



Truck Scale Structure Supply

BUILT TO LAST , DESIGNED TO WEIGHT

www.atkstructure.com.my

OUR MISSION

"At ATK, we understand that a weighbridge is a critical investment for any operation, and its reliability and accuracy are paramount. That's why we take immense pride in the robust and dependable structure of our weighbridges.

Our weighbridge designs are meticulously crafted according to the highest engineering standards, ensuring every component is precisely calculated for optimal performance and longevity. We utilize heavy-duty U-channel steel for the main structural framework, providing exceptional strength and rigidity to withstand continuous, demanding usage. The top surface is constructed from high-quality M.S. chequered plate, offering excellent durability and a non-slip surface for safe operation.

Quality is at the core of our manufacturing process. Our welding work is executed by highly experienced professionals using advanced auto-welder machines, guaranteeing consistent, strong, and flawless welds that contribute to the overall integrity of the structure. With an ATK weighbridge, you're not just getting a piece of equipment; you're investing in a solution built for enduring quality, reliability, and superior performance."



INTRODUCTION OF ATK STRUCTURE

Creating a U-beam for our weighbridge deck involves a specific fabrication process to ensure the structure's strength and durability. This design is popular for its ability to handle heavy loads and simplify installation.

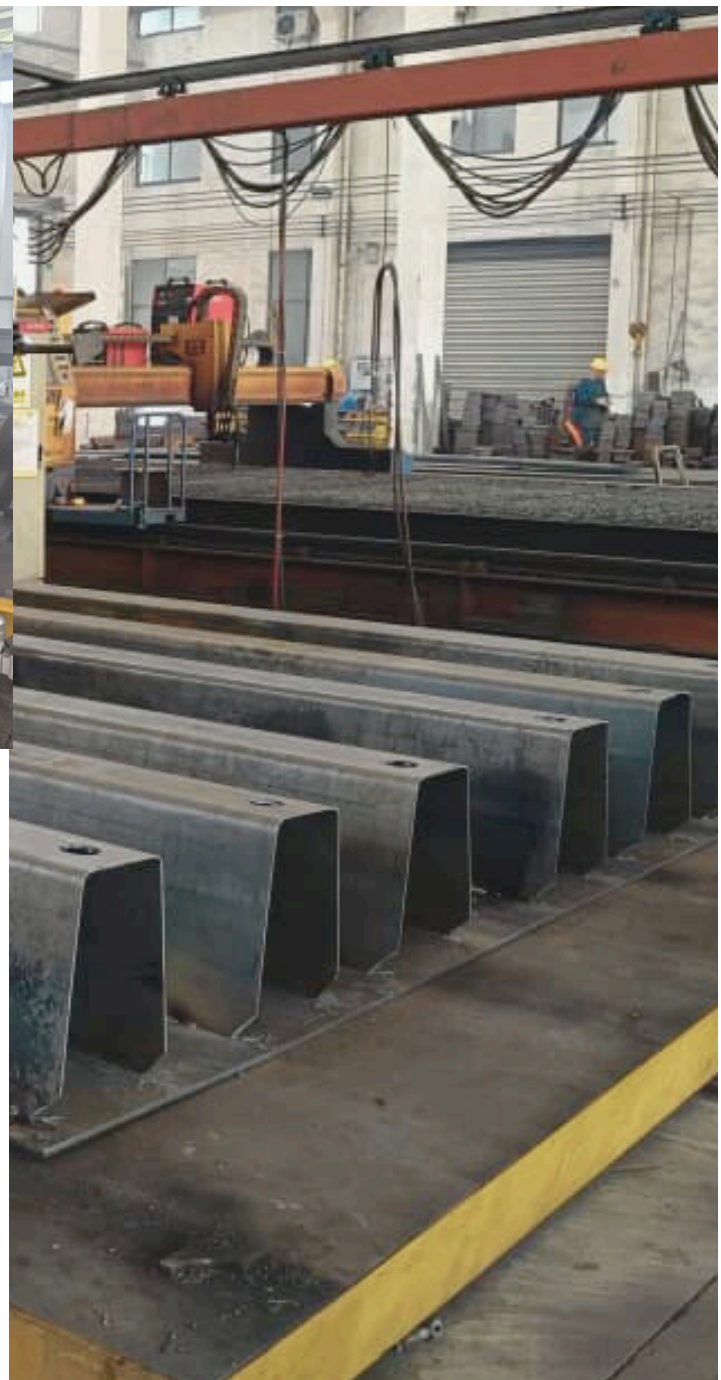
1. MATERIAL SELECTION AND PREPARATION

The process begins with selecting high-quality steel plates, typically Q235 steel, which is a common grade in China known for its strength and weldability. The thickness of these plates is critical and varies based on the weighbridge's intended capacity, generally ranging from 4 mm to 6 mm for the U-beams and 10 mm to 12 mm for the deck plate.

