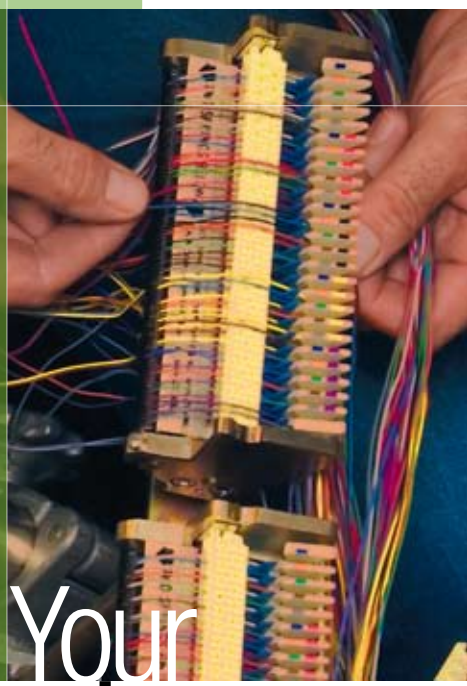
3M™ MS²™ Next Generation Modular Splicing Rigs and Maintenance Kits







Simplified Systems for All Your Multi-Pair Splicing Needs

A complete system to meet high-speed demands

In 1976, 3M™ introduced a series of connector modules to meet the needs of the telecom industry. Today, the demand for high-speed and high-bandwidth networks is greater than ever, and the complete series of 3M connector modules, tools and test equipment has evolved again.





New demands in an age of information.

Every day, local loop providers work to provide enhanced customer services such as data access with faster Internet transmission, video-on-demand and video conferencing. Many are deploying DSL, ADSL and VDSL over Category 5 into twisted pair copper cable to meet these demands. As new technologies migrate into the local loop, the importance of connections in the embedded plant has increased. Each connection is a potential point of failure in high-bandwidth applications, which could require repair by a technician. That is where 3M connector modules make a real difference.

New solutions from a company you trust.

3M™ MS²™ Next Generation Modular System Splicing tools and equipment are easy to use in any kind of splicing operation, regardless of the environment or working conditions.

More than 200 tools are available to suit your needs with the reliability you have come to trust from 3M. Detailed step-by-step instructions for every kind of splicing application are included with all test equipment, parts and tools to provide splice integrity. Splicing is simplified and inventories minimized by allowing many jobs to be performed with the same basic components, tools and techniques.

This simplified system means that any of the eight next-generation splicing rigs with MS² splicing modules could meet all of your multi-pair splicing requirements in inside or outside plant such as new construction, cable rearrangements and maintenance. These procedures are easy to learn and designed to assure both splicing accuracy and good housekeeping.

What you need, when you need it

Having exactly the right tools when you're in the field is essential for maximum productivity. With 100 years of experience, 3M knows precisely what you need and what you don't. Each of our kits is specialized to contain all essential components for your specific application, including buried/underground, aerial, pedestal/cabinet and vault/central office, as well as maintenance splicing applications.

3M™ MS²™ Splicing Rig 4021-M2/36/TMK/NXG



See page 11 for parts identification of rig components.

3M™ MS²™ SPLICING RIG APPLICATIONS

PRODUCT NUMBER FOR KITS	BURIED/ UNDERGROUND	AERIAL	PEDESTAL/ CABINET	VAULT/ CENTRAL OFFICE
4021-M2/36/NXG	●			●
4021-M2/36/TMK/NXG	●	●	●	●
4022-M2/TMK/NXG	●	●	●	●
4022-M2/NXG	●			
4045-K/36/NXG	●	●	●	
4045-K2/36/FL/NXG	●	●	●	
4049/NXG	●		●	

FEATURES AND BENEFITS

4053-PM separation tool	Easily separates DPM modules
Addition of rear spring holders and unilength hooks to all kits	Allows interruption-free cut-outs of existing splices
Extra traverse clamp/head clamp in all double-head setups	Increased craft productivity
Extra check comb on all double-head setups	Virtually eliminates wiring errors by double-checking tip and ring placement
TMK support rig in two kits (replacing the 4046 split support tube)	Allows maximum flexibility in mounting applications for pedestals, racks, manholes, etc.



