

LIBRAMAS TRUCK SCALE

Orthotropic Modular Structure Weighbridge



Our Company



PT LIBRA EMAS PERMATA history started in 1989. Since the beginning, we had ventured into the business by offering the most comprehensive range of weighing products in Indonesia. Supplying quality products & after-sales services as part of on-going support to all our customers, has been our key success factors.

In 1993 we had a mutual cooperation agreement with A&D Japan, it was the point for a successful strategic partnership between both companies. Since then, we have exclusively distributing all ranges of weighing instruments under A&D brand in Indonesia. This long term partnership remains valid until now.

To strengthen our position as the market leader, few years later we launched our ACIS brand. ACIS brand has dominated & very well accepted in the market with its speciality in quality weighing instruments at an economical price.

PT LIBRA EMAS PERMATA will remain focused to meet the highest quality standards and solutions that cater our customers' needs and supporting them with responsive, dependable customer services.

As our realistic philosophy & company's motto "YOUR BEST WEIGHING SOLUTION", we had earned our reputation as a reliable partner in the industry.

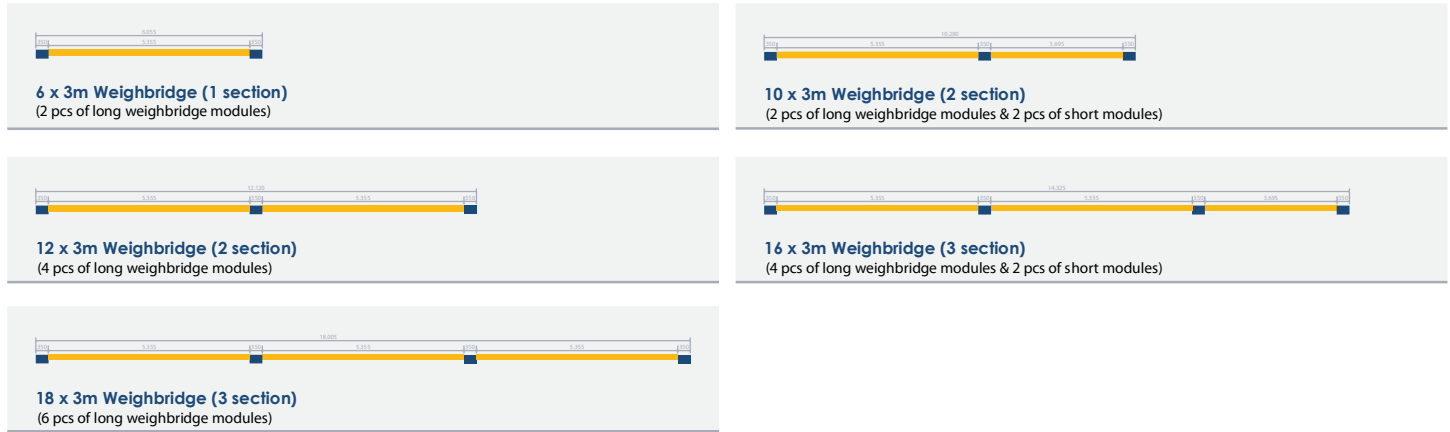
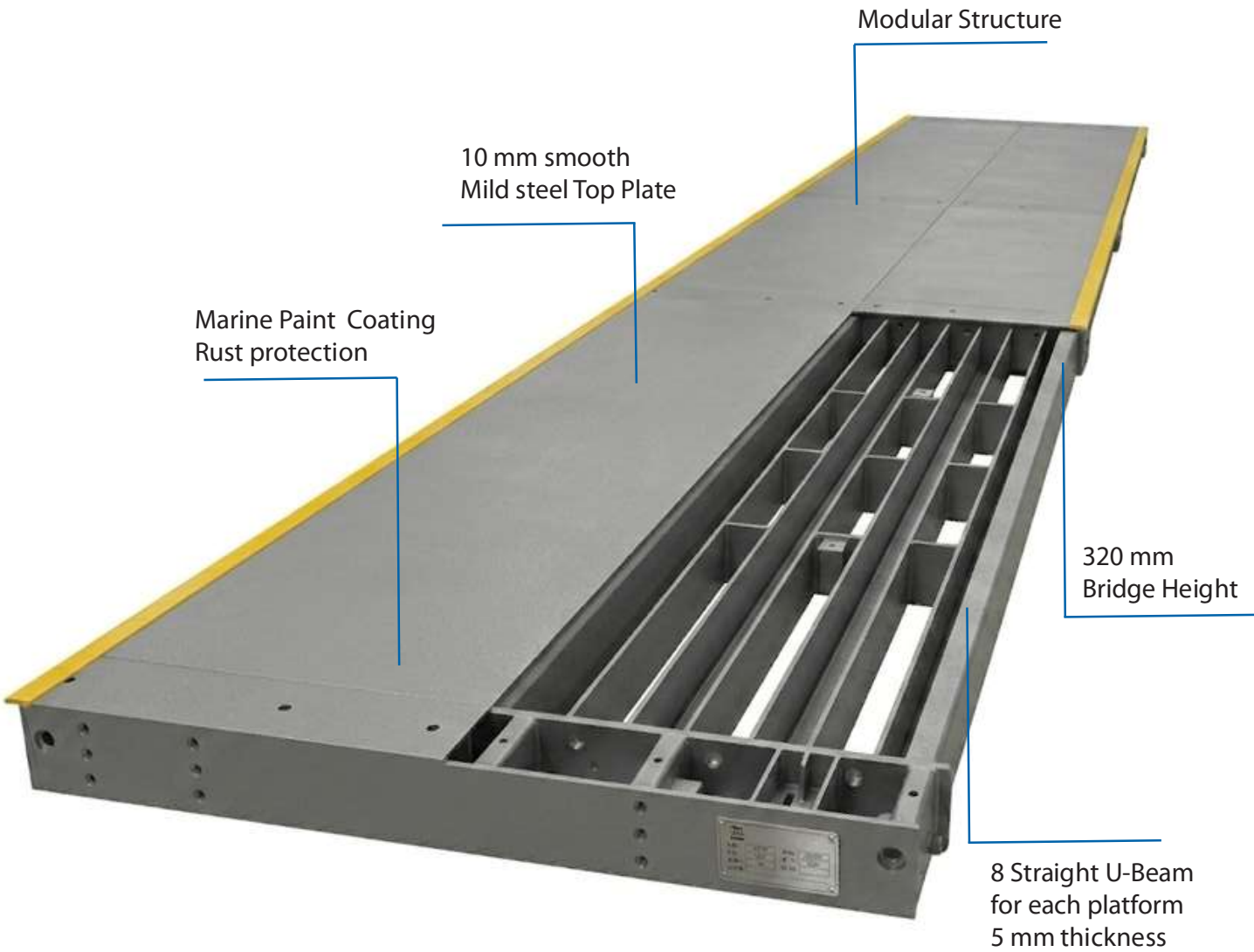
Weighbridge Specification

