



*routing and raceway*  
**PRODUCTS**

A revolutionary new multi-channel raceway, InfoStream features a unique, rounded profile which offers a sleek appearance and helps absorb shock. Many features, including InfoStream's light weight, make it a favorite with installers and end users. Here is why one customer prefers InfoStream:

"Since InfoStream is lighter, one person can hold up a single piece and install it. This ultimately allows us to cut back on labor and shipping charges."

# ROUTING AND RACEWAY PRODUCTS

## LIGHTGUIDE FIBER OPTIC PROTECTION SYSTEM



The Lightguide Fiber Optic Protection System is a fully enclosed system designed to isolate, route and protect fiber optic cable. This system provides a smooth, protective surface and channel to prevent fiber kinking, cutting and associated signal loss. Consisting of connectors and channels in gray or yellow, the Lightguide System is easily adaptable for cable routing in a LAN, central office, data center, telecommunications office or wherever cable is run from the building entrance to its termination point. The Lightguide System is designed to be supported by existing equipment such as bays, cable racks, unistrut, threaded rod, etc., and is mounted and secured with metal hardware kits available from HellermannTyton. The connectors and channels are secured by nuts and bolts or HellermannTyton's rivet fasteners.

### Components

There are more than 40 components in different sizes with various horizontal and vertical transitions. System sizes include 1" x 1", 2" x 2", 2" x 4", 4" x 2", 4" x 4", and 8" x 4". Designed to provide easy re-entry, the Lightguide connectors feature a hook and loop cover attachment, eliminating fiber pinching and the need for additional hardware. When the connector cover is removed, the cable remains in place due to an inside flange providing cable retention. The complete lay-in capability of the connectors and channels eliminates the pulling of fiber and allows ease of access and tracing. The connectors and channels are designed to prevent fiber cables from exceeding the 2" minimum bend radius requirement.

HellermannTyton has simplified the assembly process by offering rivet fasteners, which do not require tools to assemble, and can connect the components to the channel. Unlike other rivets, these interlocking rivet fasteners can be easily removed and re-installed. A 10-32 bolt also can be used for assembly.

Manufactured from a PVC/Acrylic alloy with a flammability rating of UL94V-0, the connectors possess an oxygen index of 37 with a maximum continuous temperature rating of 122° Fahrenheit.

### Protective Channel

The protective channel is available in 6 foot lengths as solid or slotted with snap-on covers. The solid channel provides fiber routing and protection for all straight horizontal runs. The slotted channel is designed for vertical drops from the overhead environment down to the front face of the equipment bay. The slotted fingers can be broken off to create a custom size opening so the fiber and cable can branch out to the equipment. The snap-on covers easily interlock with the channel and feature a non-slip surface.

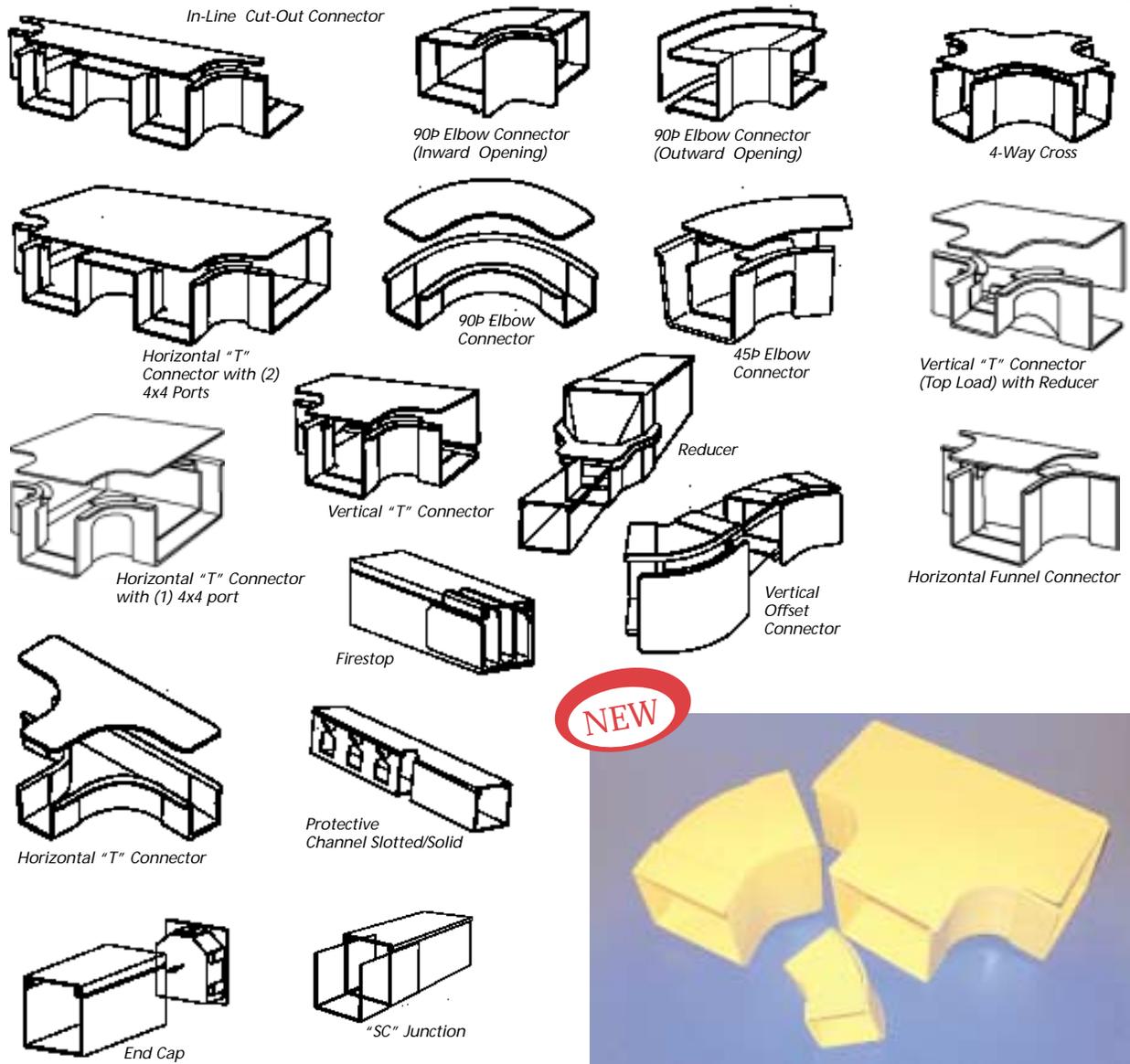
Both styles of protective channel and cover are manufactured from a rigid, non-flammable polyvinyl chloride. This material is 94V-0 rated with an oxygen index of 40 to 48 per ASTM 2863. (See page 80 for Fiber Optic Cable Tape to identify the routing of fiber optic cable.)

### Lightguide Fiber Optic Protection System Fill Capacity Chart, 40% Fill

RACEWAY		1x1	2x2	2x4	4x2	4x4	8x4	12x4
WIRE TYPE	O.D. (MM)							
FIBER OPTIC, 50/125/900	2	60	286	564	601	1204	2465	3726
	3	26	127	250	267	535	1095	1656
	<b>Fill Capacity Chart, 60% Fill</b>							
	2	90	429	846	901	1806	3697	5589
	3	40	190	376	400	802	1643	2484

Formula used to calculate fill capacity for 40%.  
Number of cables = duct area (1/4 x pi x (wire o.d.)^2) x 0.4

# ROUTING AND RACEWAY PRODUCTS



HELLERMANN TYTON PART NO.	DESCRIPTION	PKG. QTY.
<b>1" x 1" System</b>		
TECR1x1X	90° Elbow Connector	1
TCHR1x1X	Horizontal "T" Connector	1
SD1x1X/TC1	1" x 1" Solid Channel with Cover	120 feet of 6 foot lengths
SL1x1X/TC1	1" x 1" Slotted Channel with Cover	120 feet of 6 foot lengths
<b>2" x 2" System</b>		
TOC2x2X	Vertical Offset Connector (Inward & Outward Set)	1
TCVR2x2X	Vertical "T" Connector (Top Load)	1
TCVRD2x2X	Vertical "T" Connector (Top Load) with 2" to 1" reducer	1
TCXR2x2X	4-Way Cross	1

Replace "X" in the part number with the following letters for desired color: X = G (gray), Y (yellow)

