



DREKAN GROUPE

NELCO COMMUTATORS

DC Commutators & **Armatures**



DREKAN GROUPE
Un monde au service de l'énergie

The Drekan group and its various entities have been involved in the rotating machine business for nearly 90 years. Whether you want us to design, install or maintain in operational condition your electromechanical installations, Drekan will provide you with its expertise throughout the country and abroad. **Nelco-Commutators**, a world leader in the manufacturing and maintenance of commutators for direct current motors, recently joined the group and now provides all of the group's entities with its expertise on issues regarding these types of components.

Over the last thirty years, the company, which is present in around thirty countries worldwide, will have delivered close to one hundred thousand commutators. The quality and reliability of its products have always ensured the confidence of major motor manufacturers in the industrial or railway sectors. Since its takeover, Nelco is undergoing a new revolution and being restructured to provide even better service to our customers with reduced production lead times, optimized logistics and a strengthened international presence.

Needless to say, the entire team at Drekan group and Nelco-Commutators remain attentive to your needs.



 SERVICES

 TECHNOLOGY

 PROXIMITY

 GLOBAL OFFER

 REACTIVITY



DREKAN GROUPE

 QUALITY

 SECURITY

 ENVIRONMENT

Issues regarding the health and safety of our staff, environmental protection and quality control are managed within the Drekan group at the highest level and are integrated into the company's management. Similarly, all of the company's employees and its sub-contractors are involved in this approach at all levels and strive to reduce and anticipate risks and protect the environment whilst improving productivity and the quality of working life. This policy helps us to meet the following commitments:

- Ensure health and safety at work for our staff
- Provide our customers with impeccable quality of service
- Comply strictly with the country's legislation
- Reduce the environmental impact of the company's activity

Improving our QHSE performances is a constant concern for Drekan and all of its staff, who along with the management are committed to the ISO9001 and ISO14000 certification process. Since the beginning of 2016, the group has its own QHSE department.



NELCO-COMMUTATORS: 30 YEARS MANUFACTURING COMMUTATORS

Founded over 30 years ago, Nelco-Commutators, the European specialist in commutators for direct current motors, joined the Drekan group in 2016. Initially specializing in the mass production of molded commutators for motor manufacturers, over the last ten years or so the company has reoriented its activity on small-scale production or single components for repair companies.

Since taking over Nelco, the Drekan group has started to diversify it, a strategy which aims to offer complete direct current motor solutions to all of its customers. The company is therefore at your side for all of your projects regarding these types of machines. Its main areas of expertise include:

- The manufacture of molded commutators from 80 to 600 mm in diameter
- The manufacture of V-Ring mechanical commutators for traction or industrial applications
- The reconstruction of your large commutators
- The small-scale production of commutators for direct current motors
- The on-demand manufacture of coils for direct current motor armatures

Please feel free to contact Nelco-Commutators for all of your armature, commutator or coil purchasing or repair requirements.



A team of specialists at your service ...

