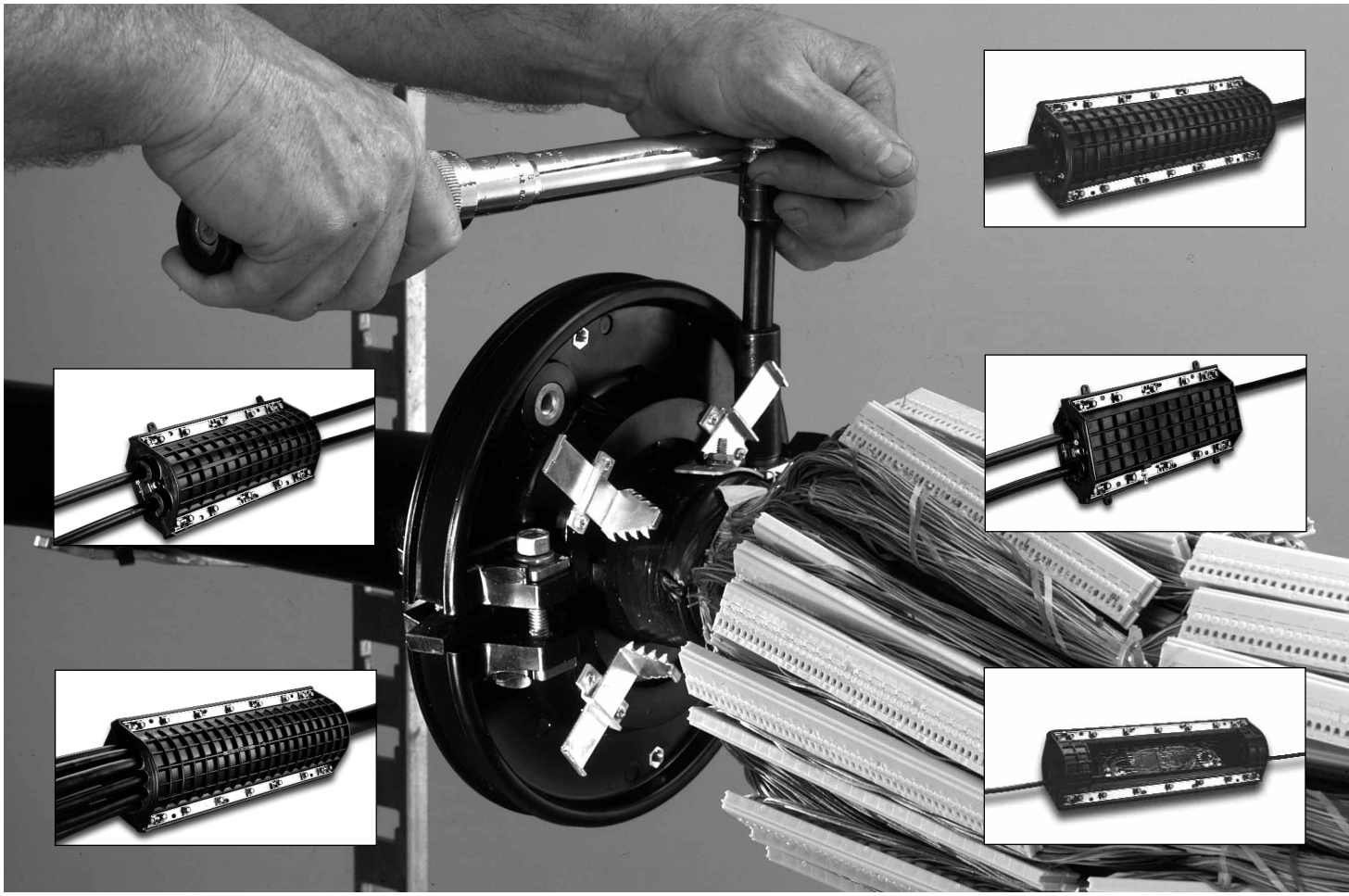
2-Type Closure System



1

A complete pressure tight closure system for enclosing spliced connections of communications cable in a wide variety of applications.

When you order the 3M™ 2-Type Closure System, you're ordering from a variety of closure lengths in combination with closure diameters.

