

# Your One Source for Connectors

Transmission

Overhead Distribution

Substation

Construction/Industrial

Compression Tools

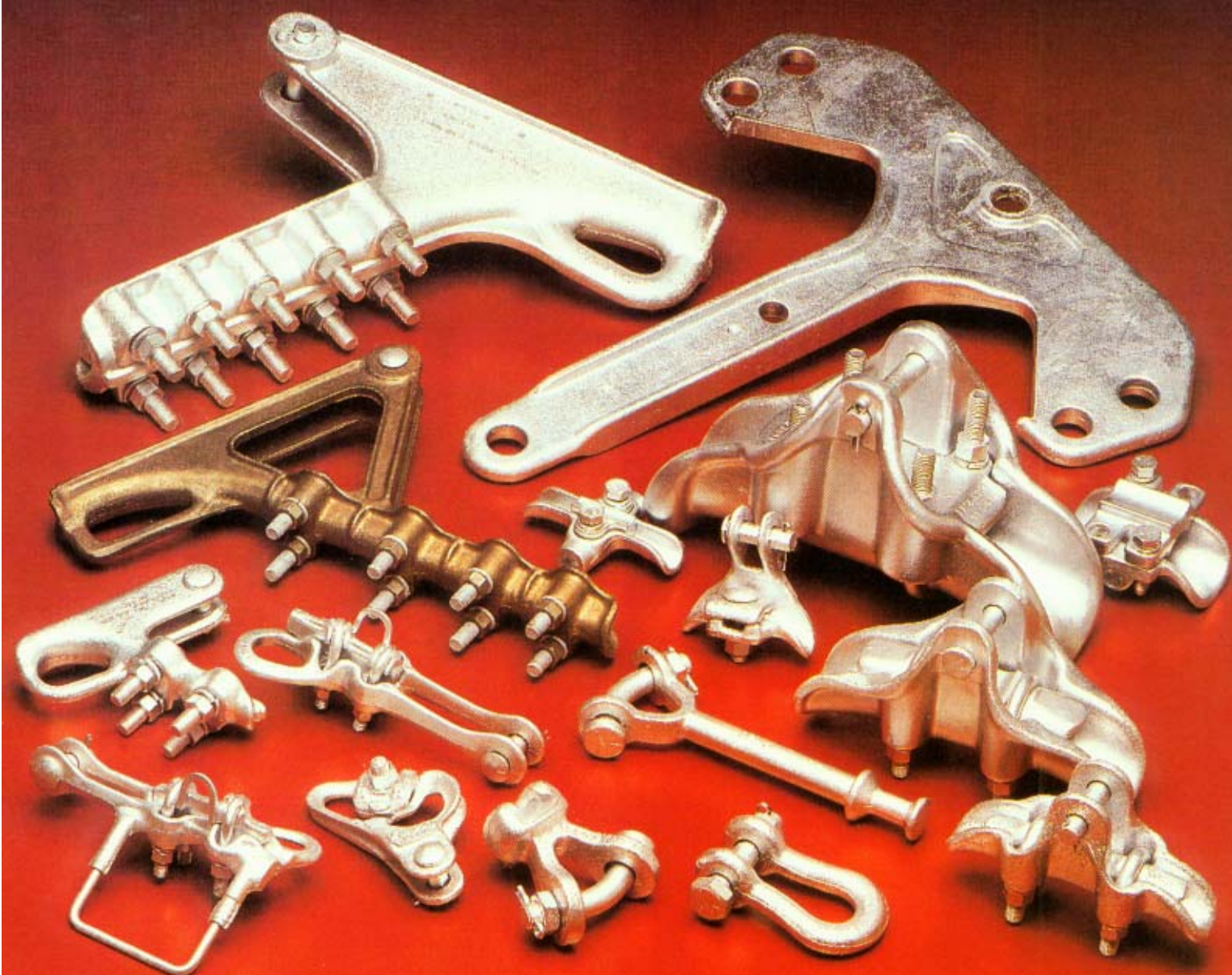


POWER SYSTEMS, INC.

# ANDERSON







**Transmission, Hardware and EHV Assemblies**





Anderson Electrical Products, a subsidiary of Hubbell Incorporated, and a major manufacturer of transmission, distribution and substation products, can be your one source for connectors, clamps, line hardware and compression tools and accessories. Customer confidence in ANDERSON products has been earned through over 100 years of experience, innovation, quality, reliability, competitiveness and availability. Anderson has been ISO-9002 registered since 1994.

The purpose of this bulletin is to provide you with a brief look at our total in-house capability to assure you that Anderson can be your one source for connectors.

## Product Development

Close coordination between sales, marketing and engineering results in the design and development of the best and most cost-efficient products, to meet your needs.

