**Firestop Products** 

#### Application

• Nelson MCT is a proven mechanical cable and pipe sealing system for use in commercial building wall and floor penetrations and in marine bulkhead and deck applications providing protection from fire, smoke, water and blast pressures.

#### **Features**

- MPS Multi-Plug System Molded Tecron Rubber plugs for use in pipe sleeves or cast round openings.
- Multi-Plugs are available in pipe sizes 2", 3", 4", 5", 6" and 8" sizes and utilize Tecron<sup>™</sup> modules for sealing around cables.
- Round version of MCT<sup>™</sup> for multiple cables/pipes in a curcular penetration such as a pipe sleeve
- Consists of round outer shell of Tecron<sup>™</sup>
- Square inner core accomodates standard MCT<sup>™</sup> Tecron<sup>™</sup> modules
- Core Modules are locked in place with four compression
  assemblies
- Quick installation. simple and requires no tools
- Fire, shock and pressure tasted
- Convenient, cost effective firestop seal

#### **Standard Materials**

- Body: Tecron<sup>™</sup> rubber
- Hardware: Stainless steel

#### **Certifications and Compliances**

- Underwriters Laboratories Inc. UL 1479 and ASTM E-814, Test method for through penetration fire stops.
- U.S. Navy
- U.S. Coast Guard
- ABS (American Bureau of Shipping)











FITTINGS: CABLE AND CORD FITTINGS

**Firestop Products** 

	Nominal Schedule 40 Pipe Size									
Marki Dhara	2"	3"	4"	5"	6"	8"				
Multi-Plug	Catalog Number									
	MP-2-30	MP-3-40	MP-4-60	MP-5-80	MP-6-90	MP-8-120				
Milti-Plug with Bulkhead Sleeve, 4" Steel	MP-SL-2-30-4S	MP-SL-3-40-4S	MP-SL-4-60-4S	MP-SL-5-80-4S	MP-SL-6-90-4S	MP-SL-8-120-4S				
Milti-Plug with Bulkhead Sleeve, 4" Aluminum	MP-SL-2-30-4A	MP-SL-3-40-4A	MP-SL-4-60-4A	MP-SL-5-80-4A	MP-SL-6-90-4A	MP-SL-8-120-4A				
Milti-Plug with Deck Sleeve, 12" Steel	MP-SL-2-30-12S	MP-SL-3-40-12S	MP-SL-4-60-12S	MP-SL-5-80-12S	MP-SL-6-90-12S	MP-SL-8-120-12S				
Milti-Plug with Deck Sleeve, 12" Aluminum	MP-SL-2-30-12A	MP-SL-3-40-12A	MP-SL-4-60-12A	MP-SL-5-80-12A	MP-SL-6-90-12A	MP-SL-8-120-12A				
Tallow Lubricant	Tube *					AA0099				

#### Multi-Plug/stuffing Tube Comparisons

Cables (.513 inches Diameter) Penetrating 9 Stuffing Tubes and 1 Multi-Plug

Cost Elements	Multi–Plug	Stuffing Tubes
Number of cutouts	1–4–1/2" diameter	9 – 1" diameter
Aproxomite are utilized	16.8 sq. inches	42.25 sq. in*
Number of weldments	1	9
Linear inches weld	14.1"	31.8"
Cable pulling	9 cables through one large opening	9 cables pulled through gland nuts:washers and small tube openings
Special tools	None	Spanner wrenches, Packing Sticks

Dimensions

Dimension	Reference						
А	Pipe Size, Nominal, Inches	2"	3"	4"	5"	6"	8"
В	Pipe Length for Bulkheads	4"	4"	4"	4"	4"	4"
	Pipe Length for Decks	12"	12"	12"	12"	12"	12"
С	Available Space for Insert Blocks & Cables	1.181	1.575	2.362	3.150	3.543	4.724



\* Supplied with each frame opening.

**Firestop Products** 

#### **Illustrated Features**

- Multi-Plug penetrators for the 6 standard schedule 40 pipe sizes available provides a square cable access opening.
- A grid format is used to assure simplicity and flexibility in assigning cables to penatrate the opening.
- The grid format provides a modular system for selection of a wide range of interchangable cables sizes for each penetrator
- Cables are placed between pairs of grooved insert blocks designed for modular application which fit in the Multi-Plug
- Each insert block module size provides interchangeability with a single or group of other module sizes
- The grid system allocates space within each Multi-Plug in a series of squares
- Each square represents .393 inches or 10 millimeteres
- Millimeter designations have been adapted for ease in selecting insert blocks (reference module selection chart) which are sized in compatble modules with the grid format



Multi-Plug Openings Shown in Grid Pattern Each Square Represents a 10mm Square



2" Pipe Size - MP 2-30 9 Squares - 30 mm x 30 mm



3" Pipe Size - MP 3-40 16 Squares - 40 mm x 40 mm



4" Pipe Size - MP 4-60 36 Squares - 60 mm x 60 mm



5" Pipe Size - MP 5-80 9 Squares - 80 mm x 80 mm



6" Pipe Size - MP 6-90 81 Squares - 90 mm x 90 mm



8" Pipe Size - MP 8-120 144 Squares - 120 mm x 120 mm

#### MPS Multi-Plug System NELSON

**Firestop Products** 

Installation Instructions

#### Typical Examples (4" Pipe Size MP 4-60)







4 cables Module 30



1 cable Module 40, 5 Cables Module 20



9 cables Module 20

Illustrated Featured

© September 2010



1. Weld pipe sleeve to bulkhead or deck

2. Insert Multi-Plugs using tallow. (Plugs are tapered. Insert initially until plug is snug in sleeve)

3. Cables are pulled through opening (Figure 1)4. After the cable has been pulled, insert blocks are lubricated with tallow (Figure 2)

