



FABRICATED FOR THE EXTREME.

Heavy-Gauge Sheet Metal, Precision Welding & Turnkey Assembly

Z&T Fabrication Services



Solving the "Big, Heavy & Complex" Problem.

"My local shop can't cut 40mm plate."

→ Our 30,000W laser cuts 40mm routine, 60mm max.

"I'm tired of managing 3 vendors."

→ We cut, bend, weld & finish under one roof.

"My last IP65 cabinet leaked."

→ Continuous gaskets, rain channels & IP65 tested.

"Paint started peeling after one winter."

→ 5-stage pretreatment + UV powder coat. Salt-spray tested.

30,000W

Fiber Laser Power

60mm

Max Cutting Thickness

4x

CNC Press Brakes (200-Ton)

2x

TM1800 Welding Robots

PRODUCT FOCUS

Industrial Enclosures & Housings

Rated for the Real World.

Water Ingress & Corrosion

IP65/IP66 certified. Continuous gasket seal, rain channels & 1,000hr ASTM B117 salt spray.

Thermal Runaway

Integrated fan filters, heat exchangers or A/C interfaces — protection without compromising IP rating.

Poor Fit & Finish

30kW laser + CNC press brake precision. Door gap $\leq 2\text{mm}$. Flush every time.

IP65 / IP66 Rated

1,000hr Salt Spray Tested · 5-Stage Powder Coat

AI Prompt: IP65 outdoor telecom cabinet in heavy snow/rain / mountain base station / professional industrial photography / 3k -- ar 9:16

Distribution Boards · Server Racks · Telecom Cabinets · Control Panels · Solar Inverter Enclosures

FROM CLEAN ROOMS TO BLAST ZONES.



MEDICAL & LAB

Precision Medical & Lab Enclosures

- Material:** 304 / 316L Stainless Steel
- Welding:** Continuous TIG, fully ground & polished
- Surface:** Electropolished to $Ra \leq 0.4\mu m$
- Compliance:** FDA-compatible, no dead zones



BLAST RESISTANT

Blast Resistant Doors & Windows

- Steel Grade:** Q355B / Q460C High-Strength
- Thickness:** 40–60mm plate
- Welding Cert:** AWS D1.1 / GJB9001C
- Locking:** Multi-point, frame deformation-tolerant

The Backbone of Heavy Industry.

2x TM1800 Welding Robots · AWS D1.1 Certified · UT Inspection

01

Weld Distortion & Dimensional Accuracy

Post-weld stress relief + precision machining on our X2018A gantry mill. Flatness \leq 0.1mm/300mm.

02

Fatigue Cracking Under Vibration

AWS D1.1 certified welders. Critical welds ultrasonically tested (UT) — zero defects guaranteed.

03

Multi-Vendor Supply Chain Complexity

30kW laser blanking → robot welding → powder coat. One factory, one contact, one delivery.



BUILT TO CONNECT. BUILT TO LAST.



Structural Steel Components

- ✓ 30kW laser one-shot cutting — bolt holes accurate to $\pm 0.1\text{mm}$
- ✓ Eliminates field-fit rework and costly installation delays
- ✓ Hot-dip galvanized or dual-coat system for 100-year building life

Connection Plates · Column Bases · Pallet Racks · Metal Cages



Mechanical Components

- ✓ Q355B / Q460C high-strength steel — Hardox 450/500 wear plates
- ✓ 30kW laser on Hardox: minimal heat-affected zone, preserves hardness
- ✓ Electrophoretic primer + powder topcoat — 1,000hr salt spray rated

Agricultural Rims · Excavator Bucket Side Cutters · Wear Parts

Quality Is Not a Department.

It's a Manufacturing Discipline.

GJB9001C-2017

Military Standard

Full traceability, configuration management & anti-counterfeit measures. Maximum document support for defense projects.

ISO 9001:2015

Quality Management

Baseline QMS ensuring consistent, reliable delivery. Every batch, every time — same standard.

AWS D1.1

Structural Welding Code

Certified welders on every structural weld. If it holds the structure, our welder is qualified to run it.

Inspection Arsenal

▶ Xi'an Edward CMM

Accuracy:
0.005mm

▶ Hexagon Articulated
Arm

Accuracy:
0.07mm

▶ Ultrasonic Flaw
Detector

Weld
integrity
certified

▶ Salt Spray Chamber

ASTM B117
/ 1,000hr

"When your project's safety margin depends on a single weld, we make sure that weld is perfect."

Z&T

Zento Trilium Metal Tech Co., Ltd.

众拓利合（天津）金属科技有限公司

Sheet Metal Fabrication · Precision Welding · CNC Machining · Turnkey Assembly

IATF 16949

ISO 9001:2015

GJB9001C-2017

AWS D1.1

Ready to Source Big, Heavy & Complex?

Send your drawing to our engineering team — response within 24 hours.

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