



POW(ER)PACK

POW(ER)CONTROL

REVOLUTION IN HEAT RECOVERY
FROM AIR COMPRESSORS



25 years of experience in HVAC (Heating, Ventilation & Air Conditioning)

With more than 25 years of track record in HVAC, our company provides the highest quality service to our customers. With industry-leading technologies and a team of experienced engineers and technicians, we are able to successfully integrate powerpack and powercontrol products into heating or processes across a variety of industry sectors. We also hold a firm commitment to sustainability, ensuring that our innovative solutions comply with the latest green standards.

Effective R&D department

We have an effective research and development department that focuses on the continuous improvement of its energy efficiency products and services. This enables us to offer the latest technologies and innovative solutions to achieve optimal efficiency and energy savings. The R&D department also collaborates with top manufacturers of air compressors and HVAC equipment to implement cutting-edge solutions. Our entire team is involved in researching and developing sustainable solutions in line with the latest green standards.



Innovation leader in compressor heat recovery

We are at the forefront of innovation in compressor heat recovery. By advancing innovative solutions, we have developed equipment that allows for the most efficient recovery of heat generated by industrial compressors on the market. This allows energy to be reused in production processes or for heating, leading to energy cost savings and promoting green initiatives such as reducing the CO2 footprint. All solutions developed by our company comply with the latest standards and technical requirements.



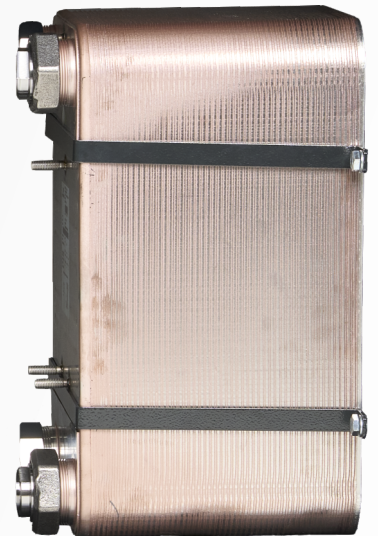
POWERPACK

Innovative and most advanced compressor heat recovery module.

powerpack is a revolutionary product developed as part of an R&D project in partnership with the National Centre for Research and Development (NCBR). At the heart of the powerpack lies innovative compressor heat recovery technology, tested in rotary screw and vane compressors in almost 6,000 measurement runs across the full temperature range. The developed mathematical models of the physical properties of the compressors provide a solid foundation for the safe and efficient recovery of heat in performance heating parameters.

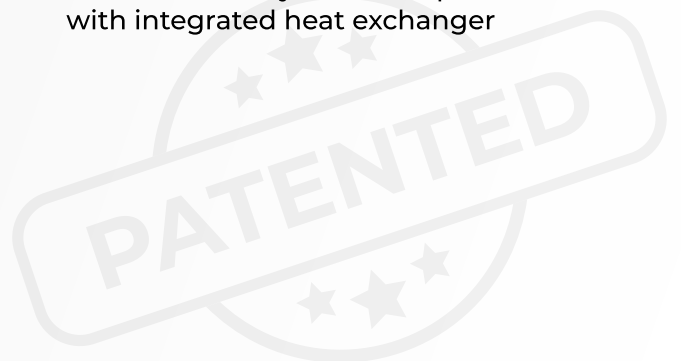


The most effective control algorithm for heat recovery has been selected out of 21 control methods in almost 2,000 measurement runs. This allows the powerpack to recover heat efficiently, with a well-documented heat exchange efficiency of more than 90%. On top of this, the powerpack guarantees the lowest oil-side pressure drop in its class! With powerpack, users of industrial air compressors save on energy costs and protect the environment while improving the efficiency of their heating systems. A prime example of how innovative technological solutions can make a positive impact on our lives and the environment.



POWERCONTROL

Innovative hydraulic module for heat recovery from compressors with integrated heat exchanger



COMPRESSOR'S SAFE
OPERATION GUARANTEED

A controller with a touchscreen control panel is responsible for implementing the most effective control algorithm for compressor heat recovery. It allows the entry of the desired receiving temperature and protects the compressor from overheating and overcooling. On top of this, it monitors the operating status of the actuators and has a built-in Ethernet interface. The controller also calculates the amount of heat energy received.

Oil fittings - a system adapted from the marine industry far exceeding the rigour of temperature and pressure found in air compressors.

Tested in almost 4,000 measurement runs, the heat exchanger delivers the lowest pressure drop in its class. Rated compressor cooling quality guaranteed, even in the absence of heat recovery.



