



Issue 2022

PRODUCTS + SERVICE

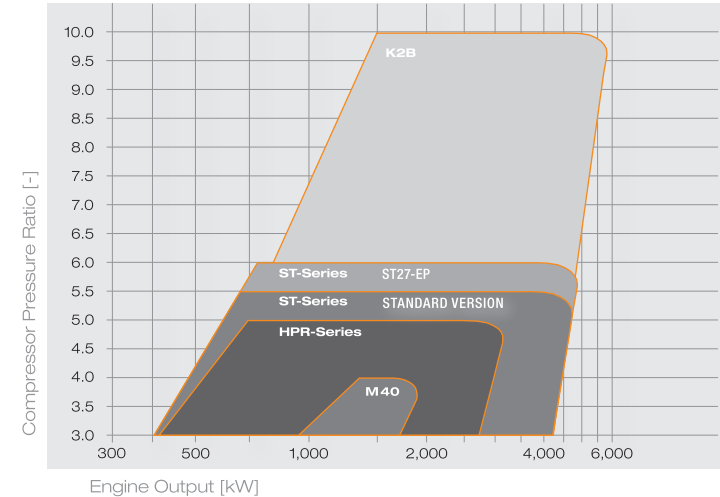
Boost Your Power. Boost Your Efficiency.

www.kbb-turbo.com

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Power Range



Introduction

Kompressorenbau Bannewitz GmbH (**KBB** for short), Germany, has gained many years of experience from the development and manufacture of eight generations of exhaust-gas turbochargers. The company has found its market among diesel and gas engine manufacturers who use its turbochargers in the maritime and railway industry as well as various other sectors. More than 70,000 exhaust-gas turbochargers have already left the production facility in Bannewitz.

KBB exhaust-gas turbochargers are suitable for two- and four-stroke diesel and gas engines with an output range between 500 and 6,000 kW. **KBB** currently manufactures turbochargers with radial turbines and axial turbines as well as its first types for two-stage turbocharging of the K2B range, whose development began in 2010 to comply with the IMO/TIER 3 requirements.

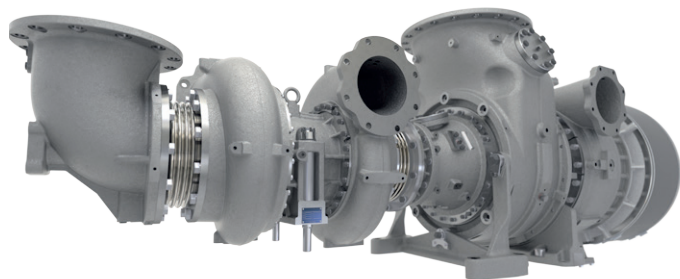
The exhaust-gas turbochargers are developed in **KBB's** own R&D department using modern CAD-technology and software tools for aerodynamic, thermo-dynamic and bearing design as well as strength and vibration simulations.

High quality is ensured through ultramodern CNC-technology to machine functional components as well as state-of-the-art 3D coordinate measuring equipment. The performance is checked by trial runs and tests on our in-house test rigs.

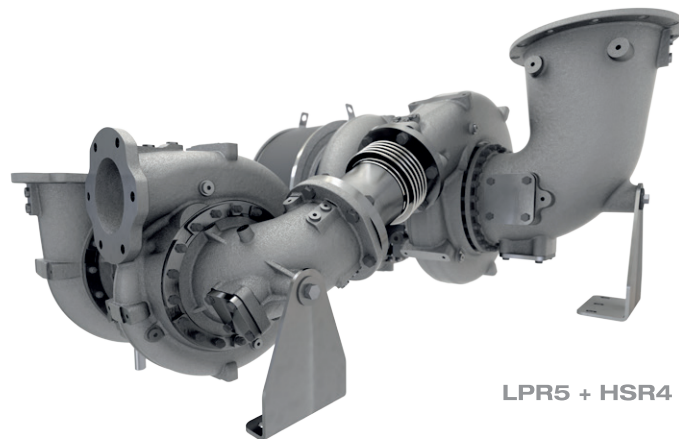
KBB's quality management system has been certified to DIN EN ISO 9001.

