KBB TURBOCHARGERS

Issue 2024

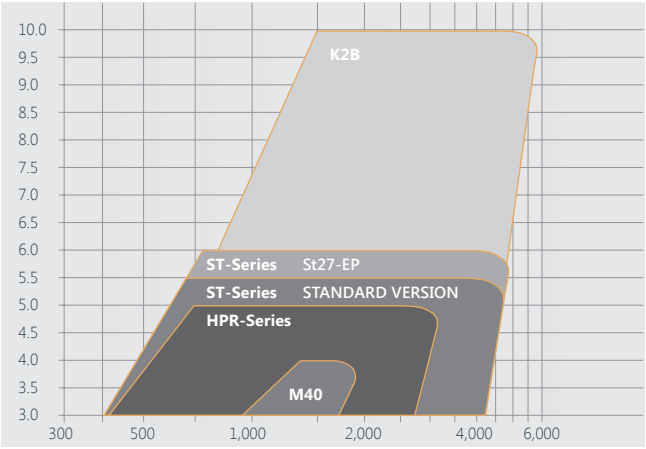
PRODUCTS + SERVICE

Boost Your Power.
Boost Your Efficiency.

kbb-turbo.com

Contents

Power Range



Introduction

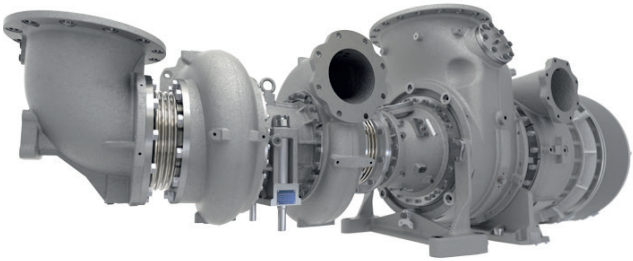
KBB (**K**ompressoren**b**au **B**annewitz GmbH) has more than 70 years of experience in the development and manufacturing of exhaust gas turbochargers, which are used on diesel and gas engines.

More than 30,000 KBB turbochargers with a power range between 500 and 6,000 kW are currently running worldwide and are mainly used on marine engines or power generator sets.

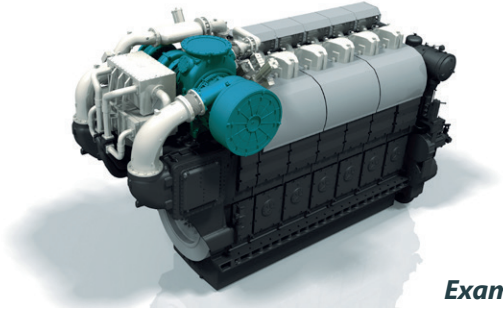
KBB turbochargers are developed and manufactured in Bannewitz, Germany. Quality tests, as well as aerodynamic, thermodynamic, strength, and vibration simulations, are carried out, tested, and finally approved internally by KBB experts.

KBB's quality management system is certified in accordance with DIN EN ISO 9001.

K2B Series

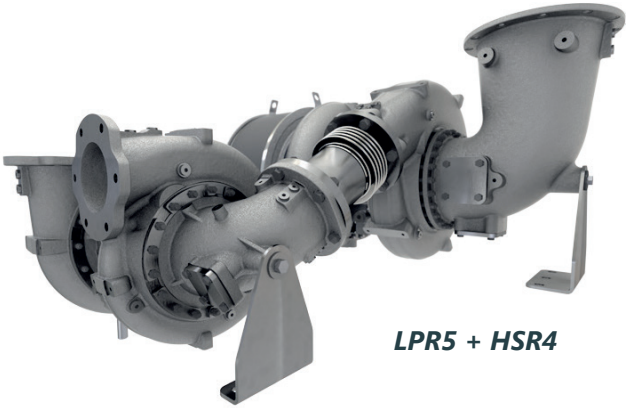


HSR6 + HPA7000 axial



Example of use

For diesel, heavy fuel and gas engines



LPR5 + HSR4

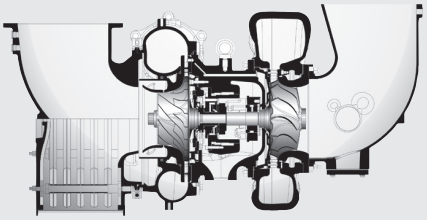
- **Concept for a low-pressure (LP) and a high-pressure (HP) turbocharger range**
- **Two sizes of LP and HP turbochargers are released for serial use:**

