







# Extended Range Products



## PRODUCTS

-  • Pipe Wrap PVC Corrosion Protection
-  • 4MIL High Density Cross-Laminated Polyethylene
-  • 8 Mil Linear Low Density Polyethylene
-  • Boxlok Valve Box Alignment Device
-  • Duc Lug
-  • Flat Washer
-  • Flange-Pak™ Flange Accessories
-  • Heavy Hex Nut
-  • Hydraulic Cement Plug
-  • MJ Eye Bolt
-  • OMNI-SLEEVE™ Improved Wall Sleeve
-  • Pipe Joint Lubricant
-  • Rod Coupling
-  • Socket Clamps
-  • Tape (Detectable, Non-Detectable, Barricade)
-  • Threaded Rods
-  • Valve Operating Wrenches

# Extended Range Products

## PIPE WRAP PVC CORROSION PROTECTION



**General Description:** SIGMA Pipe Wrap Tape is a general use polyvinyl chloride tape with pressure sensitive adhesive. It is specifically designed to protect external pipe surfaces from corrosion. It is ideally suited for valves, elbows and fittings, both in plant and outdoors. This versatile product can be easily applied by hand or machine under varying weather conditions.

**Sizes:**

#140 2"

#355 1-1/2"

**Physical Properties:**

- Temperature Rating: 80° C
- Thickness: 10 mil
- Color: Black, White, and Yellow
- Adhesion To Steel: 20 oz./in.
- Tensile Strength: 20 lbs./in.
- Elongation: 150 %

## 4MIL HIGH DENSITY CROSS-LAMINATED POLYETHYLENE



ANSI/AWWA C105/A21.5 defines cross-laminated high-density polyethylene film as: "Film extruded from virgin high-density polyethylene raw material, which is then molecularly oriented by stretching. Two single-ply layers of the film are then laminated together with their orientations at 90 degrees to one another to form the final product."

Physical Attribute	Test Direction	ANSI/AWWA C105/A21.5 MINIMUM REQUIREMENT	SIGMA TYPICAL TEST VALUES
TENSILE STRENGTH ASTM D882	MACHINE DIRECTION	6300psi	8057psi
	TRANSVERSE DIRECTION	6300psi	8516psi
ELONGATION ASTM D882	MACHINE DIRECTION	100%	328%
	TRANSVERSE DIRECTION	100%	269%
DIELECTRIC STRENGTH ASTM D149 (VOLTS / MIL)	n/a	800 volts / mil	2828 volts / mil
IMPACT RESISTANCE ASTM D1709 (grams)	n/a	800 grams	1546 grams
PROPAGATION TEAR RESISTANCE ASTM D1922 (gf)	MACHINE DIRECTION	250 grams/force	471 grams/force
	TRANSVERSE DIRECTION	250 grams/force	725 grams/force

## 8MIL LINEAR LOW DENSITY POLYETHYLENE



Polycase LLDPE encasement film is a carefully engineered linear low density virgin polyethylene resin film designed to meet the requirements of the ANSI/AWWA C105/A21.5 standard.

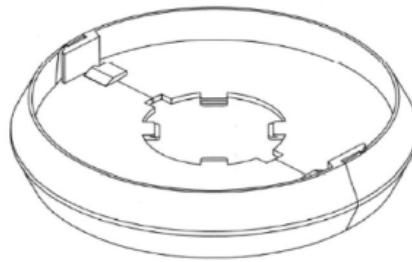
Physical Attribute	Test Direction	ANSI/AWWA C105/A21.5 MINIMUM REQUIREMENT	SIGMA LLDPE TYPICAL TEST VALUES
TENSILE STRENGTH ASTM D882	MACHINE DIRECTION	3600psi	4635psi
	TRANSVERSE DIRECTION	3600psi	4216psi
ELONGATION ASTM D882	MACHINE DIRECTION	800%	948%
	TRANSVERSE DIRECTION	800%	1012%
DIELECTRIC STRENGTH ASTM D149 (VOLTS / MIL)	n/a	800 volts / mil	1786 volts / mil
IMPACT RESISTANCE ASTM D1709 (grams)	n/a	600 grams	928 grams
PROPAGATION TEAR RESISTANCE ASTM D1922 (gf)	MACHINE DIRECTION	2550 grams/force	4082 grams/force
	TRANSVERSE DIRECTION	2550 grams/force	6159 grams/force