K2B Series

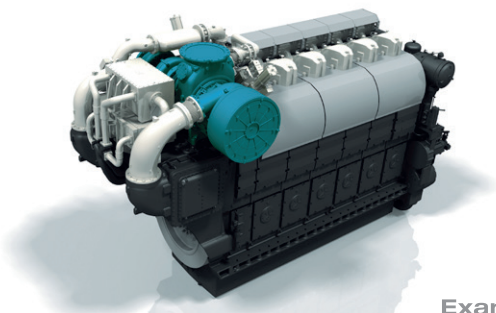
For diesel, heavy fuel and gas engines



HSR6 + HPA7000 axial



LPR5 + HSR4

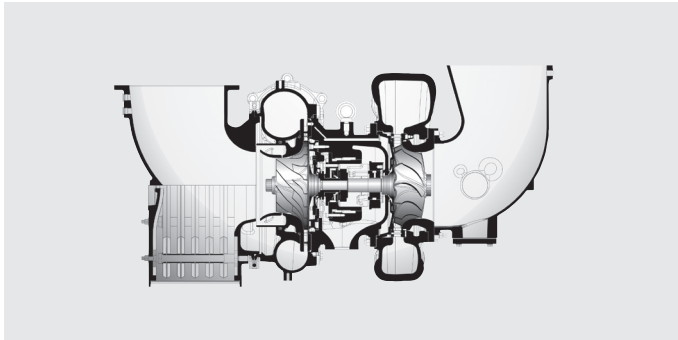


Example of use

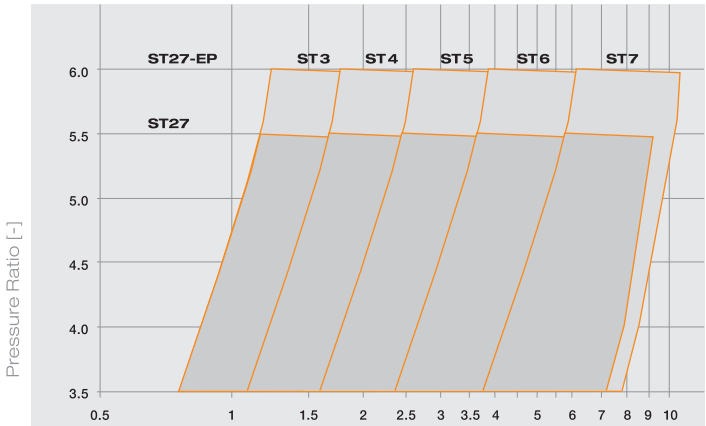
- Concept for a low pressure (LP) and a high pressure (HP) turbocharger range
- Two pairs of LP and HP turbochargers are tested and released for serial use: HPA7000 + HSR6 for engine output of 4 - 6 MW
LPR5 + HSR4 for engine output of 1.5 - 2.5 MW
- Customized design solutions for compressors, turbines and oil sealings

ST27-EP Series

- Highest efficiency and pressure ratio
- Inboard journal bearings
- Lubricated by the engine oil system
- Oil supply through the turbo support
- Suitable for heavy fuel applications
- Simple and compact design
- Long lifetime of components
- Long intervals between overhauls
- Tailor-made solutions
- Compressor and turbine washing device
- Speed measurement
- Interchangeable to the HPR-generation
- Engine power of up to 6 MW
- Extended area with top efficiency
- Reduction of engine emissions (to support IMO III requirements)
- Improved surge margin
- Water cooled bearing housing on request



For diesel, heavy fuel and gas engines



Air Flow Rate [m³/s]