Prototype designs are developed in strict accordance with industry standards such as UL, NEMA, and ANSI. Our test lab is equipped with state-of-the-art equipment for performing heat rise, heat cycle, slip and pull-out, ultimate strength, vibration, environmental and other types of tests. Simulated field conditions in our test lab help generate product performance test reports, which are available upon customer request.

## Materials Control

As customers minimize inventory to reduce costs, manufacturers likewise must closely control both processed and purchased materials to efficiently meet requested schedules. We constantly engage mainframe and personal computers to maximize the effectiveness of these resources.

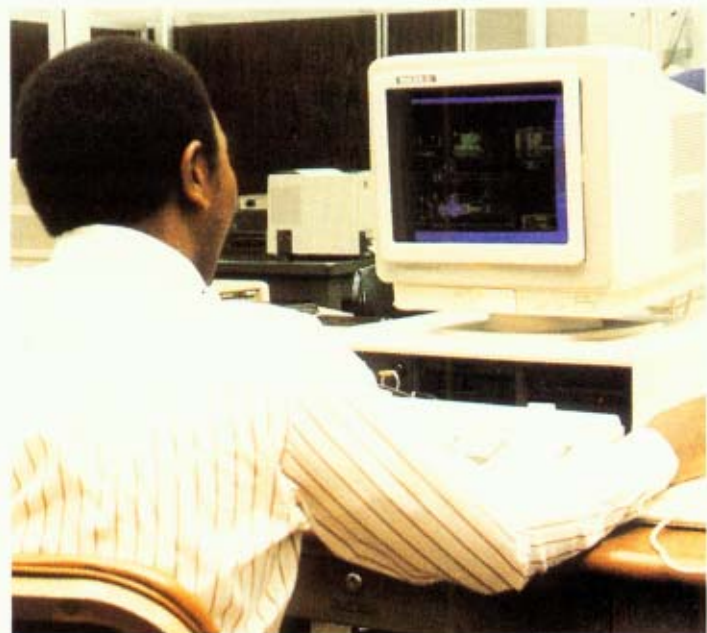
## Manufacturing and Tooling Engineering

Our in-house pattern shop facilitates communication between designer and pattern maker during the prototype pattern and permanent pattern phases. The pattern shop has the capability to manufacture all foundry related tooling from the simplest single cavity match plate pattern to sophisticated multiple cavity permanent molds. A fully staffed tool room develops and maintains fixtures, jigs, dies and production tooling.

Manufacturing engineers work with our in-house pattern shop and tool room personnel to design and build top quality patterns, molds and machining fixtures.

Our conventional tooling capability has been expanded with a state-of-the-art CAD/CAM system which integrates product design, finite element analysis, surface modeling, and computer numerical control machining. This new technology provides the capability to produce even more accurate tooling resulting in improved product quality.

A close tolerance computer controlled measuring machine is used to check complex dimensions during manufacturing. Measurements that would normally require hours can be taken in minutes. New tooling and prototypes can also be quickly and accurately evaluated.







**Substation Connectors**





## Aluminum Foundries

The permanent mold process is used in the manufacture of high volume aluminum castings which exhibit excellent physical properties, surface finish and dimensional conformance.

Conventional sand molding of aluminum is utilized for low volume casting production, common to many substation and EHV transmission applications. A multiplicity of molding stations and types and crucible melting furnaces provide the flexibility required to insure optimum cast quality. Heat treating and aging of aluminum castings are performed under the control of experienced operators. Post heat treat physical properties are confirmed through test bar analysis.

## Brass Foundries

The high volume brass foundry, installed in 1983, is built around an automatic cope and drag molding machine. All process elements are sequenced automatically using programmable controls. Volume red brass and aluminum bronze castings are efficiently produced in this process. Conventional sand molding of brass and bronze is utilized for lower volume casting production. A pallet line process allows many flexibilities unique to the production of substation and special distribution connectors.

