



ENERGY

## SOLUTIONS & SERVICES FOR HYDRO POWER



- CARBON BRUSHES
- BRUSH HOLDERS AND BRUSH GEAR
- SLIP RING ASSEMBLIES
- MERSEN DUSTCOLLECTOR
- MERSEN CONNECTED SOLUTIONS
- SERVICES

# HIGH QUALITY ENGINEERED SOLUTIONS

Our solutions for hydro power plants are made of carefully chosen quality materials, manufactured on cutting-edge equipment (CNC machines, broaching machines, computer aided measuring instruments, high precision microscopes...).

They benefit from high precision assembly and conform to industrial international standards (IEC, NEMA, ASTM, SAE, DIN...).

We test our solutions for optimum performance under all loads and environmental conditions, thereby helping our customers to reduce maintenance costs.

We have the knowledge to reengineer existing solutions and create maintenance tools to improve the performance of hydro power plants.



## CARBON BRUSHES

- Renowned grades (e.g. CG651, EG34D, EG389P, L1, M44A)
- Selected materials: graphite, copper...
- High electrical conductivity
- Ideal mechanical stability
- Low friction coefficient
- Low resistivity material
- Wide speed range (15 to 55 m/s)
- Specific design



## BRUSH-HOLDERS & BRUSH GEAR

- Wide range: metric & imperial systems
- Selected materials: non-ferrous alloys, anti-corrosion...
- Molded, machined, die-cast, stamped
- Single or multiple boxes
- Fitted with independent pressure system: tension or coil springs
- Brush-rocker assemblies
- Brush-holders available with MERSEN DUSTCOLLECTOR systems
- Customized designs

