



The Company With Connections®



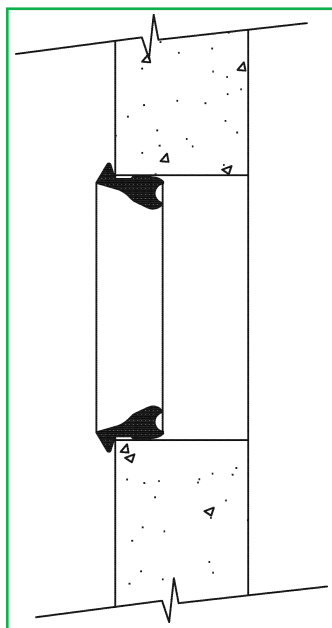
**PIPE-TO-MANHOLE AND LATERAL CONNECTORS**

**INSERTA•LOK™**

**A•LOK INSERTA•LOK™**

The **INSERTA•LOK™ Pipe-to-Manhole Connectors** and **MD Pipe-to-Lateral Connectors** are specifically engineered to produce a flexible, watertight compression seal for pipes entering precast concrete structures as well as concrete pipes.

The **INSERTA•LOK** Connectors are manufactured to meet or exceed the requirements set forth in ASTM C-923 titled *“Resilient Connector Between Reinforced Concrete Structures and Pipe”*.



**MATERIAL**

The connector is extruded from a compound formulated for wastewater applications and engineered to conform with the Resilient Material Requirements of section 4.1.1. Alternative compounds are available for unusual applications upon special order.

**KEY ADVANTAGES**

**INSERTA•LOK Connectors** function on pure compression, making field installation quick and easy. Clean and lubricate both the connector and the pipe, center pipe in connector, and insert.

The connector provides a tapered profile which enhances coupling characteristics by allowing final compression to be gradual, thereby reducing the overall coupling force.

The **INSERTA•LOK Connectors** can be installed in a precision cast or cored opening as a mainline connector for new construction, a retro-fit or a tie in for new construction.

The connector assures a positive watertight connection providing over 7 degrees of omnidirectional deflection to eliminate infiltration and shear due to settlement or ground movement. This flexibility permits immediate backfill enhancing project safety, and overcoming the problems normally encountered with water, running sand and other unstable trench conditions.

**PRODUCT REFERENCES**

**A.) ASTM C-923**

Resilient Connector Between Reinforced Concrete Manholes Structures and Pipe.

**B.) ASTM C-1244**

Standard Test Method For Concrete Sewer Manholes by the Negative Air Pressure (Vacuum) Test

**C.) ASTM C-478C**

Standard Specification for Precast Reinforced Concrete Manhole Sections

**PERFORMANCE STANDARD**

The **INSERTA•LOK Connectors** meets or exceeds all material and performance requirements of ASTM Standard C-923 titled *“Resilient Connectors Between Reinforced Concrete Manhole Structures and Pipes.”*

**PART 6 • DIMENSIONAL DATA**

**INSERTA•LOK™**  
FOR SANITARY MANHOLES ROUND AND FLATWALL

TYPE OF PIPE	Nominal Pipe O.D.	Inserta•LOK HOLE SIZE	Inserta•LOK MD HOLE SIZE
4" P VC SDR 35	4.25"	5.00"	5.00"
4" PVC SDR 40	4.50"	5.25"	5.25"
4" DUCTILE	4.75"	5.50"	5.50"
6" PVC SDR 35	6.25"	7.75"	7.00"
6" DUCTILE	6.875"	8.375"	7.625"
8" PVC SDR 35	8.50"	10.00"	9.25"
8" DUCTILE	9.00"	10.50"	9.75"
10" PVC SDR 35	10.50"	12.00"	11.50"
10" DUCTILE	11.25"	12.75"	12.00"
12" PVC SDR 35	12.50"	14.00"	13.25"
12" DUCTILE	13.00"	14.50"	13.75"

**FOR LATERAL CONNECTIONS YOU CAN USE MD INSERTA•LOK WITH A 2-STAGE CORE BIT TO PREVENT THE LATERAL FROM PENETRATING TOO FAR INTO THE PIPE**

## PERFORMANCE STANDARD

### RESILIENT TEST REQUIREMENTS OF A.S.T.M. C-923

TEST	RESULTS	ASTM METHOD
Chemical resistance 1 N Sulfuric acid 1 N Hydrochloric Acid	no weight loss no weight loss	at 22°C for 48h
Tensile strength	1200 psi or 8.5 MPa, min	D 412
Elongation at break	350% min.	
Hardness	±5 from mfg's. specified hardness	D 2240 (Shore A durometer)
Accelerated oven-aging	decr. of 15%, max. of original tensile strength, decr. of 20% max. of elongation	D 573, 70±1°C for 7 days
Compression set	decr. of 25%, max. of original deflection	D 395, Method B, at 70°C for 22h
Water absorption	increase of 10%, max. of original by weight	D 471, immerse 0.75 by 2-in. or 19 by 25-mm Specimen in distilled water at 70°C for 48h
Ozone resistance	rating 0	D 1171
Low-temperature brittle point	no fracture at -40°C	D 746
Tear resistance	200 lbf/in. or 34 kn/m	D 624, Method B

## PRODUCT SPECIFICATIONS

A flexible pipe to manhole connector shall be used for sanitary and drain pipe penetrations into precast concrete manholes and structures.

