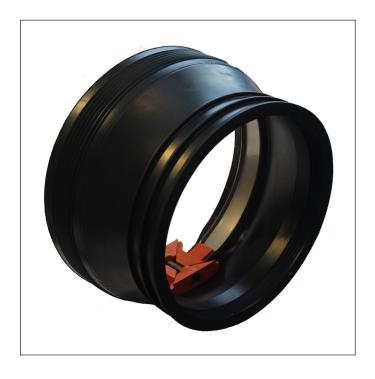
Tylox® Cobra Boot Mechanically Installed Boot Connector

Tylox® Cobra Boot Connectors... flexible enough to meet your most rigid standards.

Updated to provide the best performance during installation into the structure at the precast plant and when installing the pipe in the field.

Designed to provide a watertight seal between a preformed hole (cored or cast-in) in a concrete structure and a connecting pipe, all Tylox® Cobra style flexible, rubber boot connectors:

- Designed and tested to meet or exceed the requirements of ASTM C923: 13 psig (30 ft head) watertight sealing in straight alignment and 10 psig (23 ft head) watertight sealing at 7° axial deflection.
- Accommodate variation in hole sizes using an adjustable hoop.
- Allow for repeated installation and removal without damaging the connector.
- Are quick and easy to install, using a torque socket wrench.
- Are easily installed and/or removed from either the interior or exterior of the concrete structure.
- Manufactured in a variety of hole and pipe size combinations to fit most cored/formed hole sizes 7" thru 20" and connecting pipe outside diameters from 1.80" thru 18.5". (Please refer to chart on page two for exact details)
- Supplied as standard with high-grade, 304 Series stainless steel shield, hoop and clamp for maximum corrosion resistance.
- Manufactured with high-strength, fiberglass reinforced nylon wedges for enhanced durability.



Hamilton Kent's policy of carrying large inventories of finished product means that you'll find ordering and receiving Tylox® flexible, rubber boot connectors is a simple, worry-free experience.

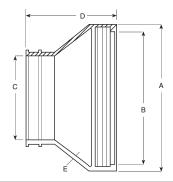


A variant of the standard boot, the step-boot is designed for either a 2", 3" or 4" connecting pipe.

Torque wrench available from HK for installing Cobra boots - two variations for small and large boots



Making Infrastructure Watertight Today for a Greener, Sustainable Tomorrow



| Available Models | | | | | | | |
|--------------------|----------------------------|-------|----------------------------|-------|-------------------------|-------|------|
| Part | Pipe O.D. Range (in) | | Hole Size Range (in) | | Connector Dimensions | | |
| | Min | Max | Min | Max | В | С | D |
| Cobra 7" to 4-3-2" | 1.80 | 4.80 | 7.00 | 7.12 | 6.00 | * | 6.00 |
| Cobra 8" to 4-3-2" | 1.80 | 4.80 | 7.99 | 8.12 | 7.00 | * | 6.25 |
| Cobra 7" to 4" | 4.21 | 4.80 | 7.00 | 7.12 | 6.00 | 4.80 | 6.00 |
| Cobra 8" to 6" | 6.00 | 6.70 | 7.99 | 8.12 | 7.00 | 6.50 | 6.00 |
| Cobra 10.5" to 6" | 6.00 | 7.00 | 10.50 | 10.60 | 9.00 | 6.50 | 6.00 |
| Cobra 10.5" to 8" | 7.50 | 9.05 | 10.50 | 10.60 | 9.00 | 8.50 | 6.00 |
| Cobra 11" to 6" | 6.00 | 7.00 | 10.99 | 11.12 | 9.00 | 6.50 | 6.00 |
| Cobra 11" to 8" | 7.50 | 9.05 | 10.99 | 11.12 | 9.00 | 8.50 | 6.00 |
| Cobra 12" to 4" | 4.21 | 4.80 | 11.99 | 12.12 | 10.50 | 4.80 | 6.00 |
| Cobra 12" to 6" | 6.00 | 7.00 | 11.99 | 12.12 | 10.50 | 6.50 | 6.00 |
| Cobra 12" to 8" | 7.50 | 9.05 | 11.99 | 12.12 | 10.50 | 8.50 | 6.00 |
| Cobra 13" to 10" | 9.00 | 11.10 | 12.99 | 13.12 | 11.40 | 10.50 | 8.00 |
| Cobra 14" to 10" | 9.50 | 11.10 | 13.99 | 14.12 | 12.25 | 10.50 | 8.00 |
| Cobra 16" to 10" | 9.50 | 11.10 | 15.99 | 16.12 | 13.87 | 10.50 | 8.00 |
| Cobra 16" to 12" | 11.75 | 13.25 | 15.99 | 16.12 | 13.87 | 12.50 | 8.00 |
| Cobra 16" to 14" | 13.25 | 14.75 | 15.99 | 16.12 | 13.87 | 14.00 | 8.00 |
| Cobra 20" to 15" | 14.00 | 15.50 | 19.99 | 20.12 | 18.25 | 15.00 | 8.00 |
| Cobra 20" to 18" | 17.00 | 18.50 | 19.99 | 20.12 | 18.25 | 18.00 | 8.00 |

* C7-2-432 and C8-2-432 boots - sleeve has optional C Dimensions: C1 @ 2.25", C2 @ 3.60", and C3 @ 4.80"

Materials and Identification

Tylox™ Cobra connectors are manufactured from virgin, synthetic rubber compounds to meet the material requirements of ASTM C923.

Connectors are available for "Standard" or "Oil-resistant" applications. Oil-resistant connectors will have an orange dot on the rubber molding.

Other materials and specifications may be available as custom order. Please consult your Hamilton Kent representative regarding your specific requirement.



Components

Tylox® flexible, rubber boot connectors consist of 5 main components:



Sleeve: The sleeve is designed for flexibility in all dimensions to accept some movement between the pipe and the structure. Sleeves are manufactured with EPDM which provides for protection against ultraviolet degradation while the structure is awaiting installation. The sleeve is available in Nitrile for use in applications requiring oil-resistance. Sleeves are designed for use with either single or dual take-up clamps.

Hoop: The hoop is manufactured from 304 Series stainless steel and is roll formed for increased radial strength. An expansion mechanism is used to expand the O.D. of the hoop inside the rubber sleeve after they have been inserted into the hole in the structure. The force exerted by the expanded hoop mechanically clamps the sleeve into the structure and deforms the rubber against the concrete, forming a watertight seal.

Shield: The 304 Series stainless steel shield provides protection between the rubber sleeve and the hoop expansion mechanism. It also gives an added amount of interference between the hoop and sleeve, at the adjustment point, ensuring full 360 degree sealing between the sleeve and the structure wall.

Clamp: Manufactured from 304 series stainless steel, the clamp is used to compress the rubber around the connecting pipe, forming a watertight seal. Clamps are quick adjustment style.

Adjustment Mechanism: The Cobra style mechanism expands the hoop by a variable amount.



The amount of expansion is adjusted by using a torque wrench to turn the nut on the screw mechanism inwards, which in turn activates the wedge system, expanding the hoop. Note that the bolt head itself is held captive inside a formed hole in the rear wedge, negating the need for a second wrench to hold it steady.

Installation: Refer MIB Series Installation Instructions document.

NOTE: It is highly recommended that all torque wrenches used to install the Cobra boot be certified on an annual basis to ensure the proper amount of torque is being applied to the adjustment mechanism.

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