



ENERGY

SOLUTIONS  
& SERVICES FOR  
CONVENTIONAL  
THERMAL POWER



- CARBON BRUSHES
- BRUSH-HOLDER PLUG SETS
- SLIP RING ASSEMBLIES
- BRUSH GEAR
- CARBON SEALS
- MONITORING
- SERVICES



A background image showing three men in a control room. One man is seated at a computer workstation, looking at a monitor displaying technical data. Two other men stand behind him, looking at the screen. The scene is dimly lit, with the primary light source being the computer monitor. The overall color palette is dark with blue and orange accents.

# HIGH QUALITY ENGINEERED SOLUTIONS



Our solutions for conventional thermal power 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 respect the international standards (IEC, NEMA, ASTM, SAE, DIN...).

We test our solutions for optimum performance in variable loads and environmental conditions, helping our customers to reduce maintenance costs. We have the knowledge to reengineer existing solutions and create maintenance tools to improve the performance of thermal power plants.

# SOLUTIONS & SERVICES FOR CONVENTIONAL THERMAL POWER

## Turbine sealing

- Carbon seals
- Papyex® gaskets



AXIAL/RADIAL SEGMENTED SEALS

## Earthing

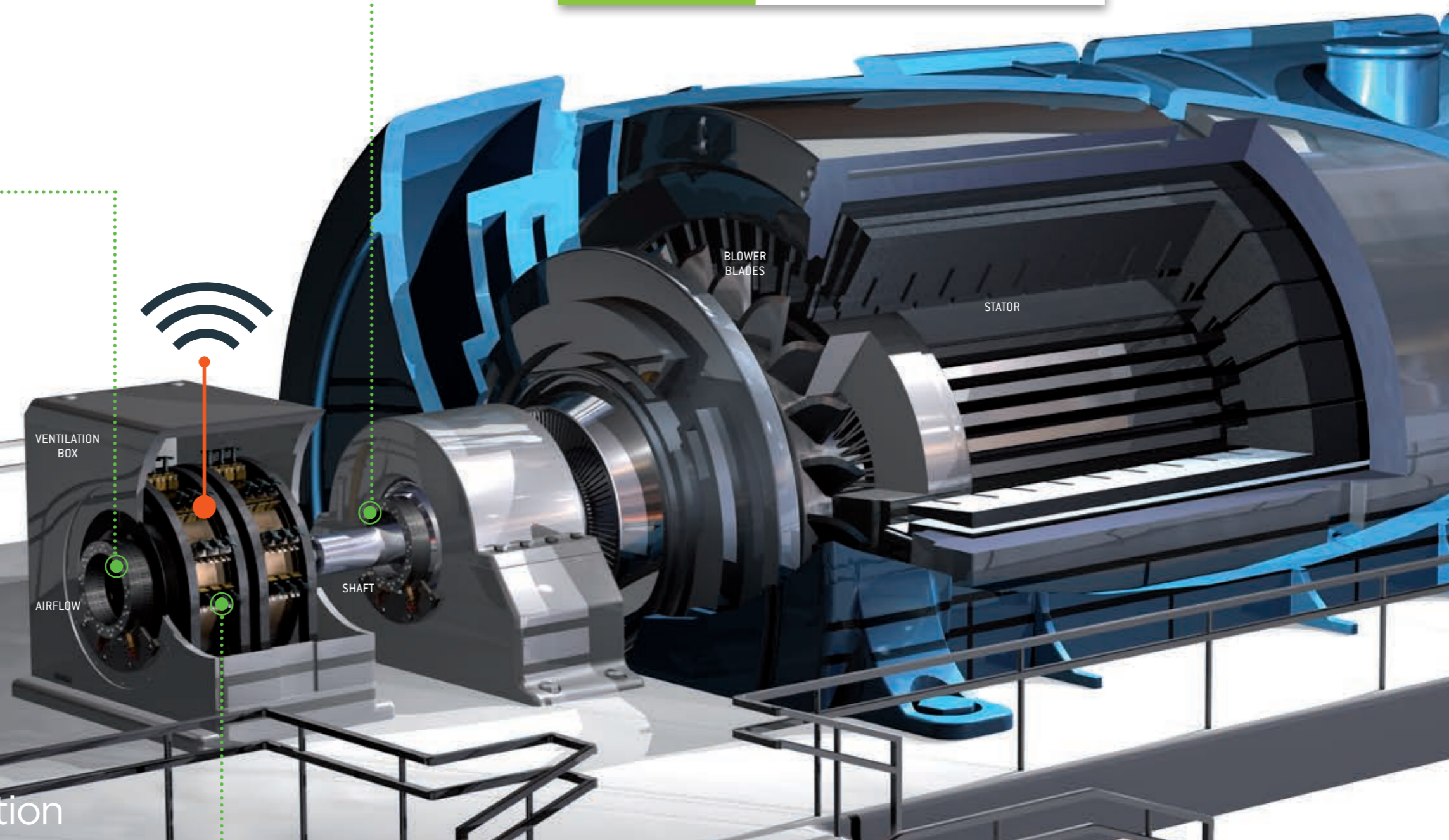
- Grounding carbon brushes
- Brush-holders
- Shaft earthing systems