# ROUTING AND RACEWAY PRODUCTS

HELLERMANN TYTON PART NO.	DESCRIPTION	PKG. QTY.
<b>2" x 2" System</b>		
TECRO2x2X	90P Elbow Connector (Outward Opening)	1
TECRI2x2X	90P Elbow Connector (Inward Opening)	1
TECR2x2X	90P Elbow Connector	1
TEC45R2x2X	45P Elbow Connector	1
TCHR2x2X	Horizontal "T" Connector	1
TCEC2x2X	End Cap	1
FS2x2X	Firestop Support	1
SC2x2X	Straight Connector (Junction)	1
TRD2x1X	2" to 1" Reducer	1
SD2x2X/TC2	2" x 2" Solid Channel with Cover	120 feet of 6 foot lengths
SL2x2X/TC2	2" x 2" Slotted Channel with Cover	120 feet of 6 foot lengths
SDWR2x20K2	Wire Retainer for 2" x 2" Solid Channel, Black	50 pieces per bag
SLWR20C2	Wire Retainer for 2" x 2" Slotted Channel, Black	100 pieces per bag
<b>2" x 4" System</b>		
TECR2x4X	90P Elbow Connector	1
SD2x4X/TC2	2" x 4" Solid Channel with Cover	120 feet of 6 foot lengths
SL2x4X/TC2	2" x 4" Slotted Channel with Cover	120 feet of 6 foot lengths
SLWR20C2	Wire Retainer for 2" x 4" Slotted Channel, Black	100 pieces per bag
<b>4" x 2" System</b>		
TECR4x2X	90P Elbow Connector	1
TCHR4x2X	Horizontal "T" Connector	1
TCVR4x2X	Vertical "T" Connector (Top Load)	1
TCHVRD4x2x2X	Vertical "T" Connector (Top Load) with Reducer	1
SC4x2X	Straight Connector (Junction)	1
TRD4x2x2X	4" x 2" to 2" x 2" Reducer	1
SD4x2X/TC4	4" x 2" Solid Channel with Cover	120 feet of 6 foot lengths
SL4x2X/TC4	4" x 2" Slotted Channel with Cover	120 feet of 6 foot lengths
SDWR4x20K2	Wire Retainer for 4" x 2" Solid Channel, Black	50 pieces per bag
SLWR40C2	Wire Retainer for 4" x 2" Slotted Channel, Black	100 pieces per bag
<b>4" x 4" System</b>		
TOC4x4X	Vertical Offset Connector (Inward & Outward Set)	1
TCVR4x4X	Vertical "T" Connector (Top Load)	1
TCVRD4x4X	Vertical "T" Connector (Top Load) with 4" to 2" Reducer	1
TCXR4x4X	4-Way Cross	1
TECRO4x4X	90P Elbow Connector (Outward Opening)	1
TECRI4x4X	90P Elbow Connector (Inward Opening)	1
TECR4x4X	90P Elbow Connector	1
TEC45R4x4X	45P Elbow Connector	1
TCHR4x4X	Horizontal "T" Connector	1
TCHRD4x4X	Horizontal "T" Connector with 4" to 2" Reducer	1
TCHRF4x4X	Horizontal Funnel Connector	1
TCEC4x4X	End Cap	1
FS4x4X	Firestop Support	1
SC4x4X	Straight Connector (Junction)	1
TRD4x2X	4" x 4" to 2" x 2" Reducer	1
TRD4x4x2X	4" x 4" to 4" x 2" Reducer	1
SD4x4X/TC4	4" x 4" Solid Channel with Cover	120 feet of 6 foot lengths
SL4x4X/TC4	4" x 4" Slotted Channel with Cover	120 feet of 6 foot lengths
SDWR4x40P2	Wire Retainer for 4" x 4" Solid Channel, Black	10 pieces per bag
SLWR40C2	Wire Retainer for 4" x 4" Slotted Channel, Black	100 pieces per bag
<b>8" x 4" System</b>		
TOC8x4X	Vertical Offset Connector (Inward & Outward Set)	1
TCXR8x4X	4-Way Cross	1
TECRO8x4X	90P Elbow Connector (Outward Opening)	1
TECR8x4X	90P Elbow Connector	1
TCHR8x4X	Horizontal "T" Connector	1
TCH8x4x4X	Horizontal "T" Connector with one 4" x 4" port	1
TCHR8x4x4X	Horizontal "T" Connector with two 4" x 4" ports	1
TCHRL8x4x4X	In-Line Cut-Out Connector with two 4" x 4" ports	1
TCEC8x4X	End Cap	1
SC8x4X	Straight Connector (Junction)	1
TRD8x4x4X	8" x 4" to 4" x 4" Reducer	1
SD8x4X/TC2	8" x 4" Solid Channel with Cover	120 feet of 6 foot lengths
<b>12" x 4" System</b>		
SD12x4X/TC12	12" x 4" Solid Channel with Cover	120 feet of 6 foot lengths

Replace "X" in the part number with the following letters for desired color: X = G (gray), Y (yellow)

# ROUTING AND RACEWAY PRODUCTS

## Lightguide Fiber Optic Protection System – Fill Capacity Chart

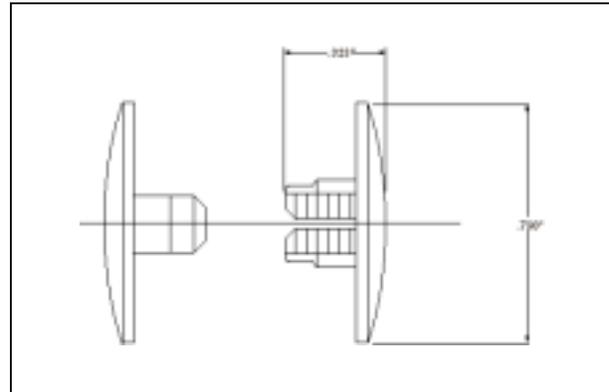
CHANNEL SIZE			1X1		2X2		2X4		4X2		4X4		8X4		12X4	
CHANNEL AREA (SQ. IN.)			0.73		3.48		6.87		7.32		14.66		30.01		45.36	
WIRE TYPE	WIRE SIZE	O.D. OF WIRE		40%	60%	40%	60%	40%	60%	40%	60%	40%	60%	40%	60%	
UNSHIELDED TWISTED PAIR, 24 AWG	2 Pr.	0.140		18	28	90	135	178	267	190	285	380	571	779	1169	1767
	3 Pr.	0.150		16	24	78	118	155	233	165	248	331	497	679	1018	1540
	4 Pr., category 5e	0.220		7	11	36	54	72	108	77	115	154	231	315	473	715
	4 Pr., Category 6	0.240		6	9	30	45	60	91	64	97	129	194	265	398	601
	25 Pr.	0.510		1	2	6	10	13	20	14	21	28	43	58	88	133
TWISTED PAIR, SHIELDED	4 Pr., 24 AWG	0.250		5	8	28	42	56	84	59	89	119	179	244	366	554
	25 Pr.	0.510		1	2	6	10	13	20	14	21	28	43	58	88	133
FIBER OPTIC CABLE	50/125 or	(2.0)	0.079	60	90	287	431	568	852	604	907	1211	1817	2480	3720	5623
	62.5/125 micron	(3.0)	0.118	26	40	127	191	251	377	267	401	536	804	1097	1646	2488

Formula used to calculate communications wire fill capacity. Numbers of wires = duct /  $\{1/4 \times \pi \times (\text{wire o.d.})^2\} \times 0.4$  or  $0.6$ . Per ANSI/TIA/EIA-569-A-1, the maximum pathway fill shall be 40 percent for planning perimeter pathways. A maximum of 60 percent pathway fill is allowed to accommodate unplanned additions after initial installation.

## Rivets

The plastic ratchet rivet (TR1) provides a secure connection of the Lightguide component to the Lightguide protective channel. Each component is equipped with predrilled holes allowing easy insertion of the plastic rivet.

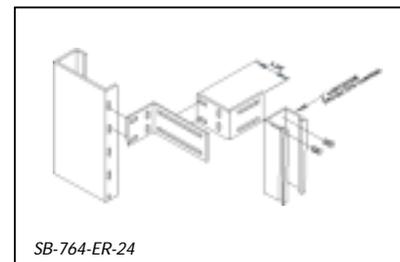
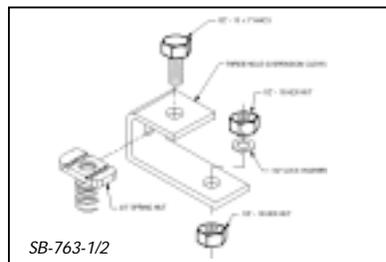
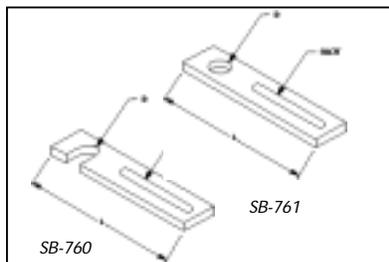
HELLERMANN TYTON PART NO.	DESCRIPTION	COLOR	PKG. QTY
TR1	Plastic Ratchet Rivet to Connect Component and Channel	Black	100 sets/kit (200 pieces)



## MOUNTING HARDWARE KITS

Various configurations of brackets are available for mounting and securing the Lightguide system to existing equipment. Kits are available for mounting onto threaded rod, strut, channel, cable runway, as well as equipment racks and computer floor posts.

