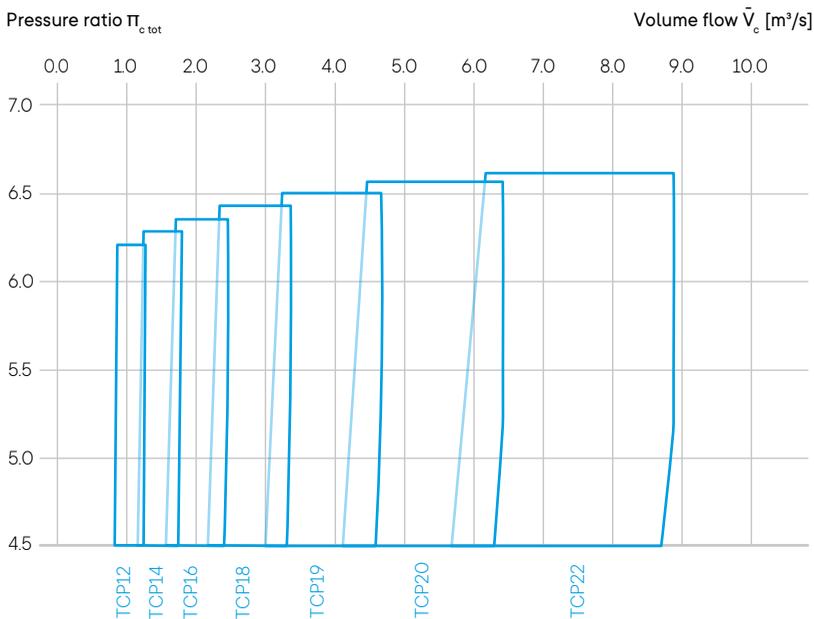


The all-new TCP series

Ready for the future with enhanced performance and efficiency



The TCP series of radial turbochargers can achieve maximum pressure ratios of up to 7, a benchmark figure that sets new industry standards. While existing 1-stage turbocharger systems typically deliver pressure ratios of well above 5, the TCP range achieves stable operating points of well above 6. These remarkable figures are thanks to a complete redesign of the aerodynamic stages on both the compressor and turbine side.



The TCP range is key-enabler for increases in power output of around 20%. That translates to increased power at a similar cost, or a smaller engine or fewer cylinders for the same output.

When creating aerodynamic and structural mechanical models for the TCP series, PBST development teams used advanced numerical simulations, which are driven by the ongoing trend towards faster computer processing capability. They were thus able to create highly complex simulations, used as the basis for targeted optimization of flow components, enhanced turbocharger performance and longer working life.



Supercharged Engine Output

Type	[kW]
TCP12	800
TCP14	1,150
TCP16	1,600
TCP18	2,200
TCP19	3,000
TCP20	4,200
TCP22	5,800

Specific air consumption (le) 6.5 kg/kWh [depends on fuel and engine type]

Key Benefits

- Increase in power density of up to 20%
- Decrease of specific engine costs up to 20%
- Improved efficiency levels of > 70%
- Significantly improved dynamic behavior:
- 25% reduction in rotor moment of inertia
- Plug & play (keep same flange connections as existing turbochargers)
- Improved cost of ownership:
 - long time-between-overhaul
- Maintenance-friendly

Applications

- High- and medium-speed engines
- Conventional and future fuels
- Seven frame sizes, to cover a wide range of power, marine and off-road applications