The 3M™ MS²™ Splicing Rig 4021-M2/36/NXG is a complete splicing rig designed for one- or two-person fold-back or inline splicing.

3M™ MS²™ MODULAR SPLICING RIGS AND EQUIPMENT

3M™ MS²™ Splicing Rig 4021-M2/36/NXG

KIT COMPONENTS:

4028 rig case	1
4036-25 hand crimper	1
4040 splicing head assembly includes:	
4041 splice head	2
Pedestal	2
Traverse clamp assembly with long bar	2
Head clamp	2
4046 CST (collapsible support tube)	1
4047 pair test plug	1
4051 wire insertion and cut-off tool	1
4052T tester check comb	2
Short traverse bar	1
4053-PM separation tool	1
Unilength hooks	2
Rear spring holders	2
Allen wrenches	2
Tube support extension	1
Instructions	1

3M™ MS²™ MODULAR SPLICING RIGS AND EQUIPMENT

3M™ MS²™ Splicing Rig 4022-M2/TMK/NXG



The 3M™ MS²™ Splicing Rig 4022-M2/TMK/NXG is a complete splicing rig designed for one- or two-person fold-back or inline splicing. The TMK kit provides maximum mounting flexibility.

KIT COMPONENTS:

4028 rig case	1
4040 splicing head assembly includes:	
4041 splice head	2
Pedestal	2
Traverse clamp assembly with long bar	2
Head clamp	2
4047 pair test plug	1
4051 wire insertion and cut-off tool	1
4052T tester check comb	2
Short traverse bar	1
4053-PM separation tool	1
Unilength hooks	2
Rear spring holders	2
TMK kit includes:	
TMK base	1
TMK A2 tool clamp	1
TMK A3 swivel bar	1
TMK A4 tube clamp	1
TMK A5 vise	1
TMK A6 swivel/knob	1
TMK A7 mount	1
TMK A8 90° mount	1
Allen wrench	1
Instructions	1

(TMK replaces the 4046 split support tube)

3M™ MS²™ Splicing Rig 4022-M2/NXG



The 3M™ MS²™ Splicing Rig 4022-M2/NXG is a complete splicing rig designed for one- or two-person fold-back or inline splicing.

KIT COMPONENTS:

4028 rig case	1
4040 splicing head assembly includes:	
4041 splice head	2
Pedestal	2
Traverse clamp assembly with long bar	2
Head clamp	2
4046 CST (collapsible support tube)	1
4047 pair test plug	1
4051 wire insertion and cut-off tool	1
4052T tester check comb	2
Short traverse bar	1
4053-PM separation tool	1
Unilength hooks	2
Rear spring holders	2
Allen wrenches	2
Tube support extension	1
Instructions	1



The 3M™ MS²™ Universal Rig 4045-K/36/NXG is a versatile rig designed for one-person splicing in difficult-to-reach pedestal or rack areas.

3M™ MS²™ MODULAR SPLICING RIGS AND EQUIPMENT

3M™ MS²™ Universal Splicing Rig 4045-K/36/NXG

KIT COMPONENTS:

4028 rig case	1
4036-25 hand crimper	1
4041-P splicing head and pedestal	1
4047 pair test plug	1
4051 wire insertion and cut-off tool	1
4052T tester check comb	1
4045 universal splicing head support assembly	1
4053-PM separation tool	1
Unilength hook	1
Rear spring holder	1
Allen wrench	1
Instructions	1



The 3M™ MS²™ Splicing Rig 4045-K/36/FL/NXG is a versatile rig designed for one-person splicing. It allows maximum flexibility for difficult-to-reach areas and aerial applications.

