

# SAFE-T-CABLE<sup>™</sup>

The Reliable, Time-Saving Solution for Fastener Security



DMC<sup>®</sup> is an ISO9001:2015 and AS9100D Registered Company. Scan the QR to learn more about our commitment to quality.

**LIMITED WARRANTY:** DMC warrants each new product sold by it to be free from defects in material and workmanship under normal use and service. DMC's obligation under this warranty is limited to the free correction or, at DMC's option, the refund of the purchase price of any such product which proves defective in normal service within ninety (90) days after delivery to the first user, provided that the product is returned to DMC with all transportation charges prepaid and which shall appear to DMC's satisfaction, after DMC's inspection, to have been defective in material or workmanship, it being understood that DMC products are not consumer products. This warranty shall not cover any damage to any product which, in the opinion of DMC, was caused by normal wear, misuse, improper operation, tampering, neglect, or accident. This warranty is in lieu of all other warranties express or implied. No warranty, express or implied, is made or authorized to be made or assumed with respect to products of Daniels Manufacturing Corporation other than those herein set forth.

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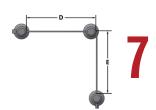
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## THE ULTIMATE FASTENER RETENTION SYSTEM

Originally invented in 1989 by GE Aviation for use on commercial aircraft engines, Safe-T-Cable<sup>™</sup> quickly became recognized as a reliable, time-saving solution for fastener security. In 1993, the Society of Automotive Engineers (SAE) industry standards for Safe-T-Cable were established and DMC received the Federal Aviation Administration (FAA) classification for use of Safe-T-Cable. Aerospace Industries Association (AIA) standards such as NASM33540 and several OEM standards for using Safe-T-Cable were established thereafter. Today, Safe-T-Cable is widely used in aerospace, rail, marine, and energy industries.

In addition to installing 3 times faster than lockwire, Safe-T-Cable also produces a stronger and safer result. The userfriendly tooling guarantees a consistent installation each time it is used. Unlike lockwire, Safe-T-Cable installations eliminate sharp edges, which greatly reduces the risk of injury. Safe-T-Cable also reduces repetitive motion injuries and Foreign Object Debris (FOD). The installation and inspection of Safe-T-Cable is simple, easy to train, and rework is essentially eliminated.







### **INSTALLING SAFE-T-CABLE IS SIMPLE**

#### THREAD

Thread the cable assembly through the fasteners in a positive or neutral direction.



#### INSERT

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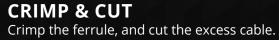
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4

Insert the free end of the cable through the ferrule and thread the cable through the nose of the tool.

#### **TENSION** Use the tool to apply tension to the cable.







### **STANDARDS AND CLASSIFICATIONS**



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#### NATIONAL AEROSPACE STANDARDS

NASM33540, formerly MIL-STD-33540, "Safety Wiring, Safety Cabling, Cotter Pinning, General Practices" documents the standard practice and is controlled by AIA. This document is referenced in many contracts, drawings, and process manuals. The standard is available online at http://global.ihs.com/?RID=AIA.



#### SAE INTERNATIONAL

SAE International maintains and distributes the procurement and detail specifications that control the design, packaging, and performance requirements of Safe-T-Cable. SAE specifications for Safe-T-Cable include the following and are available online at https://www.sae.org/.

- AS567 Safety Cable, Safety Wire, Key Washers, and Cotter Pins for Production Systems, and Use
- AS3509 Cable, Safety, Kit, Nickel Alloy, UNS N06600
- AS3510 Cable, Safety, Kit, Corrosion and Heat Resistant Steel, UNS S32100
- AS3618 Cable, Safety, Ferrule, Elongated, Corrosion and Heat Resistant Steel, UNS S32100
- AS3619 Cable, Safety, Ferrule, Elongated, Nickel Alloy, UNS N06600
- AS3655 Cable, Safety, Kit, Corrosion Resistant Nickel Alloy, UNS N06625
- AS4536 Cable, Safety, Kit, Procurement Specification for Requirements and Use

Please contact DMC for further information on SAE specifications, publication status, or application references.



#### FEDERAL AVIATION ADMINISTRATION

Many FAA approved 70-XX-XX standard documents are published and maintained by major engine, airframe, and component/subsystem manufacturers. The FAA approved manual on the specific aircraft/subsystem will advise the operator/maintainer if Safe-T-Cable is approved by the original equipment manufacturer (OEM). If it cannot be determined from this or other documentation, the operator/maintainer should contact the OEM and request information concerning the use of Safe-T-Cable on that aircraft/subsystem.

#### **OEM STANDARDS**

- GE Aircraft Engines: 70-11-01-400-005 "Standard Practices Manual"
- Pratt & Whitney: PWA 316 "Safety Wire, Safe-T-Cable and Cotter-pin Installation"
- Rolls Royce: JES 138 "Locking Devices and Practices"
- Boeing: BAC 5018 "Installation of Safetying Devices"
- Airbus: AIPI 03-06-003 "Locking by Wire"

#### **U.S. MILITARY USE**

Safe-T-Cable is included in many technical manuals (TM) and technical orders (TO) used by the U.S. military and foreign military sales organizations to support aircraft, aerospace, and defense systems. Technical information required to select, install, and maintain Safe-T-Cable and the application/verification tooling is provided. General TMs/TOs that include Safe-T-Cable are listed below:

- TO-1-1A-8
- TO-1-1A-14
- TO-1-1A-15
- TM 1-1500-204-23-6
- TM 1-1500-323-24-1
- NAVAIR 01-1A-505-1
- NAVSEA MIL-STD-763
- ARMY MICOM, Drawing 13210868
- NA 01-1A-505-1
- NA 01-1A-8
- TO 00-25-255-1
- TM 1-1500-323-24-2

Several platform specific TOs and TMs feature instructions and guidelines for Safe-T-Cable. Consult the publications organization that supports your particular platform or contact DMC for further information.

#### **DMC STATEMENT ON SAFE-T-CABLE**

It is the responsibility of the installer of Safe-T-Cable to determine where Safe-T-Cable can or cannot be installed in accordance with FAA regulations, OEM standards, or Department of Defense (DOD) directives. Where authorization is required, the installer should contact the equipment OEM.

