

Connection System



Sleeves and tools for wire, fiber and synthetic rope

Wire rope connection systems for more than 118 years

Since 1901, Nicopress® has designed and manufactured a wide range of tools, connections and terminating solutions for applications in wire, fiber and synthetic rope for global customers. A perfectly integrated system, Nicopress® tools and sleeves have been specifically engineered, laboratory- and field-tested for dependability and longevity.

Sleeves are available in aluminum, copper, tin plated copper, zinc plated copper, black-oxide coated copper, stainless steel and titanium. Traditional sleeve sizes range from 1/32" (1mm) to 5/8" (16mm). Micro sleeve sizes also are available from 0.008" (0.20mm) to 3/64" (1.2mm) as well as stop and custom sleeves.

A wide range of tools for both in-field and factory conditions complement the sleeves for convenient and proper installation; these include: hand, pneumatic, manual hydraulic, electric hydraulic and bench. Detailed instruction sheets are available to illustrate proper connector and tool selection, as well as tool operation and adjustment. Go gauges are packaged with each tool so that swaged sleeves may be inspected properly for correct installation.

Safely securing our world

Nicopress® patented and developed the science for the oval sleeve connection system, and continues to successfully secure customers' critical applications worldwide in industries that require efficiency, safety, reliability and quality. Sleeves hold up to 100% RBS (rated breaking strength) and comply with wire rope termination specifications including MS51844 and EN13411. The industry leader, the Nicopress® system of sleeves and tools ensures dependability.

Committed to innovation

We continually evaluate various types and grades of cable and rope to provide new solutions for challenging connections and terminations. Regardless of alloy, composition or application, the result is a Nicopress® system of compression connectors and tools that provides secure and permanent solutions for cable terminations and connections.

For more than 118 years, Nicopress® sleeves and tools have been the termination solution of choice for aerospace, military and defense, utilities (infrastructure), OEM/industrial, rail signal and catenary, indoor and outdoor entertainment, performing arts, motion picture, and specialty solutions including construction, erosion control, fall protection, material handling, marine and others.

Dedication to quality and continuous improvement

Our Cleveland, Ohio USA operation is certified to ISO 9001:2015 with Design standard. This globally recognized certification of quality management system standards supports our commitment to create and maintain quality processes that ensure consistency, visibility and accountability. The demanding certification and audit process demonstrate our dedication to provide the highest-quality standards in design, engineering and product manufacturing that meet or surpass our customers' expectations.

Knowledgeable post sales service & support

Our design, engineering and development team supports a wide range of Nicopress® products with extensive technical knowledge. Our team answers questions and provides after-sales service as part of our quality commitment. A wide range of educational literature including technical bulletins are available for download on our website.

We developed an efficient distributor network to make Nicopress® products available worldwide on-demand. Nicopress® customers can rely on our quality products, service and support. Our USA operation manufactures the vast majority of the products we sell and our knowledgeable team is available to answer questions and assist with global engineering challenges.

NICOPRESS: A safe, secure, integrated system

Nicopress® tools and connectors have been specifically engineered, laboratory- and field-tested for dependability. They're a perfectly integrated system for your global connection and terminating solutions for applications of wire, fiber and synthetic rope. Safety is our cornerstone. We continually provide instructions and technical bulletins to ensure proper usage of Nicopress® tools and connectors to safely secure your world.

Connections & terminations hold to RBS

The Nicopress® system is easy to use. Nicopress® sleeves are used to create rated breaking strength (RBS) eye-splice terminations. Nicopress® stop sleeves are used to terminate cable and rope and typically hold to 50% of the cable's RBS.

Through pull testing we have determined that Nicopress® oval sleeves made of copper, plated copper, aluminum and stainless steel will typically hold wire ropes in tension until they break when wire ropes and strand are certified to specifications: MIL-DTL-83420 (Flexible Wire Rope for Aircraft Control); RR-W-410 (Federal Specification for Wire Rope and Strand); MIL-DTL-18375 (Flexible Stainless Steel Aircraft Wire Rope); and EN12385 (Steel Wire Ropes for Lifting – metric standard). Typical cable constructions are: 3x7, 7x7, 7x19, 6x19 IWRC, and others.

Nicopress® sleeves for swaged wire rope connections comply with all known termination specifications and standards including: MS-51844 (Sleeve, Swaging Wire Rope), metric standard EN13411-3 (Terminations for Steel Wire Ropes, Ferrules and Ferrule Securing), and ASME B30.9 (Slings).

Other types and grades of cable exist and may be used with Nicopress® sleeves. In order to establish the exact holding power a pull test is recommended prior to use. This ensures proper selection of materials, the correct pressing procedure and an adequate margin of safety for intended use. Proof testing is recommended whenever the possibility of personal injury or property damage exists. ALWAYS wear safety glasses when tool is being used.

Nicopress® tools are designed to be used with Nicopress® sleeves as an integrated system.

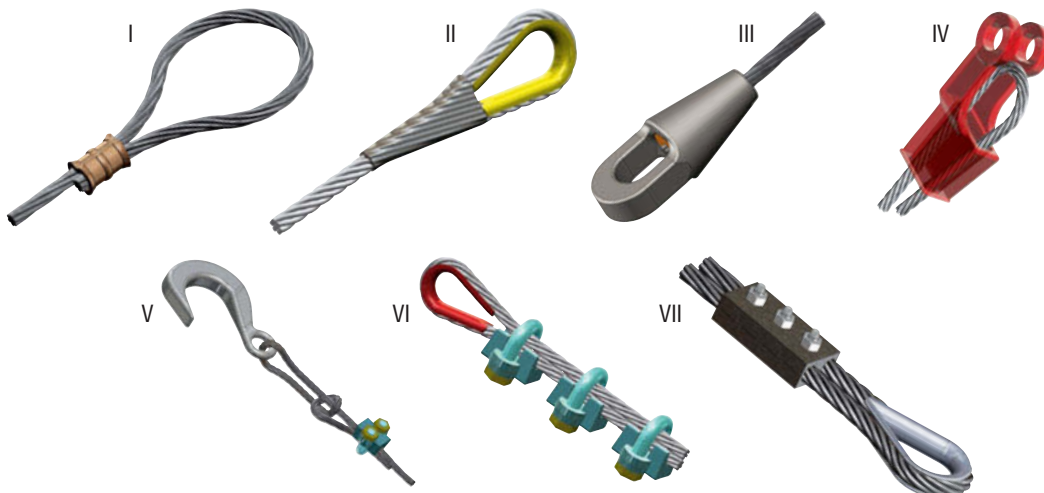
Efficiency of wire rope connections^{1,2,3}

FIGURE	TYPE OF CONNECTION	EFFICIENCY	COST
I	COMPRESSED SLEEVE 'NICOPRESS'	95 - 100%	LOW
II	SPLICED EYE AND THIMBLE	80 - 89%	MEDIUM
III	POURED SOCKET	95 - 100%	HIGH
IV	OPEN WEDGE 'WEDGE SOCKET'	75 - 85%	HIGH
V	KNOT AND CLIP 'CONTRACTORS KNOT'	50%	LOW
VI	WIRE ROPE CLIPS	75 - 85%	MEDIUM
VII	PLATE CLAMP	80%	LOW

1-Handbook of Oceanographic Winch, Wire and Cable Technology. National Science Foundation and Dept of Navy – Office of Naval Research.

2-Dept of Energy DOE-STD-1090-2007, Ch 11, Wire Rope Fastenings.

3-Rope and Cable Terminations, C Robert Shaw.



