

The logo for AMTECH OEM features a stylized gear icon to the left of the text. The text "AMTECH" is in a bold, blue, sans-serif font, and "OEM" is in a grey, sans-serif font.

OEMs Need Quality.
OEMs Trust AmTech.



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Global Manufacturing Solutions for OEM customers - *since 1995*

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01

COMPANY OVERVIEW

Pricing + Quality are a given | customer service sets us apart

AMTECH OEM

Get Started Now 908.705.7600

[AmTechInternational.com](https://www.AmTechInternational.com)

Client Portfolio

Quality is something that's built into a product from the beginning - not checked for once the job is done.



Inventory Control / Warehousing Capabilities

Are you struggling with demand by always ordering out-of-stock parts?

AmTech JIT stocking programs are the perfect solution to reduce production line delays and storage costs.



02

GEARS

Bevel, Hypoid, Cylinder, Spur, Worm, Ring & Pinion Sets

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Gear Production Capabilities

Straight Bevel Gear

M1.3 to M8.5

Min. diameter = 40mm

Max. outer diameter = 216mm

Spiral Bevel Gear - Zerol - Hypoid Gear

M2 to M15

Min. diameter is 40mm

Max. outer diameter = 600mm

Spur Gear - Cylinder Gear

M1 to M5

Min. diameter = 40mm

Max. diameter = 300mm

Ring and Pinion

M2 to M15

Min. diameter = 40mm

Max. diameter = 600mm

Services and Materials Used:

- **Grinding, Hobbing, Skiving, Shaving, Non-circular Grinding, Milling, Shaping, Rack Rolling, Wire EDM, Honing, Broaching, Nitriding, Heat Treatment**
- **Gear Grinding:** AGMA 15-12
Gear Honing: AGMA 13-9
Gear Shaping: AGMA 12-9
Gear Shaving: AGMA 13-10
Gear Hobbing: AGMA 12-8
- **Brass**
- **Bronze**
- **Aluminum**
- **Steel:** Carbon Steel, Low Alloy, Stainless and Tool Steels

Main Drive Assembly

Complex 19" long Main Drive Assembly. Mounted on a Main Shaft with splines, this is used within a Tractor Transmission application. This assembly includes the following components:

- ✓ **6 Ground Gears**
- ✓ **3 Shift Collars**
- ✓ **2 Cone Bearings**



Bevel Gears (Straight, Spiral, Hypoid, Zerol)

MP3x15Tx24T
0.2KGx0.6KG



MP3x20Tx20T
0.4KGx0.4KG



MP4x18Tx20T
0.7KGx0.7KG

MP6.45x10Tx21T



MP3.31x20Tx24T
0.8KGx0.8KG

MP3.67x7Tx43T
1.6KGx2.6KG

MP3.59x10Tx36T
0.5KGx1.5KG



MP4.4x10Tx36T
0.7KGx2.5KG



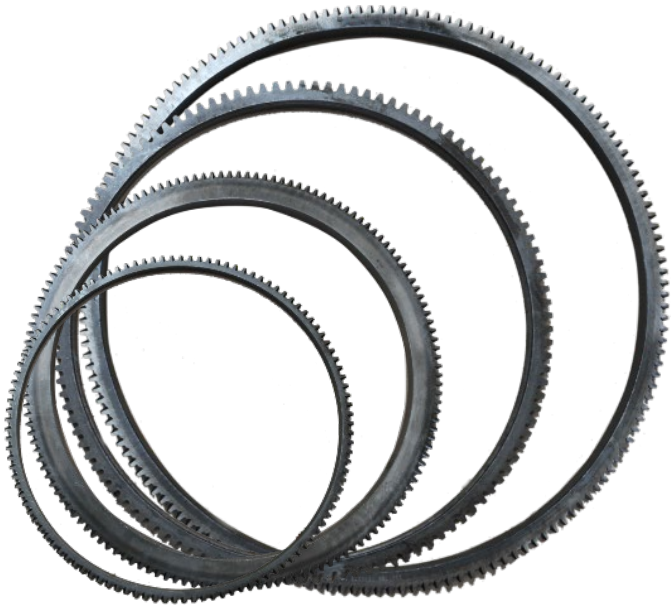
MP3.215x7Tx13T
0.15KGx0.15KG



Cylinder Gears



Ring Gears & Flywheel Assemblies



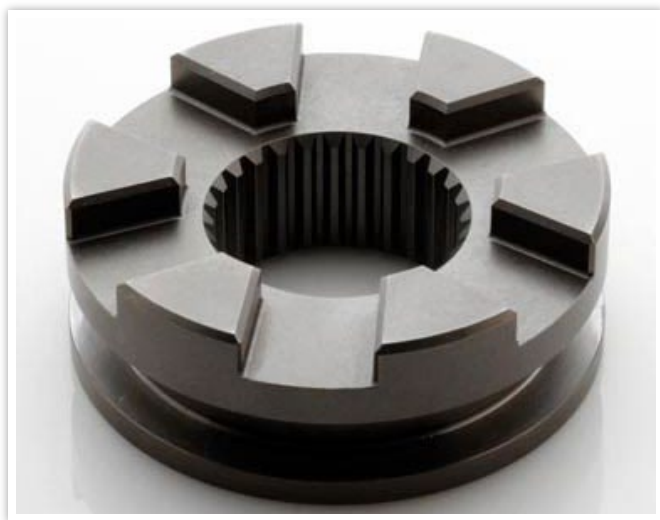
Ring and Pinion Gear Sets



Worm Gears



Shift Collar Gears



03

SHAFTS

Machined, Rolled, Forged, Hobbed, Welded and more

Shaft Production Capabilities

AmTech has cutting-edge capabilities in producing precision shafts for motion control, power transmission and other critical applications.

