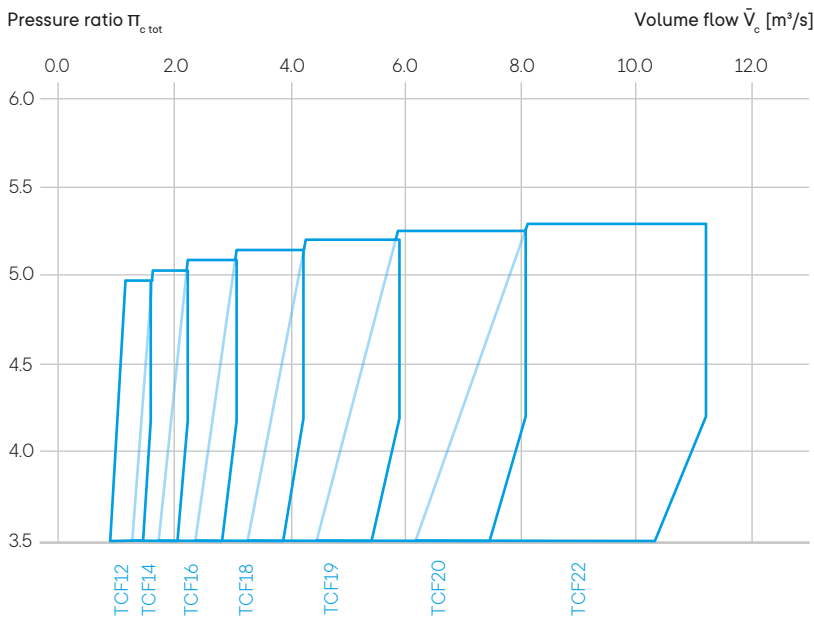


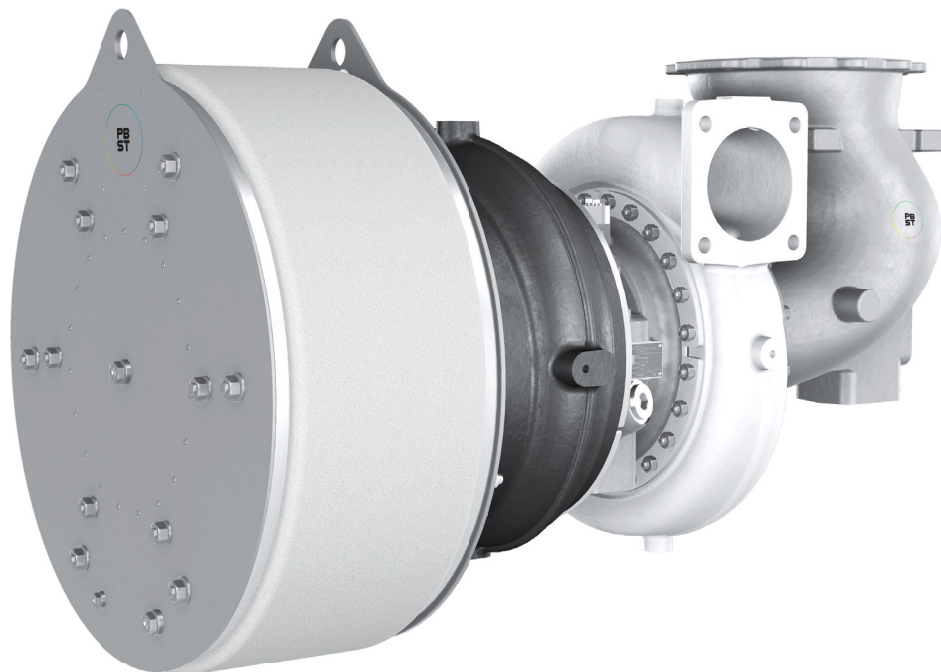
The all new TCF series

Making the most of optimized flow

Delivering an impressive 20% increase in specific flow, the TCF radial turbocharger offers a big potential to use smaller or less turbochargers. Specifically designed to deliver highest efficiencies, the TCF family is particularly suitable for optimization at part load.



Initial studies show that significantly improved fuel consumption figures are achievable with TCF turbochargers. In one study, with a TCF retrofit and engine optimization package, fuel consumption in the relevant operating range was reduced by 4.5%. TCF turbochargers can also help reduce engine emissions, for improved compliance with regulations such as EEXI (Energy Efficiency Existing Ship Index).



The TCF series is also designed for use as the low-pressure-stage turbocharger in two-stage applications, helping to reduce size or the number of turbochargers required and thereby create potential for cost savings.

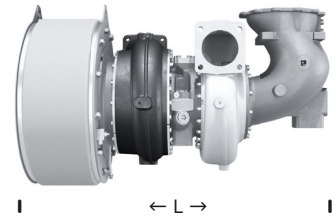
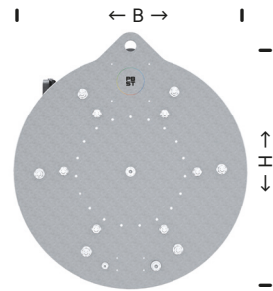
Due to the outstanding part load performance the big TCF frame sizes in addition are heading for turbocharging the small bore 2-stroke applications.

TCF turbochargers are easy to retrofit thanks to the modular construction and standard connection dimensions, and can help reduce the cost of ownership, with long time-between-overhaul and a maintenance-friendly design.

Supercharged Engine Output

Type	[kW]
TCF12	1,000
TCF14	1,450
TCF16	2,000
TCF18	2,700
TCF19	3,800
TCF20	5,200
TCF22	7,200

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



Key Benefits

- 20% increase in specific flow
- Potential to use smaller or less turbochargers
 - cost savings
- Highest efficiencies at part load
- Significant reductions in fuel consumption and emissions
- Significantly improved dynamic behavior:
 - 25% reduction in rotor moment of inertia
- Same standard connection dimensions as previous turbochargers

Applications

- High-, medium- and low-speed engines
- Suitable for low-speed engines as well as LP-stage for 2-stage turbocharging
- Conventional and future fuels
- Seven frame sizes to cover a wide range of power, marine, and off-road applications