Limitation of Liability: DMC is not liable for consequential or special damages of any nature or kind resulting from the use, misuse or unapproved use of any of its products. Owners and users of DMC products assume full responsibility for instructing their employees in the proper, approved, and safe use of such products.

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## **CABLE ASSEMBLIES AND FERRULES**

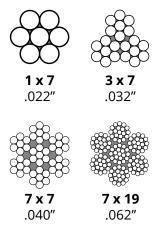
#### MATERIALS

Safe-T-Cable is comprised of three components: the cable, the end fitting, and the ferrule. All three components are made of the same high-performance alloys typically used in aerospace fasteners. The strength and corrosion resistant properties of these alloys make Safe-T-Cable reliable and durable.

- 321 Stainless Steel (AS3510) is the standard Safe-T-Cable material used for most engine and airframe applications.
- Inconel 600 (AS3509) is appropriate for high temperature and/or non-magnetic applications.
- Inconel 625 (AS3655) is ideal for marine applications where superior corrosion resistant properties are necessary.

#### CABLE

The cable assembly is made up of multiple strands of high tensile strength wire with a square-formed end fitting attached to one end. The other end of the cable is electromechanically fused to form an easy threading cable end. This construction makes it stronger, lighter, and more flexible than lockwire. Safe-T-Cable is available in four diameters and in several lengths ranging from 9" – 24". Custom lengths of Safe-T-Cable are also available. The .022" cable is made with a unilay construction. The .032", .040", and .062" cables are made with a rope-lay construction. Standard, self-looping jumper, flanged, and custom branded cables are available. More details are available on pages 6-10.



#### FERRULES

Individual crimp ferrules are precisely manufactured to a size and hardness ensuring their compatibility with the cable assemblies and tools. Ferrules are conveniently stored in a disposable, spring-loaded cartridge for easy access. Ferrules are extracted from the cartridge by threading the cable end through the ferrule and then pulling the cable away from the cartridge. Ferrules do not have to be handled individually which minimizes the possibility of FOD. Ferrules are available in standard, elongated, or flanged configurations.

#### PACKAGING

Cable assemblies and ferrule cartridges can be purchased separately or together. Cable and ferrule sizes are easily identifiable by a color-coding system provided on the label and the slug within each ferrule cartridge.



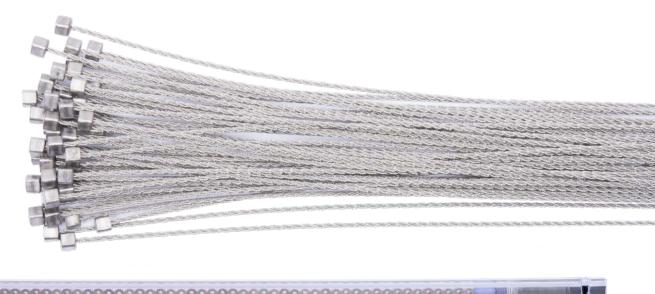
### DMC PART NUMBERING SYSTEM

COMPONENTS C = KIT (CABLE ASSEMBLY & FERRULE)	CONFIGURATION BLANK = STANDARD XX = SPECIAL PKG = 50 PIECES							
A = ASSEMBLIES (CABLE ONLY)	LENGTH							
F = FERRULES ONLY MATERIAL 08= INCONEL 625 09 = INCONEL 600 10 = 321 CRES	CABLE DIAMETER $09 = 9"$ $1 = .022'' / .026''$ $12 = 12''$ $2 = .032'' / .038''$ $15 = 15''$ $3 = .040'' / .046''$ $18 = 18''$ $9 = .062'' / .072''$ $21 = 21''$ $24 = 24''$							

#### SAE PART NUMBERING SYSTEM AS3510-02 18K

#### **CABLE ASSEMBLY AND FERRULE KITS**

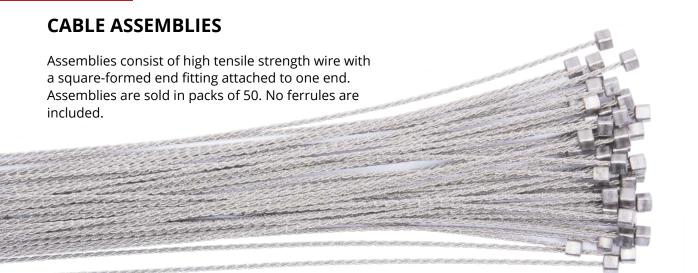
Kit packages consist of 50 cable assemblies and 50 ferrules.



Cable Diameter	Length	321 CRES	Inconel 600	Inconel 625
	12"	C10-112PKG	C09-112PKG	C08-112NPKG
.022″	18"	C10-118PKG	C09-118PKG	C08-118NPKG
.022	21"	C10-121PKG	C09-121PKG	C08-121NPKG
	24"	C10-124PKG	C09-124PKG	C08-124NPKG
	12"	C10-212PKG	C09-212PKG	C08-212NPKG
.032″	18"	C10-218PKG	C09-218PKG	C08-218NPKG
.032	21"	C10-221PKG	C09-221PKG	C08-221NPKG
	24"	C10-224PKG	C09-224PKG	C08-224NPKG
	12"	C10-312PKG	C09-312PKG	C08-312NPKG
.040″	18"	C10-318PKG	C09-318PKG	C08-318NPKG
.040	21"	C10-321PKG	C09-321PKG	C08-321NPKG
	24"	C10-324PKG	C09-324PKG	C08-324NPKG
062"	18"	C10-918PKG	C09-918PKG	
.062″	24"	C10-924PKG	C09-924PKG	

#### **IMPORTANT INFORMATION:**

When considering the cable length, be sure to add the extra cable required to engage the tension mechanism in the application tool. Add 8" for a tool with a 3" nose, and 12" for a tool with a 7" nose.



