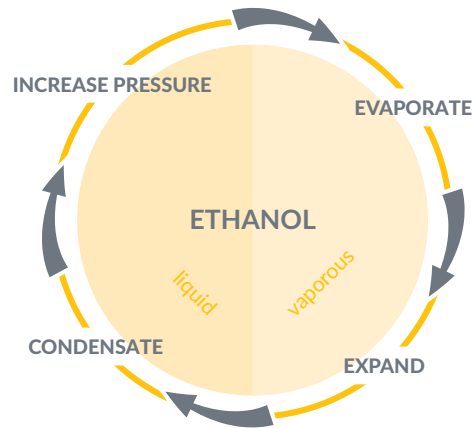


## DEVETEC-OCR-PROCESS

- // High availability due to the use of high-quality components
- // Unparalleled performance under partial loads for maximum runtimes also in case of discontinuous waste heat (30 to 110 % of the nominal load)
- // High efficiency thanks to the development of the piston-based vapour expansion engine
- // Useful heat at temperatures as needed for heating, pre-heating or drying purposes
- // Fully automatic operation suitable for telemonitoring

The cycle always proceeds under the same conditions:



- The feeding pump compresses the working medium.
- The working medium is evaporated and overheated with the energy provided by the waste heat source.
- In the engine, thermodynamic energy is converted to mechanical rotation energy. The engine is able to drive various machines producing electricity, compressed air or refrigeration.
- Useful heat is provided through condensation of the steam.

## PRODUCT OVERVIEW

### TECHNOLOGICAL SPECIFICATIONS

#### WASTE HEAT

Medium	Exhaust gas, exhaust air, thermal oil
Temperature	250°C min.
Quality	Dust and chemical loads are possible

#### WASTE HEAT POWER PLANT

Work medium	Bioethanol
Plant operation	Fully automatic and telemonitored
Noise emissions	less than 65 dB(A)
Dimension (L*H*W)	12m * 3m * 3m
Weight	30 – 35 t

#### PERFORMANCE DATA

		V8	V12	V16
Thermal Input	[kW <sub>thermal</sub> ]	960	1440	1920
Power generation, net	[kW <sub>electrical</sub> ]	135	204	272
Compressed air generation 7.5bar	[Nm <sup>3</sup> /h]	1520	2280	3040
Refrigeration 6°C / 12°C	[kW <sub>thermal</sub> ]	700	1050	1400
Useful heat up to 90°C	[kW <sub>thermal</sub> ]	613	921	1228
Optional Absorptionskälte	[kW <sub>thermal</sub> ]	520	780	1040



## WASTE HEAT POWER PLANTS

CONVERSION OF WASTE HEAT TO COMPRESSED AIR, ELECTRICITY, REFRIGERATION AND USEFUL HEAT



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# HEAT 2X



## REFRIGERATION

## COMPRESSED AIR

## ELECTRICITY

### EFFICIENT UTILISATION OF WASTE HEAT

DeVeTec waste heat power plants are able to use industrial waste heat (temperature >250°C, heat >600 kW) highly efficient. The centrepiece of a DeVeTec-waste heat power plant is the piston-based vapour expansion engine, whose efficiency and high reliability have been proved.

- // **Generation of compressed air, electricity or refrigeration without application of primary energy, directly from your waste heat**
- // **Saves fuel and energy costs**
- // **Improvement of the CO<sub>2</sub> and energy balance of your company**

WASTE HEAT produced by:

- » The glass industry
- » The steel industry
- » The ceramics and brick industry
- » The cement, lime and gypsum industry
- » The chemical industry
- » Energy generation

converted - with a high degree of efficiency - to:

// COMPRESSED AIR



// REFRIGERATION



// ELECTRICITY



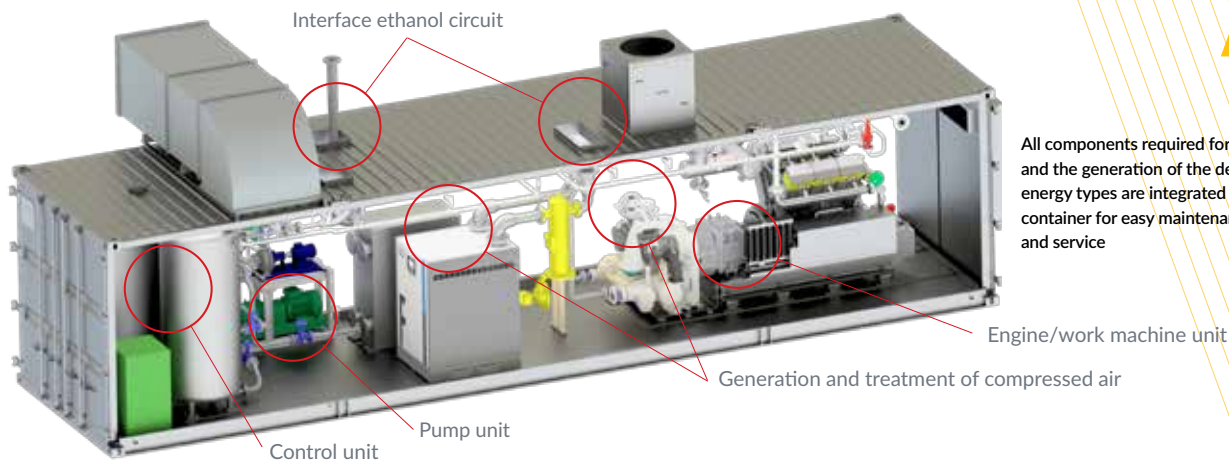
### OUR SERVICES

DeVeTec: your competent partner in all phases of project development and implementation! Our service offer includes all engineering services required for the implementation of projects, but also the design of financing or contracting solutions.

**Our Services at a Glance:**

- // **Development of the heat utilisation concept**
- // **Development of concepts for project implementation**
- // **Assistance with the grant of subsidies**
- // **Engineering services regarding the integration of the waste heat power plant into the existing plant**
- // **Manufacturing of the power plant at our site in Sankt Ingbert**
- // **Mounting, commissioning tuned to the conditions at the site**
- // **Maintenance, service, repair**
- // **Telemonitoring, accompanying process optimisation**

### THE DEVETEC WASTE HEAT POWER PLANT



All components required for operation and the generation of the desired energy types are integrated into one container for easy maintenance and service