Simple Shafts

Length: 1" – 36" Diameter: 0.25" – 4"

Spline Shafts

Length: 1" – 60" Diameter: 0.50" – 4"

Gear Shafts

Length: 3" – 36" Diameter: 2" – 8"

Worm Shafts

Length: 2" – 12" Diameter: 0.25" – 12"

Forged Shafts

Length: 3" – 16" Diameter: 1" – 8"

Cast Shafts

Length: 4" – 14" Diameter: 2" – 20"

Welded Shafts

Length: 1" – 40" Diameter: 1" – 6"

Services and Materials Used:

- **CNC Machining, Turning, Grinding, Drilling, Tapping, Honing, Balancing, Threading, Broaching, Keyways, Nitriding, Heat Treatment**
- **Steel:** Carbon Steel, Low Alloy Steel, Stainless Steel, Tool Steel, 1020, 1026, 4140, FLEXOR, 8620, 8620H, 12L14, 52100
- **Iron:** Cast Iron, Ductile Iron
- **Aluminum**
- **Copper Alloy:** Brass, Bronze
- **Thermoplastics:** Acetal, PEEK, Delrin

Simple Coupling Shafts

Differential shaft used in front and rear wheel drive vehicle. Production includes carburization.

Length: 15.748"

OD: 1.26"

Tightest Tolerances: $\pm 0.005\text{mm}$

Material: SCM420H

Coupling shaft used in heavy equipment machinery for the Forestry industry. Production includes centerless grinding and finished with induction treatment.

Length: 11.82"

OD: 0.79"

Tightest Tolerances: $\pm 0.005\text{mm}$

Material: S55C



Simple Shafts



EV Spline Shaft



Used by a Hybrid Vehicle OEM - multiple splines, keyways, heat treating & magnetic particle inspection.

Length: 19.413" **OD:** 2.343" **Material:** 4140 **Tightest Tolerances:** $\pm 0.0066\text{mm}$

Oversized Spline Shafts



Drive shaft used in an ATV rear axle application. This shaft is heat treated, with a chrome coating.

Length: 47.25" **OD:** 1.58" **Material:** SMCN439 **Tightest Tolerances:** ± 0.005 mm



Driveshaft is used in an Golf Cart drive system. This shaft is induction treated, with a zinc plate coating.

Length: 38" **OD:** 1.45" **Material:** SCM 440 **Tightest Tolerances:** ± 0.005 mm

Gear Shafts

Gear shaft used in an off-highway vehicle Engine.

Length: 7.87"

ID: 0.79"

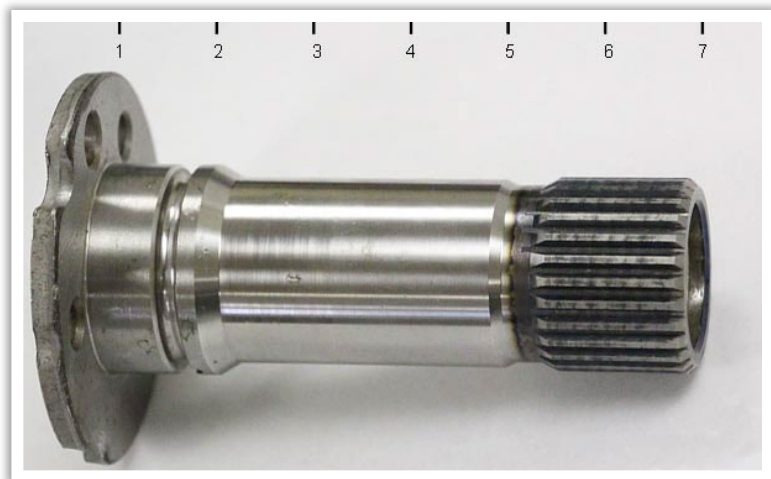
OD: 1.66"

Material: SCM420

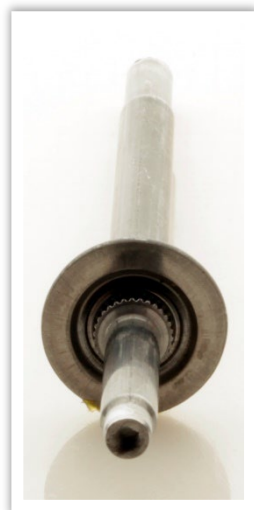
Tightest Tolerances: $\pm 0.005\text{mm}$



