



GE VERNOVA

GE VERNOVA GLOBAL SUPPLY CHAIN



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STEAM POWER SUPPLY CHAIN

Steam Power Supply Chain Footprint

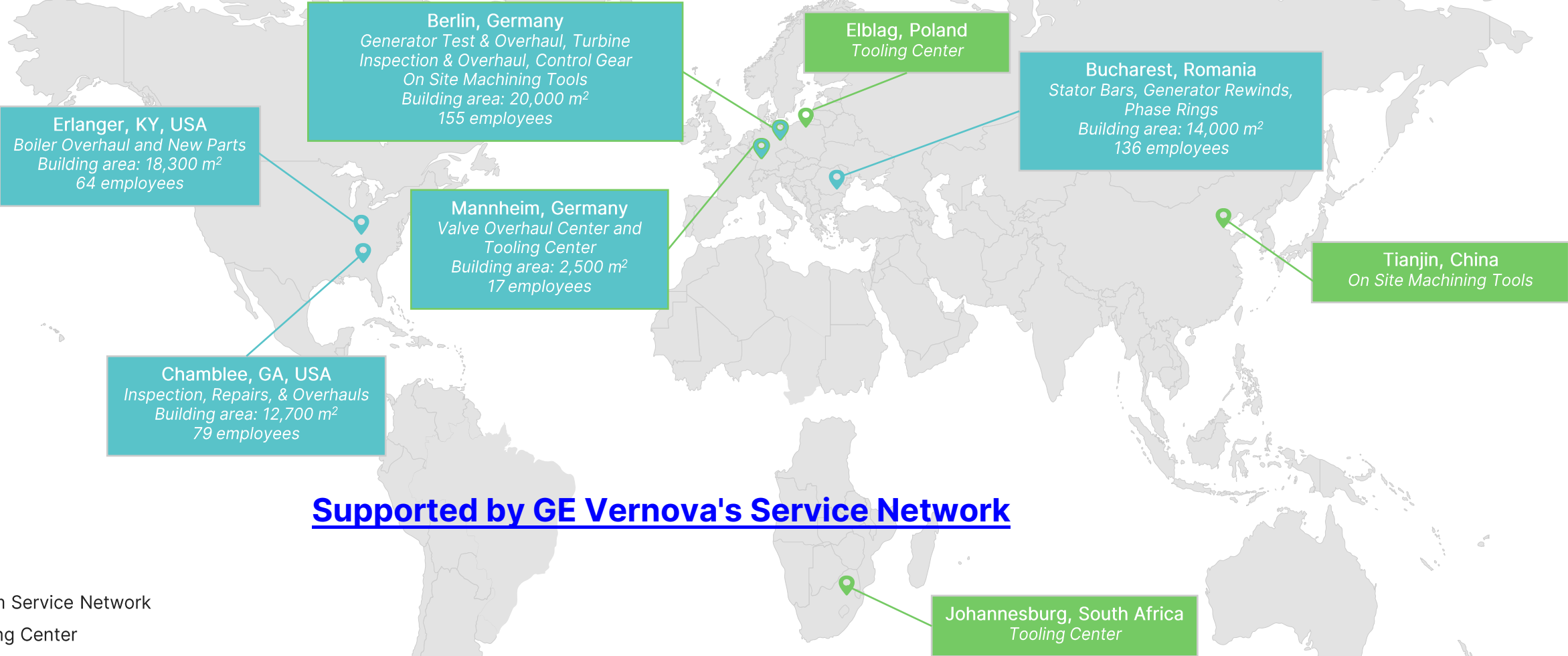
5
Factories

3
Stand Alone Tooling Centers

25
Office sites

6
Countries ^{-a)}

67.5K
MFG Size in m² ^{-a)}



-a) Excludes office figures



▶ **ERLANGER** **KENTUCKY, USA**

KEY FIGURES

- Size: 18,300 sqm
- Capacity: 70k hours/year

1500 Jamike Ave
Erlanger, KY 41018

3 CELLS: Machining, Fabrication, Assembly

Key capabilities:

- OEM & OEM Component rebuilds
- Component Manufacture - Fabrication & Machining
- Assembly & Overhaul of Pulverize Mill Components
- Warehousing and parts distribution

Special repairs/processes:

- Reverse Engineering
- 13' CNC Vertical Boring Capabilities
- Component "Blue Fit" Expertise

Products:

- Boiler & AQCS:
 - Separator body, top & access doors
 - Bowls, bowl hub covers, bowl extension rings
 - Vane wheel assemblies
 - Mill bottoms
 - Main vertical shafts, Journal assemblies
 - Welded fan spiders, shafts & bearing housings
 - Riffle elements
 - Coal compartments & nozzles
 - Smelt Spouts, Oil guns, Gas guns
- Industrial Steam Turbine & Generator

