

Technical Data

➤ Product Description

Nelson's Fire Collar is a factory pre-fabricated firestop collar utilizing our UL Classified Wrap Strip (WRS3™) and restraining collar. Wrap strip is a highly intumescent firestopping material intended for PVC and CPVC combustible pipe penetrations in fire rated walls and floors. When exposed to fire, the wrap strip expands and forms a hard char to seal off the penetrating item and preventing the passage of fire and hot gasses.

➤ Application

The use of this product is based on applications of the Nelson "WRS3" wrap strip found in UL system numbers C-AJ-2489, C-AJ-2475 and W-L-2388. The Fire Collar is easily installed over existing pipes. Release the quick release hose clamp and open collar. Place over pipe near penetration. Bend tabs out 90 deg and slide Collar flush to wall. Use hose clamp to tighten around pipe. Attach to wall or floor using suggested anchors prescribed in applicable system.

➤ Availability

- AB0315X01 – 1½ in. Collar – 10/Ctn.
- AB0315X02 – 2 in. Collar – 8/Ctn.
- AB0315X03 – 3 in. Collar – 6/Ctn.
- AB0315X04 – 4 in. Collar – 2/Ctn.
- AB0315X05 – 5 in. Collar – 2/Ctn.
- AB0315X06 – 6 in. Collar – 2/Ctn.

➤ Approvals

WRS3 Wrap Strip - Underwriters Laboratories Inc.,
Fill, Void or Cavity Material (XHHW) R10764
City of New York, New York, Department of
Buildings

- MEA 128-04-M

➤ Features

- Up to 3-Hour Rating
- Ease of installation
- Highly Intumescent
- Excellent Freeze-Thaw
- Asbestos Free
- Solvent Free
- No hazardous ingredients
- Cost Effective
- Water Resistant

➤ Physical Properties

- Intumescent Expansion Activation – 250°F (121°C)
- Service Temperature 40°F (4°C) and 90°F (32°C).

➤ Test Compliance

- ASTM E814 (UL1479)

➤ Testing Data

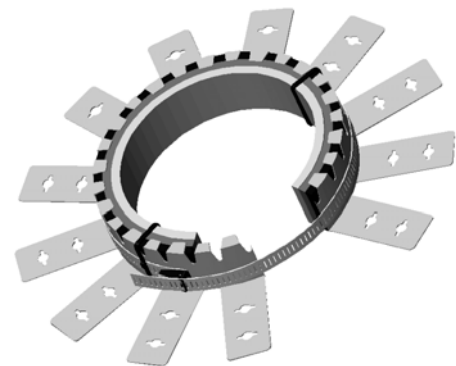
For specific test criteria, refer to the UL Fire Resistance Directory.

➤ Storage & Handling

Nelson Fire Collars should be stored between temperatures of 40°F (4°C) and 90°F (32°C).

➤ Related References

Underwriters Laboratories Inc. "Fire Resistance Directory". Application details are available in AutoCAD® format on request.



AB0315X04 ASSEMBLY SHOWN

NELSON FIRESTOP PRODUCTS

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NELSON

Firestop Products

Fire Collar

➤ INSTALLATION INSTRUCTIONS

GENERAL: Areas to be protected must be clean and free of oil, loose dirt or rust. Installation temperatures must be 40°F (4°C) and above.

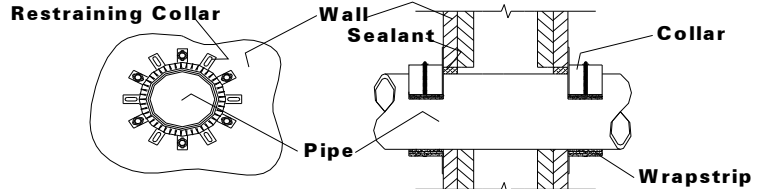
APPLICATION SYSTEM SELECTION: Selection of an appropriate firestop system design is critical to the fire protection process. Please consult the Nelson Firestop directory and application guide as well as the UL® Fire Resistance Directory for additional information.

Fire Collar: Pre-fabricated using nom 1/4" thick intumescent material faced on both sides with a plastic film, supplied in 1-1/2" wide strips. The layers of wrapstrips are wrapped around the through penetrant with ends butted and held in place with collar and hose clamp. The edge of the wrapstrip shall abut the surface of the wall or floor. The Fire Collars are installed on each side of the gypsum or concrete wall or bottom side of the concrete floor.

FILL MATERIAL: Nelson Firestop Sealant (LBS3™) ranging from 1/4" thickness to 3/4" thickness is applied within the annulus, flush with top surface of the floor or with both surfaces of the wall. Please refer to the UL® Fire Resistance Directory for the appropriate thickness.

ATTACHMENT: 1-1/4" wide by 2" long anchor tabs are used for securement to floor or wall. Steel collar tightened around wrapstrips and through penetrant using min. 1/2" wide by 0.028in. thick stainless steel hose clamp installed at mid-height of the collar. Collar secured to concrete surface with 1/4" diameter by min. 2-1/4" long steel concrete anchors in conjunction with min. 1/4" by 1-1/4" diameter steel fender washers. Collar secured to gypsum wall with 1/8" diameter by min. 2-3/4" long steel molly bolts in conjunction with min. 1/4" by 1-1/4" diameter steel fender washers. Collars are installed on both sides of wall.