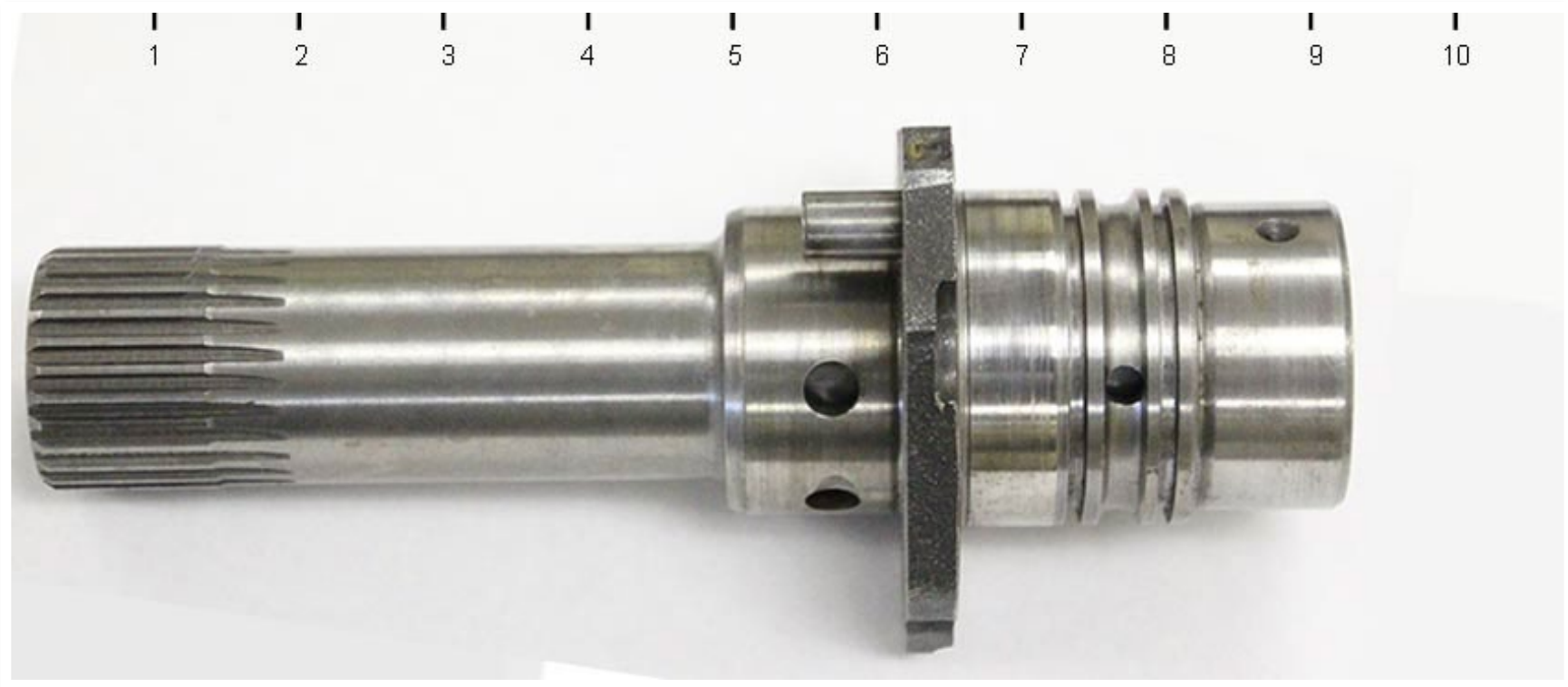
Forged Shafts



6" Forged Shafts used in a clutch gear set.



Casted Shafts



Welded Gear Shafts



04

MACHINED CASTINGS

Aluminum, Zinc, Magnesium, Iron and Steel

AMTECH OEM

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Machined Casting Capabilities

HP Die & Gravity Casting

- Press capabilities range from 120T to 2,500T.
- High speed production ideal for large volumes.
- Most suitable for restrictive dimensional tolerances.
- Most common form of casting in the Automotive Industry.

Investment Casting

- Suitable for shaped or non-symmetrical parts with fine details.
- Parts that have complex internal structures.
- Requirements for tightest tolerances, thin walls and finishes.

Sand Casting

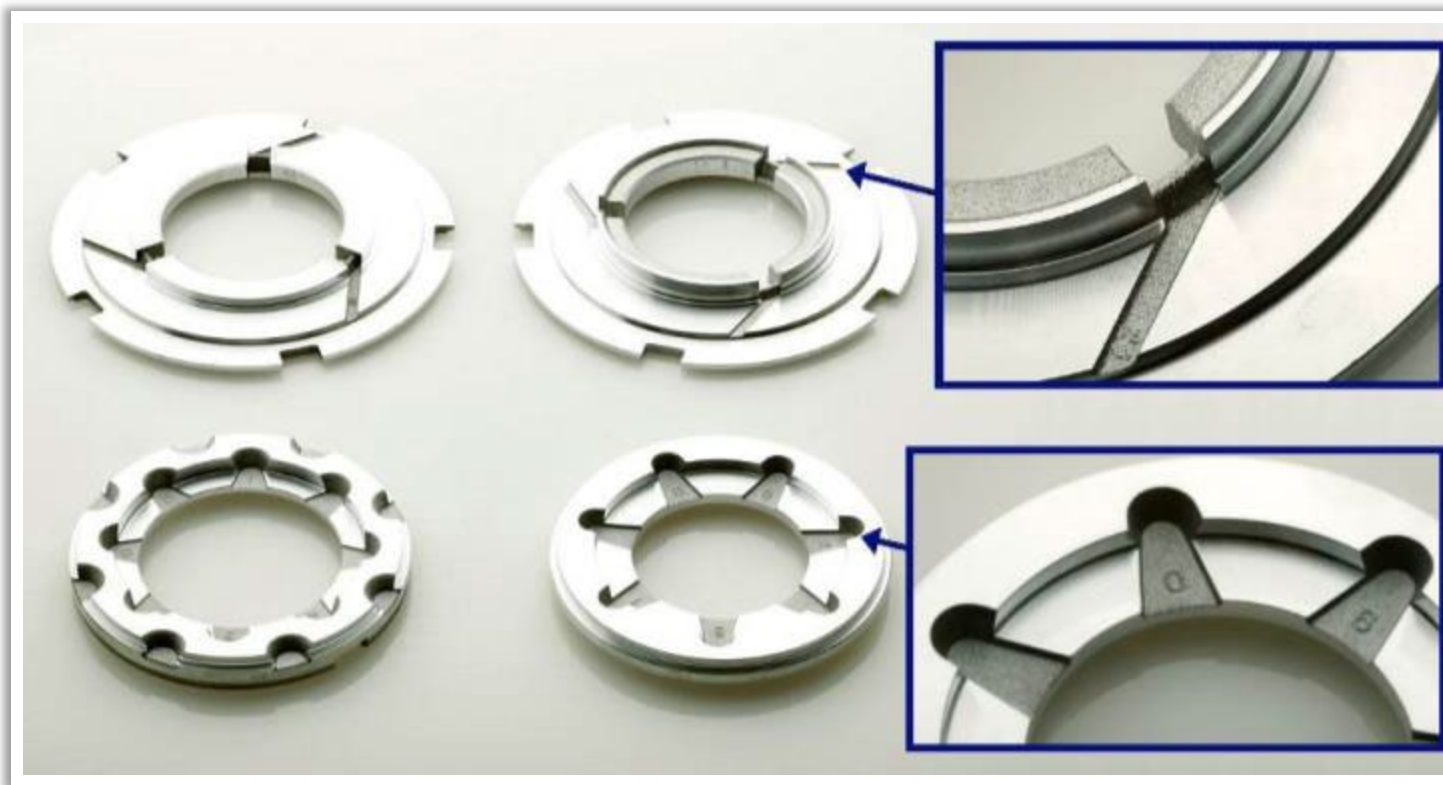
- Suitable for shaped or non-symmetrical parts with/without internal structures and less restrictive tolerances.
- Ideal for larger part sizes with less strict tolerances.
- Surface finish will be rough.

