



## ENERGIEWERKSTATT OVER 30 YEARS OF INNOVATIVE CHP



30 years of Energiewerkstatt - just as we have always done, we introduce CHP energy efficiency technology to a broad market by offering compact, user-friendly and easy-to-maintain power generation units.

As a medium-sized, owner-managed company, we have been doing this since 1987, which makes us one of the first providers of this resource- and climate-friendly technology in Germany.

Combined heat and power units from Energiewerkstatt have been at the cutting edge of technology for years and have become ever more powerful and efficient. With up to 100 installations per year, they prove their value every day in municipal facilities, hotels, hospitals, retirement homes - wherever heat and power are needed and have to be economically generated.

Since 2015, Eneegiewerkstatt has also been producing innovative compressed air heat and power units of the HWV series in collaboration with the compressed air division HERON. With this gas-powered compressor, the cost of compressed air production is reduced by up to 60%.

## EXCELLENT

The development of the HWV 20 compressed air heat and power unit was assessed and promoted by the Central Innovation Programme for SMEs (ZIM) as a promising future-oriented project.

The HWV 20 won the ASUE Efficiency Award, which was awarded as part of the German Gas Industry Award for Innovation and Climate Protection 2016. In addition, a reference unit in the celebrated journal Energy & Management, Issue 15-16/2018 was named "CHP of the month".

Funded by



based on a resolution of the German Bundestag



highly efficient



economical



environmentally friendly

## ALWAYS ONE STEP AHEAD

*HWV 20 Compressed Air Heat and Power Unit*

# REDUCE COSTS DRAMATICALLY

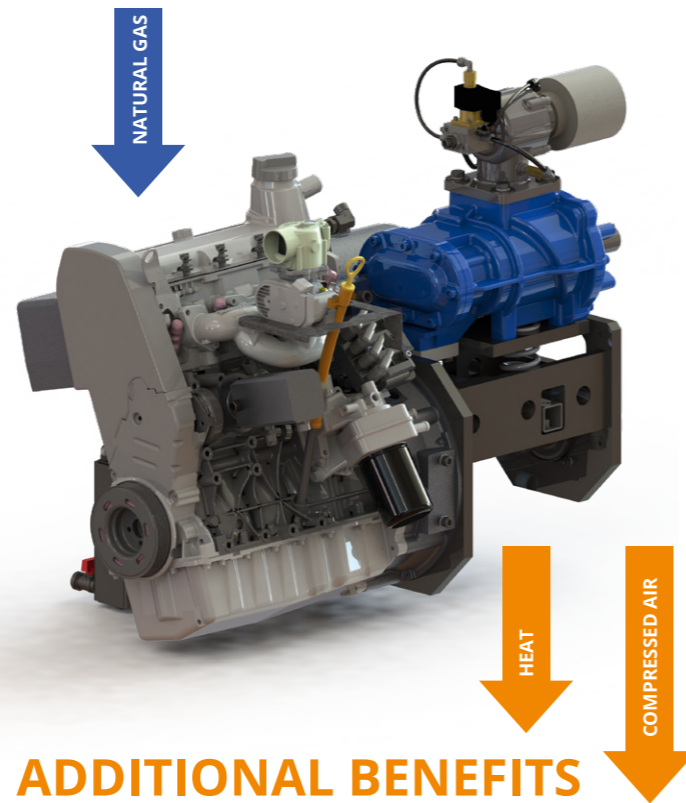
Compressed air is one of the most expensive energy sources of our time.

It is usually generated using expensive electrical energy, which can only be converted to about 10% compressed air.

The HWV 20 compressed air heat and power unit is a game-changer:

The compressed air is generated using inexpensive gas and the energy used is almost completely utilised thanks to a highly efficient heat supply. That's not all - a temperature of up to 95°C is reached that can be used as process heat in the industrial sector, with outstanding results.

The HWV 20 thus combines an unparalleled cost-effective compressed air production with the advantages of high-efficiency gas heating and thus ticks all the boxes:



## ADDITIONAL BENEFITS

- Process heat generation with flow and return flow temperatures up to 70/95°C
- Compressed air generation regardless of the price of electricity and fluctuating legal framework conditions
- High efficiency machine – compressor efficiency < 4 kW / (m<sup>3</sup>/min)
- Measurable compressed air production through integrated supply meter
- CHP technology – heat and power units, tried and tested for decades at Energiewerkstatt
- compact: HWV 20 system with 1 m<sup>2</sup> footprint\*
- Data-encrypted remote enquiry and intelligent reporting system
- Low-maintenance and service-friendly through automatic oil change

\* Compact machine – without oil separator and compressed air cooler

## APPLICATION EXAMPLES

The compressed air heat and power unit can be used in all areas where compressed air and heat are required as a base load in multi-shift operation. The HWV 20 is already successfully used in, inter alia, companies in the food, automotive supplier and paper industry. Further applications are by companies involved in electroplating or plastics processing.

