VINAY METAL COMPANY

/ COMPANY BROCHURE · SHEET METAL FABRICATION FOR OEMS

CUSTOM SHEET METAL COMPONENTS, ENCLOSURES & ASSEMBLIES

Laser cutting, five-axis CNC bending and welding for OEMs and industrial equipment manufacturers. Made to your drawing, from prototype approval to repeat production batches.

Cut • Bend • Weld • Finish

1996	**3 kW**	**100 t**	**550 m²**
Metalworking since	Fibre laser · 1500 × 3000 mm	Five-axis press brake · 3200 mm	Unit in Taloja MIDC

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/ INSIDE THIS BROCHURE

Contents

Everything on our website, in one document: who we are, the machines we run, the products we make to your drawing, the technical limits behind them, and how to send an enquiry.

/ AT A GLANCE

Established	1996
Factory	Taloja MIDC, Panvel · 550 m²
Office	Kika Street, Gulalwadi, Mumbai
Core range	Electrical enclosures · machine covers & housings · OEM components
Route	Cut · Bend · Weld · Finish under one PO
Also manufactured	Stainless steel fasteners (DIN · ISO · IS · BS)
Legacy	Three generations of engineering

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/ ABOUT US

Metalworking experience. Focused manufacturing.



Vinay Metal Company is a leading sheet metal fabrication and CNC laser cutting company in Taloja MIDC, Navi Mumbai. We specialise in CNC laser cutting, CNC bending, TIG/MIG welding, stainless steel and mild steel fabrication, and custom sheet metal components, with a focus on timely delivery, consistent quality and cost-effective solutions for bulk and customised orders.

Vinay Metal was started by the late Jayantilalji Revchandji Shah. In the second generation, Vipul J Shah and Narendra Chowdhary came together in partnership; with the third generation, Daksh V Shah and Amol Thombare now lead it together, a three-generation legacy of engineering. It began in 1996 in a 200 sq ft space with stainless steel fasteners. Today it runs a 550 m² manufacturing unit in Taloja MIDC, Panvel, with a corporate office in Mumbai's Gulalwadi market area, and manufactures:

- Electrical enclosures and cabinet bodies
- Repeat OEM components and assemblies
- Machine covers and equipment housings
- Stainless equipment fabrication
- Stainless steel fasteners

1996

Founded by the late Jayantilalji Revchandji Shah in a 200 sq ft space, making stainless steel fasteners and bolts.

Partnership

Second generation, Vipul J Shah and Narendra Chowdhary in partnership: customer base built across fabrication, electrical and engineering sectors on precision and on-time delivery.

Taloja MIDC

550 m² manufacturing unit with 100 kW connected power and a 5-ton crane.

Today

Third generation, Daksh V Shah with Amol Thombare: 3 kW fibre laser, 100-ton five-axis press brake and 1.5 kW laser welding for OEM sheet-metal work.

Location. Taloja MIDC is a developed industrial zone with road access to the Mumbai, Pune and JNPT port corridors.

3
Generations of engineering, since 1996

550 m²
Manufacturing unit, Taloja MIDC

6
Sheet-metal product families

7
Fastener groups to DIN, ISO, IS, BS

/ WHY VINAY METAL

One factory. Cut, bend, weld and finish.

Our unit in Taloja MIDC runs fibre laser cutting, five-axis CNC bending, welding and finishing in-house. We sell finished component kits: cut parts, bent parts, welded assemblies and approved outsourced finishing under one purchase order.

01

One supplier, one purchase order

Cutting, bending, welding and finishing are planned as one requirement, so your parts follow one coordinated route from flat blank to finished assembly.

02

Drawing-led, not guesswork

Materials, interfaces and inspection points are reviewed against your drawing revision before production starts.

03

Repeat batches match the sample

Tooling, bend sequence and setup are recorded on the five-axis press brake, so repeat orders follow the approved sample.

04

Clear scope before production

Prototype approval, batch size, finishing and delivery requirements are agreed up front. Ratings and certifications are confirmed separately in the quotation.

/ IN-HOUSE ROUTE

01
Cut
3 kW fibre laser

Profiles, holes, slots and flat patterns nested on a 1500 × 3000 mm sheet.

02
Bend
100 t · 3200 mm

Five-axis CNC back-gauge with 0.1 mm positioning accuracy.

03
Weld
Laser · TIG · arc

1.5 kW fibre laser welding for sheet; TIG and arc for frames.

04
Finish
Grind · polish · fit

In-house finishing; coating and plating through approved suppliers.

What we focus on

- Repeat OEM sheet-metal components and assemblies
- Parts that use cutting, bending and welding together
- Prototype, pilot and repeat production batches
- Finished kits delivered ready for your assembly line

What we confirm separately

Cutting and welding a box does not by itself establish an IP rating or a certification. Product ratings, certification, test and documentation requirements are reviewed with you and confirmed in the quotation.

/ MANUFACTURING INFRASTRUCTURE

The equipment behind your parts.

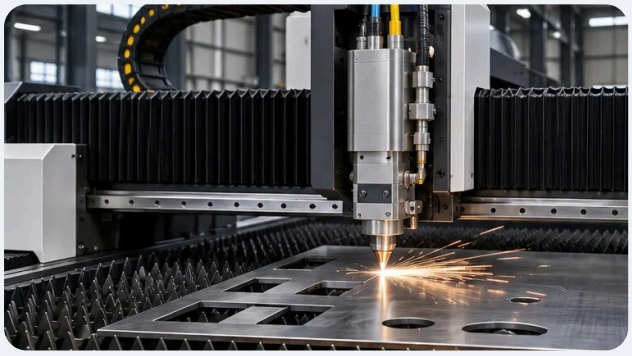


550 m²
Covered operating area, Taloja MIDC

100 kW
Connected industrial power

5 ton
Overhead crane for plate and parts

1996
Metalworking since



Fibre laser cutting machine

Machine	SIL Fiber 3015-ECAT
Laser source	3 kW fibre
Bed size	1500 × 3000 mm
Mild steel	up to 20 mm
Stainless steel	up to 12 mm
Aluminium	up to 6 mm
Copper	up to 6 mm
Brass	reviewed per job



Five-axis CNC press brake

Machine	LVD-YSD PPES 1032 CNC press brake
Pressing force	100 ton
Working length	3200 mm
Controlled axes	5 (CNC)
Controller	58T, 2D, 15-inch
X stroke	600 mm
Speed	450 mm/s
Positioning accuracy	0.1 mm

/ MANUFACTURING INFRASTRUCTURE

Welding and auxiliary equipment



Fibre laser welding machine

Source	1.5 kW SIL OEM fibre laser
Wire feed	Automatic wire feeder
Functions	4-in-1: cutting, welding, seam cleaning, rust cleaning
Mild steel	up to 6 mm
Stainless steel	up to 5 mm
Aluminium	up to 3 mm



Other machines

Hydraulic press	60 ton, punching and bending
Welding	Panasonic welding machines, TIG and arc welding
Machining	Lathe for bushes, spacers and pins
Drilling	Drilling machines for secondary features
Handling	5-ton crane
Power	100 kW connected

/ LASER CUTTING CAPACITY

Mild steel	20 mm
Stainless steel	12 mm
Aluminium	6 mm
Copper	6 mm

/ LASER WELDING CAPACITY

Mild steel	6 mm
Stainless steel	5 mm
Aluminium	3 mm

Reference limits from the company's machine specifications. Grade, geometry, assist gas, joint design and required edge quality affect feasibility and speed. Brass cutting is reviewed separately. Bending capacity depends on material, bend length and tooling. We review the actual part before confirming tolerances, lead time or production capacity.

/ CAPABILITIES

From sheet to assembly.

Five connected processes in one unit. Each part is quoted against your drawing revision, material and batch size.



01

CNC laser cutting

Profiles, cut-outs and flat patterns cut directly from your CAD file. Holes, slots, knockouts and gland patterns are cut in the same setup, so most parts need no separate marking or drilling.

Machine	3 kW SIL Fiber 3015-ECAT
Sheet size	up to 1500 × 3000 mm
Thickness	MS 20 · SS 12 · Al 6 · Cu 6 mm
Files	DXF, DWG, STEP or dimensioned PDF
Typical work	Enclosure blanks, gland plates, brackets, profiles, base plates
Practice	Repeat parts nested for material yield; cut time recorded



02

CNC bending & forming

Accurate enclosure bodies, channels, doors and formed brackets on a five-axis CNC press brake. Approved bend programs are stored, so a repeat order is bent the same way as the approved sample.