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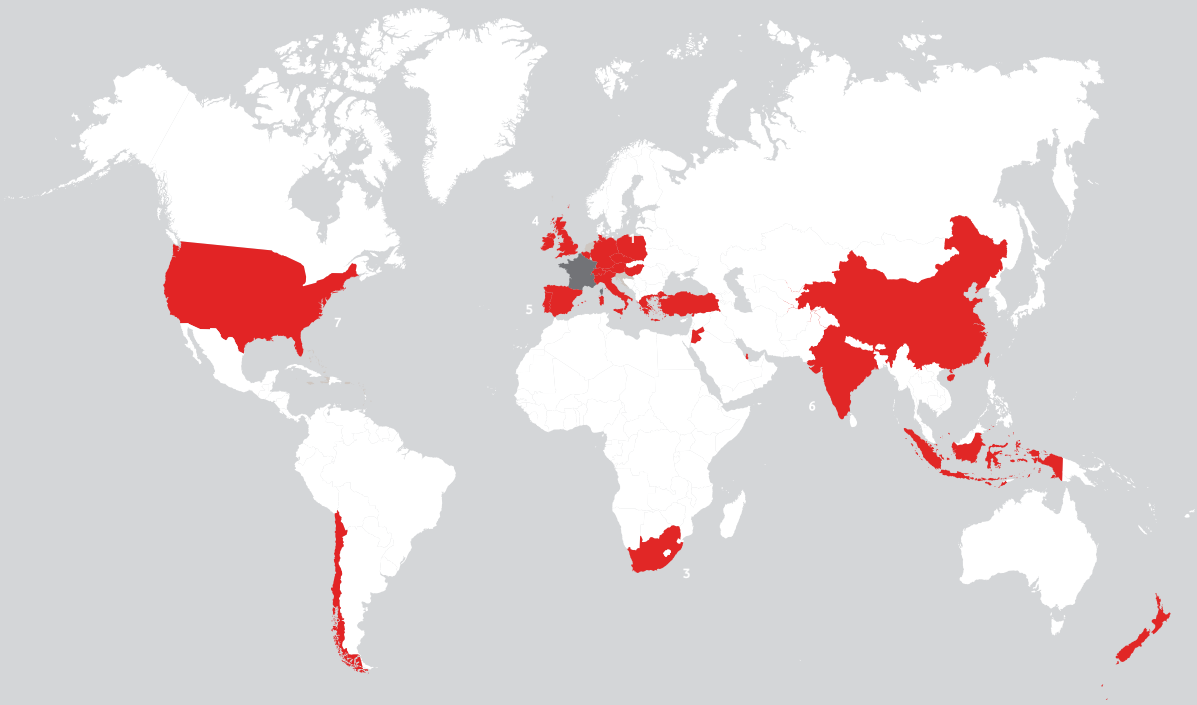
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NELCO: A GLOBAL PRESENCE ...