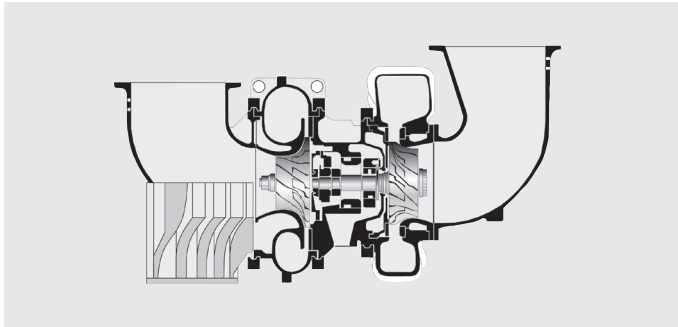
Model	Air flow rate \dot{V} [m³/s]		Engine output P [kW]	Maximum pressure ratio $\Pi_{v \max}$	Efficiency factor η [%] $\Pi = 5.0$	Weight* m [kg]
ST27	$\Pi = 4.5$	$\Pi = 5.2$				
ST3	0.85-1.60	0.95-1.70	500-1,100	5.5	64	158
ST4	1.30-2.40	1.40-2.50	700-1,600	5.5	64	280
ST5	1.90-3.60	2.10-3.70	1,050-2,300	5.5	66	383
ST6	2.90-5.40	3.20-5.60	1,600-3,300	5.5	68	570
ST7	4.30-8.10	4.80-8.40	2,500-5,000	5.5	70	1,254

ST27-EP	$\Pi = 5.2$	$\Pi = 5.6$			$\Pi = 5.0$	
ST3-EP	0.95-2.00	1.05-2.00	500-1,300	6.0	64	158
ST4-EP	1.40-2.85	1.50-2.90	700-1,900	6.0	64	280
ST5-EP	2.10-4.20	2.40-4.40	1,050-2,800	6.0	66	383
ST6-EP	3.20-6.10	3.65-6.20	1,600-4,000	6.0	68	570
ST7-EP	4.80-10.10	5.40-10.30	2,500-6,000	6.0	70	1,254

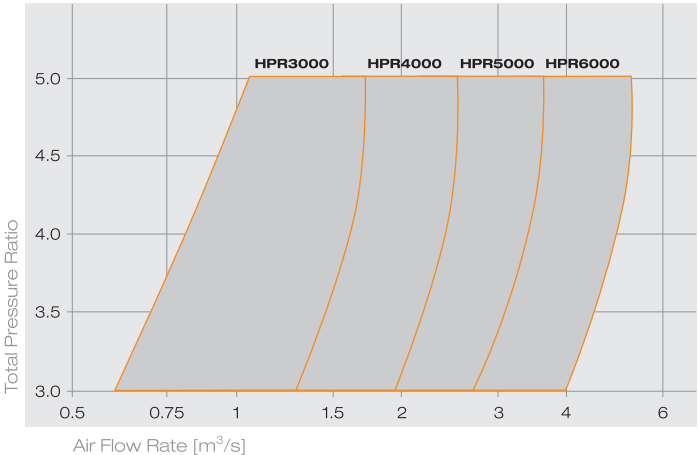
* Weight = basic turbo + air filter silencer

HPR Series

- High efficiency and pressure ratio
- Inboard journal bearings
- Lubricated by the engine oil system
- Oil supply through the turbo support
- No water cooling required
- Simple and compact design
- Long lifetime of components
- Long intervals between overhauls
- Suitable for heavy fuel applications
- Tailor-made solutions
- Compressor and turbine washing device
- Speed measurement
- Jet assist
- Cartridge



For diesel, heavy fuel and gas engines

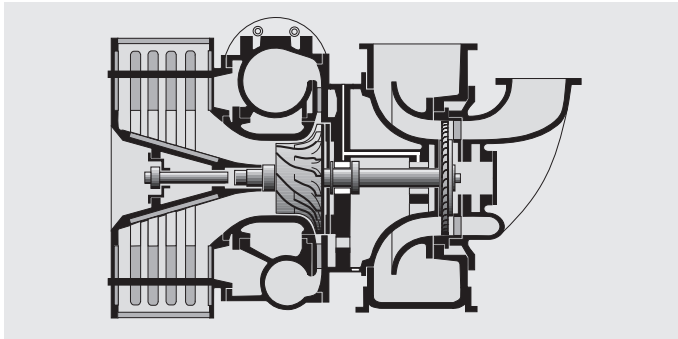


Model	Air flow rate \dot{V} [m³/s] $\Pi = 4.0$ $\Pi = 4.5$	Engine output P [kW]	Maximum* pressure ratio Π_{vmax}	Efficiency factor η [%] $\Pi = 4.0$	Weight** m [kg]
HPR 3000	0.90-1.70 1.00-1.70	500-900	5.0	63	160
HPR 4000	1.30-2.50 1.50-2.50	700-1,300	5.0	64	226
HPR 5000	1.90-3.60 2.10-3.60	1,000-1,900	5.0	66	354
HPR 6000	2.70-5.20 2.90-5.20	1,600-3,000	5.0	68	550

