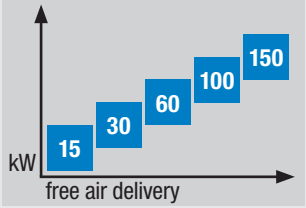
BOGE AIR. THE AIR TO WORK.

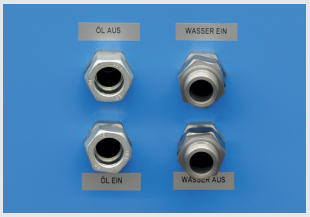
SPS

BOGE COMPRESSED AIR SYSTEMS

The new license for energy saving: **The BOGE DUOTHERM external heat recovery system.**

Embarking on heat recovery:
Retrofitting or planning from the start!





MAXIMUM EFFICIENCY

With the BOGE DUOTHERM external heat recovery system approx. 94 percent of the input motor energy can be recovered in the form of heat. Aside from compressed air your compressor can also produce hot water! – a benefit that rapidly pays off.

VERSATILE USE

Our external heat recovery system is available in five different versions for oil injected screw compressors from 10 hp to 150 hp. Apart from the S series up to the S 150 model the system can work equally effectively with compressors made by other manufacturers.

COMPACT SOLUTION

Because of its compact design, our external heat recovery system does not require much space: 700 x 700 x 380 mm – that is all you need to accomodate your new energy saving device. An oil drip pan (700 x 900 mm) is available as an option.

EASY INSTALLATION

The DUOTHERM module connects into the oil circuit of your compressor and can easily be fitted by a service technician. No external energy is required for operation. A further connection to a water circuit is required and this should be carried out by an installation engineer – then you are ready to start recovering energy and saving money.

Make more of your compressor: The external BOGE DUOTHERM heat recovery system saves you real money because it can recover up to approx. 94 percent of the input energy used in compression in the form heat. This can be utilised to supplement your heating or for pre-heating water for use in an industrial process. With a small amount of effort your compressor can be transformed into an energy saving machine: Use this energy saving opportunity to upgrade your screw compressors now!

Smart Pump Solutions
6606 Gessner Rd.
Houston, Texas 77040
+1 (281) 944 - 9377
www.smartpumpsolutions.com

RAPID PAYBACK.

Savings of more than 7,000 Dollars a year – this is how investing in a BOGE DUOTHERM external heat recovery system rapidly pays back.

EXAMPLE OF AN OIL INJECTED S 150 SCREW COMPRESSOR

Rated power of the drive motor:	110 kW
Total power consumption:	123.4 kW
Motor efficiency:	95 %
Use/year:	120 days
Compressor operation:	8 hours/day
Heating fuel price:	2.28 $/gal
Calorific value of fuel:	38,23 kWh/gal
Heating efficiency:	70 %
Usable amount of heat:	72 %

usable energy x total power consumption
= heating recovery

Usable energy in oil circuit:

0.72 x 123.4 kW = 88,8 kW

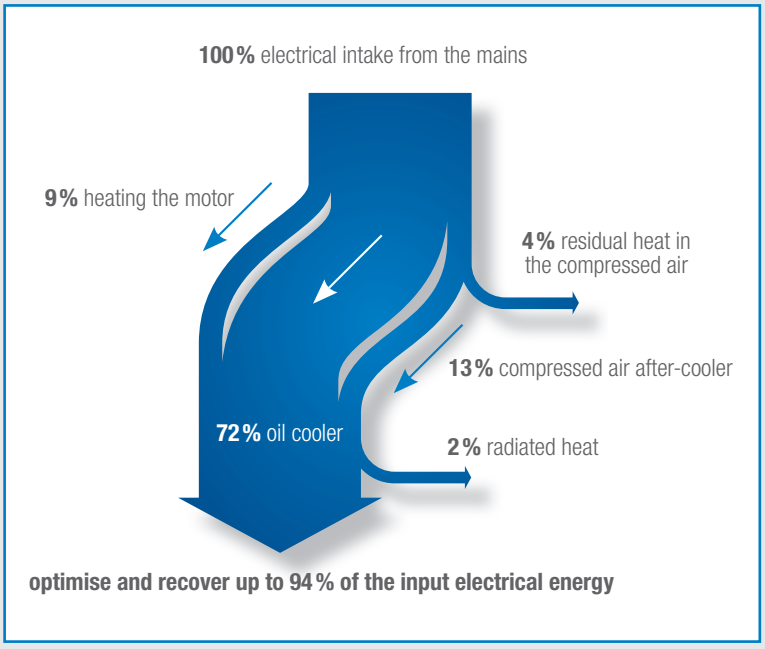
Savings potential:

$$= \frac{\text{Usable energy x operating hours x heating fuel price}}{\text{calorific value of fuel x heating efficiency}}$$

$$= \frac{88.8\ \text{kW} \times 960\ \text{Oh} \times 2.28\ \$/\text{gal}}{38{,}23\ \text{kWh/gal} \times 0.7}$$

= **7263 $** at 960 operating hours

Payback on assumed investment costs of 5,000 Dollars for DUOTHERM external heat recovery system: < 1 year!



The estimates used in the examples are approx. values.

OVERVIEW OF BOGE DUOTHERM EXTERNAL HEAT RECOVERY 15 TO 150

	DUO-THERM 15	DUO-THERM 30	DUO-THERM 60	DUO-THERM 100	DUO-THERM 150
Max. possible amount of heat (kW)	6.1–8.9	12.1–17.8	17.8–36.3	36.3–60.6	60.6–88.8
Rated motor power IP55/ISO F (kW)	7.5–11	15–22	22–45	45–75	75–110
Suitable for S10 – S150[1] series					
S 10 – S 15	●				
S 20 – S 29		●			
S 31 – S 50			●		
S 60			●		
S 61 – S 75				●	
S 90 – S 100				●	
S 101 – S 150					●

[1] additional series and rival compressors on request
t_{max}OUT = 70°C