2. FORMING THE U-BEAM SHAPE

The flat steel plates are bent into a "U" shape using a bending machine. This is a crucial step that gives the beam its structural integrity. The U-beams are designed to be a specific height, often around 300 mm to 340 mm, to provide a rigid framework for the deck.





DECK ASSEMBLING

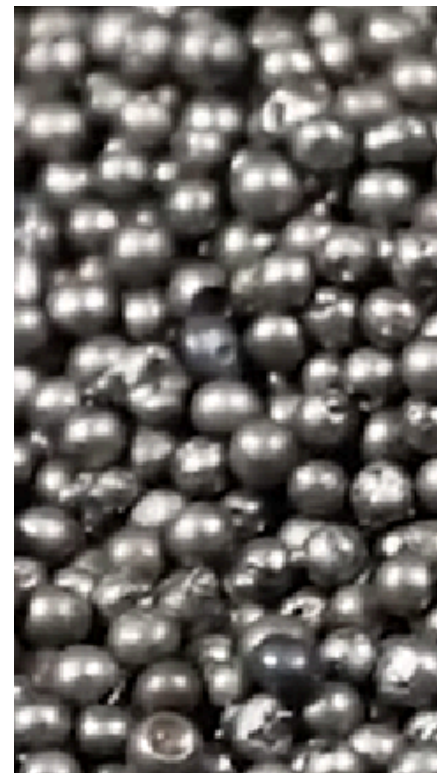
Multiple U-beams (typically 6 pieces per module) are laid out and precisely welded together to form a closed frame. This is often done using an automatic welding machine to ensure consistent, high-quality welds. The number of U-beams and the overall length of the modules are determined by the final dimensions and capacity of the weighbridge. The U-beam structure is a key design element that provides a robust, low-profile deck.

STRUCTURE WELDING WORK



A thicker steel plate is then welded on top of the U-beam frame to create the solid deck surface. This top plate is often a chequer or checkered plate to provide a slip-resistant surface for vehicles. The welding process, which may use a technique like CO2 carbon dioxide gas arc welding, is performed with great care to ensure a strong, stress-resistant connection. The entire platform is often shotblasted before painting.

"SHOT BLAST" DURABLE SURFACE PREPARATION



The shot blasting process is a critical surface preparation step for ATK STRUCTURE ensuring optimal surface cleanliness , introducing a profile for superior coating adhesion and often performing shot peening to enhance the fatigue life of high-stress metal components .

Small Steel Ball “ SHOTBLASTING “ Is a surface finishing process that uses high - pressure compressed air to propel abrasive particles at a surface . This work is performed to clean , prepare or modify a surface by removing contaminants like rust , paint and grease or smoothing or roughening it for a new finish .

FINISHING AND COATING

The ATK weighbridge utilizes a sophisticated finishing cycle—comprising high-intensity shot blasting, precision industrial coating, and accelerated oven curing—validated by rigorous digital micron thickness testing to ensure a maintenance-free, corrosion-resistant lifespan in the harshest environments.

Before any coating is applied, the raw steel structure undergoes a thorough Shot Blasting process. Using high-velocity spherical steel media, we remove all mill scale, rust, and surface contaminants. This creates a specific "anchor profile" (surface roughness), which is essential for maximum paint adhesion and long-term prevents delamination.

Following surface activation, the modules are moved to a controlled environment for Painting. We apply high-performance industrial coatings (typically epoxy primers and polyurethane topcoats) that provide a robust barrier against chemical exposure, moisture, and oxidation. The "Plug & Play" modular design ensures that even internal cavities are protected.