Cable Diameter	Length	321 CRES	Inconel 600	Inconel 625
	12"	A10-112PKG	A09-112PKG	A08-112NPKG
	18"	A10-118PKG	A09-118PKG	A08-118NPKG
.022" —	21"	A10-121PKG	A09-121PKG	A08-121NPKG
	24"	A10-124PKG	A09-124PKG	A08-124NPKG
	12"	A10-212PKG	A09-212PKG	A08-212NPKG
.032" —	18"	A10-218PKG	A09-218PKG	A08-218NPKG
.032 –	21"	A10-221PKG	A09-221PKG	A08-221NPKG
	24"	A10-224PKG	A09-224PKG	A08-224NPKG
	12"	A10-312PKG	A09-312PKG	A08-312NPKG
.040" —	18"	A10-318PKG	A09-318PKG	A08-318NPKG
.040 —	21"	A10-321PKG	A09-321PKG	A08-321NPKG
	24"	A10-324PKG	A09-324PKG	A08-324NPKG
.062" —	18"	A10-918PKG	A09-918PKG	
.002 —	24"	A10-924PKG	A09-924PKG	

#### **IMPORTANT INFORMATION:**

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When considering the cable length, be sure to add the extra cable required to engage the tension mechanism in the application tool. Add 8" for a tool with a 3" nose, and 12" for a tool with a 7" nose.

#### **CUSTOM BRANDED CABLE ASSEMBLIES**

Another value-added service available is the application of a permanent mark (unique to one customer only) on the end fitting of the cable assembly. The distinctive logo or mark becomes a reliable identification flag that can be used to trace the final assembly to a date, location, or another significant purpose. DMC custom cable assemblies are most commonly used for warranty traceability, service location verification, and/or to identify tampering.



#### FERRULES

Individual crimp ferrules are precisely manufactured to a size and hardness ensuring their compatibility with the cable assemblies and tools. Ferrules are sold in a cartridge of 50. No cable assemblies are included.

Cable Diameter	321 CRES	Inconel 600	Inconel 625
.022″	F10-1PKG	F09-1PKG	F08-1NPKG
.032″	F10-2PKG	F09-2PKG	F08-2NPKG
.040″	F10-3PKG	F09-3PKG	F08-3NPKG
.062″	F10-9PKG	F09-9PKG	

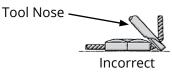
#### **ELONGATED FERRULES**

Elongated ferrules are ideal for installations where the clearance between the fastener head and the surface to which the fastener is attached is limited. The radius end and longer shape of the ferrules allow the tool nose to be placed in correct alignment with the fastener. Elongated ferrules are an excellent choice for low-profile fasteners or hard to reach areas. Use of a low-profile Safe-T-Cable nose is recommended for increased access. Elongated ferrules are supplied in a stainless steel cartridge.

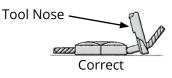
TOOL APPLY FERRULES WITH DANIELS MANUFACTURING CORP. ORLANDO, FL. USA SAFE-J-CABLE SAFE-J-CABLE

Cable Diameter	321 CRES	Inconel 600	Inconel 625
.022″	F10-08PKG	F09-08PKG	F08-08NPKG
.032″	F10-04PKG	F09-04PKG	F08-04NPKG
.040″	F10-07PKG	F09-07PKG	F08-07NPKG
.062″	F10-10PKG	F09-10PKG	

Standard Ferrule



#### **Elongated Ferrule**





#### FLANGED END CABLE ASSEMBLIES AND FLANGED FERRULES

Flanged end cable assemblies and flanged ferrules are an alternative to flat washers and greatly reduce the risk of FOD. These cable assemblies have a flanged end fitting attached to one end of the cable and are intended to be used with flanged ferrules. Flanged ferrules are sold in quantities of 50 and are supplied in two stainless steel cartridges.





Cable Diameter	Length	Assembly & Ferrule Kits	Assembly & Ferrule Kits Assembly	
	12"	C10-212FEFPKG	A10-212FEFPKG	
.032" -	18"	C10-218FEFPKG	A10-218FEFPKG	F10-14PKG
.032	21"	C10-221FEFPKG	A10-221FEFPKG	FTU-T4PKG
-	24"	C10-224FEFPKG	A10-224FEFPKG	
	12"	C10-312FEFPKG	A10-312FEFPKG	
.040" -	18"	C10-318FEFPKG	A10-318FEFPKG	F10-11PKG
.040 -	21"	C10-321FEFPKG	A10-321FEFPKG	FIU-TIPKG
-	24"	C10-324FEFPKG	A10-324FEFPKG	
.062" –	18"	C10-918FEFPKG	A10-918FEFPKG	F10-13PKG
	24"	C10-924FEFPKG	A10-924FEFPKG	FIU-I3PKG

Flanged end cable assemblies and flanged ferrules are only available in 321 CRES material.

#### **FLAT WASHERS**

Flat washers are available to accommodate fastener holes with a diameter greater than .095" (2.4 mm), but less than .200" (5.08 mm). DMC recommends the use of flanged end cable assemblies and flanged ferrules in place of washers.

NOTE: Matching materials are required and care must be taken to restrain the washer during removal/service operations.



Cable Diameter	321 CRES	Inconel 600
.022", .032" & .040"	FW10-1	FW09-1
.062″	FW10-9	FW09-9

#### SELF-LOOPING JUMPER CABLE ASSEMBLIES

Self-looping jumper cable assemblies provide the user with a means of anchoring a threaded fastener to almost any structure. These cable assemblies offer a clear advantage over lockwire on turnbuckles, castellated fittings, and other applications where holes are not provided. Operators should use good judgment in selecting a secure location to terminate self-looping jumper cable assemblies.



Cable Diameter	Length	321 CRES	Inconel 600	Inconel 625
	12"	C10-112JA	C09-112JA	C08-112NJA
.022"	18"	C10-118JA	C09-118JA	C08-118NJA
	24"	C10-124JA	C09-124JA	C08-124NJA
	12"	C10-212JA	C09-212JA	C08-212NJA
.032"	18"	C10-218JA	C09-218JA	C08-218NJA
	24"	C10-224JA	C09-224JA	C08-224NJA
	12"	C10-312JA	C09-312JA	C08-312NJA
.040"	18"	C10-318JA	C09-318JA	C08-318NJA
	24"	C10-324JA	C09-324JA	C08-324NJA

Kit packages consist of 50 self-looping jumper cable assemblies and 50 ferrules.

#### SELF-LOOPING JUMPER CABLE ASSEMBLIES

Assemblies are sold in packs of 50. No ferrules are included.