All mounting brackets are steel with a telco gray finish. Below are just some of the available kits. Contact HellermannTyton or refer to the Lightguide Design and Installation Manual for more information.

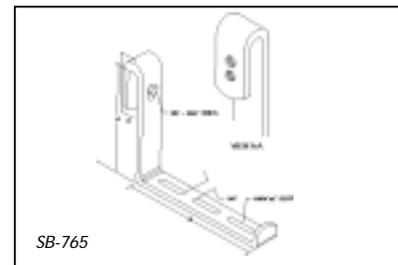
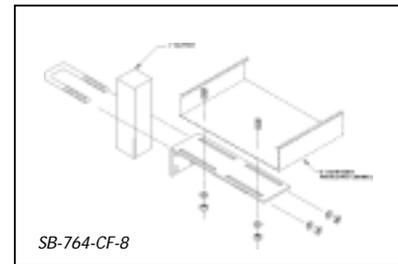
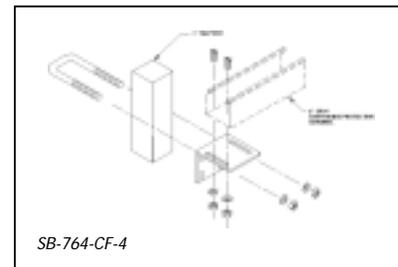


# ROUTING AND RACEWAY PRODUCTS

## Mounting Hardware Kits

HELLERMANN TYTON PART NO.	DESCRIPTION
SB-760-1/2X4	Threaded Rod/Lightguide Channel Support (Slotted)
SB-760-1/2X6	Threaded Rod/Lightguide Channel Support (Slotted)
SB-760-1/2X10	Threaded Rod/Lightguide Channel Support (Slotted)
SB-760-5/8X4	Threaded Rod/Lightguide Channel Support (Slotted)
SB-760-5/8X6	Threaded Rod/Lightguide Channel Support (Slotted)
SB-760-5/8X10	Threaded Rod/Lightguide Channel Support (Slotted)
SB-761-1/2X4	Threaded Rod/Lightguide Channel Support
SB-761-1/2X6	Threaded Rod/Lightguide Channel Support
SB-761-1/2X10	Threaded Rod/Lightguide Channel Support
SB-761-5/8X4	Threaded Rod/Lightguide Channel Support
SB-761-5/8X6	Threaded Rod/Lightguide Channel Support
SB-761-5/8X10	Threaded Rod/Lightguide Channel Support
SB-762-4	Strut Channel/Lightguide Channel Support
SB-762-6	Strut Channel/Lightguide Channel Support
SB-762-10	Strut Channel/Lightguide Channel Support
SB-763-1/2	Threaded Channel/Strut Channel Support
SB-764-ER-2	Equipment Rack/Lightguide Channel Support
SB-764-ER-4	Equipment Rack/Lightguide Channel Support
SB-764-ER-24	Equipment Rack/Lightguide Channel Support
SB-764-ER-44	Equipment Rack/Lightguide Channel Support
SB-764-CF-4	Computer Floor Post/Lightguide Channel Support
SB-764-CF-8	Computer Floor Post/Lightguide Channel Support
SB-765-41/2X5	Cable Runway/Lightguide Channel Support
SB-765-41/2X9	Cable Runway/Lightguide Channel Support
SB-765-9X5	Cable Runway/Lightguide Channel Support
SB-765-9X7	Cable Runway/Lightguide Channel Support
SB-765-9X9	Cable Runway/Lightguide Channel Support

See *Lightguide Design and Installation Manual* for more information.  
(Viewable online at [www.hellermann.tyton.com](http://www.hellermann.tyton.com) – go to products then manuals.)



## Converter Kit

When the complete connection of duct and tubing is required, or rigid Lightguide components may not fit through a certain area, the converter kit can be used. The kit consists of two gray PVC connectors, a section of black convoluted tubing, and two black Snapper clamps (SNP42) to secure the converters to the tubing. The black convoluted tubing is available in lengths of 2 feet, 4 feet, and 6 feet. The converter kit provides a smooth transition from 2" x 2" Lightguide to 1-1/2" flexible tubing.



HELLERMANN TYTON PART NO.	DESCRIPTION	PKG. QTY.
TFJK2X2	Kit containing two gray connectors, 2 foot section black convoluted tubing & two black Snapper clamps.	1
TFJK2X2-4	Kit containing two gray connectors, 4 foot section black convoluted tubing & two black Snapper clamps.	1
TFJK2X2-6	Kit containing two gray connectors, 6 foot section black convoluted tubing & two black Snapper clamps.	1
TJ2XRD	Gray connector	1

See page 113 for bulk convoluted tubing.

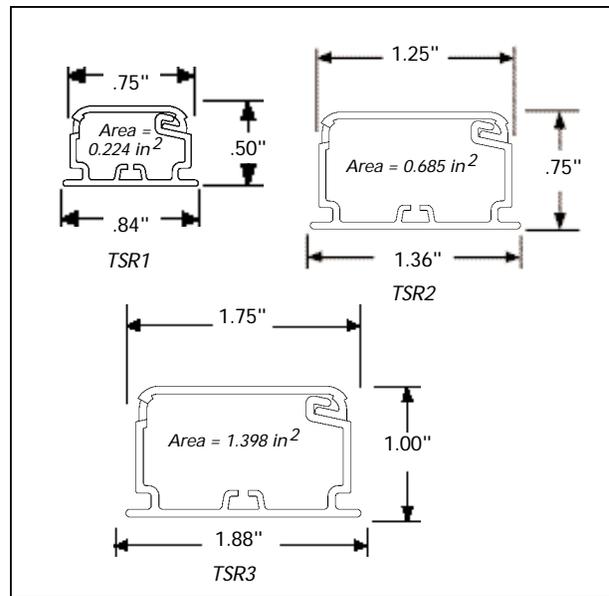
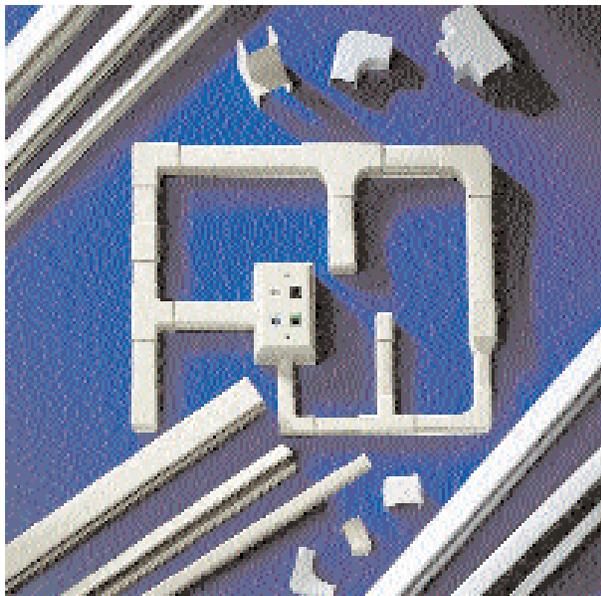
# ROUTING AND RACEWAY PRODUCTS

## RACEWAY – TSR

HellermannTyton's surface raceway (TSR) is a one piece, non-metallic, adhesive backed latching raceway designed to aesthetically organize and route low voltage communications wires including high speed UTP cable and fiber optic cable from the telecommunications closet to the workstation. It features a low profile design which blends into any environment whether it is new construction or a renovation. It is easy to cut and trim and is also paintable with a latex-based paint to fit any home or office decor. The raceway is equipped with a large base for greater adhesive surface. The adhesive is a rubber-based foam tape with high ultimate bond strength, which conforms to any surface. The adhesive alone can be used as a temporary securing device; however, screws should be installed for permanent attachment.

Featuring a special flexible hinge, the raceway can endure numerous openings without creating discoloration or stress cracking. The one piece design also allows cables to be laid in rather than pulled through, reducing installation time and cost. The cover's self-locking, hidden positive latch permits quick re-entry as well as providing a secure installation of premise wire.

Since the distance between most ceiling to junction box runs is between 6 and 8 feet, HellermannTyton offers the TSR in both 6 foot and 8 foot lengths. The 8 foot length is ideal for long horizontal runs, eliminating cutting and splicing of raceway. For varying cabling requirements, the TSR is available in three different widths including 3/4", 1-1/4" and 1-3/4". Available in electrical ivory, white, and office white, it is manufactured from 94V-0 PVC.



