Cable Transits & Penetration Seals for Fire-Rated Divisions

STI.

MARINE

Specified Technologies Inc. (STI)

was founded over 30 years ago and has become an industry leader in passive fire protection by providing premium quality, high performance and technologically advanced fire safety systems that help save lives and protect property.

Our professional team of engineers are highly dedicated towards product development and delivering unmatched technical support to provide best-in-class service for our customers. Moreover, top quality is ensured as our products undergo thorough testing using our technologically advanced furnace, designed to meet any resistance method standards.

With our strong expertise in land-based fire protection, we have been able to apply our knowledge and expand to the marine industry. Our complete line of products preserves and protect the integrity of vessels and platforms and are tested and manufactured under the strictest quality control standards to withstand the forces of nature, the threat of fire, and the test of time.

To support you better, STI has offices and representation throughout the United States, Canada, Europe, The Middle East, India, China, Southeast Asia, and Latin America. We partner with over forty independent rep agencies and work with over 1,000 distribution outlets to provide extensive international coverage.
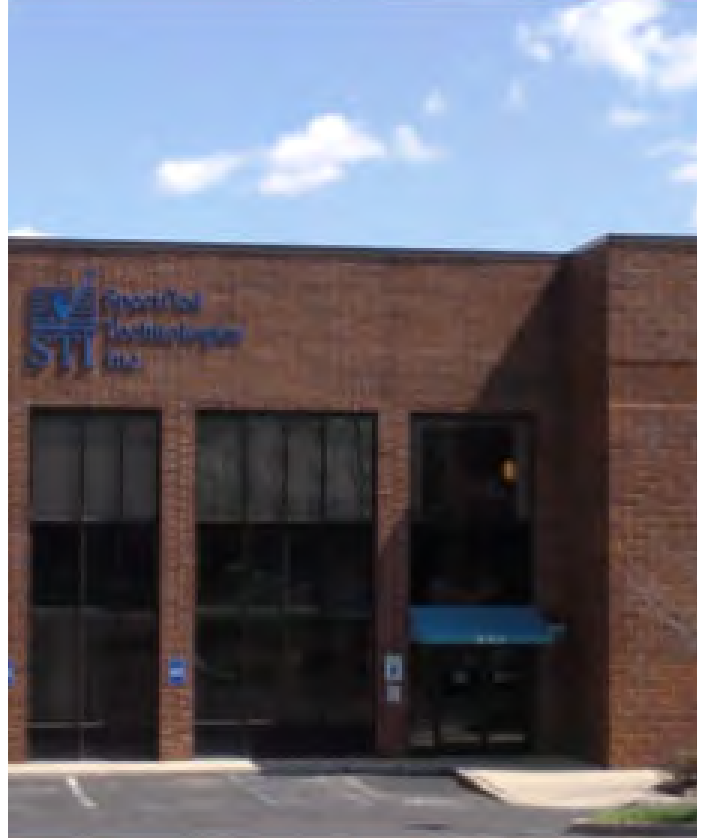
Founded over 30 years ago

A leader in innovation since 1991

Examples of STI innovations:

1991

First water-based intumescent sealants instead of solvent-based
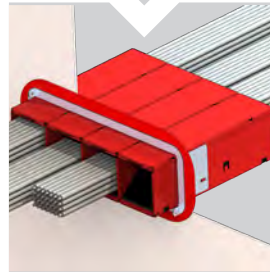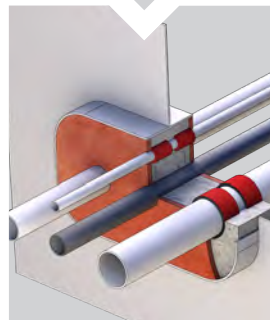
First water-based two-stage intumescent material

1993

First flexible intumescent wrap strip

2002

EZ-Path : The first and only self-sealing cable transit.

2012

The division STI MARINE Firestop is created. Innovative systems for pipe and electrical transits are introduced.

2018

Transit Tracker

Some project references

Cruise ships

Copyright Hannes van Rijn

Copyright Claudio Ritossa

Owner of the ship	Shipyard	Country of the shipyard
Princess Cruises	Victoria	Canada
Carnival	Shanghai Waigaoqiao	China
Costa Cruises	Meyer Turku	Finland
Aida Cruises	Meyer Papenburg	Germany
Disney Cruises	Meyer Werft	Germany
MSC Cruises	Fincantieri	Italy
Virgin Cruises	Fincantieri	Italy
Silversea	Fincantieri	Italy
Phoenix Cruises	Damen Shiprepair	Netherlands
Lindblad NatGeo Expeditions	Ulstein	Norway
Hurtigruten	Fosen Yards	Norway
Lindblad Expeditions	Ulstein	Norway
Hapag Lloyd TUI	Vard	Norway
Mystic Cruises	West-Sea Yard	Portugal
Genting Cruises	Sembawang	Singapore
Holland America Line	Sembawang	Singapore
Norwegian Cruise Lines	Sembawang	Singapore
TUI Marella Discovery	Cadiz	Spain
Thomson TUI Cruises	Port Barcelona	Spain
TUI Thomson	Barcelona	UK
Carnival Cruise	Operation	USA
Celebrity Cruise	Grand Bahamas	USA
Holland America Line	Grand Bahamas	USA
Norwegian Cruise Lines	Grand Bahamas	USA
Royal Caribbean	Grand Bahamas	USA

Ferries

Owner of the ship	Shipyard	Country of the shipyard
Stena RoRo	AVIC Weihai	China
Croatian Coastal	Aterro	Croatia
Estonian Ferry Authority	Baltic Workboats	Estonia
Viking Grace	Operation	Finland
Tallink Ferries	Meyer Turku	Finland
Hurtigruten	Fosen Yards	Norway
Color Line	Ulstein	Norway

Navy

Owner of the ship	Country of the shipyard
Belgium Ministry of Defence	Belgium
Chinese Coast Guard	China
DCNS (Direction des Constructions Navales)	France
USNS (United States Naval Ship)	USA
USCGC (United States Coast Guard Cutter)	USA

Research and survey

Project name
Pressure Drop
Kaimikaua O Kanaloa   University of Hawaii

Offshore

Owner	Type
CNOOC	Platform (Oil & Gas)
Idemitsu Kosan	Platform (CPP)
HHI	Offshore LQ (Living Quarters)
BP	Offshore LQ (Living Quarters)
British Gas	Offshore LQ (Living Quarters)
Chevron	Offshore LQ (Living Quarters)
HESS	Offshore LQ (Living Quarters)
Noble Energy	Offshore LQ (Living Quarters)
Shell	Offshore LQ (Living Quarters)
South Atlantic Holding	Offshore LQ (Living Quarters)
OOS	Semi-submersible
Diamond Offshore	Semi-submersible
Diamond Offshore	Drill Ship
Montco	Liftboat
Beemore	PSV
Fugro	PSV
GulfMark	PSV
Harvey Marine	PSV
Hornbeck Offshore Supply	PSV
Oceaneering	PSV
Seacor	PSV

Cargo ships/ Bulk carrier ships/ Tankers/ FPSO (Floating Production Storage and Offloading)

Owner of the ship	Type
Brazilian Petro	FPSO
Modec	FPSO
TMS Group	Tanker
Grace	Oil Tanker
Horizon Kodiac	Container ship
Nishhin	Bulk carrier
SK Shipping Co	ORE carrier

Yachts

Project name
Project Blue
Cheetah Moon
Quantum Blue
Super Yacht Voyager

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Pipe Penetration Solutions
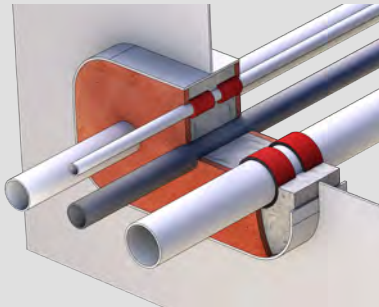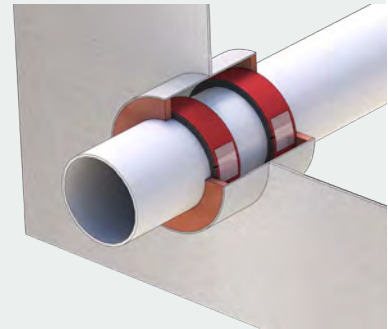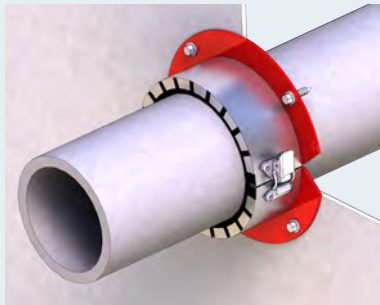
Multiple Penetrations

Plastic Pipes

Metallic Pipes

FRP/GRE/GRP Pipes

Cables

Watertight
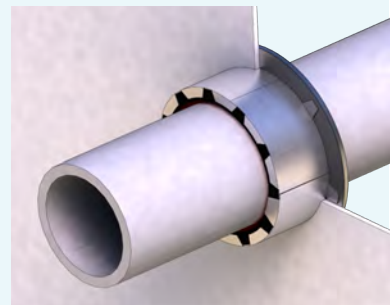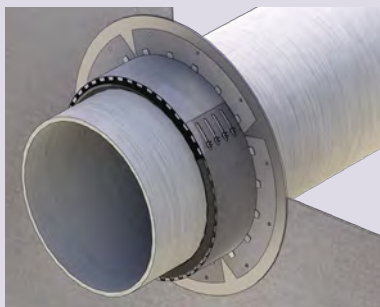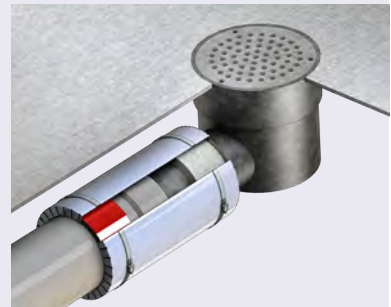
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Electrical Penetration Solutions
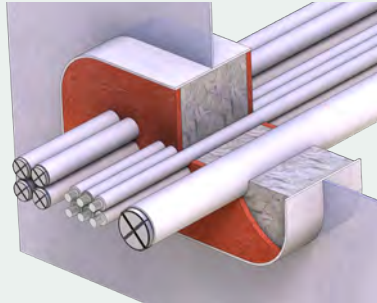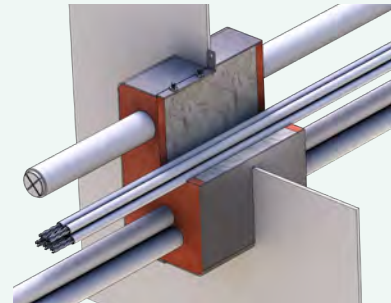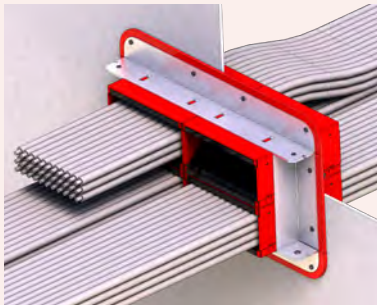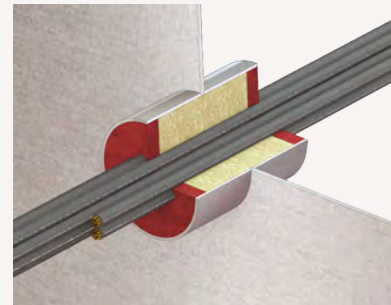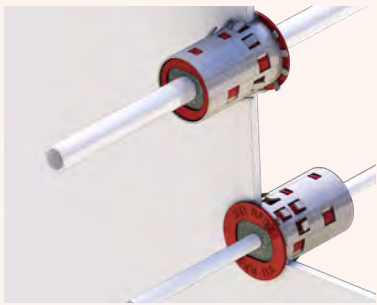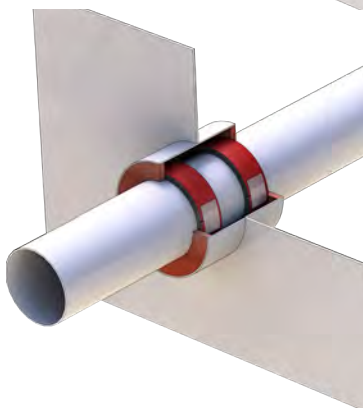
MPACT®
Marine Pipe and Cable Transit
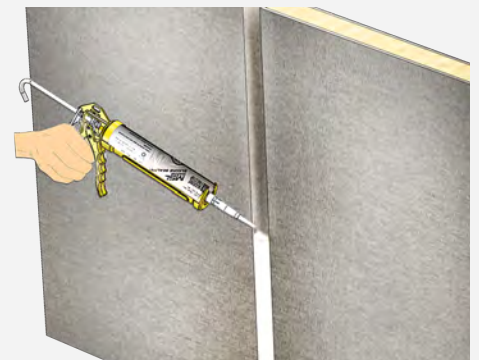
PIPE SYSTEMS
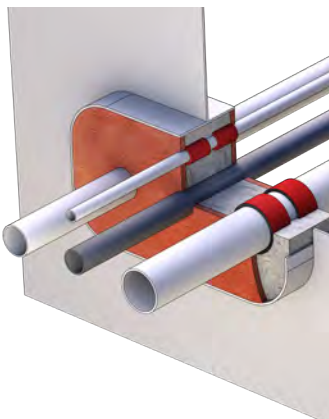
12 **MPACT®** - Pipe Transit

For metallic and plastic pipes
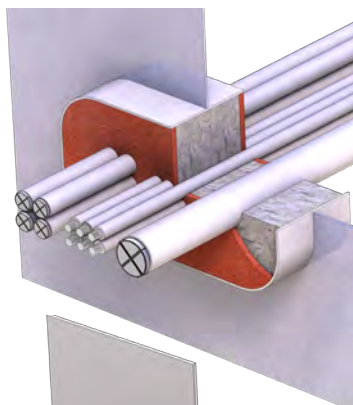An economical and flexible solution for large opening with multiple pipe transits

Plastic Pipes   Metallic Pipes

18 **MPACT®** - Tuck-in

For plastic pipes
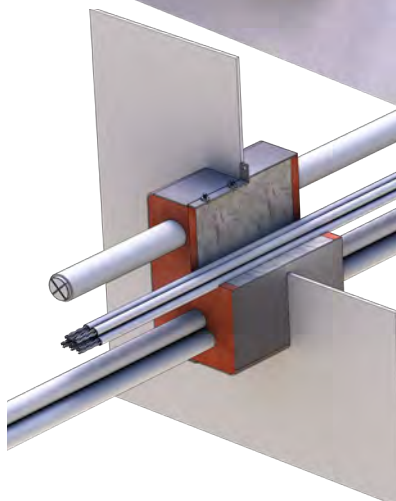A solution for plastic pipes which does not require any packing material

Plastic Pipes

CABLE SYSTEMS

22 **MPACT®** - Cable Transit

For cables
An economical and flexible solution for large opening with multiple cable transits

Cables

24 **MPACT®** - MMR/MMS Sleeves

For cables
A manufactured sleeve for new or existing cables

Cables

Ordering information

MFS Marine Firestop Sealant

	MFS100	281 mL		12	0.50 kg

MFB Marine Filler Blanket

	MFB530	12.7cm × 914cm	1	4.94 kg
	MFB730	17.8cm × 914cm	1	6.62 kg

MWS Marine Wrap Strip

	MWS250	6mm thick × 50mm wide × 365cm long	1	1.53kg

MMR Marine Retrofit Sleeves

	MMR600	MMR Marine Retrofit Sleeve - #6 Frame	6	1.82 kg
	MMR601K	MMR Marine Retrofit Sleeve Kit - #6 Frame with MFS Sealant + MFB Blanket	1	4.99 kg
MMR Sleeve to be used in conjunction with existing frame	MMR800	MMR Marine Retrofit Sleeve - #8 Frame	6	2.1kg
	MMR801K	MMR Marine Retrofit Sleeve Kit - #8 Frame with MFS Sealant + MFB Blanket	1	5.48 kg

MMS Marine Sleeves

|				
	MMS601K	MMS Marine Sleeve Kit - #6 Frame with MFS Sealant + MFB Blanket	1	5.31 kg
	MMS801K	MMS Marine Sleeve Kit - #8 Frame with MF Sealant + MFB Blanket	1	5.31 kg

MPACT®
Pipe Transit |

The solution for sealing fire-rated pipe and cable penetrations. It combines the **MFB Marine Filler Blanket**, used as packing material and the **MFS Marine Firestop Sealant** to provide a watertight and fire resistant solution. The plastic pipes are protected with the **MWS Marine Wrap Strip**.
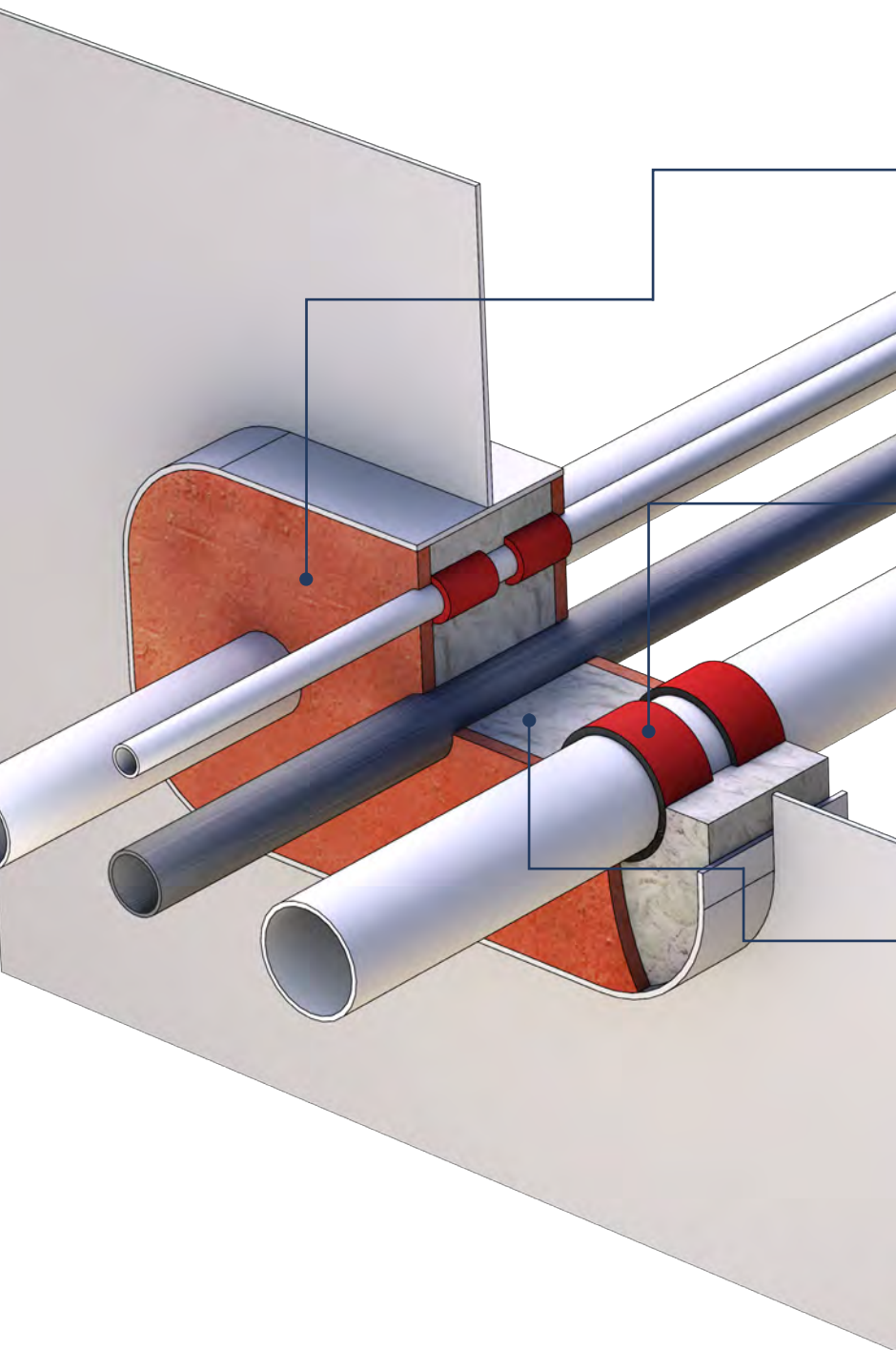
MFS Marine Firestop Sealant
MFS100

Advanced hybrid polymer sealant technology.
Excellent water resistance.

