

CASE STUDY

TurboScrew C250 TS-12



**van Elewout
Kompressoren**
Dobbeweg 3B
2254 AG Voorschoten
www.elewout.nl
+31(0)71-561 84 68

Low fuel consumption - the Krebs group of companies relies on CompAir TurboScrew compressors

More than 13,000 operating hours in 4 years – low operating costs proved the decisive factor

In the absence of appropriate power supply connections at a few of its production sites, the Krebs group of companies used diesel engine-driven compressors to supply compressed air. The group of companies with headquarters in Hamburg operates as a corrosion protection and coating company on the coasts and ports of Northern Germany. The favourable consumption values of CompAir turbo compressors therefore resulted in this manufacturer being chosen as a supplier more than 4 years ago.

Project overview

▶ User

Krebs Industrie-Service GmbH
www.krebsgruppe.de

▶ Areas of application

Krebs Unternehmensgruppe represent cutting-edge corrosion protection, provide a local service for customers and are set up as system suppliers. In addition to classic blasting technology, the company's services also include high-pressure water blasting with up to 3,000 bar.

▶ Machine used

8 TurboScrew compressors type C 250 TS-12 from CompAir. With a volume flow of 25 m³ per minute, the machines provide a full 12 bar operating pressure.

▶ Added value

Up to 25 % less fuel consumption in comparison with the competition.

The applications in detail

The operating conditions at the Rostock site are extremely demanding, with the machinery in use 24/7. A total of 5 out of the 8 C250TS-12 compressors are in use at Rostock Port.

The compressed air required is 10 bar at 24 m³/min. Krebs opted for versions with base frames and no chassis as the compressors are very rarely moved.

The C200 TS-24 to C270 TS-9 series from CompAir uses a unique bi-turbo technology. The second turbocharger pre-compresses the intake air, significantly reducing the energy required for the actual compressor stage, as well as significantly reducing the fuel consumed by the diesel engine. In conjunction with an innovative controller, this means that the compressor can be operated in a more energy-efficient manner than comparable machines. The compressor is also lighter and significantly more compact in terms of its dimensions than machines with comparable output. The weight of the chassis built version for instance remains below 3,500 kg. The fact that it lowers diesel consumption while maintaining the same performance levels in itself makes it environmentally friendly.

The TurboScrew compressors are equipped with the SCRT® system (Selective Catalytic Reduction Technology), which removes almost all soot particles and nitrogen oxide from the diesel exhaust gases. The machines and the Rostock Team perform the toughest work. Monopiles more than 9 metres in diameter and weighing up to 1,000 tonnes are blasted/coated inside and out for offshore wind farms. What is interesting is that the clients require different types of coating. The specialists at Krebs can handle this with ease. They also carry out blasting and coating work for a manufacturer of mobile harbour cranes based opposite the Krebs premises. The world's largest mobile harbour crane is currently being built there. Krebs is ready for the new dimensions of the steel components that will soon be manufactured. Work is carried out all year round. Mobile and heated halls provide a suitable working environment for carrying out high-quality blasting and coating work.

A maintenance agreement is in place to ensure high availability. Apart from daily refuelling during operations, a service partner carries out all service and maintenance work on the machines, such as interior cleaning, filter replacement and engine servicing to name a few. This includes an emergency standby service. A user in Rostock says: "We've never been short of air thanks to CompAir compressors." More than 13,000 operating hours in just 4 years for the machines in Rostock is therefore no real surprise. To summarise: There have been no significant outages or downtimes. A local CompAir service partner has quickly remedied the situation whenever a fault has occurred. The machines are easy to service and repair.

The fuel savings amount to approximately 25 % compared with machines with comparable output performance.

It is no surprise that this manufacturer is the preferred option when it comes to investing in replacements.

The Krebs group of companies represents cutting-edge corrosion protection, provides a local service for customers and is set up as a system supplier. They have in-house solutions for involving trucks weighing 3.5 tonnes and above, as well as truck-mounted cranes with a lifting capacity of 500 tonnes and above. The Krebs group also provide solutions for scaffolding work.

In addition to classic blasting technology, the company's services also include high-pressure water blasting up to 3000 bar. The Krebs group also offer training and apprenticeship schemes. It goes without saying, the group provide continuous training and support for its long-standing employees. Alongside state-of-the-art technology, this forms the basis for a forward-looking company.



Operations manager Norbert Merchel from the Krebs group of companies is more than happy with the (continuous) output of his C 250 TS-12 compressors.

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Complete TurboScrew Series

GERMAN
ENGINEERING
 & DESIGN

Your benefits at a glance

- ▶ **Reliable motor with exhaust gas treatment (SCRT®)**
 Fulfills thresholds for level 4 in accordance with 97/68/EC Stage V and is permitted for use in low-emissions zones.
- ▶ **Patented pre-compression using an additional turbo charger**
 For high fuel savings (up to 30 % compared to conventional compressors).
- ▶ **Further control range**
 From 1,000 to 2,400 U/min – to adjust to fluctuating compressed air requirements.
- ▶ **Unsurpassed weight below 3,500 kg**
 Can be moved with transporter or SUV.
 Only overrun brake required.

LOW
EMISSION
ZONE

UP TO
24
BAR



Technical Data - C200TS-24 to C270TS-9

Type		C200TS-14	C210TS-12	C220TS-10	C230TS-9	C240TS-14	C250TS-12	C260TS-10	C270TS-9	C200TS-24	C210TS-21	C230TS-17	
Operational data													
Volume flow ¹⁾	m ³ /min	20	21	22	23	24	25	26	27	20	21	23	
	cfm	706	741.6	776.9	812	847.5	882.8	918	953	706	741.6	812	
Operating pressure	bar	14	12	10	9	14	12	10	9	24	21	17	
	psi	203	174	145	130.5	203	174	145	130.5	348	304.5	246.5	
Engine		GD-M2											
Installed engine power	kW	180					224						
Engine off load speed	1/min	1200						2400					
Engine full load speed	1/min	2400											
Operating weight ²⁾													
Portable compressor adjustable towbar braked	kg	3300					3340						
Skid mount	kg	3545					3585						
Base mount	kg	3385					3425						
Dimensions & connections													
Length	mm	5198 - 5424											
Width	mm	1960											
Height	mm	2636											
Compressed air outlet		3 x 3/4" and 1 x 2"									1 x 2"		
Sound level													
Sound pressure level ³⁾ dB(A) LPA		71											

¹⁾ Acc. to ISO 1217 Ed. 4 2009 Annex D

²⁾ Operating weight without options

³⁾ Noise level acc. to PNEUROP PN8NTC.2.2 at 7 m