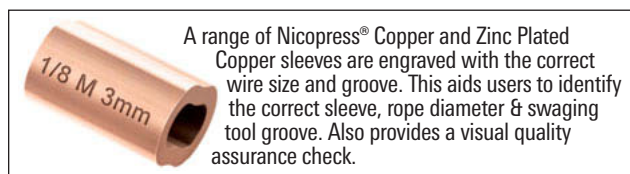
NICOPRESS Copper, Zinc Plated & Black Oxide Oval Sleeves



FOR STEEL AIRCRAFT CONTROL CABLE & WIRE ROPE															
NICOPRESS OVAL SLEEVES						NICOPRESS APPLICATION TOOL SELECTION									
CABLE SIZE		OVAL SLEEVE			APPROX WT (PER 1000/M)		HAND TOOLS		BENCH TOOL HEAD		HYDRAULIC TOOLS		AT-PNEUMATIC	BATTERY TOOLS	
in	mm	PLAIN COPPER	ZINC PLATED COPPER	BLACK OXIDE	lb	kg	SINGLE-GROOVE	MULTI-GROOVE	SINGLE-GROOVE	MULTI-GROOVE	3512 DIE	635 DIE	POWER HEAD	5606 DIE	5512 & 5612 DIES
1/32	-	17-1-B	27-1-B	617-1-B	0.6	0.3	31-B	17-BA 17-B4B					AT-B		
3/64	1-1.2	18-11-B4	28-11-B4	618-11-B4	2	1	51-B4-887 31-B4	17-B4B 33V-CGB4	51-B4-887 HEAD		12-OVAL-B4	OVAL B4	AT-B4	6-OVAL-B4	12-OVAL-B4
1/16	1.5-2	18-1-C	28-1-C	618-1-C	3	1.3	51-C-887	33V-CGB4 32-VC-VG 64-CGMP	51-C-887 HEAD 3-C-887 HEAD	64-CGMP HEAD 3V-CGMP HEAD	12-OVAL-C	OVAL C	AT-C AT-CGMP	6-OVAL-C	12-OVAL-C
3/32	2.5	18-2-G	28-2-G	618-2-G	5	2.3	51-G-887	33V-CGB4 32-VC-VG 64-CGMP	51-G-887 HEAD 3-G-887 HEAD	64-CGMP HEAD 3V-CGMP HEAD	12-OVAL-G	OVAL G	AT-G AT-CGMP	6-OVAL-G	12-OVAL-G
1/8	3-3.5	18-3-M	28-3-M	618-3-M	17	7.7	51-M-850	64-CGMP* 63V-XPM* 51-MJ 3V-F6:X:M 3-MJ	51-M-850 HEAD 3-M-850 HEAD	64-CGMP HEAD 63V-XPM HEAD 51-MJ HEAD 3V-CGMP HEAD 3V-F6:X:M HEAD 3-MJ HEAD	12-OVAL-M	OVAL M	AT-M AT-CGMP AT-XPM AT-MJ	6-OVAL-M	12-OVAL-M
5/32	4	18-4-P	28-4-P	618-4-P	23	10.4	51-P-850 3-P-850	64-CGMP* 63V-XPM*	51-P-850 HEAD 3-P-850 HEAD	64-CGMP HEAD 63V-XPM HEAD 3V-CGMP HEAD	12-OVAL-P	OVAL P	AT-P AT-CGMP AT-XPM	6-OVAL-P	12-OVAL-P
3/16	5	18-6-X	28-6-X	618-6-X	49	22.2	51-X-850 3-X-850	63V-XPM* 3V-F6:X:M	51-X-850 HEAD 3-X-850 HEAD	63V-XPM HEAD 3V-F6:X:M HEAD	12-OVAL-X	OVAL X	AT-X AT-XPM AT-X-F6**	6-OVAL-X	12-OVAL-X
7/32	6	18-8-F2	28-8-F2	618-8-F2	48	22	51-F2-850 3-F2-850		51-F2-850 HEAD 3-F2-850 HEAD		12-OVAL-F2	OVAL F2	AT-F2	6-OVAL-F2	12-OVAL-F2
1/4		18-10-F6	28-10-F6	618-10-F6	78	35	3-F6-950	3-V-F6:X:M	3-F6-950 HEAD	3-V-F6:X:M HEAD	12-OVAL-F6	OVAL F6	AT-F6** AT-X-F6**	6-OVAL-F6	12-OVAL-F6
5/16	8	18-13-G9	28-13-G9	618-13-G9	114	51.7	3-G9-950		3-G9-950 HEAD		12-OVAL-G9	OVAL G9	AT-G9**	6-OVAL-G9	6-OVAL-G9
3/8	9-10	18-23-H5	28-23-H5	618-23-H5	153	69	3-H5-950		3-H5-950 HEAD		12-OVAL-H5	OVAL H5		6-OVAL-H5	12-OVAL-H5
7/16	11	18-24-J8	28-24-J8	618-24-J8	302	137					12-OVAL-J8	OVAL J8			12-OVAL-J8
1/2	12-13	18-25-K8	28-25-K8	618-25-K8	410	186					12-OVAL-K8	OVAL K8			12-OVAL-K8
9/16	14	18-27-M1	28-27-M1	618-27-M1	551	250						OVAL M1			
5/8	16	18-28-N5	28-28-N5	618-28-N5	802	364						OVAL N5			

*Model also available with cable cutter. Specify 64-CGMP/cutter tool or 63V-XPM/cutter tool.

**Must be crimped using accessory booster kit.



NICOPRESS Stainless Steel Oval Sleeves



FOR STAINLESS STEEL AIRCRAFT CONTROL CABLE & WIRE ROPE											
NICOPRESS OVAL SLEEVES					NICOPRESS APPLICATION TOOL SELECTION						
CABLE SIZE		OVAL SLEEVE	APPROX WT (PER 1000/M)		HAND TOOLS		BENCH TOOL HEAD	HYDRAULIC TOOLS		AT-PNEUMATIC	BATTERY TOOLS
in	mm	STAINLESS STEEL	lb	kg	SINGLE-GROOVE	MULTI-GROOVE	SINGLE-GROOVE	3512 DIE	635 DIE	POWER HEAD	5512 & 5612 DIES
1/32	1	168-1-VB	0.5	0.2	31-B						
3/64	1.2-1.5	168-1.5-VB4	1.5	0.7	51-B4-887	33V-CGB4	51-B4-887 HEAD	12-OVAL-B4	OVAL B4	AT-B4	12-OVAL-B4
1/16	2	168-2-VB4	1.5	0.7	51-B4-887		51-B4-887 HEAD	12-OVAL-B4	OVAL B4	AT-B4	12-OVAL-B4
3/32	2.5	168-3-VC	2.3	1	51-C-887 3-C-887		51-C-887 HEAD 3-C-887 HEAD	12-OVAL-C	OVAL C	AT-C	12-OVAL-C
1/8	3.5	168-4-VG	3.8	1.7	51-G-887 3-G-887		51-G-887 HEAD 3-G-887 HEAD	12-OVAL-G	OVAL G	AT-G	12-OVAL-G
5/32	4	168-5-VM	14	6.3	51-M-850 3-M-850		51-M-850 HEAD 3-M-850 HEAD	12-OVAL-M	OVAL M	AT-M	12-OVAL-M
3/16	5	168-6-VP	21	9.5	51-P-850		51-P-850 HEAD	12-OVAL-P	OVAL 168-6-VP	AT-P	12-OVAL-P
7/32		168-7-VX	31	14.1	3-X-950		3-X-950 HEAD	12-OVAL-X	OVAL X	AT-X**	
1/4	6	168-8-VF2	44	20	3-F2-950		3-F2-950 HEAD	12-OVAL-F2	OVAL F2	AT-F2**	12-OVAL-F2
5/16	8	168-10-VF6	57	25.9				12-168-F6	OVAL 168-10-F6		12-168-F6