MWS Marine Wrap Strip
MWS250

Very fast intumescent expansion.
Economical system to firestop plastic pipes.

MFB Marine Filler Blanket
MFB530, MFB730

Easy and flexible installation around penetrants.
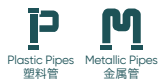Better adhesion for sealant than traditional packing material.

Features & Benefits

- Easy and quick to install
- Safe
- Can be modified for new installation
- Gas and watertight
- Flexible and vibration-resistant seal
- Non-corrosive

Fire Resistant · Water Resistant · Smoke Barrier · Re-Enterable

Noise Reduction · Lightweight · Paintable · Watertight

Low VOC · Intumescent · Flexible · Autobonding

Applications

Tested to 2010 IMO FTP, Annex 1, Part 3
- For a wide variety of metallic and plastic pipes
- For fire-rated steel and aluminum bulkheads and decks
- Class A-0 to A-60
- Class H-0 to H-120 (Bulkheads)
- Class H-0 to H-60 (Decks)
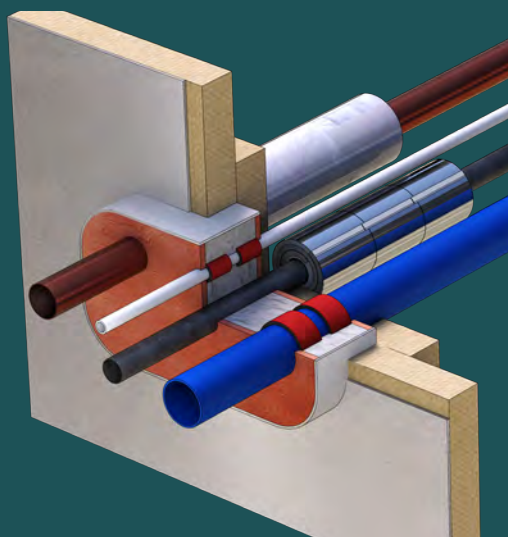* Consult Technical Services for more information

Plastic Pipes 塑料管 · Metallic Pipes 金属管

Metallic pipe — MFB Marine Filler Blanket — MFS Marine Firestop Sealant — A-60 steel deck — Steel sleeve — A-60 steel bulkhead
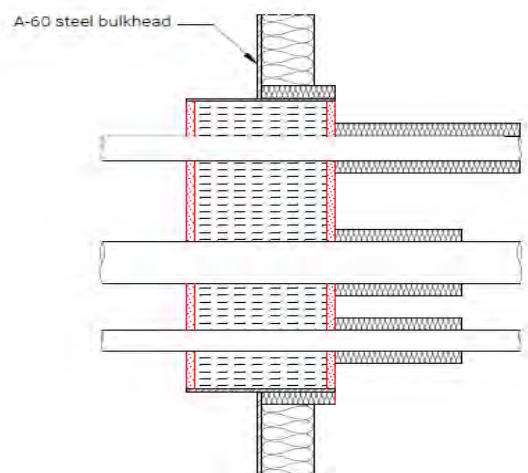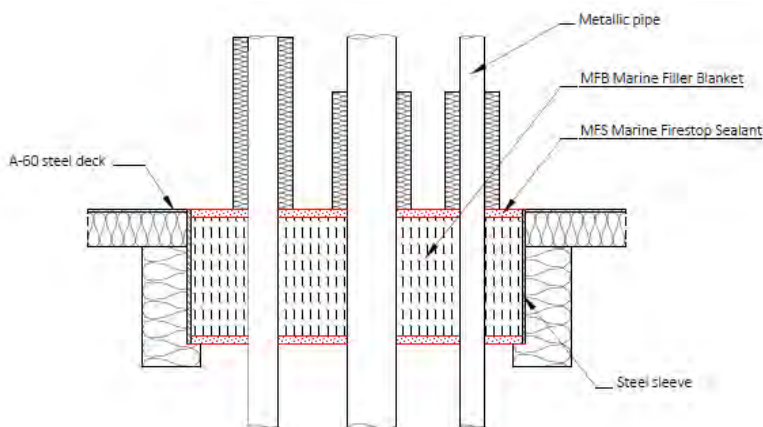
Approvals

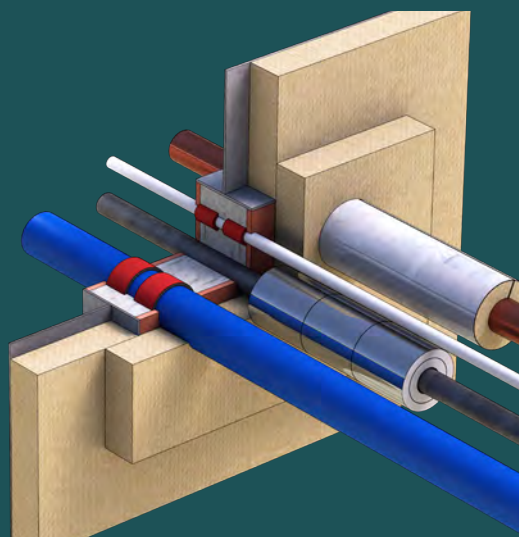# A-60 steel **bulkhead** |
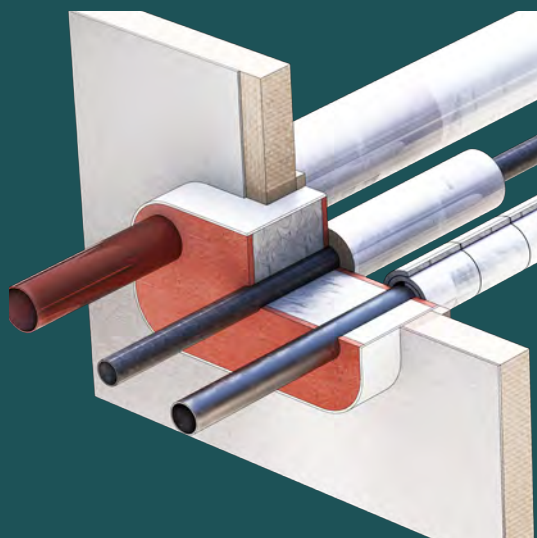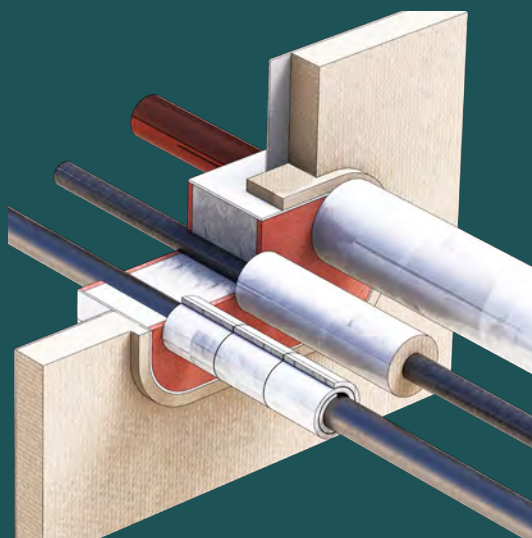
Front view

Back view
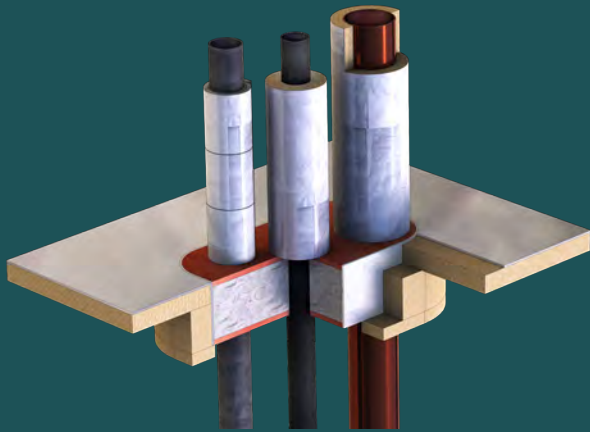
Only perimeter of the sleeve is insulated
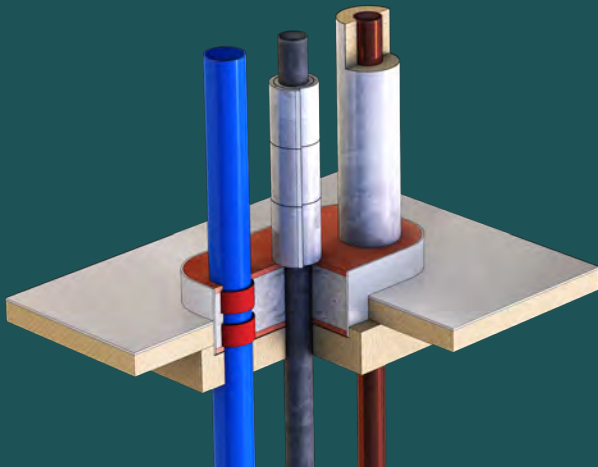

Front view

Back view

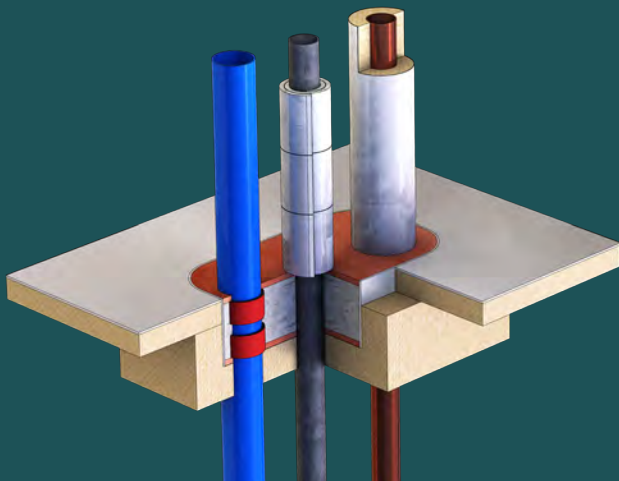The system with the **largest** application range

A-60 steel **deck |**

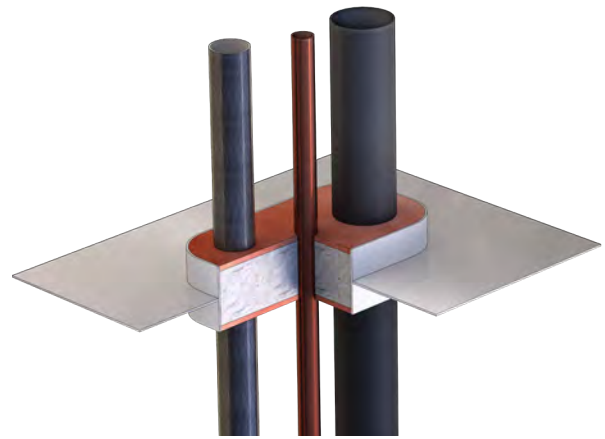**Reduced** insulation, **Improved** system

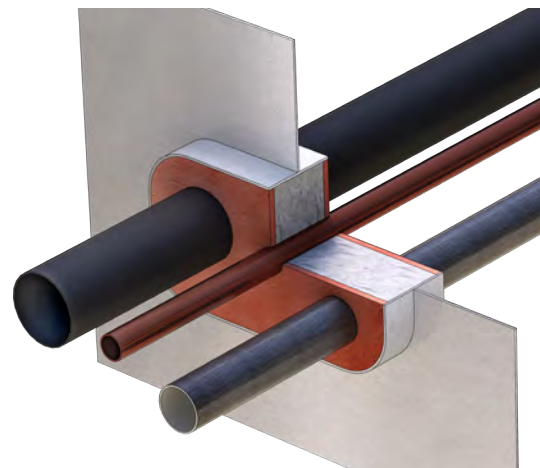The Sleeve is **centered** with the deck

The sleeve is **completely offset** on the bottom side of the deck

A-0 steel **deck |**

Deck and sleeve insulation not required
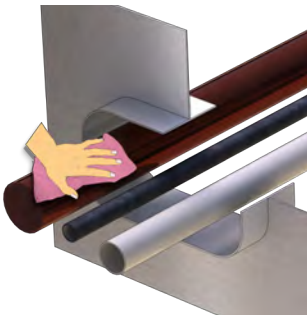
A-0 steel **bulkhead |**

Bulkhead and sleeve insulation not required

Installation instructions

Required tools

- Safety glasses
- Protective gloves
- Latex gloves
- Knife (cutter)
- Caulk Gun
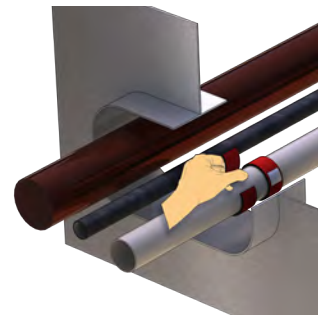- Tape measurer
- Soap
- Cloth

1

All surfaces shall be clean, dry, frost-free, and free of bond-breaking contaminants and loose material.
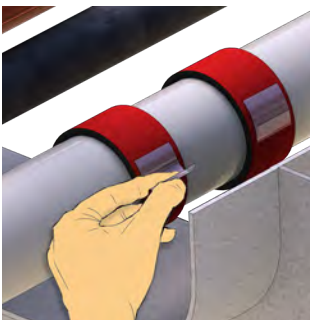
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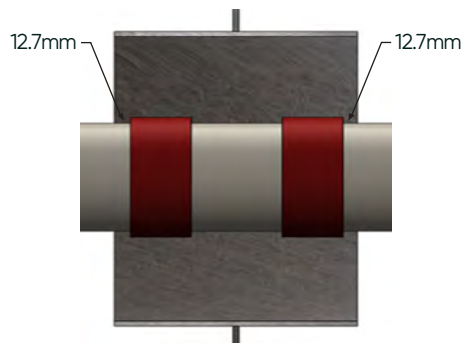For plasitc pipe, one layer of MWS Wrap Strip cut to the right length.

3

One layer of MWS Wrap Strip to be installed around plastic pipes on both sides.

4

MWS Wrap Strip is kept in place using tape.
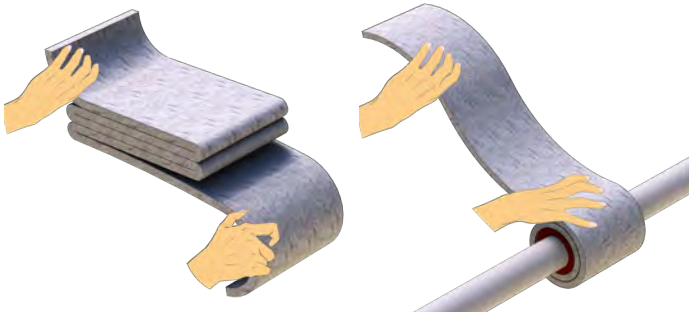
5

12.7mm   12.7mm

MWS Wrap Strip to be recessed 12.7 mm from both ends of sleeve to accomodate MFS Sealant.
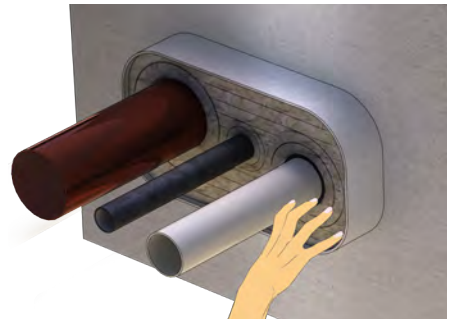
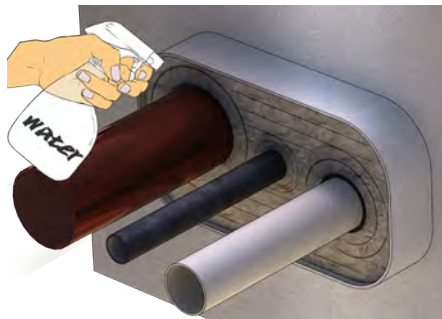| 6 |
|---|

MFB Filler Blanket to be cut.

7

The MFB Filler Blanket may be wrapped around the plastic pipes (when present) to hold the MWS Wrap Strip.
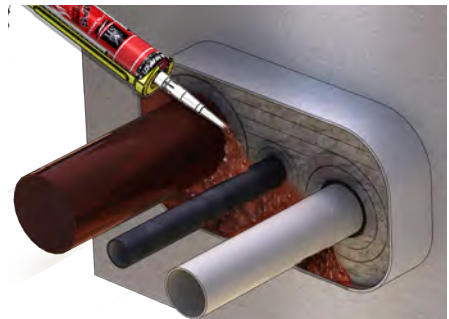

8

The MFB Filler Blanket to be installed within the sleeve to fill all voids around pipes. Blanket shall be recessed 12.7 mm from ends of the sleeve to accommodate MFS Sealant.


