



CAST-A-SEAL® 402/402F

CAST-IN BOOT-TYPE CONNECTOR
for 1-1/4" to 6" PVC Pipe

What It Is

CAST-A-SEAL 402/402F is a watertight flexible connector that is cast into the structure when the concrete is poured. The connector is folded into the casting position and placed on the reusable heavy-duty solid plastic mandrel that is installed directly to the form. After the concrete is cured, the form is opened, removing the mandrel from the gasket, but leaving the **CAST-A-SEAL 402/402F** connector embedded in the concrete. The gasket is then simply unfolded at the jobsite and is tightened around the pipe using the supplied stainless steel take-up clamp.



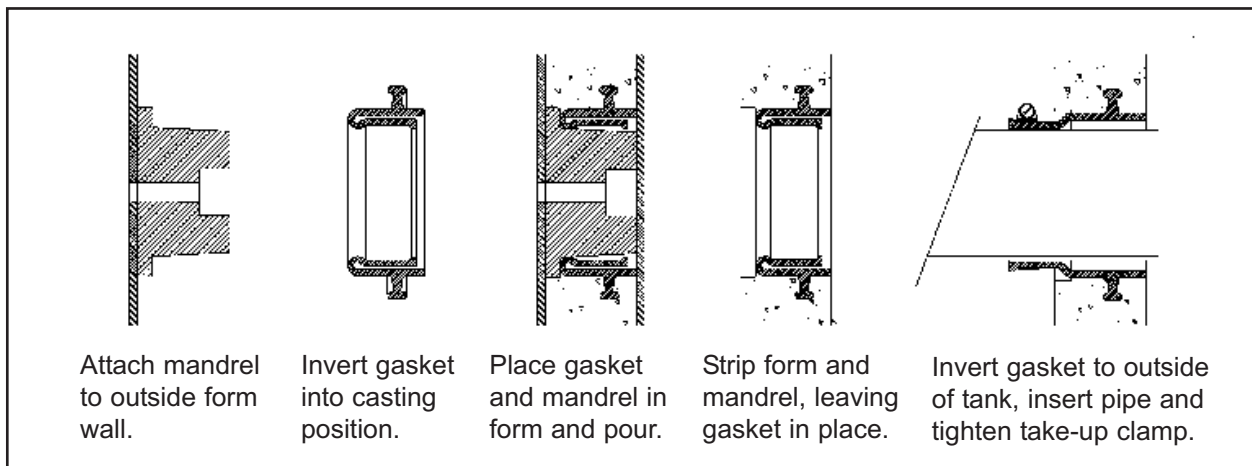
Why It's Better

- Simple cast-in design provides flexible watertight connection
- Eliminates infiltration and exfiltration
- Improves on-site system performance and minimizes maintenance
- Protects groundwater from unintended discharges
- Use in on-site treatment structures, grease interceptors, manholes, wet wells, pump and lift stations, stormwater structures, or any application requiring a flexible watertight connector

How It Performs

CAST-A-SEAL 402/402F meets or exceeds all requirements of the following Standards, Codes, Specifications and/or Test Methods:

- | | |
|--------------------|----------------------------|
| ASTM C 1227 | IAPMO Z1000 |
| ASTM C 1644 | IAPMO Z1001 |
| ASTM C 923 | NPCA Best Practices |
| ASTM C 1244 | NOWRA Model Code |
| ASTM C 1478 | |



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CAST-A-SEAL® 402/402F

PRODUCT SPECIFICATION and SELECTION

Submittal Specification

A flexible Pipe-to-Structure connector shall be employed in the connection of the sanitary sewer pipe to precast structures. The connector shall be CAST-A-SEAL® 402/402F 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 the precast structure. The connector shall consist of a rubber gasket and an external take-up clamp.

The rubber gasket element shall be constructed solely of synthetic or natural rubber, and shall meet or exceed the physical property requirements of ASTM C 923.

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-set-

ting 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.

CAST-A-SEAL 402	PIPE SIZE	PIPE O.D. RANGE	WALL THICKNESS*	APPLICATION
452.0250	1.25" - 2"	1.5" - 2.75"	2.5" - 6"	STANDARD
452.0450	4"	4.2" - 4.7"	2.5" - 6"	STANDARD
452.0402F1	4"	4.2" - 4.7"	2.5" - 3.5"	Closed Face
452.0650	6"	6.2" - 6.7"	2.5" - 6"	STANDARD
CAS ADAPTER	3"	3.2" - 3.6"	---	Use with 4" CAST-A-SEAL

PRODUCT PERFORMANCE

CAST-A-SEAL402/402F meets and/or exceeds all requirements of ASTM C 923, including physical properties of materials and performance testing, including:

- 13 psi minimum in straight alignment
- 10 psi at minimum 7° angle
- 10 psi minimum under shear load of 150 lbs/in. pipe diameter

CAST-A-SEAL 402/402F meets and/or exceeds the requirements of the following Standards, Specifications, Codes, and Test Methods:

- ASTM C 923 *Standard Specification for Resilient Connectors Between Reinforced Concrete Manhole Structures, Pipes, and Laterals*
- ASTM C 1644 *Standard Specification for Resilient Connectors Between Reinforced Concrete On-Site Wastewater Tanks and Pipes*
- ASTM C 1478 *Standard Specification for Storm Drain Resilient Connectors Between Reinforced Concrete Storm Sewer Structures, Pipes and Laterals*
- ASTM C 1244 *Standard Test Method for Concrete Sewer Manholes by the Negative Air Pressure (Vacuum) Test*
- IAPMO/ANSI Z1000 *Standard for Prefabricated Septic Tanks*
- IAPMO/ANSI Z1001 *Standard for Prefabricated Gravity Grease Interceptors*
- NPCA *Best Practices Manual for Precast Concrete On-Site Wastewater Tanks*
- NOWRA *Model Code Framework*

TYPICAL TEST RESULTS for CAST-A-SEAL 402/402F (as in ASTM C 1644, 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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