Machine	LVD-YSD PPES 1032
Force / length	100 ton · 3200 mm
Axes	5 CNC axes, 600 mm X stroke
Accuracy	0.1 mm back-gauge positioning
Typical work	Enclosure bodies, doors, channels, trays, machine covers, brackets
Practice	Standard tooling, recorded bend sequences and setup sheets

/ CAPABILITIES

Joining, machining and finishing

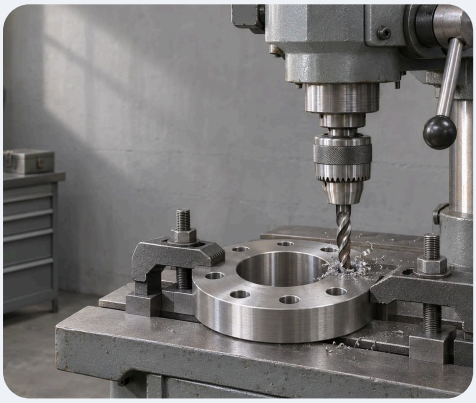


03

Laser & conventional welding

The 1.5 kW fibre laser welder suits thin sheet boxes and housings with low distortion and less grinding. TIG, arc and Panasonic machines handle frames, supports and heavier joints. Joints, distortion and finishing time are validated on samples.

Laser welding	MS 6 · SS 5 · Al 3 mm
Conventional	TIG, arc, Panasonic
Repeat work	Weld fixtures and agreed inspection points



04

Machining & drilling

Lathe and drilling operations for bushes, spacers, pins and secondary features that support assembly orders.

Operations	Turning, drilling, tapping, countersinking
Use	Secondary features on fabricated parts



05

Finishing & assembly

Deburring, grinding, polishing and fitting in-house. Powder coating, plating and PVD are coordinated with approved suppliers, so you receive finished parts on one purchase order.

In-house	Deburr, grind, polish, fit, hardware
Coordinated	Powder coat, zinc / tin / silver plating, PVD
Supply	Finished kits and subassemblies

/ MATERIALS

Material library

The sheet and plate grades we cut, bend and weld most often. Values are typical published values for the grade or standard; actual values follow the mill test certificate of the supplied lot.

Material	Standard	Tensile strength	Yield strength	Density	Laser cut
CRCA mild steel	IS 513 (CR1–CR4) · DC01–DC04	270 – 410 MPa	≤ 280 MPa (grade dependent)	7.85 g/cm³	up to 20 mm
Hot-rolled structural steel	IS 2062 E250 · S235 / S275	≥ 410 MPa	≥ 250 MPa	7.85 g/cm³	up to 20 mm
Galvanised steel (GI / GP)	IS 277 · coating Z120 – Z275	≈ 270 – 500 MPa (base grade)	≈ 180 – 350 MPa	7.85 g/cm³	up to 20 mm
Stainless steel 304	ASTM A240 · EN 1.4301	≥ 515 MPa	≥ 205 MPa	8.00 g/cm³	up to 12 mm
Stainless steel 316 / 316L	ASTM A240 · EN 1.4401 / 1.4404	≥ 515 MPa (316L ≥ 485)	≥ 205 MPa (316L ≥ 170)	8.00 g/cm³	up to 12 mm
Stainless steel 202	ASTM A240 / A666 · EN 1.4373	≥ 620 MPa	≥ 260 MPa	7.80 g/cm³	up to 12 mm
Stainless steel 430	ASTM A240 · EN 1.4016	≥ 450 MPa	≥ 205 MPa	7.75 g/cm³	up to 12 mm
Aluminium 5052-H32	ASTM B209 · EN AW-5052	215 – 265 MPa	≥ 160 MPa	2.68 g/cm³	up to 6 mm
Aluminium 6061-T6	ASTM B209 · EN AW-6061	≥ 290 MPa (typ. 310)	≥ 240 MPa (typ. 276)	2.70 g/cm³	up to 6 mm
Copper (ETP)	IS 191 · C11000 · Cu-ETP	220 – 300 MPa (temper dependent)	70 – 250 MPa	8.94 g/cm³	up to 6 mm
Brass	IS 410 · CuZn37 (C27200)	≈ 340 – 450 MPa	≈ 150 – 350 MPa	8.44 g/cm³	confirmed per job

CRCA mild steel. Smooth cold-rolled surface for painted or powder-coated parts. The usual choice for enclosures, covers and brackets.

Hot-rolled structural steel. Heavier plate for base plates, flanges, frames and structural brackets.

Galvanised steel (GI / GP). Pre-galvanised sheet for trays, ducts and covers that need corrosion protection without painting.

Stainless steel 304. General-purpose stainless with good corrosion resistance and weldability. Non-magnetic when annealed.

Stainless steel 316 / 316L. 2 – 3 % molybdenum for better resistance to chlorides and cleaning chemicals. Used for food, pharma and coastal sites.

Stainless steel 202. Lower-nickel stainless for indoor and decorative parts where 304 corrosion resistance is not required.

Stainless steel 430. Magnetic, cost-effective stainless for indoor panels, trims and appliance parts.

Aluminium 5052-H32. Bends well and resists corrosion. The usual aluminium for formed housings, chassis and panels.

Aluminium 6061-T6. Stronger than 5052 but needs larger bend radii. Best for flat or lightly formed plates and brackets.

Copper (ETP). Highest electrical conductivity. Used for busbars, earthing plates and connectors.

Brass. Decorative and electrical parts. Laser-cutting thickness is confirmed per job.

/ OUR PRODUCTS

Products made to your drawing

Enclosures, machine housings, brackets and welded subassemblies across six product families. The first three are our core range: products that use cutting, bending and welding together and repeat as approved part numbers.

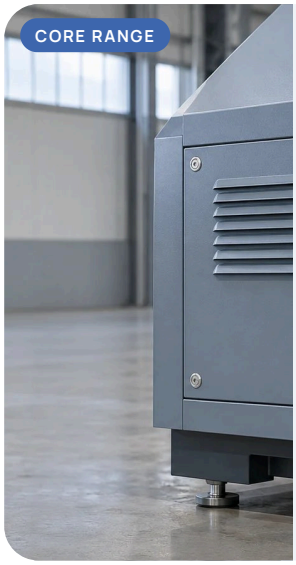


CORE RANGE

Electrical Enclosures

Drawing-led enclosure bodies and mounting components for panel builders and automation OEMs.

- Junction Boxes
- Control Panel & Cabinet Bodies
- Gland & Mounting Plates
- Distribution & Meter Boxes
- Copper Busbars & Earthing Plates



CORE RANGE

Machine Covers & Housings

Formed panels, covers and equipment housings designed around service access and assembly fit.

- Machine Cladding & Access Panels
- Equipment & Instrument Housings
- Conveyor Components
- Machine Guards & Safety Panels
- Hoppers & Chutes



CORE RANGE

OEM Sheet Metal Components

Repeatable cut, formed and welded components supplied to your drawing revision.

- Precision Brackets & Supports
- Channels & Trays
- Welded Subassemblies
- Base Plates, Flanges & Gussets
- Laser-Cut Profiles & Blanks



Stainless Equipment Fabrication

Stainless cabinets, trays and equipment furniture with attention to cleanability and finish.

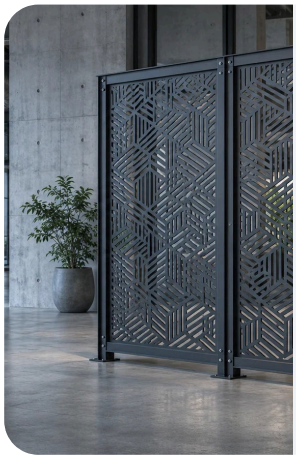
- SS Cabinets & Housings
- Worktables & Trays
- Industrial Trolleys
- Kitchen Hoods, Shelving & Racks



Rack & Electronics Components

Sheet-metal parts for rack manufacturers, electronics integrators and power-equipment OEMs.

- Rack Shelves & Blanking Panels
- Chassis & Mounting Components
- Network & Wall-Mount Cabinets



Architectural Metalwork

Selective decorative metal fabrication for interiors and architectural projects.

- Decorative Screens & Partitions
- Signage
- Furniture Frames
- Facade & Railing Panels



/ CORE RANGE · ENTRY PRODUCTS FOR PANEL BUILDERS

Electrical Enclosures

Enclosure bodies, doors, gland plates and mounting plates are laser-cut, CNC-bent and welded to your layout, so cut-outs, fixings and earthing points are placed from the drawing, not marked by hand. Gland and mounting plates are a simple way to start; complete enclosure kits follow once the first parts are approved.