9

To improve the adhesion and accelerate the curing process of the MFS Sealant, the MFB Filler Blanket may be sprayed with water before the application of the MFS sealant.


10

Pipes and inner surface of the sleeve shall be dried before the application of the sealant. MFS Sealant to be applied over the MFB Filler Blanket and the MWS Wrap Strip (if present) on both sides to a minimum 12.7 mm thickness, flush with both ends of the sleeve.
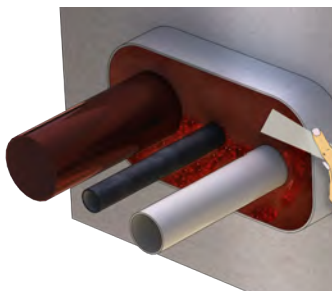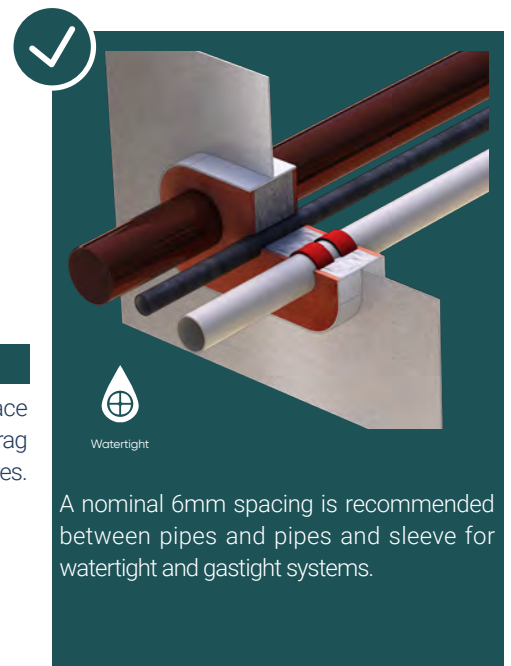

11A

MFS Sealant may be tooled and the surface may be smoothed over using a trowel, tooling knife or spatula tool.
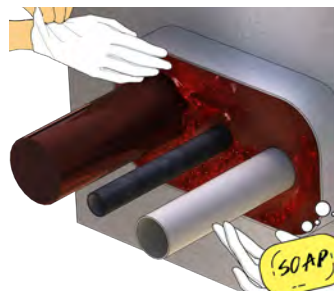
11B

MFS Sealant may be tooled and the surface may be smoothed over using wet low lint rag or by hand with a soapy water and latex gloves.


Watertight

A nominal 6mm spacing is recommended between pipes and pipes and sleeve for watertight and gastight systems.

For additional information regarding the insulation requirements, please refer to the Type Approval in use.

MPACT®
Tuck-in |

When used in association with the **MFS Marine Firestop Sealant**, the **MWS Marine Wrap Strip** provides an economical solution for plastic pipe transits. The **MWS Marine Wrap Strip** expands when exposed to heat, completely closing the opening and melted pipe to create a barrier and restrict flames and hot gases.
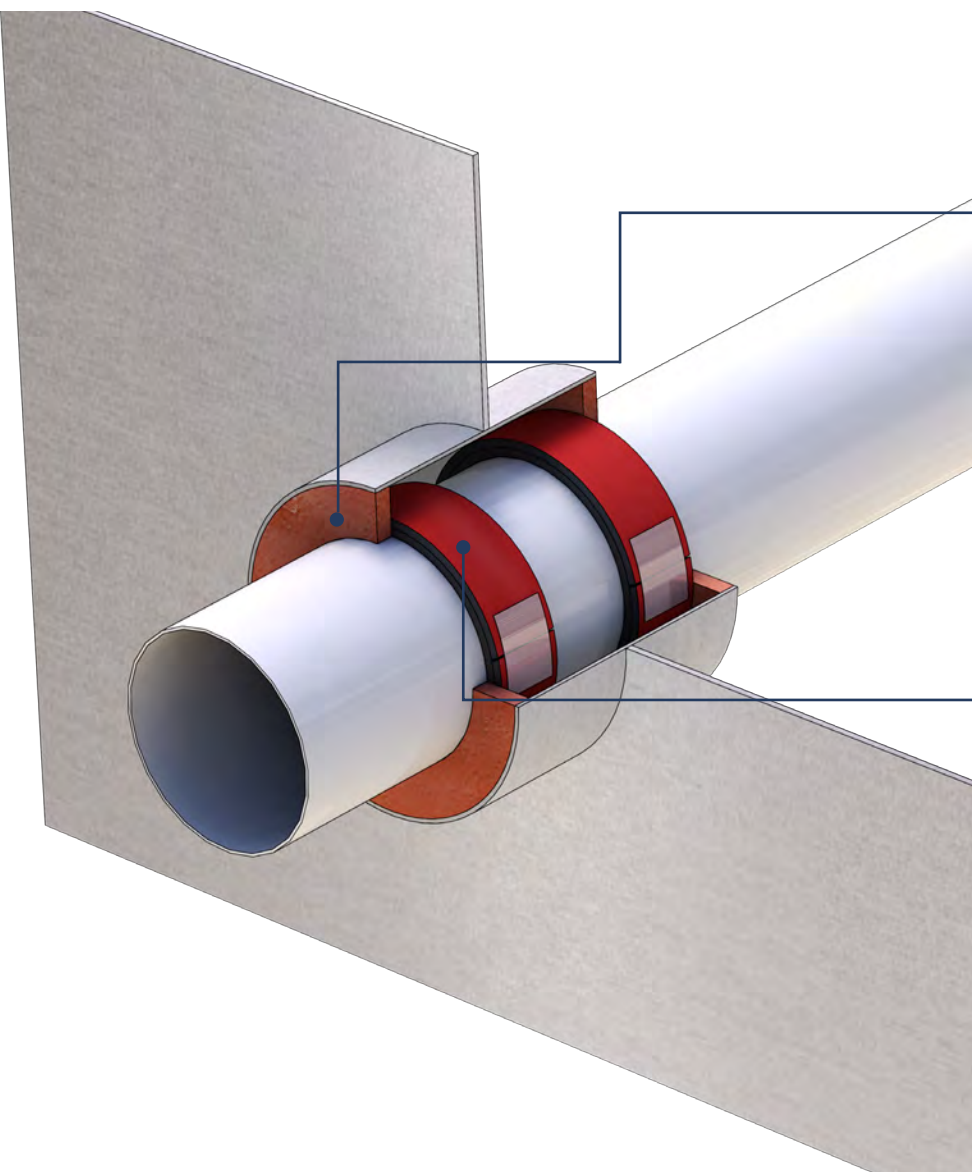
MFS Marine Firestop Sealant
MFS100

Advanced hybrid polymer sealant technology.
Excellent water resistance.

MWS Marine Wrap Strip
MWS250

Very fast intumescent expansion.
Economical system to firestop plastic pipes.

*For CPVC pipe application, the MSL Marine Silicone Sealant shall be used in lieu of the MFS Marine Firestop Marine Sealant.

Features & Benefits

- Easy and quick to install
- No packing material required
- Gas and Watertight
- Rapid expansion of wrap strip
- Water resistant seal
- Flexible to handle vibrations
- Non-corrosive

Fire Resistant | Water Resistant | Smoke Barrier | Noise Reduction

Lightweight | Paintable | Watertight | Low VOC

Intumescent | Flexible | Autobonding

Applications

Tested to 2010 IMO FTP, Annex 1, Part 3
- For plastic pipes
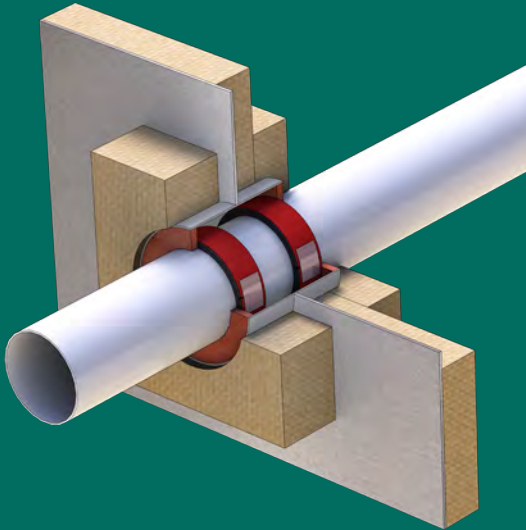- For fire-rated steel and bulkheads and decks
- Class A-0 to A-60

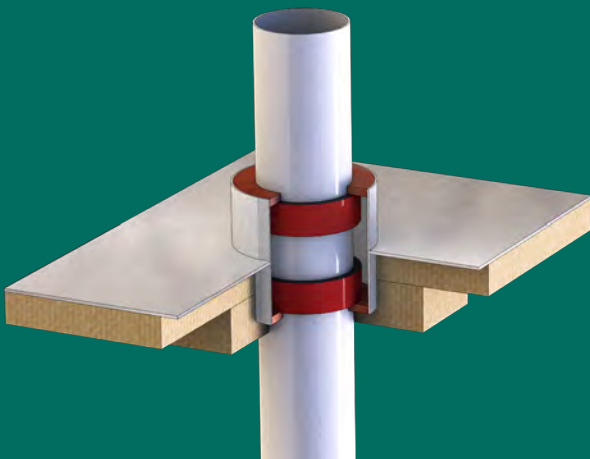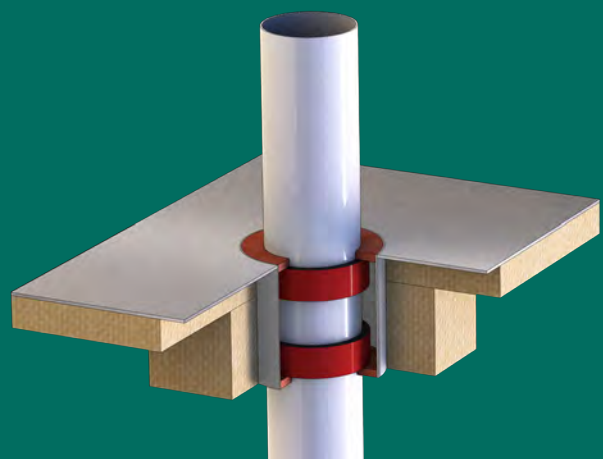* Consult Technical Services for more information

Plastic Pipes
塑料管
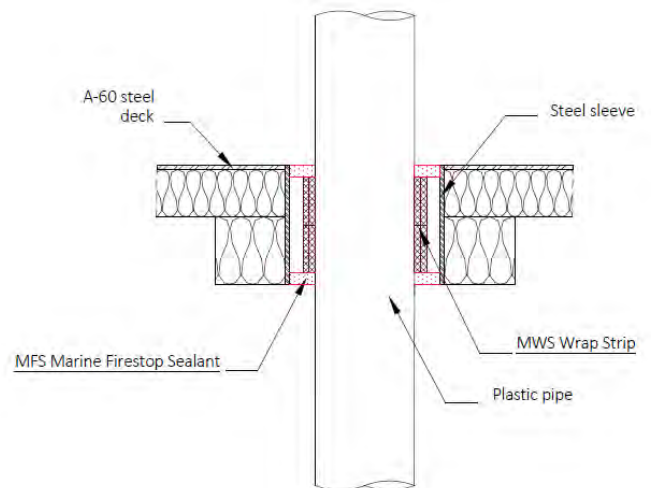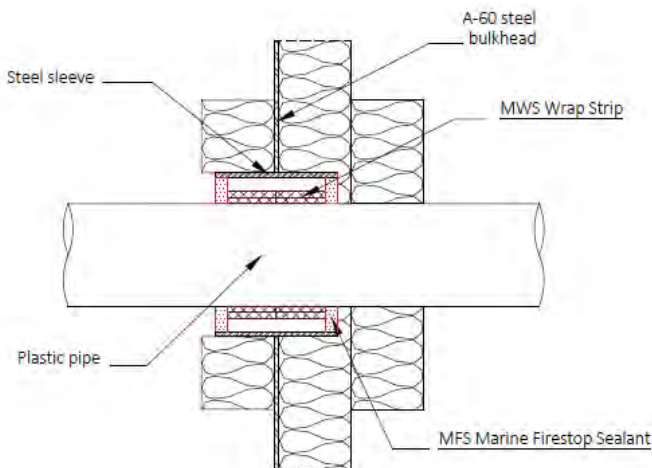
Approvals

A-60 steel **bulkhead** |

A-60 steel **deck** |

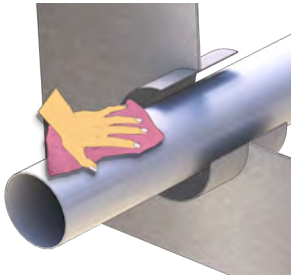The Sleeve is **centered** with the deck

The sleeve is **completely offset** on the bottom side of the deck

Installation instructions

Required tools

- Safety glasses
- Protective gloves
- Latex gloves
- Knife (cutter)
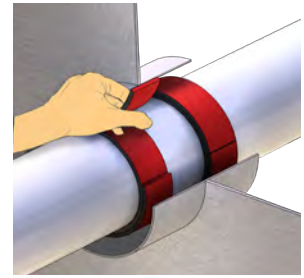- Caulk Gun
- Tape measurer
- Soap
- Cloth

1

All surfaces shall be clean, dry, frost-free, and free of bond-breaking contaminants and loose material.
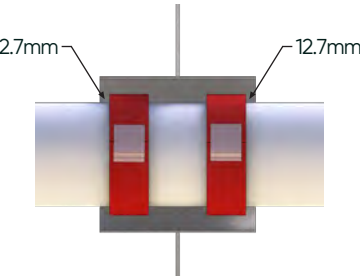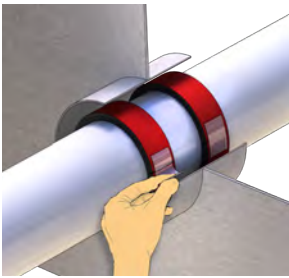
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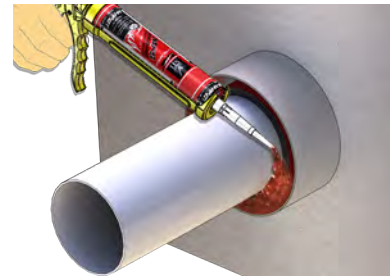One layer of MWS Wrap Strip cut to the right length.

3

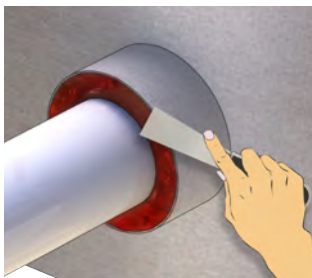Two layers of MWS Wrap Strip to be installed around plastic pipes on both sides.

4

The MWS Wrap strip is kept in place using tape. The wrap strip to be recessed 12.7 mm from both ends of sleeve to accommodate MFS Sealant.

12.7mm   12.7mm

5

MFS Sealant to be applied over the MWS Wrap Strip on both sides to a minimum 12.7 mm thickness, flush with both ends of the sleeve.
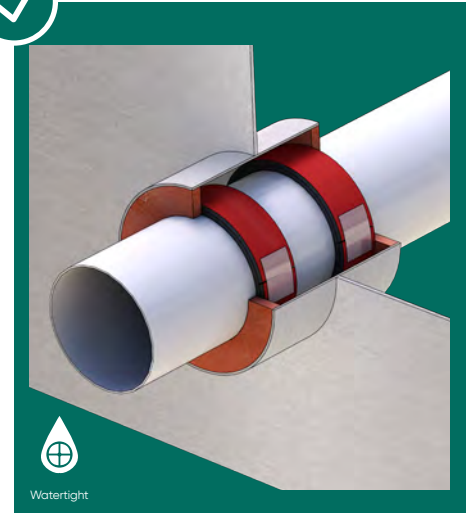
6A

MFS Sealant may be tooled and the surface may be smoothed over using a trowel, tooling knife or spatula tool.

6B

MFS Sealant may be tooled and the surface may be smoothed over using wet low lint rag or by hand with a soapy water and latex gloves.

Watertight

For additional information regarding the insulation requirements, please refer to the Type Approval in use.

MPACT®
Cable Transit

MPACT is the fastest solution for sealing fire-rated cable transits in watertight and non-watertight bulkhead and deck divisions. It combines the **MFB Marine Filler Blanket** used as packing material and the **MFS Marine Firestop Sealant** to provide a watertight and fire resistant solution.
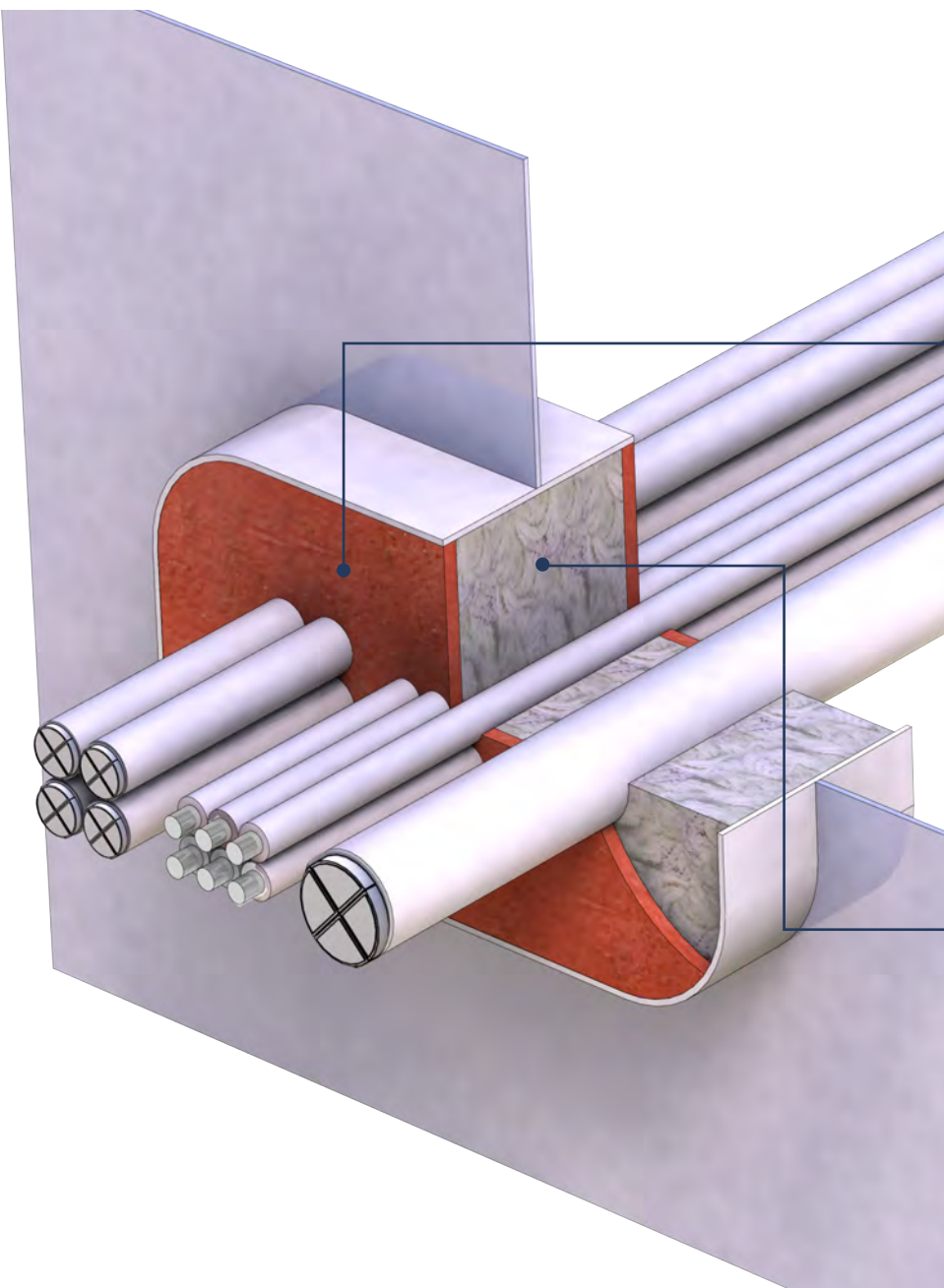
MFS Marine Firestop Sealant
MFS100

Advanced hybrid polymer sealant technology.
Excellent water resistance.