Cable Diameter	Length	321 CRES	Inconel 600	Inconel 625
	12"	A10-112JA	A09-112JA	A08-112NJA
.022"	18"	A10-118JA	A09-118JA	A08-118NJA
	24"	A10-124JA	A09-124JA	A08-124NJA
	12"	A10-212JA	A09-212JA	A08-212NJA
.032″	18"	A10-218JA	A09-218JA	A08-218NJA
	24"	A10-224JA	A09-224JA	A08-224NJA
	12"	A10-312JA	A09-312JA	A08-312NJA
.040"	18"	A10-318JA	A09-318JA	A08-318NJA
	24"	A10-324JA	A09-324JA	A08-324NJA

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### **TOOLS AND NOSES**

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Adjustable and pre-set tension tools are available in manual, battery, and pneumatic options with multiple nose lengths to accommodate most applications. Noses are interchangeable between tools for the same cable size.

#### ADJUSTABLE TENSION MANUAL TOOL SERIES

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The most popular manual Safe-T-Cable tool is the adjustable tension tool. The rotary tension mechanism on this tool can be adjusted to your precise cable tension requirements. There are adjustable tension tools available to accommodate all Safe-T-Cable sizes.

#### PRE-SET TENSION MANUAL TOOL SERIES

Pre-set tension manual tools allow for singlehanded operation. When the tool reaches the factory-set tension, it automatically completes the installation. Pre-set tension tools are available for .022", .032", and .040" size cable.



#### **PNEUMATIC TOOL SERIES**

Pneumatic-powered tools are designed for high production environments. These tools are available in adjustable tension and pre-set tension options for .022", .032", and .040" size cable.



#### **BATTERY-POWERED TOOL SERIES**



www.dmctools.com

#### TOOLS

| Cable    | Cable Nose Manual |         | nual       | Pneumatic |            | Battery    |
|----------|-------------------|---------|------------|-----------|------------|------------|
| Diameter | Length            | Pre-Set | Adjustable | Pre-Set   | Adjustable | Adjustable |
|          | 3"                | SCT203  | SCTR203    | SCTP203   | SCTPRM203  | SCTE203C   |
| .022″    | 5"                | SCT205  | SCTR205    | SCTP205   | SCTPRM205  | SCTE205C   |
| .022     | 7"                | SCT207  | SCTR207    | SCTP207   | SCTPRM207  | SCTE207C   |
|          | 9"                | SCT209  | SCTR209    | SCTP209   | SCTPRM209  | SCTE209C   |
|          | 3"                | SCT323  | SCTR323    | SCTP323   | SCTPRM323  | SCTE323C   |
| .032"    | 5"                | SCT325  | SCTR325    | SCTP325   | SCTPRM325  | SCTE325C   |
|          | 7"                | SCT327  | SCTR327    | SCTP327   | SCTPRM327  | SCTE327C   |
|          | 9"                | SCT329  | SCTR329    | SCTP329   | SCTPRM329  | SCTE329C   |
|          | 3"                | SCT403  | SCTR403    | SCTP403   | SCTPRM403  | SCTE403C   |
| .040"    | 5"                | SCT405  | SCTR405    | SCTP405   | SCTPRM405  | SCTE405C   |
| .040     | 7"                | SCT407  | SCTR407    | SCTP407   | SCTPRM407  | SCTE407C   |
|          | 9"                | SCT409  | SCTR409    | SCTP409   | SCTPRM409  | SCTE409C   |
|          | 5"                |         | SCTH625    |           |            | SCTE625C   |
| .062″    | 7"                |         | SCTH627    |           |            | SCTE627C   |
|          | 9"                |         | SCTH629    |           |            | SCTE629C   |

#### NOSES

Safe-T-Cable noses rotate 360° and are available in 1", 3", 5", 7", and 9" lengths. Low-profile noses are available for applications where the clearance between the fastener head and the surface to which the fastener is attached is limited. Elongated ferrules are recommended for use with low-profile noses.





Low-Profile Nose





| Cable Diameter | Nose Style  | 3"        | 5"        | 7"        | 9"        |
|----------------|-------------|-----------|-----------|-----------|-----------|
| .022"          | Standard    | SCTN20-3  | SCTN20-5  | SCTN20-7  | SCTN20-9  |
| .032" —        | Standard    | SCTN32-3  | SCTN32-5  | SCTN32-7  | SCTN32-9  |
|                | Low-Profile | SCTN32-3L | SCTN32-5L | SCTN32-7L | SCTN32-9L |
| .040" —        | Standard    | SCTN40-3  | SCTN40-5  | SCTN40-7  | SCTN40-9  |
|                | Low-Profile | SCTN40-3L | SCTN40-5L | SCTN40-7L | SCTN40-9L |
| .062"          | Standard    | SCTHN62-3 | SCTHN62-5 | SCTHN62-7 | SCTHN62-9 |

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### **ACCESSORIES**



#### SCT32084 Spanner Wrench

A spanner wrench is used to unlock the jam nut which allows adjustment of the indenter depth on Safe-T-Cable tools. A 7/16" wrench is used on .062" tools.



#### SCT32059SA Nose Extender

The Safe-T-Cable nose extender adds 2" in nose length and is compatible with .022", .032", or .040" tools.



#### **Replacement Tension Assembly**

| SCTR20TW-SA  | .022" tools |
|--------------|-------------|
| SCTR32TW-SA  | .032" tools |
| SCTR40TW-SA  | .040" tools |
| SCTR62TW-SA  | .062" tools |
| SCTPRM-TW-SA | SCTPRM only |



#### **Diagonal Cutters**

Both cutters feature rubber inserts which grip the cable after it is cut, reducing the potential for FOD.

.022", .032", and .040" 45-6N SCTD015 .062"

#### FIBERGLASS SLEEVING

A tubular jacket of fiberglass sleeving should be placed over Safe-T-Cable when installed in areas where the cable will be in contact with obstructions or surfaces that may cause damage. This sleeving is rated for -70 - 600° C, has a high tensile strength, and is resistant to moisture and most chemicals. **SCTD010** is sold in spools of 50 feet.