## BOXLOK VALVE BOX ALIGNMENT DEVICE

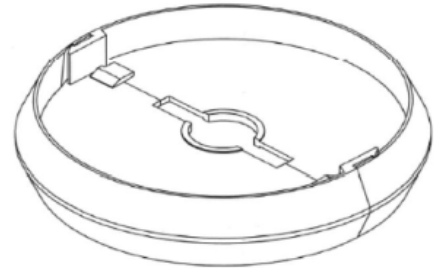


U.S. Patent No. 7575018 and 8430116

- All Boxlok products are designed as a centering device.
- These units should only be used inside the valve box or another generally accepted unit to achieve operating nut access on the valve.
- Eliminates shifting of Valve Box during backfill.
- The Boxlok is not to be used in a situation where a vertical load is placed on the Boxlok. This will cause the unit to bind the operating nut.



Boxlok 1

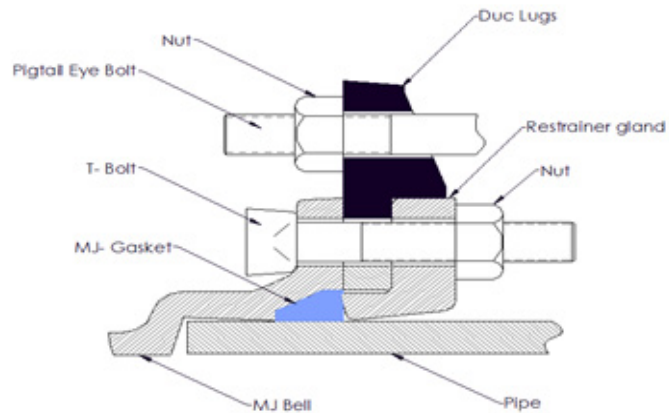


Boxlok 2

## DUC LUG



- Designed to assist in restraining of mechanical joint fittings, valves, hydrants and pipes by threaded rods.
- Manufactured with high strength ductile iron per ASTM A536, Grade 65-45-12.
- Designed for use on sizes 4" through 24"
- Installed between MJ Bell and MJ Gland



## FLANGE PAK™



1. Gasket
  - 1/8" thick either Ring or Full Face per ANSI/AWWA C110/A21.10 and ANSI/AWWA C111/A21.11.
  - Material: Red Synthetic Rubber
  - Other material gasket (EPDM, Nitrile, Neoprene & FKM) are available on request.
2. Hex Bolts & Nuts
  - Bolts & Nuts are as per ANSI/AWWA C110/A21.10 and ANSI/AWWA C111/A21.11.
  - Hex Bolts: Per ASME/ ANSI B18.2.1 Material per ASTM A307 Grade A, Zinc Plated.
  - Hex Nuts: Per ASME/ ANSI B18.2.2 Material per ASTM A563 Grade A or B, Zinc Plated.
  - Bolts & Nuts are threaded in accordance with ASME/ANSI B1.1
  - Other Material Hex Bolts & Nuts are available on request.

# Extended Range Products

## FLAT WASHERS



SIGMA Corporation carries a wide range of round and square flat washers.

Most products are available in steel/zinc, all grades of stainless steel and in a variety of platings.

Products supplied by SIGMA Corporation follow the minimum acceptable quality levels of the following industry standards:

- ANSI
- ASTM
- AWWA
- SAE
- ASME

## HEAVY HEX NUTS



SIGMA Corporation carries a wide range of heavy hex nuts.

Most products are available in steel/zinc, all grades of stainless steel and in a variety of platings.

Threading per ANSI B1.1 Coarse Thread Series.

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## HYDRAULIC CEMENT PLUG

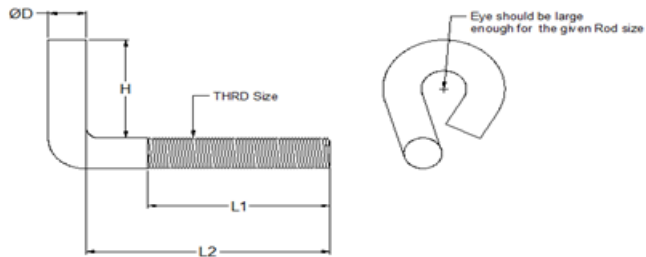


- Available in 1 and 5 gallon pails
- Regular Mix sets in 3-5 minutes
- Hot Mix sets in 45-90 seconds
- Patch and pre colored custom mixes available
- Custom setting times available
- NSF61 Approved

