

Marine Compressed Air Systems



**Leistungsschau Griechenland
Maritime Wirtschaft - BMWi**

Piraeus, September 25-27, 2019

Dipl.-Ing. Oscar de Groen
Global Business Development Manager Marine

The company

A family company with impressive history



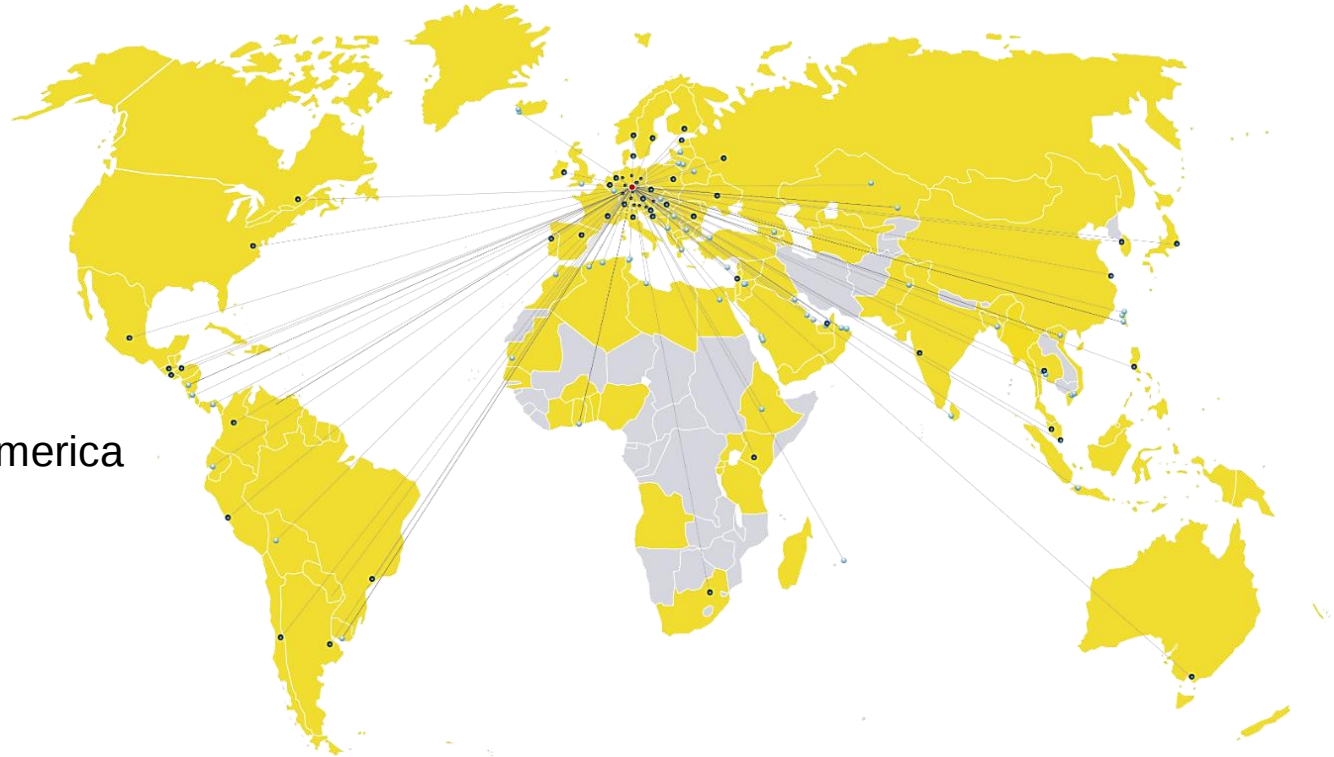
Executive Board:
Thomas Kaeser and his wife
Tina-Maria Vlantoussi-Kaeser
*The fourth industrial revolution –
Industrie 4.0*



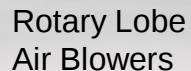
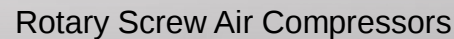
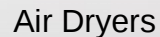
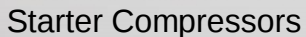
Global presence

Active in more than 140 countries

- Australia
- Asia
- Africa
- Europe
- North and South America



Compressed air for each shipboard application



Complete marine compressor range

Suitable solution for each shipboard application

Piston Starting Air Compressors	Rotary Screw Air Compressors		Rotary Lobe Blowers
	Belt-driven	Direct-driven	
			