**Must be crimped using accessory booster kit.



NICOPRESS Tin Plated Copper Oval Sleeves



FOR STAINLESS STEEL AIRCRAFT CONTROL CABLE & WIRE ROPE													
NICOPRESS OVAL SLEEVES					NICOPRESS APPLICATION TOOL SELECTION								
CABLE SIZE		OVAL SLEEVE	APPROX WT (PER 1000/M)		HAND TOOLS		BENCH TOOL HEAD		HYDRAULIC TOOLS		AT-PNEUMATIC	BATTERY TOOLS	
in	mm	TIN PLATED COPPER	lb	kg	SINGLE-GROOVE	MULTI-GROOVE	SINGLE-GROOVE	MULTI-GROOVE	3512 DIE	635 DIE	POWER HEAD	5606 DIE	5512 & 5612 DIES
3/64	1-1.2	428-1.5-VB4	2	0.9	51-B4-887 31-B4	17-B4B 33V-CGB4	51-B4-887 HEAD		12-OVAL-B4	OVAL B4	AT-B4	6-OVAL-B4	12-OVAL-B4
1/16	1.5	428-2-VC	3	1.4	51-C-887 3-C-887	33V-CGB4 32-VC-VG 64-CGMP* 3V-CGMP	51-C-887 HEAD 3-C-887 HEAD	64-CGMP HEAD 3V-CGMP HEAD	12-OVAL-C	OVAL C	AT-C AT-CGMP	6-OVAL-C	12-OVAL-C
3/32	2-2.5	428-3-VG	6	2.7	51-G-887 3-G-887	33V-CGB4 32-VC-VG 64-CGMP* 3V-CGMP	51-G-887 HEAD 3-G-887 HEAD	64-CGMP HEAD 3V-CGMP HEAD	12-OVAL-G	OVAL G	AT-G AT-CGMP	6-OVAL-G	12-OVAL-G
1/8	3.5	428-4-VM	17	7.7	51-M-850 3-M-850	64-CGMP* 63V-XPM* 51-MJ 3V-F6:X:M 3-MJ 3V-CGMP	51-M-850 HEAD 3-M-850 HEAD	64-CGMP HEAD 63V-XPM HEAD 51-MJ HEAD 3V-CGMP HEAD 3V-F6:X:M HEAD 3-MJ head	12-OVAL-M	OVAL M	AT-M AT-CGMP AT-XPM AT-MJ	6-OVAL-M	12-OVAL-M
5/32	4	428-5-VP	23	10.4	51-P-850 3-P-850	64-CGMP* 63V-XPM* 3V-CGMP	51-P-850 HEAD 3-P-850 HEAD	64-CGMP HEAD 63V-XPM HEAD 3V-CGMP HEAD	12-OVAL-P	OVAL P	AT-P AT-CGMP AT-XPM	6-OVAL-P	12-OVAL-P
3/16	5	428-6-VX	49	22.2	51-X-850 3-X-850	63V-XPM* 3V-F6:X:M	51-X-850 HEAD 3-X-850 HEAD	63V-XPM HEAD 3V-F6:X:M HEAD	12-OVAL-X	OVAL X	AT-X AT-XPM AT-X-F6	6-OVAL-X	12-OVAL-X
7/32	6	428-7-VF2	47	26.7	51-F2-850		51-F2-850 HEAD		12-OVAL-F2	OVAL F2	AT-F2	6-OVAL-F2	12-OVAL-F2
1/4	7	428-8-VF6	75	36.7	3-F6-950	3V-F6:X:M	3-F6-950 HEAD	3V-F6:X:M HEAD	12-OVAL-F6	OVAL F6	AT-F6** AT-X-F6**	6-OVAL-F6	12-OVAL-F6
5/16	8	428-10-VG9	120	54.4	3-G9-950		3-G9-950 HEAD		12-OVAL-G9	OVAL G9	AT-G9**	6-OVAL-G9	12-OVAL-G9
3/8	9-10	428-12-VH5	155	70.3	3-H5-950		3-H5-950 HEAD		12-OVAL-H5	OVAL H5		6-OVAL-H5	12-OVAL-H5
7/16	11-12	428-14-VJ8	310	140.6					12-OVAL-J8	OVAL J8			12-OVAL-J8
1/2	13	428-16-VK8	420	190.5					12-OVAL-K8	OVAL K8			12-OVAL-K8
9/16	14	428-18-VM1	565	256.3						OVAL M1			
5/8	16	428-20-VN5	822	372.8						OVAL N5			

*Model also available with cable cutter. Specify 64-CGMP/cutter tool or 63V-XPM/cutter tool.

**Must be crimped using accessory booster kit.

NICOPRESS Aluminum Oval Sleeves



FOR STEEL AIRCRAFT CONTROL CABLE & WIRE ROPE													
NICOPRESS OVAL SLEEVES					NICOPRESS APPLICATION TOOL SELECTION								
CABLE SIZE		OVAL SLEEVE	APPROX WT (PER 1000/M)		HAND TOOLS		BENCH TOOL HEAD		HYDRAULIC TOOLS		AT-PNEUMATIC	BATTERY TOOLS	
in	mm	ALUMINUM	lb	kg	SINGLE-GROOVE	MULTI-GROOVE	SINGLE-GROOVE	MULTI-GROOVE	3512 DIE	635 DIE	POWER HEAD	5606 DIE	5512 & 5612 DIES
3/64	1	188-1.5 VB4	0.7	0.3	31-B4 51-B4-887	17-B4B 33V-CGB4	51-B4-887 HEAD		12-OVAL-B4	OVAL-B4	AT-B4	6-188-B4	12-OVAL-B4
1/16	1.5	188-2-VC	1	0.4	51-C-887 3-C-887	33V-CGB4 32-VC-VG 64-CGMP* 3V-CGMP	51-C-887 HEAD 3-C-887 HEAD	64-CGMP HEAD 3V-CGMP HEAD	12-OVAL-C	OVAL C	AT-C AT-CGMP	6-188-C	12-OVAL-C
3/32	2-2.5	188-3-VG	2.8	1.3	51-G-887 3-G-887	33V-CGB4 32-VC-VG 64-CGMP*	51-G-887 HEAD 3-G-887 HEAD	64-CGMP HEAD 3V-CGMP HEAD	12-188-VG	188-VG	AT-G AT-CGMP	6-188-G	12-188-VG
1/8	3-3.5	188-4-VM	6.1	2.8	51-M-850	64-CGMP* 63V-XPM* 51-MJ 3V-F6:X:M 3-MJ 3V-CGMP	51-M-850 HEAD 3-M-850 HEAD	64-CGMP HEAD 63V-XPM HEAD 51-MJ HEAD 3V-CGMP HEAD 3V-F6:X:M HEAD 3-MJ HEAD	12-188-VM	188-VM	AT-M AT-CGMP AT-XPM AT-MJ	6-188-M	12-188-VM
5/32	4	188-5-VP	9	4	51-P-850	64-CGMP* 63V-XPM* 3V-CGMP	51-850 HEAD 3-P-850 HEAD	64-CGMP HEAD 63V-XPM HEAD 3V-CGMP HEAD	12-188-VP	188-VP	AT-P AT-CGMP AT-XPM	6-188-P	12-188-VP
3/16	5	188-6-VX	16	7	51-X-850	63-V-XPM* 3V-F6:X:M	51-X-850 HEAD 3-X-850 HEAD	63V-XPM HEAD 3V-F6:X:M HEAD	12-188-VX	188-VX	AT-X AT-XPM AT-X-F6**	6-188-VX	12-188-VX
1/4	—	188-8-VF6	27	12	3-F6-950	3V-F6:X:M	3-F6-950 HEAD	3V-F6:X:M HEAD	12-188-VF6	188-VF6	AT-F6** AT-X-F6**	6-188-F6	12-188-F6
9/32	7	188-9-VG2	30	13.6	3-G2-950		3-G2-950 HEAD		12-VG-2	VG-2	AT-G2**		
5/16	8	188-10-VG92	48	22	3-G9-950		3-G9-950 HEAD		12-VG92	VG-92	AT-G9**	6-188-VG9	12-VG92
3/8	9	188-12-VH5	65	47	3-H5-950		3-H5-950 HEAD		12-OVAL-H5	OVAL H5			12-OVAL-H5
7/16	10-11	188-14-VK8	115	52					12-OVAL-K8	OVAL K8			12-OVAL-K8
1/2	—	188-16-VM1	172	78					12-188-VM1	188-VM1			

*Model also available with cable cutter. Specify 64-CGMP/cutter tool or 63V-XPM/cutter tool.

**Must be crimped using accessory booster kit.

NICOPRESS Aluminum Oval Sleeves for Synthetic & Fiber Rope



FOR SYNTHETIC ROPE													
NICOPRESS OVAL SLEEVES					NICOPRESS APPLICATION TOOL SELECTION								
CABLE SIZE		OVAL SLEEVE	APPROX WT (PER 1000/M)		HAND TOOLS		BENCH TOOL HEAD		HYDRAULIC TOOLS		AT-PNEUMATIC	BATTERY TOOLS	
in	mm	ALUMINUM	lbs	kg	SINGLE-GROOVE	MULTI-GROOVE	SINGLE-GROOVE	MULTI-GROOVE	3512 DIE	635 DIE	POWER HEAD	5606 DIE	5512 & 5612 DIES
1/16	1.5	1700-C	1	0.4	51-C-887	64-CGMP	51-C-887 HEAD 3-C-887 HEAD	64-CGMP HEAD 3V-CGMP HEAD	12-OVAL-C	OVAL C	AT-C AT-CGMP	6-1700-C	12-1700-C
1/8	3	1700-M	7	3.2	51-M-850 3-M-850	64-CGMP 63V-XPM	51-M-850 HEAD 3-M-850 HEAD	64-CGMP HEAD 63V-XPM HEAD 3V-CGMP HEAD	12-1700-M	1700-M	AT-M AT-CGMP AT-XPM	6-1700-M	12-1700-M
3/16	5	1582-P	9	4.1	51-P-850 3-P-850	64-CGMP 63V-XPM	51-P-850 HEAD 3-P-850 HEAD	64-CGMP HEAD 63V-XPM HEAD 3V-CGMP HEAD		1582-P	AT-P AT-CGMP AT-XPM	6-1582-P	12-1582-P
1/4	6	1700-X	20	9	51-X-850 3-X-850	63V-XPM	51-X-850 HEAD 3-X-850 HEAD	63V-XPM HEAD		1700-X	AT-X AT-XPM	6-1700-X	12-1700-X
5/16	8	1700-G3	30	13.6					12-1700-G3	1700-G3		6-1700-G3	12-1700-G3
3/8	10	1700-H5	63	28.5					12-1700-H5	1700-H5		6-1700-H5	12-1700-H5
1/2	12	1700-J8	110	50					12-1700-J8	1700-J8		6-1700-J8	12-1700-J8

