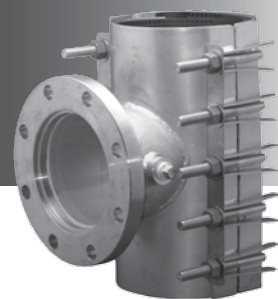
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# 6606BB

## INSTALLATION GUIDE



*All ROBAR Tapping Sleeves are leak tested at the factory prior to shipping.*

1. Visually inspect the tapping sleeve to ensure it is of the required outside diameter and outlet size for the desired application. Make sure the tapping sleeve is complete and there are no missing nuts, bolts or washers.
2. Clean the pipe over the entire circumference where the sleeve is to be installed. Be sure that there is no foreign debris (pebbles or dirt) on the clamp gasket or pipe. Lubricate the sleeve gasket with a potable, NSF certified lube. ROBAR recommends SLIKSTYX.
3. Place the flange section of the sleeve on the pipe and slide it into position. Be sure that tapered gasket ends are not folded over.
4. Slide the back section(s) over the back of the pipe and into position. Insert the bolts into corresponding bolt holes and tighten the nuts by hand. Be sure to maintain an equal gap between the tapping sleeve sections.
5. Tighten each nut, starting in the center, moving outward while alternating between the sleeve sections. Torque each nut to 80 lbs. ft.
6. Mount the tapping valve to the flange. Be sure to support or block the valve.
7. Connect the tapping machine. Pressure test the tapping sleeve prior to cutting into the pipe. Testing can either be done through the tapping machine or through the 3/4" test plug. When testing through the test plug, before testing apply sufficient Teflon tape when resealing the 3/4" plug.
8. Proceed with the tapping operation. Prior to backfilling, be sure to double check the torque levels on each nut.

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# 6626

## INSTALLATION GUIDE



*All ROBAR Tapping Sleeves are leak tested at the factory prior to shipping.*

1. Visually inspect the outlet sleeve to ensure it is of the required outside diameter and outlet size for the desired application. Make sure the tapping sleeve is complete and there are no missing nuts, bolts or washers.
2. Separate the 2 sections of the outlet sleeve for sleeves 4"-16" nominal OD. Remove the nuts, washers and lifter bars and be careful not to misplace them. Larger OD outlet sleeves are supplied with 3 sections. For a 3 section sleeve, loosely assemble the 2 back sections. Be sure to leave a 1" - 1-1/2" gap between the 2 sections.
3. Clean the pipe over the entire circumference where the sleeve is to be installed. Be sure that there is no foreign debris (pebbles or dirt) on the clamp gasket or pipe. Lubricate the sleeve gasket with a potable, NSF certified lube. ROBAR recommends SLIKSTYX.
4. Place the flange section of the sleeve on the pipe and slide it into position.
5. Slide the back section(s) over the back of the pipe and into position. Insert the bolts into corresponding bolt holes and tighten the nuts by hand. Be sure to maintain an equal gap between the outlet sleeve sections.
6. Tighten each nut, starting in the center, moving outward while alternating between the sleeve sections. Torque each nut to 80 lbs. ft. Prior to backfilling, be sure to double check the torque levels on each nut.

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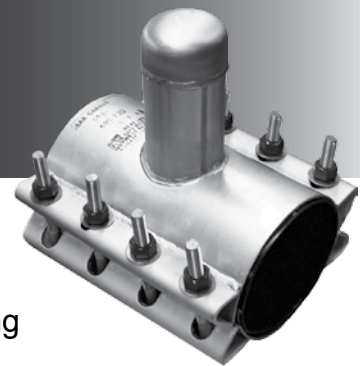
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# 6636AS

## INSTALLATION GUIDE



1. Visually inspect the Abandon Sleeve to ensure it is of the required outside diameter for the desired application. Make sure the Abandon Sleeve is complete and there are no missing nuts, bolts or washers.
2. Clean the pipe over the entire circumference where the sleeve is to be installed. Be sure that there is no foreign debris (pebbles or dirt) on the clamp gasket or pipe. Lubricate the sleeve gasket with a potable, NSF certified lube. ROBAR recommends SLIKSTYX.
3. Once the main stop is closed, remove the copper tubing for the corporation stop if still attached. Place the encapsulating section of the sleeve over the corp stop and onto the pipe. Make sure the tapered gaskets are folded over.
4. Slide the back section(s) over the back of the pipe and into position.
  - A. Bolt Bracket Closure: Insert the bolts into the corresponding bolt holes and tighten the nuts by hand.
  - B. Finger-Bolt Closure: Slide the back section and line up the bolts with the receiver lugs. Install the lifter bars, washers and nuts.