Junction Boxes · Control Panel & Cabinet Bodies · Gland & Mounting Plates · Distribution & Meter Boxes · Copper Busbars & Earthing Plates

/ COMMON TO EVERY PRODUCT IN THIS RANGE

Laser cutting
MS up to 20 mm · SS up to 12 mm · Al / Cu up to 6 mm

Max bend length
3200 mm on 100 t, five-axis CNC (LVD-YSD PPES 1032)

Welding
Laser welding: MS 6 mm · SS 5 mm · Al 3 mm; TIG / arc for heavier joints

Finish
Deburring, grinding, polishing in-house; powder coat, plating or PVD through approved suppliers

Inspection
Dimensions checked against your drawing revision before dispatch

Order size
Prototype, pilot and repeat batches



Junction Boxes

Junction boxes protect cable joints and terminations. We make the body, lid and internal mounting plate from sheet, with cable-entry cutouts, earthing points and fixing holes cut in the same laser setup.

Wall-mounted
Back-entry fixing holes or external lugs

Hinged lid
Piano or concealed hinge with screw or latch closure

Screw-cover
Flat or flanged lid with captive screws

Terminal / marshalling
Deeper body with DIN-rail plate

Typical size range	100 × 100 × 60 mm up to 800 × 600 × 250 mm
Sheet thickness	1.2 – 3 mm (body), 2 – 3 mm (mounting plate)
Joining	Welded and ground corners, or folded and spot-fastened
Materials	CRCA mild steel · Galvanised steel (GI / GP) · Stainless steel 304 · Stainless steel 316 / 316L · Aluminium 5052-H32
Applications	Control and automation panels · Instrumentation fields · Lighting and power distribution · OEM machine wiring

/ COMMON JUNCTION BOX SIZES (MADE TO ORDER)

W × H × D (mm)	Typical sheet	Typical use
150 × 150 × 100	1.2 mm	Small terminations
200 × 200 × 120	1.5 mm	Field junctions
300 × 300 × 150	1.5 mm	Instrument junctions
400 × 300 × 200	1.6 mm	Marshalling
500 × 400 × 200	2.0 mm	Large terminations
600 × 600 × 250	2.0 mm	Distribution junctions

Any size within our machine limits is made to drawing; these are the sizes most often asked for.



Control Panel & Cabinet Bodies

Control panel and cabinet bodies are folded from sheet, welded and finished to your panel layout, with doors, mounting plates, roof, base frame and internal partitions supplied as one kit.

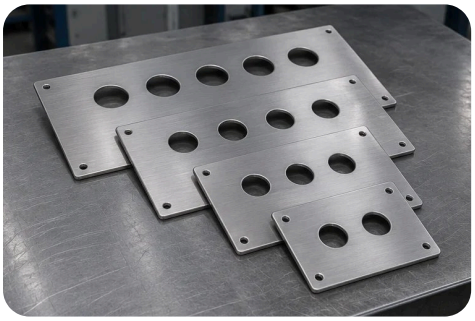
- **Wall-mount panels** — Single door with mounting plate
- **Floor-standing cabinets** — Single or double door with plinth
- **Modular / partitioned** — Internal partitions and compartment doors
- **Desk / operator consoles** — Sloped front with removable panels

Typical size range	Up to 2000 mm high per section; wider suites in bolted sections
Sheet thickness	1.6 – 2.0 mm (body), 2.5 – 3 mm (mounting plate, plinth)
Materials	CRCA mild steel · Galvanised steel (GI / GP) · Stainless steel 304 · Stainless steel 316 / 316L
Applications	Panel builders · Machine builders · Building services · Process plant control

/ COMMON CABINET SIZES (MADE TO ORDER)

H × W × D (mm)	Construction	Typical use
600 × 400 × 200	Wall-mount, single door	Small control
800 × 600 × 250	Wall-mount, single door	Motor control
1200 × 800 × 300	Floor / wall, single door	PLC panels
1800 × 800 × 400	Floor-standing	MCC sections
2000 × 1200 × 600	Floor-standing, double door	Distribution / drives

Cut-outs for meters, fans, windows and switches are made from your general-arrangement drawing.



Gland & Mounting Plates

Gland plates and mounting plates are laser-cut flat with every hole, slot and knockout positioned from your drawing, then formed with return flanges where stiffness is needed.

- **Undrilled gland plates** — Blank plates for site drilling
- **Pre-punched gland plates** — Gland holes cut to your cable schedule
- **Mounting plates** — Flat or flanged, with tapped or clinched fixings
- **Split / cable-entry plates** — Two-piece plates for pre-terminated cables

Thickness	1.5 – 3 mm (gland), 2 – 3 mm (mounting)
Gland hole sizes	M16 – M63 and PG patterns as specified
Flatness	Checked on the surface table against drawing
Materials	CRCA mild steel · Galvanised steel (GI / GP) · Stainless steel 304 · Aluminium 5052-H32 · Brass
Applications	Control panels · Junction boxes · Drive and MCC panels · Switchgear

/ METRIC CABLE GLAND CLEARANCE HOLES

Gland size	Clearance hole	Notes
M16	16.5 mm	
M20	20.5 mm	
M25	25.5 mm	
M32	32.5 mm	
M40	40.5 mm	
M50	50.5 mm	
M63	63.5 mm	

Clearance values are typical; we cut the hole size shown on your drawing.

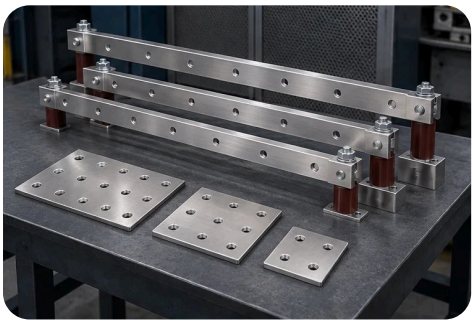


Distribution & Meter Boxes

Distribution board and meter box bodies made to your layout, from small single-phase boxes to three-phase DB enclosures with gland plates, DIN-rail mounting and hinged doors.

- **Single-phase DB** — Surface or flush mounting
- **Three-phase TPN DB** — With busbar and neutral link space
- **Meter boxes** — Single or multi-meter, with viewing window
- **Feeder pillars (bodies)** — Outdoor bodies with plinth

Typical size range	200 × 300 × 100 mm up to 1000 × 800 × 300 mm
Sheet thickness	1.2 – 2.0 mm
Materials	CRCA mild steel · Galvanised steel (GI / GP) · Stainless steel 304
Applications	Building electrical contractors · Panel builders · Infrastructure projects



Copper Busbars & Earthing Plates

Copper busbars, links and earthing plates are laser-cut and bent so hole positions, offsets and lengths repeat across every batch.

- **Flat busbars** — Straight bars with bolt holes
- **Offset / bent busbars** — Single and double offsets
- **Earthing plates & bars** — Drilled earth bars and plates
- **Links & connectors** — Short links, spacers and terminal plates

Thickness	Up to 6 mm copper (laser), thicker on review
Max length	Up to 3000 mm (cut) · 3200 mm (bend)
Hole patterns	Round, slotted and countersunk holes to drawing
Edge finish	Deburred; radius on request
Plating	Tin or silver plating through approved suppliers
Materials	Copper (ETP) · Brass · Aluminium 6061-T6
Applications	Panel and switchgear builders · Earthing systems · Power electronics

/ COMMON FLAT BUSBAR SECTIONS

Width × thickness (mm)	Cross-section	Notes
15 × 3	45 mm²	
20 × 3	60 mm²	
25 × 3	75 mm²	
25 × 5	125 mm²	
30 × 5	150 mm²	
40 × 5	200 mm²	
50 × 6	300 mm²	
60 × 6	360 mm²	

Current rating depends on enclosure, spacing and temperature rise; we make the section you specify.

/ REQUEST A QUOTE

Have a drawing for one of these parts?

Send the drawing or DXF, material, thickness, quantity, finish and delivery date. We reply with a quotation for prototypes or repeat batches.

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/ CORE RANGE · FIT, FINISH AND ASSEMBLY ACCURACY

Machine Covers & Housings

Machine builders buy covers and housings for fit, finish and service access. We develop flat patterns from your model, bend with recorded programs and weld or fasten panels so they line up with your frame, doors and fixings on every batch.

Machine Cladding & Access Panels | Equipment & Instrument Housings | Conveyor Components | Machine Guards & Safety Panels | Hoppers & Chutes

/ COMMON TO EVERY PRODUCT IN THIS RANGE

Laser cutting
MS up to 20 mm · SS up to 12 mm · Al / Cu up to 6 mm

Max bend length
3200 mm on 100 t, five-axis CNC (LVD-YSD PPES 1032)

Welding
Laser welding: MS 6 mm · SS 5 mm · Al 3 mm; TIG / arc for heavier joints

Finish
Deburring, grinding, polishing in-house; powder coat, plating or PVD through approved suppliers

Inspection
Dimensions checked against your drawing revision before dispatch

Order size
Prototype, pilot and repeat batches



Machine Cladding & Access Panels

Machine cladding, covers and access doors are formed to your equipment layout so panels fit the frame, open where operators need access and close cleanly.