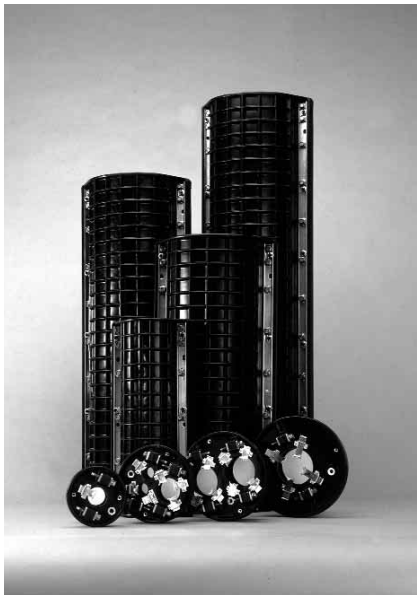
Closure lengths range from 18½" (470 mm) to over 82½" (2096 mm) from stock while closure diameters range from 3" (77 mm) to 12" (305 mm) from stock. Complete 2-Type Closure Kit packaging includes all the components required to install cover and endplates, and no special tools are required for assembly.

This system allows for quick and easy re-entry of closure and it eliminates refurbishing of closure assembly. It also has an improved resistance to fuel oil and is not affected by D or D PLUS Encapsulants

Back Cover Clips

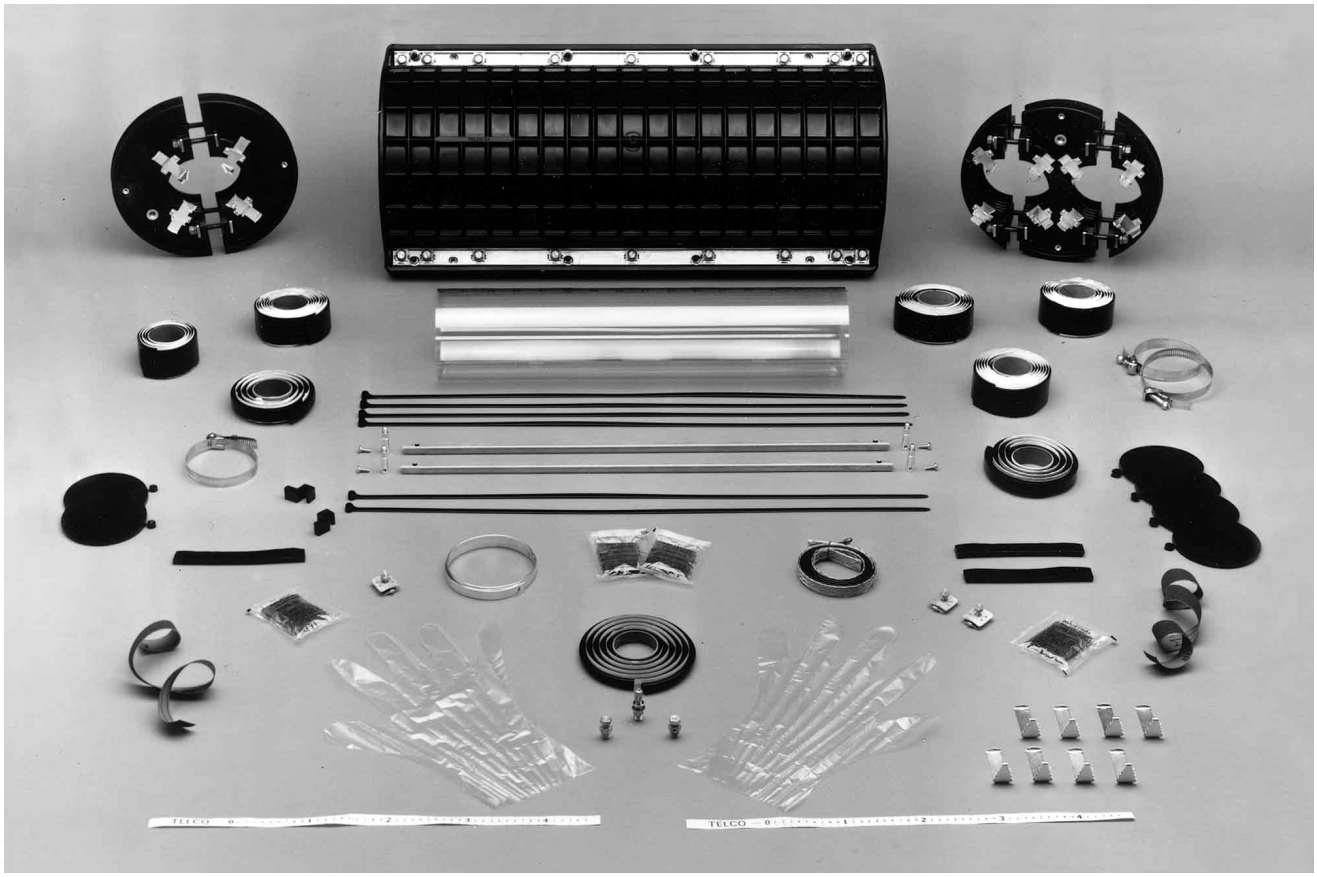
The cover clips free craftsman's hands by holding cover assembly to endplates. They also keep endplates properly spaced and parallel during splicing.

