



EMPIRE MECHANICAL COMPLEX

— FOUNDRY • CASTING • ENGINEERING —

PRODUCT CATALOGUE

EDITION 2026

— SELECTED PARTS WE HAVE MADE

Castings & machined parts, made in Karachi.

Iron, aluminium, brass and bronze components, cast in sand or gravity dies, machined and inspected under one roof for tractor, engine, motorcycle and industrial customers.



■ ABOUT THIS CATALOGUE

Some of the parts we've made.

Every component in these pages was cast and machined at our facility in Korangi, Karachi. They are only a small sample. Since 1989 we have made a great many other castings and machined parts for tractor makers, vehicle suppliers and industrial customers that don't appear here.

If you need one of these parts, or something that isn't in the catalogue, send us a drawing or a sample. For parts shown here, quote the **EMC code**. We work from a single replacement casting up to recurring batch production.

1989

Founded in Karachi

4

Metals cast in-house

4 metals

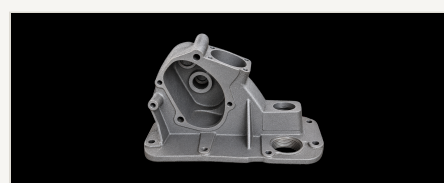
Gray iron, SG iron, aluminium, brass & bronze

1 roof

Pattern, casting, machining & inspection

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SELECTED PARTS · 4 SECTORS



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Steering Box Body

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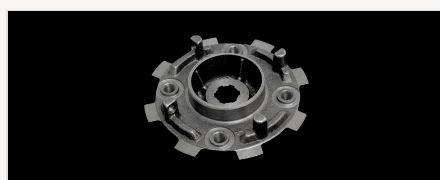
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EMC-007

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EMC-008

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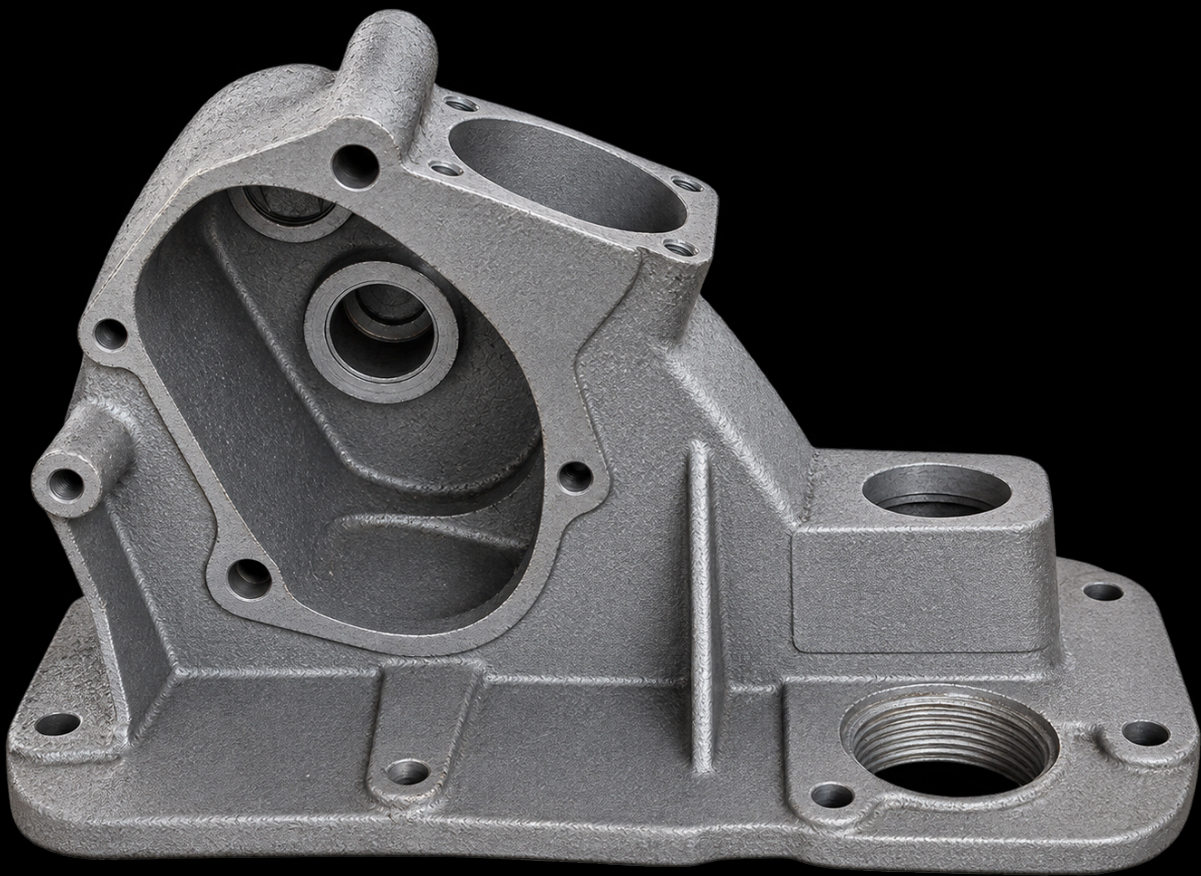