	Engine output (MW)
HSR4 + LPR5	**1.5 – 2.5**
HSR6 + HPA7000	**4.0 – 6.0**

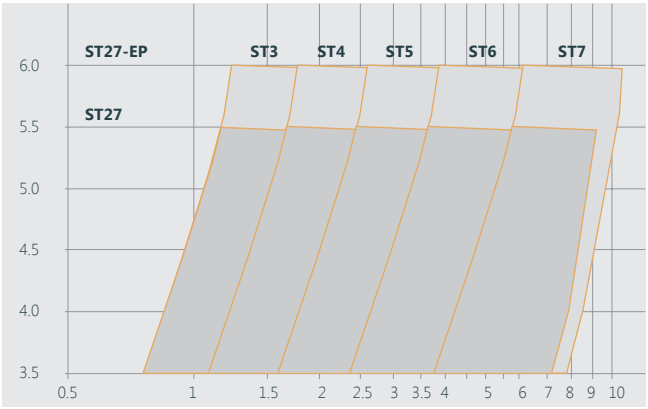
- **Customized design solutions for compressors, turbines, and oil sealings**

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 with 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



Model **ST27**	Air flow rate V [m³/s] Π = 4.5	Π = 5.2	Engine output P [kW]	Maximum pressure ratio Π v max	Efficiency factor η [%] Π = 5.0	Weight* m [kg]
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

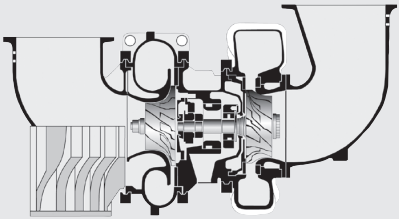
ST27-EP	Π = 5.2	Π = 5.6			Π = 5.0	
ST3-EP	0.95-2.00	1.05-2.00	500-1,300	6.0	64	158
ST4-EP	1.40-2.85	1.50-2.90	700-1,900	6.0	64	280
ST5-EP	2.10-4.20	2.40-4.40	1,050-2,800	6.0	66	383
ST6-EP	3.20-6.10	3.65-6.20	1,600-4,000	6.0	68	570
ST7-EP	4.80-10.10	5.40-10.30	2,500-6,000	6.0	70	1,254