Fixed cladding panels
Bolted to frame

Hinged access doors
With handles and locks

Removable covers
Lift-off or quarter-turn fixings

Top covers & canopies
Large formed panels

Thickness	1 – 3 mm typical
Materials	CRCA mild steel · Galvanised steel (GI / GP) · Stainless steel 304 · Stainless steel 430 · Aluminium 5052-H32
Applications	Machine builders · Packaging and process equipment · Test rigs



Equipment & Instrument Housings

Housings and consoles are folded and welded around your equipment, with cut-outs for displays, vents and connectors placed from the drawing.

- **Instrument housings** — Small boxes and covers
- **Equipment enclosures** — Floor or bench housings
- **Consoles & desks** — Sloped control desks
- **Fan and filter housings** — Vented bodies

Thickness	1 – 2.5 mm typical
Materials	CRCA mild steel · Galvanised steel (GI / GP) · Stainless steel 304 · Aluminium 5052-H32
Applications	Test and measuring equipment · Medical and lab equipment bodies · Industrial electronics



Conveyor Components

Conveyor covers, side guides and support brackets are cut and formed in long lengths on the 3200 mm press brake.

- **Side panels & guides** — Formed lengths
- **Covers & guards** — Top and belt covers
- **Support brackets** — Legs and cross-members
- **Drip trays** — Formed trays

Max length	3200 mm per piece
Thickness	1.5 – 4 mm typical
Materials	CRCA mild steel · Hot-rolled structural steel · Galvanised steel (GI / GP) · Stainless steel 304
Applications	Conveyor builders · Food and packaging lines · Warehousing



Machine Guards & Safety Panels

Guards and safety panels are cut from plain or perforated sheet and formed for stiffness, to fit your machine frame and access points.

- **Fixed guards** — Bolted covers over moving parts
- **Perforated panels** — See-through guarding
- **Hinged guards** — For access with interlock mounting
- **Fence panels** — Framed partition panels

Thickness	1.2 – 3 mm typical
Perforation	Round or slotted patterns laser-cut to drawing
Materials	CRCA mild steel · Galvanised steel (GI / GP) · Stainless steel 304 · Aluminium 5052-H32
Applications	Machine builders · Automation cells · Plant maintenance



Hoppers & Chutes

Hoppers and chutes are developed into flat blanks, formed in sections and welded into finished bodies with flanges and inspection doors.

- **Feed hoppers** — Square or rectangular to round
- **Chutes** — Straight and curved
- **Transfer guides** — Between conveyors
- **Bins** — Collection bins

Thickness	1.5 – 6 mm typical
Materials	Hot-rolled structural steel · CRCA mild steel · Stainless steel 304 · Stainless steel 316 / 316L
Applications	Food and pharma equipment · Bulk handling · Recycling machinery

/ REQUEST A QUOTE

Have a drawing for one of these parts?

Send the drawing or DXF, material, thickness, quantity, finish and delivery date. We reply with a quotation for prototypes or repeat batches.

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/ CORE RANGE · RECURRING PART NUMBERS

OEM Sheet Metal Components

Brackets, channels, trays, plates and welded subassemblies made to your drawing revision. Nested cutting, standard tooling and recorded bend sequences keep repeat part numbers consistent from the approved sample onwards.

Precision Brackets & Supports | Channels & Trays | Welded Subassemblies | Base Plates, Flanges & Gussets | Laser-Cut Profiles & Blanks

/ COMMON TO EVERY PRODUCT IN THIS RANGE

Laser cutting
MS up to 20 mm · SS up to 12 mm · Al / Cu up to 6 mm

Max bend length
3200 mm on 100 t, five-axis CNC (LVD-YSD PPES 1032)

Welding
Laser welding: MS 6 mm · SS 5 mm · Al 3 mm; TIG / arc for heavier joints

Finish
Deburring, grinding, polishing in-house; powder coat, plating or PVD through approved suppliers

Inspection
Dimensions checked against your drawing revision before dispatch

Order size
Prototype, pilot and repeat batches



Precision Brackets & Supports

Brackets and supports are cut, bent and, where needed, welded so hole positions and bend angles stay consistent across repeat orders.

L-brackets
Single bend, with slots or holes

Z-brackets
Offset brackets

Welded brackets
Multi-part welded supports

U / channel brackets
Two bends, equal or unequal legs

Gussets & stiffeners
Flat laser-cut plates

Thickness	1 – 10 mm typical (cut up to 20 mm MS)
Positioning accuracy	0.1 mm on the press brake back-gauge
Materials	CRCA mild steel · Hot-rolled structural steel · Galvanised steel (GI / GP) · Stainless steel 304 · Stainless steel 316 / 316L · Aluminium 5052-H32
Applications	Machine builders · Electrical and HVAC equipment · Automotive and material handling OEMs



Channels & Trays

Channels and trays are bent on the five-axis press brake to your profile, including cable trays, component trays and C or U channels up to 3200 mm long.

- **C / U channels** — Equal or unequal flanges
- **Perforated cable trays** — With slots and return flanges
- **Ladder / ventilated trays** — Welded rungs or punched base
- **Component trays** — Folded corners, welded or riveted

Max length	3200 mm per piece
Thickness	1.2 – 3 mm typical
Materials	CRCA mild steel · Galvanised steel (GI / GP) · Stainless steel 304 · Aluminium 5052-H32
Applications	Electrical contractors · Machine builders · Industrial plants

/ COMMON CABLE TRAY SIZES (MADE TO ORDER)

Width (mm)	Side height (mm)	Typical sheet
50	25 / 50	1.2 mm
100	50	1.5 mm
150	50	1.5 mm
200	50 / 75	1.6 mm
300	50 / 75	2.0 mm
450	75 / 100	2.0 mm
600	100	2.0 mm

Standard piece lengths 2500 or 3000 mm; bends and covers made to match.



Welded Subassemblies

Cut, formed and welded parts are joined into subassemblies that arrive ready for your line, with weld positions, fixtures and checks agreed from your drawing.

- **Frames** — Welded sheet and section frames
- **Brackets & mounts** — Multi-part welded supports
- **Housings** — Welded sheet-metal bodies
- **Kits** — Matched part sets for assembly

Fixturing	Weld fixtures for repeat batches
Materials	CRCA mild steel · Hot-rolled structural steel · Galvanised steel (GI / GP) · Stainless steel 304 · Stainless steel 316 / 316L · Aluminium 5052-H32
Applications	Industrial machinery · Material handling · Electrical equipment

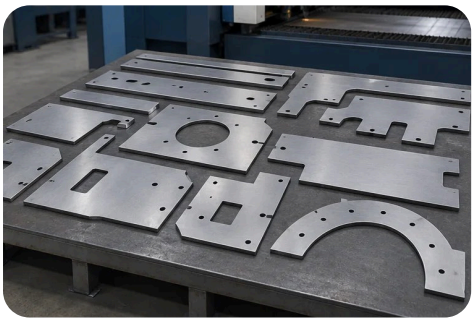


Base Plates, Flanges & Gussets

Thick mild-steel plate is laser-cut to profile with holes and slots in one pass, so base plates, flanges and gussets need no separate marking or drilling.

- **Base plates** — Column, machine and equipment bases
- **Flanges** — Flat and slip-on style, to drawing
- **Gussets & lugs** — Stiffeners and lifting lugs
- **Anchor plates** — Embedded and mounting plates

Thickness	MS up to 20 mm · SS up to 12 mm
Max plate size	1500 × 3000 mm
Holes	Laser-cut holes; tapping and countersinking on the drilling machine
Edge finish	Deburred; bevels on request
Materials	Hot-rolled structural steel · CRCA mild steel · Stainless steel 304 · Stainless steel 316 / 316L
Applications	Structural and machine bases · Piping supports · Material handling



Laser-Cut Profiles & Blanks

Flat parts are cut directly from your DXF or drawing and nested for material yield, from single prototypes to repeat kits.

- **Blanks** — For your own forming
- **Name plates & tags** — Cut and marked
- **Shims & spacers** — Thin flat parts to drawing
- **Prototype kits** — Mixed parts for trials

Max sheet	1500 × 3000 mm
Files accepted	DXF, DWG, STEP and PDF drawings
Nesting	Parts nested on the sheet for material yield
Materials	CRCA mild steel · Hot-rolled structural steel · Galvanised steel (GI / GP) · Stainless steel 304 · Stainless steel 316 / 316L · Aluminium 5052-H32 · Copper (ETP) · Brass
Applications	OEM prototypes · Fabricators and job shops · Signage and decor

/ REQUEST A QUOTE

Have a drawing for one of these parts?

Send the drawing or DXF, material, thickness, quantity, finish and delivery date. We reply with a quotation for prototypes or repeat batches.

