A Look Inside

EFR™ Series

Forged Milled Compressor Wheels (FMW)

EFR turbos contain wheels that are fully milled from forged aluminum, commonly known as 'billet'. Cut from custom forgings,their strength exceeds that which is available from typical bar-stock and also exceeds the material properties of an aluminum casting.

Gamma Ti turbine Wheel & Shaft

Gamma-Ti turbine wheel cuts turbine inertia by roughly 50% dramatically improving turbo response. Turbine sizes range from 58 to 80mm in tip diameter.



Stainless steel turbine housings

Stainless steel turbine housings improve durability in high-temperature applications and offer superior corrosion resistance as well as being cast with thin walls to reduce weight and thermal inertia. All EFR turbine housings are offered with industry standard connection flanges, select configurations available with V-band inlet and outelets for improved mounting freedom.

High Flow Wastegates

Purpose designed large wastegate ports give the wastegated EFR turbos the capability of handling the flow requirements of high performance applications.

High Turbine Efficiency

The EFR turbine wheels have the characteristic of very high efficiencies and have been paired with our 'Superback' and 'Fullback' back-disk shapes. The Superback shape adds a curved profile to the backdisk and has the effect of lowering centrifugal rotational speeds.

Select sizes available with Mixed Flow Turbine (MFT) geometry to further enhance durability, lower inertia, and improve exhaust pulse respnse.

Boost Control
Solenoid Valve (BCSV)

Sensor Mounting

Convenience

Speed sensor

provisions are

compressor

cover. Speed

separately.

aslo supplied on

sensors are sole

mounting

every

A boost control solenoid valve (BSCV) is included with every EFR turbo.

Flexible Compressor Cover

The 'large' cover has a dualmachined outlet, both for a hose connection and a vband connection

Enhanced Turbo Response

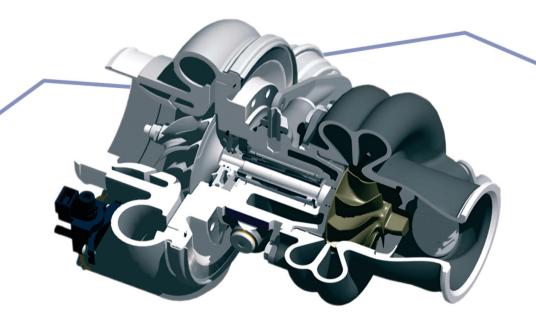
EFR turbochargersuse a dual-row ball bearing cartridge with ceramic balls and metal cage. This bearing system provides substantial friction reductionat low turbo speeds and in the process helps improve turbo response.

Simplified Installation Integrated compressor

Integrated compressor recirculation valve (CVR) to help avoid compressor surge and backflow during a throttle lift event. This feature helps to simplify the installation task and lowers overall system install cost.

Ease of Orientation

Turbo orientation flexibility is facilitated by the wastegate bracket to bearing housing mounting arrangement, allowing freedom to locate the end housings independent of the wastegate canister.



Adjustable Wastegate

The fabrication and installation task is simplified with wastegated EFR models that feature adjustable wastegates available in several canister spring options, which provide base pressure settings ranging from 6-45 psi.

