

Features of the four main types of charger at a glance

	Twin-Screw Supercharger (Whipple)	Centrifugal Supercharger	Turbocharger	Roots Type Supercharger
Response	No Lag. Instant boost - full boost to redline.	Lag. Poor low-rpm response.	Turbo lag. Poor low-rpm response.	No lag. Good low to mid range power.
Driveability	Increased lugging ability in higher gears. Constant boost through powerband.	Must downshift to maintain boost level.	Must downshift to maintain boost level.	Increased lugging ability in higher gears.
Engine Torque Curve	Virtually flat curve - ideal characteristic.	Often worse than uncharged engine at low speeds.	Often worse than uncharged engine at low speeds.	Wide range - power can fall off at high rpm.
Heat Buildup	Low - intercoolers are usually not needed.	Low - intercoolers are usually not needed.	High - may need intercooler	High - may need intercooler.
Noise	Virtually silent - extremely low noise levels.	Typically very noisy.	Very low noise levels.	Typically very noisy.
Adiabatic Efficiency	70-80%	60-78%	60-80% Peak	40-60%