COMPANY PROFILE

2026

STEEL FOUNDRY · AHMEDABAD, INDIA · SINCE 2006

STEEL CASTINGS, MADE TO YOUR DRAWING

Ferrous and nickel-base alloy castings: sand castings up to 180 kg and investment castings from 10 g to 50 kg, supplied raw, clad, machined, painted or coated, to IS, ASTM, DIN, EN, BS and customer specifications.

ISO 9001:2015
TÜV India (TÜV NORD Group)

PED 2014/68/EU
Material manufacturer · TÜV NORD 0045

ZED BRONZE
Ministry of MSME, Government of India

H. J. MetalCraft Pvt. Ltd. · Vatva, Ahmedabad · London · New Jersey

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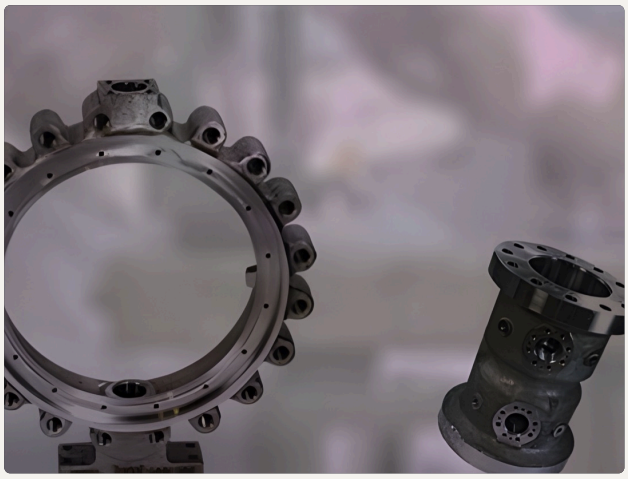
WHO WE ARE

FROM PATTERN MAKERS TO STEEL FOUNDERS

H. J. MetalCraft Pvt. Ltd. is a steel foundry in Vatva, Ahmedabad, Gujarat, India, established in 2006. It grew out of **Patterncraft Enterprise**, the pattern-making business founded by Mr. Husamuddin Jazakallah in 1985, which remains our parent company and pattern shop.

We make ferrous castings in carbon, alloy, heat-resistant, stainless and duplex steels and in cast irons, and non-ferrous castings in nickel-base alloys such as Inconel, Incoloy and Monel, to customer drawings and specifications. Sand castings go up to **180 kg** per piece, and our investment casting unit makes parts from **10 g to 50 kg**.

Our in-house pattern shop, foundry and CNC machine shop, backed by a network of machining partners, give customers a single source from drawing to finished, machined, painted or coated component. **Cameron, USA (now part of SLB)** has been one of our major customers since the beginning, and we have exported castings since 2006.



Machined steel castings

QUALITY POLICY

"H. J. MetalCraft Pvt. Ltd. is committed to the manufacture and supply of ferrous castings of various grades and machined components as per customer requirements, aiming for the highest customer satisfaction, in time, every time, abiding by regulations. We are committed to continual improvement of our process performance through dedicated and motivated personnel and by review of the quality management system."

180 kg
MAX SAND CASTING

10 g–50 kg
INVESTMENT CASTINGS

200 t
CAPACITY 2026 · 360 T 2027 · 600 T 2028

15+
EXPORT COUNTRIES

7,250
SQ YD SITE · 3,000 SQ YD BUILT

410 kW
CONNECTED POWER

OUR JOURNEY

1985
Patterncraft founded
Wooden, aluminium and CI pattern equipment.

2006
Foundry established
Cameron (USA) a major customer from the start; exports begin.

2018
ISO 9001 & PED
PED certificate renewed in October 2024.

2026
200 t capacity
ZED Bronze certification; investment casting in Unit II.

2028
600 t planned
360 t in 2027, 600 t a year by 2028.

INDEPENDENTLY CERTIFIED

CERTIFIED QUALITY, VERIFIED BY TÜV

PED 2014/68/EU

Quality management system for material manufacturers

Directive	2014/68/EU, Annex I, point 4.3
Certified by	TÜV NORD Systems GmbH & Co. KG, Notified Body 0045
Certificate no.	0045/202/WZ/22270/24
Test specification	EN 764-5, section 4.2
Process	Sand castings
Material classes	Ferritic, alloyed, austenitic and austenitic-ferritic (duplex) steel
Range	Up to 180 kg · up to 65 mm thick
First certified	2018
Current certificate	Essen, 23 October 2024 · valid until August 2027

Authorises us to issue certificates of specific tests on materials (EN 10204 3.1) for pressure equipment within this scope.