#### ADDITIONAL ACCESSORIES

| Description           |  |
|-----------------------|--|
| 9/64" Hex Wrench      |  |
| 3/32" Hex Wrench      |  |
| Drive Punch           |  |
| Retaining Ring Pliers |  |
|                       |  |

## **VERIFICATION EQUIPMENT**

DMC offers all of the equipment necessary to perform periodic testing and verification of Safe-T-Cable tools. Tensioning mechanisms are verified using the Safe-T-Cable torque verification block and a push force tester. Tool indenter verification can be confirmed based on minimum pull-off loads per cable diameter using a torque wrench and torque verification block. Minimum pull-off loads and flex limits are located in the best practices section (page 18). Refer to datasheets or contact DMC for more specific information on tool verification.



#### **Torque Verification Blocks**

SCT-TB1.022", .032", and .040" Safe-T-CableSCT-TB2.062" Safe-T-CableSCT-TB1R.022", .032", and .040" configured for<br/>right-hand reading torque wrenches



Torque Wrenches SCTD0001 .022", .032", and .040" SCTD011 .062"



#### SCTD013 Push Force Tester

Used to apply 2 lb of force to Safe-T-Cable installations when verifying cable tension on torque verification blocks

#### **MPT-250C Motorized Pull Tester**

This motorized pull tester may be used to capture and export data from tool indenter setting tests. The MPT-250C and 15-3318 grip set is used for tensile testing .022", .032", and .040" Safe-T-Cable. This motorized unit has a range





2.5 to 250 lbf and can perform pull-to-fail and force hold tests. It features a full color LCD touchscreen interface and data capture capability for exporting test data to a PC via USB or RS-232.

- Force Measurement Accuracy: +/- 0.5% Full Scale
- Force Measurement Resolution: 0.1 (lbf, kgf, N)
- Meets UL, ISO, SAE, MIL, and ASTM requirements

### **POPULAR TOOL KITS**

DMC tool kits are well known throughout the aerospace industry for quality and reliability. Our tool kits are manufactured to meet the most demanding conditions and minimize the risk of FOD. Foam inserts provide each component with a safe, designated storage space to ensure all tools and accessories are back in the kit after work is completed.

A variety of Safe-T-Cable tool kits are available including multi-tool configurations with and without verification equipment to support your specific requirements. Several of our most popular tool kits are listed on the following pages. More kits can be found on our website. If you have specific requirements, please contact DMC for a custom solution.



|                            | .022"              | .032"              | .040"              |
|----------------------------|--------------------|--------------------|--------------------|
| Adjustable Tool Kit Part # | DMC1001-7R         | DMC1000-4R         | DMC1000-11R        |
| NSN                        | 5180-01-661-4208   | 5180-01-586-3020   | 5120-01-449-2669   |
| Adjustable Tool Part #     | SCTR203            | SCTR323            | SCTR407            |
| Nose Part #                | SCTN20-7           | SCTN32-7           |                    |
| Assembly & Ferrule Kit(s)  | C10-118PKG (2 QTY) | C10-218PKG (2 QTY) | C10-318PKG (2 QTY) |
| Tool Verification Block    | $\bigotimes$       | $\bigotimes$       | $\bigotimes$       |
| Spanner Wrench             | $\bigotimes$       | $\bigotimes$       | $\bigotimes$       |
| Flat Blade Screwdriver     | $\bigotimes$       | $\bigotimes$       | $\bigotimes$       |
| Diagonal Cutter            | $\bigotimes$       | $\bigotimes$       | $\bigotimes$       |
| Hex Wrench                 | $\bigotimes$       | $\bigotimes$       | $\bigotimes$       |
| Pre-Set Tool Kit Part #    | DMC1001-7          | DMC1000-4          | DMC1000-11         |
| Pre-Set Tool Kit NSN       | 5180-01-695-9395   | 5180-01-586-7191   |                    |

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### **MULTI-TOOL KITS**

<image>

|                            | .022" & .032"                                                    | .032" & .040"                            | .022", .032" & .040"                                                                                                                   |
|----------------------------|------------------------------------------------------------------|------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------|
| Adjustable Tool Kit Part # | DMC1000-20R                                                      | DMC1000-19R                              | DMC1007-28R                                                                                                                            |
| NSN                        | 5180-01-550-2331                                                 |                                          | 5180-01-689-0253                                                                                                                       |
| Adjustable Tool Part #'s   | SCTR203, SCTR323                                                 | SCTR327, SCTR407                         | SCTR203, SCTR323,<br>SCTR403                                                                                                           |
| Nose Part #'s              | SCTN20-7, SCTN32-7                                               | SCTN32-3, SCTN40-3                       | SCTN20-7, SCTN32-7,<br>SCTN40-7                                                                                                        |
| Assembly & Ferrule Kit(s)  | C10-118PKG (2 QTY)<br>C10-218PKG (2 QTY)<br>C10-218JAPKG (1 QTY) | C10-218PKG (2 QTY)<br>C10-318PKG (2 QTY) | C10-118PKG (2 QTY)<br>C10-118JAPKG (1 QTY)<br>C10-218PKG (2 QTY)<br>C10-218JAPKG (1 QTY)<br>C10-318PKG (2 QTY)<br>C10-318JAPKG (1 QTY) |
| Ferrules                   | F10-04PKG (1 QTY)                                                |                                          | F10-04PKG (1 QTY)<br>F10-07PKG (1 QTY)<br>F10-08PKG (1 QTY)                                                                            |
| Tool Verification Block    | $\bigotimes$                                                     | $\bigotimes$                             | $\bigotimes$                                                                                                                           |
| Spanner Wrench             | $\bigotimes$                                                     | $\bigotimes$                             | $\bigotimes$                                                                                                                           |
| Flat Blade Screwdriver     | $\bigotimes$                                                     | $\bigotimes$                             | $\bigotimes$                                                                                                                           |
| Diagonal Cutter            | $\bigotimes$                                                     | $\bigotimes$                             | $\bigotimes$                                                                                                                           |
| Hex Wrench                 | $\bigotimes$                                                     | $\bigotimes$                             | $\bigotimes$                                                                                                                           |
| Pre-Set Tool Kit Part #    | DMC1000-20                                                       | DMC1000-19                               | DMC1007-28                                                                                                                             |