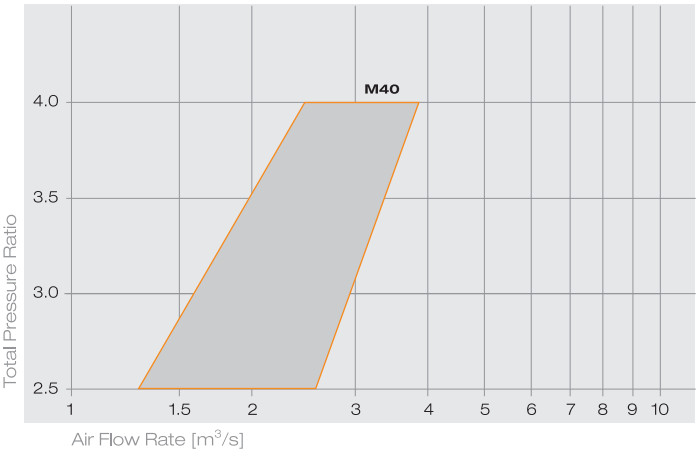
* With aluminium impeller - max. pressure ratio 4,7
** Weight = basic turbo + air filter silencer + gas outlet casing

M Series

- High efficiency and pressure ratio
- Inboard journal bearings
- Lubricated by the engine oil system
- Water cooled bearing housings
- Suitable for heavy fuel applications
- Simple and compact design
- Long lifetime of components
- Long intervals between overhauls
- Tailor-made solutions
- Compressor washing device
- Speed measurement



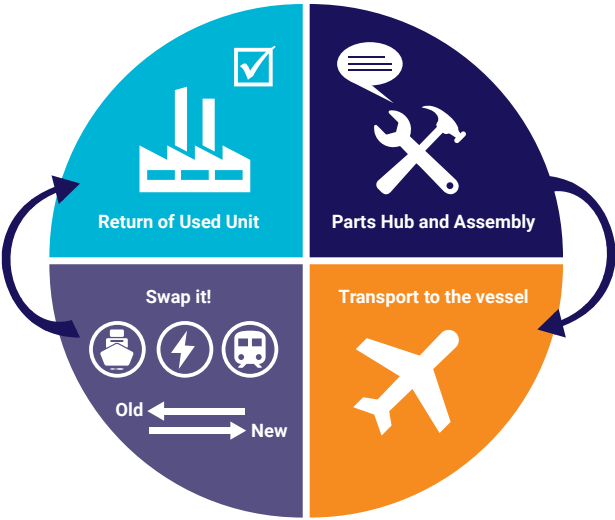
For diesel, heavy fuel and gas engines



Model	Air flow rate \dot{V} [m³/s] $\Pi = 2.5$ $\Pi = 4.0$	Engine output P [kW]	Maximum pressure ratio Π v max	Efficiency factor η [%] $\Pi = 3.5$	Weight m [kg]
M 40	1.30-2.60 2.50-3.90	900-1,800	4.0	65	260