Oil-side bypass valve arrangement - the exchanger can be shut down on the fly of compressor operation.

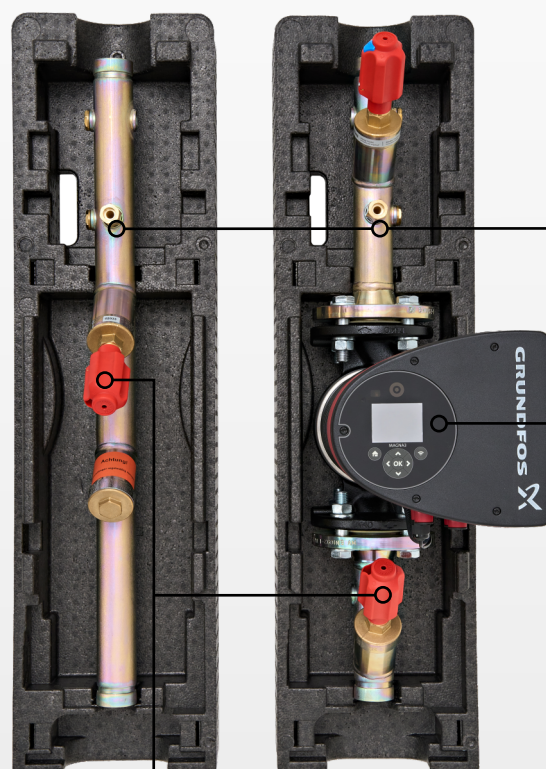
Readings from the water-side and oil-side temperature sensors enable control of the heat recovery process to ensure efficiency and safety.

The variable-speed pump is a control and actuation element that primarily ensures the safe yet efficient extraction of heat from the compressor oil, adapting to the current operating conditions of the compressor and the receiving side.

Forms a compressor heat recovery system for compressors with an integrated heat exchanger.

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Integrated shut-off valves and check valve.

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POWERPACK RANGE				
Model	Compressor power (kW)	Dimensions mm (L x W x H)	Disposable pressure water side	Electric power
PP30	30	920/480/730	60 kPa	<300W
PP75	75	920/480/730	50 kPa	<300W
PP110	110	920/480/730	50 kPa	<300W



POWERCONTROL RANGE					
Model	Compressor power (kW) for Δ15/Δ20	Pump module dimensions mm (L x W x H)	Control unit dimensions mm (L x W x H)	Disposable pressure water side	Electric power
PC55	55	420/250/260	410/310/170	60 kPa	<300W
PC110	110	420/250/260	410/310/170	50 kPa	<300W
PC160	132/200	550/175/240 x2	410/310/170	40 kPa	<450W
PC250	200/300	920/245/280 x2	410/310/170	40 kPa	<750W
PC350	250/350	920/245/280 x2	410/310/170	40 kPa	<900W
PC500	350/500	920/245/280 x2	410/310/170	40 kPa	<1500W

*assumed pressure drop across the exchanger <40 kPa

8 REASONS WHY OUR DEVICE IS A GAME-CHANGER

1

Full protection of compressors against overheating and oil overcooling.

The priority of the PowerControl algorithm is to guarantee the safe operation of the compressor. Lower and stable oil temperature translates into longer compressor lifespan and efficiency.



2

Tested and proven Plug'n'Play heat recovery system from compressors.

Powerpack and Powercontrol are the result of the R&D project conducted in industrial laboratory built on the purpose. Powerpack and Powercontrol are universal devices designed to work with oil compressors of all makes.



3

Patented solutions ensuring maximum heat recovery efficiency.



4

Recovered energy amount guaranteed.

The most efficient algorithm for recovering heat energy follows the compressor's operation, maximizing the yield. The built-in heat meter enables system verification.



5

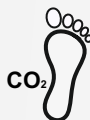
Saved energy equals real financial savings – hard savings.



6

Real reduction of carbon footprint

Future generations will appreciate.



7

Possibility of obtaining white certificates.