USA

DETAILED CAPABILITIES

Boiler	Steam Turbine	Generator
Pulverizers, Mills, and Auxiliary equipment ✕	Assembly ✕	Assembly ✕
Fuel Delivery and Firing Systems ✕	Rotor Blading (Assembly) ✕	Rotor Coils ✕
Electronics and Controls ✕	Rotor Machining ✕	Rotor Winding ✕
Balance of Boiler ✕	Turbine Low-Speed Balance (Casting/Forging) ✕	Running Test Capabilities ✕
AQCS Equipment ✕		

Technical capabilities

Max. Bay Height (m): 21'-10" under hook

Crane Capacity (T): 40

Major equipment

- Large vertical boring mills up to 160 inch diameter
- Horizontal boring mills up to 60 inch table
- CNC lathes up to 18 inch diameter
- 80 Foot Long Rotor Work Station ST/Gen Turning up to 3.3 m and 250 T



▶ CHAMBLEE GEORGIA, USA

KEY FIGURES

- Size: 12,700 sqm
- Capacity: 120K hours/year

5035 Peachtree Industrial Blvd
Atlanta, GA 30341

2 CELLS: Steam Turbine, Generator

Key capabilities:

- Steam turbine rotor cleaning / inspection / general machining
- Non destructive testing/inspection (MT, PT, UT, VT)
- Steam turbine bucket replacement
- Steam valve repairs and assembly
- Diaphragm repairs (Minor, Major, PPR, Mechanical)
- Shell / casing machining
- Generator rotors (fields) rewind with new or existing copper
- Generator field inspection, repairs and machining

Products:

- Steam Turbine
- Generator

Special repairs/processes:

- Slinky style generator field rewinds

USA

DETAILED CAPABILITIES

Steam Turbine	Generator
Assembly	Assembly
Bearings	Bearings
Casing Casting	Frame Fabrication
Casing Machining ✘	Frame Machining
Casing Welding ✘	Rotor Coils
Rotor Blading (Assembly) ✘	Rotor Balance (HSB)
Rotor Machining ✘	Rotor Winding ✘
Rotor Welding	Stator Bars
Turbine Blades from Bar	Stator Laminations
Turbine Low-Speed Balance (Casting/Forging) ✘	Running Test Capabilities
Valve & Component Parts (Asy) ✘	

Technical capabilities

Max. Height Under Hook (m): 11.5

Crane Capacity (T): 110

Balance Capacity (Kg): 45400

Major equipment

- Large lathes up to 3.8 m turning capability
- Large vertical boring mills up to 3.6 m diameter
- Horizontal boring mills, 1.3-1.5 m bar diameter
- CNC Machining Centers
- Rotor Work Stations ST/Gen Turning up to 3.3 m and 120 T each
- Dedicated generator assembly rooms



3 CELLS: Gas Turbine, Steam Turbine, Generator

▶ **BERLIN** **GERMANY**

KEY FIGURES

- Size: 20,000 sqm
- Capacity: 160K hours/year

Hertzstraße 70,
13158 Berlin, Germany

Key capabilities:

- Rotor machining & blade installation
- Heavy machining and assembly
- High speed vacuum balancing
- All service related turbine repair works on rotors, casings and associated components
- Spare parts production & valve services
- Repair engineering and repair welding
- oOEM service

Products:

- Steam Turbine (new & repairs)
- Spare Parts (Steam)
- Gas Turbine components
- Generator HSB

Special repairs/processes:

- Blade Feathering
- 5 axis crack milling
- Brazing / welding repairs

DEU

DETAILED CAPABILITIES

Steam Turbine	Gas Turbine	Generator
Assembly ✕	Assembly	Assembly
Bearings ✕	Bearings	Bearings ✕
Casing Casting	Casing Casting	Frame Fabrication
Casing Machining ✕	Casing Machining ✕	Frame Machining
Casing Welding ✕	Casing Welding	Rotor Coils
Rotor Blading (Assembly) ✕	Hot Gas Path Blades	Rotor Balance (HSB) ✕
Rotor Machining ✕	Hot Gas Path Vanes	Rotor Winding
Rotor Welding	Hot Gas Path Combustion	Stator Bars
Turbine Blades from Bar	Rotor Blading (Assembly) ✕	Stator Laminations
Turbine Low-Speed Balance (Casting/Forging) ✕	Rotor Machining ✕	Running Test Capabilities
Valve & Component Parts (Asy) ✕	Rotor Welding	
Spare Parts ✕	Compressor Blades	
Rotor Balance (HSB) ✕	Turbine Low-Speed Balance (Casting/Forging) ✕	
Assessment & Repairs ✕	Running Test Capabilities	
	Rotor Balance (HSB) ✕	