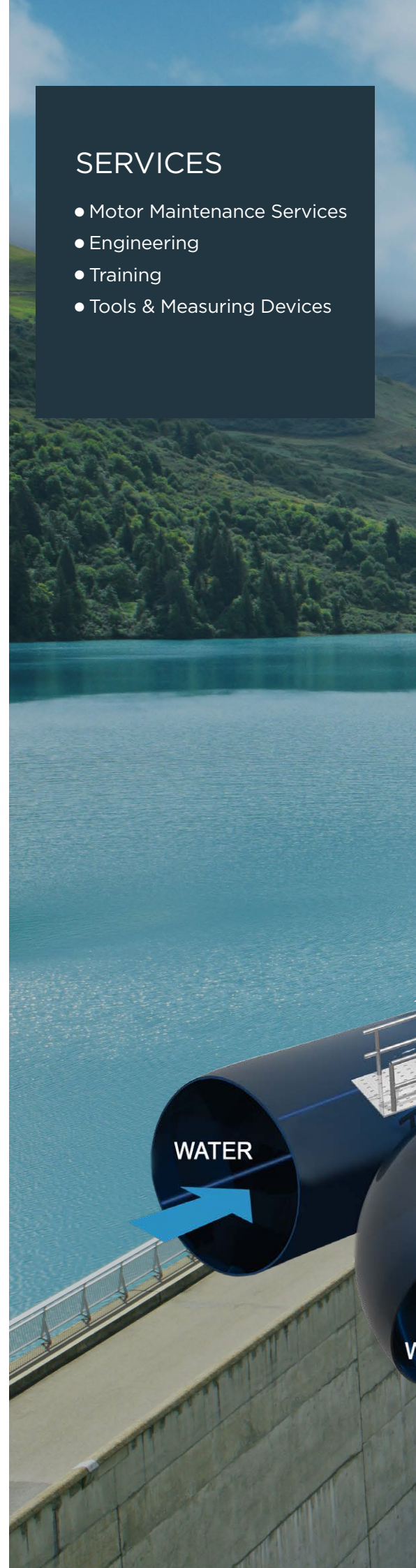


## SLIP RING ASSEMBLIES

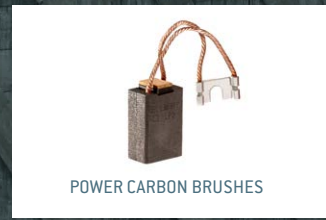
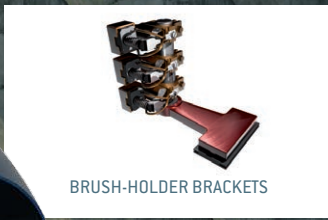
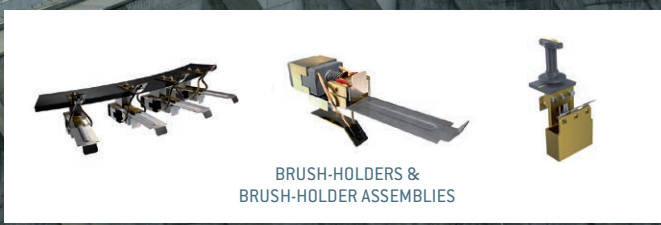
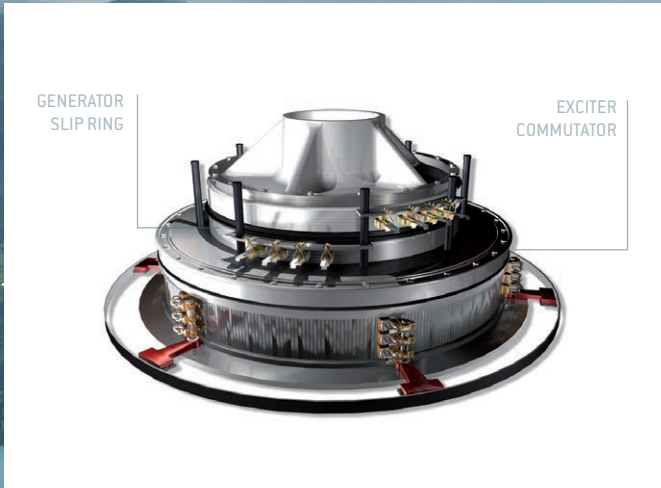
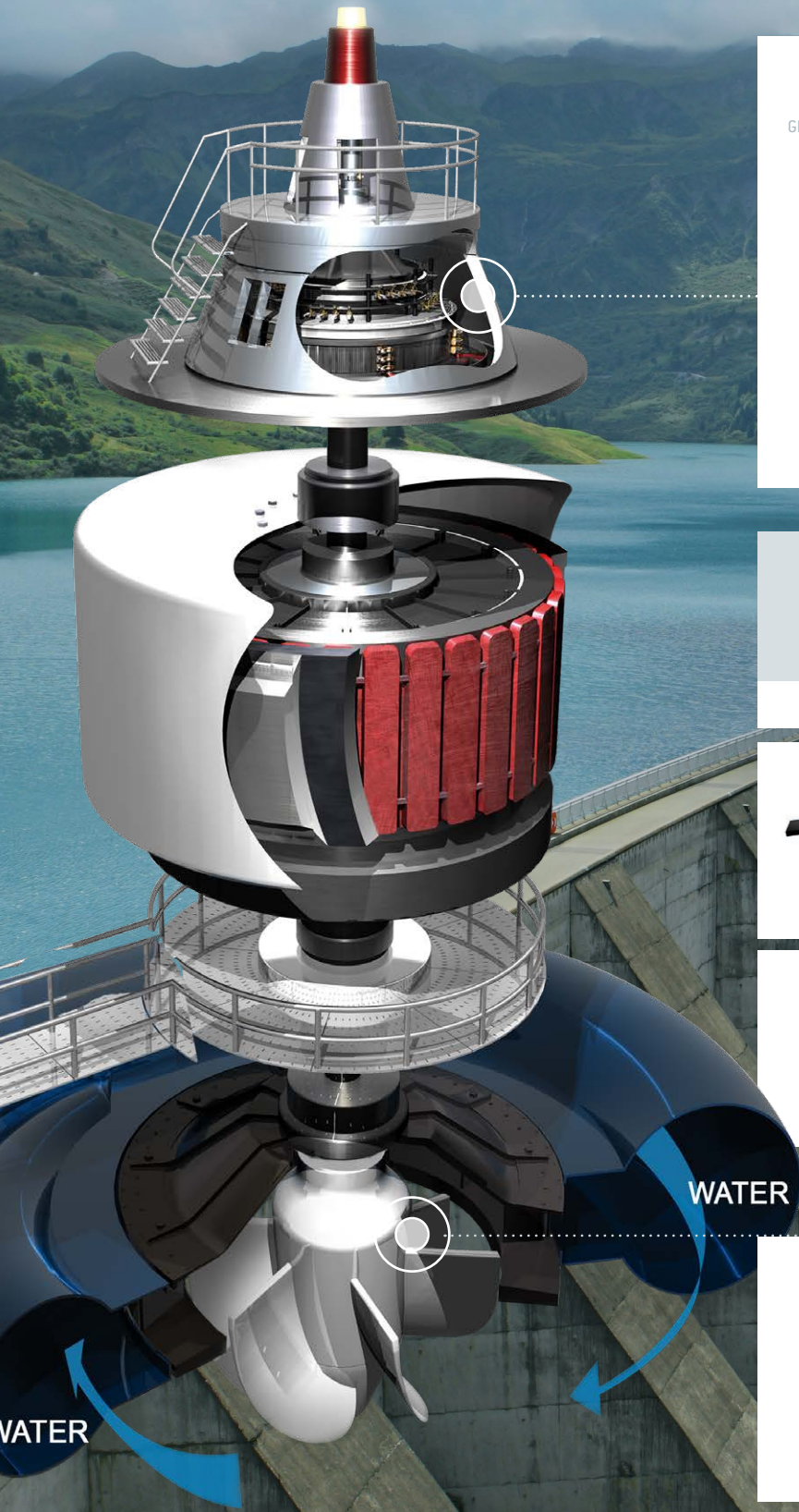
- Selected materials: non-ferrous alloys, stainless steel, insulation dielectric materials...
- Plain or helically-grooved rings
- Finished product compliance
- Customized designs