In-House Services and Materials :

- **Mold design, fabrication and maintenance**
- **Secondary machining and finishing**
- **Aluminum:** A380, ADC10, A383, ADC12, ADC6, ALSi10Mg, ALSi12Fe, ALSi9Cu3, ALSi12Cu1Fe, ALSi12CuNiMg, ALSi12Cu2
- **Zinc:** Zinc 3, 5 and 27
- **Magnesium**
- **Iron:** Ductile Iron, Gray Iron, Cast Iron
- **Steel:** Carbon Steel, Low Alloy Steel, Stainless Steel
- **Brass & Bronze**

Aluminum Die Casting -Automotive

Stator Plate Thrust Washers used by Automotive OEM customers.



Weight

0.4 oz

Thickness

0.496"

I.D.

3.500"

O.D.

4.025"

Application

Torque Converter

Tightest Tolerances

$\pm 0.0005\text{mm}$

Usage

1,000,000+

Material

A380

Aluminum Die Casting - Automotive

This Stator is the “Torque Converter’s Brain”. A very critical part with 30 turbine blades at precise angles.



Weight

2.2 lbs

O.D.

8.0”

Balancing

4000 RPM

Application

Torque Converter

Tightest Tolerances

$\pm 0.0005\text{mm}$

Usage

180,500

Material

A380

Aluminum Die Casting

This Motor Housing is produced for an OEM that manufacturers industrial air conditioning Motors.



Weight
2.35 lbs

Height
11.45"

I.D.
6.789"

O.D.
6.820"

Application
Electric Motor Housing

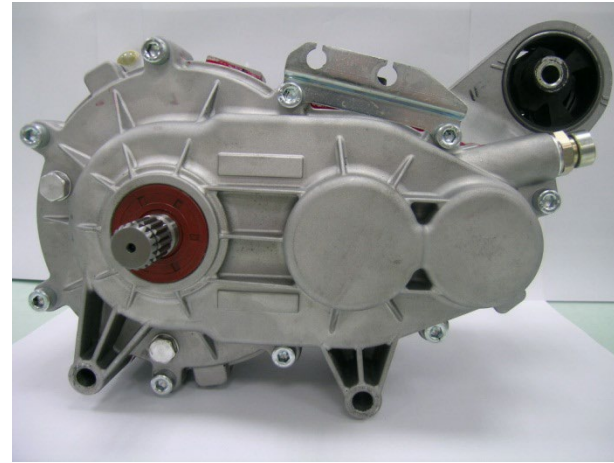
Tightest Tolerances
 $\pm 0.001\text{mm}$

Usage
80,000

Material
A380

Die Casting + Gears & Shafts

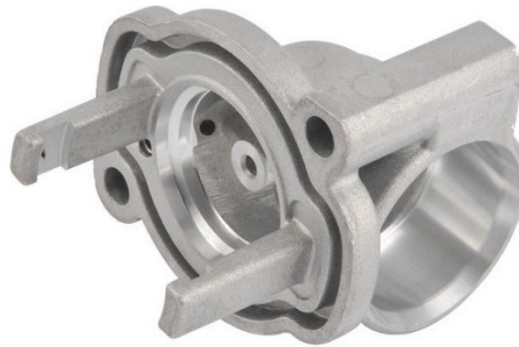
This fully assembled Aluminum Gearbox is manufactured for an Electric Vehicle OEM in Europe.