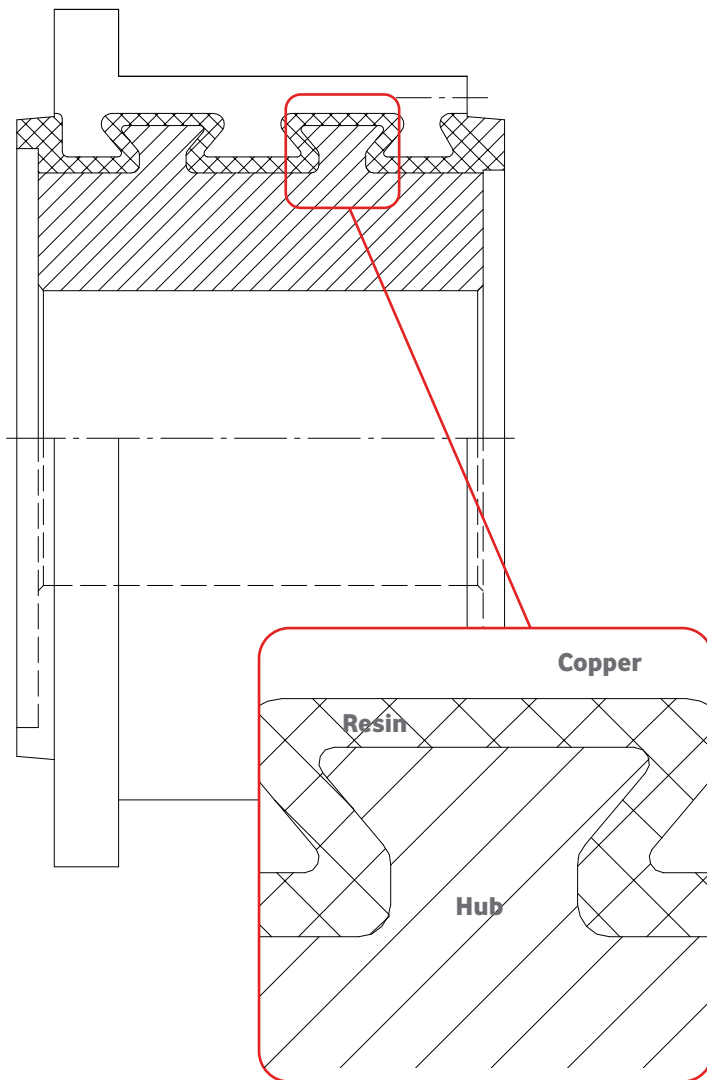


OUR RANGE OF **PRODUCTS AND SERVICES**

Nelco-Commutators can offer you a range of commutators suitable for your needs based on your price requirements and the degree of urgency of your project :

- Standard **"N"** type dovetail commutator range
- **"H"** type reinforced dovetail commutator range
- **"RX"** type high-performance commutator range
- **"V-ring"** or mechanical commutator range.
- Commutator reconstruction or repair services,
- Armature reconstruction or repair services,

Please feel free to contact us, the Nelco team is available to study your needs in detail.



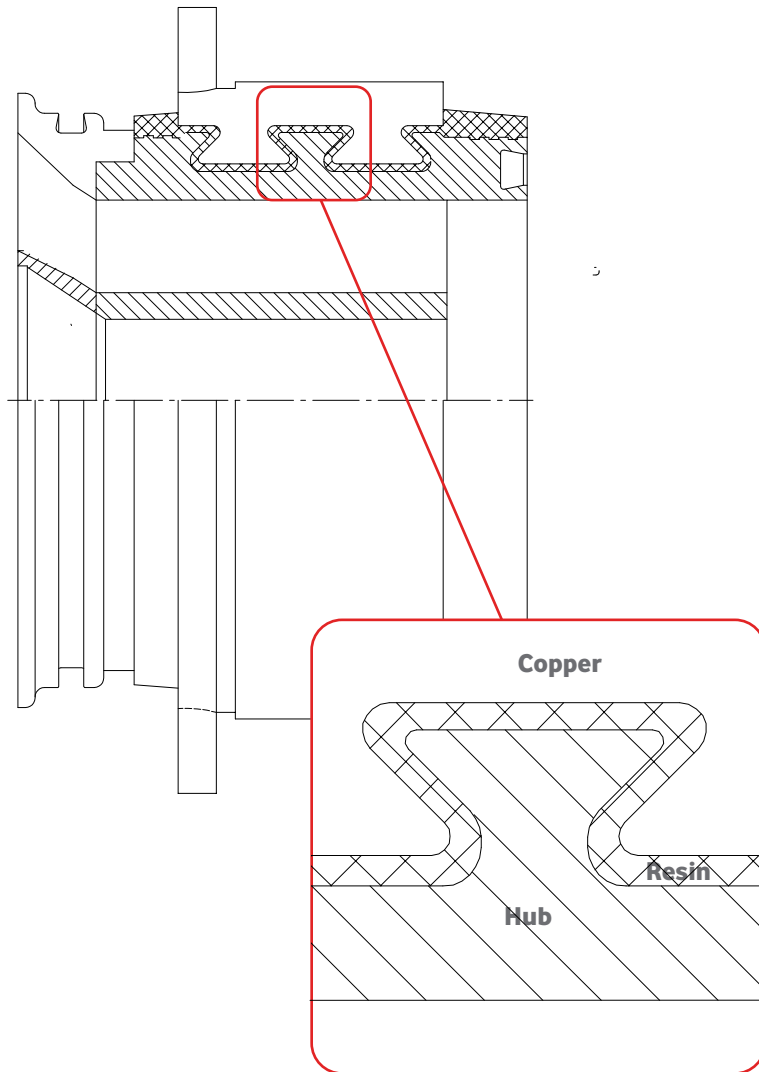
"N" TYPE MOLDED TECHNOLOGY

“N” DOVETAIL COMMUTATORS: IDEAL FOR STANDARD APPLICATIONS

Multiple dovetails provide ideal anchoring of the copper segments across the entire length of the stainless steel or cast iron hub. Due to control of the arch pressure combined with a very high quality thermoset molding resin, “N” technology commutators have good dimensional stability under the effects of speed and temperature. This type of construction is recommended for class H motors.