MFB Marine Filler Blanket
MFB530, MFB730

Easy and flexible installation around penetrants.
Better adhesion for sealant than traditional packing material.

Features & Benefits

- Easy and quick to install
- No packing material required
- Simple to clean
- Gas and Watertight
- Rapid expansion of wrap strip
- Water resistant seal
- Flexible to handle vibrations
- Non-corrosive
- Non-conductive
- Halogen free

Fire Resistant Water Resistant Smoke Barrier Re-Enterable

Noise Reduction Lightweight Paintable Watertight

Low VOC Intumescent Flexible Autobonding

Applications

Tested to 2010 IMO FTP, Annex 1, Part 3
- For all types of cables
- For fire-rated steel and aluminum bulkheads and decks
- Class A-0 to A-60
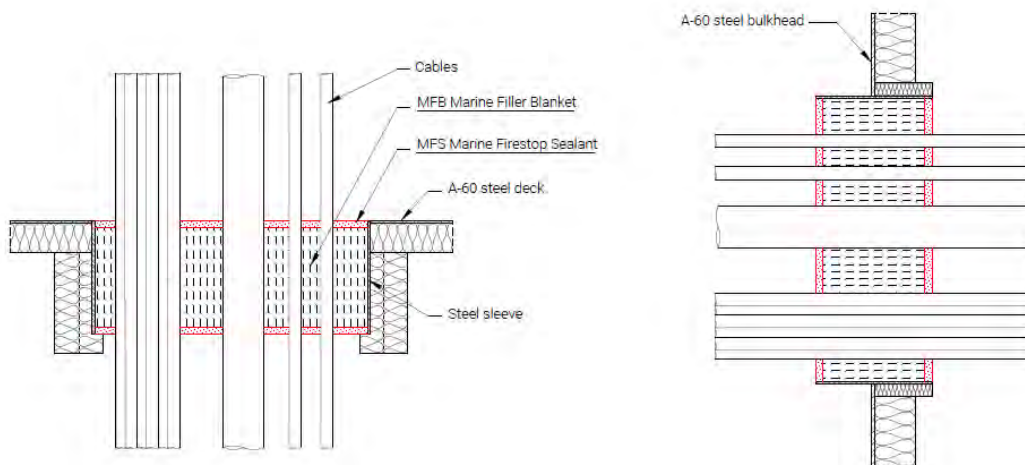- Class H-0 to H-120 (Bulkheads)
- Class H-0 to H-60 (Decks)
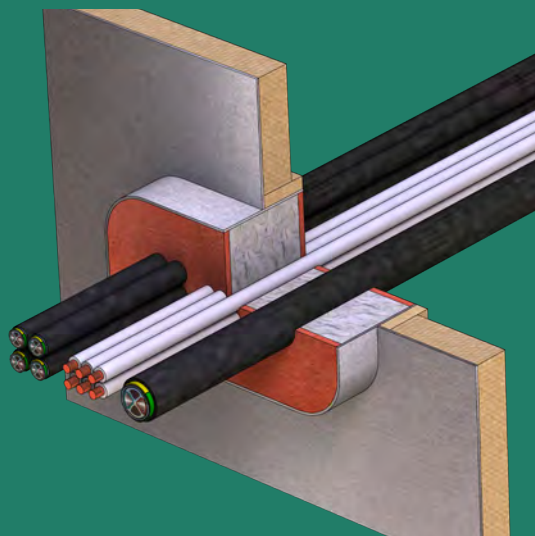* Consult Technical Services for more information

Blank Opening Cables

Cables
MFB Marine Filler Blanket
MFS Marine Firestop Sealant
A-60 steel deck.
Steel sleeve

A-60 steel bulkhead

Approvals

Bulkhead |

A-60 steel bulkhead

A-0 steel bulkhead
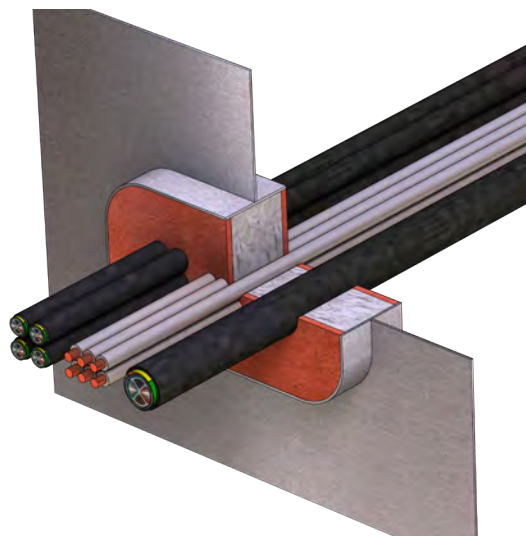
Bulkhead and sleeve insulation not required for A-0

Deck |

A-60 steel deck
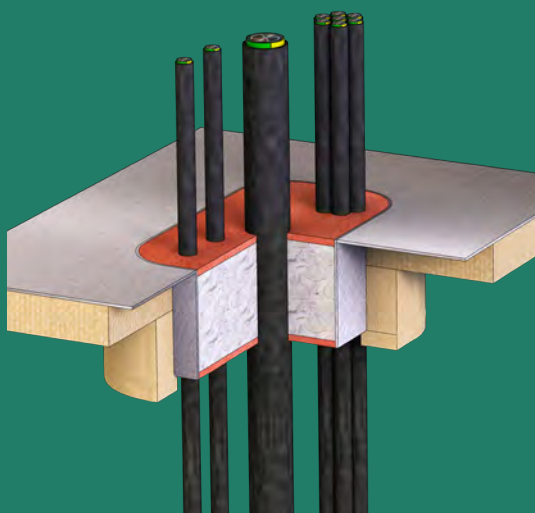
A-0 steel deck

The sleeve is **completely offset** on the bottom side of the deck
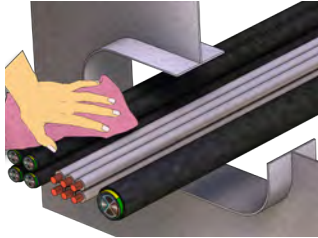
The sleeve is **centered** with the deck

Installation instructions

Required tools

- Safety glasses
- Protective gloves
- Latex gloves
- Knife (cutter)
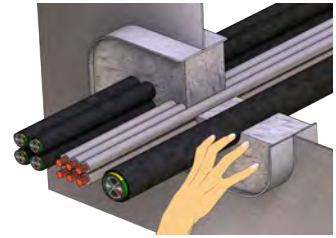- Caulk Gun
- Tape measurer
- Soap
- Cloth

1

All surfaces shall be clean, dry, frost-free, and free of bond-breaking contaminants and loose material.
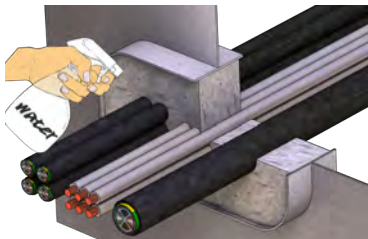

2

MFB Filler Blanket to be cut.

3

MFB Filler Blanket to be installed within the sleeve to fill all voids around pipes. Blanket shall be recessed 12.7 mm from ends of the sleeve to accommodate MFS Sealant.

4

To improve the adhesion and accelerate the drying process of the MFS Sealant, the MFB Filler Blanket may be sprayed with water before the application of the MFS sealant.

5
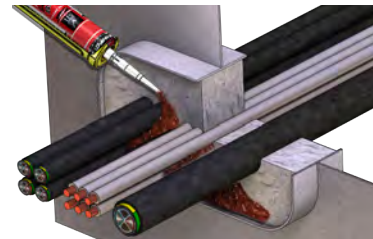
MFS Sealant to be applied over the MFB Filler Blanket and the MWS Wrap Strip (if present) on both sides to a minimum 12.7 mm thickness, flush with both ends of the sleeve.

6A

The MFS Sealant may be tooled and the surface may be smoothed over using a trowel, tooling knife or spatula tool.

6B

The MFS Sealant may be tooled and the surface may be smoothed over using wet low lint rag or by hand with a soapy water and latex gloves.


Watertight

A nominal 6mm spacing is recommended between cables and cables and sleeve for watertight and gastight systems.

For additional information regarding the insulation requirements, please refer to the Type Approval in use.
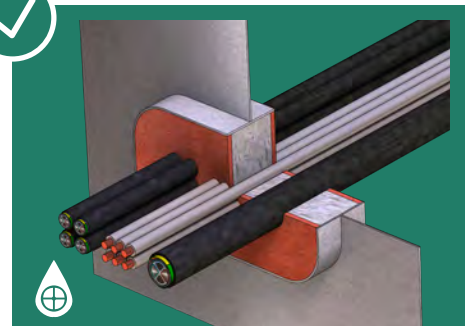
MPACT®
MMS/MMR Sleeves |

The **MMS sleeve** is a two-piece steel shell which can be used for new or exisitng cables. The sleeve is mechannicaly attached with screws or welds. The **MMR Retrofit sleeve** is used when an existing transit frame had been previously installed. The **MMR/MMS sleeves** are used in association with the packing material **MFB Marine Filler Blanket** and the **MFS Marine Firestop Sealant** to provide a watertight and fire resistant cable transit system.

MMS Sleeve for new construction
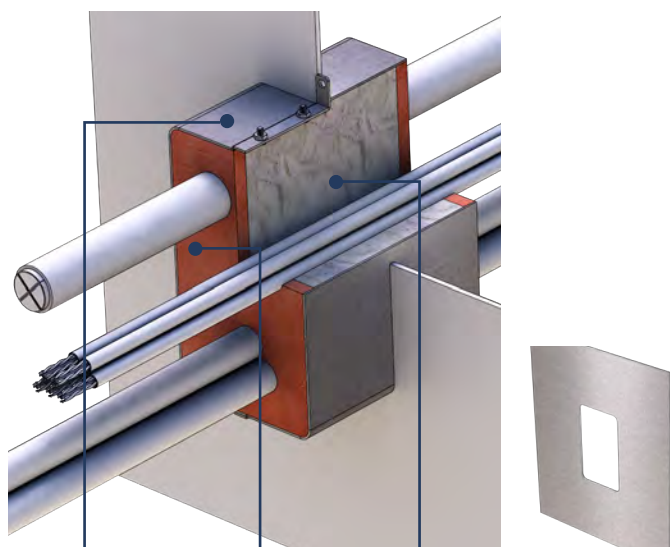
MMR Retrofit Sleeve when sealing blocks had been removed from an existing transit frame

MMS Sleeve
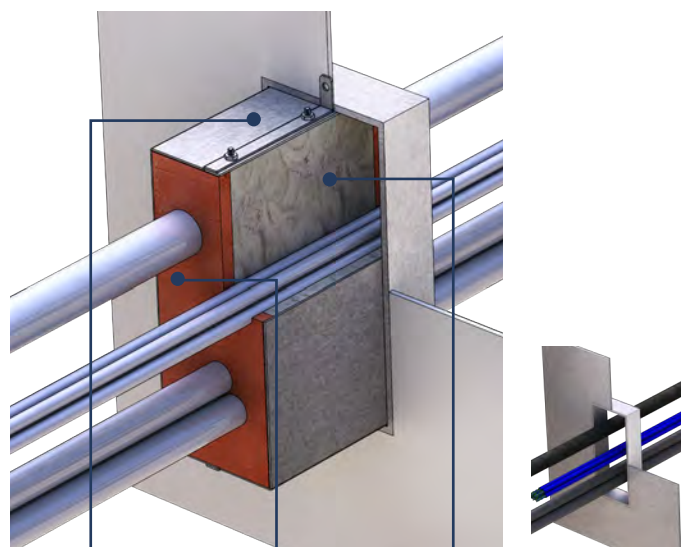
MMR Retrofit Sleeve

MFB Marine Filler Blanket
MFB730

Easy and flexible installation around penetrants.
Better adhesion for sealant than traditional packing material.

MFS Marine Firestop Sealant
MFS100

Advanced hybrid polymer sealant technology.
Better water resistance than traditional silicones.

Features & Benefits

- Easy and quick to install
- Simple to clean
- Two-piece design for exisitng cables
- Forms flexible, water resistant seal
- Halogen free, non-conductive, non-corrosive
- Flexible to handle vibrations
- Gas and Watertight
- Water resistant

Fire Resistant   Water Resistant   Smoke Barrier   Re-Enterable

Noise Reduction   Lightweight   Paintable   Watertight

Low VOC   Intumescent   Flexible   Autobonding

Applications

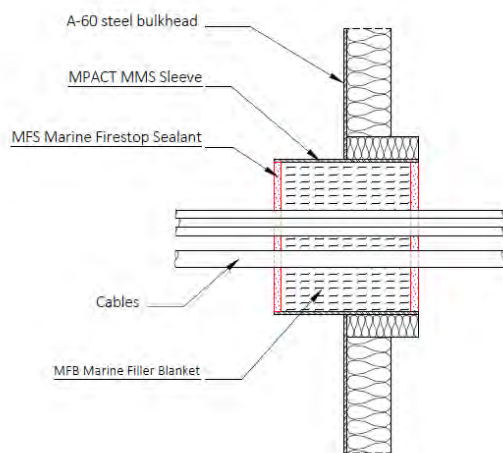**Tested to 2010 IMO FTP, Annex 1, Part 3**
- For all types of cables
- For fire-rated steel bulkheads and decks
- Class A-0 to A-60

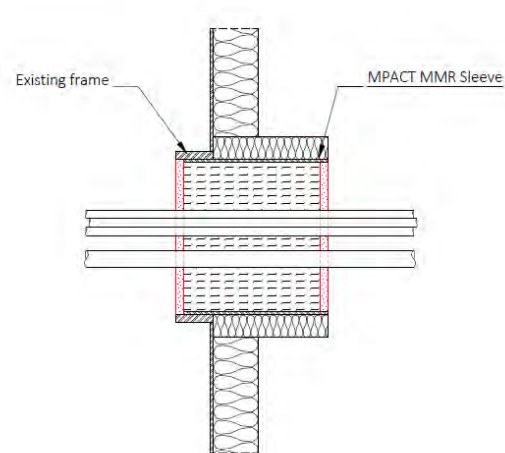* Consult Technical Services for more information

Blank Opening
空开孔

Cables
电缆

A-60 steel bulkhead
MPACT MMS Sleeve
MFS Marine Firestop Sealant
Cables
MFB Marine Filler Blanket

Existing frame
MPACT MMR Sleeve

MMS Sleeve

MMR Retrofit Sleeve

Approvals

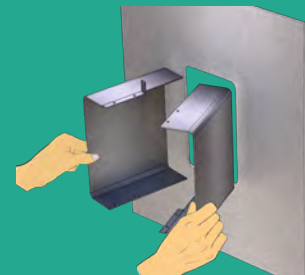# Installation instructions: MMS/MMR Sleeve

Required tools

- Safety glasses
- Protective gloves
- Latex gloves
- Welding machine
- Caulk Gun
- Soap
- Cloth

MMS Sleeve

1 — All surfaces shall be dry, frost-free, and clean of oil, paint loose material, dirt and any bond-breaking contaminants, especially at designated weld zones.

2 — Two parts of the MMS Sleeve to be inserted into the opening.
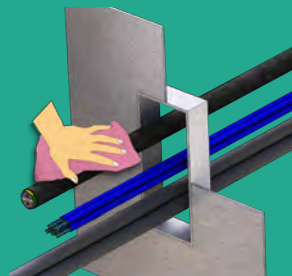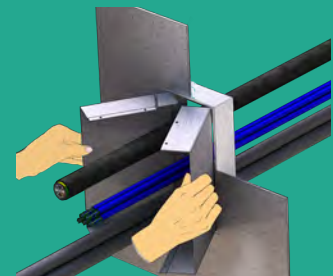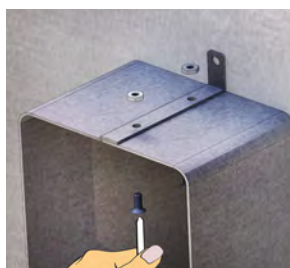
MMR Retrofit Sleeve with existing frame

1 — All surfaces shall be dry, frost-free, and clean of oil, paint loose material, dirt and any bond-breaking contaminants, especially at designated weld zones.
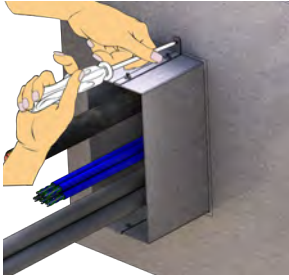
2 — Two parts of the MMR Retrofit Sleeve to be inserted into the existing transit frame.

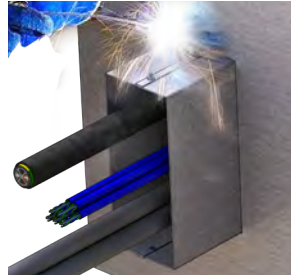### MMS Sleeve/ MMR Retrofit Sleeve with existing frame

3 — Two parts of the sleeve to be fastened together using the provided screws and nuts on top and bottom side.