Aluminum Die Casting - Automotive



Description: Terminal Housing
Weight: 0.111 kg
Dimensions: 99mm x 78mm x 33mm
Reference/Tolerances: -0/+0.015



Description: Coupling Joint
Weight: 0.195 kg
Dimensions: 105.35mm x 61mm x 104mm
Reference/Tolerances: H7



Description: Torque Reaction Arm
Weight: 3.4 kg
Dimensions: 453mm x 156mm x 92mm
Reference/Tolerances: ± 0.05



Description: Electric Controls Cover
Weight: 0.5 kg
Dimensions: 471mm x 326mm x 69mm
Reference/Tolerances: ± 0.1



Description: Paddle Shifter Lever
Weight: 0.109 kg
Dimensions: 94mm x 55mm x 30mm
Reference/Tolerances: ± 0.1



Description: Electrical System Fitting
Weight: 0.007Kg
Dimensions: 33.1mm x 21mm x 34mm
Reference/Tolerances: ± 0.05

Aluminum Die Casting - Automotive



Description: Manifold

Weight: 0.41kKg

Dimensions: 189mm x 101mm x 53mm

Reference/Tolerances: ± 0.05



Description: OBD-II Connector

Weight: 0.124 kg

Dimensions: 115mm x 71mm x 37mm

Reference/Tolerances: ± 0.1



Description: Headlight Housing

Weight: 0.075 Kg

Dimensions: 105mm x 84mm x 76mm

Reference/Tolerances: ± 0.01



Description: Wiring Housing

Weight: 0.85Kg

Dimensions: 175mm x 151mm x 132.5mm

Reference/Tolerances: H7



Description: Thermostat Controller

Weight: 0.025Kg

Dimensions: 26.6mm x 26.6mm x 60mm

Reference/Tolerances: H7



Description: Thermostat Housing

Weight: 0.147Kg

Dimensions: 96.1mm x 87.6mm x 98.6mm

Reference/Tolerances: H7

Gravity Die Casting

Electrical Air System Housing used by a Motorcycle OEM.



Weight
1.33 lbs

Length
6.31"

I.D.
2.25"

O.D.
4.05"

Application
Motorcycle

Tightest Tolerances
+0/-0.005mm

Usage
30,000

Gravity Die Casting

Gravity Cast and Machined body for a “ZERO Spill” Fuel Nozzle System OEM.



Weight
1.51 lbs

Length
10.77”

I.D.
1.62”

Material
A356-T6

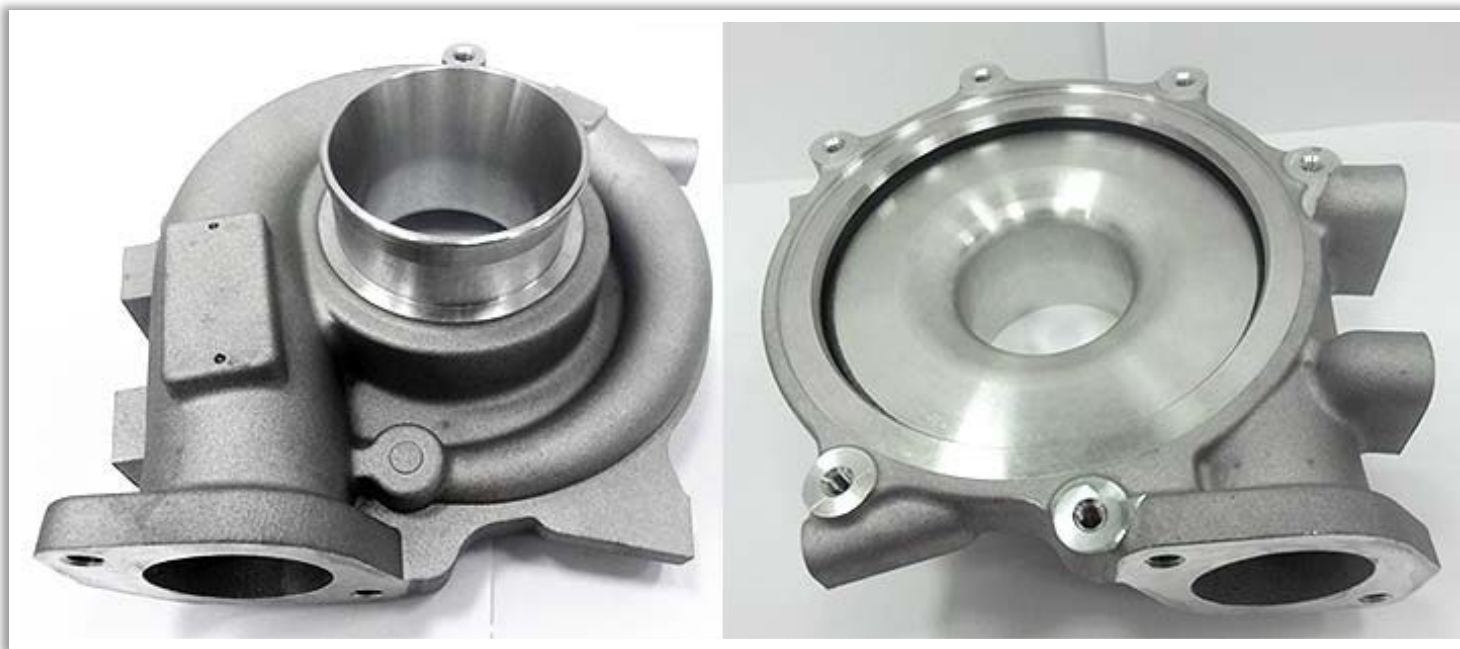
Application
Fuel System

Tightest Tolerances
 $\pm 0.005\text{mm}$

Usage
40,000

Gravity Die Casting

Gravity Cast and Machined Housing used by a Turbo Charger manufacturer.



