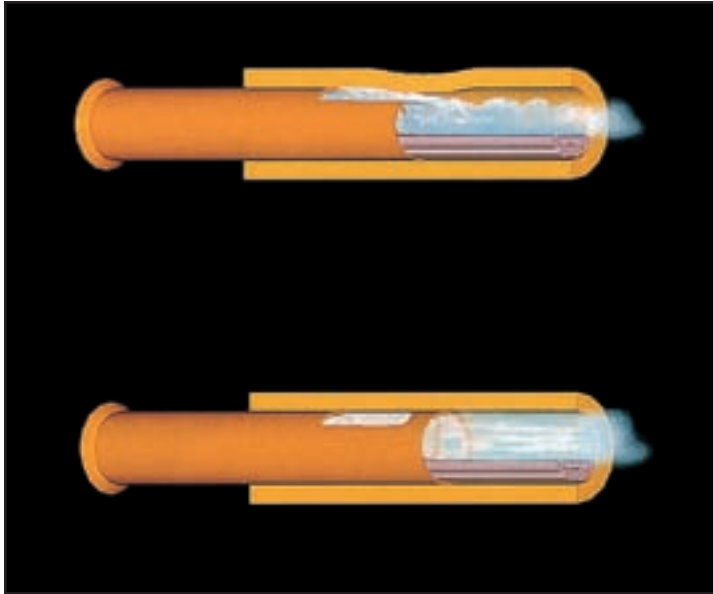


HOTLINE



Bernoulli Ring Cables



History guarantees performance on water-cooled cables

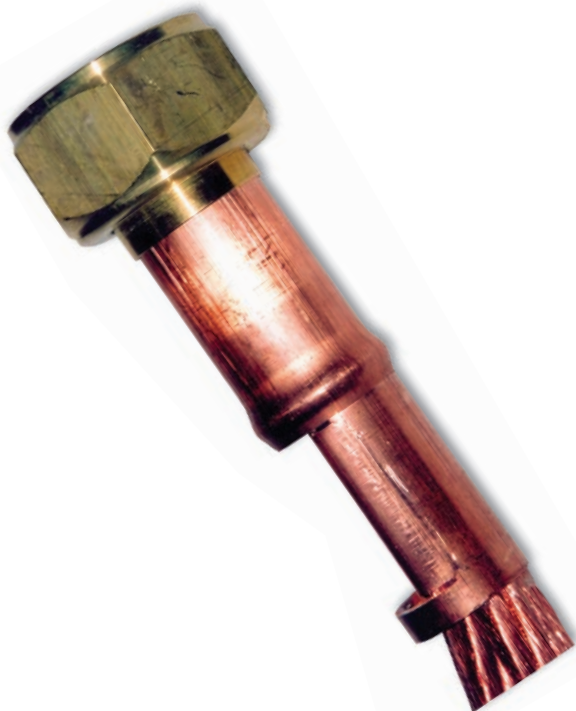
As the “life blood” of your induction system, proper water-cooling is essential for proper operation and life of your induction equipment. In the furnace system, improper cooling will result in poor cable life, and in some cases, will adversely affect the life of induction coils. Induction coils may rely on the water-cooled leads to serve as feeds and drains for the coil cooling water. In these systems, both the water feed and the drains of the coil are connected to leads.

Many furnaces require flexible connection points in order to tilt the furnace. This is the purpose of the water-cooled leads. It gives the flexible connection that is required by these furnaces. The question is how do we insure proper flow through these connection points?

History gives us the answer!

A Swiss mathematician, Daniel Bernoulli explained this principle several years ago. Bernoulli explained that water moving through a hose exerts a uniform pressure on the hose. His principle states that if the flow of water in the hose is speeded up, the pressure on the hose decreases. A way to increase the speed of the water in the hose is to pinch off the hose. The problem with pinching off the hose to speed up the water flow is that it will also decrease the pressure of the water on the hose. Bernoulli proved that by inserting an object into the hose, he could achieve the speed of the water flow without decreasing the pressure.

EMSCO uses Bernoulli’s principle by adding “this object into the hose” to insure proper water flow and pressure. The **Bernoulli Ring** is an added feature on several of the sizes of crimped power cables that **EMSCO** manufacturers.



BULLETIN M20/1M/0408

Maintenance Questions

One of the main functions of the Maintenance Department is troubleshooting and responding to potential problems with their equipment. With induction systems, intermittent heating due to the drape or bend of the lead can be some of the most frustrating.