The 2-Type Closure System is reenterable and reusable. In fact, everything you need for complete parts and associated tools and supplies are now available from the splice closure specialists, 3M.



2

Complete 3M™ 2-Type Cover and Endplate Selection (510 Version)



3

Each complete 2-Type Cover Selection contains:

- Cover assembly with channel bars and bolts
- Transparent splice wrap and cable ties
- Cover sealing R-Type self forming gasket material
- Endplate sealing R-Type self forming gasket material
- Solvent cleaning wipe and plastic gloves
- Back cover support clips with cable ties
- Pressurization valve
- Internal shield continuity braid with insulation
- External grounding ribbon
- Vented and solid continuity and ground connectors with hex nuts
- Assembly instructions

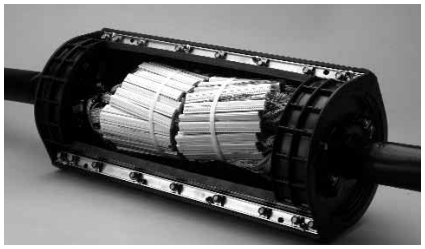
NOTE: Components will vary depending upon the cover and endplate series selected.

Each complete 2-Type Endplate Selection contains:

- Endplate assembly with sheath grip clamps
- Cable collar build-up R-Type selfforming gasket material
- Endplate mid-section sealing R-Type self forming gasket material
- Solvent cleaning wipe and plastic gloves
- Cable diameter measuring tape
- Shield connector
- Cable sheath scuff
- Hose clamps for securing sheath grip clamps to cable
- Additional sheath grip clamps
- Universal slotted washers for sealing cable entrances
- Assembly instructions

Tools required (not included with cover or endplate kits):

- Washer Cutter Tool
- Screwdriver
- Snips
- Speed wrench
- Knife
- Tabbing shears
- Torque wrench (250 in.•lbs. 2.9 kg•m)
- Can wrench with 3/8" (9.5 mm) and 7/16" (11 mm) ends
- 1/2" (13 mm) and 7/16" (11 mm) deep wrench sockets
- 3" (76 mm) socket extender