Weight
3.66 lbs

Length
7.359"

Width
7.050"

Depth
4.010"

Application
Electric Vehicle

Tightest Tolerances
 $\pm 0.0001\text{mm}$

Usage
120,000

Gravity Casting



Description: Filter Block with Steel inserts
Weight: 0.111 kg
Dimensions: 99mm x 78mm x 33mm
Reference/Tolerances: -0/+0.015



Description: EGR Cooling Housing
Weight: 0.195 kg
Dimensions: 363.2mm x 120mm x 104mm
Reference/Tolerances: ± 0.05



Description: Engine Support Bracket
Weight: 3.4 kg
Dimensions: 453mm x 156mm x 92mm
Reference/Tolerances: ± 0.05



Description: Turbine Housing
Weight: 0.5 kg
Dimensions: 471mm x 326mm x 69mm
Reference/Tolerances: ± 0.1



Description: Air Regulator
Weight: 0.109 kg
Dimensions: 94mm x 55mm x 30mm
Reference/Tolerances: ± 0.1

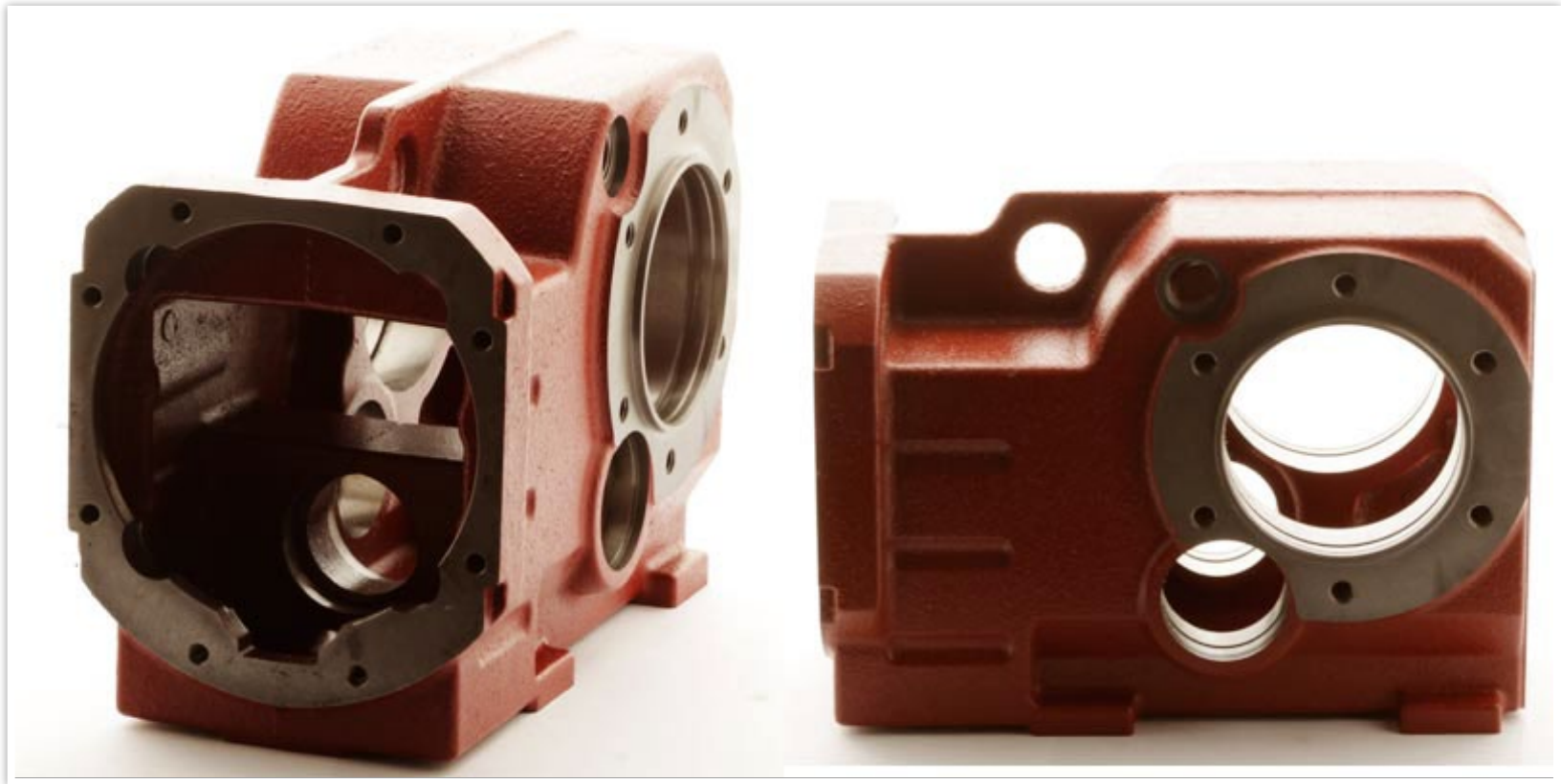


Description: Valve Housing
Weight: 0.007Kg
Dimensions: 33.1mm x 21mm x 34mm
Reference/Tolerances: ± 0.05

Sand Casting

This machined gearbox housing is used within a transmission application for Industrial Conveyor systems.

Length: 18" **Width:** 11" **Weight:** 98 lbs. **Material:** Steel **Tightest Tolerances:** $\pm 0.0005\text{mm}$



Sand Casting

Transmission gear case used by an OEM in the Marine Industry.