3M™ MS²™ Splicing Rig 4045-K2/36/FL/NXG

KIT COMPONENTS:

4028 rig case	1
4036-25 hand crimper	1
4041-P splicing head and pedestal	2
4047 pair test plug	1
4051 wire insertion and cut-off tool	1
4052T tester check comb	2
4045 universal splicing head support assembly	1
4025 support vise	1
4035A strand clamp	1
4044 cross connect splicing head frame adapter	1
4053-PM separation tool	1
Unilength hooks	2
Rear spring holders	2
Allen wrench	1
Instructions	1

3M™ MS²™ MODULAR SPLICING RIGS AND EQUIPMENT

3M™ MS²™ Splicing Rig 4049/NXG

KIT COMPONENTS:

4049 rig container/pail	1
4036-H tool holster	1
4036-25 hand crimper	1
4041-SH splice head holder	1
4041-P splicing head and pedestal	1
4047 pair test plug	1
4051 wire insertion and cut-off tool	1
4052T tester check comb	1
4049-VTB variable traverse brace	1
4053-PM separation tool	1
Unilength hook	1
Rear spring holder	1
Allen wrench	1
Instructions	1



The 3M™ MS²™ Splicing Rig 4049/NXG is a lightweight and portable splicing rig.

3M™ MS²™ Module Maintenance Kit 4026-A

KIT COMPONENTS:

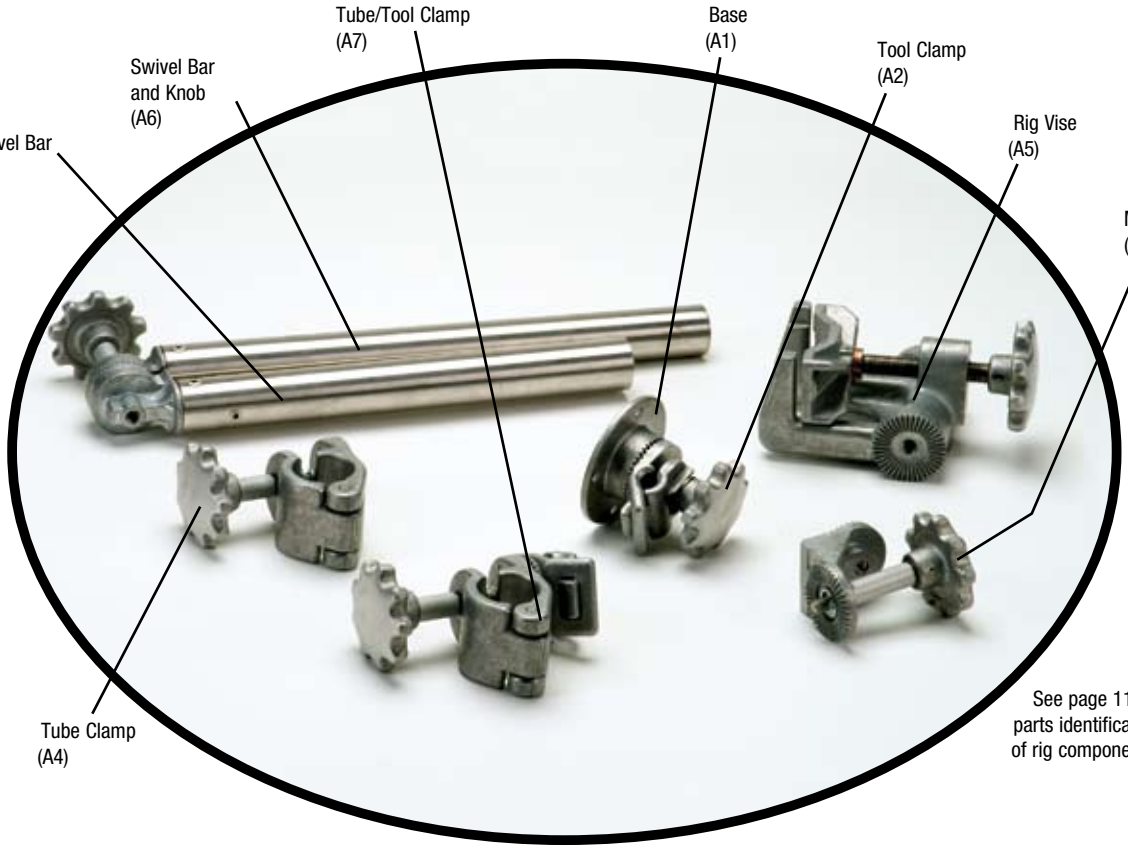
4047 pair test plug	1
4051 wire insertion and cut-off tool	1
4005-DPM/BTP/JMP super-mate bottom test plug jumper assembly	2
4005-DPM/36PTJ preterminated jumper assembly	2
4270-A hand presser	1
4053-PM separation tool	1
4053 cover removal tool	1