5. Blocks are placed in position (Figure 3)

6. Drive plug and insert blocks into sleeve

7. Nuts are alternately tightened until the Multi-Plug is secure in the sleeve (Figure 4)

**Firestop Products** 

Module Sele	ection Chart		
Cable Dia. Inches	Tecron Module Catalog Number	Cable Dia. Inches	Tecron Module Catalog Number
Blank	15/0	Blank	40/0
.157	15/4	.866	40/22
.197	15/5	.945	40/24
.236	15/6	1.024	40/26
.276	15/7	1.102	40/28
.315	15/8	1.181	40/30
.354	15/9	1.260	40/32
.394	15/10	1.339	40/34
.433	15/11	1.378	40/35
Blank	20/0	Blank	60/0
.157	20/4	1.181	60/30
.197	20/5	1.260	60/32
.236	20/6	1.339	60/34
.276	20/7	1.417	60/36
.315	20/8	1.496	60/38
.354	20/9	1.575	60/40
.394	20/10	1.654	60/42
.433	20/11	1.732	60/44
.472	20/12	1.811	60/46
.512	20/13	1.890	60/48
.551	20/14	1.969	60/50
.591	20/15	2.047	60/52
.630	20/16	2.126	60/54
Blank	30/0	2.165	60/55
.472	30/12	Blank	90/0
.512	30/13	1.969	90/50
.551	30/14	2.165	90/55
.591	30/15	2.362	90/60
.630	30/16	2.559	90/65
.669	30/17	2.756	90/70
.709	30/18	Blank	120/0
.748	30/19	2.953	120/75
.787	30/20	3.150	120/80
.827	30/21	3.346	120/85
.866	30/22	3.543	120/90
.906	30/23	3.740	120/95
.945	30/24		
1.024	30/26		





**Groove To Small** 

Groove Too Large

Select the module having an inside diameter one size smaller than the diameter of the cable.



Each grid square is 0.39"/10 mm x 0.39"/10 mm



## Nelson<sup>™</sup> Commercial Roof and Gutter De-Icing

Self-regulating electric heating cables and controls, specifically designed for commercial applications.



# Keep Your Facility Protected, Comfortable and Productive.



As snow accumulates on a roof in winter, subsequent water melting and re-freezing results in ice accumulation along roof edges, in gutters and through the downspouts. Over time, the cycle of melt and re-freeze develops ice dams, retaining meltwater on the roof, or in the gutter, promoting migration of that water underneath the shingles or along the roof edge.

Nelson heating cable systems by Emerson are designed for both commercial and residential applications. For over 50 years, our Nelson brand has earned the trust and satisfaction of our customers with easy-to-install, reliable heating products. We combine the latest technology, superior materials, and relentless quality control, to provide the consistent, reliable performance you can depend on.

Our Nelson self-regulating roof and gutter de-icing products are engineered to protect properties from the damage caused by ice dam formation; economically and efficiently reducing ice accumulation along roof edges, in gutters, and downspouts, by providing a path for meltwater to flow freely, from the roof to the ground.

#### **Benefits**

Nelson commercial de-icing systems prevent ice dam build-up and costly damage to buildings caused by ice formation and snow accumulation in gutters, downspouts and roof valleys. The self-regulating design of our Nelson cables offer additional benefits:

#### • Application Flexibility

Nelson self-regulating cables are generally suitable for use on asphalt or wood shingles; angled cedar, tile or terra cotta; metal roofing; or flat "membrane"-type roofing. Each cable is cut-to-length allowing for complete coverage on any roof design. Consult a roofing supplier for details.

#### Self-regulating Output

- Heat output automatically varies as the surrounding temperature changes; warmer temperatures = less cable heat = reduced power required
- Optimum operating performance when combined with automated controls

## **Keeping Hot Water Flowing Through Your Pipes.**



#### **System Installation**

Emerson offers the highest quality Nelson cables, controls and accessories for virtually every roof and gutter de-icing application.

Cut-to-length cable should be installed on roof areas where ice forms — along roof edges, in gutters, drains and downspouts — to provide a path for meltwater to flow off the roof. This can also include specific areas such as beneath skylights, in valleys or around dormers.

Two system control options are available: pre-set (SS-1) and programmable (SMMC-3). The SS-1 control needs to be installed in an exterior location, while the SMMC-3 needs to be installed inside a control room.

## Roof and Gutter De-Icing.



#### **Heating Cables**

Nelson electric heating cables are designed for efficient, cost-effective ice formation reduction along roof edges and in gutters, downspouts and drains by providing a path for meltwater to flow off the roof. Emerson offers the highest quality Nelson cables and control options for virtually every commercial roof and gutter de-icing application.