09 – 80.2.3 HD	SX / SM / SK ASK – BSK	ASD – CSDX	DB – FB
0,08 – 4,6 m³/min	0,25 – 4,01 m³/min	3,04 – 16,1 m³/min	15,6 – 85,2 m³/min
30 – 40 bar(g)	8 – 12 bar(g)	8 – 14 bar(g)	-0,5 – 1,0 bar(g)
- Starting air - Emergency air	- Working air - Control air - Exhaust gas cleaning (SCR)	Nitrogen generation	- Bulk handling - Sewage water treatment

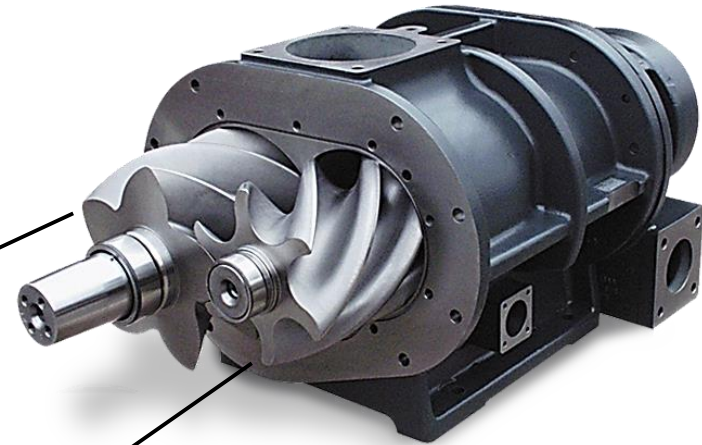


SIGMA profile

Most efficient rotary screw compressors



Air-end



Primary rotor

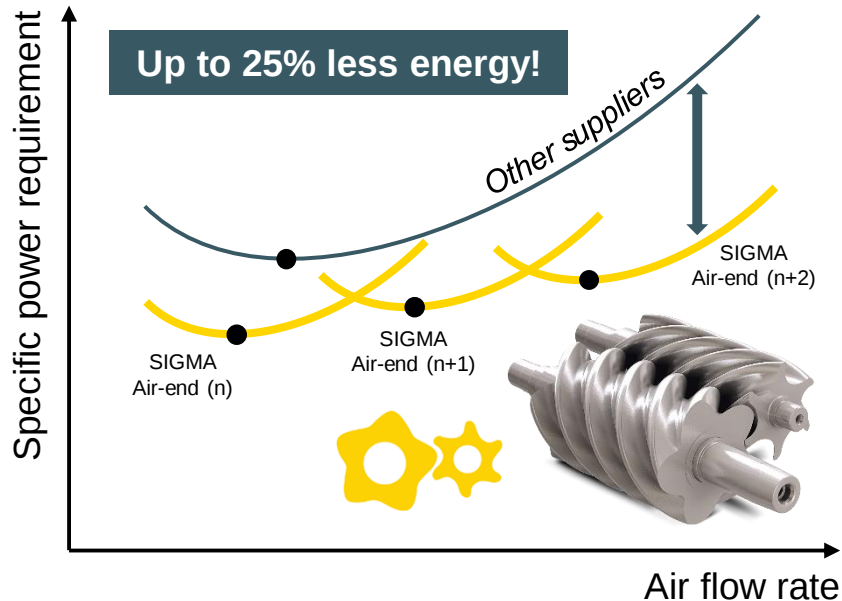
- 5 teeth
- driven

Secondary rotor

- 6 teeth
- revolving

Maximum reduction of OPEX

Focus on efficiency and reliability



Unique KAESER advantages:

- SIGMA rotary screw profile
- > 35 air-end sizes for optimization
- Direct-driven (1:1), no gearbox
- IE4 drive motors

Benefits for Ship Owner:

- ✓ Lower power consumption
- ✓ Less maintenance costs
- ✓ Lower noise level

Superior design and quality

Focus on efficiency and reliability



3-Stage fluid separation



Fixed piping with flexible connections



Integrated cyclone separator w/ drain



Automatic control of oil temperature



Marine certified SIGMA Control



Direct-drive with flexible coupling

Compressed air after-treatment

Drying & filtration for shipboard working air and control air systems



- Refrigeration air dryers
 - Integrated version possible
 - SECOTEC energy-saving dryers
- Heatless adsorption air dryers
- Air filters