The 3M™ MS²™ Module Maintenance Kit 4026-A contains the tools necessary for re-entry of super-mini and super-mate modules. The kit may be used for splice module combinations of two- through seven-way stackable splices.

3M™ MS²™/710 Support Rig 3M710-TMK10-A

The 3M710-TMK10-A rig can be used to support the MS² splice head or the 3M 710 splicing rig.



See page 11 for parts identification of rig components.

3M™ MS²™/710 Tripod Kit 3M710-TPK10

The 3M710-TPK10 tripod kit can be used to support MS² or 3M 710 splicing applications.



ORDERING INFORMATION

3M™ MS²™ SPLICING SYSTEM COMPONENTS

PRODUCT NUMBER	DESCRIPTION	STOCK NUMBER	UPC	UOM	MOQ
3M710-TPK10	TRIPOD KIT (V2)	80611048473	05113878491	EA	1
4021-M2/36/NXG	MS² SPLICING RIG	80611311707	05111518524	EA	1
4021-M2/36/TMK/NXG	MS² SPLICING RIG	80611311715	05111518525	EA	1
4022-M2/TMK/NXG	MS² SPLICING RIG	80611311723	05111518526	EA	1
4022-M2/NXG	MS² SPLICING RIG	80611311731	05111518527	EA	1
4045-K/36/NXG	MS² SPLICING RIG	80611311749	05111518528	EA	1
4045-K2/36/FL/NXG	MS² SPLICING RIG	80611311327	05111518486	EA	1
4049-NXG	MS² SPLICING RIG	80611311756	05111518529	EA	1
4025	SUPPORT VISE	78801120433	05400726468	EA	1
4026-A	MODULE MAINTENANCE KIT	80610757231	05400792307	EA	1
4028A	TOOL BOX W/MODIFIED TRAY	80610999254	005113870971	EA	1
4030	AIR/HYDRAULIC CRIMP	80609000015	05400730183	EA	1
4031	HAND/HYDRAULIC CRIMPER	80609100062	05400730184	EA	1
4035A	STRAND CLAMP	80610085526	05400731917	EA	1
4036-25	HAND CRIMPER	80610845507	05400792843	EA	1
4039	MARKING PEN (NEW)	80610616601	05400757516	EA	144
4040	SPL HEAD ASSEMBLY	80601112057	05400727822	EA	1
4041-2	2" UNILENGTH HOOK	80610326888	05400763857	EA	1
4041-P	SPL HEAD T-BAR	80610026462	05400730266	EA	1
4041-RS	REAR SPRING HOLDER	78806187957	05400768203	EA	1
4041-SH	SPLICING HEAD HOLDER	80610847628	05400792955	EA	1
4041-SPL	SPLICING HEAD	80601112065	05400727823	EA	1
4041-T/BR	TEST HEAD CLEANING BRUSH	26100442818	05111514216	EA	1
4045-HCA	UNIVERSAL HEAD CLAMP	78800624823	05400726332	EA	1
4045-SHSA	UNIVERSAL SPLICE HEAD SUPPORT ASSEMBLY	80610023683	05400730219	EA	1
4045-ST	UNIVERSAL SUPPORT TUBE	78800624856	05400726333	EA	1