NICOPRESS Aluminum Stop Sleeves



FOR STEEL AIRCRAFT CONTROL CABLE & WIRE ROPE													
NICOPRESS STOP SLEEVES					NICOPRESS APPLICATION TOOL SELECTION								
CABLE SIZE		STOP SLEEVE	APPROX WT (PER 1000/M)		HAND TOOLS		BENCH TOOL HEAD		HYDRAULIC TOOLS		AT-PNEUMATIC	BATTERY TOOLS	
in	mm	ALUMINUM	lb	kg	SINGLE-GROOVE	MULTI-GROOVE	SINGLE-GROOVE	MULTI-GROOVE	3512 DIE	635 DIE	POWER HEAD	5606 DIE	5512 & 5612 DIES
1/16	1-1.5	878-2-VC	0.83	0.4	51-C-887	33V-CGB4 32-VC-VG 64-CGMP*	51-C-887 HEAD 3-C-887 HEAD	64-CGMP HEAD 3V-CGMP HEAD	12-OVAL-C	OVAL C	AT-C AT-CGMP	6-OVAL-C	12-OVAL-C
3/32	2-2.5	878-3-J	3	1.4		51-MJ 3-MJ		51-MJ HEAD 3-MJ HEAD	12-J	878-J	AT-MJ	6-J	12-J
1/8	3	878-4-J	3	1.4		51-MJ 3-MJ		51-MJ HEAD 3-MJ HEAD	12-J	878-J	AT-MJ	6-J	12-J
5/32	4	878-5-M	4.8	2.2		51-MJ 3-MJ		51-MJ HEAD 3-MJ HEAD	12-M	878-M	AT-MJ	6-OVAL-M	12-M
3/16	5	878-6-M	4.3	2		51-MJ 3-MJ		51-MJ HEAD 3-MJ HEAD	12-M	878-M	AT-MJ	6-OVAL-M	12-M
1/4	6	878-8-VF6	21	9.5	3-F6-950	3V-F6:X:M	3-F6-950 HEAD	3V-F6:X:M HEAD	12-OVAL-F6	OVAL-F6	AT-F6** AT-X-F6**	6-OVAL-F6	12-OVAL-F6
5/16	8	878-10-VF6	19	8.3	3-F6-950	3V-F6:X:M	3-F6-950 HEAD	3V-F6:X:M HEAD	12-OVAL-F6	878-VF6	AT-F6** AT-X-F6**	6-OVAL-F6	12-OVAL-F6
3/8	10	878-12-VF6	16	7	3-F6-950	3V-F6:X:M	3-F6-950 HEAD	3V-F6:X:M HEAD	12-OVAL-F6	878-VF6	AT-F6** AT-X-F6**		12-OVAL-F6

*Model also available with cable cutter. Specify 64-CGMP/cutter tool or 63V-XPM/cutter tool.

**Must be crimped using accessory booster kit.

NOTE: Stop sleeves typically hold between 30-50% of the RBS of the cable.

NICOPRESS Copper/Zinc Plated Copper Stop Sleeves



FOR STEEL AIRCRAFT CONTROL CABLE & WIRE ROPE															
NICOPRESS STOP SLEEVES							NICOPRESS APPLICATION TOOL SELECTION								
CABLE SIZE		STOP SLEEVE			APPROX WT (PER 1000/M)		HAND TOOLS		BENCH TOOL HEAD		HYDRAULIC TOOLS		AT-PNEUMATIC	BATTERY TOOLS	
in	mm	PLAIN COPPER	ZINC PLATED COPPER	BLACK OXIDE	lb	kg	SINGLE-GROOVE	MULTI-GROOVE	SINGLE-GROOVE	MULTI-GROOVE	3512 DIE	635 DIE	POWER HEAD	5606 DIE	5512 & 5612 DIES
1/32	-	871-32-B	872-32-B	876-32-B	0.75	0.3	31-B	17-BA 17-B4B				871-B	AT-B		
3/64	1-1.2	871-12-B4	872-12-B4	876-12-B4	1.5	0.7	51-B4-887 31-B4	17-B4B 3V-F6:X:M	51-B4-887 HEAD		12-OVAL-B4	OVAL B4	AT-B4	6-OVAL-B4	12-OVAL-B4
1/16	1.5	871-1-C	872-1-C	876-1-C	2	0.9	51-C-887	3V-F6:X:M 32-VC-VG 64-CGMP*	51-C-887 HEAD 3-C-887 HEAD	64-CGMP HEAD 3V-CGMP HEAD	12-OVAL-C	OVAL C	AT-C AT-CGMP	6-OVAL-C	12-OVAL-C
1/16	1.5	871-1-Q^	-	876-1-Q^	2	0.9	51-Q-929		51-Q-929 HEAD 3-Q-929 HEAD			871-Q	AT-Q		
3/32	2-2.5	871-17-J (yellow)	872-17-J	876-17-J	8	3.6		51-MJ 3-MJ		51-MJ HEAD 3-MJ HEAD	12-J	871-J	AT-MJ	6-J	12-J
3/32	2-2.5	871-3-Q^	-	876-3-Q^	2	0.9	51-Q-929		51-Q-929 HEAD 3-Q-929 HEAD			871-Q	AT-Q		
1/8	3-3.5	871-18-J (red)	872-18-J	876-18-J	8	3.6		51-MJ 3-MJ		51-MJ HEAD 3-MJ HEAD	12-J	871-J	AT-MJ	6-J	12-J
5/32	4	871-19-M	872-19-M	876-19-M	13	5.9		51-MJ 3-MJ		51-MJ HEAD 3-MJ HEAD	12-1-M	871-1-M	AT-MJ	6-OVAL-M	12-1-M
3/16	5	871-20-M (black)	872-20-M	876-20-M	12	5.4		51-MJ 3-MJ		51-MJ HEAD 3-MJ HEAD	12-1-M	871-1-M	AT-MJ	6-OVAL-M	12-1-M
7/32	6	871-22-M	872-22-M	876-22-M	20	9.1		51-MJ 3-MJ		51-MJ HEAD 3-MJ HEAD	12-1-M	871-1-M	AT-MJ	6-OVAL-M	12-1-M
1/4	7	871-23-F6	872-23-F6	876-23-F6	60	27.2	3-F6-950	3V-F6:X:M	3-F6-950 HEAD	3V-F6:X:M HEAD	12-OVAL-F6	OVAL F6	AT-F6** AT-X-F6**	6-OVAL-F6	12-OVAL-F6
5/16	8	871-26-F6	872-26-F6	876-26-F6	55	27.2	3-F6-950	3V-F6:X:M	3-F6-950 HEAD	3V-F6:X:M HEAD	12-OVAL-F6	OVAL F6	AT-F6** AT-X-F6**	6-OVAL-F6	12-OVAL-F6
3/8	9	871-27-F6	872-27-F6	876-27-F6	45	27.2	3-F6-950	3V-F6:X:M	3-F6-950 HEAD	3V-F6:X:M HEAD	12-OVAL-F6	OVAL F6	AT-F6** AT-X-F6**		12-OVAL-F6

^Electro galvanized steel sleeves.

*Model also available with cable cutter. Specify 64-CGMP/cutter tool or 63V-XPM/cutter tool.

**Must be crimped using accessory booster kit.

NOTE: Stop sleeves typically hold between 30-50% of the RBS of the cable.

NICOPRESS Tool & Sleeve and Splice Kits

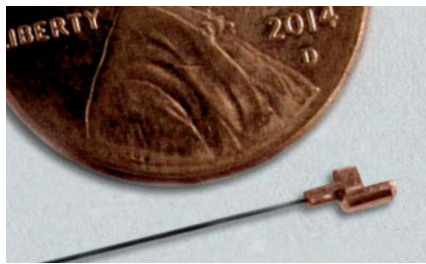
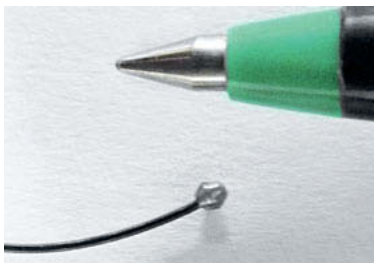
All kits include a comprehensive assortment of the most popular Nicopress® oval splicing and stop sleeve sizes, packed in a sturdy, latching, plastic carrying case. Kits 1 & 2 also include: swaging/cutting tool and tool gauge.