## HellermannTyton Surface Raceway



HELLERMANN TYTON PART NO.	DESCRIPTION	DIMENSIONS	PKG. QTY.
<b>TSR1 Raceway</b>			
TSR1X-6A	3/4" One Piece Surface Raceway	3/4"(W) x 1/2"(H) x 6'(L)	120 feet of 6 foot lengths
TSR1X-8A	3/4" One Piece Surface Raceway	3/4"(W) x 1/2"(H) x 8'(L)	160 feet of 8 foot lengths
<b>TSR2 Raceway</b>			
TSR2X-6A	1-1/4" One Piece Surface Raceway	1-1/4"(W) x 3/4"(H) x 6'(L)	120 feet of 6 foot lengths
TSR2X-8A	1-1/4" One Piece Surface Raceway	1-1/4"(W) x 3/4"(H) x 8'(L)	160 feet of 8 foot lengths
<b>TSR3 Raceway</b>			
TSR3X-6A	1-3/4" One Piece Surface Raceway	1-3/4"(W) x 1"(H) x 6'(L)	120 feet of 6 foot lengths
TSR3X-8A	1-3/4" One Piece Surface Raceway	1-3/4"(W) x 1"(H) x 8'(L)	160 feet of 8 foot lengths

Replace "X" in the part number with the following letters for desired color: X = I (Ivory), FW (office white), W (white)

# ROUTING AND RACEWAY PRODUCTS

## RACEWAY FITTINGS – TSR

HellermannTyton provides a complete line of fittings to manage connectivity requirements from the telecommunications closet to the workstation. The fittings are available for each size raceway and also in the color options of electrical ivory, white, or office

white. Each size offers numerous accessories, including TIA/EIA-568-B compliant 1" bend radius accessories which help ensure consistent data transmission performance of Category 5, 5e and 6 communications systems.



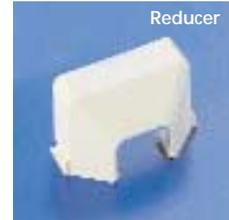
Designated with -50



Designated with -36



Designated with -14



Designated with -12



Designated with -25-1



Designated with -29-1



Designated with -33-1



Designated with -21-1

## Low Voltage Surface Raceway Accessories

HELLERMANN TYTON PART NO.	DESCRIPTION	PKG. QTY.
<b>TSR1 Fittings</b>		
TSR1X-14	Splice Cover – 3/4"	10
TSR1X-21-1	Tee Cover - 3/4" – 1" Bend Radius	10
TSR1X-25-1	Elbow Cover – 3/4" - 1" Bend Radius	10
TSR1X-29-1	External Cover – 3/4" – 1" Bend Radius	10
TSR1X-33-1	Internal Cover – 3/4" – 1" Bend Radius	10
TSR1X-36	End Cap – 3/4"	10
TSR1X-50	Ceiling Drop – 3/4"	10
<b>TSR2 Fittings</b>		
TSR2X-14	Splice Cover – 1-1/4"	10
TSR2X-21-1	Tee Cover – 1-1/4" – 1" Bend Radius	10
TSR2X-25-1	Elbow Cover – 1-1/4" – 1" Bend Radius	10
TSR2X-29-1	External Cover – 1-1/4" – 1" Bend Radius	10
TSR2X-33-1	Internal Cover – 1-1/4" – 1" Bend Radius	10
TSR2X-36	End Cap – 1-1/4"	10
TSR2X-50	Ceiling Drop – 1-1/4"	10
<b>TSR3 Fittings</b>		
TSR3X-14	Splice Cover – 1-3/4"	10
TSR3X-21-1	Tee Cover – 1-3/4" – 1" Bend Radius	10
TSR3X-25-1	Elbow Cover – 1-3/4" – 1" Bend Radius	10
TSR3X-29-1	External Cover – 1-3/4" – 1" Bend Radius	10
TSR3X-33-1	Internal Cover – 1-3/4" – 1" Bend Radius	10
TSR3X-36	End Cap – 1-3/4"	10
TSR3X-50	Ceiling Drop – 1-3/4"	10
<b>Reducers</b>		
TSR1X-12	Reducer – 1-3/4" to 1-1/4" (TSR3 to TSR2)	10
TSR2X-12	Reducer – 1-3/4" to 3/4" (TSR3 to TSR1)	10
TSR3X-12	Reducer – 1-1/4" to 3/4" (TSR2 to TSR1)	10

Replace "X" in the part number with the following letters for desired color: X = I (ivory), FW (office white), W (white)

# ROUTING AND RACEWAY PRODUCTS

## Surface Raceway Wire Fill Capacity Chart – TSR

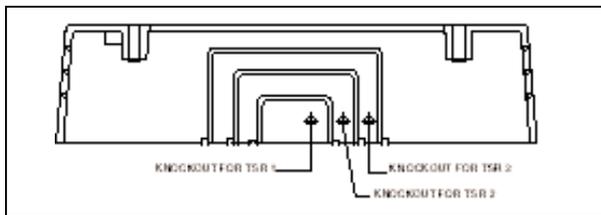
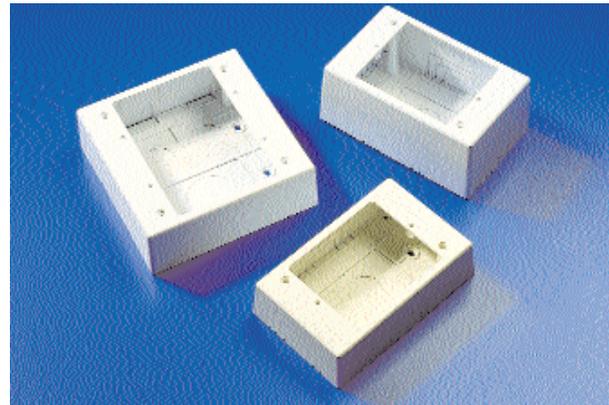
Wire Type	Wire Size	O.D. of Wire	TSR1 0.224 in <sup>2</sup>		TSR2 0.685 in <sup>2</sup>		TSR3 1.398 in <sup>2</sup>	
			40%	60%	40%	60%	40%	60%
Signal Wire-UL	18 AWG	0.066	26	39	80	120	163	245
Style 1061	20 AWG	0.060	31	47	96	145	197	296
300v-80 C	22 AWG	0.050	45	68	139	209	284	427
	24 AWG	0.045	56	84	172	258	351	527
Twisted Pair	2 Pr.	0.140	5	8	17	26	36	547
24 AWG	3 Pr.	0.150	5	7	15	23	31	47
Unshielded	4 Pr. Cat 5	0.217	2	3	7	11	15	22
	4 Pr. Cat 6	0.240	1	2	6	9	12	18
	25 Pr.	0.410	0	1	2	3	4	6
Twisted Pair	4 Pr. 24 AWG	0.250	1	2	5	8	11	17
Shielded	25 Pr. 24 AWG	0.510	0	0	1	2	2	4
	Type 1	0.390	0	1	2	3	4	7
	Type 2	0.465	0	0	1	2	3	4
	Type 3	0.245	1	2	5	8	11	17
Coax	RG58/U	0.193	3	4	9	14	19	28
	RG59/U or RG62/U	0.242	1	2	5	8	12	18
	RG6/U	0.270	1	2	4	7	9	14
Fiber Optic	2 Strand	0.175	3	5	11	17	23	34
FA Jacket	4 Strand	0.185	3	5	10	15	20	31
OFNP	6 Strand	0.210	2	3	7	11	16	24

Formula used to calculate communications wire fill capacity. Numbers of wires = duct /  $\{1/4 \times s \times (\text{wire o.d.})^2\} \times 0.4$  or  $0.6$ . Per ANSI/TIA/EIA-569-A-1, the maximum pathway fill shall be 40 percent for planning perimeter pathways. A maximum of 60 percent pathway fill is allowed to accommodate unplanned additions after initial installation.

## Junction Boxes

Offered in a dual or single gang format, Hellermann-Tyton's low voltage junction boxes are versatile enough for any network cabling application. Available in varying depths, these boxes are all equipped with concentric knockouts. Providing knockouts on all four sides for every TSR size raceway eliminates routing and installation inconvenience.

All three styles of junction boxes come with adhesive strips on the back of the base and also #6 screws to secure the box to the base.