ORDERING INFORMATION

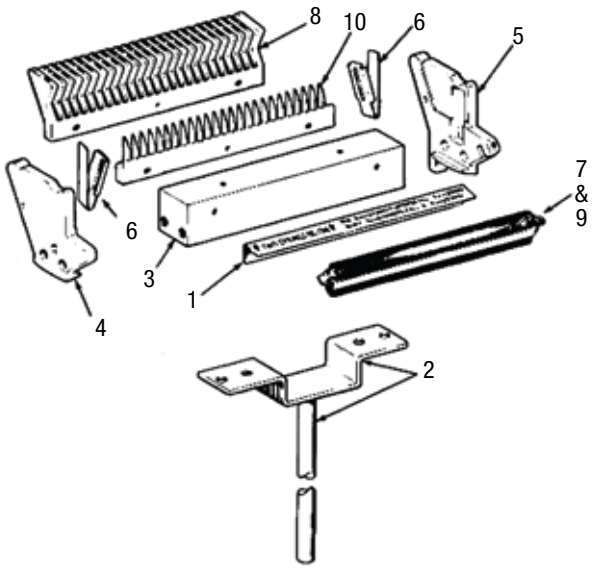
3M™ MS²™ SPLICING SYSTEM COMPONENTS

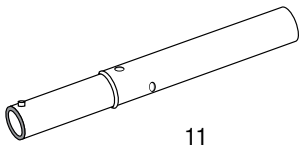
PRODUCT NUMBER	DESCRIPTION	STOCK NUMBER	UPC	UOM	MOQ
4045-VA	VISE FINAL ASSEMBLY	78800624724	05400726331	EA	1
4045-VHPA	UNIVERSAL VISE HANDLE AND PAD ASSEMBLY	78802079588	05400726727	EA	1
4046-CST	COLLAPSIBLE SUPPORT TUBE	78804495535	05400717626	EA	1
4047	PAIR TEST PLUG	80610023758	05400730220	EA	10
4051	SUPER MINI MODULE WIRE INSERT AND CUTOFF TOOL	80610072557	05400731137	EA	10
4052T	CHECK COMB	80610123244	05400733796	EA	10
4053	COVER REMOVAL TOOL	80609100070	05400730185	EA	1
4053-PM	SEPARATION TOOL	80610133409	05400734404	EA	1
4270-A	HAND PRESSER	80610415350	05400771280	EA	1
3M710-TMK10-A	TOOL MOUNT KIT	80611048374	05113878481	EA	1
3M710-TMK10 (A1)	BASE	80611048382	05113878482	EA	1
3M710-TMK10 (A2)	TOOL CLAMP	80611048390	05113878483	EA	1
3M710-TMK10 (A3)	SWIVEL BAR	80611048408	05113878484	EA	1
3M710-TMK10 (A4)	TUBE CLAMP	80611048416	05113878485	EA	1
3M710-TMK10 (A5)	RIG VISE	80611048424	05113878486	EA	1
3M710-TMK10 (A6)	SWIVEL BAR/KNOB	80611048432	05113878487	EA	1
3M710-TMK10 (A7)	TUBE/TOOL CLAMP	80611048440	05113878488	EA	1
3M710-TMK10 (A8)	90° MOUNT	80611048457	05113878489	EA	1
3M710-TMK10 (A9)	PLASTIC CASE FOR TOOL MOUNT KIT	80611048465	05113878490	EA	1