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Daksh Shah · +91 90823 86814



/ NON-PRESSURE STAINLESS EQUIPMENT

Stainless Equipment Fabrication

Stainless cabinets, worktables, trays, trolleys and kitchen equipment made with folded edges, welded corners and the surface finish agreed at quotation. Applications are non-pressure equipment; hygiene or sterile requirements are reviewed with you.

SS Cabinets & Housings | Worktables & Trays | Industrial Trolleys | Kitchen Hoods, Shelving & Racks

/ COMMON TO EVERY PRODUCT IN THIS RANGE

Laser cutting
MS up to 20 mm · SS up to 12 mm · Al / Cu up to 6 mm

Max bend length
3200 mm on 100 t, five-axis CNC (LVD-YSD PPES 1032)

Welding
Laser welding: MS 6 mm · SS 5 mm · Al 3 mm; TIG / arc for heavier joints

Finish
Deburring, grinding, polishing in-house; powder coat, plating or PVD through approved suppliers

Inspection
Dimensions checked against your drawing revision before dispatch

Order size
Prototype, pilot and repeat batches



SS Cabinets & Housings

Stainless cabinets and housings are made with folded edges, welded corners and the surface finish you specify, for clean areas and wash-down zones.

Wall cabinets
Hinged or sliding doors

Floor cabinets
With adjustable feet

Equipment housings
Around machines and motors

Control boxes
Small stainless boxes

Thickness	1 – 2 mm typical
Surface	2B, No. 4 brushed or polished as specified
Materials	Stainless steel 304 · Stainless steel 316 / 316L · Stainless steel 202
Applications	Food and pharma plants · Hospitals and labs · Clean rooms



Worktables & Trays

Stainless worktables, frames and trays are folded with rounded edges and welded for rigidity, with the top, undershelf and splash-back you need.

- **Worktables** — With undershelf and splash-back
- **Workbench frames** — Tube and sheet frames
- **Trays** — Folded and welded corners
- **Drip trays** — With drain outlet

Top thickness	1 – 1.5 mm typical
Surface	2B or No. 4 brushed
Materials	Stainless steel 304 · Stainless steel 316 / 316L · Stainless steel 202
Applications	Commercial kitchens · Food processing · Laboratories

/ COMMON WORKTABLE SIZES (MADE TO ORDER)

L × W × H (mm)	Top	Notes
1200 × 600 × 850	1.2 mm SS 304	With undershelf
1500 × 750 × 850	1.2 mm SS 304	With undershelf
1800 × 750 × 850	1.5 mm SS 304	Splash-back optional
2400 × 900 × 850	1.5 mm SS 304	Centre leg added

Heights and sizes are made to your layout.



Industrial Trolleys

Trolley frames, decks and trays are welded to your load and layout, in stainless or mild steel.

- **Platform trolleys** — Flat deck
- **Shelf trolleys** — Two or three tiers
- **Tray / rack trolleys** — Runners for trays
- **Bin trolleys** — For process bins

Castors	Fitted as specified
Materials	Stainless steel 304 · Stainless steel 202 · CRCA mild steel · Hot-rolled structural steel
Applications	Food and pharma · Workshops · Warehousing



Kitchen Hoods, Shelving & Racks

Hoods, shelves and racks are made in food-grade stainless with folded edges and welded corners, finished to the surface agreed at quotation.

- **Wall hoods** — With baffle filter frames
- **Island hoods** — Four-sided
- **Wall shelves & pot racks** — Folded edges
- **Storage racks** — Multi-tier racks

Thickness	0.9 – 1.5 mm typical
Surface	2B or No. 4 brushed
Materials	Stainless steel 304 · Stainless steel 202 · Stainless steel 430
Applications	Hotels and restaurants · Institutional kitchens · Food production



/ REPEATABLE PARTS FOR RACK AND POWER-EQUIPMENT OEMS

Rack & Electronics Components

Rack shelves, blanking panels, chassis and cabinet bodies to the 19-inch interface, made as repeatable sheet-metal parts for rack manufacturers, UPS and inverter makers and electronics integrators.

Rack Shelves & Blanking Panels | Chassis & Mounting Components | Network & Wall-Mount Cabinets

/ COMMON TO EVERY PRODUCT IN THIS RANGE

Laser cutting
MS up to 20 mm · SS up to 12 mm · Al / Cu up to 6 mm

Max bend length
3200 mm on 100 t, five-axis CNC (LVD-YSD PPES 1032)

Welding
Laser welding: MS 6 mm · SS 5 mm · Al 3 mm; TIG / arc for heavier joints

Finish
Deburring, grinding, polishing in-house; powder coat, plating or PVD through approved suppliers

Inspection
Dimensions checked against your drawing revision before dispatch

Order size
Prototype, pilot and repeat batches



Rack Shelves & Blanking Panels

Rack shelves, blanking panels and rack accessories are folded to the 19-inch interface and your depth, with vents and mounting slots cut to drawing.

Blanking panels
1U – 4U, plain or vented

Fixed shelves
Front-mount or four-post

Sliding shelves
With telescopic slides

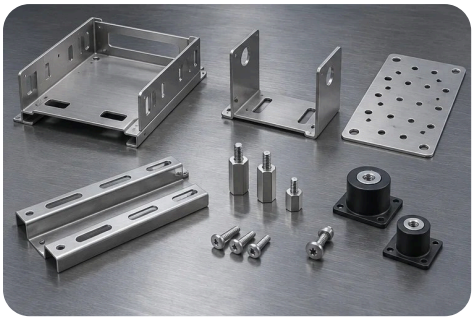
Cable management
Brush and finger panels

Thickness	1.2 – 2 mm typical
Interface	EIA-310 / IEC 60297 19-inch
Materials	CRCA mild steel · Galvanised steel (GI / GP) · Aluminium 5052-H32 · Stainless steel 304
Applications	Rack manufacturers · Data centres and telecom · Broadcast and audio

/ 19-INCH RACK UNIT HEIGHTS (EIA-310)

Rack units	Panel height	Notes
1U	44.45 mm (panel 43.7 mm)	Blanking / vented panel
2U	88.9 mm (panel 88.1 mm)	Shelf or panel
3U	133.35 mm (panel 132.5 mm)	Panel or sub-rack
4U	177.8 mm (panel 177 mm)	Panel or chassis
Panel width	482.6 mm (19 in)	Mounting pitch 465 mm

Rack depth and rail positions follow your drawing.



Chassis & Mounting Components

Electronic chassis, sub-racks and mounting brackets are folded and joined with cut-outs placed for connectors, displays and ventilation.

- **Chassis** — 19-inch and bench chassis
- **Sub-racks** — With card guides
- **Mounting brackets** — PCB and component mounts
- **Small cabinets** — Desktop and wall boxes

Thickness	1 – 2 mm typical
Materials	CRCA mild steel · Galvanised steel (GI / GP) · Aluminium 5052-H32 · Stainless steel 304
Applications	Electronics integrators · Power electronics · Test equipment

/ 19-INCH RACK UNIT HEIGHTS (EIA-310)

Rack units	Panel height	Notes
1U	44.45 mm (panel 43.7 mm)	Blanking / vented panel
2U	88.9 mm (panel 88.1 mm)	Shelf or panel
3U	133.35 mm (panel 132.5 mm)	Panel or sub-rack
4U	177.8 mm (panel 177 mm)	Panel or chassis
Panel width	482.6 mm (19 in)	Mounting pitch 465 mm

Rack depth and rail positions follow your drawing.



Network & Wall-Mount Cabinets

Network cabinet bodies are folded from sheet with 19-inch rails set to your rack-unit layout, and cable entries and ventilation cut to drawing.

- **Wall-mount cabinets** — 6U – 15U
- **Floor cabinets** — 22U – 42U bodies
- **Doors** — Glass-frame, perforated or solid
- **Accessories** — Shelves, fan plates, cable managers

Thickness	1.2 – 2 mm typical
Interface	19-inch EIA-310 rails
Materials	CRCA mild steel · Galvanised steel (GI / GP) · Aluminium 5052-H32
Applications	IT and telecom integrators · Security and CCTV · Offices and buildings

/ COMMON NETWORK CABINET SIZES (MADE TO ORDER)

Size	Height (approx.)	Depth options
6U wall	≈ 370 mm	450 / 550 mm
9U wall	≈ 500 mm	450 / 550 mm
12U wall	≈ 635 mm	450 / 550 mm
27U floor	≈ 1400 mm	600 / 800 mm
42U floor	≈ 2050 mm	800 / 1000 mm

External height depends on top, base and door design.

/ REQUEST A QUOTE

Have a drawing for one of these parts?

Send the drawing or DXF, material, thickness, quantity, finish and delivery date. We reply with a quotation for prototypes or repeat batches.

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/ SELECTIVE PROJECT WORK

Architectural Metalwork

Laser-cut screens, partitions, signage, furniture frames and facade panels, taken on selectively where the design, finish and installation scope are clearly agreed before cutting starts.

