

Atlas Copco Air Optimization Energy Recovery for GA, GA+ & GA VSD



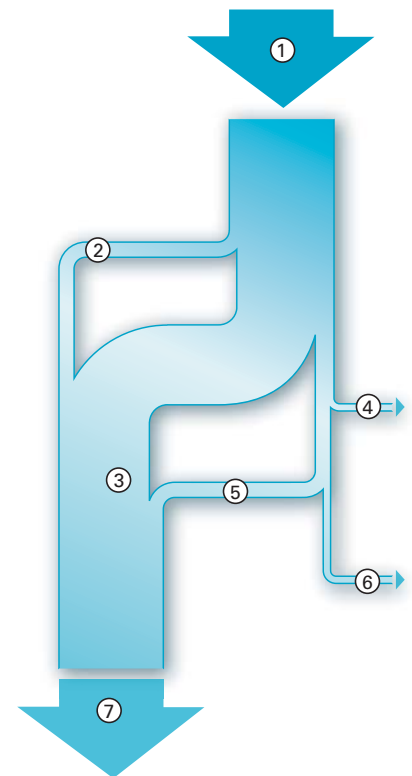
Atlas Copco Air Optimization Energy Recovery

ER, reinventing warm water

The way to achieve the highest energy savings is to recover wasted energy through radiation losses by the use of heat recovery systems.

As much as 94% of the electrical energy used by an industrial air compressor is converted into heat and loss through radiation in the compression process. The remaining 6% is converted into compressed air heat losses. Therefore, a properly designed heat recovery unit can recover anywhere from 50-94% of this available thermal energy (as low-grade heat) to heat air or water (up to 90°C or 140°F).

Pre-heated water can be used in the application process to reduce the use of traditional energy sources reducing the amount of CO2 emissions.



Features	Benefits
Energy savings	Reduction of external fuel inputs for the process and associated ancillaries (fans, pumps, ...).
One size fits all	Standardization.
Plug and play concept	Fully pre-assembled Energy Recovery unit. Easy to connect to the compressor.
Stand alone unit	Easier access to motor overhaul operations, thermostatic valve housing and simplified maintenance operations.
Control of ancillary equipment	Optimize energy consumption in the complete compressor room.
Heat recovery	Reduced impact on the environment.

Optional :

Energy counter	Shows exact energy saving from your ER with the possibility of connecting to your back office.
Extended connection kits	Kit containing all required parts to cover the maximum connection distance of 6m.

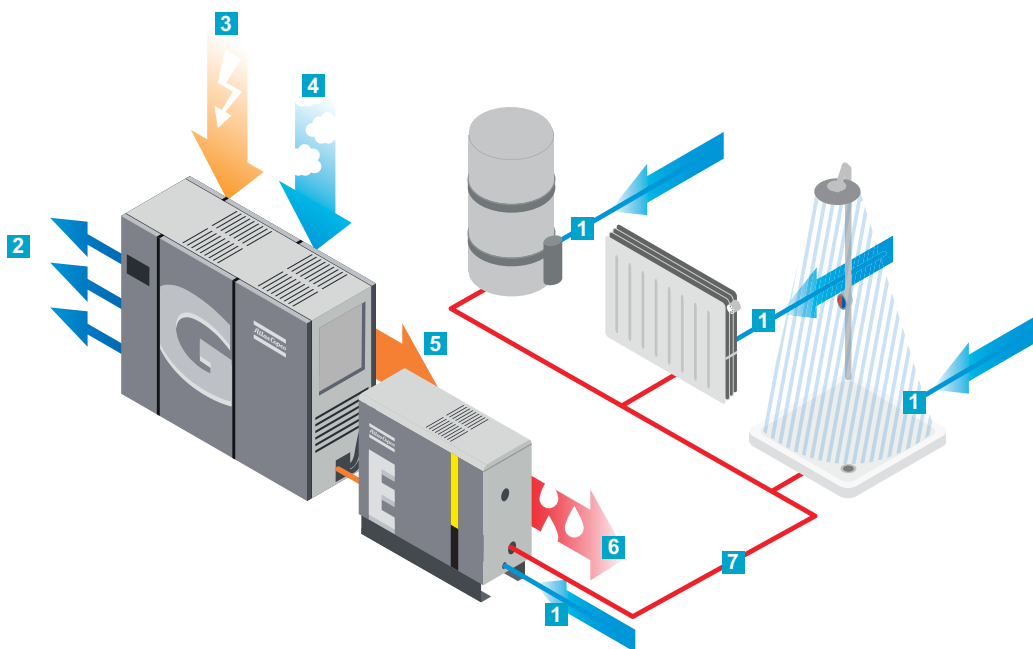
- ① **Total energy** transmitted by the engine
- ② Heat from the **engine** 9%
- ③ Heat from the **oil cooler** 72%
- ④ Heat dissipated in the **ambient air** 2%
- ⑤ Heat from the **aftercooler** 13%
- ⑥ Heat remaining in the **compressed air** 4%
- ⑦ **Recoverable energy** 94%

