

The Energy Recovery control unit



Energy Recovery control units are specifically designed to transfer the energy recovered from oil-free air compressors to the customers' process.

The control unit is installed between the compressor and the customers' cooling- and heating circuit. A modular design guarantees perfect integration of the Energy Recovery in the application.

Main functionalities:

- Regulation of compressor cooling water pressure and temperature to keep the compressed air system working optimally
- Compressor operates independently from the customers' process
- Optimal compressor cooling water quality
- Single interface between compressed air system - up to 4 units - and the customers' process.

There are 4 sizes of control units available, which can handle the energy recovered from the oil-free compressors up to 900 kW.

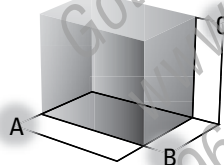
A comprehensive standard execution can be extended with a number of application specific options.

Standard scope of supply:

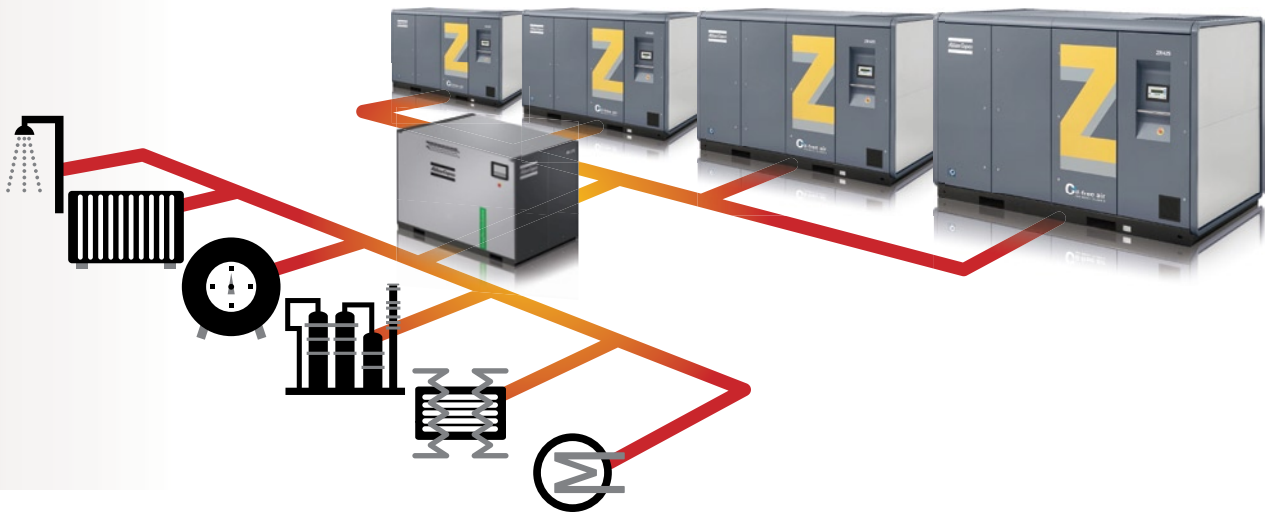
- Variable speed water pump
- Electronic controlled 3 way by-pass valve
- Elektronikon® microprocessor with graphical display for monitoring & control system
- Pre-mounted electrical cubicle
- Single point of electrical connection (380-500V 50/60Hz)
- Stainless steel gasketed plate heat exchanger(s)
- Pressure relief valve
- Pressure expansion vessel
- Automatic de-aeration valve
- CE or ASME Approval depend on site requirement
- Single point inlet and outlet connections (DIN or ANSI flanges)
- Common baseframe with all pipes and connections included
- Protective canopy

Options table	Models			
	ER 90	ER 275	ER 425	ER 900
❶ Stainless steel back-up heat exchanger	●	●	●	●
❷ Stainless steel heat exchanger for customer's process circuit (*)	●	●	●	●
❸ Cooling water connections for (I)MD dryer type (*)	●	●	●	●
❹ Stand-by water pump	●	●	●	●
❺ Anchor pads	●	●	●	●
❻ Maximum # connectable compressors:	1	4	4	4

(*) If this option is selected, the built in back-up heat exchanger is automatically selected



Dimensions	A (mm)	B (mm)	C (mm)
ER 90 - 900 Without optional heat exchanger for customer's process	1450	1500	1500
ER 90 - 900 With optional heat exchanger for customer's process	1950	1500	1500



Optional equipment:

- 1 **Built-in back-up heat exchanger:** Makes sure the requested set point of the cooling water delivered to the compressor is maintained. In case not all the heat energy (hot water delivered by the compressor) is consumed by the customers' process, the fresh cooling water circuit connected to this heat exchanger will further reduce the temperature.
- 2 **Built-in heat exchanger for the customers' process circuit:** A stainless steel gasketed plate heat exchanger for process water
- 3 **Secondary fresh cooling water connection :** Available to supply cooling water to the (I)MD dryer
- 4 **Stand-by water pump:** A redundant variable speed driven water circulation pump will kick in automatically when the duty pump stops. Isolating and check valves are included
- 5 **Anchor pads:** Fixation to the foundation of the unit can be guaranteed
- 6 **Connectable compressors:** Control units are available to handle the heat energy in the cooling water flow of multiple compressors, and this up to a maximum of 4 compressors connected to 1 single control unit.

Control & monitoring

The latest generation Elektronikon® controller offers a great variety of control and monitoring features that allow you to increase the machine's efficiency and reliability:

- Improved user-friendliness with 6-inch high-definition colour display with clear pictographs and extra LED indicators
- Multilingual user interface and durable keyboard
- Built-in web server for visualisation of all the parameters
- Remote control and connectivity functions via digital contacts and field bus interfaces