Decorative Screens & Partitions | **Signage** | **Furniture Frames** | **Facade & Railing Panels**

/ COMMON TO EVERY PRODUCT IN THIS RANGE

Laser cutting
MS up to 20 mm · SS up to 12 mm · Al / Cu up to 6 mm

Finish
Deburring, grinding, polishing in-house; powder coat, plating or PVD through approved suppliers

Max bend length
3200 mm on 100 t, five-axis CNC (LVD-YSD PPES 1032)

Inspection
Dimensions checked against your drawing revision before dispatch

Welding
Laser welding: MS 6 mm · SS 5 mm · Al 3 mm; TIG / arc for heavier joints

Order size
Prototype, pilot and repeat batches



Decorative Screens & Partitions

Patterns are laser-cut from your artwork into sheet, then edges are folded or framed so screens stay flat and fit on site.

- **Jali / pattern screens** — From artwork
- **Perforated panels** — Regular patterns
- **Room partitions** — Framed panels
- **Feature walls** — Large-format panels

Max panel	1500 × 3000 mm per piece
Thickness	1.5 – 6 mm typical
Materials	Stainless steel 304 · Stainless steel 202 · CRCA mild steel · Aluminium 5052-H32 · Brass
Applications	Architects and interior designers · Hospitality · Offices and retail



Signage

Letters, logos and backing panels are laser-cut from your artwork and finished for indoor or outdoor display.

- **Cut letters** — Flat or with return edges
- **Logo panels** — Cut-through or layered
- **Backing panels & trays** — Folded trays
- **Plaques** — Name and building plaques

Thickness	1 – 6 mm typical
Materials	Stainless steel 304 · Stainless steel 202 · Aluminium 5052-H32 · Brass · CRCA mild steel
Applications	Sign makers · Architects · Corporate interiors



Furniture Frames

Metal frames and components are cut, bent and welded for furniture and interior fit-outs.

- **Table frames** — Legs and under-frames
- **Shelving frames** — Wall and floor units
- **Brackets & fittings** — Concealed brackets
- **Panels** — Folded sheet panels

Materials	CRCA mild steel · Hot-rolled structural steel · Stainless steel 304 · Stainless steel 202
Applications	Furniture makers · Interior contractors · Retail fit-outs



Facade & Railing Panels

Facade screens, cladding panels and railing infills are laser-cut from your artwork and folded or framed to fix cleanly on site.

- **Facade screens** — Pattern or perforated
- **Cladding panels** — Folded cassette panels
- **Railing infills** — For balcony and stair railings
- **Gate panels** — Cut patterns

Max panel	1500 × 3000 mm per piece
Thickness	1.5 – 6 mm typical
Materials	CRCA mild steel · Galvanised steel (GI / GP) · Stainless steel 304 · Stainless steel 316 / 316L · Aluminium 5052-H32
Applications	Architects · Builders and developers · Hospitality projects

/ INDUSTRIES

Industries we serve

Sheet-metal parts for companies that build equipment: electrical panels, machines, process equipment and racks.



Electrical & Automation

Enclosure bodies, junction boxes, gland plates and mounting components for panel builders.

Typical buyers: Panel builders, automation companies, electrical OEMs



Industrial Machinery

Machine cladding, access panels, brackets and welded subassemblies for machine builders.

Typical buyers: Machinery, packaging, process-equipment and automation manufacturers



Food & Pharma Equipment

Non-pressure stainless housings, worktables, trays and trolley frames.

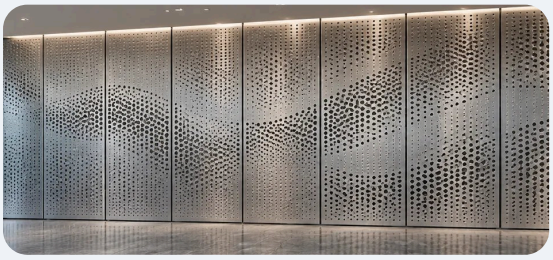
Typical buyers: Food, pharmaceutical and laboratory equipment manufacturers



Electronics & Rack Manufacturers

Rack shelves, blanking panels, chassis and mounting parts.

Typical buyers: Rack manufacturers, UPS / inverter makers, electronics integrators



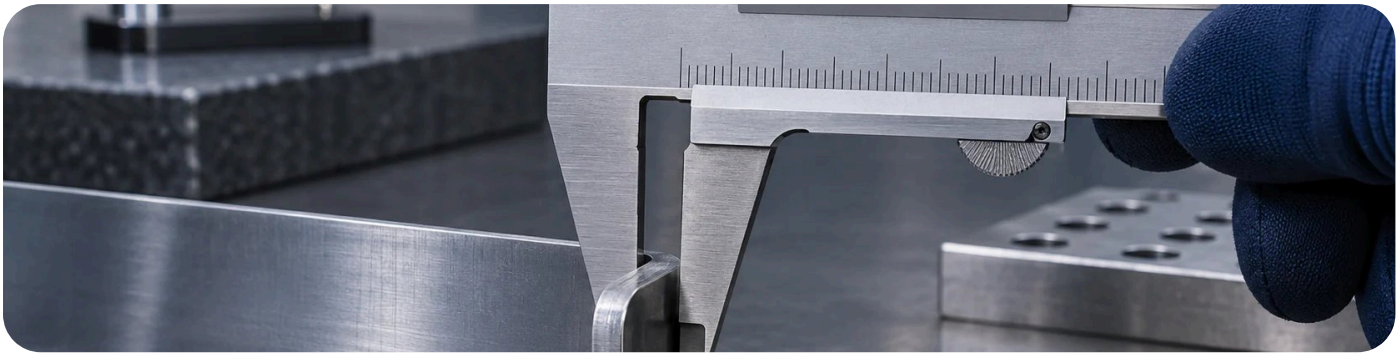
Architecture & Interiors

Decorative screens, partitions, signage components and furniture frames.

Typical buyers: Interior contractors, architects and specialist fabricators

/ QUALITY & INSPECTION

Defined requirements. Practical checks.



01

Before production

Confirm drawing revision, material grade, thickness, surface finish and critical dimensions.

02

During fabrication

Review flat patterns, bend sequence, hole positions, weld access and distortion.

03

Before dispatch

Check agreed dimensions, sharp edges, finishing and assembly interfaces; pack to the requirement.

/ FROM ENQUIRY TO REPEAT BATCH

1 **Enquiry**
Drawing, material, quantity, finish, date

2 **Review**
Feasibility against machine limits

3 **Quotation**
Scope, finish and inspection agreed

4 **Prototype**
Sample made for your approval

5 **Approval**
Program, tooling and setup recorded

6 **Repeat batches**
Made to the approved sample

Tell us which dimensions, material documents, inspection records or sample approvals your project needs. Material test certificates follow the supplied lot. Product ratings, certification and test requirements are reviewed separately and confirmed in the quotation.

/ REQUEST A QUOTE

Have a drawing ready? Send it for a quote.

What to send

01 Drawing / CAD + revision
DXF or DWG for flat parts; STEP for formed and welded parts; dimensioned PDF

02 Material & thickness
Grade (e.g. CRCA, GI, SS 304, SS 316, Al 5052) and sheet thickness

03 Quantity & repeat plan
Prototype, pilot batch and expected repeat quantities

04 Finish
Plain, brushed, polished, powder coat (colour), plating

05 Tolerances & critical dimensions
Dimensions, hole positions and interfaces that must be checked

06 Delivery requirement
Date, packing and delivery location

Email **info@vinaymetal.com** or WhatsApp Daksh Shah on **+91 90823 86814**. We review it and reply with a quotation for prototypes or repeat batches.

What should I send for a quotation?

A drawing or DXF with revision, material grade and thickness, quantity, finish and the delivery date. A STEP file helps for formed and welded parts.

What is the largest part you can make?

Flat parts up to 1500 × 3000 mm from one sheet, and bends up to 3200 mm long on the 100-ton press brake. Larger assemblies are made in welded or bolted sections.

How thick can you cut?

On the 3 kW fibre laser: mild steel up to 20 mm, stainless steel up to 12 mm, and aluminium and copper up to 6 mm.

Do you make prototypes and small batches?

Yes. We make prototypes for approval, then repeat batches using the recorded bend programs and setups from the approved sample.

Can you do powder coating or plating?

Deburring, grinding and polishing are done in-house. Powder coating, plating and PVD are coordinated with approved suppliers, so you can order finished parts on one purchase order.

Do you manufacture fasteners as well?

Yes. We have manufactured stainless steel bolts, nuts, screws, washers and studs since 1996, in DIN, ISO, IS and BS patterns, in our own fastener manufacturing setup.



