

Through Piston Cooled (TPC) Front Caliper

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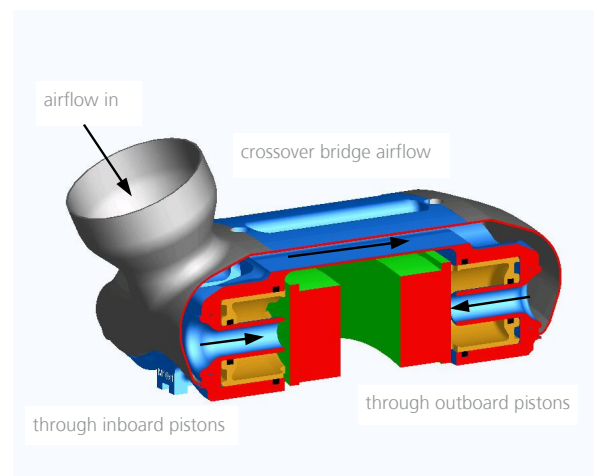
features and benefits

- **Unique, Through Piston Cooling (TPC) design.** Air is ducted through Titanium pistons, diffusing against the backing plate of the brake pad.
- Brake fluid around pistons is cooled, helping to prevent vaporization at the most critical location.
- Dual crossover bridge allows effective cooling of both caliper sides with a single, 3" inlet duct.
- With the addition of an inlet baffle, airflow may be controlled from side to side, providing thermal balance.
- Superior piston position control: Dual seals to better prevent piston knock-back.
- Machined from billet aircraft aluminum alloy for superior strength at higher temperatures.
- Mono-block construction for maximum caliper stiffness.
- Uses commonly available pad shapes.
- Four-piston staggered bore design for reduced pad taper and superior pedal feel.
- Radial mount with adaptor bracket for accurate positioning.
- Easily drops in to replace many current brake packages.



specifications

Piston size	1.75" / 0.81" - 1.875" / 0.75"
Total piston area per caliper	8.46 in ² (54.58 cm ²)
Pad area	12.2 in ² (78.7 cm ²)
Pad volume	11.53 in ³ (189 cm ³)
Pad thickness	1.18" (30mm)
Standard rotor (48) vane	18.7 lbs.
New rotor (252) vane	18.0 lbs.
TPC front caliper	6.82 lbs.
Bobbin drive hat	2.21 lbs.
Bobbin drive hardware (axle set)	1.21 lbs.
(Typical) total airflow to brake:	400 cfm
(Typical) airflow direct to TPC:	190 cfm



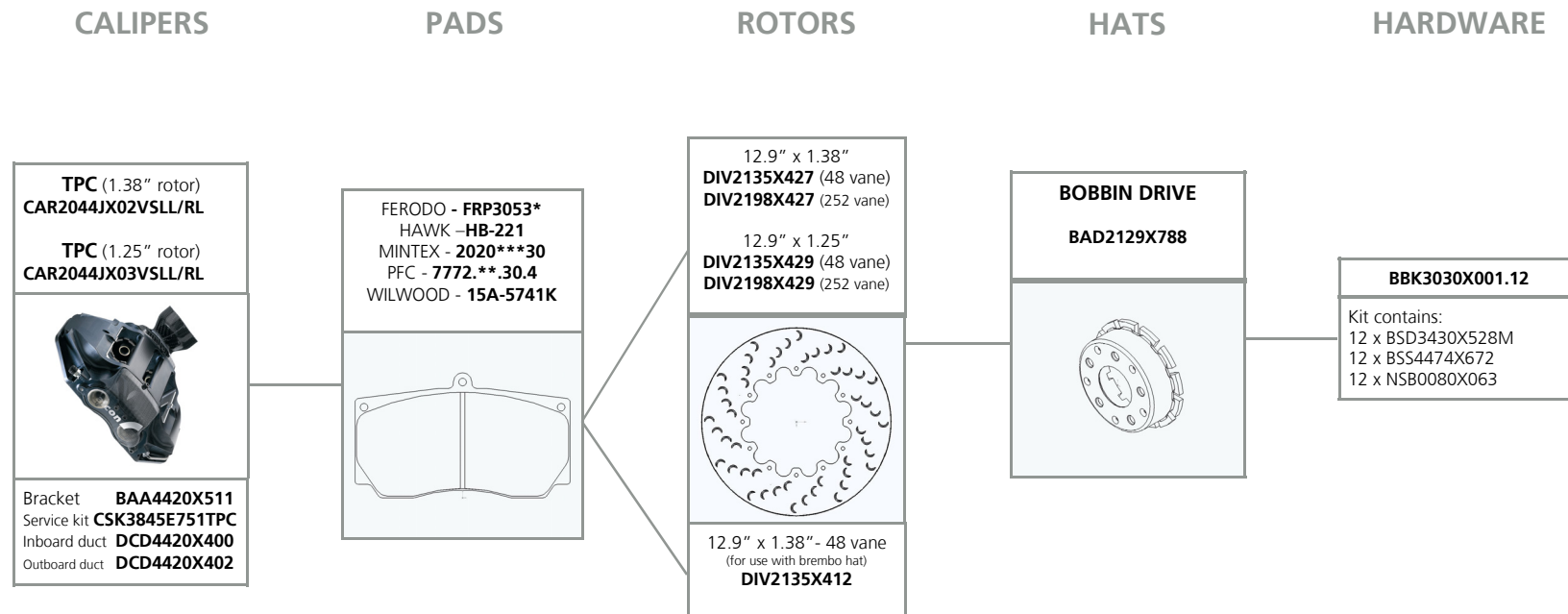
TPC cross section view with ducts

applications

NASCAR (Nextel Cup, Busch Series, Craftsman Truck Series), USAR Pro Cup, others.

TPC stock car front package

After extensive development and testing, the *Through Piston Cooling* (TPC) caliper by Alcon is now available for all high temperature racing applications. The TPC combines durability, stiffness and performance into a single lightweight package, while cooling the most heat sensitive areas of the brake system. By ducting air *through* the pistons on both sides of the caliper, the TPC helps avoid vaporization of the brake fluid during the most extreme braking conditions. In addition to superior piston position control, thermal balance can be achieved by directing airflow from side to side, reducing hot spots.



service parts

	1.75" bore	1.875" bore		
Ti piston (1.6" long)	PTH4541X800	PTH4841X800	pipe assembly	PSC4420X501
Ti piston (1.7" long)	PTH4543X800	PTH4843X800	recirculator kit	PSC4420X700
inner seal	SES3422X601	SES3419X601	bleed screw	FSB0080X008
outer seal	SES4500X751	SES4900X751	caliper temp. strips	THS0080X285
back-up ring	BPC2010X501	BPC1910X500		
Service kit	CSK3845E751TPC			

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