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17

### **POPULAR MILITARY TOOL KITS**

Our military Safe-T-Cable kits are packaged in a soft canvas bag making them easy to carry and ideal for confined spaces. These kits are available in either .032" manual or .062" manual hydraulic options.



|                             | .032"               | .062"              |
|-----------------------------|---------------------|--------------------|
| Adjustable Tool Kit Part #  | DMC1000-32NAV       | DMC1000-62NAV      |
| NSN                         | 5180-01-498-1237    | 5180-01-498-1507   |
| Adjustable Tool Part #      | SCTR323             | SCTH625            |
| Nose Part #'s               | SCTN32-9            | SCTHN62-9          |
| Assembly and Ferrule Kit(s) | C10-224PKG (10 QTY) | C10-924PKG (5 QTY) |
| Tool Verification Block     | $\bigotimes$        | $\bigotimes$       |
| Spanner Wrench              | $\bigotimes$        |                    |
| Flat Blade Screwdriver      | $\bigotimes$        | $\bigotimes$       |
| Diagonal Cutter             | $\bigotimes$        | $\bigotimes$       |
| Hex Wrench                  | $\bigotimes$        | $\bigotimes$       |
| Retaining Ring Pliers       | $\bigotimes$        | $\bigotimes$       |
| Nose Extender               | $\bigotimes$        |                    |
| Drive Punch                 |                     | $\bigotimes$       |

MINIMUM PULL-OFF LOAD

18

135°

MAX

# **BEST PRACTICES AND RESOURCES**

Safe-T-Cable assemblies and ferrules should be installed with a Safe-T-Cable tool which has been set to meet the performance requirements of AS4536 (SAE). Users should use the tool to apply tension to the installation. Users should not pull Safe-T-Cable tight with their hands.

**Temperature Ratings:** 321 CRES Safe-T-Cable (AS3510 series, UNS S32100 CRES) should be selected for general purpose use on all applications up to 800°F. Inconel 600 Safe-T-Cable (AS3509 series, UNS N6600 Nickel Alloy) should be selected for applications where the temperature range is between 800°F and 1500°F or for electrical related applications where magnetic materials cannot be used.

#### HOLE DIAMETER CABLE SELECTION GUIDE

| Recommended<br>Hole Diameter | Safe-T-Cable<br>Diameter | Safe-T-Cable<br>Diameter | lbf (N)      |
|------------------------------|--------------------------|--------------------------|--------------|
| .037"060"                    | .022″                    | .022″                    | 30 (133.4)   |
| .060"080"                    | .032″                    | .032″                    | 70 (311.4)   |
| .070"090"                    | .040″                    | .040″                    | 110 (489.3)  |
| .080"120"                    | .062″                    | .062″                    | 280 (1245.4) |

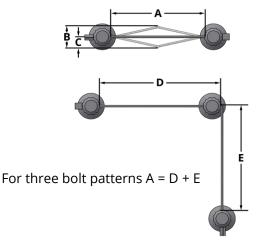
**Maximum Span:** The maximum span between two termination points should be 6" (152.4 mm) unless otherwise specified. Routing of Safe-T-Cable may vary from that of lockwire in order to achieve a proper installation.

**Bend Limits:** The maximum bend limit of a Safe-T-Cable installation is 135°. This does not apply to hose fittings, electrical connector coupling mechanisms, turnbuckles, or similar applications where Safe-T-Cable is constrained by the shape of the component being secured.

A self-looping jumper cable assembly should be used to obtain a secure installation in applications where holes do not exist in a fastener or other part of the assembly. This method should not be used in applications where Safe-T-Cable can flip over the head of the fastener being secured.

**Flex Limits:** Maximum flex limits between termination points are stated on the following table. Apply 2 lb of pressure to mid-span when inspecting flex limits.

| А               | В                 | С                |
|-----------------|-------------------|------------------|
| 0.5" (12.7 mm)  | 0.125" (3.18 mm)  | 0.062" (1.59 mm) |
| 1.0" (25.4 mm)  | 0.250" (6.35 mm)  | 0.125" (3.18 mm) |
| 2.0" (50.8 mm)  | 0.375" (9.52 mm)  | 0.188" (4.76 mm) |
| 3.0" (76.2 mm)  | 0.375" (9.52 mm)  | 0.188" (4.76 mm) |
| 4.0" (101.6 mm) | 0.500" (12.70 mm) | 0.250" (6.35 mm) |
| 5.0" (127.0 mm) | 0.500" (12.70 mm) | 0.250" (6.35 mm) |
| 6.0" (152.4 mm) | 0.625" (15.88 mm) | 0.312" (7.94 mm) |





### Visit our website for more application/installation information at: https://qrco.de/BestPractices or scan the QR code.

