

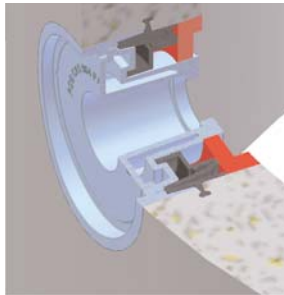


CAST-A-SEAL® 964

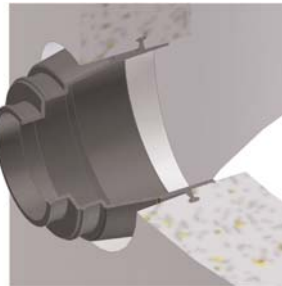
MULTI-SIZE CAST-IN BOOT-TYPE CONNECTOR

What It Is

CAST-A-SEAL 964 is a cast-in, flexible watertight pipe-to-structure connector. Its design allows it to be placed into the structure formwork, and it is cast into the concrete when it is poured, eliminating the time and expense of forming or coring holes. The unique two-step design of **CAST-A-SEAL 964** allows it to accommodate pipe from 4.21" OD to 6.9" OD, in either manhole or straight wall applications.



CAST-A-SEAL 964
Cast into manhole



CAST-A-SEAL 964
Unfolded and ready for
pipe installation

Why It's Better

- Two-Step design fits almost all pipe from 4.21" OD to 6.9" OD
- Casting Mandrels for 3" - 6" straight-wall applications and for 48" x 5" round manhole forms
- Available with or without a sealed face
- Simple cast-in design eliminates time and expense of casting or coring holes
- Patented design allows cast-in connector to be cut out (if damaged or if pipe size changes) and a new connector installed
- Use in manholes, wet wells, pump and lift stations, stormwater structures, on-site treatment structures, grease interceptors, or any application requiring a flexible watertight connector

How It Performs

CAST-A-SEAL 964 meets or exceeds all requirements of the following Specifications and/or Test Methods:

- ASTM C 923**
- ASTM C 1244**
- ASTM C 1478**
- ASTM C 1644**
- ASTM F 2510**

How It Works

- Specially developed synthetic rubber is continuously tested and lab-certified
- The connector is cast into the concrete product when it is made
- The large keylock assures a watertight seal between the connector and the concrete
- Accommodates deflection and shear loads without losing its seal

Protected under one or more of the following U. S. Patents: 5529312, 6676136, 7028972

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CAST-A-SEAL® 964

Specification and Application Guide PIPE OD 4.21" - 6.9"

Submittal Specification

A flexible Pipe-to-Manhole connector shall be employed in the connection of the sanitary and storm drain sewer pipe to precast manholes or other structures. The connector shall be CAST-A-SEAL® 964 as manufactured by Press-Seal Gasket Corporation, Fort Wayne, Indiana, or approved equal. The connector shall be the sole element relied on to assure a flexible, watertight seal of the pipe to manhole. The connector shall consist of a rubber gasket and one or two external take-up clamp(s).

The rubber gasket element shall be constructed solely of synthetic or natural rubber, and shall meet or exceed the requirements of ASTM C 923. The connector casting mandrel system shall include a precisely-formed opening in the concrete for installation of a replacement connector in the event that the cast-in connector is damaged.

The external take-up clamp shall be constructed of Series 300 non-magnetic stainless steel and shall utilize

no welds in its construction. The clamp shall be installed by torquing the adjusting screw using a torque-setting wrench available from the connector manufacturer.

Selection of the proper size connector for the structure and pipe requirement, and installation thereof, shall be in strict conformance with the recommendations of the connector manufacturer. Any dead end pipe stubs installed in connectors shall be restrained from movement per ASTM C 923.

The finished connection shall provide sealing to 13 psi (minimum) and shall accommodate deflection of the pipe to 7 degrees (minimum) without loss of seal.

Vacuum testing shall be conducted in strict conformance with ASTM C 1244 prior to backfill. Other testing shall be conducted in strict conformance with the requirements of the connector manufacturer.

PIPE O.D./IN.	PIPE DESCRIPTION	CAS 964 Step
4.21	4" PVC D3033 OR D3034	4" Outer
4.30	4" TRUSS	4" Outer
4.50	4" Sched 40/80 PVC	4" Outer
4.80	4" CI/DI 4" C900 PVC 4" HDPE	4" Outer
6.275	6" PVC D3033 OR D3034	6" Inner
6.30	6" TRUSS	6" Inner
6.50	6" Sched 40/80 PVC	6" Inner
6.625	6" PVC D3033 OR D3034	6" Inner
6.90	6" CI/DI 6" C900 PVC 6" HDPE	6" Inner

TYPICAL TEST RESULTS for CAST-A-SEAL 964 (as in ASTM C 923 and C 1478)			
Test	ASTM Test Method	Test Requirements	Typical Result
CHEMICAL RESISTANCE; 1N SULFURIC ACID and 1N HYDROCHLORIC ACID	D 534, AT 22°C FOR 48 HRS	NO WEIGHT LOSS NO WEIGHT LOSS	NO WEIGHT LOSS NO WEIGHT LOSS
TENSILE STRENGTH	D 412	1200 PSI, MIN.	2100 PSI
ELONGATION AT BREAK	D 412	350%, MIN.	525%
HARDNESS	D 2240 (SHORE A DUROMETER)	±5 FROM THE MANUFACTURER'S SPECIFIED HARDNESS	<2
ACCELERATED OVEN-AGING	D 573, 70± 1°C FOR 7 DAYS	DECREASE OF 15%, MAX. OF ORIGINAL TENSILE STRENGTH, DECREASE OF 20%, MAX. OF ELONGATION	-13% TENSILE CHANGE, -14% ELONGATION CHANGE
COMPRESSION TEST	D 395, METHOD B, AT 70°C FOR 22 HRS	DECREASE OF 25%, MAX. OF ORIGINAL DEFLECTION	13%
WATER ABSORPTION	D 471 IMMERSE 0.75 BY 2-IN. SPECIMEN IN DISTILLED WATER AT 70°C FOR 48 hrs	INCREASE OF 10%, MAX. OR ORIGINAL BY WEIGHT	3.50%
OZONE RESISTANCE	D 1171	RATING 0	PASS
LOW-TEMP, BRITTLE POINT	D 746	NO FRACTURE AT -40°C	PASS
TEAR RESISTANCE	D 624, METHOD B	200 LBF/IN. (MIN.)	450 LBF/IN.

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