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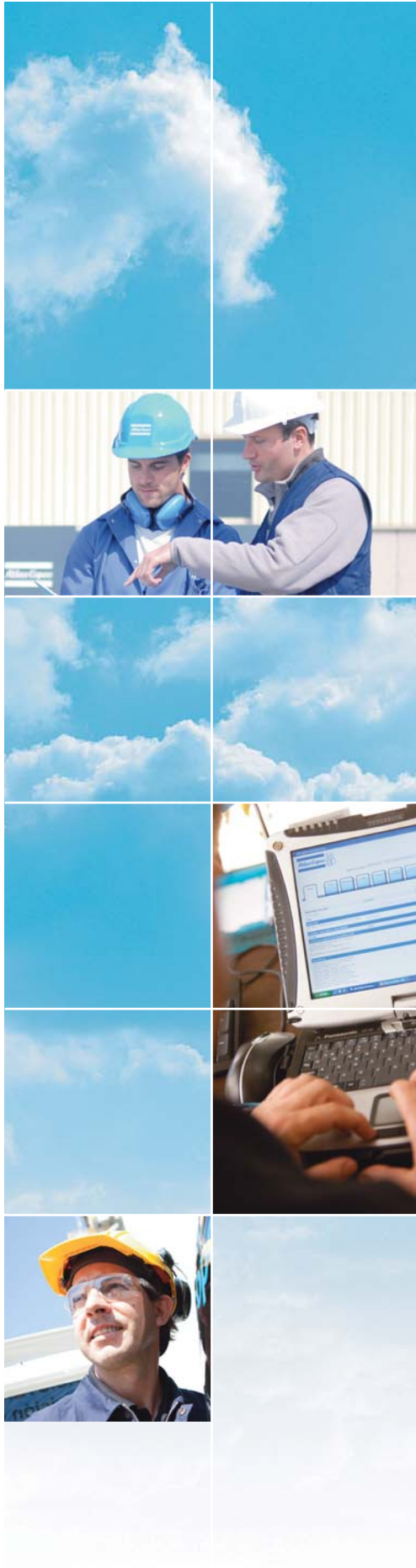
Energy Recovery

Type	GA, GA+ & GA VSD (nominal power)		Recoverable energy		Savings potential for 4000 running hours	
	kW	hp	kW	hp	Heating oil (l)	CO2 (ton)
ER-S1 (2230 0060 90)	11	15	9	12	4.224	9.292
	15	20	12	16	5.760	12.672
	18	25	14	19	6.720	14.784
	22	30	18	24	8.640	19.008
	30	40	24	32	11.520	25.344
ER-S2 (2230 0060 91)	37	50	30	40	14.400	31.680
	45	60	36	48	17.280	38.016
	55	75	44	59	21.120	46.464
ER-S3 (2230 0060 92)	75	100	60	80	28.800	63.360
	90	120	72	97	34.560	76.032
ER-S4 (2230 0060 93)	110	150	88	118	42.240	92.928
	180	241	144	193	69.120	152.064
ER-S5 (2230 0060 94)	200	268	160	215	76.800	168.960
	315	422	252	338	120.960	266.112

Type	Dimensions	Low temperature rise ($\Delta T = 10\text{ }^\circ\text{C}, 50\text{ }^\circ\text{F}$) high water flow		High temperature rise ($\Delta T = 60\text{ }^\circ\text{C}, 140\text{ }^\circ\text{F}$) low water flow	
		l/min	GPM	l/min	GPM
ER-S1		12	3.2	1.9	0.5
		15	4.0	2.4	0.6
		18	4.8	2.9	0.8
		22	5.8	3.6	1.0
		32	8.5	5.2	1.4
ER-S2	1028 x 637 x 862 mm	39	10.3	6.4	1.7
		48	12.7	7.9	2.1
		59	15.6	9.8	2.6
ER-S3		80	21.1	13.3	3.6
		98	25.9	16.2	4.3
ER-S4		118	31.2	19.6	5.2
		193	50.9	32.2	8.5
ER-S5	1028 x 637 x 902 mm	216	56.7	35.8	9.5
		337	89.0	56.2	14.9



1) Cold water 2) Compressed air 3) Electric power 4) Air 5) Oil circuit 6) Energy recovery 7) Warm water



Atlas Copco Group:

Global Industrial group, headquartered in Stockholm, Sweden.

More than 140 years of experience.

More than 39,800 employees worldwide, with sales turnover, over BEUR 10.5.

Network in 180 countries.

Interaction. Commitment. Innovation.

These are the core values on which Atlas Copco has built its position as the world leader in compressed air. Our service organization is driven by your need for a reliable and efficient quality air solution that is the driving force behind your business. Our structure, our people, our processes, and our products are aligned to ensure superior customer value.

We want to be a real performance partner for you by offering total customer care.

Always offering professional and timely service, through interaction and involvement we adapt our offer to your specific processes, needs and objectives. Working in close cooperation with you to optimize the efficiency of your processes.

We continuously improve our offer.

Through continuous investment in our competent, committed and efficient service organization, we ensure superior customer value by maximizing your productivity.



Atlas Copco Compressor Technique

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