To ensure the coating reaches its maximum hardness and chemical resistance immediately, the weighbridge modules are processed in a specialized Baking Oven. This controlled thermal curing process eliminates the risks associated with air-drying, such as dust contamination or "soft" finishes, resulting in a factory-hardened surface ready for immediate transit and installation.

The final stage of our technical validation is the Micron Test. Using precision digital coating thickness gauges, we verify that the dry film thickness (DFT) meets our strict engineering specifications (as shown in your photo, achieving a consistent high-micron finish. This ensures uniform protection across all critical stress points, including the U-beams and 40mm mounting plates.



MODULAR "BOLT-ON" DESIGN



The ATK weighbridge structure redefines industrial weighing through its high-performance Modular "Bolt-on" Design. This architecture is specifically engineered to combine the logistical ease of a "Plug & Play" system with the heavy-duty rigidity required for global industrial markets.

- Advanced Structural Geometry
- Specialized Load Cell Mounting
- Superior Surface Protection Process



ACCESSORIES



JUNCTION BOX

OUR PREMIUM PEDESTAL DESIGN ENSURES MAXIMUM UPTIME BY PROTECTING CRITICAL LOAD CELL CONNECTIONS FROM ENVIRONMENTAL STRESS, FEATURING A SLEEK, STANDING SILHOUETTE THAT SIMPLIFIES TECHNICIAN ACCESS AND ENHANCES THE OVERALL SITE AESTHETIC



LOAD CELL PROTECTION JUMPER

FLEXIBLE GROUND STRAP (ALSO CALLED A BYPASS JUMPER). ITS PRIMARY JOB IS TO PROTECT THE DELICATE ELECTRONICS INSIDE YOUR LOAD CELL FROM HIGH-VOLTAGE SURGES, SUCH AS LIGHTNING OR WELDING CURRENTS.



BUMPER STOPPER

THESE STOPPERS FEATURE A GUSSETED DESIGN (THE TRIANGULAR SUPPORT PLATE). THIS REINFORCEMENT ALLOWS THE VERTICAL POST TO WITHSTAND MASSIVE IMPACT FORCES WITHOUT BENDING OR SNAPPING.

ATK STRUCTURE DETAIL

**Metal Junction
Box (Stand Type)**



**Modular
Connection
Side By Side Link**



**Front
Connection
Link**



**Load Cell
Mounting
Plate**



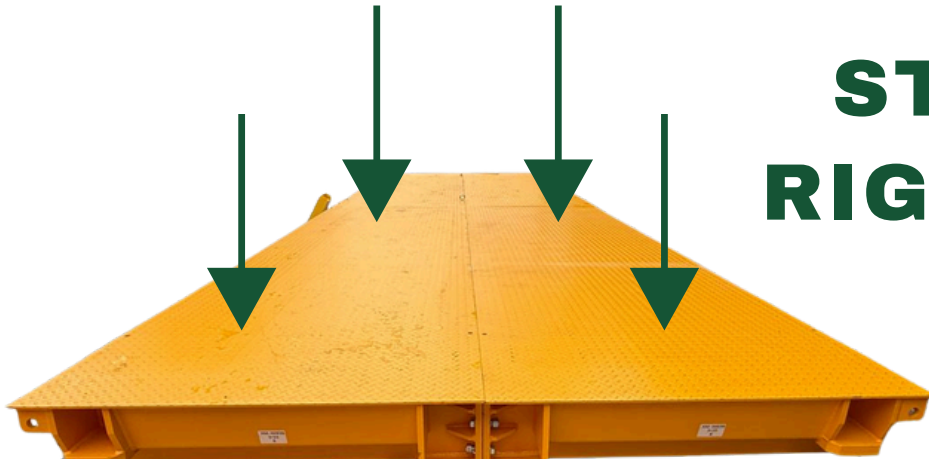
**Front Bumper
Stopper**



**Intermediate
Connectin Link**



**Main Beam
"U Beam"**



STRUCTURE RIGIDITY TEST

ELECTRONIC TRUCK SCALE RIGIDITY CALCULATION AND FEA" TECHNICAL SERVICE/REPORT,

Electronic Truck Scale Rigidity Calculation and FEA" is a technical service/report, these reports are typically issued by specific types of organizations to ensure compliance with National Standards (GB).