Kit #	Wire Size		Weight	
	in	mm	lbs	kg
1 - Copper w/64-CGMP/Cutter Tool	1/16-5/32	1.5-4	21	9.5
2 - Zinc/Copper w/63V-XPM/Cutter Tool	1/8-3/16	1.5-4	21	9.5
3 - Copper	1/32-1/4	0.75-7	2.6	1.2
4 - Zinc Plated Copper	1/32-1/4	0.75-7	2.6	1.2
5 - Tin Plated Copper	3/64-1/4	1-7	2.6	1.2
6 - Aluminum	3/64-1/4	1-7	1.3	0.6

NICOPRESS Micro-Cable Oval & Stop Sleeves

FOR STEEL AIRCRAFT CONTROL CABLE & WIRE ROPE							
NICOPRESS OVAL SLEEVES					NICOPRESS APPLICATION TOOL SELECTION		
CABLE SIZE		OVAL SLEEVE			TOOL PART	PRESSES REQUIRED	TOOL GROOVE
in	mm	PLAIN COPPER	ZINC PLATED COPPER	TIN PLATED COPPER			
0.008-0.021	0.20	16-1-A			17-BA	3	A
0.022-0.027	0.52	16-2-A			17-BA	3	A
0.027-1/32	0.75	17-1-B	27-1-B		17-BA 17-B4B	2	B
3/64	1-1.2	18-11-B4	28-11-B4	428-1.5-VB4	17-B4B	3	B4

NICOPRESS STOP SLEEVES				NICOPRESS APPLICATION TOOL SELECTION		
CABLE SIZE		STOP SLEEVE		TOOL PART	PRESSES REQUIRED	TOOL GROOVE
in	mm	PLAIN COPPER	ZINC PLATED COPPER			
1/32	0.75	871-32-B	872-32-B	17-BA 17-B4B	2	B
3/64	1-1.2	871-12-B4	872-12-B4	17-B4B	2	B4



Above images are custom micro sleeve solutions.

NICOPRESS Hand Tools

Engineered for field conditions, Nicopress® tools are made from drop-forged alloy steel with heat treated and specially hardened working surfaces. Tools are designed to create maximum metal flow of the splicing sleeve around the wire or conductor which results in strong, reliable splices. Tools have single- or multiple-marked pressing grooves matching similar markings found on Nicopress® sleeves. Go gauges are supplied with toggle action tools to ensure accurate sleeve compression.

17 Series

Lightweight, handy field manual tool. Ideal for use with small diameter cable and in confined spaces.



17-BA

Length	8.25" (21cm)
Weight	0.75 lbs (0.34kg)
Wire Size	1/32"
Oval Sleeve	17-1-B, 27-1-B
Stop Sleeve	871-32-B
Groove	A, B



17-B4B

Length	8.25" (21cm)
Weight	0.75 lbs (0.34kg)
Wire Size	1/32", 3/64" (1mm to 1.2mm)
Oval Sleeve	17-1-B, 27-1-B, 18-11-B4, 28-11-B4, 428-1.5-VB4, 188-1.5-VB4
Stop Sleeve	871-32-B, 871-12-B4
Groove	B, B4

30 Series

Multi-groove toggle action hand tool. Recommended when several small diameter cables are being used.



31-B

Length	11.25" (28.6cm)
Weight	2.5 lbs (1.13kg)
Wire Size	1/32" (1mm)
Oval Sleeve	17-1-B, 27-1-B, 168-1-VB
Stop Sleeve	871-32-B
Groove	B



31-B4

Length	8.25" (21cm)
Weight	2.5 lbs (1.13kg)
Wire Size	3/64" (1mm to 1.2mm)
Oval Sleeve	18-11-B4, 28-11-B4, 428-1.5-VB4, 188-1.5-VB4
Stop Sleeve	871-12-B4
Groove	B4



32-VC-VG

Length	11.25" (28.6cm)
Weight	2.5 lbs (1.13kg)
Wire Size	1/16" (1mm) to 3/32" (2.5mm)
Oval Sleeve	18-1-C, 28-1-C, 18-2-G, 28-2-G, 428-2-VC, 428-3-VG, 188-2-VC, 188-3-VG
Stop Sleeve	871-1-C, 878-2-VC
Sleeve Size	3/64" 0mm (B-4), 1/16" 0mm (C), 3/32" 0mm (G)
Groove	VC, VG



33V-CGB4

Length	11.75" (30cm)
Weight	2.5 lbs (1.13kg)
Wire Size	3/64" (1mm) to 3/32" (2.5mm)
Oval Sleeve	18-11-B4, 28-11-B4, 18-1-C, 28-1-C, 18-2-G, 28-2-G, 168-1.5-VB4, 428-1.5-VB4, 428-2-VC, 428-3-VG, 188-1.5-VB4, 188-2-VC, 188-3-VG
Stop Sleeve	871-12-B4, 871-1-C, 878-2-VC
Groove	VC, VG, VB4

51 Series

Toggle action tools available in single- and multi-groove. Useful when several small diameter cables are being used.



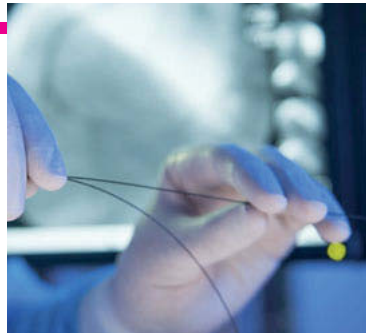
51-Single Groove Hand Tools

Single Groove Tool Listing	
	51-B4-887, 51-C-887, 51-G-887, 51-M-850, 51-P-850, 51-X-850, 51-F2-850, 51-Q-929
Length	18.75" (45cm)
Weight	5.25 lbs (2.4kg)
Wire Size	3/64" (1mm) to 1/4" (6mm)
Oval Sleeve	varies by tool groove
Stop Sleeve	varies by tool groove
Groove	B4, C, G, M, P, X, F2, Q



51-MJ

Length	18.75" (45cm)
Weight	5.25 lbs (2.4kg)
Wire Size	3/32" (2mm) to 7/32" (6mm)
Oval Sleeve	18-3-M, 28-3-M, 428-4-VM, 188-4-VM
Stop Sleeve	871-17-J, 871-18-J, 871-19-M, 871-20-M, 871-22-M, 878-3-J, 878-4-J, 878-5-M, 878-6-M
Groove	M, J



NICOPRESS Hand Tools

60 Series

Multi-groove toggle action adjustable hand tool. Recommended when several small diameter cables are being used. Also available with fiberglass handles and in a cutter combination.



64-CGMP

Length	20" (51cm)
Weight	6 lbs (2.7kg)
Wire Size	1/16" (1mm) to 5/32" (4mm)
Oval Sleeve	18-1-C, 28-1-C, 18-2-G, 28-2-G, 18-3-M, 28-3-M, 18-4-P, 28-4-P, 428-2-VC, 428-3-VG, 428-4-VM, 428-5-VP, 188-2-VC, 188-3-VG, 188-4-VM, 188-5-VP, 1700-C, 1700-M, 1582-P
Stop Sleeve	871-1-C, 878-2-VC
Groove	C, G, M, P



64-CGMP w/Cable Cutter

Length	20" (51cm)
Weight	6 lbs (2.7kg)
Wire Size	1/16" (1mm) to 5/32" (4mm)
Oval Sleeve	18-1-C, 28-1-C, 18-2-G, 28-2-G, 18-3-M, 28-3-M, 18-4-P, 28-4-P, 428-2-VC, 428-3-VG, 428-4-VM, 428-5-VP, 188-2-VC, 188-3-VG, 188-4-VM, 188-5-VP, 1700-C, 1700-M, 1582-P
Stop Sleeve	871-1-C, 878-2-VC
Cutting Capacity	up to 3/16" (5mm)
Groove	C, G, M, P



63V-XPM

Length	20.5" (52.1cm)
Weight	6 lbs (2.7kg)
Wire Size	1/8" (3mm) to 3/16" (5mm)
Oval Sleeve	18-3-P, 28-3-P, 18-4-P, 28-4-P, 18-6-X, 28-6-X, 428-4-VM, 428-5-VP, 428-6-VX, 188-4-VM, 188-5-VP, 188-6-VX, 1700-M, 1582-P, 1700-X
Stop Sleeve	none
Groove	VM, VP, VX



63V-XPM w/Cable Cutter

Length	20.5" (52.1cm)
Weight	6 lbs (2.7kg)
Wire Size	1/8" (3mm) to 3/16" (5mm)
Oval Sleeve	18-3-P, 28-3-P, 18-4-P, 28-4-P, 18-6-X, 28-6-X, 428-4-VM, 428-5-VP, 428-6-VX, 188-4-VM, 188-5-VP, 188-6-VX, 1700-M, 1582-P, 1700-X
Stop Sleeve	none
Cutting Capacity	up to 3/16" (5mm)
Groove	VM, VP, VX

3 Series

Recommended when larger diameter cables are being used. Single- and multi-groove toggle action hand tools.