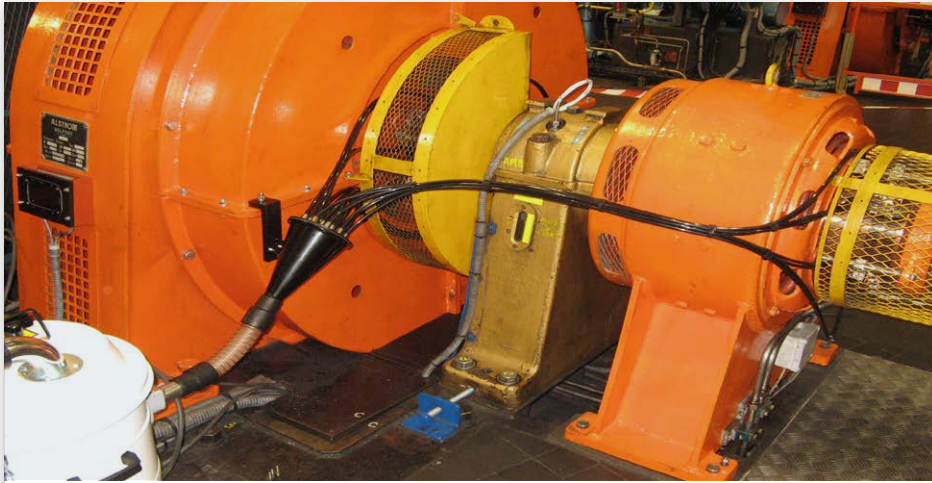
## SERVICES

- Motor Maintenance Services
- Engineering
- Training
- Tools & Measuring Devices



# SOLUTIONS & SERVICES FOR HYDRO POWER





## MERSEN DUSTCOLLECTOR

### CARBON DUST IS SUCTIONED AT ITS SOURCE

A SMART CONCEPT DESIGNED TO PREVENT SHORT CIRCUITS CAUSED BY LOW INSULATION RESISTANCE BETWEEN ACTIVE COILS AND GROUND

- For slip rings, commutators and generator brakes
- Requires minimal maintenance
- Completely integrated and customized with plug & play concept
- Designed for new, retrofit and refurbished hydro generators (up to 900 MW)
- An annual preventative maintenance contract is available

A RELIABLE SOLUTION FOR BETTER HYDRO GENERATOR EFFICIENCY AND INCREASED HYDRO GENERATOR RUNNING TIME

- Studies performed by Mersen design offices
- Selection of high quality materials
- Tested on our test benches
- Installed and set up by Mersen experts

## SERVICES

### MOTOR MAINTENANCE SERVICES

- MERSEN DUSTCOLLECTOR and MERSEN Total Monitoring installation
- Expertise and Diagnostics
- On site machining of slip rings and commutators

### ENGINEERING

- Retrofit: refurbishing & reengineering of solutions and components

### TRAINING

- Led by technical experts
- According to a defined curriculum or adapted to specific needs
- Transfer of skills
- At either our location or our clients'

### TOOLS & MEASURING DEVICES

- CL-Profilor and ComPro2000™
- Grinding stones
- Dynamometers
- Stroboscopes
- Alarm boxes
- Roughness meters