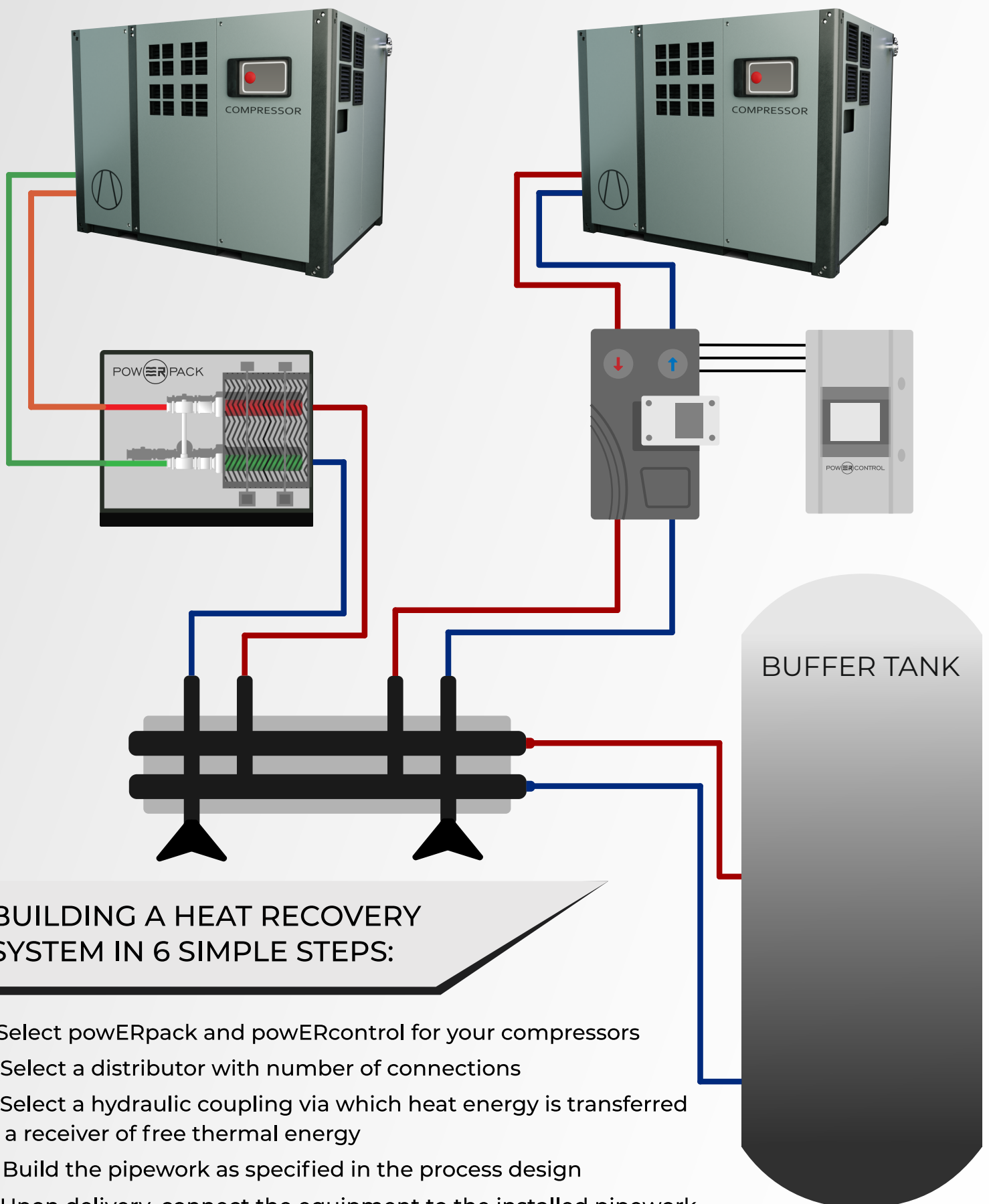
8

Built-in communication functions allow integration with BMS/SCADA for data collection and analysis.



FEEL THE DIFFERENCE

Equipment	powerpack	OEM
Heat exchanger	Yes lower pressure drop	Yes higher pressure drop
By-pass valve	Yes	No
Water temp. Sensors	Yes	No
Oil temp. Sensors	Yes	No
Controller	Yes	No
Circ. Pump	Yes - vsd	No
Heatmeter	Yes	No
Thermostatic oil valve	No	Yes



BUILDING A HEAT RECOVERY SYSTEM IN 6 SIMPLE STEPS:

1. Select powerERpack and powerERcontrol for your compressors
2. Select a distributor with number of connections
3. Select a hydraulic coupling via which heat energy is transferred to a receiver of free thermal energy
4. Build the pipework as specified in the process design
5. Upon delivery, connect the equipment to the installed pipework
6. Once the system is up and running, it saves you money and the environment

RECOVER YOUR HEAT LIKE A PRO!

www.heatrecovery.pro