#### **Nelson CLT Cable**

#### **Nelson SLT Cable**





A premium de-icing solution suitable for shingle, slate, metal, wood and flat roofs with either plastic or metal gutters and/or downspouts. The parallel-resistance cable automatically varies its heat output as the surrounding temperature changes.

- Installs in wet or dry environments.
- Available in cut-to-order lengths.
- All cable outer jackets are constructed of waterproof polyolefin material.
- Can be overlapped (wrapped over itself), minimizing the risk of damaging temperature-sensitive roof coating.
- Specifically-designed installation and connection kits available.

Product Feature	CLT Cable		SLT Cable		
	CLT5-JT	9.9 W/ft @ 120 Vac	SLT-1	12 W/ft @ 120 Vac	
Nominal Power Output in Ice	CLT25-JT	7.8 W/ft @ 208 Vac 9.9 W/ft @ 240 Vac 12.3 W/ft @ 277 Vac	SLT-2	9.5 W/ft @ 208 Vac 12 W/ft @ 240 Vac 15 W/ft @ 277 Vac	
Max. Voltage	277 Vac		277 Vac		
Bus Wire Size	18 Gauge		16 Gauge		
May Cingle Cable Longth	CLT5-JT	165 ft	SLT-1	185 ft	
wax. Single Cable Length	CLT25-JT	330 ft	SLT-2	370 ft	

## Delivering the Heat That's Needed, When It's Needed.



#### Controls

Before activating the cables, Nelson roof and gutter de-icing controls are designed to sense the presence of both moisture and temperature, to determine if heat is actually required. These controls monitor both elements to make sure the system is on when it needs to be, while optimizing power consumption.

#### **Pre-Set Configuration**

![](_page_9_Picture_5.jpeg)

#### SS-1 Controller

#### **Nelson Heat Trace** SS-1 Controller

![](_page_9_Picture_8.jpeg)

Designed and manufactured exclusively to control heat cables in residential and commercial applications. This automatic snow/ice melting controller is ideal for roofs, gutters, downspouts, sidewalks, driveways and parking garage entrances.

- Uses microprocessor technology to reduce energy consumption.
- · Sensors detect snow or ice conditions and activate the heating system through a power relay.
- LED indicator turns red if the sensor requires cleaning, turns green every time the power relay is activated (switches off automatically when not active).
- Operating temperature: +3 °C (+38 °F, +/- 1 °F).

#### **Programmable Configuration**

![](_page_9_Figure_15.jpeg)

detects moisture on roofs and in gutters. An integrated sensor wire design detects roof moisture using a sensing grid on the bottom of the housing detects autter moisture.

- The sensor operates on the low voltage supplied by the controller.
- Includes 10' (3 m) of wire for connection to the controller, as well as mounting hardware.
- Connection may be extended up to 500' (152.4 m) with an appropriately rated unshielded cable.
- Working temperature: -40 °C to +65 °C (-40 °F to +150 °F).

snow/ice accumulation in up to three different areas, by issuing separate signals to heating cables for de-icing in each of those zones.

- NEMA 12 enclosure for commercial/industrial indoor applications.
- LCD display, programming and associated indicator lights, confirming the operation of each zone.
- TS1 temperature sensor included.
- Operating temperature: -20 °C to +70 °C (-4 °F to +160 °F).

## Keep it Together.

![](_page_10_Picture_1.jpeg)

## **Connection Kits and Accessories**

Nelson connection kits and accessories provide maximum versatility for installers by interfacing with common electrical and construction materials.

#### **SLT-LPS Power Connection Kit**

![](_page_10_Picture_5.jpeg)

- Provides heat shrink tubing based power connection for one cable within customer supplied junction box.
- Provides one (1) heat shrinkable end seal.
- Allows for heating cable to heating cable splice using a customer supplied junction box.

#### **SLT-E End Seal Kit**

![](_page_10_Picture_10.jpeg)

- Provides heat shrink tubing based end seal for a heating cable circuit.
- Each connection kit contains five (5) end seals.

## Do the Job Right, the First Time.

![](_page_11_Picture_1.jpeg)

#### Accessories

Nelson self-regulating heating cables must be installed with appropriate connection kits. Emerson offers standard kits that contain the accessories needed to execute a successful de-icing system installation. Additional accessories are also available — the hardware you need, in the quantities required.

#### SLT-D Downspout Hanger

![](_page_11_Picture_5.jpeg)

- Supports heating cable and maintains cable spacing where it enters and exits a downspout.
- Each connection kit contains two hangers.

#### SLT-S In-Line Splice Kit

![](_page_11_Picture_9.jpeg)

- Provides heat shrink tubing based materials necessary to perform a splice of two roof and gutter heating cables.
- Each connection kit contains one splice.

#### **SLT-C Universal Roof Clips**

![](_page_11_Picture_13.jpeg)

- Universal roof mounting clips are used for all types of installations.
- Clips are packaged in quantities of 25 per box.
- Order one box per 8' of eave, or one box for every 100' of cable installed on flat roofs.

#### **SLT-RC Roof Clips and Spacers**

![](_page_11_Picture_18.jpeg)

- Attaches heating cable to roof and also assists maintaining cable spacing in gutters and downspouts.
- Each connection kit has components for 50 roof clips or 25 cable spacers.

#### AT-50 Aluminum Heat Transfer Tape

![](_page_11_Picture_22.jpeg)

- Used to provide even heat distribution.
- For commercial and residential applications.

