

INDUSTRY APPLICATIONS



OIL & GAS



WATER, WATER TREATMENT



POWER



METAL





















CORE CASTING DIVISIONS SAND INVESTMENT PRESSURE DIE

IN-HOUSE CAPABILITIES

Sand Casting:

Production capacity ranging from 1 kg to 1800 kgs per piece in ferrous and non-ferrous alloys, supported by an in-house Heat Treatment Facility.

Investment Casting:

Precision casting for intricate designs requiring minimal machining and superior surface finish.

Pressure Die Casting:

Pressure die casting is a high-precision manufacturing process where molten metal is injected into a steel mold under high pressure.

Casting Simulation Tools:

Ensuring precise design of patterns, cores, ingates, runners, and risers for optimal performance.

Pattern Shop:

Equipped with conventional and CNC/VMC machines to create flawless patterns and cores.

Heat Treatment Facility:

We offer advanced heat treatment processes

- Annealing
- Normalizing
- Tempering
- Hardening
- Quenching
- Stress Relieving

Solution Treatment

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Quality Assurance:

Comprehensive in-house testing facilities for uncompromised quality including

- PMI
- Spectrometer
- Liquid Penetrant Testing (LPT)
- Ultrasonic Testing (UT)
- Magnetic Particle Testing (MPT)
- Tensile Testing
- Impact Testing
- Radiography (X-Ray Inspection)
- Dimensional Inspection
- Hardness Testing
- Microstructure Analysis

Our Processes

Sand Casting: Versatility and Precision



Ideal for creating complex shapes in a wide range of metals, including ferrous, non-ferrous, and exotic alloys. With expendable sand molds, we handle everything from small to large components without dimensional constraints.

Processes:

- Green Sand Process
- CO₂ Sand Process
- No-Bake Process

Production Capacity

- Daily Capacity: 25,000 kg
- Crucible Sizes: Ranging from 50 kg to 5000 kg

Investment Casting: Precision Redefined

Also known as the lost-wax process, investment casting provides unparalleled accuracy, making it perfect for high-performance and intricate applications.

Production Capacity:

10 grams to 50 kilograms per piece

Pressure Die: Accuracy Meets Durability

Pressure die casting is a manufacturing process in which molten metal is forced into a precision steel mold, or die, under high pressure. This process allows for the production of complex, detailed, and high-strength components with exceptional dimensional accuracy and smooth surface finishes

Production Capacity:

Up to 3 kg per piece

Materials we manufacture with

- Hastelloy
- Aluminium Alloys
- Inconel
- Super Duplex Steels
- Monel
- Stainless Steel
- Copper Alloys
- Cast Steel (CS, DI, CI)
- Nickel Alloys

What we manufacture for your industry

Industrial Equipment and Machinery

- Valve Bodies
- Pump Housings
- Pump Impellers
- Machinery Parts
- Machine Tool Bases
- Furnace Trays/ Heat Treatment
- Heat-Resistant Fixtures
- Hydraulic Components
- Industrial Tools

Automotive and Transportation

- · Bearings and Bearing Housings
- Bushes
- Cylinder Heads
- Engine Valves
- Engine Blocks / Manifolds
- Gears
- · Propeller Shafts

Railways

- · Railway Components
- Die Blocks

Oil & Gas

- Pressure and Temperature Transmitter Bodies / Heads
- · Clamps, Fittings, Flanges, Pipe Plugs
- Corrosion-Resistant Parts

Power Generation

- Steam and Gas Turbine Component
- High-Performance Nozzles

Aerospace and Defense

- Turbine Blades
- High-Pressure Fittings
- Heat-Resistant Components

Construction

- Structural Parts
- Brackets

Electronics

Electrical Contact Parts

Consumer Goods

Sanitary Hardware

EXPERIENCE THE METAVAL DIFFERENCE

Tailored Solutions:

Customized to meet your unique project requirements.

Quick turnaround

Streamlined processes ensure timely delivery for projects of all sizes.

Uncompromised Quality

Advanced testing and stringent quality checks ensure products exceed expectations.

Global Expertise

A trusted partner for over five decades, serving clients across multiple industries worldwide.





Est. 1967

THINKING OUTSIDE THE BOX WITHOUT LIMITATIONS

Australia

United Kingdom

India

KSA

UAE

Global