The dielectric properties and insulation resistance are very high. We offer a wide range of hubs and molding flanges. To avoid tooling creation costs, standard designs are available in virtually all sizes.

Its low radial thickness provides very large cooling surfaces and also an excellent quality-price ratio.

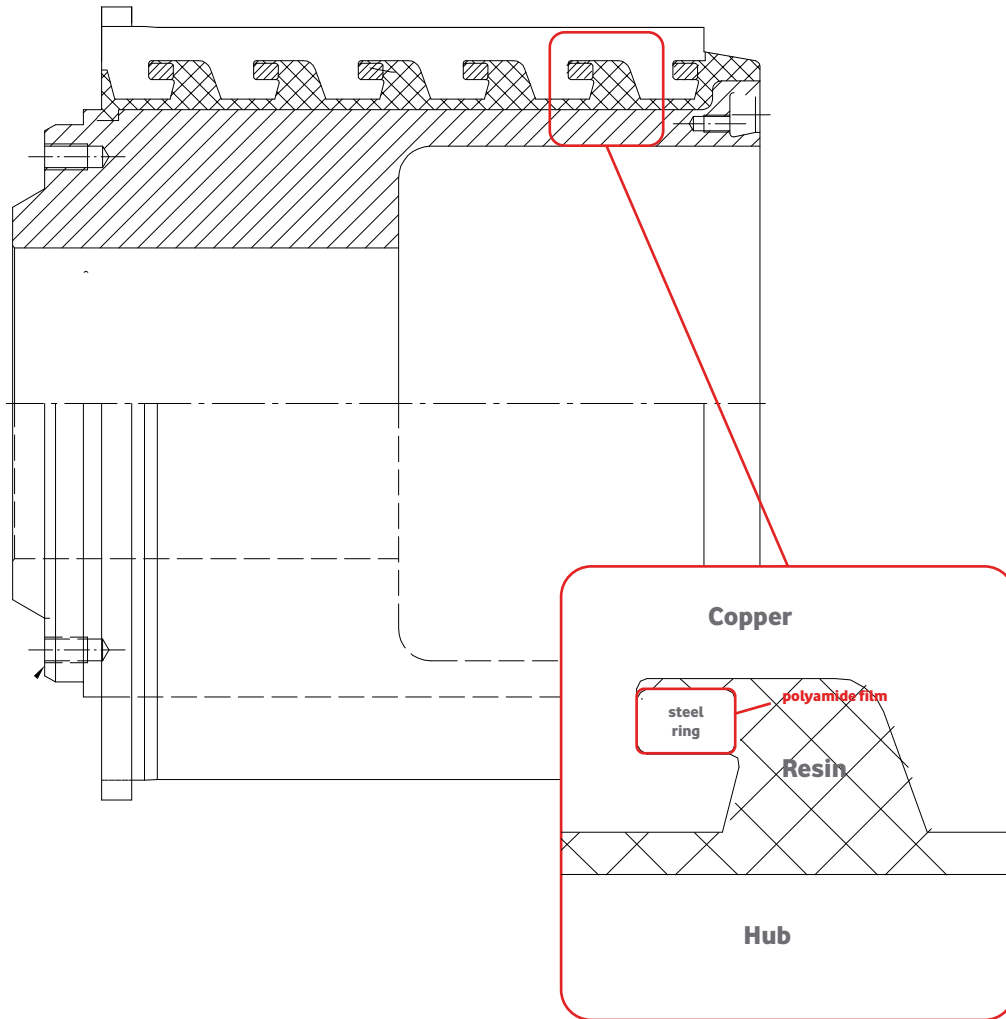


"H" TYPE MOLDED TECHNOLOGY

"H" DOVETAIL COMMUTATORS: PRICE/PERFORMANCE RATIO

With a very similar technology to that of our "N" type commutator, our "H" type dovetail commutator has been designed with a reinforced segment clamp. Although unable to achieve the capacities of our "RX" commutators, our "H" type commutators do accept faster operating speeds than a conventional dovetail commutator and at a relatively affordable price.

This technology clearly represents the best price/performance ratio for traction motor or industrial uses.