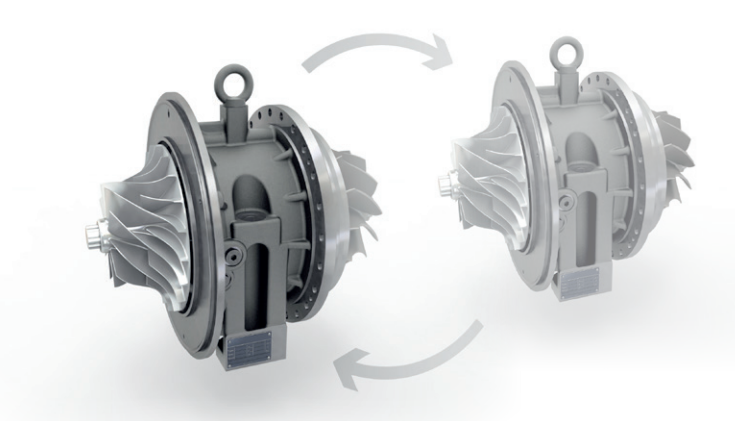
K2S – Knowledge 2 Swap

With K2S, you can benefit from fixed prices on exchange units, offering easy budget planning for emergency and scheduled repairs. Achieve this predictability without incurring traditional stock expenses, shedding the risk of holding stock while maintaining full flexibility.



Key benefits

- Exchange your existing KBB-turbochargers with minimized downtime
- Suitable for scheduled and unscheduled events
- Perfect for fleets with same or similar units
- Risk mitigation and fixed costs
- Easy handling: no detailed training or engineering knowledge needed on board
- Environmentally friendly
- A true 'plug and play' solution
- Access to manufacturer-assured components and latest design



Exhaust aftertreatment systems



- 1 Bypass valve
- 2 Turbocharger outlet / EATS inlet
- 3 Catalyst withdrawal hatch
- 4 Diesel injector
- 5 Temperature sensors
- 6 DPF PM reduction
- 7 NOx sensor
- 8 Urea injector
- 9 SCR NOx reduction
- 10 (Control cabinet, without picture)
- 11 (DEF tank, without picture)

- Modular exhaust aftertreatment system to fulfill highest emission standards like IMO III and EU Stage V
- Suitable for new engine or retrofit installation
- Standardized catalysts and parts to be applied across the entire range of system sizes
- Small package and low backpressure to minimise fuel consumption
- Service intervals aligned with standard overhaul engine intervals to minimize down time
- Full service and support by your local KBB service partner

What we offer to our customers' advantage

World-wide service directly from our headquarters or through our dense service network based at most strategic locations across the globe

24/7 on-call service

SERVICE NUMBER: +49 (0) 172 351 6045

Genuine spare parts available from our service stations or sent from the headquarters within 24 hours

Service work is carried out by trained and experienced experts

Competent specialists as your contact person

Technical advice from our service engineers

Original parts and reconditioned parts are stocked on an exchange basis

Repairs in our workshop and in the field

Order details

Please provide the following details for prompt service:

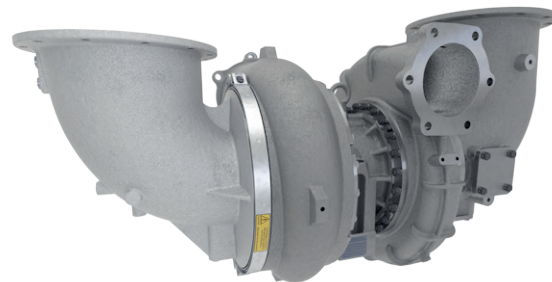
turbocharger model (Type), serial number (Serial) and turbocharger specification (Spec.). These can be found on the nameplate fixed to the compressor housing or bearing housing.

PLEASE SEND US YOUR INQUIRY OR ORDER ONLINE:

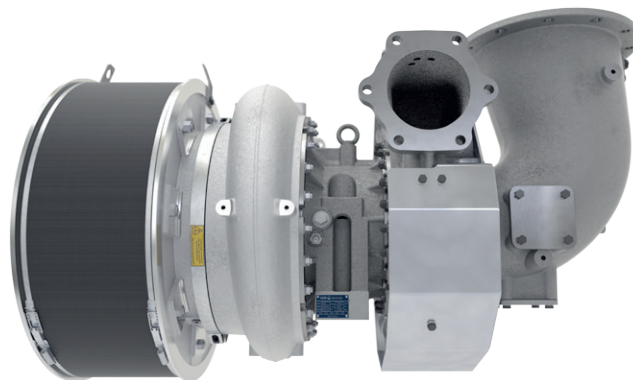
WWW.KBB-TURBO.COM/INQUIRY

KBB Kompressorenbau Bannewitz GmbH			
Type	<input type="text"/>	n_{max}	<input type="text"/> min^{-1}
Spec.	<input type="text"/>	t_{max}	<input type="text"/> $^{\circ}C$
Serial	<input type="text"/>	m	<input type="text"/> kg
<input type="text"/>			