Analyzing the structural rigidity of an electronic truck scale (weighbridge) is critical to ensuring measurement accuracy and long-term durability. Excessive deflection during weighing can lead to load cell misalignment, fatigue cracks, and inaccurate readings.

The rigidity of a truck scale is defined by its resistance to deformation under load. Traditionally, this is calculated by treating the scale as a simply supported beam or a grillage system.



OPTIONAL APPLICATION



Safety Divider / Wheel Guide

Safety dividers, or wheel guides, are a critical safety accessory for the weighbridge deck.



Finishing with - Galvanizing

Galvanizing provides a robust, long-lasting, and low-maintenance defense against rust and wear, significantly extending the life of the structure.



The “Mobile Rack “

The rack is a fabricated steel structure, often using U-beams, to ensure it is strong and rigid. It is designed to be low-profile, and it typically includes integrated steel ramps at both ends for vehicles to drive on and off.



Ready Make “Man hole”

We provide a pre-fabricated 'Ready-Make' steel frame delivered as a complete unit, allowing civil contractors to use the precise dimensions of the frame to cast it directly into the concrete foundation during the initial pouring phase for a seamless, high-precision fit .

“Especially for pit type weighbridge design use”

MATERIAL SPECIFICATION



Load cell mounting plate

The load cell mounting assemblies feature high-strength plates with thicknesses ranging from 25mm to 40mm. These plates are fully welded to the main structure to ensure maximum force transfer and zero deformation. The universal design allows for the seamless installation of multiple major load cell brands, providing a versatile 'Plug & Play' solution for the global market.



"U Beam" cold-forming process

We utilize high-grade 4mm to 6mm steel, cold-pressed into a U-beam profile. This design significantly increases the Moment of Inertia (I), reinforcing structural rigidity according to the specific load capacity required

- Standard Capacity (60T): 4mm U-beams (6 or 7 ribs).
- Heavy Capacity (80T - 100T): 6mm U-beams (high-density ribbing).



Plate Reinforced Modular Junctions

Our modular system utilizes heavy-duty link plates ranging from 20mm to 25mm in thickness. The specific plate gauge is selected based on the required load capacity and structural rigidity to ensure zero-flex performance at the module joints.

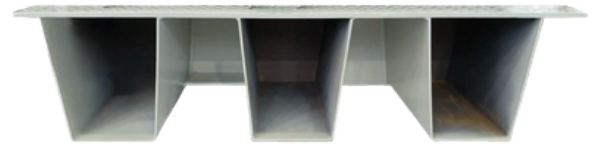


Professional Phrasing for the Deck Plate

The modular platform features a variable-thickness top deck, ranging from 10mm to 25mm, customizable to meet specific rigidity and axle-load requirements.

Choose between Mild Steel (Smooth) or Chequered (Anti-slip) surface plates, with thicknesses up to 25mm for maximum structural integrity."

Platform Size & Endurance



1. Standard Products

S - Model	Capacity	Size	Top Plate Thickness
S0530	20t	5m x 3m	10mm
S1030	30t	10m x 3m	10mm
S1230	50t	12m x 3m	10mm
S1630	60t	16m x 3m	10mm
S1830	80t	18m x 3m	10mm
S1832	100t	18m x 3.2m	10mm
S1834	100t	18m x 3.4m	10mm

2. Custom - Made Products

C - Model	Capacity	Size	Top Plate Thickness
C1832	120t	18m x 3.2m	12mm
C1834	120t	18m x 3.4m	12mm
C1836	150t	18m x 3.6m	12mm

Customer Request Note



1. Standard Products

Please tick for your request



S - Model	Capacity	Size
S0530	20t	5m x 3m
S1030	30t	10m x 3m
S1230	50t	12m x 3m
S1630	60t	16m x 3m
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S1832	100t	18m x 3.2m
S1834	100t	18m x 3.4m

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Date Request :

Customer Name :

Address :

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C - Model	Capacity	Size
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C1834	120t	18m x 3.4m
C1836	150t	18m x 3.6m

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Contact Number :

Weighbridge Type :

PIT TYPE

☐

PITLESS TYPE

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SEMI PITLESS
TYPE

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3. To Weight Products ?

4. Other Remarks :-

Dealer Chop
Here

Authorized Dealer



**BUILT TO LAST,
DESIGNED TO WEIGHT**



Dealer Stamp