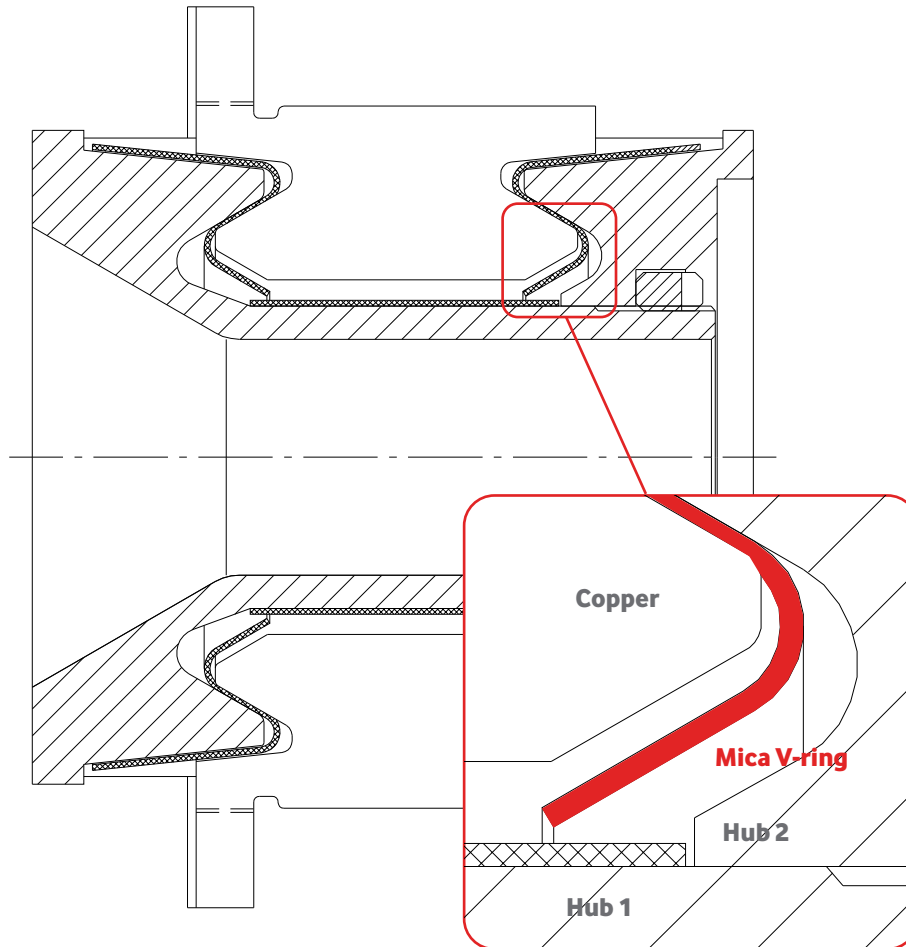
"RX" MOLDED TECHNOLOGY

RX COMMUTATORS: A NELCO EXCLUSIVITY FOR HIGH-PERFORMANCE MOTORS

The RX construction represents top-of-the-line performance. The principle is unique in the molded commutator sector as there is no resin between the copper segments and the steel reinforcing rings, resulting in direct contact. A polyamide film of a few hundredth of a mm ensures their insulation. The dimensional stability is excellent under the effect of speed and temperature, and this performance is remarkably continuous throughout mass production. With the RX commutator:

- Segment movements are no more than 1 micron and usually undetectable.
- Out-of-roundness distortions are less than 10 microns and are difficult to measure because they merge into the tolerance of the rotor.