### MJ EYE BOLT

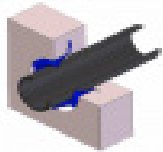


- Material: High Strength Low alloy steel per ANSI/AWWA C111/121.11.
  - Threads per ASME B1.1
  - Eye bolts can be used in place of T-Head bolts
  - Used on sizes 4" through 24"
- Note: We also offer eye bolts in stainless steel



Eye Bolt detail (all Dim are Inches)					
Part No	ØD +0.005/-0.073	H (Ref)	L1 +0.250/-0.00	L2 ±0.060	Thread Size
IRB3445	0.75	2	3.500	4.500	3/4" -10 UNC -2A
IRB584	0.625	2	3.000	4.000	5/8" -11 UNC -2A

### OMNI-SLEEVE™ WALL PIPE PENETRATION SLEEVE



OMNI SLEEVE with sleeve pipe as installed

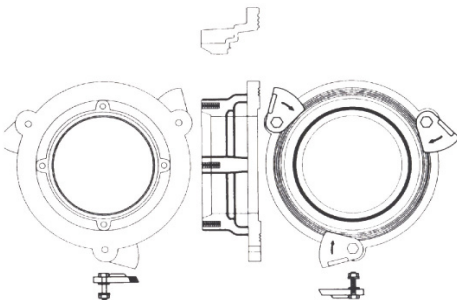
**HUB:** Manufactured from Ductile Iron, ASTM A536, in conformance with ANSI/AWWA C110/A21.10, American National Standard for Ductile and Gray Iron Fittings, 3-48" for water and other liquids.

Mechanical Joint sleeve seal is designed, manufactured, and tested in strict accordance with the applicable provisions of ANSI/AWWA C111/A21.11, American National Standard for Rubber Gasket Joints for Cast Iron and Ductile Iron Pressure Pipe and Fittings.

Drilling and Tapping conform to ANSI B1.1, Unified Screw Threads, and to B1.2, Screw Thread Gages and Gaging. Threads conform to standards and dimensions of the Coarse Thread Series, Class 2B Limits. OMNI-SLEEVE™ Hub and Sleeve Pipe are assembled and sealed with an exclusive OMNI-SEAL™ gasket.

**OMNI-SEAL 'A' GASKET:** Material conforms to the applicable provisions of CSA B 620M90, Mechanical Couplings for Drain, Waste, Vent Pipe, and Sewer Pipe.

**SUGGESTED SPECIFICATION:** Wall and/or floor pipe penetrations shall be made by a means of a sleeve capable of being bolted directly to the formwork to prevent misalignment. Seal of the annular space between the carrier pipe and the sleeve shall be by means of a confined rubber gasket capable of withstanding 350psi. Sleeve shall be manufactured from ASTM A536 Ductile Iron with an integrally cast waterstop of 1/2" minimum thickness and 2-1/2" minimum height. Wall sleeves shall be OMNI-SLEEVE™ as manufactured by SIGMA Corporation or prior approved equal.



# Extended Range Products

## PIPE JOINT LUBE



SIGMA Corporation Offers a wide range of Pipe Joint Lubrication products.

The lubricants are state of the art materials that:

- Can be applied from -10 to 150 F
- Will not damage or swell gaskets
- Are Non Toxic and biodegradable
- Will not support bacteria
- Contain no petroleum products
- Slow rate of solubility
- Are soft and easy to spread
- Have excellent lubricity
- Work in a wide range of temperature condition
- NSF approved pipe lubes are available

## ROD COUPLING



SIGMA Corporation carries a wide range of rod couplings. Couplings are used with mechanical joint coupled joint pipe to provide joint restraint with a mechanical joint of a pipe, fitting, valve or other product.

Most products are available in steel/zinc, all grades of stainless steel and in a variety of platings.

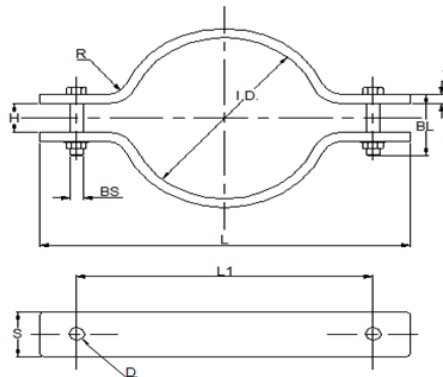
Products supplied by SIGMA Corporation follow the minimum acceptable quality levels of the following industry standards:

- ANSI
- ASTM
- AWWA
- SAE
- ASME

## SOCKET CLAMPS



- Material: Steel
- Sizes: 3" through 24"
- Function: Clamp is used for underground AWWA cast iron and ductile iron water pipe to prevent joints from separating.