## HellermannTyton Surface Raceway Junction Boxes

HELLERMANNTYTON PART NO.	DESCRIPTION	DIMENSIONS	PKG. QTY.
TSRX-JB1	Single Gang 1-1/4" Depth Junction Box	3" (W) x 4-3/4" (L) x 1-1/4" (H)	1
TSRX-JB2	Single Gang 2" Depth Junction Box	3" (W) x 4-3/4" (L) x 2" (H)	1
TSRX-JBD	Dual Gang 1-1/2" Depth Junction Box	4.91" (W) x 4.83" (L) x 1-1/2" (H)	1

Replace "X" in the part number with the following letters for desired color: X = I (ivory), FW (office white), W (white)

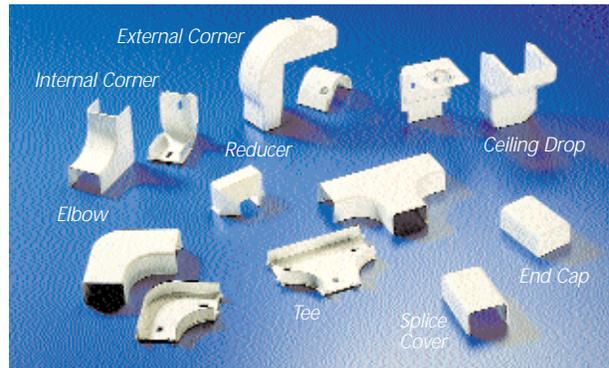
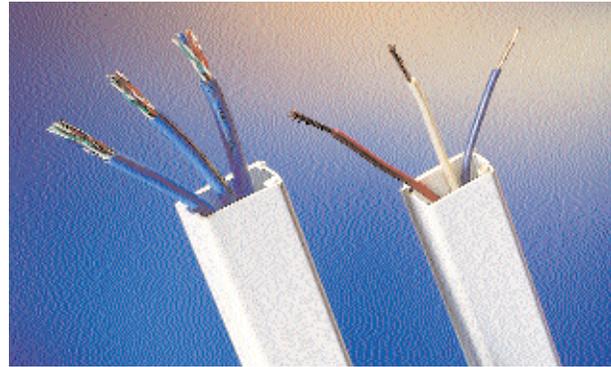
# ROUTING AND RACEWAY PRODUCTS



## 600V SURFACE RACEWAY – TSR

HellermannTyton's TSR-600V raceway is ideal for applications containing both communications and power cables. It is completely tamper resistant and self-locking due to a hidden positive latch, providing secure installation of wire and cable. The TSR-600V is manufactured from UL 94V-0 rated PVC material.

- Standard raceway now U.L. Listed for power up to 600 Volts
- Meets New UL5A and CSA 22.2 No. 62-93 Standards
- One raceway system for both low voltage communications and power cabling
- All fittings incorporate a minimum 1" bend radius per TIA/EIA 568-A and 569-A standards
- Junction boxes can be used for electrical or data outlets



## 600V Surface Raceway Wire Fill Chart\*

Wire Type	Wire Size	O.D. of Wire	TSR1 0.2241 in <sup>2</sup> Maximum	TSR2 0.6845 in <sup>2</sup> Maximum	TSR3 1.3979 in <sup>2</sup> Maximum
Electrical Wire	14 AWG THHN	0.105	9	10	12
	12 AWG THHN	0.122	6	8	9
	10 AWG THHN	0.153	4	5	6

\*Anticipated.  
See pg. 39 for low voltage wire fill capacities.

## Raceway for Power Applications



HELLERMANN TYTON PART NO.	DESCRIPTION	DIMENSIONS	PKG. QTY.
<b>TSR1 Raceway</b>			
TSR1X-6A	3/4" One Piece Surface Raceway	3/4" (W) x 1/2" (H) x 6' (L)	120 feet of 6 foot lengths
TSR1X-8A	3/4" One Piece Surface Raceway	3/4" (W) x 1/2" (H) x 8' (L)	160 feet of 8 foot lengths
<b>TSR2 Raceway</b>			
TSR2X-6A	1-1/4" One Piece Surface Raceway	1-1/4" (W) x 3/4" (H) x 6' (L)	120 feet of 6 foot lengths
TSR2X-8A	1-1/4" One Piece Surface Raceway	1-1/4" (W) x 3/4" (H) x 8' (L)	160 feet of 8 foot lengths
<b>TSR3 Raceway</b>			
TSR3X-6A	1-3/4" One Piece Surface Raceway	1-3/4" (W) x 1" (H) x 6' (L)	120 feet of 6 foot lengths
TSR3X-8A	1-3/4" One Piece Surface Raceway	1-3/4" (W) x 1" (H) x 8' (L)	160 feet of 8 foot lengths

Replace "X" in the part number with the following letters for desired color: X = I (ivory), FW (office white), W (white)

# ROUTING AND RACEWAY PRODUCTS

## 600V Surface Raceway Accessories

HELLERMANN TYTON PART NO.	DESCRIPTION	PKG. QTY.
<b>TSR1 Fittings</b>		
TSR1X-14P	Splice Cover – 3/4"	10
TSR1X-21-1P	Tee – 3/4" –1" Bend Radius	10
TSR1X-25-1P	Elbow – 3/4" –1" Bend Radius	10
TSR1X-29-1P	External Corner – 3/4" –1" Bend Radius	10
TSR1X-33-1P	Internal Corner – 3/4" –1" Bend Radius	10
TSR1X-36P	End Cap – 3/4"	10
TSR1X-50P	Ceiling Drop – 3/4" –1" Bend Radius	10
<b>TSR2 Fittings</b>		
TSR2X-14P	Splice Cover – 1-1/4"	10
TSR2X-21-1P	Tee – 1-1/4" –1" Bend Radius	10
TSR2X-25-1P	Elbow – 1-1/4" –1" Bend Radius	10
TSR2X-29-1P	External Corner – 1-1/4" –1" Bend Radius	10
TSR2X-33-1P	Internal Corner – 1-1/4" –1" Bend Radius	10
TSR2X-36P	End Cap – 1-1/4"	10
TSR2X-50P	Ceiling Drop – 1-1/4" –1" Bend Radius	10
<b>TSR3 Fittings</b>		
TSR3X-14P	Splice Cover – 1-3/4"	10
TSR3X-21-1P	Tee – 1-1/4" –1" Bend Radius	10
TSR3X-25-1P	Elbow – 1-3/4" –1" Bend Radius	10
TSR3X-29-1P	External Corner – 1-3/4" –1" Bend Radius	10
TSR3X-33-1P	Internal Corner – 1-3/4" –1" Bend Radius	10
TSR3X-36P	End Cap – 1-3/4"	10
TSR3X-50P	Ceiling Drop – 1-3/4" –1" Bend Radius	10
<b>Reducers</b>		
TSR1X-12P	Reducer – 1-3/4" to 1-1/4" (TSR3 to TSR2)	10
TSR2X-12P	Reducer – 1-3/4" to 3/4" (TSR3 to TSR1)	10
TSR3X-12P	Reducer – 1-1/4" to 3/4" (TSR2 to TSR1)	10

Replace "X" in the part number with the following letters for desired color: X = I (ivory), FW (office white), W (white)

## 600V Surface Raceway Junction Boxes

HELLERMANN TYTON PART NO.	DESCRIPTION	PKG. QTY.
TSRX-JB1P	Single Gang – 3"(W) x 4-3/4"(L) x 1-1/4"(H) Junction Box	1
TSRX-JB2P	Single Gang – 3"(W) x 4-3/4"(L) x 2"(H) Junction Box	1
TSRX-JBDP	Dual Gang – 4.91"(W) x 4.83"(L) x 1-1/2"(H) Junction Box	1

Replace "X" in the part number with the following letters for desired color: X = I (ivory), FW (office white), W (white)

# ROUTING AND RACEWAY PRODUCTS

## INFOSTREAM™

### Multi-Channel Raceway



HellermannTyton's InfoStream is a revolutionary design for a non-metallic raceway system. The elliptical shape is aesthetically pleasing to customers when compared to other designs. By using the three rails to snap in dividers, the InfoStream system can accommodate up to four separate channels of electrical, voice, data, video or fiber optic cabling. InfoStream's unique and patented design make installations quicker and easier. The raceway and fittings are manufactured from a UL 94V-0 rated material.