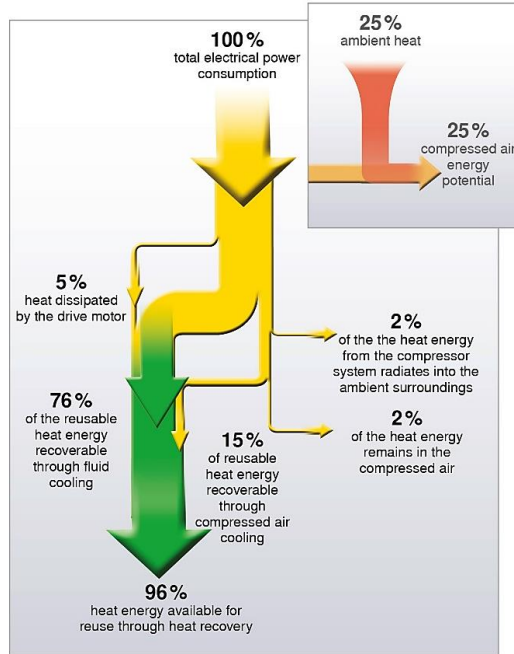
up to 70% less energy consumption!

SECOPACK LS
with latent heat
accumulator



Improvement of ship's CO₂ footprint

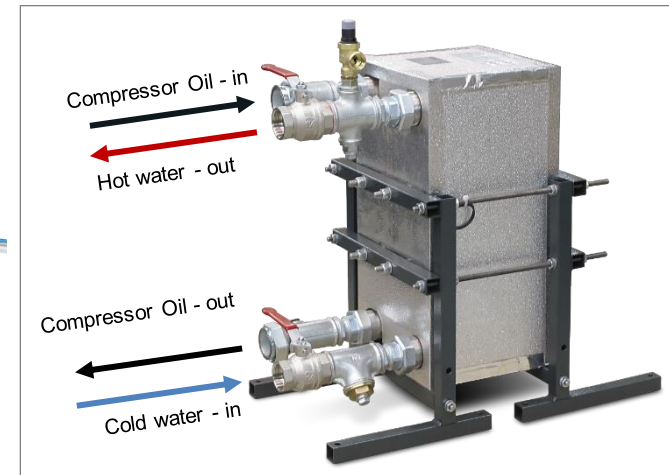
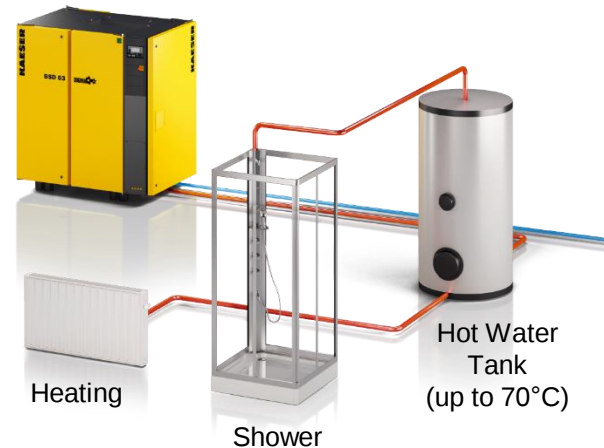
Heat recovery for space heating & hot water



Usable Heat Output as % of Compressor Power Consumption

- Space heating: 96%
- Hot water heating: 76%

Not suitable for drinking water!