# Heating cable solutions that protect commercial roofs and gutters from ice build-up.

![](_page_12_Picture_1.jpeg)

Nelson is the cornerstone brand of Emerson's Electrical and Lighting business; trusted worldwide to make electrical installations safer, more productive and more reliable.

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![](_page_12_Picture_7.jpeg)

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**CONSIDER IT SOLVED**<sup>®</sup>

Maintain pipe temperatures in demanding industrial and harsh environments

## Nelson™ Heat Trace Technologies

![](_page_13_Picture_2.jpeg)

A complete range of tailored heat trace solutions for the most demanding environments.

# Tailored solutions with innovative installation, control and monitoring technologies.

![](_page_14_Picture_1.jpeg)

At Emerson, we are committed to finding the most cost-effective solution to your heat trace requirements, regardless of size or scope. Trained on the specialized requirements of mineral insulated cable design, our Nelson<sup>™</sup> application and engineering group can design systems utilizing all major product technologies; self-regulating, parallel constant-wattage and series resistance heating products.

Our expertise goes beyond just heat tracing, we can help you incorporate all of your needs into a fully integrated package. From simple material selection to complete plant surveys, we can provide exactly the level of service your project needs and demands. With over 65 years in the industry, we can deliver the most efficient and cost-effective solutions available.

![](_page_14_Picture_4.jpeg)

![](_page_15_Picture_0.jpeg)

## **Unbiased Expertise**

If you choose a heat trace system, we will provide the right products that fit your application even if that means recommending an alternative solution. It is our corporate pledge that guides every step in the design, installation, operation, and continued support of your system.

For our customers and partners who prefer to design their own systems, we offer tools to simplify your efforts such as our Nelson Design Suite. Just like our in-house engineering department, this tool provides you with the ability to design with products from all major heating cable technologies.

## **Unique Solutions**

We know your application is unique, and your reputation is riding on a system that provides flawless operation and years of reliability. With over 50 years of industry firsts, advances and breakthroughs, we can provide a complete offering of products with global approval to fit your application. Each customer engagement offers us a unique opportunity to prove and improve our existing systems.

## **Create Value**

From control panels to termination kits, Emerson can provide a complete system, with optimum reliability, at a very competitive price. Because we manufacture all of our own equipment, we can provide a single integrated product line with sales and support personnel to service clients anywhere in the world. Our Nelson Heat Trace products allow our clients to focus on their business and simplify their lives with a single point of contact, while being offered concept to completion project design and support.

## Global products with a global reach.

![](_page_16_Picture_1.jpeg)

## **Mineral Insulated Cable**

We have pioneered the use of mineral insulated heating cables for industrial applications that require higher temperatures, extended heater life and efficient power output. With one or two heating elements surrounded by magnesium oxide insulation, maximum exposure temperatures of +593°C (+1100°F) are possible.

## Self Regulating Cable

Time proven, extremely reliable, field cut-to-length, Nelson self-regulating heating cables are ideal for both freeze protection and process maintenance applications. These heater cables feature multiple power output and voltage ratings.

## **Connection Systems**

Emerson can provide a wide range of connection systems to meet the global installation requirements for Zone and Division locations. Most of our Nelson heating cables are cut-to-length and assembled in the field. These systems require kits for connecting to the power supply, configuring multiple cables and sealing electrical components from the surrounding environment.

It's important to note. Our mission is to make it easy to develop accurate, cost-effective, solutions to your heat tracing requirements. By utilizing our heat trace selection software, we take the guess work out of heat tracing applications. If you need quick and accurate engineering calculations, our Nelson Design Suite Software makes you the expert.

![](_page_16_Picture_9.jpeg)

## Heat Trace Technology for Any Application

## **Mineral Insulated Cable**

![](_page_17_Picture_2.jpeg)

- Wrapped in a corrosion resistant alloy 825 sheath, MI heating cables feature excellent chemical resistance, including immunity from harsh chloride stress corrosion.
- Our unique manufacturing process results in a product that is superior in durability, flexibility, and ease of installation.

![](_page_17_Figure_5.jpeg)

- Our self-regulating heating cables automatically alter their output in response to temperature changes an increase in heat as the pipe cools, a decrease in heat as the temperature rises.
- Cables are tested and certified to ensure they operate effectively even in the harshest of environments.
- These self-regulating heating cables are suitable for installation on metallic and non-metallic piping systems, tanks and vessels for freeze protection or process temperature maintenance up to +150°C (+300°F) and exposure temperatures up to +230°C (+450°F).

## Integral Connection Kits

![](_page_17_Picture_10.jpeg)

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### Component Connection Kits

## Optional External End Termination

![](_page_17_Picture_13.jpeg)

![](_page_17_Picture_14.jpeg)

- Manufactured using the highest quality materials, these systems are designed to handle the wide temperature ranges and chemical exposures found in today's industrial facilities.
- Pipe mounted and component based connections meet the stringent demands for heat trace applications.

## Simply intelligent heat trace control.

![](_page_18_Picture_1.jpeg)

## **Temperature Control**

We can provide the right system for your specific needs, from simple electro-mechanical thermostats to sophisticated electronic control and monitoring systems.

## **Control Systems**

Temperature control and cable monitoring systems are designed to simplify maintenance of electrical heat tracing systems and provide real time verification of operational parameters.