3M™ MS2™ SPLICING RIG 4041 SPARE PARTS

3M™ MS2™ SPLICING HEAD 4041

PRODUCT NUMBER	DESCRIPTION	STOCK NUMBER	UPC	MOQ
(1) SPARE-RIGS/HTP	HEAD TAPE PLATE	78801125580	05400726479	1
(2) SPARE-RIGS/PED	PEDESTAL	78801125572	05400726478	1
(3) SPARE-RIGS/SHB	SPLICE HEAD BODY	78800408698	05400726289	1
(4) SPARE-RIGS/SHLP	SPLICE HEAD SIDE PLATE — LEFT HAND	78802677134	05400726860	1
(5) SPARE-RIGS/SHRP	SPLICE HEAD SIDE PLATE — RIGHT HAND	78802677142	05400726861	1
(6) SPARE-RIGS/SHLS	SPLICING HEAD LEAF SPRING UNIVERSAL	78809563790	05113875718	1
(7) SPARE-RIGS/SWR	SPRING WIRE RETAINER 20-22, 26-28 GAUGE (BLUE/BROWN)	78801125085	05400726476	1
(8) SPARE-RIGS/WGK	WIRE GUIDE KIT	78805496953	05400717636	1
(9) SPARE-RIGS/WRA 2226	SPRING WIRE RETAINER ASSEMBLY 22-26 GAUGE (RED/BLACK)	78801125598	05400726480	1
(10) SPARE-RIGS/WSK	WIRE SEPARATOR KIT	78801125606	05400726481	1
(11) SPARE-RIGS/TSXA	TUBE SUPPORT EXTENSION ASSEMBLY	78800624674	05400726330	1