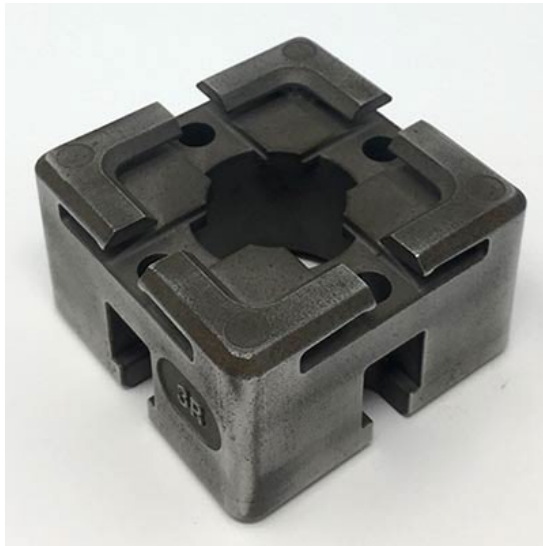
Length: 12" **Width:** 10" **Weight:** 33 lbs. **Material:** Gray Iron **Tightest Tolerances:** $\pm 0.0005\text{mm}$



Sand Casting



Investment Casting



05

MACHINED FORGINGS

Cold or Hot capabilities with precision machining

Machined Forging Capabilities

Cold Forging

- Reliable and cost efficient process.
- Savings in material and final machining.
- Increased dimensional control .
- Parts require very little or no finishing.
- Less susceptible to contamination issues.
- Favorable crystal grain flow increases toughness of the part.
- Final component features offer a better overall finish.
- Long die life.

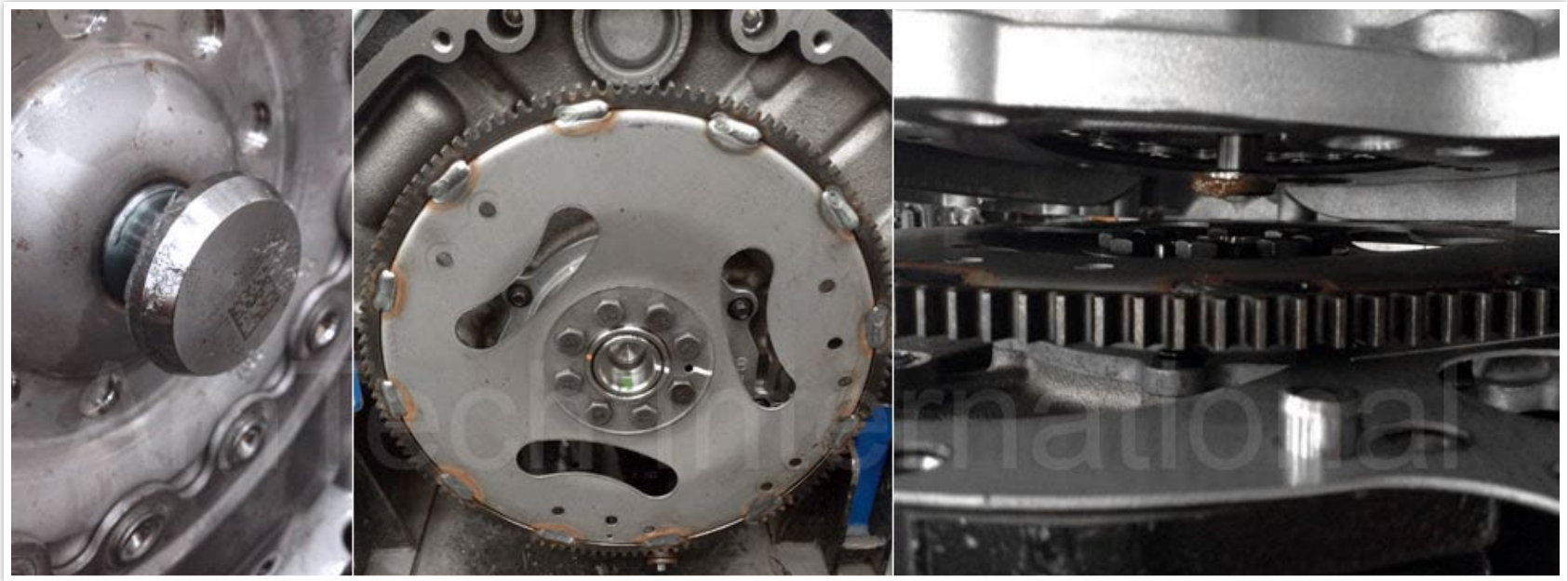
Hot Forging

- Main advantage of hot forging is that as the metal is deformed the strain-hardening effects are negated by the recrystallization process.
- Parts possess increased ductility which makes them desirable for many configurations.
- Homogenized Grain Structure.
- Porosity free surface quality enables a wide range of completion operations such as polishing or surface treatment.
- Efficient process when working with harder metals such as steel.

In-House Services and Materials :

- **Mold design, fabrication and maintenance**
- **Secondary services and finishing**
- **Iron:** Ductile Iron, Gray Iron
- **Steel:** Carbon Steel, Low Alloy Steel, Stainless Steel

Torque Converter Pilot



Height: 27.0mm **OD:** 33.95mm **Tolerances:** $\pm 0.05/\pm 0.1$ mm **Yearly Production:** 750,000 - 1,000,000

We currently produces this part for several Automotive OEMs in North America. The Pilot is a cold forged part, made from SAE 1018 material.

The Pilot is attached by heat welding onto the front side of the Torque Converter assembly. It's important to explain how this part serves as a critical guide or "pilot", during the installation of the Torque Converter.

Hot Forgings



Used in the Forklift Transmission industry.

Height: 1" **OD:** 4.25"

Material: AISI 1045



Used in the Forklift Transmission industry.

Length: 6.05" **Width:** 2.5"

Material: 42CrMo

Machined Forging Projects

Driveline Yokes used in Automotive, Off-Highway and Heavy Vehicle applications.