### NATIONAL STOCK NUMBER LISTINGS

|                           | DMC PART #         | DESCRIPTION                                                                      | NSN                                                     |
|---------------------------|--------------------|----------------------------------------------------------------------------------|---------------------------------------------------------|
|                           | C08-124N           | KIT .022" X 24" - INCONEL 625                                                    | 5340-01-572-9621                                        |
|                           | C08-224N           | KIT .032" X 24" - INCONEL 625                                                    | 5340-01-572-9629                                        |
|                           | C08-324N           | KIT .040" X 24" - INCONEL 625                                                    | 5340-01-573-0466                                        |
|                           | C09-209            | KIT .032" X 9" - INCONEL 600                                                     | 5340-01-468-6698                                        |
|                           | C09-212            | KIT .032" X 12" - INCONEL 600                                                    | 5340-01-468-6688                                        |
|                           | C09-215            | KIT .032" X 15" - INCONEL 600                                                    | 5340-01-468-6665                                        |
|                           | C09-218            | KIT .032" X 18" - INCONEL 600                                                    | 5340-01-468-6658                                        |
|                           | C09-324            | KIT .040" X 24" - INCONEL 600                                                    | 5340-01-513-3853                                        |
|                           | C10-106            | KIT .022" X 6" - 321 CRES                                                        | 5340-01-667-2634, 5340-01-631-5863                      |
| KITS                      | C10-112            | KIT .022" X 12" - 321 CRES                                                       | 5340-01-667-7757, 5342-01-414-6581                      |
| EX                        | C10-118            | KIT .022"" X 18" - 321 CRES                                                      | 5342-01-414-6583, 5975-01-697-2951                      |
| FERRULE                   | C10-118EF          | KIT .032" X 18" W/ELONGATED FERRULES - 321 CRES                                  | 5340-01-680-6361                                        |
| IRR                       | C10-206            | KIT .032" X 6" - 321 CRES                                                        | 5340-01-514-6921                                        |
|                           | C10-209            | KIT .032" X 9" - 321 CRES                                                        | 5340-01-612-3670                                        |
| Ž                         | C10-212            | KIT .032" X 12" - 321 CRES                                                       | 5342-01-414-6584                                        |
| X                         | C10-212JA          | KIT .032" X 12" W/JUMPER - 321 CRES                                              | 5340-01-630-4359                                        |
| <b>CABLE ASSEMBLY AND</b> | C10-218            | KIT .032" X 18" - 321 CRES                                                       | 5342-01-414-6582                                        |
| SEN                       | C10-218EF          | KIT .032" X 18" W/ELONGATED FERRULES- 321 CRES                                   | 5340-01-680-6093, 4030-01-538-7856                      |
| AS                        | C10-218EFR         | KIT .032" X 18" W/ELONGATED CONICAL FERRULES - 321 CRES                          | 5340-01-495-4038                                        |
| 3LE                       | C10-218JA          | KIT .032" X 18" W/JUMPER - 321 CRES                                              | 5340-01-551-3251                                        |
| CAB                       | C10-224            | KIT .032" X 24" - 321 CRES                                                       | 5120-01-473-7392, 5120-01-453-1505,<br>5340-01-671-3294 |
|                           | C10-306            | KIT .040" X 06" - 321 CRES                                                       | 5340-01-614-8610                                        |
|                           | C10-312            | KIT .040" X 12" - 321 CRES                                                       | 5340-01-625-3947                                        |
|                           | C10-312JA          | KIT .040 x 12" W/JUMPER - 321 CRES                                               | 5340-01-650-7592                                        |
|                           | C10-318            | KIT .040" X 18" - 321 CRES                                                       | 5340-01-526-4612, 5340-01-452-0343                      |
|                           | C10-318EF          | KIT .040" X 18" W/ELONGATED FERRULES - 321 CRES                                  | 5340-01-618-6760                                        |
|                           | C10-318JA          | KIT .040" X 18" W/JUMPER - 321 CRES                                              | 5340-01-664-6393, 5340-01-664-6393                      |
|                           | C10-321            | KIT .040" X 21" - 321 CRES                                                       | 5340-01-667-2877                                        |
|                           | C10-324            | KIT .040" X 24" - 321 CRES                                                       | 5340-01-625-3882, 5340-01-452-0345                      |
|                           | C10-924            | KIT .062" X 24" - 321 CRES                                                       | 5120-01-453-1508                                        |
|                           | A09-118            | ASSEMBLY .022" X 18" LENGTH - INCONEL 600                                        | 5340-01-588-8411                                        |
| IES                       | A10-118            | ASSEMBLY .022" X 18" LENGTH - 321 CRES                                           | 5340-01-479-8403                                        |
| 1BL                       | A10-121            | ASSEMBLY .022" X 21" LENGTH - 321 CRES                                           | 5995-01-661-0760                                        |
| SEV                       | A10-209            | ASSEMBLY .032" X 9" LENGTH - 321 CRES                                            | 1620-01-493-1760                                        |
| AS                        | A10-212            | ASSEMBLY .032" X 12" LENGTH - 321 CRES<br>ASSEMBLY .032" X 18" LENGTH - 321 CRES | 5340-01-632-9503, 5342-01-387-1906                      |
| CABLE ASSEMBLIE           | A10-218<br>A10-221 | ASSEMBLY .032 X 18 LENGTH - 321 CRES                                             | 5340-01-479-8417, 4010-01-508-6610<br>5995-01-661-0756  |
| CAE                       | A10-224            | ASSEMBLY .032 X 24" LENGTH - 321 CRES                                            | 4010-01-508-6604                                        |
|                           | A10-924            | ASSEMBLY .062" X 24" - 321 CRES                                                  | 4010-01-508-8004                                        |
|                           | F08-1N             | FERRULE FOR .022" - INCONEL 625                                                  | 5340-01-573-0074                                        |
| ERRULES                   | F08-2N             | FERRULE FOR .032" - INCONEL 625                                                  | 5340-01-573-0069                                        |
|                           | F08-3N             | FERRULE FOR .040" - INCONEL 625                                                  | 4030-01-573-1297                                        |
|                           | F09-1              | FERRULE FOR .022" - INCONEL 600                                                  | 5340-01-588-8409                                        |
|                           | F10-04             | ELONGATED FERRULE FOR .032" - 321 CRES                                           | 5342-01-414-0319                                        |
| RRI                       | F10-06             | ELONGATED CONICAL FERRULE FOR .032" - 321 CRES                                   | 5340-01-474-6482                                        |
| Ш                         | F10-08             | ELONGATED FERRULE FOR .022" - 321 CRES                                           | 5940-01-661-3350                                        |
|                           | F10-1              | FERRULE FOR .022" - 321 CRES                                                     | 5340-01-496-6089                                        |
|                           | F10-2              | FERRULE FOR .032" - 321 CRES                                                     | 5342-01-387-1796, 5365-01-493-1767                      |
|                           | F10-9              | FERRULE FOR .062" - 321 CRES                                                     | 5340-01-504-1488                                        |
|                           | L                  | ٠                                                                                |                                                         |

