

## Wire rope connection systems for more than 120 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" (1mm) 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 120 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, 6x25 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<sup>1,2,3</sup>

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.

