



**We Make Energy  
More Efficient!**

**nem**

**Energy Group**

# ABOUT NEM ENERGY

**NEM Energy B.V.**, headquartered in Zoeterwoude, the Netherlands, simply known as **NEM**, is a **global leader in heat transfer technology and gas turbine exhaust systems** with almost a century of experience. We are renowned for our commitment to **quality and innovation**, as well as our focus on safety and people. From design to aftermarket services, we supply solutions for **power generation, oil & gas**, and many **other industries**.

NEM has installed close to **1,000 steam generators on six continents**, providing a total equivalent energy capacity that could **power 200 million households**.

Our **Exhaust and Diverter Solutions**, with its competence center in Recklinghausen, **Germany**, cover the entire spectrum of gas turbine applications, from **industrial aero-derivative** to **large frame heavy-duty machines**.

One of the other strong brands in the NEM portfolio, Balcke-Dürr, has more than **130 years of experience** in offering **innovative energy efficiency solutions** for utilities and companies active in the **nuclear, gas power generation** as well as **chemical industries**.

For more info about NEM and Balcke-Dürr products and services, visit [www.nem-energy.com](http://www.nem-energy.com) or contact us at [info@nem-energy.com](mailto:info@nem-energy.com).

1929



Founding of NEM

1936



Starting with the fabrication of boilers

1960s



NEM becomes OEM for Heat Recovery Steam Generators (HRSGs)

1990s



Various acquisitions and the inclusion of Exhaust and Diverter Solutions in the NEM portfolio

2011



NEM became part of Siemens, later Siemens Energy

2022



Continuing business as NEM Energy B.V. using the NEM brand under Mutares ownership.

2023



NEM acquired Balcke-Dürr





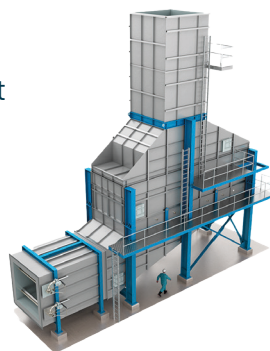
# HEAT RECOVERY SOLUTIONS

## Solutions in Heat Transfer Technology

NEM heat recovery products can be found in a variety of different applications for different industries, onshore and offshore. Our core competence is the heat transfer related to waste heat, regardless of whether it comes from a gas turbine or another source.

### Waste Heat Recovery Units

The Waste Heat Recovery Unit (WHRU) range of NEM offers an efficient recovery method of thermal energy from gas turbine exhaust gases, as well as other heat sources. The WHRU can heat up water for district heating, or can heat up any other type of fluid or gaseous heat transfer media.



**NEM WHRU**  
Co-generation  
for district heating  
and industries

**NEM Ultra-Light OTSG**  
Offshore Heat Recovery

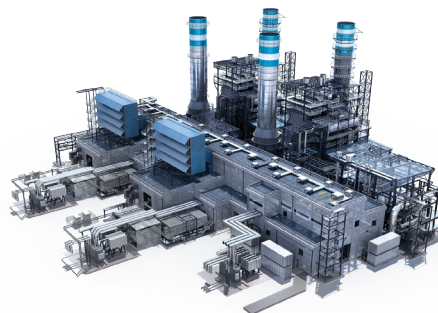


### Modular Heat Recovery Steam Generators

NEM's vertical and horizontal modular designs, ranging up to 75 MW gas turbine output, offer heat recovery solutions at competitive total installed cost for power, co-generation, and other applications.

### Large Heat Recovery Steam Generators

With hundreds of units installed in the world, NEM is a key player in developing HRSGs for the largest gas turbines on the market. Our designs offer operational flexibility and are made ready for hydrogen.



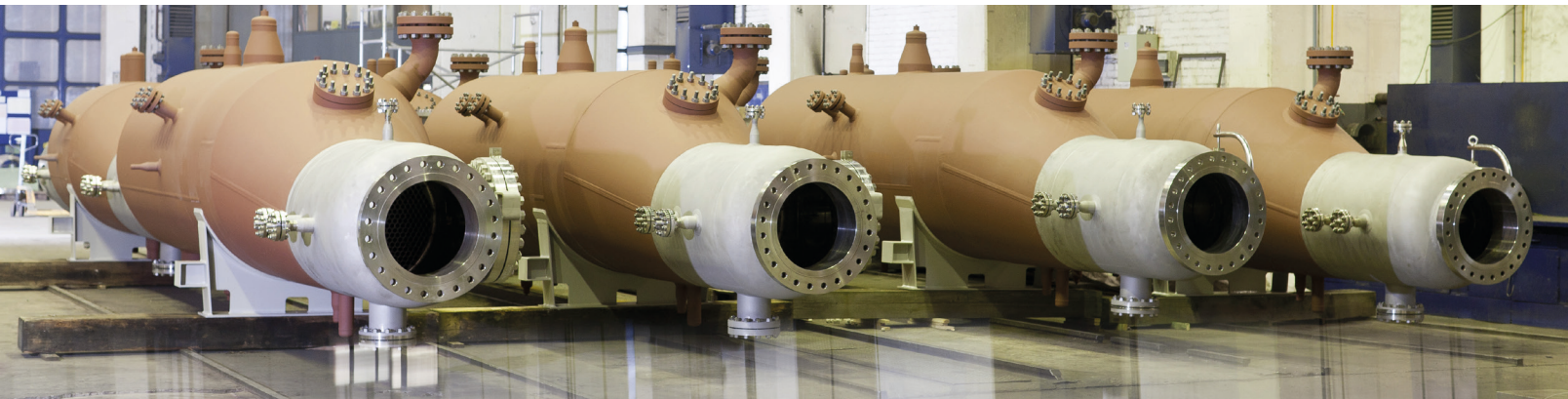
**NEM HNC+**  
Fast start &  
Cycling Power Plant

# HEAT EXCHANGER SOLUTIONS

Through our Balcke-Dürr brand, part of NEM Energy Group as of 2023, we offer innovative solutions for utilities and chemical industry, ranging from standard to customized equipment and from single component to complete systems.