ISO 9001:2015

Quality management system

Certified by	TÜV India Pvt. Ltd. (TÜV NORD Group)
Scope	Manufacture and supply of sand castings and precision machined components
First certified	2018
Valid until	September 2027

ZED BRONZE

MSME Sustainable (ZED) Certification Scheme · Zero Defect, Zero Effect

Awarded by	Ministry of Micro, Small & Medium Enterprises, Government of India
Certificate no.	06072026_965506
Udyam registration	UDYAM-GJ-01-0065900
Issued	6 July 2026 · valid three years

BACKED BY INDEPENDENT CHECKS

ASNT-QUALIFIED NDT

Two Level II engineers for all NDT methods and an ASNT-certified Level III.

NABL LABORATORIES

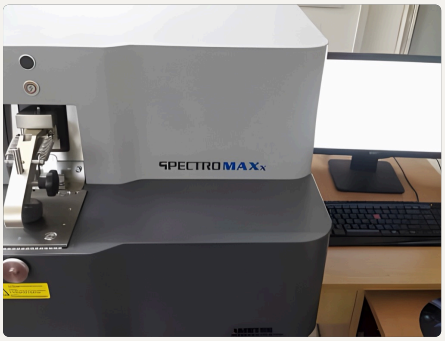
In-house testing supported by links with accredited NABL laboratories.

CUSTOMER AUDITS

Regularly assessed and evaluated by our customers, not only our certification bodies.

CAMERON (SLB)

Cameron, USA, now part of SLB, a major customer since the beginning.



CCD spectrometer, 32 ferrous and 24 nickel-base elements



200 kN universal testing machine with extensometer



Computerised dot marking for traceability

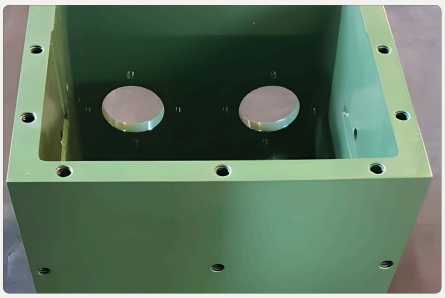
WHAT WE MAKE

CASTINGS AND MACHINED COMPONENTS TO DRAWING

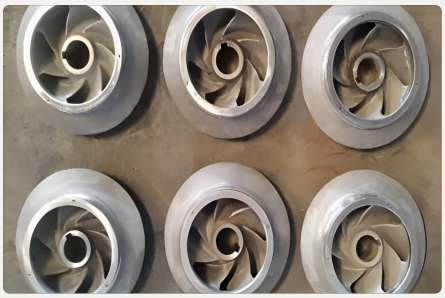
We supply raw (un-machined) and machined castings to domestic and global customers, made to their drawings and specifications under IS, ASTM, DIN, EN, BS and proprietary standards.



PRESSURE-RETAINING PARTS
High-pressure retaining API components for oil and process duty.



VALVES & PUMPS
Butterfly, gate and ball valve bodies, strainers, pump casings and housings.



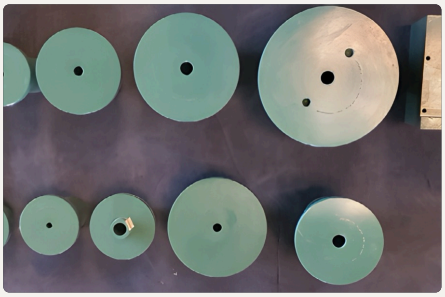
IMPELLERS & COUPLINGS
Impellers, hammer nuts and couplings, cast and machined to drawing.



NICKEL-ALLOY PARTS
Inconel 625, Incoloy 825, Monel and Hastelloy-type castings.



INVESTMENT CASTINGS
Machined investment-cast components, 10 g to 50 kg.



COATED COMPONENTS
Corrosion-resistant and autophoretic coatings, or painted.