KBB Kompressorenbau Bannewitz GmbH		Type
n_{max}	min^{-1}	Spec.
t_{max}	$^{\circ}C$	Serial
m	kg	Made in Germany



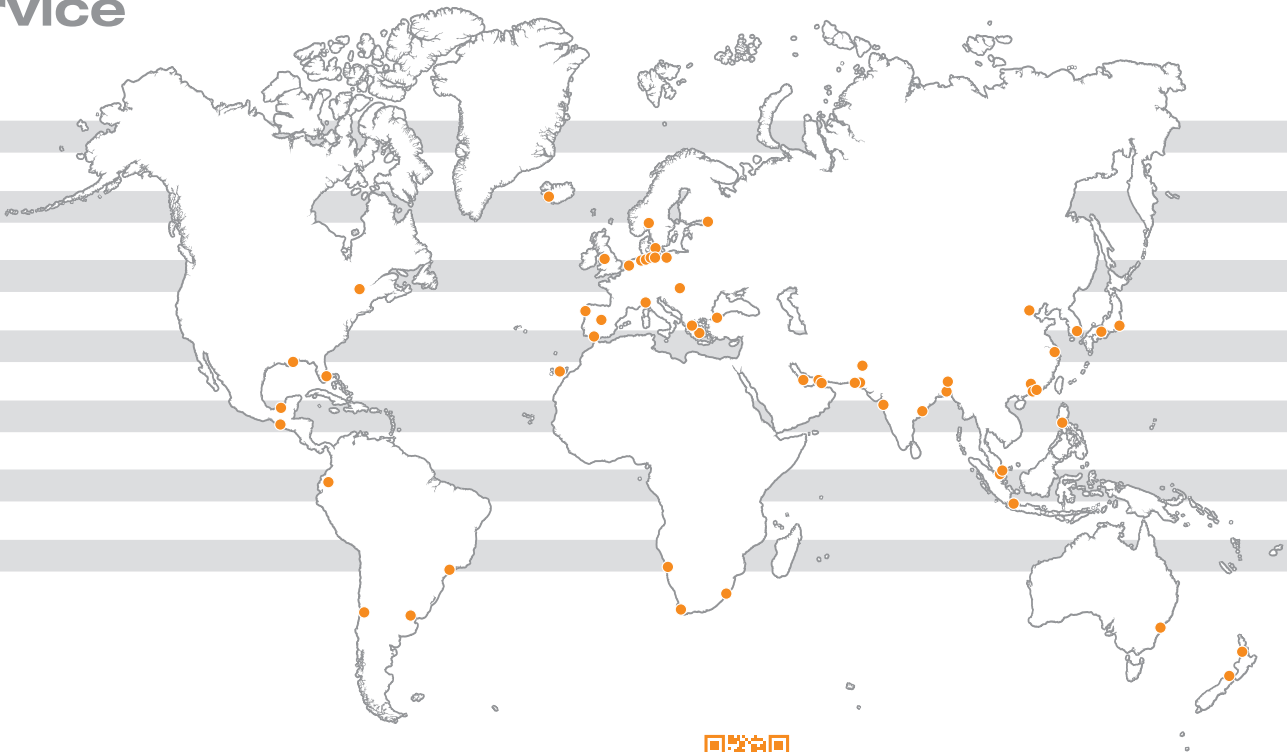
HPR5000



ST6-EP

KBB worldwide service

Over 60 trained and audited Service Partners



Please see the latest map with our Service Partners:
www.kbb-turbo.com/service-partners



Last revised: August 2022

Subject to modifications in the interest of technical progress.



Eine Kampagne des  VDMA

www.vdma.org/original



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