BRUSH-HOLDERS AND GROUNDING CARBON BRUSHES



SHAFT EARTHING SYSTEMS

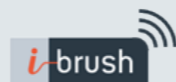


## Power generation

### BRUSH GEAR

Complete collector assemblies with:

- Metal boxes with access doors
- Optimized airflow
- Slip ring assemblies & complete metal frames
- Carbon brushes
- Brush-holder arms
- Brush-holder plug sets



CARBON BRUSHES



BRUSH-HOLDER PLUG SETS



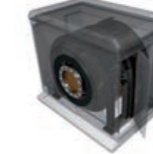
ARMS & PLUG SET SYSTEMS



HIGH SPEED SLIP RING ASSEMBLIES



BRUSH GEAR



VENTILATION BOXES WITH ACCESS DOORS

GLOBAL EXPERT

## CARBON BRUSHES

- Top grades, including LFC 554, adapted to specific needs
- Good mechanical stability
- Low friction coefficient
- High electrical conductivity
- Wide speed range (up to 100 m/s)
- High transient current density
- Adapted to load variation
- Low resistivity material

## BRUSH-HOLDERS

- Wide range: metric & imperial systems
- Fitted with independent pressure systems
- Single or multiple boxes
- Safe on-load removable systems (brush-holder plug sets)
- Side attachment on arms
- Brush-holder attachment arms with a good repartition of current between brushes and arms
- Brush wear warning systems
- Brush-rocker assemblies
- Selected materials: non-ferrous alloys, anti-corrosion...
- Customized designs

## SLIP RING ASSEMBLIES

- Machined rings for high speed (up to 3,600 rpm)
- Selected materials: non-ferrous alloys, stainless steel, dielectric materials...
- Customized designs

## BRUSH GEAR

- Large range for generators (turbo generators from 10 to 1,200 MW) & alternators
- Selected materials
- Customized designs
- Performance & optimization
- Dust filtration

## CARBON SEALS

- Adjustable orientation of segmented seals
- Design with overlapping to improve sealing performance
- Customized design & material to make the seal integration easier
- Self lubrication properties
- Extended life solutions

## INNOVATION



## CARBON BRUSH DATA COLLECTION ON MACHINES IN OPERATION

- Monitoring sensors on brushes and brush-holders
- Control box with integrated Intelligence
- Alarms sent by SMS and/or email
- Data available online on secured website

## FOR

- Machine protection
- Instant access to carbon brush condition on machines in operation → Predictive maintenance
- Reduced maintenance visits to site
- Optimized machine performance