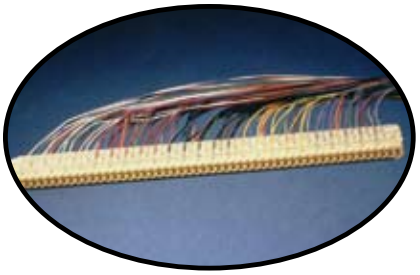




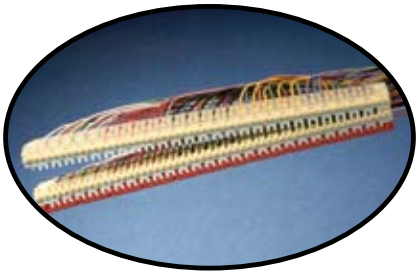
ORDERING INFORMATION

3M™ MS2™ SPLICING MODULES AND SEALANT BOXES

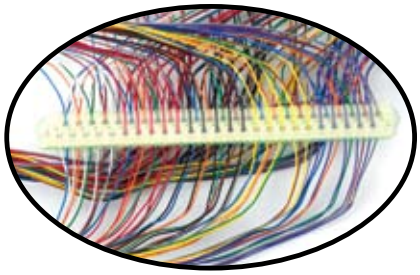
PRODUCT NUMBER	DESCRIPTION	STOCK NUMBER	UPC	UOM	MOQ
MS2™ Modules					
4000-D/TR/24	SUPER MINI MODULE (DRY TRANSPARENT)	80610863070	5113857525	EA	120
4000-D/CO	SUPER MINI SPLICING MODULE (DRY FLAME RETARDANT)	80610069546	05400730944	EA	120
4000-DT/TR	SUPER MINI TEST MODULE (DRY TRANSPARENT)	80610416192	05400771368	EA	120
4000-DWP/TR	SUPER MINI SPLICING MODULE & SEALANT BOX	80610863617	05113857574	EA	120
4000-G/TR	SUPER MINI SPLICING MODULE (GEL TRANSPARENT)	80611013105	05113870906	EA	120
4005-DBM/TR/NB	BRIDGE MODULE WITH NO CUT-OFF BLADES (DRY)	80610757363	05400792318	EA	120
4005-DPM/FR	SUPER MATE PLUGGABLE MODULE (DRY FLAME RETARDANT)	80610156848	05400717352	EA	120
4005-DPM/TR	SUPER MATE BRIDGE MODULE (DRY TRANSPARENT)	80610416218	05400771370	EA	120
4005-GBM/TR	SUPER MATE BRIDGE MODULE (GEL TRANSPARENT)	80611150238	05111515064	EA	120
4005-GBM/TR/NB	SUPER MATE BRIDGE MODULE WITH NO CUT-OFF BLADES (GEL TRANSPARENT)	80611304413	05111516181	EA	120
4008-D/CO	SUPER MINI HALF-TAP MODULE (DRY FLAME RETARDANT)	80610069553	05400730945	EA	120
4008-D/TR	SUPER MINI HALF-TAP MODULE (DRY TRANSPARENT)	80610416234	05400771372	EA	120
4008-G/TR	SUPER MINI HALF-TAP MODULE (GEL TRANSPARENT)	80611020498	05113889336	EA	120
MS2™ Sealant Boxes					
4075-S	SUPER MINI SEALANT BOX	80610863542	05113857567	EA	120
4077-A	PLUGGABLE MODULE SEALANT BOX (FOR ONE SUPER MATE)	80610863567	05113857569	EA	120
4077-B	PLUGGABLE MODULE SEALANT BOX (FOR ONE SUPER MATE/ONE SUPER MINI)	80610863575	05113857570	EA	120
4077-C	PLUGGABLE MODULE SEALANT BOX (FOR TWO SUPER MATES)	80610863591	05113857572	EA	120
4077-D	PLUGGABLE MODULE SEALANT BOX (FOR THREE SUPER MATES)	80610863609	05113857573	EA	120
MS2™ Accessories					
4003-D/TR	SUPER MINI SPLICING MODULE COVER (TRANSPARENT)	80610579288	05400771596	EA	120
4004-D/TR	SUPER MINI SPLICING MODULE BASE (SMOKED)	80610579296	05400771597	EA	120
4004-DT/TR	SUPER MINI TEST MODULE BASE (TRANSPARENT)	80610580104	05400771654	EA	120
4078-C	HALF-TAP COVER	80610129860	05400734167	EA	120



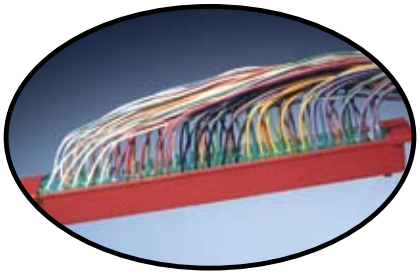
3M™ Super-Mini
Splicing Module 4000-G/TR



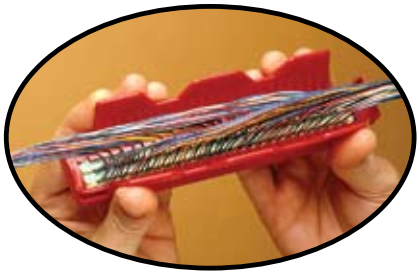
3M™ Super-Mate Bridge
Module 4005-DPM/TR