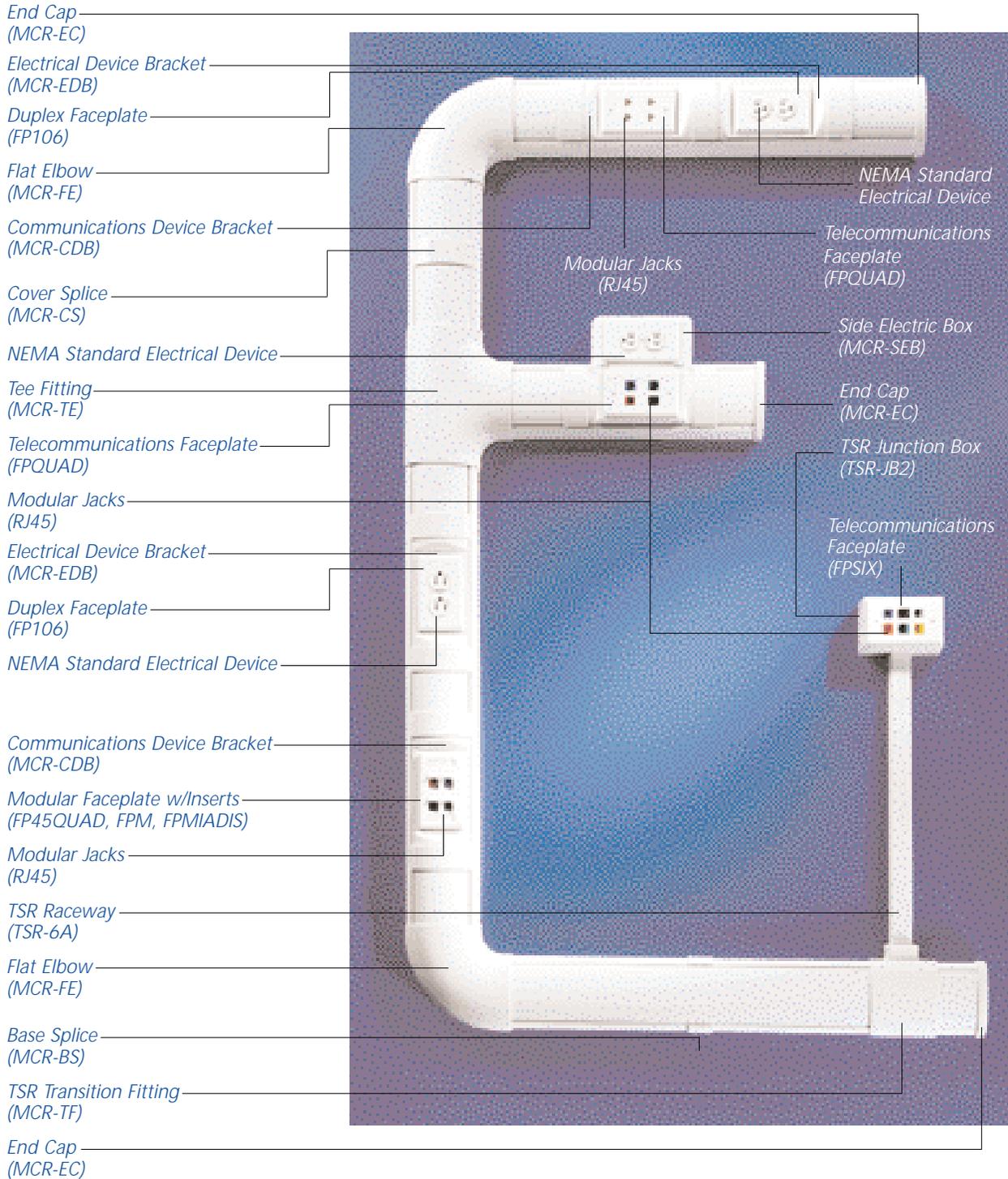
- All fittings have been designed to maintain the required 1" minimum bend radius per TIA/EIA-568-A and 569-A standards.
- U.L. Listed to 600 Volts – Meets new UL5A and CSA 22.2 No. 62-93 standards.
- Patented hinged cover speeds installation time by allowing installer to partially mount cover prior to laying cables.
- Light weight also eases installation and reduces labor costs.
- Offset elbow is the only solution currently on the market for wall offsets between 2-6" .
- Mates directly with HellermannTyton's TSR-single channel raceway system.
- System is designed to accept all NEMA standard faceplates and devices.
- Side electric box gives installer the option to offset electrical outlet above or below raceway.
- Cable tie mount retains cables inside of channel if necessary and accepts standard HellermannTyton cable ties.
- Entrance end fitting allows entrance into raceway from ceiling or through wall.



# ROUTING AND RACEWAY PRODUCTS

## INFOSTREAM™

### Multi-Channel Raceway Diagram



# ROUTING AND RACEWAY PRODUCTS

## INFOSTREAM™

### Multi-Channel Raceway

#### Power and Data Only



#### Power Only Configuration

Components: Electrical Device Bracket (MCR-EDB)  
Area: 2.50 sq. in.



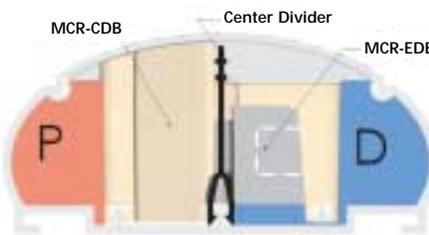
#### Data Only Configuration

Components: Communications Device Bracket (MCR-CDB)  
Area: 3.08 sq. in.

#### Power and Data Inline



#### With Center Divider



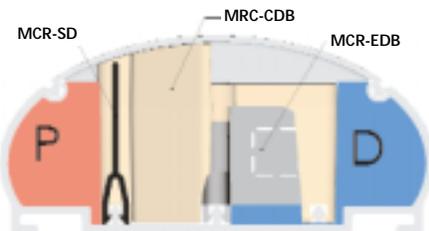
#### Center Divider Configuration

Components:

- Raceway Center Divider (included with base)
- Communications Device Bracket (MCR-CDB)
- Electrical Device Bracket (MCR-EDB)

Data Area: 1.15 sq. in.  
Power Area: 1.00 sq. in.

#### With Side Divider



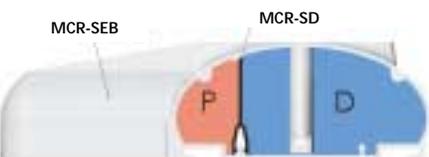
#### Side Divider Configuration

Components:

- Raceway Side Divider (MCR-SD)
- Communications Device Bracket (MCR-CDB)
- Electrical Device Bracket (MCR-EDB)

Data Area: 1.15 sq. in.  
Power Area: 1.00 sq. in.

#### Side Electric Box with Data



#### Side Electric Box with Data Configuration

Components:

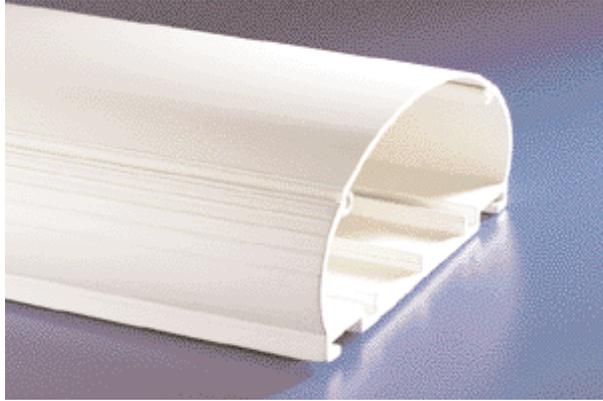
- Side Electric Box (MCR-SEB)
- Raceway Side Divider (MCR-SD)

Data Area: 4.26 sq. in.  
Power Area: 1.22 sq. in.

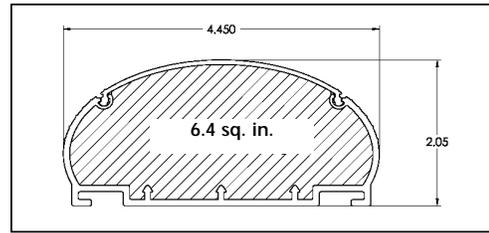
# ROUTING AND RACEWAY PRODUCTS

## INFOSTREAM™

### Multi-Channel Raceway



Unique, streamlined design enhances the aesthetics of any installation.



Hinged cover speeds installation.