## TAPE (DETECTABLE, NON-DETECTABLE, BARRICADE)

### DETECTABLE MARKING TAPE



- Detectable Marking tape consists of a minimum 5.0Mil overall thickness, with a (0.00035”)solid aluminum foil core. Construction is 0.8 Mil clear film, reverse printed and laminated to aluminum foil laminated to 3.75 Mil clear film, making the film permanently printed.
- The tape meets or exceeds industry standards including the American Public Works Association (APWA) color code.
- Available in different widths.

### NON-DETECTABLE MARKING TAPE



- Non-detectable marking tape consists of a 4.0 Mil overall thickness. It is manufactured with no lead material and is used for underground purposes.
- Super stretch Non-Detectable marking tape consists of a minimum 6.0 Mil overall thickness, is reverse printed and has a laminated construction for prolonged use underground.
- Both Detectable and Non-Detectable tape meets or exceeds industry standards including the American Public Works Association (APWA) color code.
- Available in different widths.



### BARRICADE TAPE

Barricade tape consists of a 4.0 Mil overall thickness and 3” Width weather resistant poly with easy to read 2” black lettering such as:

- CAUTION
- DANGER
- CAUTION DO NOT ENTER
- QUARANTINE
- And Many More

### RESTRAINED JOINT IDENTIFICATION TAPE

- Material: High Strength Low alloy steel per ANSI/AWWA C111/121.11
- Threads per ASME B1.1
- Size: 5/8” and 3/4”

## THREADED RODS



### MECHANICAL PROPERTIES - A242 HSLA

- Yield Strength 45000 PSI (min)
- Elongation in 2in. 20% (min)

### CHEMICAL PROPERTIES - A242 HSLA

- Carbon 0.20% Max
- Manganese 1.25% Max
- Sulfur 0.05% Max
- Nickel 0.25% Min
- Copper 0.20% Min
- Combined 1.25% Min (Ni, Cu, Cr)

Other Material Threaded Rods are available on request.

Mild Steel - Not for use in buried applications.

# Extended Range Products

## VALVE OPERATING WRENCHES



### Curb Stop Wrench

- 5' & 6' long wrench for 2" AWWA valve operation nut
- 1-1/2" heavy wall square tubing shaft
- 30" long x 1-1/4" O.D. handle
- Sealed shaft section to avoid water or mud in shaft
- Mud vents at the top of the socket
- Durable red powder-coat finish

Designed to shut off 3/4" through 2" curb stops. Fits directly on tee head of curb stops. Made of 5/8" round carbon steel.

### Crowfoot Wrenches

Crowfoot Wrenches are used with Torque Wrenches for use in tight, Restricted Spaces.

Features:

- Anti-slip design to prevent wrench from slipping when turning the fastener
- Open ended Crowfoot wrench for ratchets and torque wrench
- Non-Sparking, corrosion resistant

### Gate Valve Extension Key with Center Ring

Gate Valve Extensions are made of Solid Steel 1-inch Shaft and 2-inch Top Nut Fits 2-inch Operating Nut, Centering ring on top. Extensions over 8 feet are made in two pieces slip together coupler with 3/8" stainless steel bolt for shipment savings, unless otherwise requested.

**SIGMA also offers the following copper products (contact your local representative for more information and availability):**



### Copper Wire

Solid and Stranded Core

10, 12, and 14 Gauge

Roll Length: 500 feet

Colors: Blue, Green, Yellow, Black, White, Red



### Copper Tubing

Type K Soft: Coils, Sticks (hard and soft), OXY/MED

Type L: Sticks, ACR/OXY/MED (measured by OD)

Type M: & DWV (stick only)

Refrigeration Service Tube (50' & 100' coils, measured by OD)

Stick Lengths: 10' & 20' sold by the bundle

Coil Lengths: 3/4"-1-1/2" - 60' and 100', 2" 40' and 60'

Specialty coil lengths on request



### Straight Length Copper Tubing