3-H5-950

Length	33.5" (85cm)
Weight	15 lbs (6.8kg)
Wire Size	3/8" (9-10mm)
Oval Sleeve	18-23-H5, 28-23-H5, 188-12-VH5, 618-23-H5
Groove	F2



3-G9-950

Length	33.5" (85cm)
Weight	15 lbs (6.8kg)
Wire Size	5/16" (8mm)
Oval Sleeve	18-13-G9, 28-13-G9, 428-10-VG9, 188-10-VG92
Groove	G9



3-F6-950

Length	33.5" (85cm)
Weight	15 lbs (6.8kg)
Wire Size	1/4" (6mm) to 3/8" (10mm)
Oval Sleeve	18-10-F6, 28-10-F6, 428-8-VF6, 188-8-VF6
Stop Sleeve	871-23-F6, 871-26-F6, 871-27-F6, 878-8-VF6, 878-10-VF6, 878-12-VF6
Groove	F6



3V-F6:X:M

Length	34.5" (88cm)
Weight	14 lbs (6.4kg)
Wire Size	1/8" (3mm) to 3/8" (10mm)
Oval Sleeve	18-3-M, 28-3-M, 18-6-X, 28-6-X, 18-10-F6, 28-10-F6, 428-4-VM, 428-6-VX, 428-8-VF6, 188-4-VM, 188-6-VX, 188-8-VF6
Stop Sleeve	871-23-F6, 871-26-F6, 871-27-F6, 878-8-VF6, 878-10-VF6, 878-12-VF6
Groove	VM, VX, VF6

NICOPRESS Bench Mounted Compression Tools

Tools are designed to speed up bench type cable assembly work by allowing one-handed operation of bench press. This frees the other hand to position the sleeve and cable. Available in two sizes.
Head for bench tool must be ordered separately.



510

Length	21" (53cm)
Weight	6 lbs (2.7kg)
Wire Size	1/16" (1.5mm) to 7/32" (6mm)
Accommodates Interchangeable Tool HEADS	
51-B4-887 HEAD, 51-C-887 HEAD,	
51-G-887 HEAD, 51-X-850 HEAD,	
51-F2-850 HEAD, 51-M-850 HEAD,	
51-P-850 HEAD, 51-MJ HEAD, 51-Q-929 HEAD,	
64-CGMP, 63-V-XPM HEAD	
Available HEAD Grooves	
Single-Groove: B4, C, G, X, F2, M, Q, P,	
Multi-Groove: MJ, CGMP, XPM	



300

Length	35" (89cm)
Weight	19 lbs (8.6kg)
Wire Size	1/16" (1.5mm) to 3/8" (10mm)
Accommodates Interchangeable Tool HEADS	
3-C-887 HEAD, 3-G-887 HEAD, 3-M-850 HEAD,	
3-P-850 HEAD, 3-X-850 HEAD, 3-F2-850 HEAD,	
3-F6-950 HEAD, 3-G9-950 HEAD, 3-Q-929 HEAD,	
3V-CGMP HEAD, 3-F6:X:M HEAD, 3-MJ HEAD,	
3-H5-950 HEAD, 3V-F6:X:M HEAD,	
3V-XPM HEAD	
Available HEAD Grooves	
Single-Groove: C, G, M, P, X, F2, F6, G9, H5, Q	
Multi-Groove: MJ, CGMP, F6:X:M, XPM	

NICOPRESS Battery-Powered Compression Tool & Dies



Ergonomic one-handed operation tool that provides operator convenience to speed wire rope splicing tasks for repetitive and aerial swaging. Its compact size permits use in confined areas where traditional compression tools cannot be used (jaws rotate 360 degrees for ease of operation). Crimp cycle time is less than 6 seconds with approximately 250 crimps per charge. *Cutting dies are available.*

5606

Dimensions	20.5"L x 4"H x 2.5"W (52.1cm x 12.2cm x 7.9cm)
Weight	8 lbs (3.6kg) w/battery
Wire Size	3/64" (1mm) to 3/8" (10mm)
Battery Pack	2 Lithium-ion
A/C Battery Charger	•
Molded Carrying Case	•
Wrist Strap	•
Approx No of Crimps	250
Die Selection	See pg 14 for die selection table



LED lights on both sides of tool

NICOPRESS Die Selection



Cable Size		Tool 5606	Tools 3512, 5512, 5612	Tool 635
in	mm			
3/64	1	6-Oval-B4	12-Oval-B4	Oval B4
1/16	2	6-Oval-C	12-Oval-C	Oval C
3/32	2.5	6-Oval-G	12-Oval-G	Oval G
1/8	3	6-Oval-M	12-Oval-M	Oval M
5/32	4	6-Oval-P	12-Oval-P	Oval P
3/16	5	6-Oval-X	12-Oval-X	Oval X
7/32	6	6-Oval-F2	12-Oval-F2	Oval F2
1/4	7	6-Oval-F6	12-Oval-F6	Oval F6
5/16	8	6-Oval-G9	12-Oval-G9	Oval G9
3/8	10	6-Oval-H5	12-Oval-H5	Oval H5
7/16	11	—	12-Oval-J8	Oval J8
1/2	12	—	12-Oval-K8	Oval K8
9/16	14	—	—	Oval M1
5/8	16	—	—	Oval N5

NICOPRESS Battery-Powered Compression Tools & Accessories



5512 On-Ground or Bench Operation

Dimensions	18"L x 10.5"H x 3.5"W (45.7cm x 26.7cm x 8.9cm)
Weight	19 lbs (8.6kg)
Wire Size	3/64" (1mm) to 1/2" (13mm)
Battery Pack	2 Lithium-ion
A/C Battery Charger	•
Molded Carrying Case	•
Wrist Strap	•
Approx No of Crimps	65
Die Selection	See pg 14 for die selection table



5612 Pistol-Grip

Dimensions	16"L x 11.5"H x 3.5"W (41cm x 29cm x 9cm)
Weight	15.5 lbs (7.5kg)
Wire Size	3/64" (1mm) to 1/2" (13mm)
Battery	2 Lithium-ion
A/C Battery Charger	•
Molded Carrying Case	•
Wrist Strap	•
Approx No of Crimps	65
Die Selection	See pg 14 for die selection table

Battery Charger NCH-1

FEATURES

- UL listed
- Monitors battery temperature and battery voltage for correct charging and battery faults
- Less than 1 hour charge time



Battery Pack NBP-1

FEATURES

- Lithium-ion battery
- Superior runtime and long life
- Impact-resistant housing
- Non-hazardous chemistry, environmentally safe
- Recyclable with the RBRC Recycling Program



NICOPRESS Pneumatic Compression Tools

Tools are recommended where continuous operation of hand tools reduces operator productivity. Available in either hand-held or bench models. Tools can be used at the field site or centralized production assembly work at a bench. These tools cover the widest range of wire sizes. Both single- and multi-groove power crimp heads can be interchanged easily, minimizing shop set-up time.



ATB-330 (Bench Tool)

Dimensions	15"L x 6"H x 4"W (38.1cm x 15.2cm x 10.2cm)
Weight	15 lbs (6.8kg)
Wire Size	1/32", 3/64" (1mm) to 3/8" (10mm)*
Available Tool HEADS	AT-B, AT-B4, AT-C, AT-CGMP, AT-G, AT-M, AT-XPM, AT-MJ, AT-P, AT-X, AT-X-F6*, AT-F2, AT-F6*, AT-G9*
Available HEAD Grooves	B, B4, C, G, M, P, X, F2, F6, G9, J

*AT-Booster Accessory required for AT-X-F6; AT-F6 and AT-G9 Heads.



AT-330 (Hand Tool)

Dimensions	15"L x 7.5"H x 4"W (38.1cm x 19.1cm x 10.2cm)
Weight	13 lbs (6kg)
Wire Size	1/32", 3/64" (1mm) to 3/8" (10mm)*
Available Tool HEADS	AT-B, AT-B4, AT-C, AT-CGMP, AT-G, AT-M, AT-XPM, AT-MJ, AT-P, AT-X, AT-X-F6*, AT-F2, AT-F6*, AT-G9*
Available HEAD Grooves	B, B4, C, G, M, P, X, F2, F6, G9, J

NICOPRESS Hydraulic Power Sources for 635-A & 3512-H

Optional electric hydraulic and pneumatic hydraulic power sources compatible with 12 ton 3512-H and 35 ton 635-A hydraulic swaging tools. Engineered for both shop and field use when higher volume throughput is required.