4A

Two additional screws (not provided) used to attach the sleeve to the steel barrier and top and bottom.
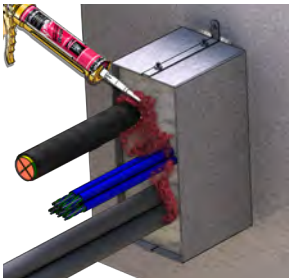

4B

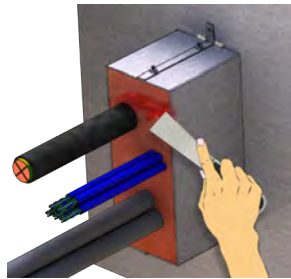The sleeve also can be tack welded directly all around directly.

5

MFB Filler Blanket to be installed within the sleeve to fill all voids around cables. Blanket shall be recessed 12.7 mm from both ends to accommodate MFS Sealant.
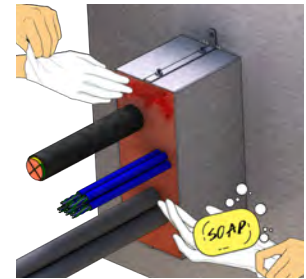

6

MFS Sealant to be applied over the MFB Filler Blanket on both sides to a minimum 12.7 mm thickness, flush with both ends.
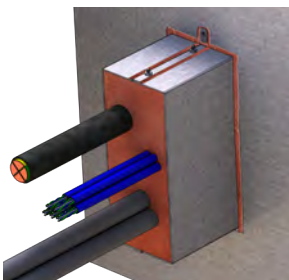

7A

MFS Sealant may be tooled and the surface may be smoothed over using a trowel, tooling knife or spatula tool.

7B

MFS Sealant may be tooled and the surface may be smoothed over using wet low lint rag or by hand with a soapy water and latex gloves.

8

1) The bead of sealant is always necessary for MMS Sleeves, but only for watertight MMR Retrofit Sleeves.
2) The bead of sealant is also to be applied over the seam between sleeve halves, not just between the sleeve/division.

MMS Sleeve
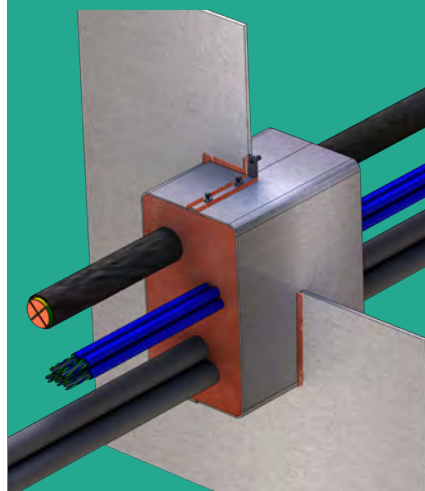
MMR Retrofit Sleeve
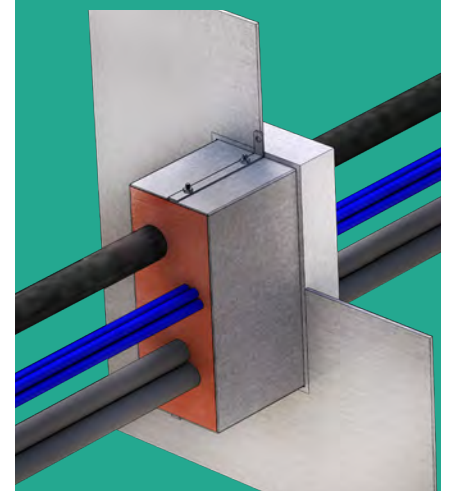
Watertight — A nominal 6mm spacing is recommended between cables and cables and sleeve for watertight and gastight systems.

*For watertight system, please contact STI Engineering Service.

For additional information regarding the insulation requirements, please refer to the Type Approval in use.

MFC and MFC-W
Firestop Collars
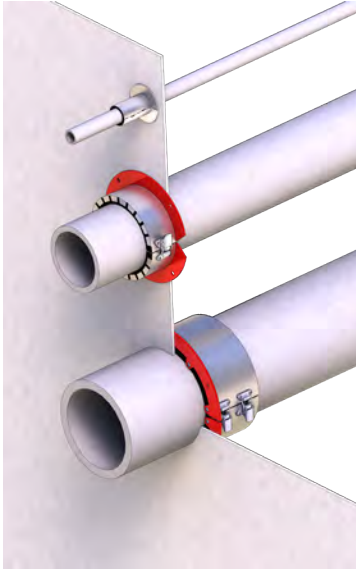
32 **MFC** - Marine Firestop Collars

For plastic pipes and can also be used for metallic pipes in bulkheads and decks.

Plastic Pipes   Metallic Pipes

36 **MFC-W** - Marine Watertight Firestop Collars

For plastic pipes can also be used for metallic pipes for watertight applications in bulkheads and decks.

Plastic Pipes   Metallic Pipes   Watertight

Ordering information

MFC Firestop Collar

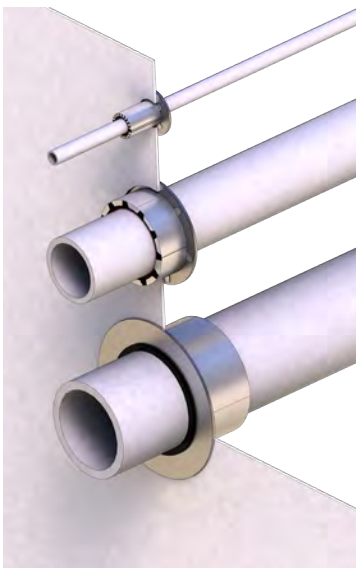| IIII	⌀ mm	📦	kg
MFC16	16mm	12	0.09 kg
MFC20	20mm	12	0.11 kg
MFC25	25mm	12	0.12 kg
MFC32	30mm	6	0.15 kg
MFC40	40mm	6	0.17 kg
MFC50	50mm	6	0.51 kg
MFC60	60mm	6	0.59 kg
MFC63	63mm	6	0.60 kg
MFC75	75mm	6	0.69 kg
MFC90	90mm	6	0.79 kg
MFC110	110mm	6	0.92 kg

IIII	⌀ mm	📦	kg
MFC115	115mm	6	0.94 kg
MFC125	125mm	2	1.49 kg
MFC140	140mm	2	1.64 kg
MFC160	160mm	2	1.84 kg
MFC169	169mm	2	2.15 kg
MFC200	200mm	1	4.20 kg
MFC219	219mm	1	4.31kg
MFC225	225mm	1	4.35 kg
MFC273	273mm	1	5.89kg
MFC324	324mm	1	6.55 kg

MFC-W Watertight Firestop Collar

IIII	⌀ mm	📦	kg
MFC16W	16mm	12	0.22 kg
MFC20W	20mm	12	0.26 kg
MFC25W	25mm	12	0.29 kg
MFC32W	30mm	6	0.34 kg
MFC40W	40mm	6	0.41 kg
MFC50W	50mm	6	0.56kg
MFC60W	60mm	6	0.64 kg
MFC63W	63mm	6	0.70 kg
MFC75W	75mm	6	0.79 kg
MFC90W	90mm	6	0.97 kg
MFC110W	110mm	6	1.12 kg

IIII	⌀ mm	📦	kg
MFC115W	115mm	6	1.15 kg
MFC125W	125mm	2	1.88 kg
MFC140W	140mm	2	4.19 kg
MFC160W	160mm	2	2.99 kg
MFC169W	169mm	2	3.15 kg
MFC200W	200mm	1	4.98 kg
MFC219W	219mm	1	5.48 kg
MFC225W	225mm	1	5.76 kg
MFC273W	273mm	1	6.57 kg
MFC324W	324mm	1	7.16 kg

MFS Marine Firestop Sealant

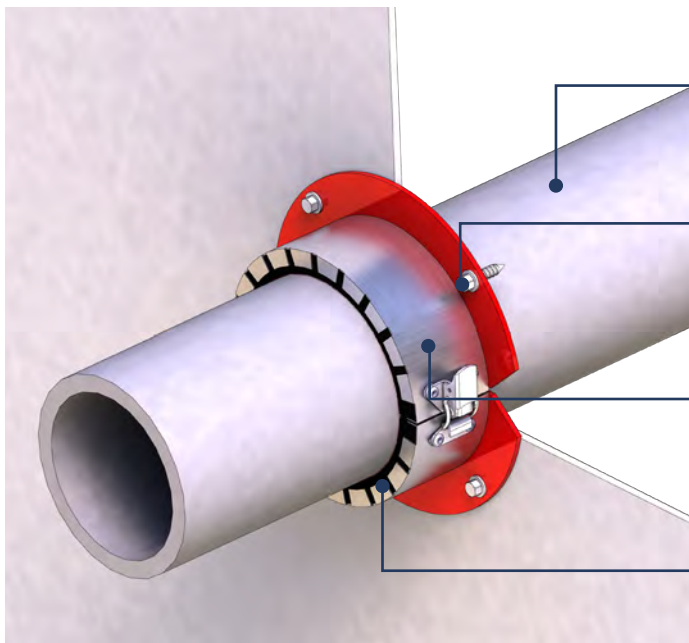| IIII	➤	🎨	📦	kg
MFS100	281 mL	▮	12	0.50 kg

MFC
Marine Firestop Collars |

MFC Marine Firestop Collars are factory-manufactured, intumescent devices designed for use as penetration seals in fire-rated bulkheads and decks to protect plastic and metallic pipes. The **MFC Collars** can be opened and used around existing pipes.

Approved for common plastic and metallic pipes

Mild steel flange for weld attachment or stainless-steel screws

Stainless-steel body

Thick intumescent liner

Features & Benefits

- Easy and quick to install
- Two-piece design for exisitng cables
- Halogen free, non-conductive, non-corrosive
- Flexible to handle vibrations
- Gas and Watertight

Fire Resistant   Water Resistant   Smoke Barrier   Noise Reduction   Watertight

Intumescent   Paintable   No Expiration   Finished Product

*For sparrow pipes, please contact STI Technical Service.Refer to page 39

Easier and faster installation :
Unlike other collars, the MFC Collars are engineered with
thicker intumescent liner which firmly grip the pipe and
don't slide down during the installation in deck conditions.

Accommodate vibrations :
When vibration occurs, the thicker intumescent liner
protects the pipe from potential damage. There are no
sharp metal edges directly in contact with the pipe.

Applications

Tested to 2010 IMO FTP, Annex 1, Part 3
- For all common metallic and plastic pipes
- For fire-rated steel bulkheads and decks
- For fire-rated aluminum bulkheads
- Class A-0 to A-60

* Consult Technical Services for more information

Plastic Pipes
塑料管

Metallic Pipes
金属管
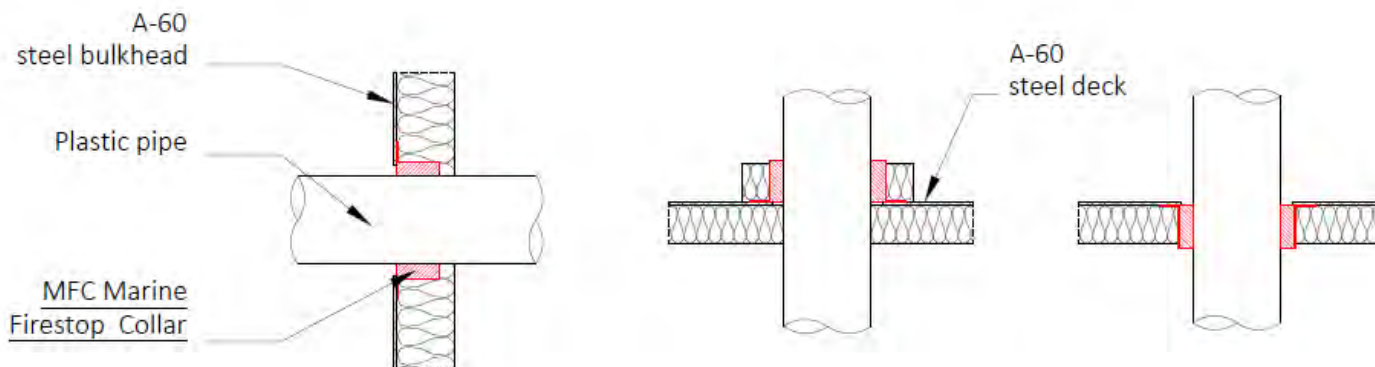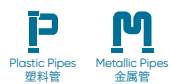
Approvals

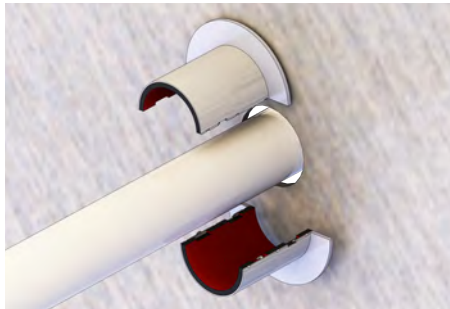# Installation instructions: MFC Marine Firestop Collars

Required tools

- Safety glasses
- Protective gloves
- Latex gloves

Marine Firestop Collars : MFC16 - MFC40

1

All surfaces shall be dry, frost-free, and clean of oil, paint loose material, dirt and any bond-breaking contaminants, especially at designated weld zones.

2

Open the collar and install the two parts around the pipe.

3

Engage the clips to close the collar.

4

Make sure that the parts of the collar are property secured to each other.

5

Mechanically attach the collar by means of welds.
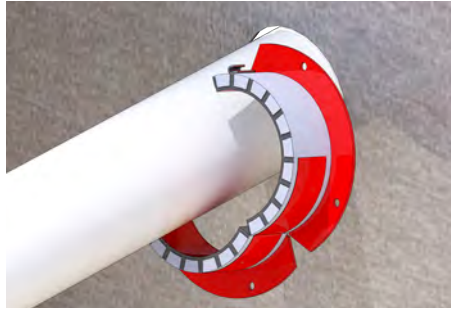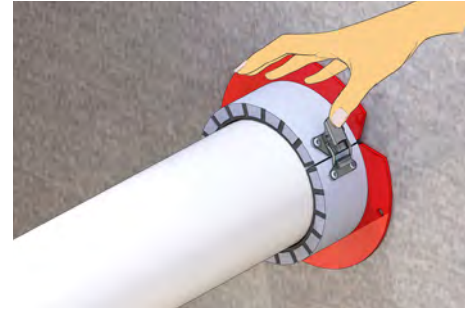

Tack and weld sequences

For more information, please consult Technical Services and the manufacturer specific installation instruction.

MFC Marine Firestop Collars: MFC50 – MFC324
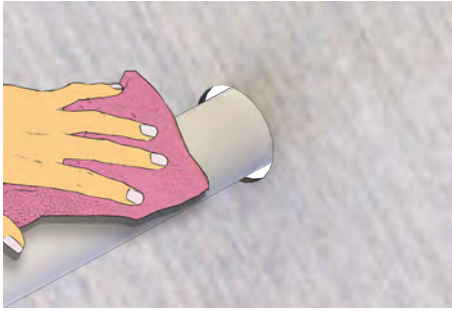
1

All surfaces shall be dry, frost-free, and clean of oil, paint loose material, dirt and any bond-breaking contaminants, especially at designated weld zones.

2

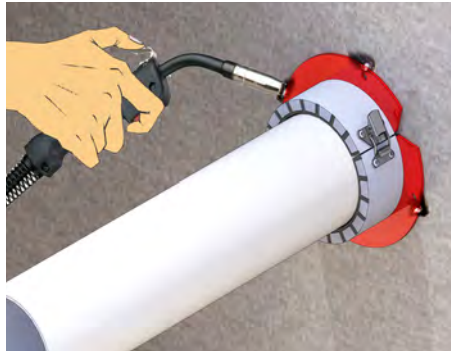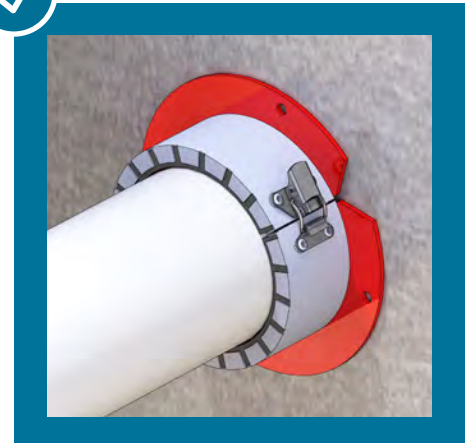Collar to be open and installed around the pipe.

3

Secure the latches.

Method 1

Mechanically attach the collar by means of welds.
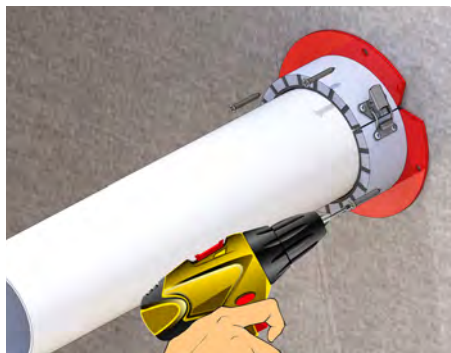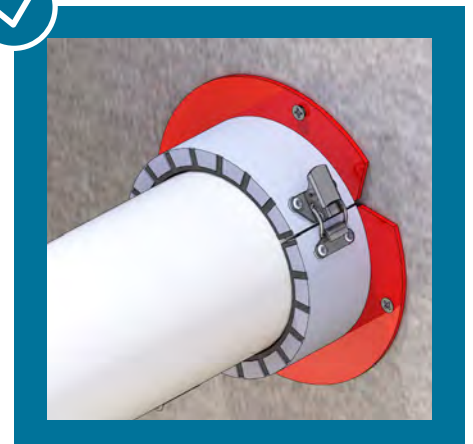

4A

Method 2

Mechanically attach the collar by means of stainless steel screws.

4B

Tack and weld sequences
For more information, please consult Technical Services and the manufacturer specific installation instruction.

MFS Sealant or MSL Sealant (for CPVC pipes) can be applied to provide a smoke seal, gas and watertightness. Please contact Tecgnical Services.

For additional information regarding the insulation requirements, please refer to the Type Approval in use.