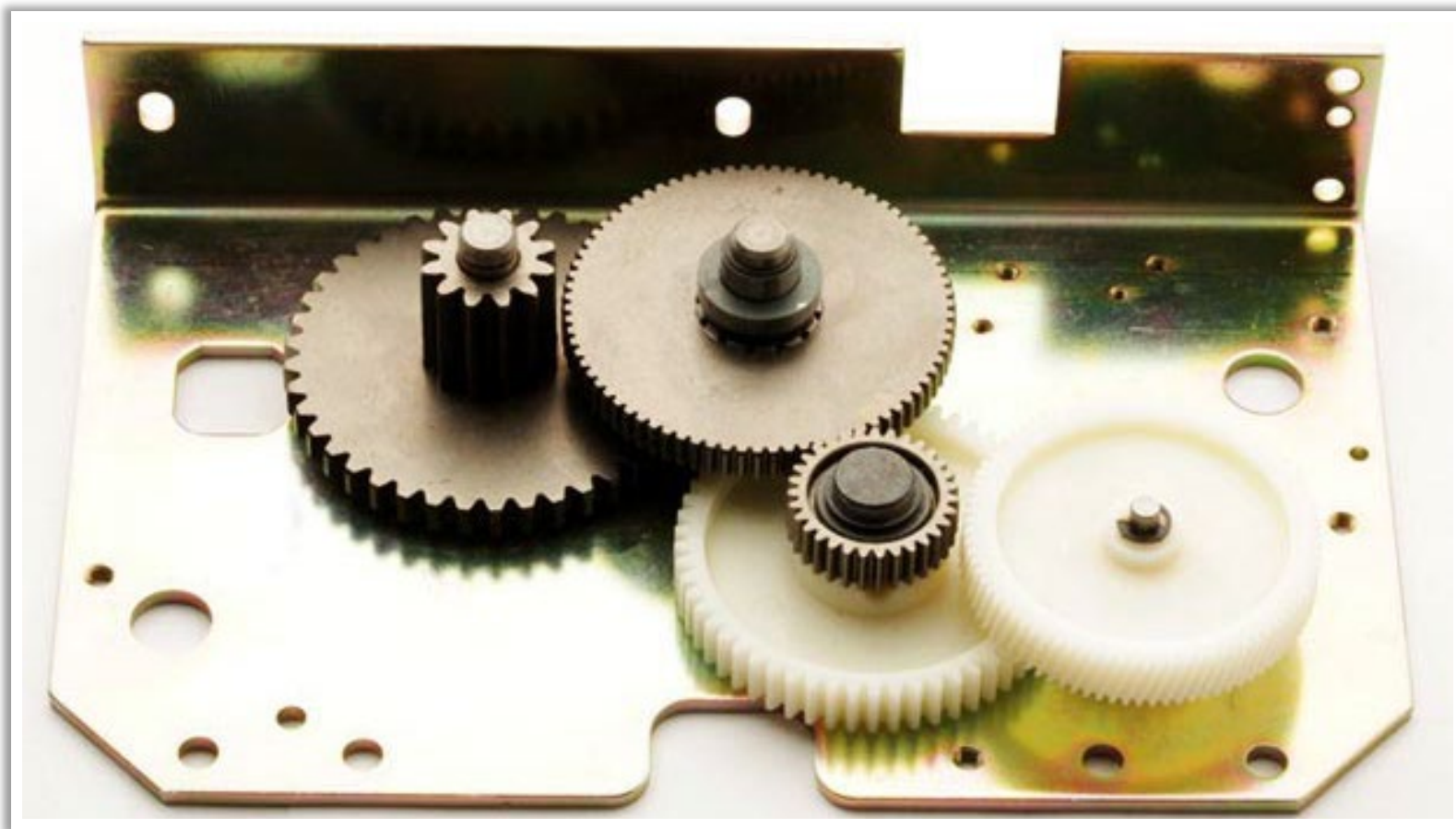
06

OTHER MACHINED PARTS

Planetary Drive Assembly



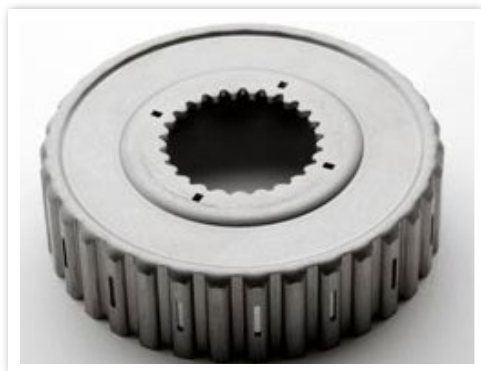
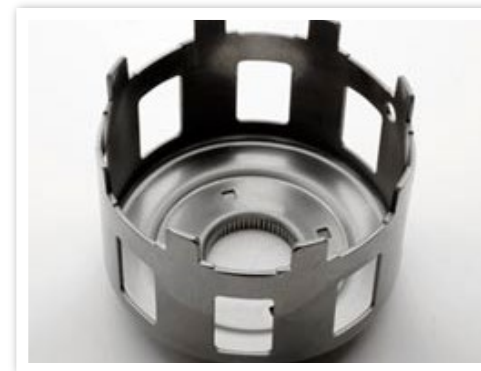
Electric Drive Assembly



Turbine and Impeller Hubs



Clutch Shells and Baskets



08

CONTACT US

Get your project started with us today

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Contact AmTech OEM

Get started now. The project team is available to assist you today.

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