EMC-009

Pump Bearing Housing

11

Supplier to **Agriauto Industries** for aluminium steering box castings, **Al-Ghazi Tractors** for tractor engine crankshafts and **Atlas Honda** for motorcycle clutch parts.



TRACTOR & AGRICULTURE

Steering Box Body

Massey Ferguson tractor manual steering

The main housing of the tractor steering gear. It is a thin-walled casting with cored internal passages, bearing bosses and several flanged faces, so the mould and cores have to stay accurate to keep the walls even and the casting pressure-tight. We cast it in LM-6 aluminium and produce it in recurring batches.

SUPPLIED TO

Agriauto Industries Ltd

SPECIFICATION	
MATERIAL	Aluminium alloy LM-6 (Al-Si12)
PROCESS	Sand casting with cores
WEIGHT	Approx. 6.3 kg
MACHINING	Bearing bores, threaded port, drilled & tapped mounting holes
INSPECTION	Dimensional and visual / soundness check
SUPPLY	Series production



TRACTOR & AGRICULTURE

Steering Box Cover Plate

Massey Ferguson tractor manual steering

The matching cover for the steering box body (EMC-001). It closes the housing and carries the shaft seal bore and a cast boss, with four lugs for bolting to the body. We produce it alongside the body in the same LM-6 alloy.

SUPPLIED TO

Agriauto Industries Ltd

SPECIFICATION	
MATERIAL	Aluminium alloy LM-6 (Al-Si12)
PROCESS	Sand casting
WEIGHT	Approx. 1.0 kg
MACHINING	Seal / bearing bore, mounting holes
INSPECTION	Dimensional and visual / soundness check
SUPPLY	Series production



TRACTOR & AGRICULTURE

Lift Pump Cover

Fiat / New Holland tractor hydraulic lift

A cover casting for the tractor hydraulic lift pump. It has two raised arms with cross-bored ends, a machined side mounting pad and a pattern of spot-faced, drilled and tapped holes. The machined faces are left bright and the casting is finished in red primer.

SPECIFICATION

MATERIAL	Gray cast iron
PROCESS	Sand casting
MACHINING	Mounting pad milled; holes drilled, tapped and spot-faced; arm bores
FINISH	Red primer, machined faces bare
INSPECTION	Dimensional and visual check



TRACTOR & AGRICULTURE

Rear Axle Tube

Fiat 480 tractor

A large, load-bearing housing that carries the rear axle shaft from the final-drive casing out to the wheel. Because it takes the weight of the tractor and the implement, we pour it in SG (ductile) iron rather than gray iron. The bolting flange and spigot are turned and drilled so the tube sits square on the transmission.

SPECIFICATION

MATERIAL	SG (spheroidal graphite) ductile iron
PROCESS	Sand casting with cores
MACHINING	Flange face & spigot turned, bolt-circle holes drilled, tapped bosses
FINISH	Red primer, machined faces bare
INSPECTION	Hardness, dimensional and visual check



■ TRACTOR & AGRICULTURE

Front Wheel Hub

Tractor front axle

The hub that carries the front wheel on its bearings. The wheel-mounting flange is faced flat with six drilled stud holes, and the centre is bored for the bearing seats with an internal thread at the outer end. Accurate machining here keeps the wheel running true.

SPECIFICATION

MATERIAL	SG (ductile) iron
PROCESS	Sand casting
MACHINING	Flange faced, 6 stud holes drilled, bearing seats bored, internal thread cut
FINISH	Red primer, machined faces bare
INSPECTION	Hardness, dimensional and visual check



■ TRACTOR & AGRICULTURE

Brake Drum

Tractor & trolley brakes

A drum cast in gray iron, which absorbs heat and vibration well and wears evenly against brake linings. The outer diameter and rim are turned, and the hub is bored with a keyway to lock it onto its shaft. The inside of the drum is finished in red primer.