MFC-W
Marine Watertight Firestop Collars |

MFC-W Marine Watertight Firestop Collars are factory-manufactured, intumescent devices designed for use as penetration seals in fire-rated bulkheads and decks to protect plastic and metallic pipes. They incorporate a rubber grommet which fits snugly around the pipe to ensure watertightness and gastightness.
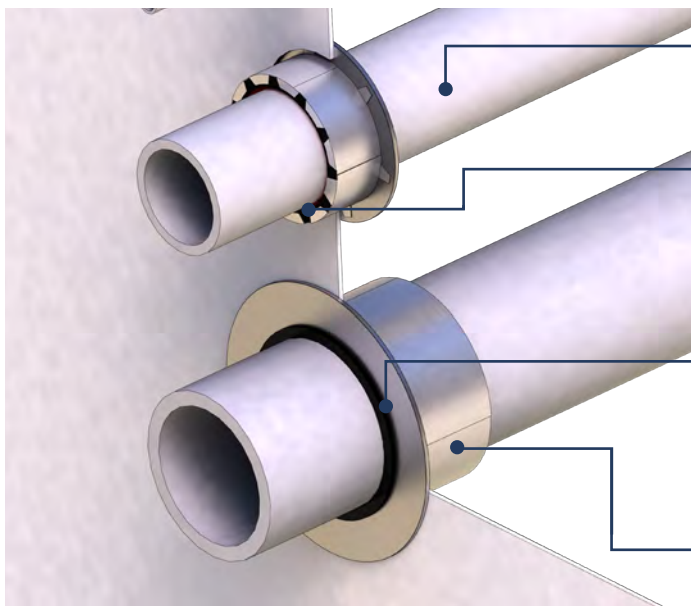
Approved for common plastic and metallic pipes

Thick intumescent liner

Rubber grommet is tight around the pipe to ensure watertightness

Stainless-steel body

Features & Benefits

- Easy and quick to install
- Halogen free, non-conductive, non-corrosive
- Flexible to handle vibrations
- Gas and Watertight
- Water resistant

Fire Resistant

Water Resistant

Smoke Barrier

Noise Reduction

Intumescent

Paintable

No Expiration

Finished Product

Watertight

Accommodate vibrations :
When vibration occurs, the thicker intumescent liner protects
the pipe from potential damage. There are no sharp metal edges
directly in contact with the pipe.

Applications

Tested to 2010 IMO FTP, Annex 1, Part 3
- For all common metallic and plastic pipes
- For fire-rated steel bulkheads and decks
- Class A-0 to A-60

* Consult Technical Services for more information

Plastic Pipes   Metallic Pipes
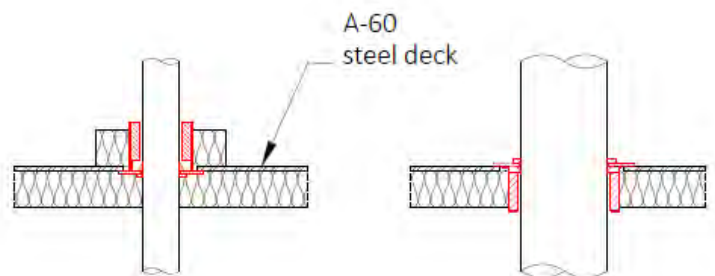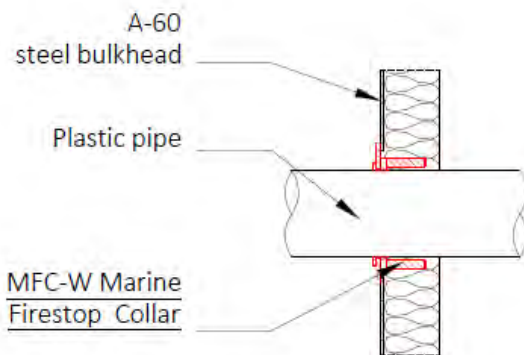
Approvals

Installation instructions: MFC-W Marine Watertight Firestop Collars

Required tools

- Safety glasses
- Protective gloves
- Latex gloves
- Knife (cutter)
- Caulk Gun
- Tape measurer
- Soap
- Cloth

Tack and weld sequences

For more information, please consult Technical Services and the manufacturer specific installation instruction.

Caution !

Keep heat input to a minimum to avoid any expansion of the intumescent material inside the collar. A wet rag should be used to limit heat input.

1

All surfaces shall be dry, frost-free, and clean of oil, paint loose material, dirt and any bond-breaking contaminants, especially at designated weld zones.

2

Remove the gasket and insert the collar in the opening.
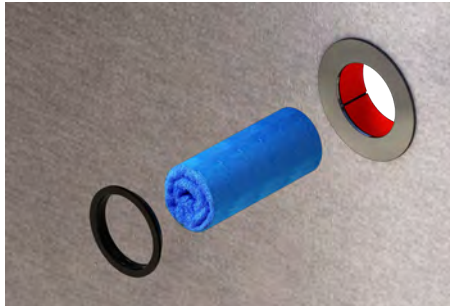
3

Insert a wet rag inside the collar before welding.

4

Weld continuously around the collar.

5

Insert the gasket inside the collar.

6

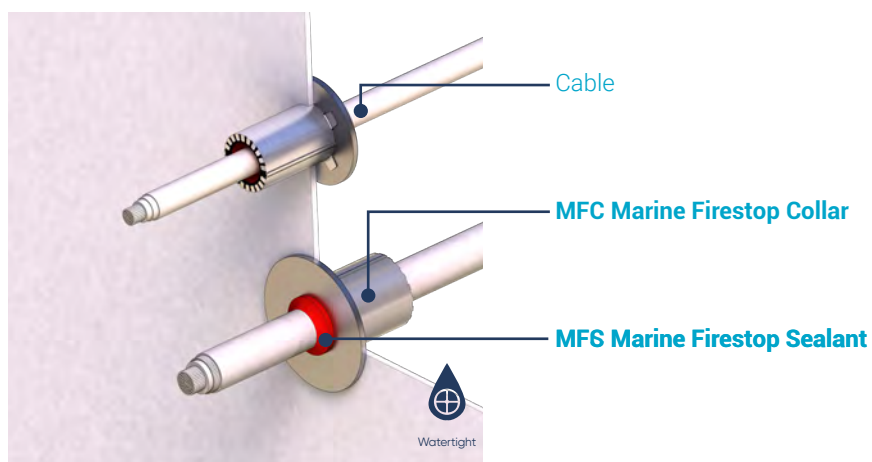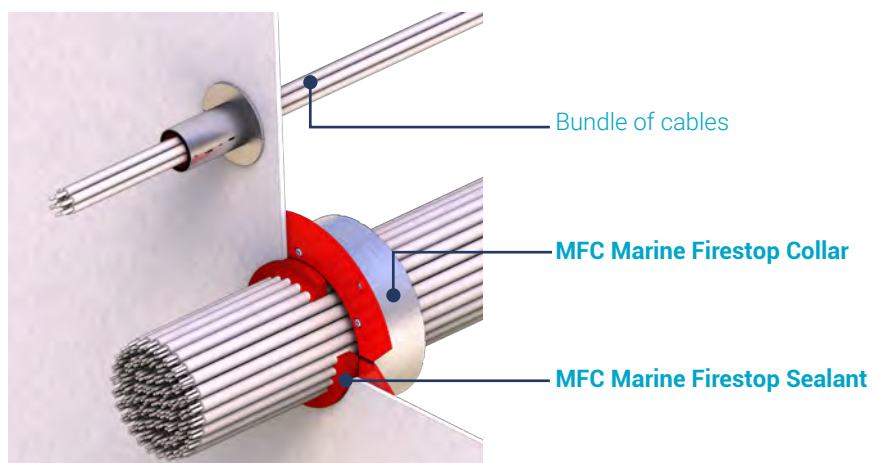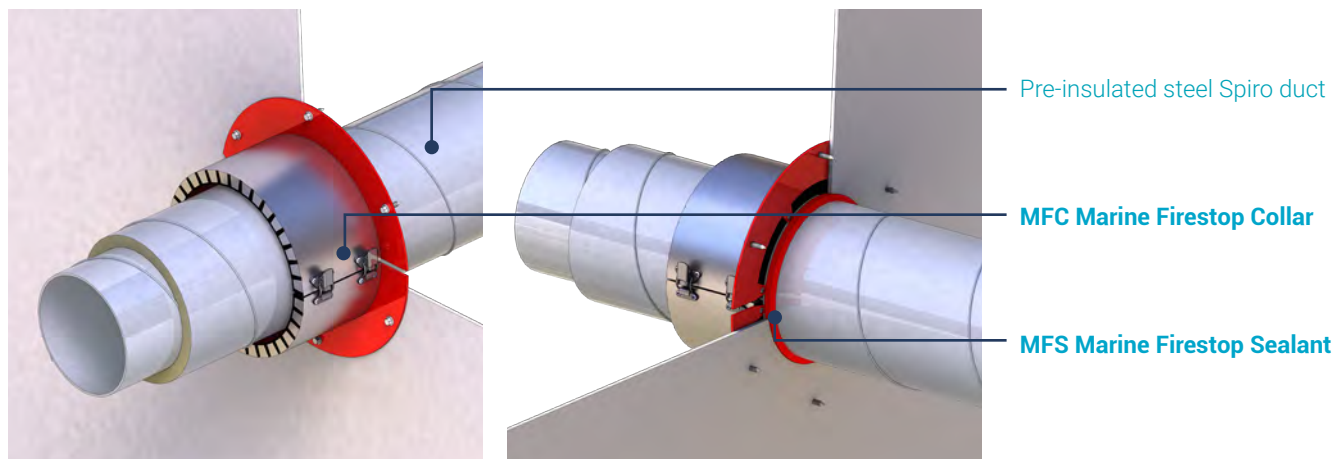Apply project's approved lubricant on the gasket.

Insert the pipe inside the collar.

Sealant may be used instead of the rubber grommet. Please contact the STI representative

For additional information regarding the insulation requirements, please refer to the Type Approval in use.
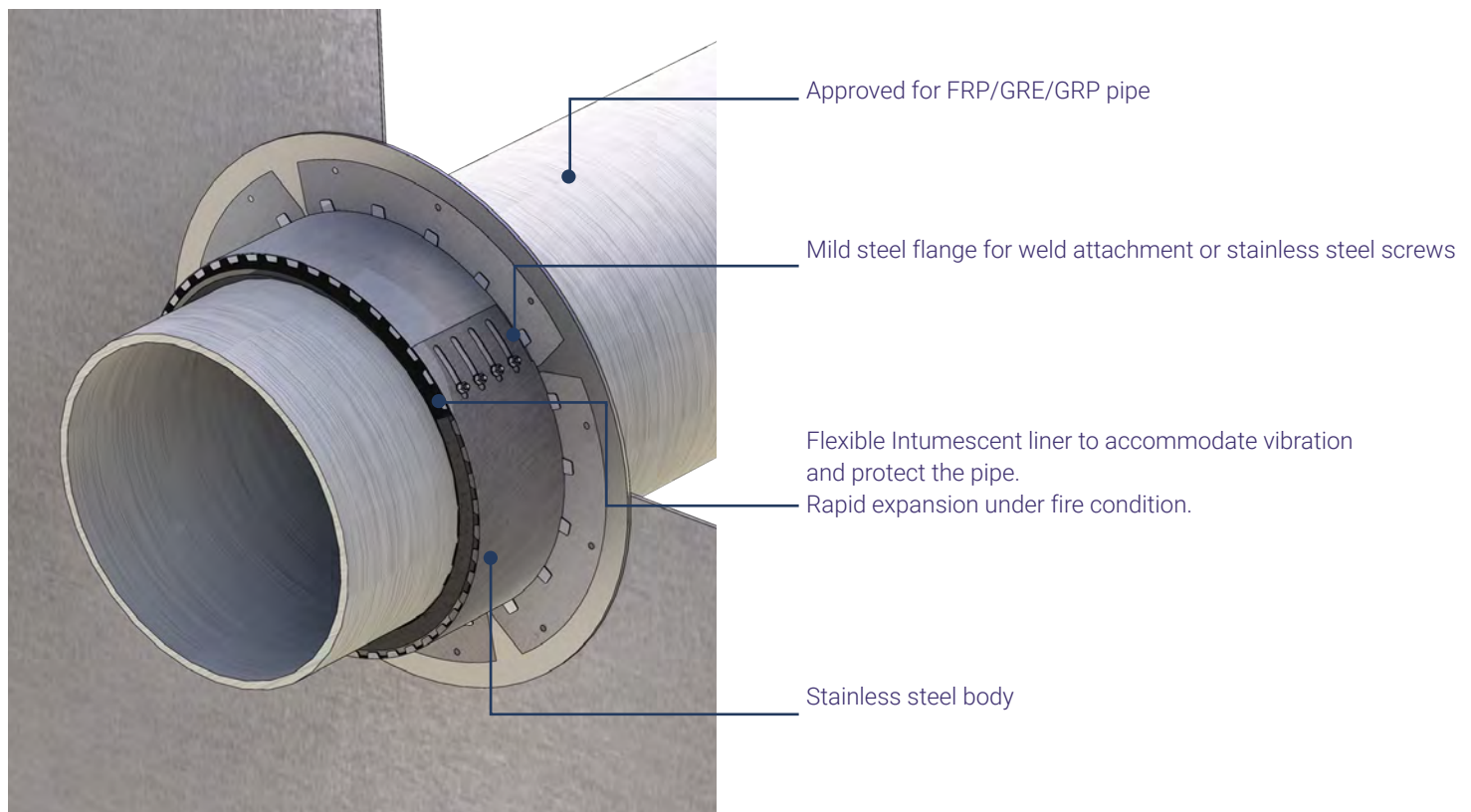
STI MARINE

MFC and MFC-W
Other applications |

Pre-insulated steel Spiro duct

MFC Marine Firestop Collar

MFS Marine Firestop Sealant

Bundle of cables

MFC Marine Firestop Collar

MFC Marine Firestop Sealant

Cable

MFC Marine Firestop Collar

MFS Marine Firestop Sealant

Watertight

For additional information concerning the installation method, please contact the STI representative.

MFC-G Large Diameter
FRP/GRE/GRP Firestop Collars |

The **MFC-G Firestop Collar** is a factory-manufactured, intumescent device for use as pipe penetration seal in fire-rated bulkheads and decks. It can provide watertightness with the application of the **MFS Marine Firestop Sealant**.

Approved for FRP/GRE/GRP pipe

Mild steel flange for weld attachment or stainless steel screws

Flexible Intumescent liner to accommodate vibration and protect the pipe.
Rapid expansion under fire condition.

Stainless steel body

Features & Benefits

• Easy and quick to install
• Halogen free
• Non-conductive and non-corrosive
• Flexible to handle vibrations
• Gas and Watertight
• Resistant to aging and weathering
• Water resisitant

Fire Resistant   Smoke Barrier   Water Resistant   Intumescent

Noise Reduction   Watertight   Finished Product   No Expiration

Applications

Tested to 2010 IMO FTP, Annex 1, Part 3
- For FRP/GRE/GRP pipes from 302mm to 1095mm
- For fire-rated steel bulkheads and decks
- Class A-0 to A-60
- Class H-0 to H-60

* Please contact the STI representative for additional information

Approvals

Ordering information

MFC-G Firestop Collar

MFC300G	302 mm - 360 mm		1	7.17 kg
MFC350G	354 mm - 402 mm		1	7.94 kg
MFC400G	402 mm - 456 mm		1	7.94 kg
MFC450G	456 mm - 501 mm		1	10.12 kg
MFC500G	501 mm - 555 mm		1	10.66 kg
MFC600G	608 mm - 665 mm		1	11.79 kg
MFC700G	710 mm - 746 mm		1	13.61 kg
MFC800G	747 mm - 895mm		1	14.23 kg
MFC900G	895 mm - 995 mm		1	16.19kg
MFC1000G	995mm - 1095 mm		1	20.18 kg

MFS Marine Firestop Sealant

MFS100	281 mL			12	0.50 kg

MFB Marine Filler Blanket

MFB530F	12.8cm × 914cm		5 rolls	6.11 kg

MFB Marine Filler Blanket with foil on one side

A-60 steel **bulkhead** |
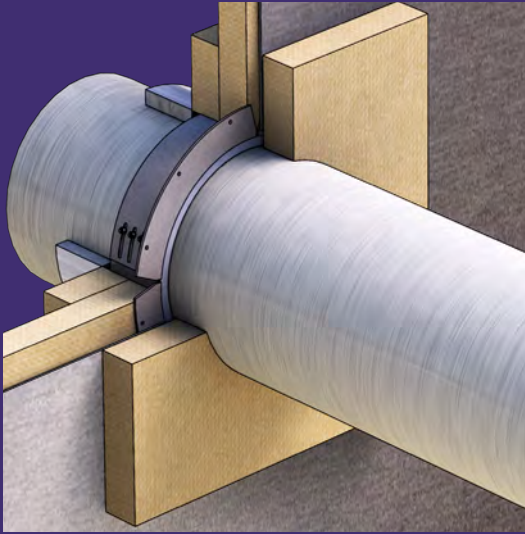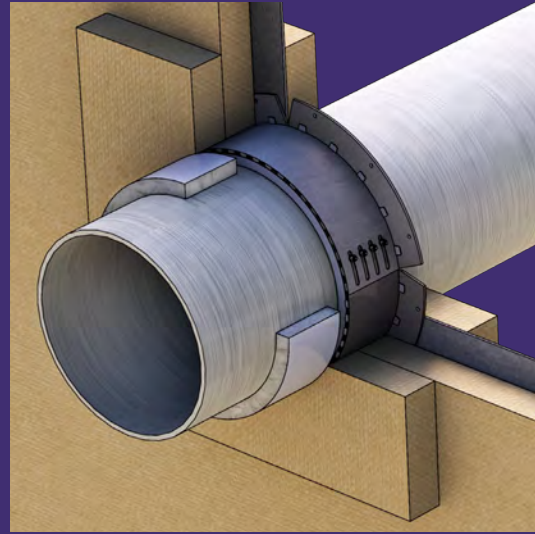
Front view

Back view

A-60 steel **deck** |
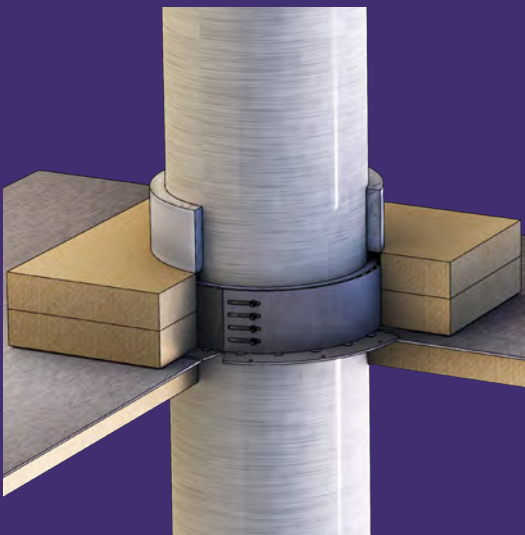
Front view
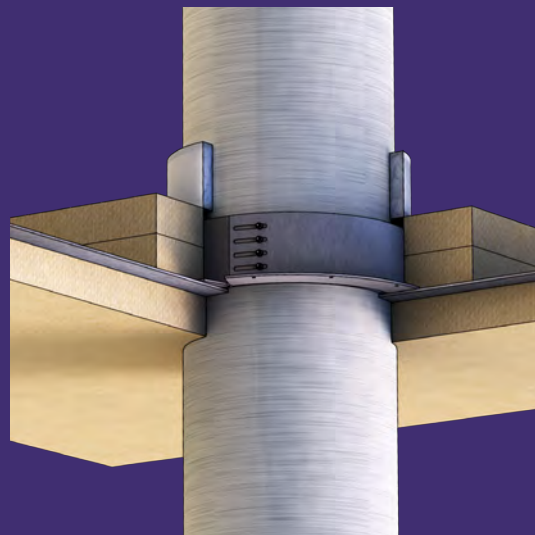
Back view

Installation instructions: FRP/GRE/GRP Firestop Collars

Required tools

- Safety glasses
- Protective gloves
- Caulk Gun
- Welding machine

1

Cut opening in bulkhead.Continuously weld doubler plate to non-insulated side of bulkhead.*

2

Apply MFS Sealant into void between pipe and opening, creating a 13 mm wide bead.