## **Multi Point Control Systems**

Our Nelson Heat Trace multi point control systems provide an economical approach to process control where large concentrations of heater circuits are present. All functional and operational parameters are continuously monitored to ensure system integrity.

## Monitoring and Distribution Panels

Stand-alone monitoring systems are available for new installations and are designed to retrofit into existing installations that require additional monitoring capabilities. Control status, supply voltage, current and buss wire continuity can be monitored, alarmed and communicated to plant personnel 24/7.

![](_page_19_Picture_1.jpeg)

- Mechanical thermostats provide a cost effective control option for most heat tracing installations.
- Thermostats are available in a variety of enclosures including NEMA 4, 4X and 7 for use in hazardous and nonhazardous locations.

## Control Systems

![](_page_19_Picture_5.jpeg)

- Single point and dual point, microprocessor based control systems provide the ultimate in flexibility to remote plant location or small installations requiring a higher level of process control.
- With all the attributes of distributive control systems, these controllers can be seamlessly integrated into larger plant wide monitoring networks.

## Multi Point Control Systems

![](_page_19_Picture_9.jpeg)

- Multi point control systems provide a compact, tightly integrated, factory assembled/tested solution for high density plant locations.
- Temperature, load current and ground leakage conditions are identified and communicated to plant personnel allowing maintenance to be performed as needed to reduce or eliminate costly down-time.
- Negative trends are noted on a maintenance pending list, while more severe problems are removed from service and alarmed.

## Monitoring and Distribution panels

![](_page_19_Picture_14.jpeg)

- Standard monitoring and distribution panels are designed to meet the specific demands of electrical heat tracing systems.
- Energy saving control options that monitor actual design conditions can reduce operational costs by up to 70% over conventional control schemes.

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## Innovative and reliable heat trace solutions for demanding environments.

![](_page_20_Picture_1.jpeg)

Nelson is the cornerstone of Emerson's Electrical and Light business; providing worldwide heat trace solutions that ensure optimum control and cost-efficient operations.

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in LinkedIn.com/company/emerson

![](_page_20_Picture_18.jpeg)

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## CONSIDER IT SOLVED<sup>®</sup>

## MCT Cable Transit System

**Firestop Products** 

NELSON

Fire Rated, Environmental Cable Sealing Systems

#### **Applications**

 Nelson MCT is a proven mechanical cable and pipe sealing system for use in commercial building wall and floor penetrations and in marine bulkhead and deck applications providing protection from fire, smoke, water and blast pressures.

#### **Features**

- Welded frames and Tecron rubber based modules provide the most secure and tight system available in the industry from cable pullout and against shock and vibration.
- Modules are available in 15 mm (0.59"), 20 mm (0.79"), 30 mm (1.18"), 40 mm (1.57"), 60 mm (2.36"), 90 mm (3.54") and 120 mm (4.72") base sizes and for cable diameters ranging from 4 mm (0.156") to 95 mm (3.74").
- Frames are provided in four opening sizes in single to multiples and tandem arrangements.
- MCT Multi-Cable Transit Large variety of frame systems utilized welded frames for bolting, welding or casting into place.
- Transit Frames provide the housing for the array of Tecron modules available for properly sealing around various diameters of cables or pipes. Each frame opening is provided with a compression bolt.
- MCT Lubricant (Tallow) is provided with each frame opening to assist in assembly of the modules within the frame opening.
- Stay plates are used between rows of Tecron modules to provide a secure mechanical system preventing the module from possible pull-out.
- Compression plates, used on top of the module stack and under the compression bolt will compress the assembly to seal around each cable.
- End Packings are fitted in the opening above the compression plate and seal that space with its own compression hardware.
- Special custom frames and frames with banding are available.

#### **Standard Materials**

- MCT Frames: Steel, stainless steel and aluminum
- · Hardware: Plated Steel, stainless steel and aluminum

#### **Standard Finishes**

 MCT Frames: Steel - Grey Prime Paint Stainless Steel - none Aluminum - none

#### **NEC Certifications and Compliances**

- Underwriters Laboratories Inc. UL 1479 and ASTM E-814, Test method for through penetration fire stops.
- U.S. Navy
- U.S. Coast Guard
- ABS (American Bureau of Shipping)

![](_page_21_Picture_26.jpeg)

CABLE SEALING SYSTEMS

## NELSON MCT Cable Transit System

Firestop Products Fire Rated, Environmental Cable Sealing Systems

![](_page_22_Figure_2.jpeg)

ten openings.