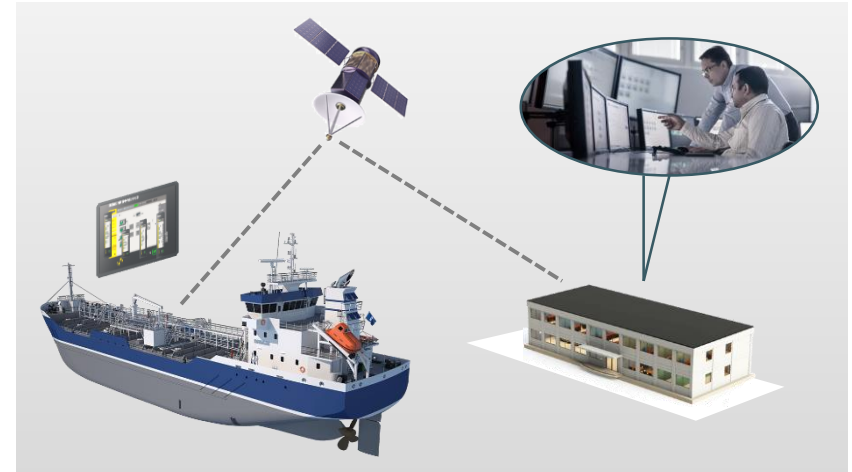


SIGMA Smart Air

Remote monitoring & predictive maintenance



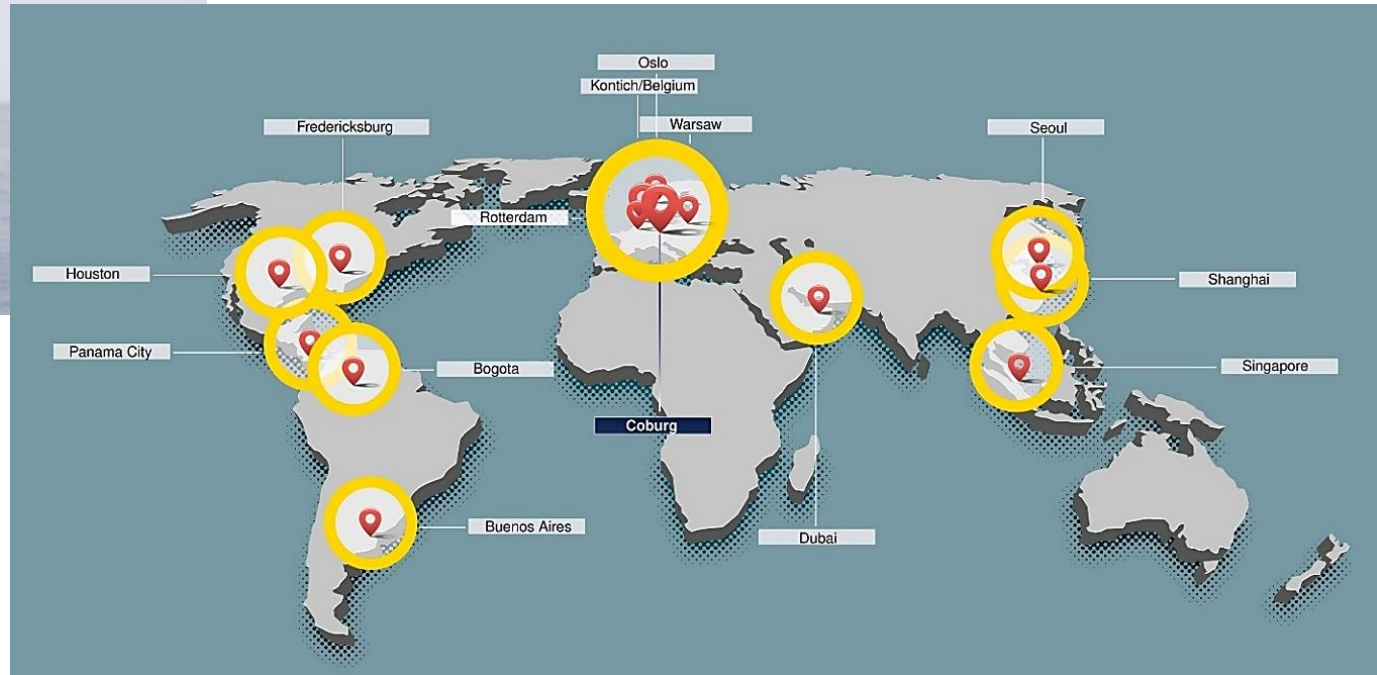
SIGMA Air Manager – SAM 4.0



Next step...

KAESER Marine Compressed Air World

Marine service & spare parts hubs



KAESER on the waves

More than 700 supplied marine air compressors



Container Ship



Bulk Carrier



SuperYacht



Cruise Ship



Chemical & Product Tanker



LNG Carrier



Methanol Carrier



LPG Carrier

For more information

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