SPECIFICATION	
MATERIAL	Gray cast iron
PROCESS	Sand casting
MACHINING	Outer diameter & rim turned, hub bored and key-slotted
FINISH	Red primer inside, machined surfaces bare
INSPECTION	Hardness, dimensional and visual check



ENGINE COMPONENTS

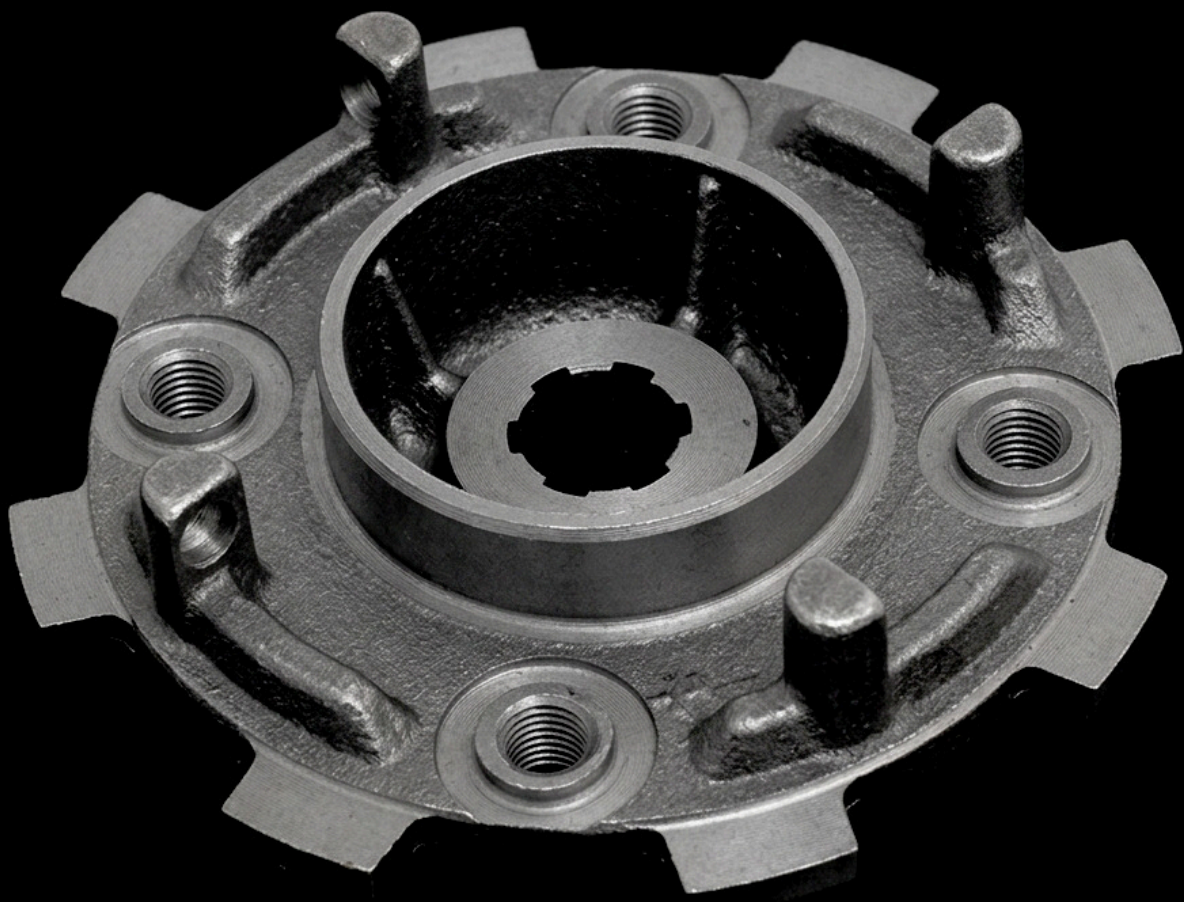
Crankshaft

4-cylinder tractor engine

A four-cylinder crankshaft with five main journals, four crankpins and an integral flywheel flange. The counterweights are left as-cast, while every journal is turned and finished to size with drilled oil ways. It is one of the most demanding parts we make, needing a sound casting and tight tolerances on every journal.