Be sure to maintain equal gaps between the sleeve sections and verify that the gaskets are not folded over.

5. Tighten each nut, starting in the center, moving outward while alternating between the sleeve sections. Torque each nut to 80 lbs. ft.

**ROBAR INDUSTRIES LTD. - BRITISH COLUMBIA**

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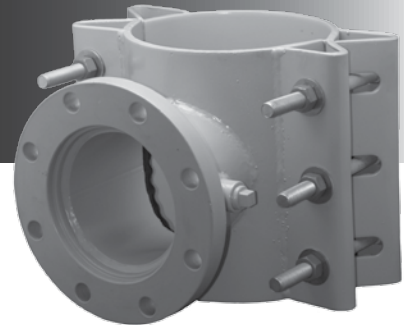
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# 6800 / 6900

## INSTALLATION GUIDE



*All ROBAR Tapping Sleeves are leak tested at the factory prior to shipping.*

1. Visually inspect the sleeve to ensure it is of the required outside diameter and outlet size for the desired application. Make sure the sleeve is complete and there are no missing nuts, bolts or washers.
2. Clean the pipe over the entire circumference where the sleeve is to be installed. Be sure that there is no foreign debris (pebbles or dirt) on the clamp gasket or pipe. Lubricate the sleeve gasket with a potable, NSF certified lube. ROBAR recommends SLIKSTYX.
3. Place the flange section of the sleeve on the pipe and slide it into position.
4. Slide the back section(s) over the back of the pipe and into position. Insert the bolts into corresponding bolt holes and tighten the nuts by hand. Be sure to maintain an equal gap between the tapping sleeve sections.
5. Tighten each nut, starting in the center, moving outward while alternating between the sleeve sections. Torque each nut to 80 lbs. ft.
6. Mount the tapping valve to the flange. Be sure to support or block the valve.
7. Connect the tapping machine. Pressure test the tapping sleeve prior to cutting into the pipe. Testing can either be done through the tapping machine or through the 3/4" test plug. When testing through the test plug, before testing apply sufficient Teflon tape when resealing the 3/4" plug.
8. Proceed with the tapping operation. Prior to backfilling, be sure to double check the torque levels on each nut.

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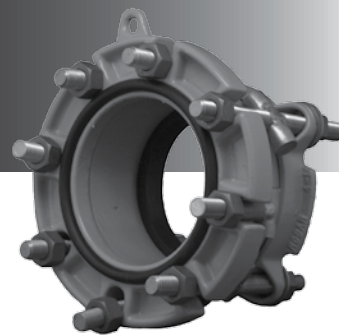
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# 7400 / 7500

## INSTALLATION GUIDE



1. Visually inspect the Flange Coupling Adapter to ensure it is of the required outside diameter for the desired application. Make sure the coupling is complete and there are no missing nuts, bolts or washers.
2. Clean the pipe end to ensure that all dirt and irregularities have been removed.
3. Slide the end ring over the pipe end.
4. Lubricate the coupling gaskets and the pipe with potable, NSF certified lube. ROBAR recommends SLIKSTYX. Slide the appropriate gasket over the pipe. The tapered end must face the pipe ends.
5. Slide the center ring over the pipe. Position the flanged end of the center ring against the mating flange. An O-Ring gasket is supplied with the FCA, eliminating the need for a flat flange gasket. Keep the pipe gap to a minimum.
6. Slide the bolts into place and assemble the flanged joint. Slide the gasket and endplate into place against the center ring.
7. Torque each bolt alternating between bolts in a "star" pattern to the torque levels indicated below:

4" - 8":        80 lbs. ft.  
10" - 12":     100 lbs. ft.

### CAUTION



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

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# 9626

## INSTALLATION GUIDE



1. Remove the insert and wedges from the box and verify that the insert diameter corresponds to the inside diameter of the HDPE pipe.
2. Gently compress the insert by hand and slide the insert into the pipe. Slide the insert until the pipe stops touch the face of the pipe.
3. Examine the gap size in the insert to determine what size wedge is necessary:  
  
Wedge # 1: Gap size 2-1/2" or less.  
Wedge # 2: Gap size between 2-1/2" and 3".  
Wedge # 3: Gap size 3" or greater.
4. Slide the appropriate wedge into place. The insert will slide in between the 2 laminated sections of the wedge. Using a hammer, gently tap the wedge until it fits tightly into the insert.
5. When the wedge is in its final position, there should be no gap between the insert and the pipe wall. If there are any gaps, remove the insert and reinstall using a larger wedge.

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