### Plastics processing company (1x HWV 20)

Heat requirement for the heating of injection moulds and generally high compressed air requirement (up to 10% of operating costs).

Annual hours of operation	7,500 hours
Heat generated	446,250 kWh
Compressed air generated	1,440,000 m <sup>3</sup>
<b>Annual savings*</b>	<b>EUR 29,300</b>
Amortisation period	1.72 years

### Electroplating company (2x HWV 20)

Heat requirement for electrolyte bath and high compressed air requirement for the associated metalworking.

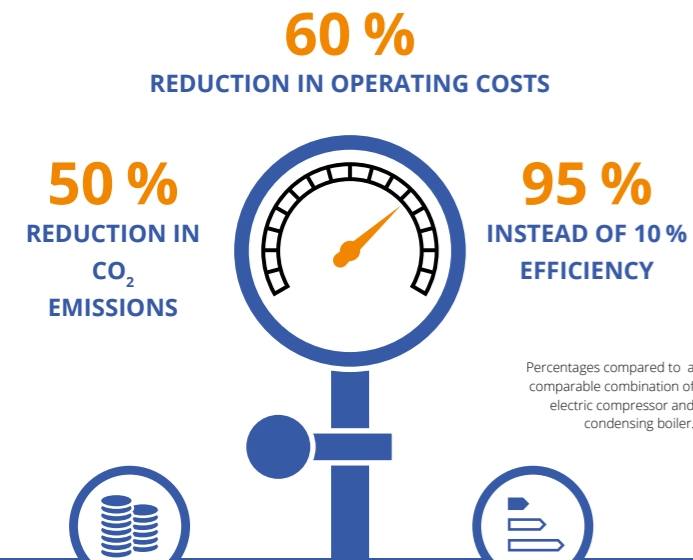
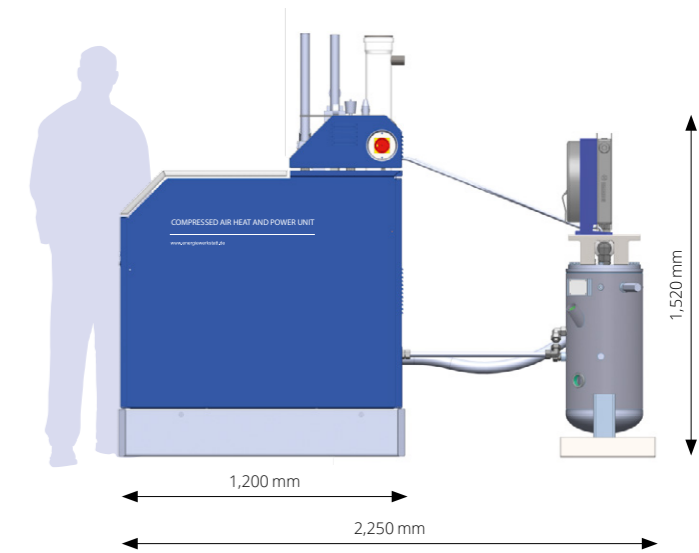
Annual hours of operation	6,000 hours
Heat generated	714,000 kWh
Compressed air generated	2,304,000 m <sup>3</sup>
<b>Annual savings*</b>	<b>EUR 47,000</b>
Amortisation period	2.15 years

\* With respect to a comparable combination of electric compressor and condensing boiler with an electricity price of 20 ct/kWh and a gas price of 3.5 ct/kWh.

## TECHNICAL DATA

HWV 20 Compressed Air Heat and Power Unit	
Engine	Gas industrial engine from Volkswagen
Fuel	Natural gas, LPG
Gas absorption	68 kW Hi
Compressor	Oil-injected screw compressor Power consumption: max. 22 kW
Nominal delivery quantity	from 2.6 to 3.2 m <sup>3</sup> /min**
Nominal pressure	up to 10 bar
Thermal output	59.5 kW
Thermal efficiency	87.5 %
Operating temperature - return flow and flow	65 (max. 70) / 95°C
Dimensions:	L x B x H: 1,200 x 800 x 1,520 mm*
Weight	700 kg

Information provisional, subject to change, as at: 04/2018.  
\* Compact machine – without oil separator and compressed air cooler \*\* depending on nominal pressure



ECONOMICAL



HIGHLY EFFICIENT



ENVIRONMENTALLY FRIENDLY



LOW-MAINTENANCE



TRIED AND TESTED CHP TECHNOLOGY



COMPACT



INNOVATIVE



MADE IN GERMANY