4

5

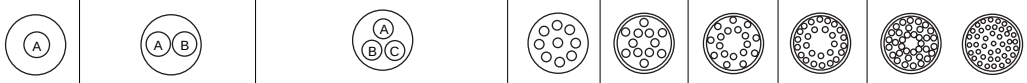
Cover Selection

Series Number		2Y2	2X2	2A2	2B2	2C2	2D2	2E2
Inside Diameter, Inches (mm)		3" (77)	4" (102)	5 1/4" (134)	7" (178)	8" (203)	9 1/2" (241)	12" (305)
Overall Length	**Sheath Opening**	**Standard Sizes - Example 2D2A**			**Ordering Codes**	Custom Sizes - Example 2D2D		
18 1/2" (470)	10" (254)	2Y2AA	2X2AA	2A2AA	2B2AA	2C2AA	2D2AA	2E2AA
27 1/2" (699)	19" (483)	2Y2A	2X2A	2A2A	2B2A	2C2A	2D2A	2E2A
Maximum number of cable pairs[1]		100	100	600	1200	1800	3600	4200
36" (914)	27 1/2" (699)	2Y2B	2X2B	2A2B	2B2B	2C2B	2D2B	2E2B
44 1/2" (1130)	36" (914)	2Y2C	2X2C	2A2C	2B2C	2C2C	2D2C	2E2C
48 1/2" (1232)	40" (1016)	N/A	N/A	2A2D	2B2D	2C2D	2D2D	2E2D
52 3/4" (1340)	44 1/4" (1124)	N/A	N/A	2A2E	2B2E	2C2E	2D2E	2E2E
57" (1448)	48 1/2" (1232)	N/A	N/A	2A2F	2B2F	2C2F	2D2F	2E2F
61 1/2" (1563)	53" (1346)	N/A	N/A	2A2G	2B2G	2C2G	2D2G	2E2G
65 1/2" (1664)	57" (1448)	N/A	N/A	2A2H	2B2H	2C2H	2D2H	2E2H
69 3/4" (1772)	61 1/4" (1556)	N/A	N/A	2A2I	2B2I	2C2I	2D2I	2E2I
74" (1880)	65 1/2" (1664)	N/A	N/A	2A2J	2B2J	2C2J	2D2J	2E2J
78 1/2" (1994)	70" (1778)	N/A	N/A	2A2K	2B2K	2C2K	2D2K	2E2K
82 1/2" (2096)	74" (1880)	N/A	N/A	2A2L	2B2L	2C2L	2D2L	2E2L

[1]Maximum number of cable pairs based on the following specifications: 2Y2 & 2X2 Series = 24/26 gauge cable using 25 pair modular connectors for straight, in-line, 1-bank splice (18 1/2" overall cover length - 10" sheath opening) 2A2, 2B2, 2C2, 2D2, & 2E2 Series. = 24/26 gauge cable using 25 pair modular connectors for straight, in-line, 2-bank splice (27 1/2" overall cover length - 19" sheath opening).

Endplate Selection

Number of Cable Openings/Endplate	1	2		3			9	12	18	27	36	42
Ordering Code	*1E	*2E		*3E			*9E or S	*12E or S	*18E or S	*27E or S	*36E or S	*42E[1]
2-Type Endplate Cable Entrance Configuration	A	A	B	A	B	C						



Series	Diameter Inches	(mm)	Maximum Cable Outside Diameter						Cable Range Outside Diameter					
2Y2-(*)	3"	(77)	N/A	1.0" (25)	1.0" (25)	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
2X2-(*)	4"	(102)	N/A	1.0" (25)	1.0" (25)	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
2A2-(*)	5 1/4"	(134)	2.2" (56)	1.6" (41)	1.3" (33)	N/A	N/A	N/A	.88" - 1.1"	N/A	N/A	N/A	N/A	N/A
2B2-(*)	7"	(178)	3.4" (86)	2.2" (56)	2.2" (56)	2.2" (56)	1.0" (25)	1.0" (25)	N/A	.88" - 1.1"	N/A	N/A	N/A	N/A
2C2-(*)	8"	(203)	3.4" (86)	2.8" (71)	2.8" (71	2.8" (71)	1.6" (41)	1.6" (41)	N/A	N/A	.88" - 1.1"	N/A	N/A	N/A
2D2-(*)	9 1/2"	(241)	3.4" (86)	3.4" (86)	3.4" (86)	3.4" (86)	2.2" (56)	2.2" (56)	N/A	N/A	.88" - 1.1"	.88" - 1.1"	.88" - 1.1"	.88" - 1.1"
2E2-(*)	12"	(305)	N/A	4.4" (112)	4.4" (112)	4.0" (102)	3.4" (86)	3.4" (86)	N/A	N/A	N/A	.88" - 1.1"	.88" - 1.1"	.88" - 1.1"

[1]Tip cable diameters other than cable range shown may be special ordered.
[2]"E" designates solid endplate for new construction. "S" designates split endplate for existing or retrofit applications. 42E not available in split endplate configuration
NOTE: 2D2 series endplates may be used with 2E2 series covers.
NOTE: .88" - 1.1" = 22 mm - 28 mm

Ordering information

To select the correct cover:
1. Determine number of cable pairs
2. Determine splice bundle diameter
3. Determine sheath opening required

To select the correct endplate:
4. Determine cable entrance configuration
5. Determine outside diameter of each cable (Outside cable diameter must not exceed pre-sized opening in endplate)