**Mersen**  
Total Monitoring



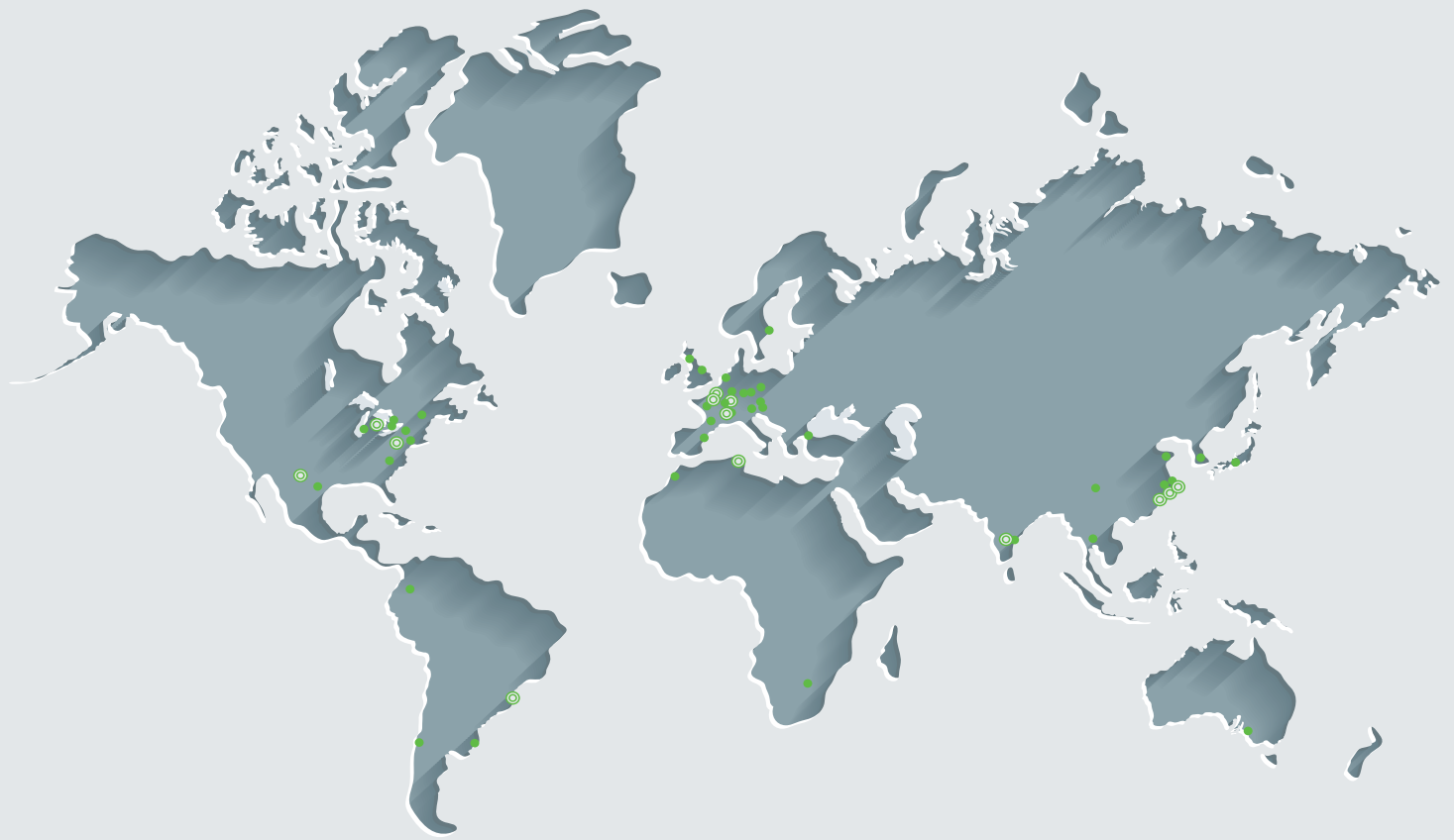
## MERSEN CONNECTED SOLUTIONS

### For MERSEN DUSTCOLLECTOR

- 3 levels of monitoring systems: Basic, Optimum and Smart

### MERSEN TotalMonitoring

- Real time data information of the brushes and brush-holders in operation
- Email/SMS alert system available
- Data management by cloud or local mode (please contact us)



PTT-Energy Hydro EN 2104 - Design by HENRY & SIEGLER - Photos : Photothèque Mersen - @Silvy K./Fotolia



GLOBAL EXPERT IN ELECTRICAL  
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