Technical capabilities

Max. Bay Height (m): 12.5
 Crane Capacity (T): 100
 Balance Capacity (kg): 100

Major equipment

- Vertical lathe boring machine (D 8.0m; H 5.5 m)
- Machining center for lathing and milling (D 3.5 m; H 2.9 m)
- Waldrich Gantry milling machine (5.8 / 12.5 / 4.5 m; 100 t)
- Horizontal boring milling machine (12.0 / 4.5 / 2.3 m; 100t)
- CNC 5 access milling
- Large-scale lathes DXW2000 (D 2.22m; L 11.0m)
- High Speed Vacuum Balancing Pit (D: 4.5 m; L: 20.0 m)



2 CELLS: Gas Turbine, Steam Turbine

▷ MANNHEIM GERMANY

KEY FIGURES

- Size: 2,500 sqm
- Capacity: 25K hours/year

Turbinenstraße 5,
68309 Mannheim, Germany

Key capabilities:

- Overhaul and Repair of Hydraulic Actuators, Control and Safety Equipment
- Repair Engineering for hydraulic Equipment
- Overhaul, Testing and Adjustment of all kinds of Turning Gears
- Field Service on Hydraulic Control and Safety Equipment globally
- Certified GE Workshop for Overhauling and Repair of S90 Trip Blocks
- Exchange Program for S 90 Trip Blocks
- Testing and Adjusting of new Hydraulic Equipment and Actuators

Products:

- Gas Turbine
- Steam Turbine

Special repairs/processes:

- Smart Repairs Solutions for Actuator Piston Rod's and Housings
- Bearing and Bushing Repairs
- Pump Repairs
- Testing and Adjusting of Pneumatic and Hydraulic Control and Safety Equipment
- Up Grade Solutions for Actuators and EHC's to Up to date standards
- High Level of Expertise and Experience in Hydraulic Turbine Controls

DEU

DETAILED CAPABILITIES

Steam Turbine

Assembly	
Bearings	
Casing Casting	
Casing Machining	
Overhaul, Repair, Testing and Adjustment for Actuators and Hydraulic Equipment	✘
Field Service on Actuators and Hydraulic Equipment	✘
Repair Engineering for Actuators and Hydraulic Equipment	✘
Overhaul, Testing and Adjusting of Turning Gears	✘
Valve & Actuator Overhaul and Repair	✘
Spare Parts for Hydraulic	✘
Hydr. and Lube Oil Pump Service (incl. E-motors)	✘
Assessment & Repairs on Hydraulic Equipment	✘

Gas Turbine

Assembly	
Bearings	
Overhaul, Repair, Testing and Adjustment for Actuators and Hydraulic Equipment	✘
Field Service on Actuators and Hydraulic Equipment	✘
Repair Engineering for Actuators and Hydraulic Equipment	✘
Overhaul, Testing and Adjusting of Turning Gears	✘
Valve & Actuator Overhaul and Repair	✘
Spare Parts for Hydraulic	✘
Hydr. and Lube Oil Pump Service incl. E-motors	✘
Assessment & Repairs on Hydraulic Equipment	✘

Technical capabilities

Max. Bay Height (m): 6.0
Crane Capacity (T): 20

Major equipment

- Main Hydraulic Test Bench
 - 300 l/min, 100 bar
- High Pressure Test Bench
 - 50 l/min, 300 bar
- HDF Fluid Test Bench
 - 60 l/min, 100 bar
- Special Test Benches
 - Overspeed Trip Devices
 - Speed Governors
- Industrial Cleaning Machine
- Sandblasting Cabin
- Paint Booth



▷ BUCHAREST ROMANIA

KEY FIGURES

- Size: 14,000 sqm
- Capacity: 172K hours/year

104 Berceni Road, Sector 4
041919 Bucharest
București
Romania

1 CELL: Generator

Key capabilities:

- Manufacture of generator components
- Resin rich technology stator bars
- Rotor coils
- Phase rings
- Generator rotor (field) and stator assembly and repair
- New generator rotors (fields) and rewind with new or existing copper

Products:

- Generators

Special repairs/processes:

- Vacuum bag curing for stator bars
- Copper strand manufacturing for stator bars

ROU

DETAILED CAPABILITIES

Generator

Assembly

Bearings

Frame Fabrication

Frame Machining

Rotor Coils

✘

Rotor Balance (HSB)

Rotor Winding

✘

Stator Bars

✘

Stator Laminations

Running Test Capabilities

Technical capabilities

Max. Bay Height (m): 13

Crane Capacity (T): 480

Balance Capacity (kg): 220,000

Major equipment

- Autoclave for resin rich technology
- TVPI stator bar impregnation line
- Balancing Facility
- CNC copper punch (rotor coils)



GE VERNOVA