A remarkable dimensional stability, at distortion levels that do not disturb commutation, maximizes brush life and also enables replacement with limited maintenance which can be grouped together with other mechanical components of the motor.



"V-RING" MECHANICAL TECHNOLOGY

“V-RING” COMMUTATORS: FOR LARGE SIZES OR TRACTION

With the oldest direct current motor commutator technology in the world, this commutator is still the most commonly used worldwide for traction or for large commutators that cannot be molded.

With this technology, the commutator is installed by tightening two steel cones that constitute the hub, which is insulated from the commutator segments by two mica cones. The biggest advantage of this type of commutator is that it can be completely dismantled and then reassembled. Therefore, the entire copper segment pack can be changed after several “maintenance” grindings or an isolated repair can be carried out easily, for example, following segment movement.

This technology has virtually no size limits. In fact, mechanically welded-hub commutators can be produced that are several meters in diameter. However, it comes at a cost much higher than a molded commutator as its production, assembly and stabilization cannot be automated and are effectively performed manually.



RECONSTRUCTION: A QUICK AND ECONOMICAL SOLUTION

The reconstruction option is specific to mechanical commutators and occurs after several years of operation during which a series of grinding operations would have been carried out. It can also be carried out following a motor operation incident (mechanical breakdown, fire, etc.).

The aim of this operation is to keep all of the hub's components and only replace the copper segments and mica insulating parts (segments and cones). Therefore, the operation can be carried out within extremely tight deadlines and for a cost that is much more affordable than that incurred by complete replacement of the commutator.

For our customers who manage commutator reassembly and stabilization, we can provide only the pack of pre-assembled segments and the set of 2 mica cones.



RECONSTRUCTION OF **ARMATURES**

For very specific motors where replacement with new motors is not possible, for example, in the traction sector, the repair of an armature sometimes incurs extremely high costs: unwinding, changing the commutator, winding, shaft banding, work on the pack of plates, etc. Therefore, for the most damaged armatures, it becomes much more cost-effective to reconstruct a new armature.

The service includes:

- A new shaft,
- A new commutator,
- A new pack of magnetic plates,
- The rewinding,
- VPI (Vacuum Pressure Impregnation),
- The balancing,

For small-scale production runs, this operation, which also saves on sometimes very expensive armature unwinding and cleaning costs, is particularly cost-effective. Please feel free to contact our teams for any project design.



OVER 600 REFERENCES AVAILABLE IMMEDIATELY

With nearly 4,000 commutators in stock representing 600 different references, Nelco has the largest worldwide stock of commutators for direct current motors. Once the notching/milling characteristics have been accepted, Nelco can implement the finishing and packaging operations for your order for delivery in Europe within 48 hours and anywhere in the world within one week.

Over the last 30 years, we have built up partnerships with all motor manufacturers (Leroy-Somer, ABB, TT, Siemens, etc.) to whom we still supply first-fit commutators. In fact, our stock includes molded commutator references that are the most widely used for repairs.

All of our references can be delivered individually for urgent requirements or be produced on a small or medium scale.



ALSTOM

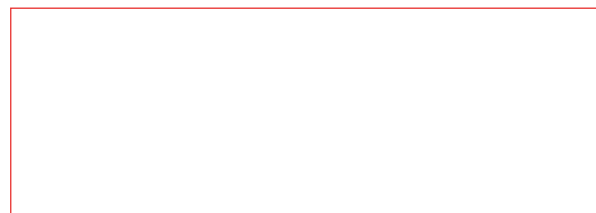


SIEMENS

T-T Electric



And many others ...



www.drekan.com