Example:
Number of cable pairs = 1200/24 gauge
Splice bundle diameter = 6" (152 mm)
Sheath opening = 19" (483 mm)
Cable configuration = 3-way 1200 pairs in/600 pairs out x 600 pairs out
Cable outside diameters:
1200 pairs = 2.6" (66 mm)
600 pairs = 1.9" (48 mm)
Correct codes to order one cover and two endplates.
1 each – 2B2A Cover Assembly
1 each – 2B2-1E Endplate Assembly
1 each – 2B2-2E Endplate Assembly

A complete 2-Type Closure for enclosing spliced connections of communication cables requires the selection of one (1) cover assembly kit and two (2) endplate assembly kits from the same series. Note from the example that the cover series (2B2) matches the endplate series (2B2). This ordering procedure is an approximate guide only. Proper cover and endplate selection will vary with type of splice connectors and splicing method used.

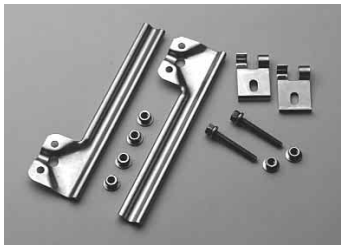
Example:
Number of cable pairs = 1200/24 gauge (.5 mm)
Sheath opening = 19" (483 mm)
Cable configuration = 3-way 1200 pairs in/600 pairs out x 600 pairs out
Cable outside diameters:
1200 pairs - 2.6" (66 mm)
600 pairs = 1.9" (48mm)
Correct codes to order one cover and two endplates:
1 each - 2B2A Cover Assembly
1 each - 2B2-1E Endplate Assembly
1 each - 2B2-2E Endplate Assembly

Accessories

Washer Cutter Tool Kit
For cutting universal slotted washers to match cables entering closure (spare replacement blades are available)

Alignment Tool
For keeping endplates properly spaced and parallel during splicing. (May only be used with 27½" (699 mm), 36" (914 mm) and 44½" (1130 mm) length covers)

Alignment Bar Kit
For keeping endplates properly spaced and parallel during splicing. (May only be used with 18½" (470 mm), 27½" (699 mm), 36" (914 mm) and 44½" (1130 mm) length covers. Kit becomes an integral part of the closure assembly.)

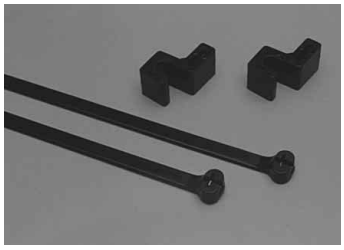


Underground Closure Support Kit (left)
For providing closure support on racks in manholes and vaults.
Aerial Hanger Kit (right)
For fastening a complete 2-Type Closure to strand support wire in aerial applications.

Replacement Parts

R-Type Self Forming Gasket Material
For sealing endplates, covers and for collar build-up around cable (new material required with each re-entry)

Universal Slotted Washers and Plugging Spools
For enclosing cables in endplates and plugging unused cable openings



Back Cover Clip Kit
For holding cover assembly to endplates and for keeping endplates properly spaced and parallel during splicing

Continuity Grounding/ Pressurization Kit
For maintaining internal shield continuity and external grounding. Pressure valve provides for external flash testing and pressurization.

Important Notice

Before using this product, you must evaluate it and determine if it is suitable for your intended application. You assume all risks and liability associated with such use.

Warranty; Limited Remedy; Limited Liability.

This product will be free from defects in material and manufacture for a period of one year from the date of purchase. 3M MAKES NO OTHER WARRANTIES INCLUDING, BUT NOT LIMITED TO, ANY IMPLIED WARRANTY OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE. If this product is defective within the warranty period stated above, your exclusive remedy shall be, at 3M's option, to replace or repair the 3M product or refund the purchase price of the 3M product. Except where prohibited by law, 3M will not be liable for any loss or damage arising from this 3M product, whether direct, indirect, special, incidental or consequential regardless of the legal theory asserted.

Telecom Systems Division

6801 River Place Blvd.
Austin, TX 78726-9000
800/426 8688
FAX 800/626 0329
http://www.3M.com/telecom

40% Pre-consumer waste paper
10% Post-consumer waste paper

Litho in USA.

© 3M IPC 2000 80-6111-5969-2 (0207.5)