### Multi-Channel Raceway Base

HELLERMANN TYTON PART NO.	DESCRIPTION	PKG. QTY.
	<i>Base is supplied with pre-punched mounting holes every 8". Center and side dividers are not interchangeable. Raceway base also includes adhesive double-sided tape for aid in mounting. Raceway must still be properly fastened to the wall per included instructions.</i>	
<b>MCRX-B8</b>	Raceway Base – 8 feet with <b>center</b> divider	48 feet
<b>MCRX-B10</b>	Raceway Base – 10 feet with <b>center</b> divider	60 feet
<b>MCRX-BS8</b>	Raceway Base – 8 feet with <b>side</b> divider	48 feet
<b>MCRX-BS10</b>	Raceway Base – 10 feet with <b>side</b> divider	60 feet

Replace "X" in the part number with the following letters for desired color:  
X = I (ivory), FW (office white)



**NEW**

### Multi-Channel Raceway Cover

HELLERMANN TYTON PART NO.	DESCRIPTION	PKG. QTY.
<b>MCRX-C8</b>	Raceway Cover – 8 feet	48 feet
<b>MCRX-C10</b>	Raceway Cover – 10 feet	60 feet

Replace "X" in the part number with the following letters for desired color:  
X = I (ivory), FW (office white)



### Multi-Channel Raceway Divider

HELLERMANN TYTON PART NO.	DESCRIPTION	PKG. QTY.
	<i>Snaps onto either side of raceway base rails for proper power and data separation per UL/CSA.</i>	
<b>MCRW-SD8</b>	White Raceway Side Divider – 8 feet	96 feet
<b>MCRW-SD10</b>	White Raceway Side Divider – 10 feet	120 feet



# ROUTING AND RACEWAY PRODUCTS

## INFOSTREAM™

### Multi-Channel Raceway



#### Flat Elbow



HELLERMANN TYTON PART NO.	DESCRIPTION	PKG. QTY.
MCRX-FE	Joins raceway at 90° flat angle. Flat Elbow	1

Replace "X" in the part number with the following letters for desired color: X = I (ivory), FW (office white)



#### External Elbow



HELLERMANN TYTON PART NO.	DESCRIPTION	PKG. QTY.
MCRX-EE	Joins raceway at 90° outside corner. External Elbow	1

Replace "X" in the part number with the following letters for desired color: X = I (ivory), FW (office white)

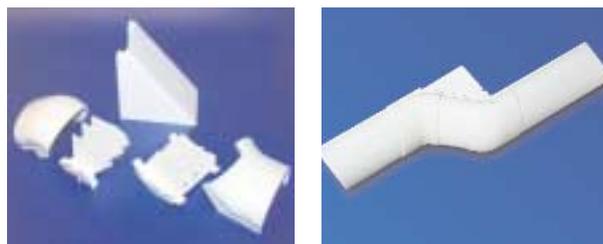


#### Internal Elbow



HELLERMANN TYTON PART NO.	DESCRIPTION	PKG. QTY.
MCRX-IE	Joins raceway at 90° inside corner. Internal Elbow	1

Replace "X" in the part number with the following letters for desired color: X = I (ivory), FW (office white)



#### Offset Elbow



HELLERMANN TYTON PART NO.	DESCRIPTION	PKG. QTY.
MCRX-OE	For small wall offsets between 2"-6". Used in conjunction with piece of raceway. Corner filler included for a flush appearance. Offset Elbow	1

Replace "X" in the part number with the following letters for desired color: X = I (ivory), FW (office white)



#### Tee Fitting



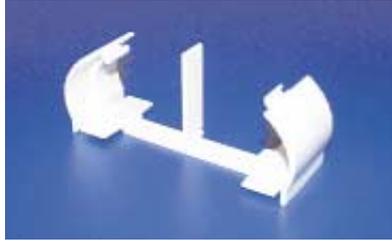
HELLERMANN TYTON PART NO.	DESCRIPTION	PKG. QTY.
MCRX-TE	Joins 3 sections of raceway and includes divider. Tee Fitting	1

Replace "X" in the part number with the following letters for desired color: X = I (ivory), FW (office white)

# ROUTING AND RACEWAY PRODUCTS

## INFOSTREAM™

### Multi-Channel Raceway



#### Base Splice



HELLERMANN TYTON PART NO.	DESCRIPTION	PKG. QTY.
MCRX-BS	Joins 2 sections of raceway base. Base Splice	10

Replace "X" in the part number with the following letters for desired color:  
X = I (ivory), FW (office white)



#### Cover Splice



HELLERMANN TYTON PART NO.	DESCRIPTION	PKG. QTY.
MCRX-CS	Joins 2 sections of raceway cover and required with use of Communications and Electrical Device Brackets. Cover Splice	10

Replace "X" in the part number with the following letters for desired color:  
X = I (ivory), FW (office white)



#### End Cap



HELLERMANN TYTON PART NO.	DESCRIPTION	PKG. QTY.
MCRX-EC	Completes raceway or provides transition for 1/2", 3/4" and 1" conduit. End Cap	1

Replace "X" in the part number with the following letters for desired color:  
X = I (ivory), FW (office white)



#### Transition Fitting



HELLERMANN TYTON PART NO.	DESCRIPTION	PKG. QTY.
MCRX-TF	Knockouts are provided for TSR1, TSR2, and TSR3 surface raceway. Transition Fitting	1

Replace "X" in the part number with the following letters for desired color:  
X = I (ivory), FW (office white)



#### Electrical Device Bracket



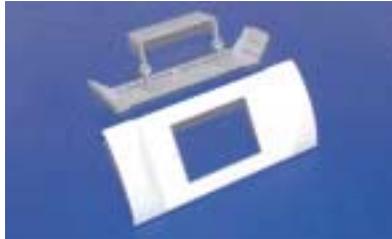
HELLERMANN TYTON PART NO.	DESCRIPTION	PKG. QTY.
MCRX-EDB	Used to mount NEMA standard single gang electrical faceplates — cover splice is required for proper use. Electrical Device Bracket	10

Replace "X" in the part number with the following letters for desired color:  
X = I (ivory), FW (office white)

# ROUTING AND RACEWAY PRODUCTS

## INFOSTREAM™

### Multi-Channel Raceway



#### Communications Device Bracket



HELLERMANN TYTON PART NO.	DESCRIPTION	PKG. QTY.
MCRX-CDB	Used to mount NEMA standard single gang faceplates for communications devices — cover splice is required for proper use. Communications Device Bracket	10

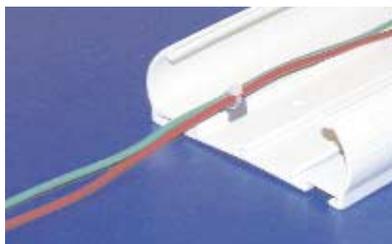
Replace "X" in the part number with the following letters for desired color:  
X = I (ivory), FW (office white)



#### Wire Retainer



HELLERMANN TYTON PART NO.	DESCRIPTION	PKG. QTY.
MCRG-WR	Keeps wire & cable in place. Recommend placement every 18" to 24". Wire Retainer – Gray	10



#### Tie Mount



HELLERMANN TYTON PART NO.	DESCRIPTION	PKG. QTY.
MCRG-TM	Keeps wire & cable bundled. Accepts standard HellermannTyton cable ties T18-T50. Tie Mount – Gray	100



#### Side Electric Box



HELLERMANN TYTON PART NO.	DESCRIPTION	PKG. QTY.
MCRX-SEB	Option for communications devices in raceway and electrical outlets on side. Side Electric Box	1

Replace "X" in the part number with the following letters for desired color:  
X = I (Electrical Ivory), FW (Office White)



#### Entrance End



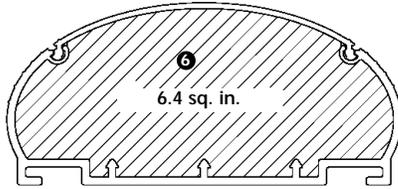
HELLERMANN TYTON PART NO.	DESCRIPTION	PKG. QTY.
MCRX-ENT	For use as a ceiling drop, conduit transition from end or base of raceway, or low voltage entrance from end or base of raceway. Includes dual 0.75", 1.0", 1.25", 1.75", 2", and 2.5" knockouts. Entrance End Fitting	1

Replace "X" in the part number with the following letters for desired color:  
X = I (Electrical Ivory), FW (Office White)