One of the main reasons for this problem is the bend of water-cooled leads without a Bernoulli Ring. As the lead settles the hose can collapse across the terminal causing a restriction in the water flow. This problem can be very frustrating and costly to your production demands. Some remanufacturers instruct their customers to install the lead with the terminal upside down in the hope to eliminate the problem.

Approaching the problem like this puts the responsibility for the positioning of the terminal on the Maintenance Department.

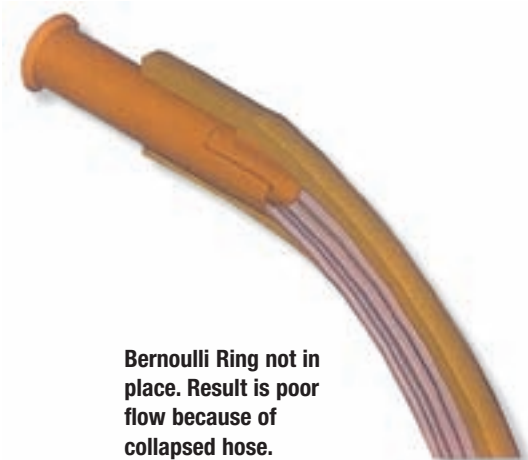
The Bernoulli Ring helps eliminate this problem. By supporting the hose at the end of the terminal and behind the crimp, the lead can be installed in any direction without worry about the hose collapsing at the end of the terminal.

EMSCO offers the manufacture and repair of these types of water-cooled leads with the Bernoulli Ring feature at **all of our full service repair centers in North America**. A full stock of terminals, cable, hose, and spare parts for all styles and designs of water-cooled leads is available.

Contact your local EMSCO account manager for information on the Bernoulli Ring and water-cooled cable rebuild and manufacture.



Bernoulli Ring in place. Result is good flow through hose.



Bernoulli Ring not in place. Result is poor flow because of collapsed hose.

EMSCO is ready when you need us...every day.

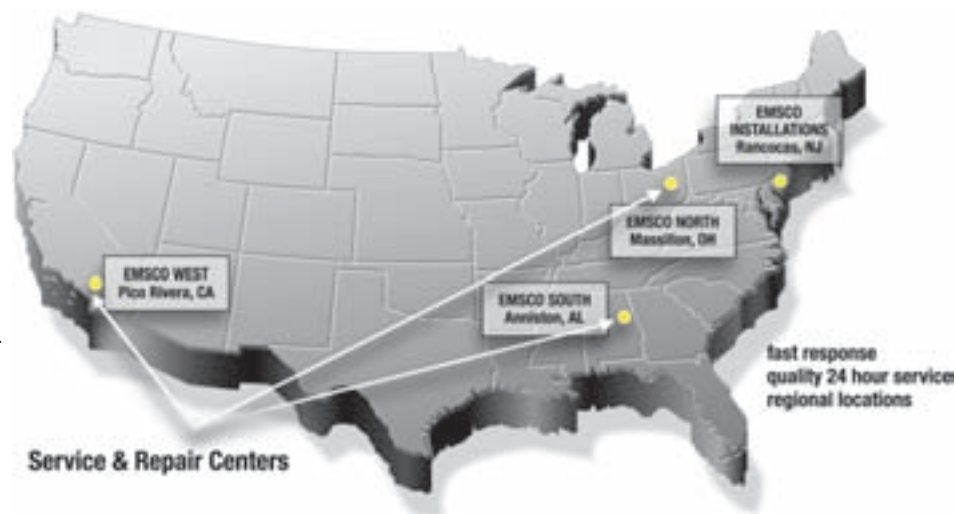
EMSCO's Commitment to you

KNOWLEDGE: EMSCO will begin each project with a customer-focused understanding of the problem to be solved and a soundly engineered approach to the solution.

COST: EMSCO will, when possible, offer more than one level of service and will explain the costs and compromises associated with each. Every option we propose will meet industry standards for safety.

QUALITY: EMSCO will understand and meet the quality expectations agreed to at the start of the project. Warranties will be explained and will set the standard for the industry.

OUR GOAL: EMSCO will provide quality services at reasonable prices so that our customers have the competitive edge in their markets.



NATIONWIDE TOLL-FREE NUMBERS

Repair Centers - 877.77.EMSCO (773.6726) | Installations - 800.858.7030

www.emsco.com