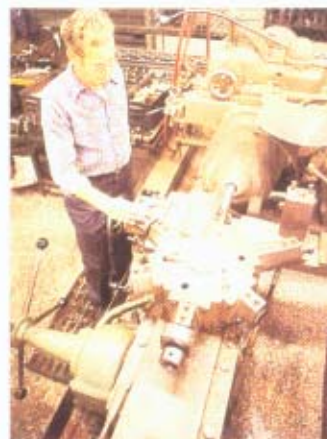
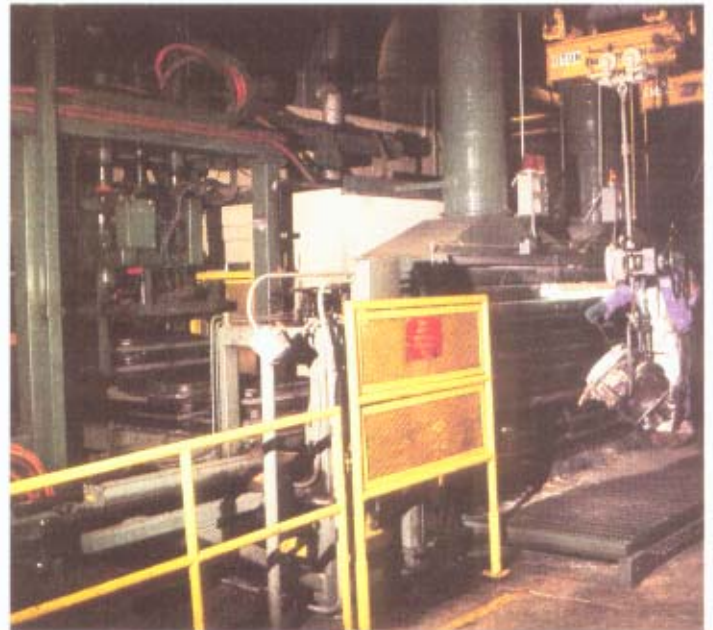
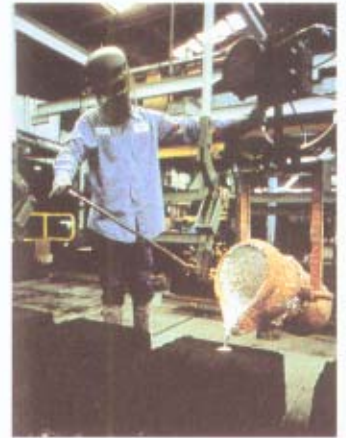
All brass and bronze melting is accomplished in electrical induction melting equipment. Advantages include good mixing of alloying ingredients and resistance to atmospheric contamination.

## Metal Finishing

Heavy emphasis is placed on vibratory finishing to remove flash and provide a smooth, burr-free surface.

## Machine Shop

Parts are processed in our modern and complete machine shop. Operations are performed on drill presses, lathes, milling machines, etc. In addition, an automatic multi-station horizontal indexing machining center, a computer numerically controlled (CNC) turning machine and a CNC palletized machining center are utilized for both high volume and complex machine parts.









## Assembly

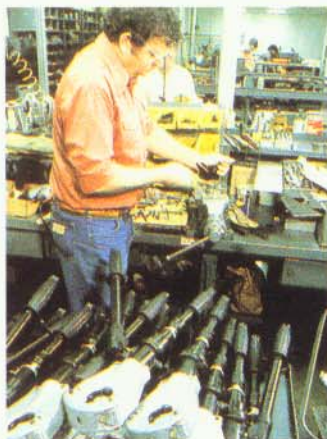
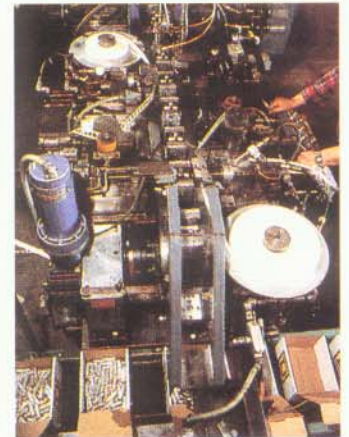
Finished components are assembled into individual products at bench assembly stations and automated assembly machines. Completed products may be individually packaged, carton packed or special packed per job specifications.

Although many products are produced for specific customer orders, many of the higher volume connectors are inventoried as complete items. This enables us to respond quicker on short notice orders.

## Total Quality Control

Complete control of product quality is accomplished through the integrated efforts of the people in all departments. These efforts are supplemented and audited by competent metallurgical and quality control personnel. In the metallurgical area, statistical process control techniques are utilized to regulate metal chemistry and other key variables unique to sand and permanent mold casting. Metal samples are transmitted via vacuum tube to the lab for emission spectrographic analysis prior to releasing heats for use. Permanent equipment to measure sand conditions, gas porosity, microstructure and metal physical properties are used to maintain constant process quality. Metallurgical personnel aid in product design and pattern design to minimize defects and maximize production efficiency.

Great emphasis is placed on providing the equipment, procedures and training to insure that products are made right the first time. In addition, non-destructive testing, 100 percent inspection, statistical lot sampling techniques and quality audit tests of both manufactured and purchased items are used to assure that only products that meet your expectations are shipped.





## Compression Connectors, Tools and Accessories

As an innovator in compression connector systems, the VERSA-CRIMP® compression systems provides the greatest flexibility of any compression tool on the market. It offers a tremendous range-taking capability when used with our connectors or can be used on anyone's connectors which meet ANSI C119.4 for the recommended range. VERSA-CRIMP tools are designed and manufactured in-house to provide you with the best quality and service in the industry today.



# ANDERSON



ISO-9002-1994  
Cert. No. A2850

**ANDERSON™ CHANCE® FARGO® HUBBELL® OHIO/BRASS®**

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NOTE: Because Hubbell has a policy of continuous product improvement, we reserve the right to change design and specifications without notice.

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