PRODUCT RANGE

- Valve bodies & bonnets
- Butterfly, gate & ball valves
- Strainers
- Pump casings & housings
- Impellers
- Hammer nuts
- Couplings
- API pressure-retaining parts
- Housings
- Handwheels
- Gear box components
- Bearing housings
- Pressure vacuum relief valve bodies
- Flanges & fittings
- Machined investment-cast parts
- Wrought steel EN8, EN9, EN24, EN36 machining
- Custom castings to drawing

SUPPLY CONDITION

Raw castings	Fettled, heat-treated and inspected
Machined	In-house CNC or through our machining partners
Clad	Automatic overlay cladding, 10–15 mm, flanges Ø200–550 mm
Finished	Painted, corrosion-resistant or autophoretic coating
Weight range	Sand up to 180 kg · investment 10 g–50 kg
Minimum wall	7 mm (sand castings)

FERROUS AND NON-FERROUS

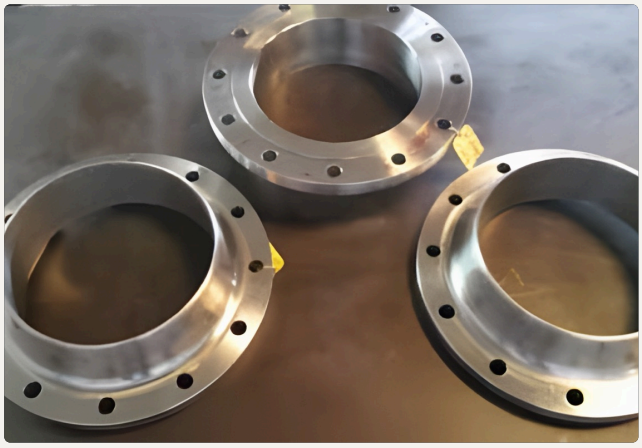
MATERIALS WE CAST

Commonly supplied grades are listed below. We also cast to DIN, EN, BS, IS and proprietary specifications: send the grade on your drawing and we will confirm it.

FAMILY	STANDARD	GRADES
Carbon steel	ASTM A216 · A352	WCB, WCC · LCB, LCC
Alloy steel	ASTM A217 · A487	WC6, WC9, CA15 · Grade 4, Class A, B, C, D
Stainless steel	ASTM A351 · A743 · A744	CF8, CF8M, CF3, CF3M and other grades
Duplex & super duplex	ASTM A890 · A995	4A (2205 type), 5A (2507 type), 6A (CD3MWCuN)
Heat-resistant steel (HRCS)	ASTM A297	HH, HK and other grades
High-chrome & Ni-hard iron	ASTM A532	Class I Type A, B, C, D · Class II Type A, D
Manganese steel	ASTM A128	Grade A, B, C, D
Grey & SG iron	ASTM A48 · A536	Various grades
Nickel-base alloys (non-ferrous)	ASTM A494	CW-6MC (Inconel 625 type) · CU5MCuC (Alloy 825, Incoloy type) · M35-1 (Monel type) · CW-12MW, CW-2M, N-12MV (Hastelloy types)
Wrought steel (machining)	EN	EN8, EN9, EN24, EN36

HOW WE CONTROL THE METAL

- Chemistry of every heat checked on our CCD spectrometer: 32 elements for ferrous alloys, including nitrogen, and 24 for nickel-base alloys; a second PMT spectrometer for iron-base alloys (17 elements).
- Solution annealing, normalising, stress relieving, hardening and tempering in our own furnaces, with online temperature recording.
- Tensile, 0.1% and 0.2% proof stress and Young's modulus on a 200 kN universal testing machine with extensometer; computerised Brinell hardness.
- NDT: ultrasonic, radiographic, magnetic particle and dye penetrant testing.



Machined nickel-base alloy flanges

EVERY STAGE IN OUR OWN SHOPS

FROM PATTERN TO POUR

01 INFRASTRUCTURE

Total land area	7,250 sq yd
Constructed area	3,000 sq yd
Administrative office	400 sq yd
Power	410 kW
Casting weight	Sand up to 180 kg · investment 10 g–50 kg

02 PATTERN SHOP

Run by our parent company, Patterncraft Enterprise (since 1985): two units with German CNC machines making teak wood, aluminium and CI patterns. Exporting patterns since 2000.