/ FASTENER MANUFACTURING · SINCE 1996

Stainless steel fasteners

We manufacture bolts, nuts, screws, washers and studs in SS 202, 304, 310 and 316 to DIN, ISO, IS and BS patterns, in our own fastener setup since 1996. Order them on their own or on the same order as your sheet-metal parts.

Materials & standards

Stainless steel grades	202 · 304 · 310 · 316 · 316L · 410
Other materials	HT · MS · Copper · Brass · Titanium
Property class	A2 / A4
Standard finish	Plain
Standards	DIN · ISO · IS · BS

/ CHOOSING A GRADE

Environment	Grade	Why
Indoor, dry	SS 202	Lowest-cost stainless. Fine for dry indoor furniture, fixtures and panels where moisture is low.
General & outdoor	SS 304 (A2)	The everyday stainless fastener. Good corrosion resistance for machines, panels and outdoor use away from salt.
Coastal, chemical, food	SS 316 / 316L (A4)	Molybdenum improves resistance to chlorides. Use near the coast, in chemical plants, pharma and food washdown.
High temperature	SS 310	High-chromium, high-nickel grade for ovens, furnaces and heat-treatment fixtures.
Hard, self-tapping	SS 410	Martensitic and hardenable. Taps into steel sheet, but resists corrosion less than 304.
Electrical contact	Brass / Copper	Good conductivity for terminals, earthing and bus connections.

/ FASTENER MATERIAL GRADES

Grade	Also known as	Magnetic	Density	Max. service	Use
SS 202	Cr-Mn austenitic	Slightly	7.80 g/cm³	≈ 800 °C	Indoor and dry conditions; lowest cost stainless
SS 304 (A2)	EN 1.4301	No (annealed)	8.00 g/cm³	≈ 870 °C	General-purpose; most common stainless fastener
SS 316 / 316L (A4)	EN 1.4401 / 1.4404	No (annealed)	8.00 g/cm³	≈ 870 °C	Marine, chemical and food environments
SS 310	EN 1.4845	No	7.90 g/cm³	≈ 1100 °C	High-temperature service, furnaces and ovens
SS 410	EN 1.4006 (martensitic)	Yes	7.75 g/cm³	≈ 650 °C	Hardenable; used for tapping screws and wear parts
Brass	CuZn37 / CuZn39Pb3	No	8.4 – 8.5 g/cm³	≈ 200 °C	Electrical and decorative use
Copper	Cu-ETP	No	8.94 g/cm³	≈ 200 °C	Electrical conductivity
Titanium Gr 2	ASTM B348	No	4.51 g/cm³	≈ 300 °C	Light weight, excellent corrosion resistance

Values are typical published values for the grade. Service temperatures are approximate scaling limits in air, not design ratings.

Bolts

Hexagon bolts carry most structural and machine joints. Full-thread (DIN 933) suits short grips and general fixing; part-thread (DIN 931) gives a plain shank for shear loads.

Thread	ISO metric coarse; fine and BSW on request
Head	Hexagon, flange, mushroom, eye
Property class	A2-70 / A4-70 typical; A4-80 on request
Finish	Plain stainless



Fully threaded hex bolts



Part thread hex bolts



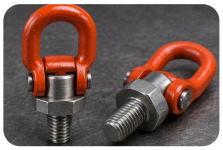
Flange bolts



Square neck carriage bolts



Lifting eye bolts



Pivot eye bolts

Type	Standard	Sizes	What it is	Typical use
Hex bolt, full thread	DIN 933 / ISO 4017	M3 – M48	Thread runs right up to the head, so one bolt covers many grip lengths.	Machine frames, brackets, general fixing
Hex bolt, part thread	DIN 931 / ISO 4014	M3 – M48	A plain shank under the head takes shear load across the joint.	Hinged joints, structural connections
Hex head bolt, inch	BS 1083	1/4" – 2"	Imperial hexagon bolt with BSW or UNC thread for older equipment.	Replacement on imported machinery
Hex flange bolt	DIN 6921	M5 – M20	Built-in flange spreads the load, so no separate washer is needed.	Sheet metal panels, automotive parts
Mushroom head square neck bolt	DIN 603	M5 – M20	Smooth domed head with a square neck that locks in a square hole.	Wooden frames, guards, conveyor slats
Lifting eye bolt	DIN 580	M6 – M36	Forged collar eye for vertical lifting of machines and covers.	Motor and enclosure lifting points
Eye bolt	DIN 444	M5 – M39	Eye end with a threaded shank, used as a pivot or anchor point.	Tie rods, hinges, tensioning

/ HOW TO SPECIFY A FASTENER

Standard · size · grade · quantity

Give the standard (or a drawing for specials), thread size and length, material grade and property class, quantity and finish. Example:

STANDARD	SIZE × LENGTH	GRADE / CLASS	QUANTITY
DIN 933	M10 × 40	A2-70	500 pcs

Nuts

Nuts are matched to the bolt grade. Nylock nuts resist vibration, thin jam nuts lock a second nut, and cap nuts cover exposed thread ends.

Thread	ISO metric coarse
Types	Hex, jam, nylock, cap, wing, square, flange, eye
Property class	A2-70 / A4-70 (match the bolt)
Finish	Plain stainless



Hex nuts



Heavy hex nuts



Thin jam nuts



Nylon insert lock nuts



All metal lock nuts



Domed cap nuts

Type	Standard	Sizes	What it is	Typical use
Hexagon nut	DIN 934 / ISO 4032	On request	The standard nut for bolts and studs; height close to 0.8 d.	General assembly with hex bolts
Hexagon nut, inch	BS 1083	1/4" – 1.3/4"	Imperial hex nut for BSW and UNC threads.	Older and imported machinery
Thin / jam / lock nut	DIN 439	M3 – M48	About half the height of a standard nut; locks a second nut.	Adjusters, locking a full nut
Nylock nut	DIN 982 / ISO 7040	M5 – M24	Nylon insert grips the thread and resists loosening under vibration.	Motors, fans, vibrating machines
Nylock nut, thin	DIN 985	M3 – M20	Lower profile nylock where space is short.	Covers, guards, compact assemblies
Domed cap nut	DIN 1587	M4 – M24	Closed dome covers the thread end for a neat, safe finish.	Exposed furniture and equipment ends
Wing nut	DIN 315	M3 – M20	Tightened by hand, no tool needed.	Access covers, frequently opened clamps
Square nut	DIN 557	M5 – M16	Square body sits in a slot and does not turn.	Channel slots, timber
Hex flange nut	DIN 6923	M5 – M20	Integral flange spreads the load on thin sheet.	Sheet metal panels
Lifting eye nut	DIN 582	M6 – M36	Forged eye that fits onto a stud for lifting.	Lifting points on studs

Socket screws

Socket screws give high clamp load from a compact head, and fit counterbores where a hex head cannot.

Drive	Hexagon socket (Allen)
Head	Cap, countersunk, button, set screw
Property class	A2-70 / A4-70
Finish	Plain stainless



Socket head cap screws



Countersunk socket screws



Button head socket screws



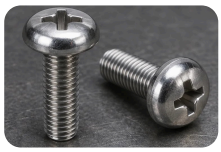
Headless socket set screws

Type	Standard	Sizes	What it is	Typical use
Socket head cap screw	DIN 912 / ISO 4762	M1.6 – M36	Cylindrical head with a hexagon socket; high clamp load from a small head.	Dies, fixtures, machine parts in counterbores
Socket head screw, inch	BS 2470	1/4" – 5/8"	Imperial Allen cap screw.	Imported machine spares
Socket countersunk screw	DIN 7991 / ISO 10642	M3 – M24	90° countersunk head sits flush with the surface.	Flush covers, guides, slides
Socket button head screw	ISO 7380	M3 – M16	Low, rounded head with a wide bearing face.	Guards, panels, visible fixings
Set (grub) screws	DIN 916 / 913 / 914 / 915	M3 – M20	Headless screws: cup, flat, cone and dog point.	Locking pulleys, collars and knobs on shafts

Machine screws

Machine screws fix panels, covers and electrical parts into tapped holes or with nuts.

Drive	Phillips (H) or slotted
Head	Pan, countersunk, cheese
Thread	M1.6 – M10 metric coarse
Grade	SS 304 / 316



Phillips pan head machine screws



Phillips countersunk machine screws



Slotted countersunk machine screws



Slotted cheese head machine screws



Slotted pan head machine screws

Type	Standard	Sizes	What it is	Typical use
Pan head Phillips	DIN 7985 / ISO 7045	M1.6 – M10	Low domed head with a cross recess; the most used panel screw.	Electrical panels, covers, DIN rails
Countersunk Phillips	DIN 965 / ISO 7046	M2 – M10	90° flush head with a cross recess.	Hinges, flush covers
Slotted countersunk	DIN 963 / ISO 2009	M1.6 – M10	Flush head with a single slot.	Fittings, legacy assemblies
Slotted cheese head	DIN 84	M2 – M10	Tall cylindrical head with a slot.	Terminals, instruments
Slotted pan head	DIN 85	M3 – M10	Wide low head with a slot.	Light panels, switchgear
Slotted CSK and cheese, inch	BS 450	1/8" – 1/2"	Imperial machine screws.	Replacement on older equipment

Self-tapping screws

Self-tapping screws form their own thread in sheet metal, which removes a tapping operation on thin panels.