3

Wrap intumescent strip around pipe on insulated side of bulkhead and cut to size. Hold in place with tape, if necessary.

4

Position collar halves around intumescent strip, inserting threaded bolts through slots. Secure the parts together using hardware provided.

5A

Secure collar to bulkhead via 12 symmetrically spaced 13 mm wide stitch welds.

5B

As an alternative to weld attachment, collar may be secured via stainless steel screws or nuts and bolts.

5A
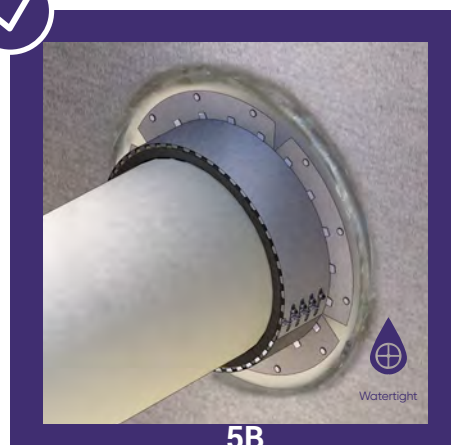
5B

* For the use of the doubler plate, please contact the STI representative.

For additional information regarding the insulation requirements, please refer to the Type Approval in use.

MFC-T
Transitional Firestop Collars |

The **MFC-T Collar** is an adjustable factory-manufacturered device designed to protect transitions between metallic and plastic pipes in fire-rated divisions, including scupper connections.
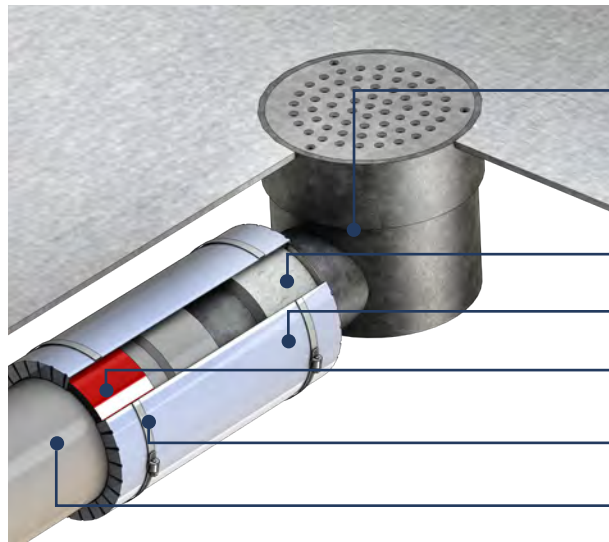
Metallic pipe

**MFC-T
Transtional Firestop Collar**

MFB Marine Filler Blanket (x1)

Restraining Steel Shell (x1)

MWS Marine Wrap Strip (x1)

Hose Clamp (x3)

Plastic pipe
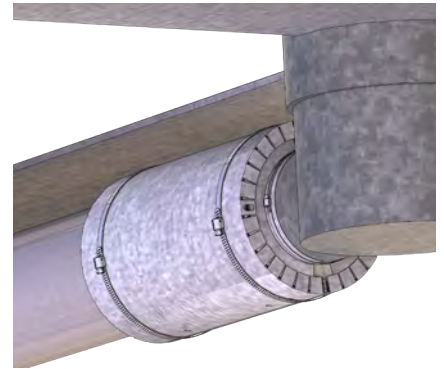
Features & Benefits

- Easy and quick to install
- Simple to clean
- Forms flexible, water resistant seal
- Halogen free, non-conductive,non-corrosive
- Flexible to handle vibrations
- Durable pre-galvanized steel construction
- Resistant to aging and weathering
- No soluble or hygroscopic ingredients

Fire Resistant　　Water Resistant　　Smoke Barrier　　Noise Reduction

Intumescent　　Finished Product　　No Expiration

Applications

Plastic Pipes　　Metallic Pipes

Tested to 2010 IMO FTP, Annex 1, Part 3
- For transitions between steel pipe and common plastic pipes
- For fire-rated steel decks
- Class A-0 to A-60

* Consult Engineering services for more information

Approvals

Installation instructions:

Required tools

- Safety glasses
- Protective gloves
- Tape measurer
- Knife (cutter)
- Drill machine

| 1 | 2 | 3 | 4 |

1. Connected metallic pipe and plastic pipe.
2. Install 50mm wide MFB Filler Blanket around metallic steel pipe and MWS Wrap Strip around plastic pipe, held in place with tape, if necessary.
3. Encircle pipes, MFB Filler Blanket and MWS Wrap Strip with restraining steel shell.
4. Fasten hose clamps on both ends of restraining steel shell and over steel retaining bracket.

For additional information regarding the insulation requirements, please refer to the Type Approval in use.

Ordering information

MFC-T Transition Firestop Collar	|||||	⌀ mm	📦	kg
	MFC63T	40 mm - 63 mm	1	1.08 kg
	MFC115T	75 mm - 115 mm	1	1.83 kg

EZ-Path®
Marine Cable Transits |

Faster, Easier, Cleaner, Safer   **Self sealing design : Always compliant**

EZ-Path® Marine Cable Transit is the only maintenance-free system especially designed for cable management in fire-rated bulkheads and decks in non-watertight applications. **EZ-Path®** can accommodate future installation and increase the cable load capacity. **EZ-Path®** protects your cable network and provides flexibility.
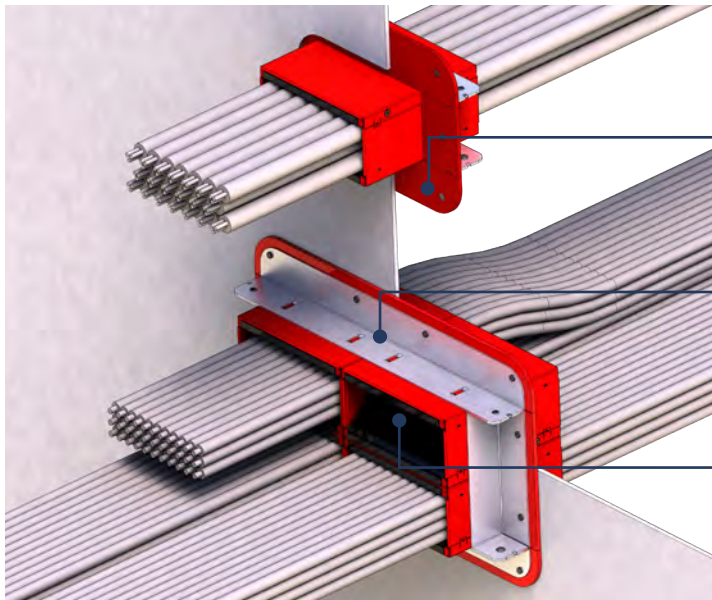
Powder coated rigid galvanized steel casing.

Heavy-duty mounting plates can be welded, screwed or bolted.

Empty up to 100% cable fill.
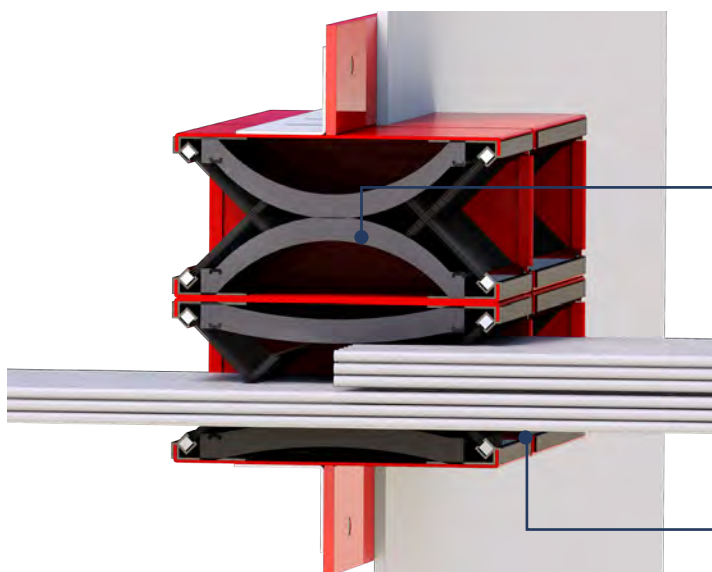
Patented self-adjusting intumescent liners and smooth surfaces for an easy cable installation.

No handling required during cable maintenance. Cables can be added and removed without the need of a firestop specialist.

No inspection is required for cable changes. The system is always compliant.

Smooth surfaces : Easy cable installation.

Features & Benefits

- Maintenance free
- No handling during cable changes
- Cables can be pushed or pulled
- Self-sealing : Always compliant
- Easy and quick installation
- No sharp edges : Protects the cables
- Finished mechanical system : No sealant
- Accommodate vibration
- Rapid intumescent expansion

Fire Resistant   Smoke Barrier   Intumescent   Re-Enterable

Noise Reduction   No Expiration   Finished Product

Applications

Tested to 2010 IMO FTP, Annex 1, Part 3
- For all cables
- Approved for fire-rated steel and aluminum bulkhead and deck
- Class A-0 to A-60
- Class H-0 to H-120

*   Consult Technical Services for more information

Approvals

CABLE CAPACITY	MDM400	MDM150	MDM300
	92 / 85	144 / 48	69 / 47
	7,820mm^2	6,900mm^2	3,243mm^2
Ø3mm	896	748	374
Ø4mm	504	396	192
Ø6mm	224	176	88
Ø8mm	120	96	48
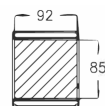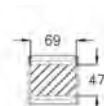
* Please refer to www.stimarine.com/resources/ezpath-estimator for additional information

Installation instructions:

Required tools

- Safety glasses
- Protective gloves

Marine Cable Transits : MDM150

| 1 | 2A | 2B |

Insert device(s) through the opening.

Secure the plate by means of symmetrically spaced welds, stainless steel screws or stainless steel nuts and bolts.
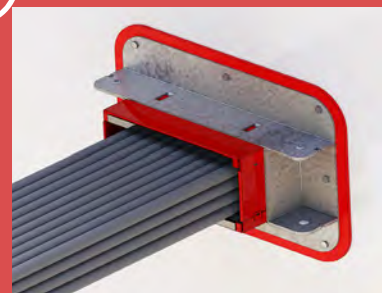
Install the cables through the device.

Marine Cable Transits : MDM400

Can be used for existing cables.

| 1 | 2 |

Insert device(s) through the opening.

Install the plate around the device.

| 3A | 3B |

Install the cables through the device.

Secure the plate by means of symmetrically spaced welds, stainless steel screws or stainless steel nuts and bolts.

* For additional installation instructions please refer to the www.stimarine.com or contact the STI representative

For additional information regarding the insulation requirements, please refer to the Type Approval in use.

Return on Investment ensured with EZ-Path®

• Protect and manage your network
• Design for fire-protection and cable management
• No handling requirement during cable maintenance
• Ensures full control of the budget with no-unexpected failures

Total cost of ownership

Other firestop solutions

EZ-Path®

Initial investment ⟹

· Initial costs
初始成本

✔ Initial costs

Operational expenses ⟹

• Firestop maintenance

• Risk of noncompliance

• Risk of network loss

• Replacement of damaged cables

• Productiveness losses

✔ No unexpected cost
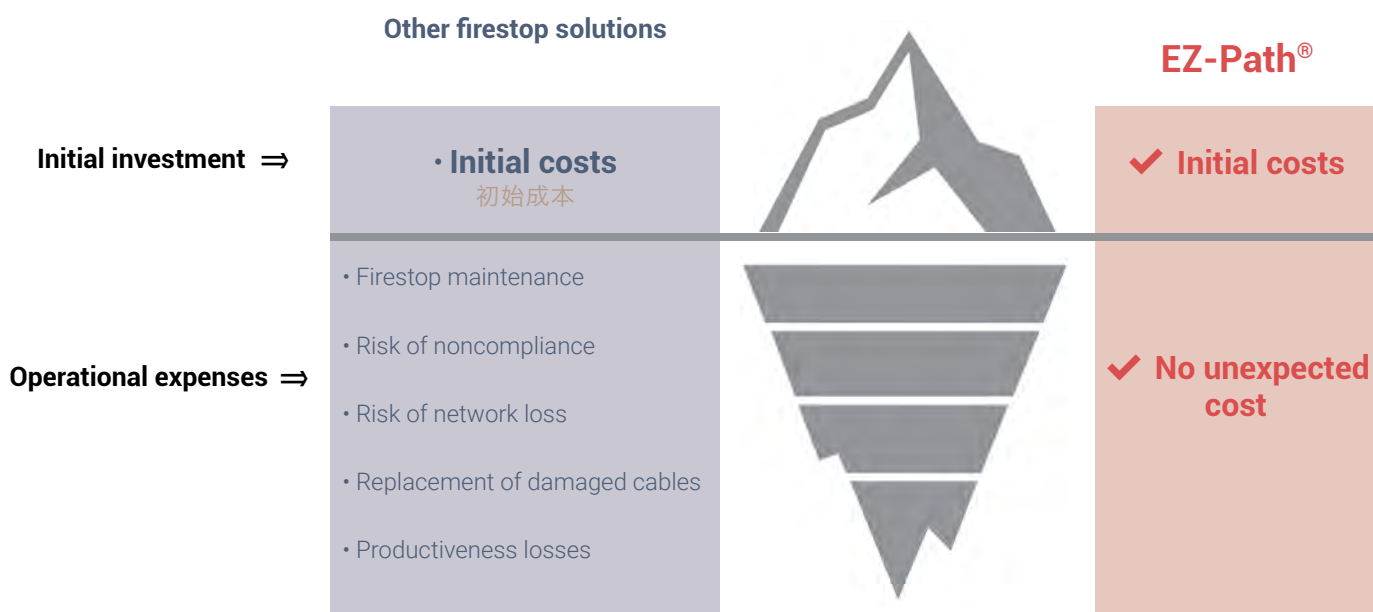
Cable changes - EZ-Path® vs Other solutions

Total cost of ownership

Other solutions

Return on investment

EZ-Path®

Cable changes

Break even within a few cable changes
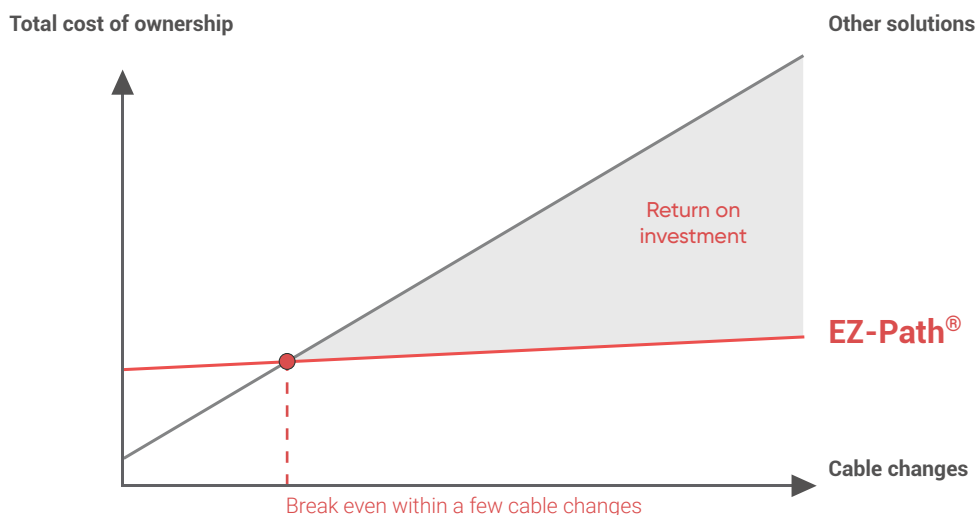
EZ-Path®
Marine Cable Transits |
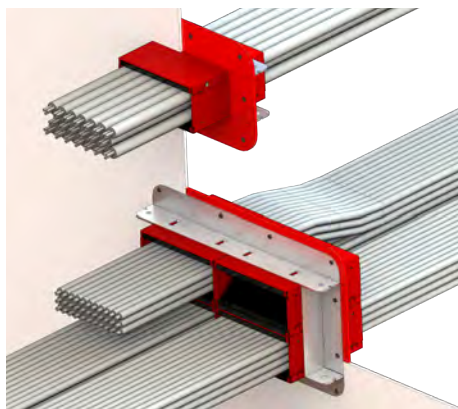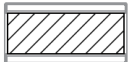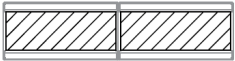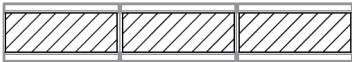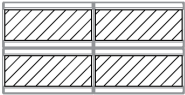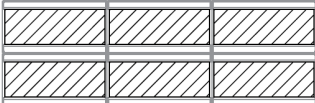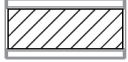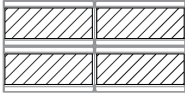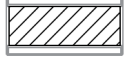
MDM150 Fire-Rated Cable Transit

Fire-rated cables

Ordering information

MDM150					
	MDM150A	6,900mm²		1	3.60 kg
	MDM150D	13,800mm²		1	5.05 kg
	MDM150F	20,700mm²		1	7.03 kg
	MDM150B	27,600mm²		1	8.80 kg
	MDM150G	41,400mm²		1	10.92 kg
	MDM150Y	DNV	6,900mm²	1	3.80 kg
	MDM150Z	DNV	27,600mm²	1	9.70 kg
	MDM150C	6,900mm²		1	2.00 kg

STI MARINE

MDM400 AND MDM300
Fire-Rated Cable Transit

Fire-rated cables

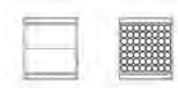| MDM400					
	MDM400A		7,820mm^2	1	3.90 kg
	MDM400B		7,820mm^2	1	3.90 kg
	MDM400C		15,640mm^2	1	6.70 kg
	MDM400D		15,640mm^2	1	7.80 kg
	MDM400G		15,640mm^2	1	12.30 kg
	MDM400J		7,820mm^2	1	5.12 kg
	MDMBOOT	DNV		1	0.45 kg

*For additional for the use of the MDMBOOT, please refer to the www.stimarine.com or contact the STI representative

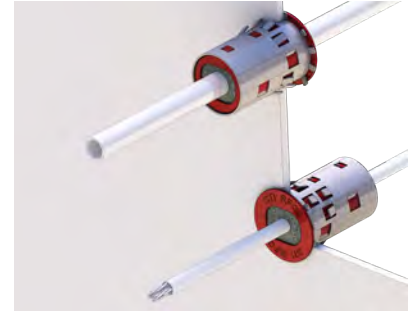| MDM300					
	MDM300A		3,143mm^2	1	2.00 kg

MSS
Marine Snap-Seal Plug |

The **MSS Marine Snap-Seal Plug** features a split design for easy installation around new or previousy installed small cables and tubes. The **MSS Marine Snap-Seal Plug** is ideally designed for use with surveillance cameras, speakers, lights, data cables and hydraulic lines.