#### **Dimensions in Millimeters (Inches)**

	Frame Size	"W" Width	"H" Height
-	2	120 (4.72)	60 (2.36)
-	4	120 (4.72)	120 (4.72)
"★	6	120 (4.72)	180 (3.15)
w	8	120 (4.72)	240 (9.45)

## NELSON MCT Cable Transit System

**Firestop Products** 

Fire Rated, Environmental Cable Sealing Systems

Steel and	Stainless S	Steel Fram	ies								
<b>D</b>	RGS			RG	B		RG	S Tandem	(T)		RGB Tandem (T)
Dimensio	ns in Millim	eters (Inc	nes)		Width Dima	noione "D"	_				
Dim.				Numb	er of frame	openings ir	, 1 a row				Catalog
"A"	1	2	3	4	5	. 6	7	8	9	10	Number
119.9	139.7	270.0	400.1	530.4	660.4	790.7	920.8	1051.1	1181.1	1311.4	BGS-2
(4.72)	(5.50)	(10.63)	(15.75)	(20.88)	(26.00)	(31.13)	(36.25)	(41.38)	(46.50)	(51.63)	100-2
178.6	139.7	270.0	400.1	530.4	660.4	790.7	920.8	1051.1	1181.1	1311.4	RGS-4
(7.03)	(5.50) 120.7	(10.63)	(15.75)	(20.88)	(26.00)	(31.13)	(36.25)	(41.38)	(46.50)	(01.03)	
(9.34)	(5 50)	(10.63)	400.1	(20.88)	(26.00)	(31 13)	920.0	(41.38)	(46 50)	(51.63)	RGS-6
296.2	139.7	270.0	400.1	530.4	660.4	790.7	920.8	1051.1	1181.1	1311.4	
(11.66)	(5.50)	(10.63)	(15.75)	(20.88)	(26.00)	(31.13)	(36.25)	(41.38)	(46.50)	(51.63)	RGS-8
	, ,		Same dim	ensions a	s RGS Sta	andard As	sembly			. ,	RGSO
239.8	260.4	390.7	520.7	651.0	781 1	911.4	1041 4	1171 7	1301.8	1432 1	
(9.44)	(10.25)	(15.38)	(20.50)	(25.63)	(30.75)	(35.88)	(41.00)	(46.13)	(51.25)	(56.38)	RGB-2/RGM-2
299.2	260.4	390.7	520.7	651.0	781.1	911.4	1041.4	1171.7	1301.8	1432.1	
(11.78)	(10.25)	(15.38)	(20.50)	(25.63)	(30.75)	(35.88)	(41.00)	(46.13)	(51.25)	(56.38)	RGB-4/RGM-4
357.9	260.4	390.7	520.7	651.0	781.1	911.4	1041.4	1171.7	1301.8	1432.1	PCB-6/PCM-6
(14.09)	(10.25)	(15.38)	(20.50)	(25.63)	(30.75)	(35.88)	(41.00)	(46.13)	(51.25)	(56.38)	hab-o/ham-o
417.8	260.4	390.7	520.7	651.0	781.1	911.4	1041.4	1171.7	1301.8	1432.1	RGB-8/RGM-8
(16.44)	(10.25)	(15.38)	(20.50)	(25.63)	(30.75)	(35.88)	(41.00)	(46.13)	(51.25)	(56.38)	DOMO DODO
	100 7	070.0		ensions a	S RGB Sta		sembly	1051.1	4404.4	1011.1	RGMO,RGBO
239.8	(5.50)	(10.63)	400.1	230.4	(26,00)	790.7 (31.13)	920.8	1051.1	(46 50)	(51.63)	RGS-2T
(3.44) 407 9	(3.30)	270.0	400 1	(20.00) 530.4	660.4	790.7	920.8	1051 1	1181 1	1311 4	
(14.06)	(5.50)	(10.63)	(15.75)	(20.88)	(26.00)	(31.13)	(36.25)	(41.38)	(46.50)	(51.63)	RGS-4T
474.7	139.7	270.0	400.1	530.4	660.4	790.7	920.8	1051.1	1181.1	1311.4	
(18.69)	(5.50)	(10.63)	(15.75)	(20.88)	(26.00)	(31.13)	(36.25)	(41.38)	(46.50)	(51.63)	RGS-6T
592.1	139.7	270.0	400.1	530.4	660.4	790.7	920.8	1051.1	1181.1	1311.4	PCS-8T
(23.31)	(5.50)	(10.63)	(15.75)	(20.88)	(26.00)	(31.13)	(36.25)	(41.38)	(46.50)	(51.63)	143-01
			Same dim	nensions a	as RGS Ta	Indem As	sembly				RGSO (Tandem)
357.1	260.4	390.7	520.7	651.0	781.1	911.4	1041.4	1171.7	1301.8	1432.1	RGB-2T/RGM-2T
(14.16) 177 0	(10.25)	(15.38)	(20.50)	(20.63) 651.0	(30.75)	(J) (J) (J) (J) (J) (J) (J) (J) (J) (J) (J)	(41.00) 1041 4	(40.13) 1171 7	(31.25)	(30.38)	
477.0 (18.81)	200.4 (10.25)	(15.38)	(20.50)	(25.63)	(30.75)	911.4 (35.88)	(41 00)	(46 13)	(51 25)	(56.38)	RGB-4T/RGM-4T
595.4	260.4	390.7	520.7	651.0	781.1	911.4	1041.4	1171.7	1301.8	1432.1	
(23.44)	(10.25)	(15.38)	(20.50)	(25.63)	(30.75)	(35.88)	(41.00)	(46.13)	(51.25)	(56.38)	RGB-6T/RGM-6T
712.7	260.4	390.7	520.7	651.0	781.1	911.4	1041.4	1171.7	1301.8	1432.1	
(28.06)	(10.25)	(15.38)	(20.50)	(25.63)	(30.75)	(35.88)	(41.00)	(46.13)	(51.25)	(56.38)	
		:	Same dim	ensions a	as RGB Ta	ndem As	sembly				RGMO, RGBO (Tandem)
119.9	79.5										MGS-2
(4.72)	(3.13)	Note: 1	Dimension	s shown :	are actual	frame dim	ensions. A	Allow 1.59	mm (1/16	") for	
1/8.6	(9.5 (2.12)	cu	touts to ac	cept RGS	type fram	nes.				,	MGS-4
(1.03) 227 2	(3.13) 70 5	2.	Frames ar	e construe	cted of 3.1	8 mm x 6	0.33 mm (	1/8" x 2-3/	/8") steel.		
(9.34)	(3.13)	<b>F</b>	1-1 <sup>111</sup>	1.6	1 400 0						MGS-6
296.2	79.5	⊢or each	additiona	i frame ad	a 130.3 m	im (5.13″)					
(11.66)	(3.13)										19103-0