NEM Balcke-Dürr Heat Exchanger products can be found in a variety of different applications for different industries. For instance, we are active in the nuclear and geothermal applications as well as in the market for conventional power generation.

Our experienced engineers are specialized in solutions that meet the highest safety



## Products



### Moisture Separator Reheaters

As a pioneer of Moisture Separator Reheaters (MSR) technology since the beginning of nuclear power generation, with an experience of more than 50 years, we provide MSRs for new builds, retrofits and power upgrades in the field of nuclear and solar thermal power plants of virtually any size. In addition we provide stand-alone moisture separators.

### Rotor Air Cooler

The Balcke-Dürr Rotor Air Cooler is an advanced design and solves the stress corrosion problem faced by many gas turbines applications. The innovative, patented design, is based on stress corrosion resistant material, elimination of expansion joint and heat protection of critical parts. This protects the cooler against excessive fatigue from thermal cycling and increases the plant availability.



### Turbine Condensers

Our turbine condensers are rated among the most efficient in the world and have highest efficiency due to optimized and verified tube bundle design. Possible as vertical or horizontal arrangement with round and rectangular shell. Suitable for new plants and retrofit with power upgrade of existing plants.

### Feedwater Heaters

Our feedwater heaters are either shell-and-tube or header-type heat exchangers. We design and manufacture those for nearly all kind of applications. The experience we gained from supplying thousands of feed water heaters has resulted in a most reliable design.







# EXHAUST & DIVERTER SOLUTIONS

Our customized Exhaust & Diverter Solutions portfolio provides solutions for clever flue gas routing, modulation, and tight shut-off requirements, supporting the transition towards a de-carbonized and sustainable energy environment, also offering emission control solutions, such as NOx reduction with tempered SCR systems.

We are experts at managing demanding gas turbine exhaust parameters, such as ever increasing flue gas mass flows, high turbulences and ever rising exhaust temperatures, combined with severe noise attenuation requirements.

## Products & solutions



Exhaust Gas Bypass Systems



Simple Cycle Exhaust Gas Stacks



Tempered Selective Catalyst Reduction System (T-SCR)



Stack Dampers



Louver Dampers



Guillotine Dampers and Blanking Plates



### Early power generation

Flexible and short deliveries, ensuring swift gas turbine utilization after erection and far before the complete power island is ready for operation.

### Operational flexibility

Added value through enhanced operational flexibility, efficiency and safety aspects wherever reliable flue gas shut-off is required.

### Equipment protection

Quick (emergency) actuation of dampers, enabling protection of valuable components and equipment.

### Emission control

Simple cycle gas turbine operations with a state of the art tempered SCR system.

# AFTERMARKET SERVICES

## HRSG services



Operating and maintaining a power plant is challenging. At NEM, we are committed to supporting our customers throughout the entire lifetime of the plant. Whether you need spare parts, complete refurbishments, or long-term service agreements, NEM is your right partner.

Our service agreements focus on safeguarding the integrity of the installation where we carefully plan ahead inspections and service moments. As Original Equipment Manufacturer (OEM), we have unique know-how of our products. This unique know-how gives our clients the best service, irrespective whether for installations that have been designed and supplied by NEM or from other OEMs.

Our service team is always ready to assist you. For more information, please contact us at [info@nem-energy.com](mailto:info@nem-energy.com).



**Engineering Services and Consultancy**



**General and Customized Inspections**



**Refurbishments and Modifications**



**Spare Parts**



**(Long Term) Service Agreements**



[www.nem-energy.com](http://www.nem-energy.com)

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# AFTERMARKET SERVICES

## Heat exchanger services

Heat exchanger service covers a wide range of possibilities for repair, maintenance or optimization of heat exchangers. Our capabilities range from inspection to project planning and implementation. Based on many well proven references, we serve the entire range of project execution requirements, including inspection and repair works as well as manufacturing and assembly.



### Retubing

Tube exchange of existing heat exchangers under limited time schedule and confined space conditions is our daily business. We are well equipped with necessary tools for replacement of heat exchanger and condenser tubes. If necessary we will design and construct individual assembly aids.



### Bundle Replacement

As a specialist for shell and tube type heat exchangers we supply new heat exchanger bundles as an individual solution. We are able to serve any type of bundle, such as U-type or straight and also Header-type.

### Testing, Cleaning & Plugging

Supported by a broad range of special tools we are able to execute inspections and tests in order to evaluate the condition of entire heat exchangers or only parts of it. As a provider for complete solutions we also offer an universal service including cleaning and repair, either on site or at one of our workshops.



### Installation & Disassembly

Based on countless executed projects we will have solutions for most challenging installation situations. Disassembly and assembly of both, complete heat exchangers or heat exchanger parts, are one of our core competencies. We serve most difficult tasks by individual solutions and provide consultation under consideration of customer requirements.

### Cooling Tower Service

During the service life of a wet cooling tower, a number of conditions will cause increased burdens on components and might cause considerable damage. By proper cooling tower service maintenance cost can be reduced and unscheduled repair outages and losses in plant performance can be avoided.



We offer a wide variety of services for natural draft cooling towers as well as fan assisted natural draft and cell-type cooling towers for permanent optimal performance and long life time of our cooling towers. Refurbishments, Maintenance as well as spare part services are our daily- business.

For more information regarding our heat exchanger and cooling tower services, please contact our service team at [contact@balcke-duerr.com](mailto:contact@balcke-duerr.com).



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