3M™ Super-Mini Half-Tap
Module 4008-D/TR



3M™ Pluggable Module
Sealant Box 4077-C

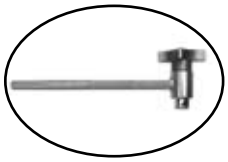


3M™ Super-Mini
Sealant Box 4075-S

3M™ MS²™ RIG ACCESSORIES

 **Support Vise 4025**	Used to mount the 4040 splicing head assembly in tight situations.
 **Tool Box with Modified Tray 4028-A**	Durable, easy to transport tool box with tray. 66 x 29.2 x 28.2 cm (26 x 11.5 x 11.1") Cube: 9.8 kg. (21.7 lbs.) Ctn. size: 67.1 x 30 x 58.4 cm (26.4 x 11.8 x 23")
 **Air/Hydraulic Crimping Unit 4030**	Designed for high-volume module termination and uses air or nitrogen supply. An air cylinder or compressor with output pressure of 6.33–7.03 kg/cm (90–100 PSI) must be used. The unit is either hand- or foot-operated.
 **Hand/Hydraulic Crimping Unit 4031**	Lightweight and hand-operated. When proper crimping pressure is reached, a bypass valve opens.
 **Aerial Strand Clamp 4035-A**	Designed to hold a 4041-P splicing head in aerial splicing applications. Anchored to the suspension strand, the strand clamps behind and below the splice bundle and can be used with strands from 5 mm (3/16") diameter to 10 mm (3/8").
 **Hand Crimper 4036-25**	A self-contained, pistol-gripped crimper designed to crimp MS² modules in the 4041 splicing head.
 **Splicing Head Assembly 4040**	This assembly contains a splicing head, a pedestal, a traverse clamp assembly with a long bar, and a head clamp for use with two-man fold-back splicing.
 **Splicing Head and "T" Bar 4041-P**	Additional splicing head and "T" bar support for use with the MS² system.
 **Splice Head Holder 4041-SH**	The 4041-SH is the tool mounting assembly from the 4049-NXG and 4049-R Lite Rigs that holds the 4049-VTB Variable Traverse Brace. It enables the user to position the MS² splice head where needed for greater splicing flexibility.
 **Splice Head 4041-SPL**	The standard MS² splicing head without any support components.

3M™ MS²™ RIG ACCESSORIES

 **Universal Splicing Head Support Assembly 4045-SHSA**	This assembly is designed to hold an MS² splicing head so it can be used in all applications.
 **Split Support Tube 4046-CS**	Collapsible for easy transport and setup.
 **Pair Test Plug 4047**	A module probe that permits one pair checking without damaging wire insulation. The prongs fit the test entry port of all MS² modules. The cord permits easy connection to a talk block or test set.
 **Variable Traverse Brace 4049-VTB**	The 4049-VTB Variable Traverse Brace fits into the 4041-SH Splicing Head Holder and is designed to hold the MS² Splicing Head with Pedestal Support. It enables the user to position the MS² splice head where needed for greater splicing flexibility.
 **Wire Insertion and Cut-off Tool 4051**	Used to terminate individual conductors on MS² modules.
 **Cover Removal Tool 4053**	Recommended for removing either bases or covers from 25-pair super-mini and covers only from 25-pair super-mate modules.
 **Separation Tool 4053-PM**	The only recommended tool to separate 4005-DPM/TR modules from any other module. Note: The 4053 cover removal tool cannot be used to separate DPM modules.
 **Hand Presser 4270-A**	Used to plug up to seven super-mate modules together.
 **Tool Mounting Kit 3M710-TMK10-A**	Allows flexibility in mounting applications for pedestals, racks, manholes, etc. It can be used with either MS² or 3M710 splicing systems.

The full-service 3M repair facility can help you with any spare part needs. Contact the 3M repair center at 800/426 8688, option 2, or online at www.3MRepair.com.

3M and MS² are trademarks of 3M Company.

Important Notice

3M™ MS²™splicing rigs, tools and modules are engineered to work together to achieve consistently superior performance in the field. Modules from other manufacturers may not meet the tight quality tolerances of 3M modules and may damage the calibration and performance of a 3M rig or tool. Therefore, the published 3M warranty does not extend to any 3M modules spliced in rigs or tools not made by 3M. The warranty on 3M MS² splicing rigs and Scotchlok™ splicing tools can also be violated if used on non-3M modules.

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Communication Markets Division
3M Telecommunications
6801 River Place Blvd.
Austin, TX 78726-9000
800/426 8688
Fax 800/626 0329
3MTelecommunications.com

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