Fittings

![](_page_23_Picture_6.jpeg)

## **NELSON** MCT Cable Transit System Cable Tray Application

Firestop Products Fire Rated, Environmental Cable Sealing Systems

#### Application

- RGS type frames are shown as an example only.
- Any of the frame types can be used depending on the application.
- Calculations are based on using 6" deep cable trays filled to 40% capacity.
- If the tray size or fill percentages change, the number of frame openings or frame height should change accordingly.

![](_page_24_Picture_7.jpeg)

	Width of cable tray — mm (in)							
Type of Cable	152.4 (6)	304.8 (12)	457.2 (18)	609.6 (24)	762.0 (30)	914.4 (36)		
Control Cable	RGS-6	RGS-6X2	RGS-6X4	RGS-6X5	RGS-6X6	RGS-6X7		
Power Cable	RGS-4	RGS-4X2	RGS-4X4	RGS-4X5	RGS-4X6	RGS-4X7		
Mixed	RGS-6	RGS-6X2	RGS-6X4	RGS-6X5	RGS-6X6	RGS-6X7		

## NELSON MCT Cable Transit System

**Firestop Products** 

Fire Rated, Environmental Cable Sealing Systems

Διυπίου	m Frame	<u></u>									
									1 Allen		
	RGA	4			RGAM			RGA Tand	lem (T)		RGAM Tandem (T)
Dimensi	ions in Mi	llimeters	(Inches)		Width Dim	noiono "P"	1				
Dim.				Numbe	er of frame	openings ir	n a row				Catalog
"A"	1	2	3	4	5	6	7	8	9	10	Number
126.2	146.1	279.4	412.8	546.1	679.5	812.8	946.2	1079.5	1212.9	1346.2	RGA-2
(4.97)	(5.75)	(11.00)	(16.25)	(21.50)	(26.75)	(32.00)	(37.25)	(42.50)	(47.75)	(53.00)	
(7.28)	(5.75)	(11.00)	(16.25)	(21.50)	(26.75)	(32.00)	(37.25)	(42.50)	(47.75)	(53.00)	RGA-4
243.6	146.1	279.4	412.8	546.1	679.5	812.8	946.2	1079.5	1212.9	1346.2	RGA-6
(9.59) 302 5	(5.75) 146 1	(11.00) 279.4	(16.25) 412 8	(21.50) 546 1	(26.75) 679.5	(32.00) 812.8	(37.25) 946.2	(42.50) 1079 5	(47.75) 1212 9	(53.00) 1346 2	
(11.91)	(5.75)	(11.00)	(16.25)	(21.50)	(26.75)	(32.00)	(37.25)	(42.50)	(47.75)	(53.00)	RGA-8
			Same di	mensions	as RGS S	tandard /	Assembly				RGAO
246.9	266.7	400.1	533.4	666.8	800.1	933.5	1066.8	1200.2	1333.5	1466.9	RGAM-2
(9.72) 305.6	(10.50)	(15.75)	(21.00) 533.4	(26.25) 666 8	(31.50)	(36.75)	(42.00)	(47.25)	(52.50) 1333 5	(57.75) 1766 Q	
(12.03)	(10.50)	(15.75)	(21.00)	(26.25)	(31.50)	(36.75)	(42.00)	(47.25)	(52.50)	(57.75)	RGAM-4
364.2	266.7	400.1	533.4	666.8	800.1	933.5	1066.8	1200.2	1333.5	1466.9	RGAM-6
(14.34)	(10.50)	(15.75)	(21.00)	(26.25)	(31.50)	(36.75)	(42.00)	(47.25)	(52.50)	(57.75)	
423.2 (16.66)	(10.50)	(15.75)	(21.00)	(26.25)	(31.50)	933.5 (36.75)	(42.00)	(47.25)	(52.50)	(57.75)	RGAM-8
	, ,	( )	Same dir	nensions	as RGB S	standard /	Assembly	, ,	, ,	, ,	RGAMO
252.5	146.1	279.4	412.8	546.1	679.5	812.8	946.2	1079.5	1212.9	1346.2	RGA-2T
(9.94)	(5.75)	(11.00)	(16.25)	(21.50)	(26.75)	(32.00)	(37.25)	(42.50)	(47.75)	(53.00)	
(14.56)	(5.75)	(11.00)	(16.25)	(21.50)	(26.75)	(32.00)	(37.25)	(42.50)	(47.75)	(53.00)	RGA-4T
487.4	146.1	279.4	412.8	546.1	679.5	812.8	946.2	1079.5	1212.9	1346.2	RGA-6T
(19.19)	(5.75)	(11.00)	(16.25)	(21.50)	(26.75)	(32.00)	(37.25)	(42.50)	(47.75)	(53.00)	
(23.81)	(5.75)	(11.00)	(16.25)	(21.50)	(26.75)	(32.00)	(37.25)	(42.50)	(47.75)	(53.00)	RGA-8T
			Same di	mensions	as RGS	Tandem A	ssembly				RGAO (Tandem)
373.1	266.7	400.1	533.4 (21.00)	666.8	800.1	933.5	1066.8	1200.2	1333.5	1466.9	RGAM-25
485.1	266.7	400.1	533.4	666.8	800.1	933.5	1066.8	1200.2	1333.5	1466.9	DCAM 4T
(19.31)	(10.50)	(15.75)	(21.00)	(26.25)	(31.50)	(36.75)	(42.00)	(47.25)	(52.50)	(57.75)	RGAM-41
608.1 (23.94)	266.7 (10.50)	400.1	533.4 (21.00)	666.8 (26.25)	800.1 (31.50)	933.5 (36.75)	1066.8	1200.2 (47 25)	1333.5 (52 50)	1466.9	RGAM-6T
725.4	266.7	400.1	533.4	666.8	800.1	933.5	1066.8	1200.2	1333.5	1466.9	
28.56)	(10.50)	(15.75)	(21.00)	(26.25)	(31.50)	(36.75)	(42.00)	(47.25)	(52.50)	(57.75)	nuAlVI-01
			Same di	mensions	as RGB	Tandem A	ssembly				RGAMO (Tandem)
126.2 (4 97)	85.9 (3.38)										MGA-2
184.9	85.9	Note: 1.	Dimensior	is shown a	are actual	frame dim	ensions. A	llow 1.59	mm (1/16'	') for	
(7.28)	(3.38)	2.	Frames ar	e construc	cted of 3.1	165. 8 mm x 61	0.33 mm ( <sup>.</sup>	1/8" x 2-3/	'8") steel.		WGA-4
243.6 (9.59)	85.9 (3.38)					(= ···	(		,		MGA-6
302.5	85.9	⊦or each	additiona	I frame ad	a 133.4 m	m (5.25")					MGA-8
(11.91)	(3.38)										WMA-0