Thread	ISO 1478 ST form
Point	Type C pointed / F flat as specified
Drive	Phillips or slotted
Grade	SS 304 / SS 410



Phillips pan head tapping screws



Phillips countersunk tapping screws



Slotted pan head tapping screws



Slotted countersunk tapping screws

Type	Standard	Sizes	What it is	Typical use
Phillips pan head	DIN 7981 / ISO 7049	ST2.2 – ST6.3	Pan head with a cross recess and ST thread.	Covers and panels on thin sheet
Phillips countersunk	DIN 7982 / ISO 7050	ST2.2 – ST6.3	Flush head for countersunk holes.	Flush fixing on sheet and plastic
Slotted pan head	DIN 7971 / ISO 1481	ST2.2 – ST6.3	Pan head with a slot.	Light fixing, legacy parts
Slotted countersunk	DIN 7972 / ISO 1482	ST2.2 – ST6.3	Flush head with a slot.	Nameplates, trims

Washers

Washers spread load under the head or nut. Spring and toothed washers help resist loosening, and taper washers sit square on channel and beam flanges.

Types	Plain, spring, toothed, taper
Standards	DIN 125A, DIN 127, IS 3063, IS 6735, DIN 6797/6798, DIN 434/435
Grade	SS 304 / 316
Finish	Plain



Plain flat washers



Split spring washers



Square section spring washers



External toothed lock washers



Square taper washers



Cup washers

Type	Standard	Sizes	What it is	Typical use
Plain washer	DIN 125A	On request	Flat washer that spreads the clamp load and protects the surface.	Under almost every bolt head and nut
Spring washer, flat section	DIN 127 / IS 3063	On request	Split helical washer that keeps some tension in the joint.	General machinery, electrical
Spring washer, square section	IS 6735	On request	Heavier square-section spring washer.	Heavier joints, structural
Toothed and serrated lock washers	DIN 6797 / 6798	On request	Teeth bite into the surface; also improve earth contact.	Earthing points, electrical panels
Square taper washer	DIN 434 / 435	M8 – M27	Wedge washer so bolts sit square on sloped flanges.	Channel (434) and I-beam (435) flanges

Studs & specials

Studs, U-bolts, anchors and other specials are manufactured to standard or made to your drawing.

Types	Studs, U-bolts, carriage bolts, anchors, rivets
Thread	Metric, BSW or to drawing
Grade	SS 202 / 304 / 316 and others on request
Made to drawing	Yes, on review



Full thread studs



Double ended studs



U bolts



Foundation anchor bolts



Solid rivets



Steel nails

Type	Standard	Sizes	What it is	Typical use
Studs	Standard and full thread	On request	Threaded both ends or full length; used where a bolt head cannot be reached.	Flanges, cylinder heads, panels
U-bolts	To size	On request	U-shaped bolt with two threaded legs and a cross plate.	Pipe and tube clamping
Carriage bolts	Square neck	On request	Domed head that does not turn once seated.	Timber, guards, trailers
Anchors and rivets	On request	On request	Anchors for concrete and masonry; rivets for sheet joints.	Site fixing, sheet assemblies
Made to drawing	Your drawing	On request	Special lengths, threads or heads, reviewed against your drawing.	OEM and replacement parts

/ REQUEST A QUOTE

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/ FASTENERS · TECHNICAL DATA

Property classes & strength

/ MECHANICAL PROPERTIES OF BOLTS, SCREWS AND STUDS

Property class	Material	Tensile Rm min. (MPa)	Yield Rp0.2 min. (MPa)	Elongation
A2-50 / A4-50	Stainless, soft	500	210	0.6 d
A2-70 / A4-70	Stainless, cold-worked	700	450	0.4 d
A2-80 / A4-80	Stainless, high strength	800	600	0.3 d
4.6	Mild steel (MS)	400	240	22 %
8.8	High tensile (HT), ≤ M16	800	640	12 %
10.9	High tensile (HT)	1040	940	9 %
12.9	High tensile (HT)	1220	1100	8 %

Stainless classes per ISO 3506-1; carbon and alloy steel classes per ISO 898-1. Elongation for stainless is elongation after fracture on the finished fastener.

/ MINIMUM BREAKING TORQUE, AUSTENITIC BOLTS AND SCREWS (ISO 3506-1)

Thread	Class 50 (Nm)	Class 70 (Nm)	Class 80 (Nm)
M1.6	0.15	0.2	0.24
M2	0.3	0.4	0.48
M2.5	0.6	0.9	0.96
M3	1.1	1.6	1.8
M4	2.7	3.8	4.3
M5	5.5	7.8	8.8
M6	9.3	13	15
M8	23	32	37
M10	46	65	74
M12	80	110	130
M16	210	290	330

/ NUT PROPERTY CLASSES, AUSTENITIC GRADES (ISO 3506-2)

Steel grade	Nut style 1 (m ≥ 0.8d)	Thin nut (0.5d ≤ m < 0.8d)	Proof stress, style 1 / thin (N/mm²)
A1 – A5	50	025	500 / 250
A1 – A5	70	035	700 / 350
A1 – A5	80	040	800 / 400

/ READING A STAINLESS DESIGNATION

A2-70

A = austenitic steel group (C = martensitic, F = ferritic) · **2** = grade within the group (A2 ≈ 304, A4 ≈ 316) · **70** = one-tenth of the minimum tensile strength, so 700 MPa. Low-carbon grades (≤ 0.03 % C) may also be marked "L", e.g. A4L-80.

Cold-headed vs machined

A cold-headed bolt keeps unbroken grain flow through the head. Machining from bar cuts across that grain, which can create planes of weakness.

Rolled vs cut threads

Thread rolling removes no metal and leaves the thread roots in compression, which improves fatigue strength compared with cut threads.

Magnetism

Austenitic stainless fasteners are normally non-magnetic. Cold working can leave some slight magnetism, which is normal.

/ FASTENERS · DIMENSIONS

Dimension tables

Typical nominal dimensions in millimetres, from the named standards, for quick reference when selecting spanner sizes, counterbores and washers.

/ METRIC COARSE THREAD (ISO 261 · ISO 4017 · ISO 4032 · DIN 912)

Size	Pitch	Hex AF ISO	Hex AF DIN	Bolt head k	Nut m (ISO 4032)	Socket head dk	Hex key
M3	0.5	5.5	5.5	2.0	2.4	5.5	2.5
M4	0.7	7	7	2.8	3.2	7	3
M5	0.8	8	8	3.5	4.7	8.5	4
M6	1.0	10	10	4.0	5.2	10	5
M8	1.25	13	13	5.3	6.8	13	6
M10	1.5	16	17	6.4	8.4	16	8
M12	1.75	18	19	7.5	10.8	18	10
M14	2.0	21	22	8.8	12.8	21	12
M16	2.0	24	24	10.0	14.8	24	14
M20	2.5	30	30	12.5	18.0	30	17
M24	3.0	36	36	15.0	21.5	36	19
M30	3.5	46	46	18.7	25.6	45	22
M36	4.0	55	55	22.5	31.0	54	27

/ PLAIN AND SPRING WASHERS

Size	DIN 125A d1	d2	s	DIN 127B d1	d2	s
M4	4.3	9	0.8	4.1	7.6	0.9
M5	5.3	10	1.0	5.1	9.2	1.2
M6	6.4	12	1.6	6.1	11.8	1.6
M8	8.4	16	1.6	8.2	14.8	2.0
M10	10.5	20	2.0	10.2	18.1	2.2
M12	13	24	2.5	12.2	21.1	2.5
M16	17	30	3.0	16.2	27.4	3.5
M20	21	37	3.0	20.2	33.6	4.0
M24	25	44	4.0	24.5	40.0	5.0

/ SELF-TAPPING SCREW SIZES (ISO 1478)

Size	Thread dia. (mm)	Pitch (mm)
ST2.2	2.2	0.8
ST2.9	2.9	1.1
ST3.5	3.5	1.3
ST3.9	3.9	1.3
ST4.2	4.2	1.4
ST4.8	4.8	1.6
ST5.5	5.5	1.8
ST6.3	6.3	1.8

From M10 to M22 some ISO hexagon heads are one size smaller across flats than DIN; check the column that matches your standard. Other sizes, inch threads and specials are manufactured on request.



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