SUPPLIED TO **Al-Ghazi Tractors Ltd**

SPECIFICATION	
MATERIAL	SG (ductile) iron
PROCESS	Sand casting
MACHINING	Main & crankpin journals turned and finished, oil holes drilled, flange and nose turned
LAYOUT	5 main journals · 4 crankpins
INSPECTION	Hardness, dimensional and visual / soundness check



MOTORCYCLE

Clutch Drive Plate

Honda CD70 motorcycle

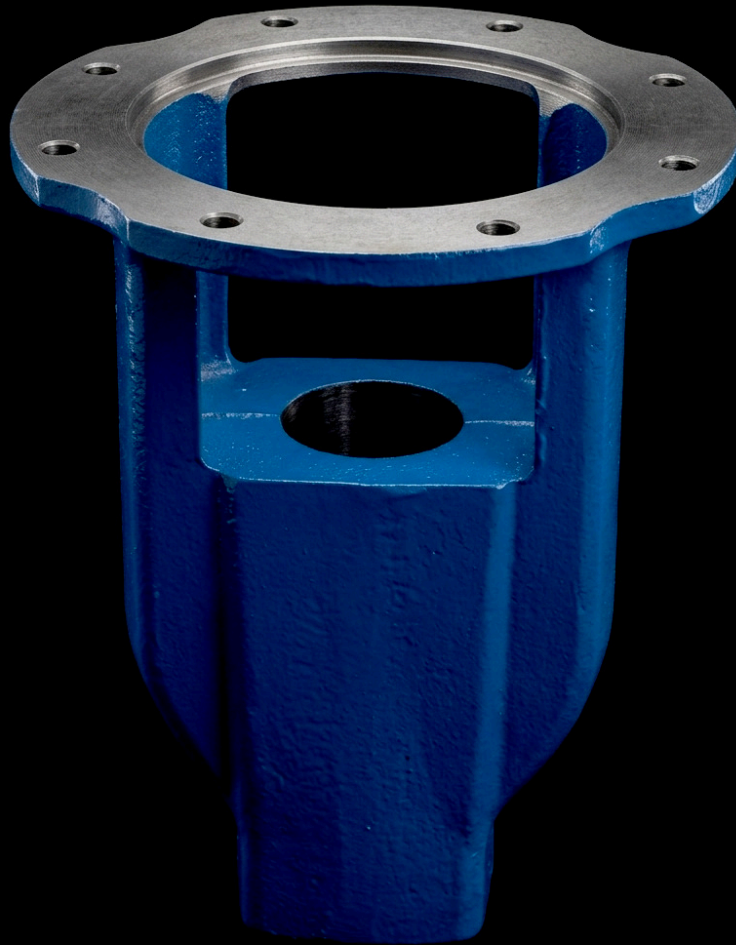
A compact clutch component for the Honda CD70, Pakistan's most common motorcycle. It has a splined centre bore, eight drive tabs on the outer rim, four raised pegs and four threaded bosses. Small parts like this need consistent castings and clean threads so they fit straight into the clutch pack.

SUPPLIED TO

Atlas Honda Ltd

SPECIFICATION

MATERIAL	SG (ductile) iron
PROCESS	Sand casting
MACHINING	Faces turned, splined bore, 4 bosses drilled and tapped, outer tabs finished
INSPECTION	Dimensional, thread and visual check
SUPPLY	Batch production



■ GENERAL INDUSTRIAL

Pump Bearing Housing

Industrial pump / motor bracket

A bracket housing that connects a pump to its drive and supports the shaft bearing. The top flange is faced with a register and a ring of drilled holes, and the lower block is bored for the shaft, so the two stay concentric. It is finished in blue enamel with the machined faces left bare.

SPECIFICATION

MATERIAL	Gray cast iron
PROCESS	Sand casting
MACHINING	Flange faced with register, bolt holes drilled, shaft / bearing bore
FINISH	Blue enamel, machined faces bare
INSPECTION	Dimensional and visual check

Need a part made?

Send us a drawing or a sample.

The parts in this catalogue are only a fraction of what we have made over the years. Whether you need one of them or something completely different, we can develop the pattern, cast it, machine it and inspect it. If a part is obsolete or imported, we can reverse-engineer it from a single sample.

WHAT TO SEND US

- **Drawing** (PDF, DWG or STEP) or a **physical sample**
- **Material grade**, if you have one specified
- **Quantity**: one-off, batch or annual volume
- **Machining & finish** required, or as-cast only
- The **EMC code** if it is a part from this catalogue

WHAT WE WORK WITH

- **Materials**: gray iron, SG (ductile) iron, aluminium alloys, brass & bronze
- **Casting**: green-sand, resin-bonded and gravity die casting
- **Machining**: turning, milling, drilling, tapping, CNC
- **Engineering**: in-house patterns, CAD modelling, reverse engineering
- **Inspection**: dimensional and visual in-house; laboratory testing arranged outside

FROM ENQUIRY TO DELIVERY

01 Drawing or sample	02 Pattern making	03 Casting	04 Machining	05 Inspection	06 Delivery
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EMAIL
PHONE
WEB
ADDRESS

mzr.ahmedd@gmail.com
+92 333 3572346 · also WhatsApp
empiremechanicalcomplex.com
C.1 B/4, Sector 16, Korangi Industrial Area, Karachi