BreathSaver® XW

(TYPE XW)

Atkore™
FRE Composites

One of the Most Cost Effective Cable Fire Protection Conduit Systems in the Industry

What is BreathSaver Conduit?

BreathSaver is a phenolic Reinforced Thermosetting Resin Conduit (RTRC) system which offers high performance in terms of flame resistance, smoke development, toxicity emission and corrosion resistance.

What are the typical installations for BreathSaver?

BreathSaver products are typically utilized in areas with highly stringent safety requirements for flame resistance, smoke development and toxicity emissions. These include roadway tunnels, transit facilities (tunnels and stations), high-rise emergency circuits, power plants, plenums and other air-handling spaces, vent shafts and mines.

Is BreathSaver plenum rated?

BreathSaver conduit products have demonstrated a flame spread index below 25 and a smoke developed index below 50 (i.e., a 25/50 rating) when tested in accordance with ASTM E84, ASTM E162, ASTM E662 and ASTM 800C. UL considers products that meet this rating to be compliant with the U.S. electrical, building or mechanical codes for surface burning requirements for materials intended for installation in plenums or air-handling spaces.

Does Breathsaver meet the Noncombustible Material and Limited-Combustible Material requirements of NFPA 130?

Yes, Breathsaver products meet the requirements of NFPA 130 in Section 4.6 because it is made from a material that, in the form in which it is used and under the conditions anticipated, will not ignite, burn, support combustion, or release flammable vapors, when subjected to fire or heat.

How is the support spacing determined in a 2-hour FHIT listed System?

FHIT systems are listed/Certified as a whole system. This means in order to keep the 2-hour listing it has to be installed as tested and listed in the certification. Everything from the conduit, cable and fitting manufacturers are listed in the system documentation as well as how many cables or maximum fill rates are allowed in each size conduit. Supports and spacing of the supports are no different. They are tested as part of the 2-hour system and must be installed as tested.

Many people become confused and think if you are using Fiberglass Conduit (RTRC) you would follow the support requirements in Article 355 but in reality the installation is of a listed system and not fiberglass conduit. You have to install the whole system as listed. For the System that includes BreathSaver please see System No 25.C which should be dated October 29, 2020 and will give complete instructions for installing the system. In this system the maximum space of supports is 5 feet on center.

Is BreathSaver product line a RTRC UL Listed product?

Our BreathSaver product line is UL Listed against UL 2515A Supplemental Requirements for Extra Heavy Wall Reinforced Thermosetting Resin Conduit (RTRC) and Fittings. This Class 1 Division 2 – suitable for physical damage locations raceway listing is also UL2196 2-Hour Fire Certified when installed in compliance to FHIT 25C. We are offering complete raceway system products ranging from ¾" to 6" trade size with unmatched fiberglass industry vertical and horizontal wire fill rates.

US 719-565-3311
Canada 1-888-849-9909

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BreathSaver® XW Product Specifications:

- Corrosion resistant 2-Hour Fire-Rated Cable System (UL 2196 | FHIT 25C)
- Ideal for roadway tunnels, transit and subway stations, vent shafts, mines and confined areas
- UL listed system per UL 2196 for 2 hours both vertical and horizontal (FHIT 25C)
- Available in ¾" IPS (21mm) to 1-½" IPS (41mm) and 2" ID (51mm) to 6" ID (152mm) dimensions
- No threading or masking of joints required
- Bell and spigot joint for fast, easy bonding installation

Benefits:

- Most complete 2-hour certified conduit (3/4 - 6") system for vertical and horizontal installations
- Lightweight 4" Conduit: 56lbs (26Kg) for a 20' (6 M) conduit vs. EMT at 109lbs (49Kg) for a 10' (3 M) conduit
- Emits no toxic halogen (ASTM 800C)
- Non conductive, reliable easy to install raceway protecting critical systems against fire and corrosion

Certifications:

- Fire Resistive Cables (bearing the UL Classification Mark) – The hourly fire rating applies to cable systems passing completely through a fire zone and terminating a minimum of 12 inches beyond the fire rated wall or floor bounding the fire zones
- PRYSMIAN CABLES AND SYSTEMS USA LLC — Type RHW-2 Lifeline Brand of the following part numbers: G300 followed by 64, 65, 66, 67, 68, 69, 70, 71, 72, 73, 74, 75, 76, 77, 78; or G31501 or G31496. To be installed as described herein and in accordance with the manufacturer's installation instructions SPL-FPT-0013 (TIS301H) dated Sept. 2020, SPL-FPT-0012 dated Sept. 2020.

1 Hour Fire Rating - NFPA 130

	Competition	Lifeline RHW-2 / XW BreathSaver®
FHIT	28C	25C
Hours	1	2
Conduits	1" - 2"	Atkore - FRE Composites
Cables	Competition - VitaLink	3/4" - 6"
Sizes	#12 - #2 AWG	#12 AWG to 750 Kcmil
Fill	38% max	Varies - no more than 32% horizontal and 21% vertical
Vertical rise	45 Feet	24 Feet
Pulling lube	Polywater LZ	Polywater LZ
Pull Box	Yes – (NEMA 1 and 4X)	Yes – (NEMA 4X) Resolve One

2 Hour Fire Rating - Emergency Circuits + NFPA 502

	Competition	Lifeline RHW-2 / XW BreathSaver®
FHIT	N/A	25C
Hours	N/A	2
Conduits	N/A	XW BreathSaver
Cables	N/A	Prysmian Draka - Lifeline RHW-2
Sizes	N/A	#8 AWG to 750 Kcmil
Fill	N/A	Varies - no more than 32% horizontal and 21% vertical
Vertical rise	N/A	24 Feet
Pulling lube	N/A	Polywater LZ
Pull Box	N/A	Yes – (NEMA 4X) Resolve One

Notes: FHIT.25C system is designed to meet and has successfully passed the two hour fire rating certification test per UL 2196, Standard for Tests for Fire Resistive Cables. The system holds a one hour rating for horizontal and vertical installations both in EMT conduit and BreathSaver® XW Phenolic conduit, while it holds a two hour rating for horizontal installations in EMT conduit or BreathSaver® XW Phenolic conduit and vertical installations in BreathSaver® XW Phenolic conduit.

Since the system was tested and passed the more rigorous two hour rating certification, the same parameters and requirements apply to the one hour rating (e.g. Fill, Vertical Rise) making it a robust and extremely safe solution for NFPA 130 1-hour applications.

FHIT.130 system has successfully passed the less stringent one hour fire rating certification per UL 2196 only and is not certified for two hour applications.

The gap in the hour ratings between the two systems explain the difference in the maximum allowed fill rates and vertical rises.

Prysmian™ Group Lifeline® is a brand of the Prysmian Group™ and is not affiliated with FRE Composites

For more info visit Atkore.com/frecomposites