UL System No. W-L-2388 F Rating 1 or 2 Hr. T Rating 0, 1 or 1-1/2 Hr.



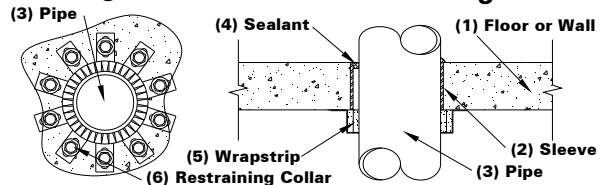
- **WALL ASSEMBLY** - Constructed in the manner specified in the U300 or U400 series designs as shown in the UL Fire Resistance Directory.
- **NONMETALLIC PIPE or CONDUIT** - Max. 4" nominal diameter, Sch. 40 PVC, ABS or RNC pipe for use in closed (process or supply) or vented (drain, waste or vent) piping systems. Max. 4" diameter or smaller SDR 13.5 CPVC pipe for use in closed piping systems. The annular space between pipe, conduit or tubing and periphery of opening shall be 0" (point of contact) to 1/2".
- **NELSON LBS3 SEALANT** - Apply LBS3 within the annular space to a min. 5/8" depth, flush with both wall surfaces. At point of contact, a min. 3/8" diameter bead of sealant shall be applied at the gypsum/pipe interface on both surfaces of wall.
- **NELSON WRS3 WRAPSTRIP** - Apply 1" wide WRS3 around the pipe on both sides of the wall in accordance with the schedule shown in the table below.

Pipe Type	Max. Pipe Size	Nos. of Layers	F Rating (Hr.)	T Rating (Hr.)
PVC, CPVC or RNC	4	2	2	0
ABS	4	3	2	1-1/2
PVC, CPVC or RNC	4	3	2	1
PVC, CPVC or RNC	3	2	2	1
ABS	3	2	2	1-1/2
PVC, CPVC or RNC	2	1	2	1
ABS	2	1	2	1-1/2
PVC, CPVC, ABS or RNC	4	3	1	0
PVC, CPVC or RNC	4	2	1	0
PVC, CPVC, ABS or RNC	3	2	1	0
PVC, CPVC, ABS or RNC	2	1	1	0

- **STEEL RESTRAINING COLLAR** - Apply nominal 28 gauge prefabricated galvanized steel collar around the wrapstrip. Overlap the collar and secure with 1/2" wide by 0.028" thick stainless steel hose clamp. Collar secured to the wall with 1/8" diameter by min. 2-3/4" long steel molly bolts in conjunction with 1/4" by 1-1/4" diameter steel fender washers.

DWG NO. **FS-0632 R0**

U.L. SYSTEM NO. C-AJ-2475 F Rating 1 Hr. T Rating 1 Hr.



1. **FLOOR or WALL ASSEMBLY** - Min. 2-1/2" (64mm) thick lightweight or normal weight concrete floor or wall or CMU block wall. Floor may also be constructed of any 8" (152mm) thick HOLLOW-CORE Precast Concrete Units. Max. diameter of opening is 7" (178mm).
2. **METALLIC SLEEVE (optional)** - Nom 5" (127mm) diameter, or smaller, Sch. 10 or heavier steel sleeve, cast or grouted into floor or wall assembly, flush with top surface of floor or both surfaces of wall.
3. **NONMETALLIC PIPE** - Max. 6" (152mm) diameter, or smaller, Sch. 40 PVC or RNC pipe for use in closed (process or supply) or vented (drain, waste or vent) piping systems. Max. 6" (152mm) diameter of smaller SDR 13.5 CPVC pipe for use in closed piping systems.
4. **NELSON LBS3 SEALANT** - Min. 1/4" (6mm) thickness of sealant applied within the annulus, flush with top surface of floor or with both surfaces of wall. Additional sealant to be installed such that a min. 1/4" (6mm) crown is formed around the through penetrant on top surface of floor or on both surfaces of wall.
5. **NELSON WRS3 WRAPSTRIP** (part # AA0896) - Apply 1/4" (6mm) thick by 1" (25mm) wide Nelson wrapstrip around the through penetrant. The wrapstrips are installed on the bottom side of the floor or on each side of the wall.

Nom Pipe Diam. in. (mm)	Min. No. of Wrapstrip Layers	Annular Space in. (mm)	Use of Sleeve
6 (152)	4	0 to 3/8 (10)	Not Permitted
5 (127)	4	0 to 3/8 (10)	Not Permitted
4 (102)	2	0 to 3/4 (19)	Permitted
3 (76)	2	0 to 3/4 (19)	Permitted
2 (51)	1	0 to 3/4 (19)	Permitted
1-1/2 (38)	1	0 to 3/4 (19)	Permitted

6. **RESTRAINING COLLAR** (part # AA0659D) - Apply min. 28 GA. glv. steel restraining collar around the wrapstrip. Attach the collar to the floor or wall with min. 1/4" (6mm) diameter x 2-1/4" (57mm) long steel concrete anchors in conjunction with 1/4" (6mm) x 1-1/4" (32mm) diameter fender washers.

DWG NO. **FS-0616 R2**

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