* Weight = basic turbo + air filter silencer

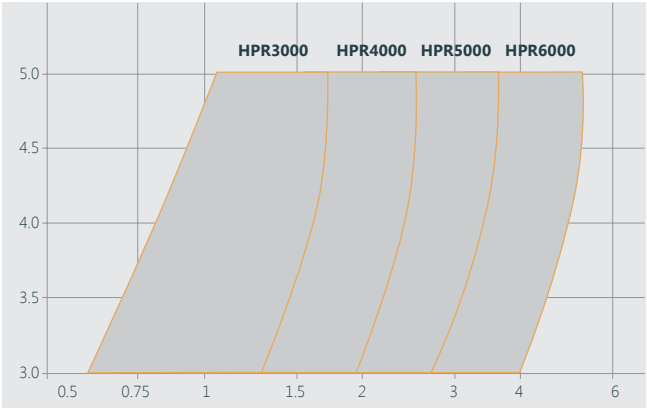
HPR Series

- 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
- Cartridge



For diesel, heavy fuel and gas engines



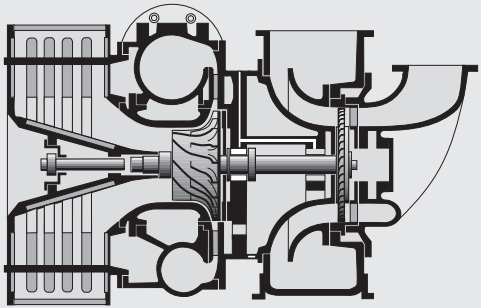
Model	Air flow rate V [m³/s] Π = 4.0	Π = 4.5	Engine output P [kW]	Maximum pressure ratio Π v max	Efficiency factor η [%] Π = 4.0	Weight* m [kg]
HPR 3000	0.90-1.70	1.00-1.70	500-1,100	5.0	63	160
HPR 4000	1.30-2.50	1.50-2.50	700-1,300	5.0	64	226
HPR 5000	1.90-3.60	2.10-3.60	1,000-1,900	5.0	66	354
HPR 6000	2.70-5.20	2.90-5.20	1,600-3,000	5.0	68	550

* With aluminum impeller - max. pressure ratio 4.7

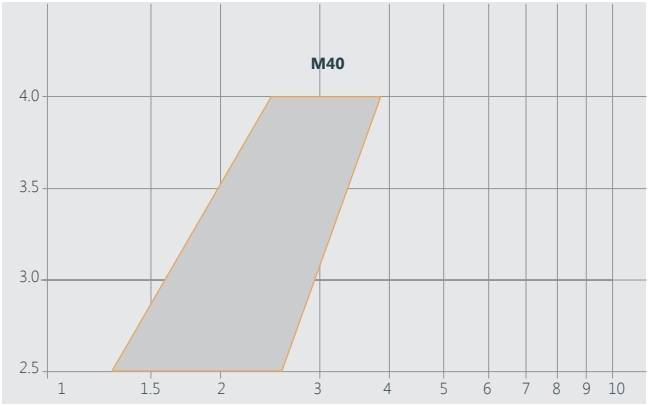
** Weight = basic turbo + air filter silencer + gas outlet casing

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



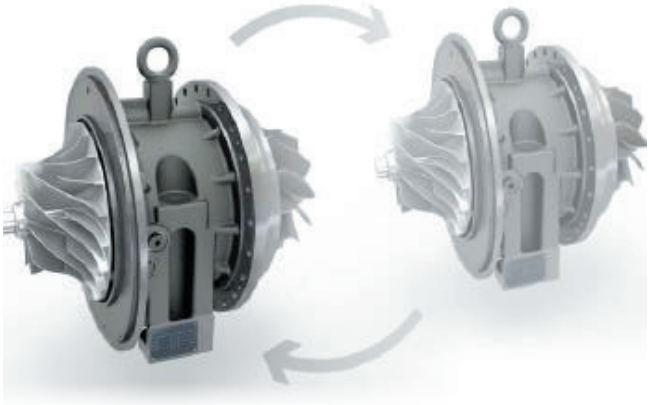
For diesel, heavy fuel and gas engines



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

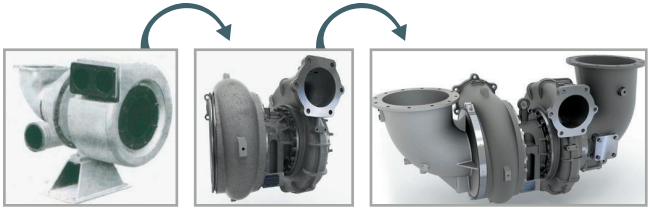
K2S Swap Program for Cartridge or Turbocharger

- Carried out by qualified KBB Service
- Optimized service downtime in the event of overhauling
- Long-term service with fixed costs for standard service
- Standard maintenance by crew self-service possible
- Risk mitigation because of different specifications
- Swap kit will be scheduled and delivered prior to the service event



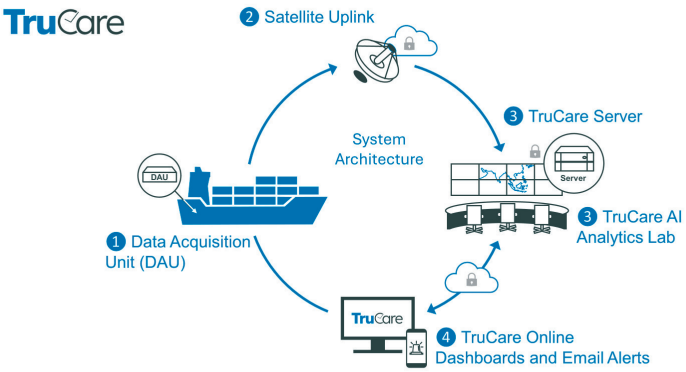
Retrofit / Upgrade Turbocharger

- Higher efficiency in terms of engine power and performance
- Lower fuel consumption
- Green footprint due to lifetime extension for the old engine
- Better availability of spare parts
- K2S swap program will be available