CNC routers	5,500 × 2,250 × 920 mm (H); 2 × 3,010 × 1,510 × 300 mm; 2 × 3,010 × 2,100 × 500 mm
Machines	3 grinders, 2 lathes, 1 drilling machine, 3 hacksaws, 4 band saws, 1 jigsaw
Measuring	2 CI plates (1.0 × 2.0 m), granite plate (0.5 × 1.0 m), height gauges 12 & 24 in, calipers 6–24 in, micrometers 1–300 mm, bore gauges 5–150 mm

03 MOULDING & CORE SHOP

Processes	CO2 and airset (no-bake), moulding and core making
Auto sand mixer	30 kg/batch · 3.0 t/hr
Sand mixer / muller	150 kg/batch · 1.0 t/hr each
Sand reclamation	500 kg/hr
Mould boxes	300 × 300 × 85 mm (H) to 1,100 × 1,000 × 230 mm (H)
Compressor · crane	7.5 HP, 15 bar · 1 t overhead crane



Pattern shop



Moulding shop

04 MELTING SHOP

Induction furnace	100 kW medium-frequency power pack
Crucibles	150 kg and 300 kg
Ladles	Top-pour and teapot-pour · 300, 150, 100, 50 kg
Ladle preheating	For all ladle sizes
Temperature	Immersion pyrometer, 0–1,700 °C



Induction melting furnaces

FINISHING IN-HOUSE

FETTLING, HEAT TREATMENT AND MACHINING

05 FETTLING, CLADDING & BLASTING

Fettling bay	Dedicated, 30 × 15 ft
Welding	600 A transformer-based
Welding / arc cutting	600 A and 400 A rectifier-based
Overlay cladding	Automatic overlay welding with cold-wire feeder · 10–15 mm thick · flanges Ø200–550 mm
Gas cutting	Oxygen gas cutting system
Grinding	2 swing grinders (16 × 2.5, 12 × 1.25) · 3 flexible grinders
Shot blasting	Centrifugal, 4 ft table
Sand blasting	500 kg capacity

06 HEAT TREATMENT

Processes	Solution annealing, normalising, stress relieving, hardening, tempering, water quenching
Bogie furnace 1	1 t (1.4 × 1.0 × 0.6 m) · quenching, normalising, annealing
Bogie furnace 2	1 t (1.4 × 1.0 × 0.6 m) · tempering, indirect heating
Recording	Online temperature graph and recording
Calibration	API 6A calibrated furnaces
Quench tank	14,000 litres, with agitation
Crane	1 t overhead crane



Heat-treatment furnaces and agitated quench tank

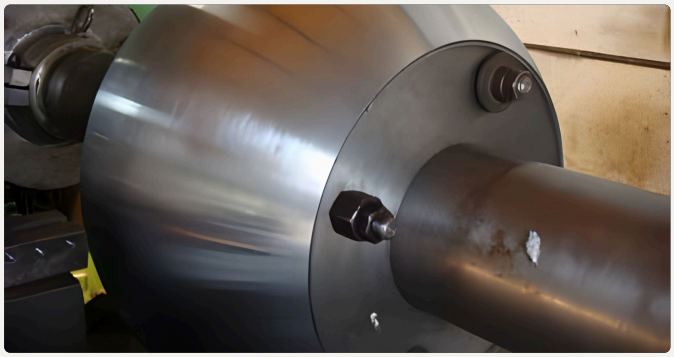


CNC vertical machining centres

07 MACHINE SHOP

VMC 01	1,210 × 610 × 600 mm (H)
VMC 02	4th axis (200 mm) · 1,000 × 450 × 500 mm (H)
VMC 03	4th axis (250 mm) · 1,000 × 450 × 500 mm (H)
VMC 04	1,300 × 700 × 700 mm (H)
CNC turning 01	Ø370 × 740 mm (L)
CNC turning 02	Ø310 × 510 mm (L)
CNC turning 03	Ø600 × 1,050 mm (L)
Conventional	7 lathes · 2 drilling machines · 1 radial drill
Machining partners	Network of dedicated vendor machine shops for larger work

We have exported finished, machined castings since 2006. A boring machine and a VTL are planned.