Features & Benefits

- Easy and quick to install
- Safe
- Simple to clean
- Can be modified for new installation
- Flexible and vibration-resistant seal
- Non-corrosive

Fire Resistant	Water Resistant	Smoke Barrier	Intumescent	Low VOC
Noise Reduction	Lightweight	Paintable	Finished Product	No Expiration

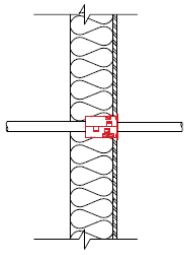# Applications

Tested to 2010 IMO FTP, Annex 1, Part 3
• For division thicknesses from 4 to 12 mm
• For one or more cables (total OD of max 14 mm)
• For small plastic and metallic tubing
• Use on data, alarm, security, CCTV or electrical cables
• Approved for fire-rated steel and aluminum divisions
• Class A-0 to A-60 Bulkheads and Decks

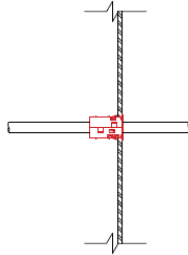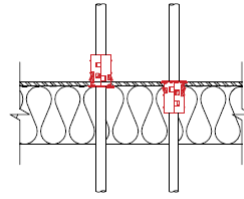* Consult Technical Services for more information

Cables	Plastic Pipes	Metallic Pipes

Approvals

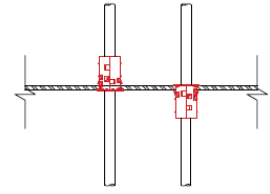RINA   DNV   UNITED STATES COAST GUARD   LR TYPE APPROVAL SCHEME
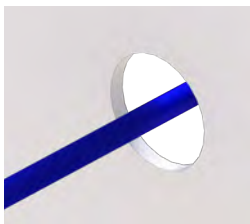
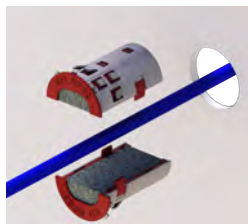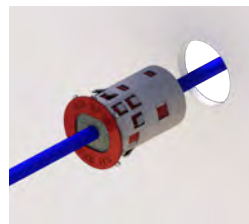A-60 Bulkhead   A-0 Bulkhead   A-60 Deck   A-0 Deck

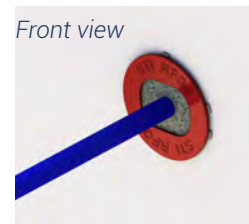# Installation instructions: Marine Snap-Seal Plug

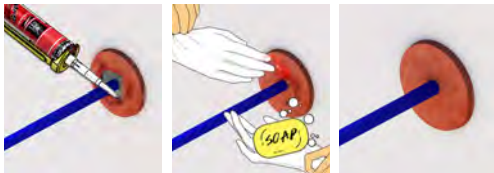| 1 | 2 | 3 |

Front view   Back view   ✓ Finished

1. Ø 28mm opening in division with cable(s) or tube(s).
2. Wrap the MSS Marine Snap-Seal halves around the cabe(s) or tube(s).
3. Insert through opening until the pre-bent tabs are engaged.

Optional

For IP66 Rating: Apply MFS Marine Firestop Sealant over MSS25 Snap-Seal per manufacturer installation instruction.

Ordering information

MFS Marine Snap-Seal Plug

	MSS25	Two-Piece Split Cable Plug	100	0.20 kg

MFS Marine Firestop Sealant

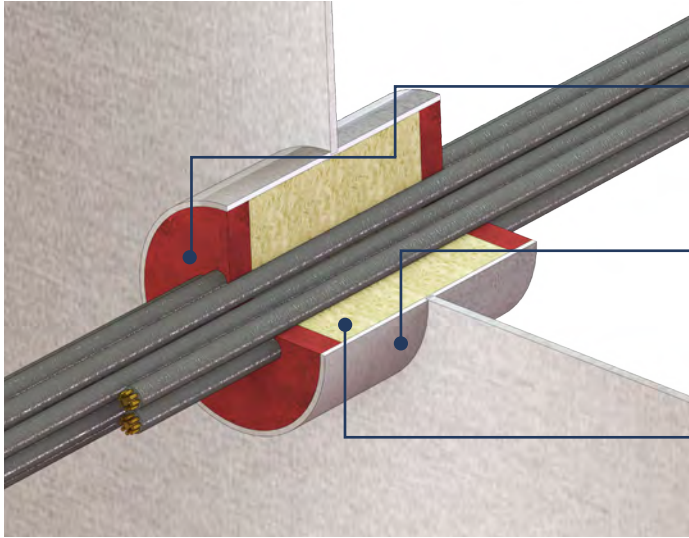|					
	MFS100	281 mL		12	0.50 kg

MPU
Marine Firestop Putty |

MPU Marine Firestop Putty is designed to seal small to medium size cable openings in fire-rated bulkheads and decks. It is a non-hardening, moldable intumescent compound. **MPU Putty** can be used for a permanent or a temporary sealing allowing for cable changes.

MPU Marine Firestop Putty
MPU28, MPU52

Sleeve

Backing material

Features & Benefits

- Fire, gases and smoke seal
- Easy to install and repair for cable changes
- Flexible to accommodate vibration
- Never hardens or dries out
- Resistant to aging and weathering
- Ozone and UV resistant

Fire Resistant   Water Resistant   Smoke Barrier   Low VOC

Noise Reduction   Flexible   Re-Enterable   No Expiration

Applications

Tested to 2010 IMO FTP, Annex 1, Part 3
• For cables
• Approved for fire-rated steel and aluminum divisions
• Class A-0 to A-60 Bulkheads and Decks
• Class H-0 to H-120 (Steel Bulkheads)
• Class H-0 to H-60 (Steel Decks)
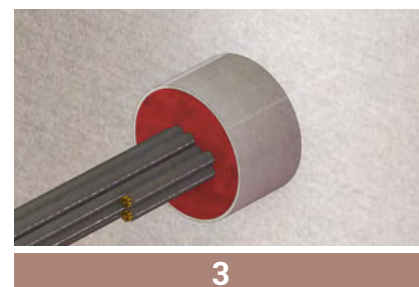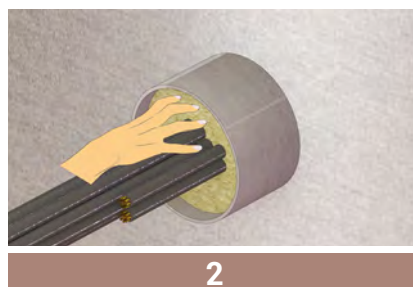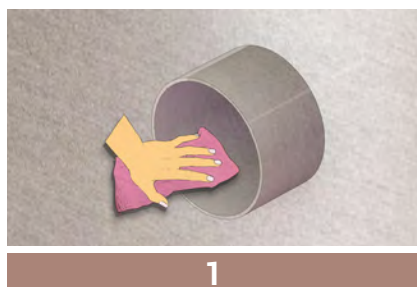* Consult Technical Services for more information

Approvals

Installation instructions: Marine Firestop Putty

Required tools

- Safety glasses
- Protective gloves
- Latex gloves

1

2

3

General Notes: Read Safety Date Sheet (SDS) and product label for safe handing. For further information regarding installation requirements, please refer to the corresponding Type Approvals.
1. All surfaces shall be clean, sound, dry, frost-free, and free of bond-breaking contaminants and loose material.
2. Install backing material (as required).
3. Install MPU Putty.

For additional information regarding the insulation requirements, please refer to the Type Approval in use.

Ordering information

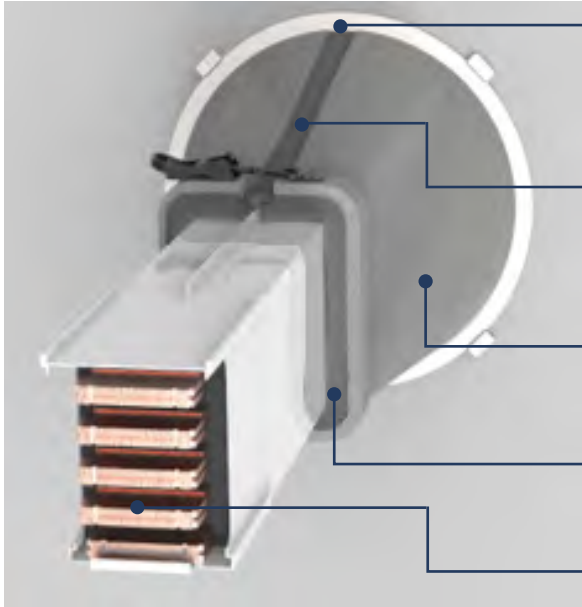| MPU Firestop Putty | |||| |
|---|---|---|---|---|
| | MPU28 | 410ml | 25 | 0.80 kg |
| | MPU52 | 13.2L | NA | 13.9 kg |

MBD
Marine Busbar Device |

Attaches to any division thickness via spot welds and/or provided clamps.

Split steel attachment plates.

Flexible flame-retardant boot to accommodate vibration and movement. It allows for 3cm of lateral movement.

Compressible foam to ensure air and smoke seal.

Electrical busway.

Features & Benefits

- Easy and quick to install
- Maintenance free
- No putty or sealant required
- Attaches to any division thickness
- Flexible to accommodate vibration
- Rapid intumescent expansion
- Fire, gas and smoke seal
- Resistant to aging and weathering

Fire Resistant   Water Resistant   Smoke Barrier   Intumescent

Noise Reduction   Finished Product   No Expiration

Applications

Tested to 2010 IMO FTP, Annex 1, Part 3
• For electrical busways
• Approved for fire-rated steel divisions
• Class A-0 to A-60 Bulkheads and Decks
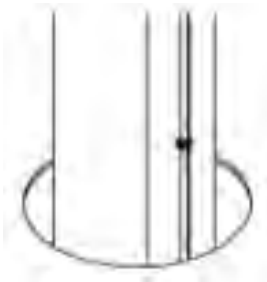* Consult Technical Services for more information
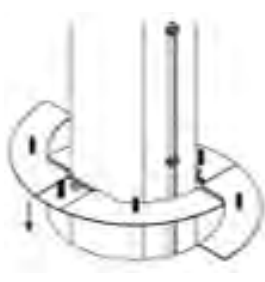
Approvals

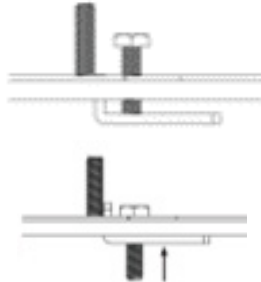# Installation instructions: Marine Busbar Device

Required tools

- Safety glasses
- Protective gloves
- Latex gloves

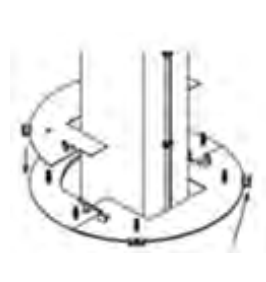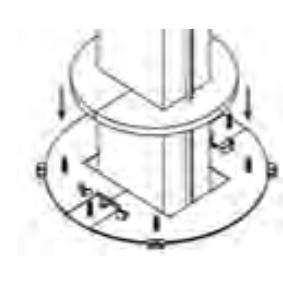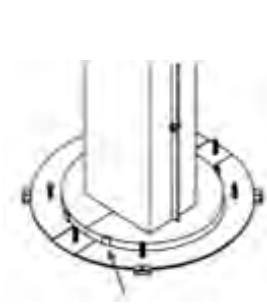| 1	2	3	4	5

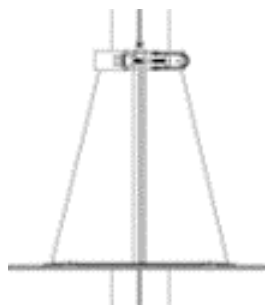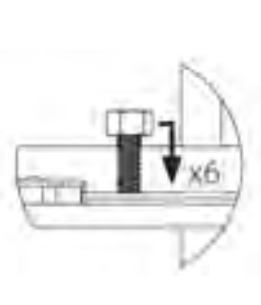| 6	7	8

1. Busway to be centered in the opening.
2. Bottom plates (x2) to be installed around the busway onto the surface of the division.
3. Bottom plates (x2) to be secured using the clamps. The clamps shall be tightened to the opposite surface of the division.
4. Top plates (x2) to be attached to the bottom plates (x2).
5. Intumescent foam gasket to be slid along the busway.
6. Intumescent foam gasket to be attached to the top plates (x2).
7. Boot to be wrapped around the busway and to be attached to the top plates (x2).
8. Boot to be closed using the zip.

For additional information regarding the insulation requirements, please refer to the Type Approval in use.
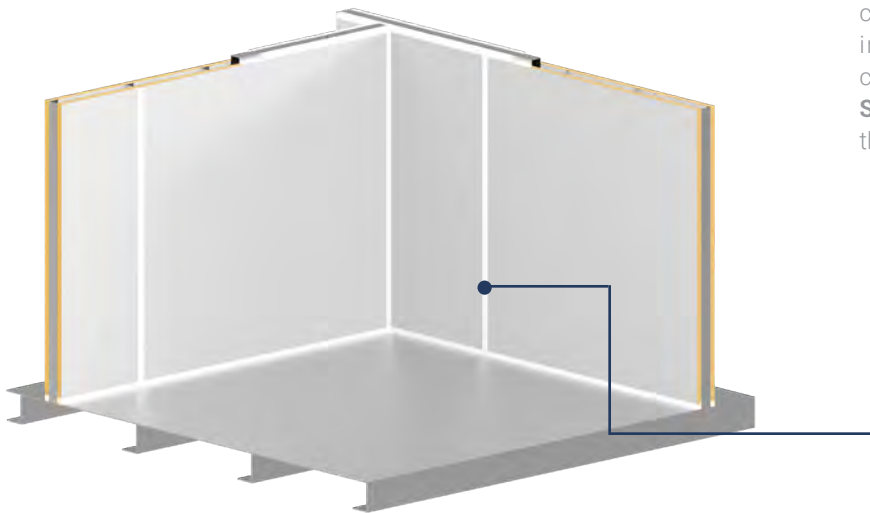
Ordering information

MBD Marine Busbar Device	|||||		
	MBD100	Marine Busbar Device	1	3.18kg

Panel Construction and C-Class Divisions

MSL-Marine Silicone Sealant

The **MSL Marine Silicone Sealant** is a single component, neutral-curing silicone to seal joints in marine structures, including joiner panel construction and C-Class divisions. The **MSL Silicone Sealant** adheres to most surfaces without the use of primers.

MSL Marine Silicone Sealant

Features & Benefits

Smoke Barrier   Water Resistant   Noise Reduction   Watertight

Flexible   Autobonding   Low VOC

- Low flame spread
- Easy and quick to install
- Autobonding
- Water and gastight
- Flexible to accommodate vibration
- Resistant to aging and weathering
- Ozone and UV resistant
- No asbestos, no PCBs

Applications

Tested to 2010 IMO FTP, Annex 1, Part 5
- C-Class divisions
- Joiner panel construction
- For interior and exterior
- Joints with movement*
- Consult Technical Services for more information

*Complies with the cyclic movement criteria of ANSI/UL 2079 for 500 movement cycles
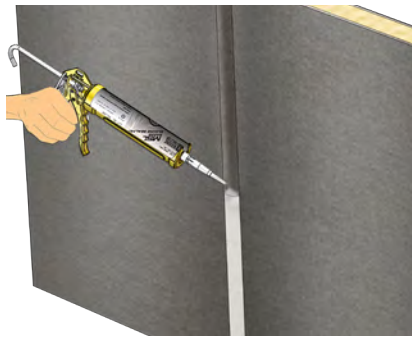
Installation instructions:

Required tools

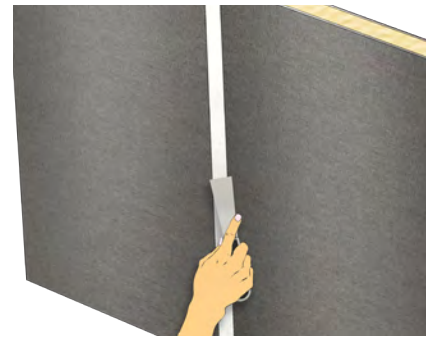- Cloth
- Protective gloves
- Caulk Gun

1

All surface shall be clean, sound , dry, frost-free, and free for bondbreaking contaminants and loose material.

2

Installation of the MSL Silicone Sealant.

3

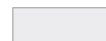The surface of the MSL Silicone Sealant to be smoothed before skin forms.

Ordering information

MSL - Marine Silicone Sealant					
	MSL300	300mL		12	0.47 kg

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STI Marine Firestop Products are available worldwide through an integrated distribution network. Local STI offices are on call to provide unparalleled technical support for all of your project-specific conditions. Schedule time with an STI representative today to learn more about these great products and services. To do so, call us at +1 908.526.8000 or visit us online at www.stimarine.com.

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