R-Series HPR- Series ST27-Series

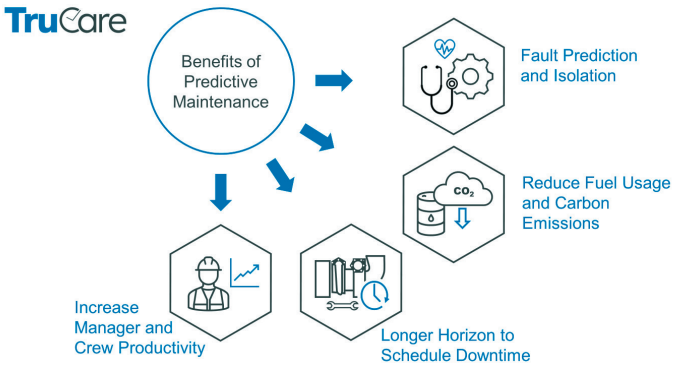
Condition Based Maintenance CBM



Advantages of the TruCare ™ Architecture

- Easy to install (can be installed onboard the vessel in a few hours)
- One system monitors all turbochargers on the vessel (main and auxiliary engines)
- Works for all makes and models of turbochargers
- Cost-effective

Condition Based Maintenance CBM

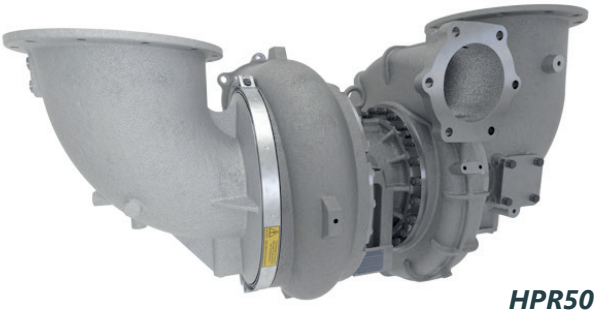


What we offer to our customers' advantage

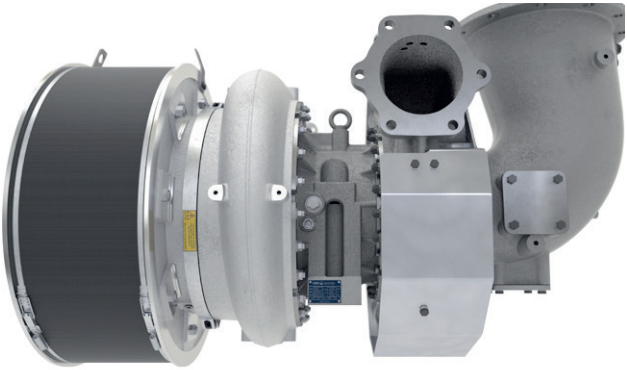
- Worldwide service directly from our headquarters or through our dense service network based at the most strategic locations across the globe 24/7 on-call service
  SERVICE NUMBER: +49 (0) 172 351 6045
- Genuine spare parts available from our service stations or sent from the headquarters within 24 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



HPR5000



ST6-EP

KBB worldwide service

Over 60 trained and audited Service Partners

Worldwide Service Partners

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

Last revised: August 2024
Subject to modifications in the interest of technical progress.

KBB TURBOCHARGERS **Boost Your Power. Boost Your Efficiency.**

Kompressorenbau Bannewitz GmbH
Windbergstrasse. 45 | 01728 Bannewitz
Germany

Phone: +49 (0) 351 4085 664
24 hour service number: +49 (0) 172 3516 045
e-mail: info@kbb-turbo.com

A member of Ogepar S.A.

kbb-turbo.com