NEH-1 Electric Pump

- 115 volt, 60 HZ-AC power
- Hydraulic output is 20 cu in per minute at 9,200 PSI
- Approx wt 33 lbs



NAH-1 Pneumatic Pump

- Air-driven hydraulic source, 80-110# air pressure
- Output is 15 cu in per minute at 10,000 PSI
- Approx wt 20 lbs

NICOPRESS Hydraulic Compression Tools

3512

The hand operated 12 ton hydraulic compression tool features a two stage rapid advance pumping system. It's engineered to swage the full range of Nicopress® product up through 1/2" (12mm).



3512

Dimensions	23"L x 6.5"H x 3.5"W (59cm x 16.5cm x 8.9cm)
Weight	13 lbs (6kg)
Wire Size	3/64" (1mm) to 1/2" (12mm)
Compression Output	12-ton
Die Selection	See pg 14 for die selection table



3512-H

Dimensions	9.5"L x 5.25"H x 2.75"W (24.1cm x 13.3cm x 7cm)
Weight	8.5 lbs (3.9kg)
Wire Size	3/64" (1mm) to 1/2" (12mm)
Compression Output	12-ton
Die Selection	See pg 14 for die selection table

635

The 35 ton swaging tool is designed for a range of markets and is the most versatile swager of its size. It's supplied with a manual pump and can be ordered with an electric hydraulic power unit.

It's compatible with the full range of Nicopress® oval and stop sleeves and will swage sleeves up through 5/8" (16mm). An excellent choice for both shop and field applications.



635

Dimensions	33"L x 13"H x 6.5"W (84cm x 16.5cm x 33cm)
Weight	73 lbs (33kg)
Wire Size	3/64" (1mm) to 5/8" (16mm)
Die Selection	See pg 14 for die selection table



635-A

Dimensions	9"L x 13"H x 6.5"W (33cm x 16.5cm x 23cm)
Weight	45 lbs (21kg)
Wire Size	3/64" (1mm) to 5/8" (16mm)
Die Selection	See pg 14 for die selection table

NICOPRESS Cutting Tools

Nicopress® manual and hydraulic cable cutters produce round clean cuts without fraying wire rope ends. Cutting blades are made from ultra-tough forged and hardened alloy steel construction.



1-VC1 Cable Cutter

Length	7.5" (19.1cm)
Weight	0.8 lbs (0.36kg)
Cutting Capacity	up to 3/16" (up to 5mm)



4512 Hydraulic Cutter

Length	15" (38cm)
Weight	6 lbs (2.72kg)
Wire Size	up to 5/8" (16mm)
Compression Output	4.5 tons



LED lights on both sides of tool

7506 Battery-Powered Hydraulic Cutting Tool

Dimensions	15.5"L x 4.8"H x 3.1"W (39.4cm x 12.2cm x 7.9cm)
Weight	8 lbs (3.6kg) w/battery
Cutting Capacity	9/16" (14mm)
Cutting Estimate	110 cuts on 1/2" wire rope
Battery Pack	2 Lithium-ion

NICOPRESS Material Selection & Rated Breaking Strength

Proper material selection is important to ensure efficiency of wire rope connections

The ideal combination between any sleeve and wire rope are similar metals; however, some dissimilar metals combinations are perfectly acceptable to meet performance and/or material availability requirements. Understanding material combinations of wire rope and sleeves for a given environment is important to minimize corrosion. Refer to *Technical Bulletin TB-3.1* for details.

Nicopress Guide to Sleeve and Wire Rope Material Combinations in Various Environments										
Sleeve Materials (small area electrode)	Wire Rope Materials (large area electrode)									
	Mildly Corrosive Environment (ex: indoors)				Moderately Corrosive Environment (ex: outdoors)				Severely Corrosive Environment (ex: chemical or ocean exposure)	
	CS	Zn CS	SS	BO SS	CS	Zn CS	SS	BO SS	Zn CS	SS
Cu	B	B	B	B	C	B	B	B	C	C
Zn Cu	C	A	C	C	NR	A	C	C	B	NR
Sn Cu	B	B	B	C	C	B	B	C	C	C
BO Cu	B	B	B	B	C	B	B	C	C	C
Al	C	C	NR	NR	NR	C	NR	NR	NR	NR
SS	B	B	A	A	C	B	A	A	B	A
BO SS	B	B	A	A	C	B	A	A	B	A

Note: All combinations of sleeves and wire rope in the above table represent "galvanic couples" where it is always preferable to have the "smaller area electrode," or the metal sleeve, to be cathodic (or the more noble metal) relative to the "larger surface area electrode," or wire rope, which is better when it is anodic (or a more active metal) in the couple. Refer to *Technical Bulletin TB-3* for more information.

Disclaimer: The information provided herein serves as a general recommendation only. Many factors involved in service environments such as, but not limited to; temperature cycles and extremes, mechanical loading, electrical currents, radiation, chemicals, exposure methods (spray, immersion, or mists), exposure severity or frequency, and others may potentially vary or reverse an expected result.

Compatibility Key

A	Excellent
B	Good
C	Fair
NR	Not Recommended

Sleeve Materials Key

Cu	Copper
Zn Cu	Zinc plated Copper
Sn Cu	Tin plated Copper
BO Cu	Black Oxide coated Copper
Al	Aluminum
SS	Stainless Steel
BO SS	Black Oxide coated Stainless Steel

Wire Rope Materials Key

Zn CS	Zinc plated Carbon Steel
SS	Stainless Steel
BO SS	Black Oxide coated Stainless Steel
CS	Carbon Steel

Rated breaking strength

Table of Government Specifications for Breaking Strengths (lbs force) of Wire Ropes Typically used for Nicopress Sleeve Terminations					
Note: The following table was taken from: "Sleeve – Swaging Wire Rope" MS51844E, pg 4					
Cable size nominal	Construction	Nominal breaking strength (lbs)*			
		MIL-DTL-83420, type I		RR-W-410, type I, class 2**	
		Zinc or tin coated carbon steel comp A	Corrosion resistant steel comp B	Zinc coated steel	Corrosion resistant steel
1/32	3 x 7	110	110		
3/64	7 x 7	270	270		
1/16	7 x 7	480	480		
1/16	7 x 19	480	480		
3/32	7 x 7	920	920		
3/32	7 x 19	1000	920		
1/8	7 x 19	2000	1760		
5/32	7 x 19	2800	2400		
3/16	7 x 19	4200	3700		
7/32	7 x 19	5600	5000		
1/4	7 x 19	7000	6400		
5/16	7 x 19	9800	9000		
3/8	7 x 19	14400	12000		
7/16	6 x 19 IWRC			18360	16300
1/2	6 x 19 IWRC			24000	22800
9/16	6 x 19 IWRC			30200	28500
5/8	6 x 19 IWRC			37000	35000
3/4	6 x 19 IWRC			53000	49600

*Nominal breaking strength. Eye splices, when properly assembled using the manufacturer's recommended tools and splicing instructions and when pulled with increasing tension, shall hold until wire rope breaks. It's preferred that tensile loads at failure be not less than 90 percent of the breaking strength specified in Table I.

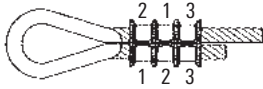
**In all applications where RR-W-410 type I, class 2 wire rope is being used, proof tests should be conducted to determine if one or two sleeves are required.

Amendment notations. The margins of this specification are marked with vertical lines to indicate modifications generated by this amendment. This was done as a convenience only and the Government assumes no liability whatsoever for any inaccuracies in these notations. Bidders and contractors are cautioned to evaluate the requirements of this document based on the entire content irrespective of the marginal notations.

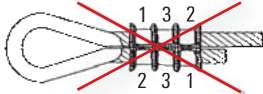
Proper press sequences

If making three or more presses, it's important to press in the recommended sequences illustrated. The most important sequences to avoid are ones which press an area on the sleeve in-between two previous presses as illustrated. **Reason:** once two outer presses are formed followed by pressing an interior position, the middle press will cause sleeve material to push (or flow) against the previously pressed outer positions possibly breaking wires and/or compromising the grip strength of the two outer presses.