|                | DMC DADT #    | DECONDENSION                                                                                       | NCN                                |
|----------------|---------------|----------------------------------------------------------------------------------------------------|------------------------------------|
|                | DMC PART #    |                                                                                                    | NSN                                |
|                | DMC1000       | PRE-SET TENSION TOOL KIT FOR .032"                                                                 | 5180-01-452-2175                   |
|                | DMC1000-11R   | ADJUSTABLE TENSION TOOL KIT FOR .040"                                                              | 5120-01-449-2669                   |
|                | DMC1000-20R   | ADJUSTABLE TENSION TOOL KIT FOR .022" & .032"                                                      | 5180-01-550-2331                   |
| S              | DMC1000-32NAV | ADJUSTABLE TENSION SOFT CASE TOOL KIT FOR .032"                                                    | 5180-01-498-1237                   |
| OOL KITS       | DMC1000-4     | PRE-SET TENSION TOOL KIT W/ TEST BLOCK FOR .032"                                                   | 5180-01-586-7191                   |
|                | DMC1000-4R    | ADJ. TENSION TOOL KIT W/ TEST BLOCK FOR .032"                                                      | 5180-01-586-3020                   |
| <u>P</u>       | DMC1000-62NAV | ADJUSTABLE TENSION SOFT CASE TOOL KIT FOR .062"                                                    | 5180-01-498-1507                   |
|                | DMC1001       | PRE-SET TENSION TOOL KIT FOR .022"                                                                 | 5180-01-492-2670                   |
|                | DMC1001-7R    | ADJUSTABLE TENSION TOOL KIT .022"                                                                  | 5180-01-661-4208                   |
|                | DMC1007       | PRE-SET TENSION TOOL KIT FOR .022" & .032"                                                         | 5180-01-695-9395                   |
|                | DMC1007-28R   | ADJUSTABLE TENSION TOOL KIT FOR .022", .032" & .040"                                               | 5180-01-689-0253                   |
|                | SCT320        | TOOL FRAME (NOSE ASSEMBLY NOT INCLUDED)                                                            | 5120-01-413-8727                   |
|                | SCT327        | PRE-SET TENSION TOOL W/7" NOSE FOR .032"                                                           | 5120-01-440-5129                   |
|                | SCTH625       | HYDRAULIC TOOL W/5" NOSE FOR .062"                                                                 | 5120-01-498-1529                   |
|                | SCTP323       | PNEUMATIC TOOL W/3" NOSE FOR .032"                                                                 | 5130-01-575-0335                   |
| S              | SCTR203       | ADJUSTABLE TENSION TOOL W/3" NOSE FOR .022"                                                        | 5120-01-463-6819                   |
| TOOL           | SCTR207       | ADJUSTABLE TENSION TOOL W/7" NOSE FOR .022"                                                        | 5120-01-463-7115                   |
| Ĕ              | SCTR323       | ADJUSTABLE TENSION TOOL W/3" NOSE FOR .032"                                                        | 5120-01-453-1506, 5120-01-516-5557 |
|                | SCTR327       | ADJUSTABLE TENSION TOOL W/7" NOSE FOR .032"                                                        | 5110-01-463-7117                   |
|                | SCTR407       | ADJUSTABLE TENSION TOOL W/7" NOSE FOR .040"                                                        | 5120-01-449-0969                   |
|                | SCTHN62-5     | 5" NOSE ASSEMBLY FOR .062" TOOL                                                                    | 5120-01-498-1511                   |
|                | SCTHN62-9     | 9" NOSE ASSEMBLY FOR .062" TOOL                                                                    | 5120-01-498-1545                   |
|                | SCTN20-3      | 3" NOSE ASSEMBLY FOR .022" TOOL                                                                    | 5120-01-413-8726                   |
|                | SCTN20-7      | 7" NOSE ASSEMBLY FOR .022" TOOL                                                                    | 5110-01-463-6820                   |
| NOSES          | SCTN32-3      | 3" NOSE ASSEMBLY FOR .032" TOOL                                                                    | 5120-01-413-8725                   |
| 2              | SCTN32-7      | 7" NOSE ASSEMBLY FOR .032" TOOL                                                                    | 5120-01-413-8724                   |
|                | SCTN32-7L     | 7" LOW PROFILE NOSE ASSEMBLY FOR .032" TOOL                                                        | 5120-01-649-0205                   |
|                | SCTN32-9      | 9" NOSE ASSEMBLY FOR .032" TOOL                                                                    | 5120-01-453-1502                   |
|                | SCTN40-3      | 3" NOSE ASSEMBLY FOR .040" TOOL                                                                    | 5120-01-459-0350                   |
|                | SCTN40-7      | 7" NOSE ASSEMBLY FOR .040" TOOL                                                                    | 5120-01-456-2590                   |
| N              | SCT-TB1       | TORQUE VERIFICATION BLOCK FOR .022", .032" & .040"                                                 | 6635-01-416-9870                   |
|                | SCTD0001      | TORQUE WRENCH, 150 INCH-POUND RANGE                                                                | 5120-01-463-7122, 5120-01-498-1470 |
| ß              | SCTD011       | TORQUE WRENCH, 750 INCH-POUND RANGE                                                                | 5120-01-498-1509                   |
| VERIFICATI     | SCT-TB1R      | TORQUE VERIFICATION BLOCK FOR .022", .032" & .040" TOOLS<br>FOR RIGHT-HAND READING TORQUE WRENCHES | 6635-01-551-3297                   |
| >              | SCT-TB2       | TORQUE VERIFICATION BLOCK FOR .062" TOOLS                                                          | 6635-01-462-4438                   |
|                | 45-6N         | DIAGONAL CUTTERS FOR .022", .032" & .040"                                                          | 5110-01-431-0976                   |
| . :            | SCT32059SA    | 2" NOSE EXTENDER FOR .022", .032" & .040" TOOLS                                                    | 5120-01-498-1535                   |
| llsc           | SCT32084      | SPANNER WRENCH                                                                                     | 5120-01-498-1482                   |
| CCESSORIES/MIS | SCTD010       | FIBERGLASS SLEEVING - 50 FT                                                                        | 5970-01-661-4175                   |
| RIE            | SCTD012       | RETAINING RING PLIERS                                                                              | 5120-01-498-1476                   |
| Sol            | SCTD015       | DIAGONAL CUTTERS FOR .062"                                                                         | 5110-01-509-6707                   |
| ES             | SCTR32TW-SA   | TENSION WHEEL SUB-ASSEMBLY FOR .032"                                                               | 5180-01-633-3991                   |
| AC             | SCT-SCC32-1   | SOFT CASE ONLY FOR DMC1000-32NAV                                                                   | 5140-01-498-1245                   |
|                | SCT-SCC62-1   | SOFT CASE ONLY FOR DMC1000-62NAV                                                                   | 5140-01-498-1508                   |
|                | FW10-1        | FLAT WASHER FOR .022", .032", .040"                                                                | 5310-01-631-8694                   |



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