Fittings

![](_page_25_Picture_7.jpeg)

## NELSON MCT Cable Transit System

Firestop Products Fire Rated, Environmental Cable Sealing Systems

Module Sele	ection Chart		
Cable Dia. Inches	Tecron Module Catalog Number	Cable Dia. Inches	Tecron Module Catalog Number
Blank	15/0	Blank	40/0
.157	15/4	.866	40/22
.197	15/5	.945	40/24
.236	15/6	1.024	40/26
.276	15/7	1.102	40/28
.315	15/8	1.181	40/30
.354	15/9	1.260	40/32
.394	15/10	1.339	40/34
.433	15/11	1.378	40/35
Blank	20/0	Blank	60/0
.157	20/4	1.181	60/30
.197	20/5	1.260	60/32
.236	20/6	1.339	60/34
.276	20/7	1.417	60/36
.315	20/8	1.496	60/38
.354	20/9	1.575	60/40
.394	20/10	1.654	60/42
.433	20/11	1.732	60/44
.472	20/12	1.811	60/46
.512	20/13	1.890	60/48
.551	20/14	1.969	60/50
.591	20/15	2.047	60/52
.630	20/16	2.126	60/54
Blank	30/0	2.165	60/55
.472	30/12	Blank	90/0
.512	30/13	1.969	90/50
.551	30/14	2.165	90/55
.591	30/15	2.362	90/60
.630	30/16	2.559	90/65
.669	30/17	2.756	90/70
.709	30/18	Blank	120/0
.748	30/19	2.953	120/75
.787	30/20	3.150	120/80
.827	30/21	3.346	120/85
.866	30/22	3.543	120/90
.906	30/23	3.740	120/95
.945	30/24		
1.024	30/26		

![](_page_26_Figure_3.jpeg)

![](_page_26_Figure_4.jpeg)

Wrong

![](_page_26_Picture_5.jpeg)

Groove To Small

Wrong

Groove Too Large

Select the module having an inside diameter one size smaller than the diameter of the cable.

![](_page_26_Figure_9.jpeg)

Each grid square is 10 mm x 10 mm (0.39" x 0.39")

**Firestop Products** 

Accessories		
	Description	Catalog Number
~	Standard steel stay plate	AA0130U
$\langle \rangle$	Stay plate aluminum	AA0127
	Stay plate stainless steel	AA0130SS
~	Compression Plate plated cast iron	AA0126112
$\langle \rangle$	Compression Plate aluminum	AA0126411
	Compression Plate stainless steel	AA0126511
	End Packing Special (one side installation)	AA0147
	End Packing Special stainless steel hdwe	AA0147SS
	End Packing standard	AA0148
$\checkmark$	End Packing stainless steel hdwe	AA0148SS
	Replacement Compression Bolt Stainless	AA0133
	Replacement Plug stainless steel	AA0137
	Tallow Lubricant Tube	AA0099

#### AA0126112 Compression Plate

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![](_page_27_Picture_4.jpeg)

![](_page_27_Picture_6.jpeg)