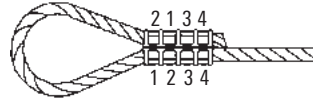
Recommended press sequences for a 3-press sleeve



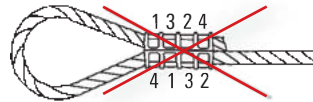
NOT Recommended press sequences for a 3-press sleeve



Recommended press sequences for a 4-press sleeve



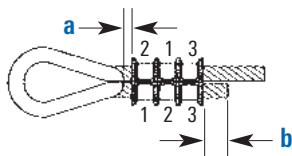
NOT Recommended press sequences for a 4-press sleeve



Proper wire rope end protrusion "tail" and thimble clearance

When making an eye-splice, extend the rope cut-end a sufficient distance (b) out of the sleeve so when pressing has completed, some portion of the cut end (or "tail") remains outside the sleeve. **Reason:** the material flows and lengthens the sleeve as it's pressed and may cause the wire rope end to retract inside the sleeve. If the wire has retracted, the gripping strength cannot be predicted since less rope is gripped by the sleeve, which may reduce the gripping strength between the wire rope and sleeve.

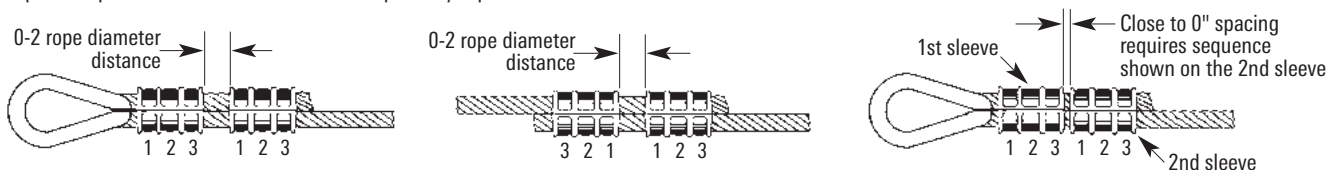
When using a thimble, position the sleeve from the thimble a distance of at least 1/2 of the wire rope diameter (a). **Reason:** when swaging, material flow tends to lengthen the sleeve which may cause the sleeve to contact the thimble – possibly damaging the wire rope wires and/or compromising the grip strength of the sleeve. Proper press sequences also are shown for the three-press sleeve illustrated below.



Refer to Technical Bulletin-1 for proper press sequences, wire rope end protrusion, and thimble clearance for oval sleeve eye splices.

Proper construction of multiple sleeve eye and lap splices

When it's necessary to use multiple sleeves for special eye or lap splices, it's always better to keep the sleeves as close as possible to prevent one intermediate rope from becoming longer than the other. If the recommended procedure for multiple sleeve installations is used, the pressed sleeves will act additively and perform reliably and consistently. If it's desired to install the second sleeve in direct contact with the first, the second sleeve must be pressed in the sequence shown below so the sleeve material flows outward, away from the interface during swaging. Recommended sleeve spacing and press sequences are illustrated below for lap and eye splices:



Refer to Technical Bulletin-4 for details regarding proper construction of eye and lap splices using multiple compression sleeves.

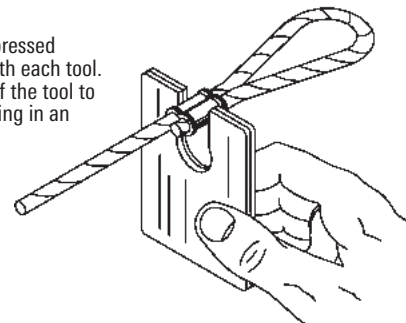
Go gauge usage

Gauging swaged sleeves is an important inspection process to determine if a sleeve has been pressed enough to ensure a full-strength connection to wire rope. Nicopress go gauges are provided with each tool. It's always recommended, while adjusting a hand tool, to gradually increase the compression of the tool to a point where the Nicopress "go-gauge" easily slides (or "goes") over the pressed sleeve resulting in an optimum swage compression.

It's a "go" gauge, not a "go-no-go" gauge

A Nicopress "go" gauge is a gauge designed to easily slide or "go" over a properly swaged section of sleeve to be sure a safe amount of compression has been reached. If the gauge tool doesn't slide easily over the swage, or doesn't go, the swage tool must be adjusted to press deeper to allow the gauge to freely pass or "go" over the swage. In theory, this would be an inspection tool to prevent under-pressing occurring during a swaging process.

Refer to Technical Bulletin-2 for "Go-Gauge" or "Go-No-Go" Gauge details.



Standard Fittings

We manufacture and stock a wide range of standard compression fittings and tools. From wire rope terminations to lap splices, Nicopress® can provide fittings per your specification. Contact us for assistance to select the right connection system – both tools and fittings – to meet your needs.

Custom Fittings

We thrive on designing engineered connections and specialize in difficult and unique fitting configurations and attaching them to ferrous, non-ferrous and synthetic wires, strands and cables to achieve maximum tensile strength. Sleeve materials may include copper, aluminum, stainless steel, PTFE coated wire, titanium, nitinol, Inconel and high performance synthetics. Our R&D and engineering department have the right tools available, from 3-D modeling to non-linear FEA analysis, to ensure the connection solution is engineered in a timely and efficient manner. You specify the final fitting dimensions and tolerances of the cable assembly and we'll suggest either a standard item or quote a custom engineered solution.

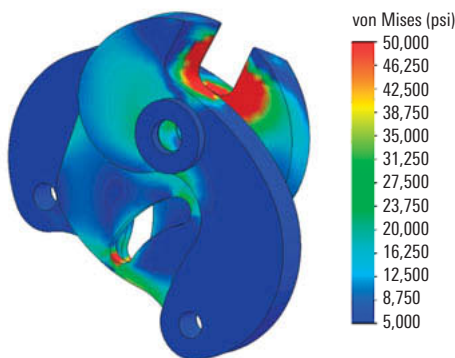
Tool Selection

Nicopress® offers proven mechanical connectivity systems and solutions. Laboratory and field-tested for dependability, our tools are manufactured specifically for use with Nicopress® connectors. We have a variety of tools for all your crimping and compression needs, including manual, battery-powered, hydraulic and pneumatic. Nicopress® tools are recognized around the world by their "safety orange" colored handles.

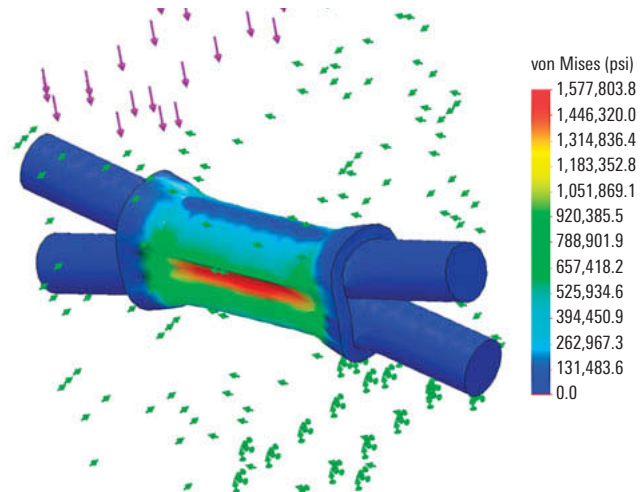
Certified Testing

Nicopress® has the capabilities to test everything we build. All tensile testing and measurement equipment is certified and calibrated utilizing reference standards traceable to the U.S. National Institute of Standards and Technologies (NIST), in accordance with ISO 10012 and MIL-STD-45662A.

Cable assemblies can be 100% proof loaded to a percentage of ultimate break strength and sampled for destructive testing. Tensile testing capabilities available up to 60,000 lbs (266 kN). Conductivity/resistance testing also is available.



Stress Concentration Analysis



Plastic Deformation Analysis

Nicopress resources are available to download or request online at www.nicopress.com. Or, ask your distributor. Resources include catalogs, brochures, data sheets, instruction sheets, technical bulletins, white papers and technical drawings. Call Nicopress at (+1)216-361-0221 for design assistance.

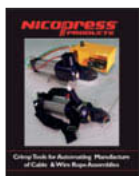


Brochures

Battery-Powered Compression & Cutting Tools



Theatrical Rigging Connectors & Tools



Crimp Tools for Automating Manufacture of Cable Wire Rope Assemblies



Efficiency of Wire Rope Connections



Data Sheets

Wire Rope Products: Copper & Zinc Plated Copper Oval Sleeves for Aircraft Control Cable & Wire Rope



Oval Sleeve Connector Series – Rotation Resistant Wire Rope



Sleeve, Swaging - Wire Rope MS51844E w/Amendment



Technical Bulletins

TB-1.0: Proper Press Sequences, Wire Rope End Protrusion, and Thimble Clearance for Oval Sleeve Eye Splices



TB-2.0: Go-Gauge or Go-No-Go Gauge



TB-3.2: Proper Material Selection for Wire Rope Sleeves



TB-4.0: Proper Construction of Eye Splices & Lap Splices Using Multiple Compression Sleeves

QR code on Nicopress® tools permits easy access to helpful instructions & info.

Available for these tools:
50, 51, 31 series, 63V-XPM, 64 CGMP.



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