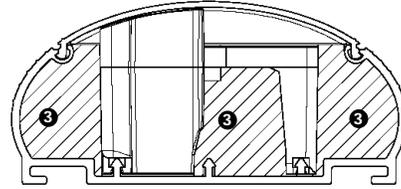
# ROUTING AND RACEWAY PRODUCTS

## INFOSTREAM™

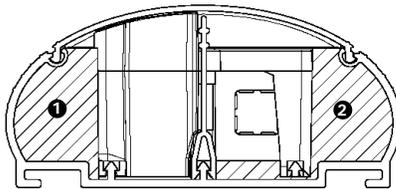
### Multi-Channel Raceway



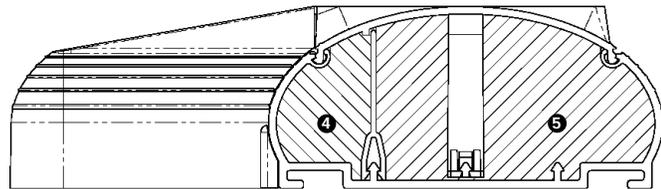
Base and Cover with No Devices



Data Only Using Communications Device Bracket



Power and Data Inline



Side Electric Box with Data

### Multi-Channel Raceway Wire Fill Capacity

LOW VOLTAGE			Raceway Area of Raceway		Channel 1 1.000"		Channel 2 1.150"		Channel 3 2.080"		Channel 4 1.220"		Channel 5 4.260"		Channel 6 6.400"	
Wire Type	Wire Size	O.D. of Wire	40%	60%	40%	60%	40%	60%	40%	60%	40%	60%	40%	60%	40%	60%
Signal Wire-UL Style 1061 300v-80 C	18AWG	0.066"	116	175	134	201	243	364	142	213	498	747	748	1122		
	20AWG	0.060"	141	212	162	244	294	441	172	258	602	904	905	1358		
	22AWG	0.050"	203	305	234	351	423	635	248	372	867	1301	1303	1955		
	24AWG	0.045"	251	377	289	433	523	784	306	460	1071	1607	1609	2414		
Twisted Pair 24 AWG	2 Pr.	0.140"	25	38	29	44	54	81	31	47	110	166	166	249		
	3 Pr.	0.150"	22	33	26	39	47	70	27	41	96	144	144	217		
Unshielded	4 Pr., Cat. 5	0.217"	10	16	12	18	22	33	13	19	46	69	69	103		
	4 Pr., Cat. 6	0.240"	8	13	10	15	18	27	10	16	37	56	56	84		
	25 Pr.	0.410"	3	4	3	5	6	9	3	5	12	19	19	29		
Twisted Pair Shielded	4 Pr., 24 AWG	0.250"	8	12	9	14	16	25	9	14	34	52	52	78		
	25 Pr., 24 AWG	0.510"	1	2	2	3	4	6	2	3	8	12	12	18		
	Type 1	0.390"	3	5	3	5	6	10	4	6	14	21	21	32		
	Type 2	0.465"	2	3	2	4	4	7	2	4	10	15	15	22		
Coax	Type 3	0.245"	8	12	9	14	17	26	10	15	36	54	54	81		
	RG58/U	0.193"	13	20	15	23	28	42	16	25	58	87	87	131		
	RG59/U or RG62/U	0.242"	8	13	10	15	18	27	10	15	37	55	55	83		
Fiber Optic FA Jacket OFNP	RG6/U	0.270"	6	10	8	12	14	21	8	12	29	44	44	67		
	2 Strand	0.175"	16	24	19	28	34	51	20	30	70	106	106	159		
	4 Strand	0.185"	14	22	17	25	30	46	18	27	63	95	95	142		
6 Strand	0.210"	11	17	13	19	24	36	14	21	49	73	73	110			
POWER			Raceway Area of Raceway		Channel 1 1.000"		Channel 2 1.150"		Channel 3 2.080"		Channel 4 1.220"		Channel 5 4.260"		Channel 6 6.400"	
Wire Type	Wire Size	O.D. of Wire	Maximum		Maximum		Maximum		Maximum		Maximum		Maximum		Maximum	
Electrical Wire	14AWG THHN	0.105"	17						21				30			
	12AWG THHN	0.122"	12						15				25			
	10AWG THHN	0.153"	8						9				19			

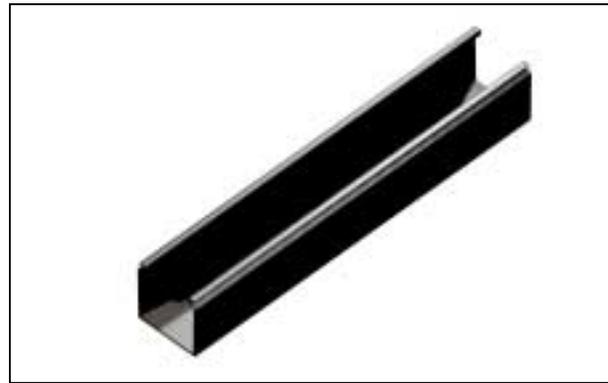
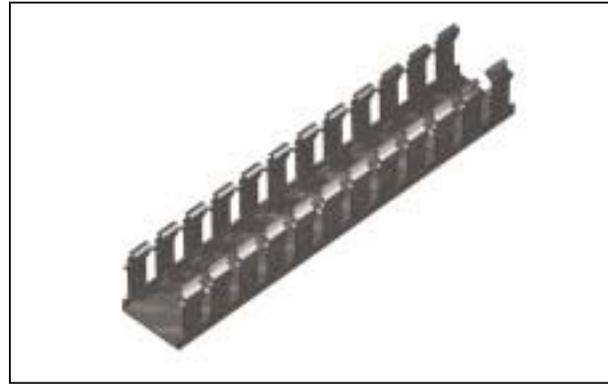
Formula used to calculate communications wire fill capacity. Numbers of wires = duct /  $\{1/4 \times \pi \times (\text{wire o.d.})^2\} \times 0.4$  or  $0.6$ . Per ANSI/TIA/EIA-569-A-1, the maximum pathway fill shall be 40 percent for planning perimeter pathways. A maximum of 60 percent pathway fill is allowed to accommodate unplanned additions after initial installation.

# ROUTING AND RACEWAY PRODUCTS

HellermannTyton manufactures wiring duct from high impact and rigid PVC for routing and protecting wire and cable.

The slotted duct features break-away fingers which provide additional access for wire and cable. Each section of slotted duct is provided with two score lines. The first one is at the base of the finger which allows the finger to be bent and broken away when a greater opening is required. The second score line is lower which allows a section of the sidewall to be easily removed by simply cutting the sidewall down to the lower score line and snapping out the desired section. These two score lines provide smooth edges to ensure user comfort and cable safety. For straight wire runs where break-outs are not required, HellermannTyton also provides solid wall duct.

The covers are flush with the side of the duct and also are provided with a non-slip plastic lining to ensure that the covers remain in place. **The covers must be ordered separately.**



## Wiring Duct

HELLERMANN TYTON PART NO.	DESCRIPTION	*COLOR	PKG. QTY.
SL1X1BK4	1" (W) x 1" (H) x 6' (L) Slotted Duct	Black	120 feet of 6 foot lengths
SL1X4BK4	1" (W) x 4" (H) x 6' (L) Slotted Duct	Black	120 feet of 6 foot lengths
SL1.5XBK4	1.5" (W) x 4" (H) x 6' (L) Slotted Duct	Black	120 feet of 6 foot lengths
SL1.5X1.5BK4	1.5" (W) x 1.5" (H) x 6' (L) Slotted Duct	Black	120 feet of 6 foot lengths
SL1.5X2BK4	1.5" (W) x 2" (H) x 6' (L) Slotted Duct	Black	120 feet of 6 foot lengths
SL2X2BK4	2" (W) x 2" (H) x 6' (L) Slotted Duct	Black	120 feet of 6 foot lengths
SL2X3BK4	2" (W) x 3" (H) x 6' (L) Slotted Duct	Black	120 feet of 6 foot lengths
SL2X4BK4	2" (W) x 4" (H) x 6' (L) Slotted Duct	Black	120 feet of 6 foot lengths
SL3X2BK4	3" (W) x 2" (H) x 6' (L) Slotted Duct	Black	120 feet of 6 foot lengths
SL3X3BK4	3" (W) x 3" (H) x 6' (L) Slotted Duct	Black	120 feet of 6 foot lengths
SL3X4BK4	3" (W) x 4" (H) x 6' (L) Slotted Duct	Black	120 feet of 6 foot lengths
SL3X5BK4	3" (W) x 5" (H) x 6' (L) Slotted Duct	Black	60 feet of 6 foot lengths
SL4X4BK4	4" (W) x 4" (H) x 6' (L) Slotted Duct	Black	120 feet of 6 foot lengths
SL4X5BK4	4" (W) x 5" (H) x 6' (L) Slotted Duct	Black	60 feet of 6 foot lengths
SD1X1BK4	1" (W) x 1" (H) x 6' (L) Solid Duct	Black	120 feet of 6 foot lengths
SD1.5X1.5BK4	1.5" (W) x 1.5" (H) x 6' (L) Solid Duct	Black	120 feet of 6 foot lengths
SD2X2BK4	2" (W) x 2" (H) x 6' (L) Solid Duct	Black	120 feet of 6 foot lengths
SD3X3BK4	3" (W) x 3" (H) x 6' (L) Solid Duct	Black	120 feet of 6 foot lengths
SD4X4BK4	4" (W) x 4" (H) x 6' (L) Solid Duct	Black	120 feet of 6 foot lengths
TC1BK4	Cover for 1" Wide Duct	Black	120 feet of 6 foot lengths
TC1.5BK4	Cover for 1.5" Wide Duct	Black	120 feet of 6 foot lengths
TC2BK4	Cover for 2" Wide Duct	Black	120 feet of 6 foot lengths
TC3BK4	Cover for 3" Wide Duct	Black	120 feet of 6 foot lengths
TC4BK4	Cover for 4" Wide Duct	Black	120 feet of 6 foot lengths

\*Also available in standard White and Gray – Call for availability of additional sizes.