**MERSEN**  
SERVICES

### MOTOR & MAINTENANCE SERVICES

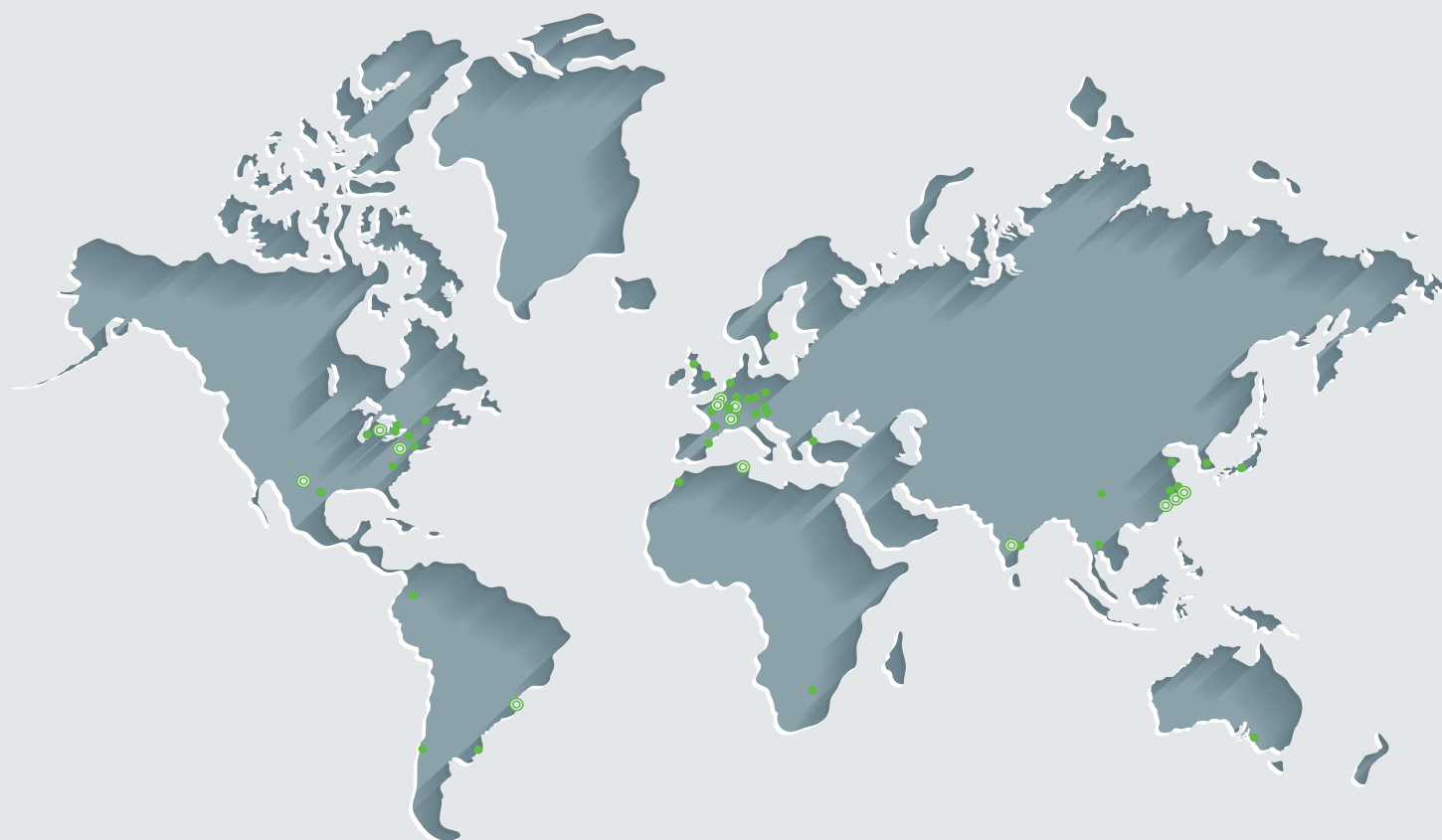
- Expertise
- Diagnostics
- On site intervention
- Refurbishing & re-engineering of solutions and components

### 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-Profiler
- ComPro2000™
- Grinding stones
- Mica undercutters
- Dynamometers
- Stroboscopes
- Alarm boxes
- Roughness meters
- Grinders & accessories
- Saws
- Scrapers
- Slotting files



GLOBAL EXPERT IN ELECTRICAL  
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