Machined valve ball

QUALITY CONTROL

CHECKED AT EVERY STAGE, FROM SAND TO FINAL SIZE

08 LABORATORY

Spectrometer 1	CCD-based, ferrous base 32 elements incl. nitrogen; nickel base 24 elements
Spectrometer 2	PMT-based, iron base, up to 17 elements
Universal testing machine	Electronic, 200 kN, accuracy ±1%
Extensometer	Strain-gauge type: 0.1% and 0.2% proof stress, Young's modulus
Hardness	Computerised Brinell tester with optical scanner; portable hardness tester
Temperature	Immersion pyrometer 0–1,700 °C · muffle furnace 0–1,200 °C

09 SAND, MOULD & CORE TESTING

Sand analysis	Sieve shaker (AFS), rapid moisture tester
Mould & core	Permeability meter, pneumatic rammer, scratch hardness tester

10 INSPECTION, MARKING & PRESSURE TESTING

Inspection tables	2 CI plates (1.0 × 2.0 m), 1 granite plate (0.5 × 1.0 m)
Gauges	Height gauge 24 in, calipers 6–24 in, vernier 0–600 mm, micrometers 1–400 mm, bore gauges 5–450 mm
Dot marking	Computerised, 150 × 100 mm
Laser marking	30 W with rotary, 150 × 150 mm, 360°
Pressure testing	Hydrostatic and pneumatic



Computerised Brinell hardness tester

NON-DESTRUCTIVE TESTING

UT	RT	MT	PT
Ultrasonic	Radiography	Magnetic particle	Dye penetrant

Carried out by two Level II engineers qualified for all NDT methods, with an ASNT-certified Level III, and backed by accredited NABL laboratories.



Sand testing equipment



Centrifugal shot blasting machine

UNIT II

INVESTMENT CASTING

Our second unit makes investment (lost-wax) castings from **10 g to 50 kg** for small, detailed parts that need a fine surface and a near-final shape, in steel, stainless steel and nickel-base alloys. Parts can be finish-machined in our CNC shop.

UNIT II EQUIPMENT	
Wax room	Melting pot 100 kg · mixing 100 kg · auto-filling system 150 kg
Wax injection	Auto press 5 t · 2 injection presses, 3 t each
Shell building	Jar mill 200 kg · rain-flow sanding 50 kg · 3 coating drums (250, 200, 200 kg) · fluidised bed 300 kg with dust collector
Dewax & firing	Gas-fired tank 200 kg · shell firing 3 × 3 × 3 ft, 500 kg of shells
Melting	Induction furnace with hydraulic system, 50 / 100 / 150 kg · cooling tower
Finishing	Knock-out machine · 2 bench grinders · belt grinder
Services	2 air compressors · 500 L air receiver



Fired ceramic shells at Unit II



Polished investment-cast parts



Cast handwheels

PARENT COMPANY

PATTERNCRAFT ENTERPRISE

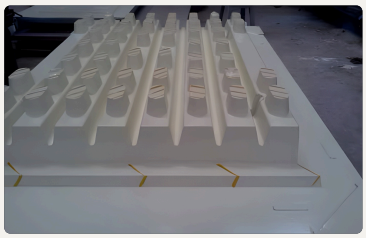
Founded in 1985 by Mr. Husamuddin Jazakallah, Patterncraft has made pattern equipment for four decades and has exported patterns since 2000. Its two units with German CNC machines make wooden, aluminium and CI patterns, shell patterns and core boxes, self-certified for castings that come out right the first time.

Its work includes very large tooling for crusher parts cast by other foundries, such as a Pitman 120 match plate of 2.5 × 5.0 m, an HP 500 main frame of 12 × 12 ft and 1.5 m high, and a 4-tonne aluminium HP 300 main frame pattern.

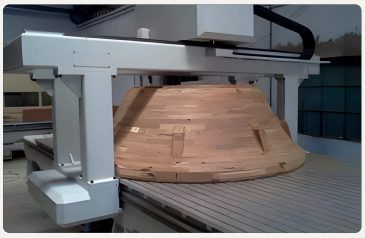
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Pitman 120 match plate, 2.5 × 5.0 m



Jaw plate pattern, PU finish



Mantle pattern, 2.5 m diameter



HP 300 main frame, aluminium

INDUSTRIES & MARKETS

BUILT FOR DEMANDING INDUSTRIES, SHIPPED TO 15+ COUNTRIES

INDUSTRIES SERVED

Valves & pumps · Oil & gas · Chemical · Marine · Cement · Power generation · Earth-moving & mining · Automobile · General engineering

EXPORTING SINCE 2006 TO

USA · Canada · Mexico · Ireland · Netherlands · Denmark · France · Italy · Romania · Saudi Arabia · UAE · the Gulf · China · Malaysia · Singapore · Indonesia

US customers in Houston, Oklahoma, Chicago, Bakersfield, Patterson and New Iberia.

CONTACT US

SEND US YOUR DRAWING

Share your drawing, material grade, weight, quantity, supply condition and testing requirements, and we will come back to you with a quotation.

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