The connector shall be the **INSERTA•LOK™ CONNECTOR** as manufactured by **A•LOK PRODUCTS, INC.**, Tullytown, PA, or approved equal.

The design of the seal shall provide a flexible, positive watertight connection between the pipe and concrete wastewater structures. The connector shall assure that a seal is made between (1) the connector and the structure wall, and (2) between the connector and the pipe. The seal between the connector and the structure wall will be made by pure compression of the resilient material against the wall of the structure. The seal between the connector and the pipe will be made by pure compression of the resilient material against the outside diameter of the pipe. The connector shall be the only component to affect the seal between the pipe and structure.

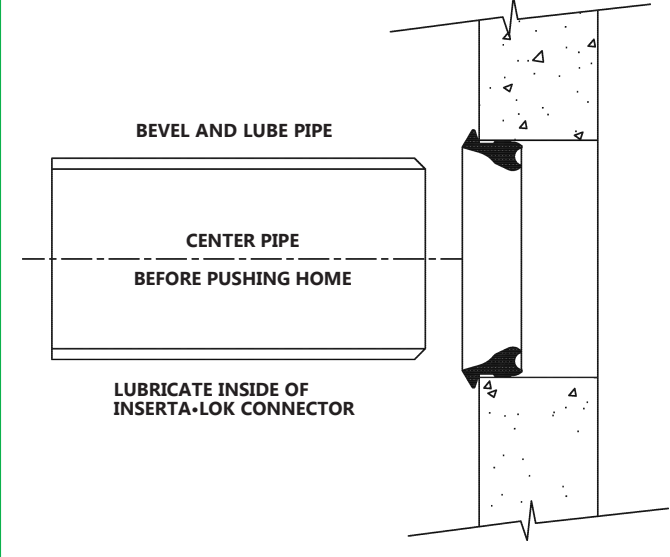
The connector shall be extruded and vulcanized from materials whose physical/chemical properties meet or exceed the physical/chemical resistant properties outlined in ASTM C-923.

The connector shall be of size specifically designed for the pipe material being used and shall be installed in accordance with the recommendations of the manufacturer.

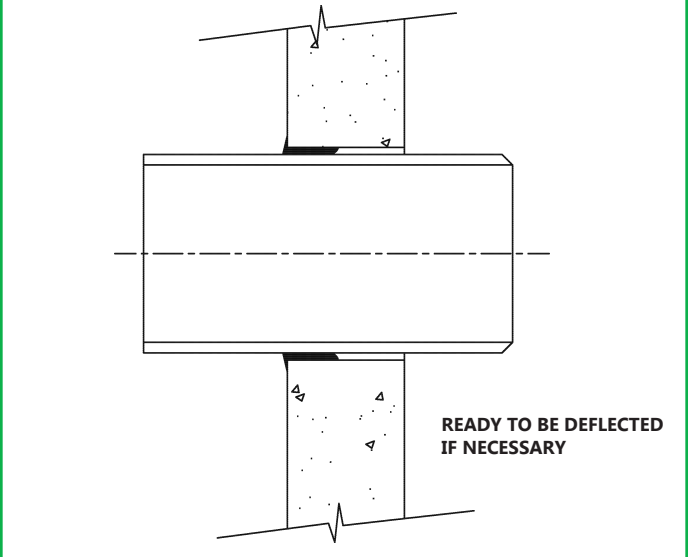
## INSTALLATION INSTRUCTIONS

Experience has shown that successful performance of this product depends on proper plant installation, as well as the backfill and the care in the field installation of the manhole or wastewater structure and connecting pipes.

### INSTALLATION OF CONNECTOR INTO WALL



### PIPE INSTALLED INTO CONNECTOR



**WARNING:** To ensure the INSERTA•LOK™ Connector remains a flexible, watertight joint, it is A•LOK Products, Inc. strong recommendation that **no mortar** be placed between the pipe and wall of the precast concrete unit. The use of mortar in this area would eliminate the flexibility for which the connector was designed and cause problems of shear.

**NOTE:** Approximate subgrade of trench at the structure can be determined by measuring from the bottom of the connector or flat spot if present, to the bottom of the manhole and wall thickness of pipe.

**CAUTION:** When installing pipe stubs for future pipeline, installation of all stubs should be properly restrained to prevent any movement by means other than, and in addition to, the resilient connector.

**ANY QUESTIONS REGARDING A•LOK INSERTA•LOK INSTALLATION, PLEASE CALL 1-800-822-2565**