



Matching High Tech Turbos

All of these turbos are capable of more horsepower than the ratings given. Ratings have been calculated keeping EGT's in mind. We rate air flow for the given horsepower. So, generally speaking, if EGT's are too high with a properly matched compressor then there is too much fuel for some reason – normally injector issues.

We like to give real world horsepower ratings, at maximum EGT's of approximate 1400 degrees on a long, hard pull at 2000 ft. elevation. These ratings also assume a free flowing air box, air filter and exhaust.

Notes to keep in mind:

- A 57mm inducer on an HTBG will cool EGT's in "real world" applications the same as the *Holset* HX40 60mm inducer wheel, due to the major diameter of the (extended tip base size ... not inducer size) compressor wheel. So, 62mm compressors might flow more than simple inducer sizing suggests.
- These compressors tend to raise cruising EGT's while lowering EGT's on long, hard pulls.
- These turbos currently run two turbine wheel sizes, a 64mm and a 71mm. The smaller turbine wheel tends to spool up quicker but have higher "drive pressure". Drive pressure can reduce top-end horsepower (depending on RPM and horsepower level). The larger turbine wheel will have a slightly slower spool-up. This LDP (Low Drive Pressure) wheel design tends to build boost faster than the 64mm turbine wheel. It tends to reduce WOT EGT's by 200 degrees.
- These turbos currently run two turbine housing sizes, a 12cm² and a 14cm². These numbers are used to give you a *Holset* comparison. Due to the size and design of the turbine wheel, a 12cm² will have more exhaust flow than *Holset's* 14cm². Spool-up will roughly be equivalent to *Holset's* HX35 with a 14cm² turbine housing. Likewise, a 14cm² will almost match a *Holset* HX40 16cm² turbine housing in real world applications but should spool quicker than the HX40 16cm².
- Housing sizing will affect drivability ... smaller for low-end, larger for top-end. (Comments about "top-end" performance generally refer to the last bit of a quarter-mile drag strip run.) Larger housings tend to reduce EGT's about 100 degrees.
- New stainless steel alloy turbine housings are coming soon exclusively from High Tech Turbo. They will be available in 2 sizes, a 13cm² and a 16cm². These will increase flow as well as lower drive pressure due to our custom designed volutes. The larger LDP turbine wheel will be able to be used in both of the new turbine housing.

Most people select too large of a compressor. The most drivable compressor for street driving is the 62mm compressor such as the **Super Stock** or HTB2 **Street Stock** turbo. The 64mm and 66mm compressors are intended for racing and pulling. Many people use larger compressors for street use but there will often be some give and take on performance somewhere.

Some things to keep in mind when selecting your turbo are transmission type, gear ratio, tire size, elevation, type of driving and where you want your power to be. Those with an Automatic transmission, with gear ratios that keep you running at lower RPM's, will prefer smaller turbine housing. Also, stock 3rd gen trucks run smaller turbine housing so many customers will prefer the smaller performance turbine housing.

When running an adjustable level "box", lower levels may not provide enough fuel and/or timing to run a performance charger efficiently. Drivability issues will intensify as the compressor size increases, when the box settings are low.

Another thing to consider is "surge". Some call this compressor surge, technically it's not compressor surge. Actually it's turbulence. This can happen with all turbos, including stock. This surge issue occurs on about 10% of the compressors we sell that are larger than 62mm. Since this is turbulence, it is erratic. It can usually be "driven around" easily with a manual transmission. Automatic transmission makes driving around the issue more difficult. Often something as simple as a *Turbo Air Guide* will minimize the condition.

HTBG turbos (57mm) are 2nd gen turbos most efficient in the 350-425 HP range. These are very durable large shaft turbos providing great low-end drivability and increased torque. (Use when adding 150-200 HP worth of fueling mods.) Use 12cm² housing for low-end street performance and drivability, and use the 14cm² mainly for top-end performance consideration.

HTB2 turbos (62mm) **Street Stock** turbos are most efficient in the 450-525 HP range. Very durable large shaft turbos. (Use when adding 250-300 HP worth of fueling mods.) Great low-end drivability and increased torque using a 12cm² turbine housing. The 14cm² will push you past the 500 HP range.

HTB2 turbos (64mm) **Killer B2** turbos are most efficient in the 475-575 HP range. Very durable large shaft turbos. (Use when adding 300-350 HP worth of fueling mods.) The 14cm² will push you past the 550 HP range. The 12cm² housing will aid spool-up by about 200 RPM

HTB2 turbos (66mm) **Sled Puller 66** turbos are most efficient in the 550-625 HP range. Very durable large shaft turbos. (Use when adding 375-400 HP worth of fueling mods.) The 14cm² will push you past the 600 HP range. The 12cm² housing will aid spool-up by about 200 RPM.

High Tech Series turbos

The LDP or *Killer Wheel* is the major difference between the HTB turbo line and the new High Tech Series. This turbine wheel acts much like an extended tip compressor wheel. After initial spool-up, the design builds boost faster than other wheels. So if you love the performance curve of the HTB compressor compared with stock turbos, you should enjoy the new turbine wheel addition to the line-up for similar reasons. The *Killer* turbine wheel extend every horsepower range by another 50+ HP.

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