## **Tapered Bore Throttle Bodies Increase Power And Torque**

EFI Hardware have increased the range of high performance Tapered Bore Throttle Bodies to include 43mm, 45mm, 48mm, 50mm and 53mm throttle plate sizes.

The tapered bore results in an increase in air speed over conventional straight bore throttle bodies. This extra air speed enhances the engine's scavenging cycle to provide increased filling on each cylinder intake stroke. More air, plus the corrected fuel and spark delivery equals more engine torque and power.

Tapered Bores are available in the EFI Hardware Pro Race Series Throttle Bodies.

## TAPERED BORE THROTTLES



Tapered Bore Throttles have a clear advantage over Parallel Bore Throttles at increasing power and torque. By accelerating the air through a venturi (in this case a tapered bore) the air speed through the throttle body is increased. This enhances the engine cycle's scavenging effect to provide more air and fuel in the combustion chamber and therefore more power and torque.

The Tapered Bore Throttle Body has 3 sections:

- Inlet from ram tube is the largest diameter of between 45mm and 55mm
- This then tapers down to a short parallel section for the throttle plate between 43 and 53mm
- There is a second taper down to the outlet flange of the throttle body of between 40 and 50mm

## HP RATINGS

HP/kW Ratings vary from engine to engine. The power ratings given here are only a guide, and are not absolute power ratings. Engine power is determined by intake, exhaust, cylinder head design, camshaft design, compression ratio, fuel type and quality and many other factors.

43mm - 50HP/36KW\* per throttle - with the tapered bore giving a potential for 5% above this figure. 45mm - 54HP/40KW\* per throttle - with the tapered bore giving a potential for 5% above this figure. 48mm - 64HP/48KW\* per throttle - with the tapered bore giving a potential for 5% above this figure. 50mm - 72HP/54KW\* per throttle - with the tapered bore giving a potential for 5% above this figure. 53mm - 80HP/60KW\* per throttle - with the tapered bore giving a potential for 5% above this figure.

\*This number is a guide only and should be used in conjunction with real-world experience.

These Throttle Bodies are manufactured from 601 Cast aluminum and heat treated before being CNC machined.

The butterflies are measured for each bore & precision machined to a 0.0005"" tolerance. Butterflies are secured to centreless ground brass shafts with split screws to ensure reliability and serviceability.

All are fitted with bearings rather than bushes to eliminate axial shaft movement. Low stiction bearings for sharp throttle response.

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