Technical Specification of Modular Truck Scale

Accuracy Class	III
Rated Capacities	30t ~ 100t
Division	10kg ~ 20kg
Widths of Platform	3m
Lengths of Platform	6, 9, 12, 16, 18, 21, 24m
Foundation	Pitless and Shallow Pit
Maximum Display Resolution	6.000 counts (Maximum)
Overload Limit	125%
Working Environment Temperature	-10°C to +40°C
Weighbridge Operation Temperature (including load cell)	-30°C to +65°C
Operating Humidity RH	20 - 85%
Maximum Axle Load of Vehicle	20-30t

Weighbridge Sizes & Capacities

Model	Platform Size	Capacity	Resolution	No. of Load Cell
TS3006-030	6 x 3m	30t	10kg	6
TS3010-050	10 x 3m	50t	10kg	6
TS3012-040	12 x 3m	40t	10kg	6
TS3012-060	12 x 3m	60t	10kg	6
TS3016-060	16 x 3m	60t	10kg	8
TS3016-080	16 x 3m	80t	20kg	8
TS3016-100	16 x 3m	100t	20kg	8
TS3018-060	18 x 3m	60t	10kg	8
TS3018-080	18 x 3m	80t	20kg	8
TS3018-100	18 x 3m	100t	20kg	8



Pitless Type



Excellent Drainage & No Flooding Risk

Since the entire structure sits completely above ground level, rainwater and water runoff flow away naturally. There is no risk of water accumulating underneath the scale, which protects the load cells and electronics from water damage.

Easier and Safer Maintenance

Because the platform is fully elevated, technicians can easily access the load cells, junction boxes, and wiring from the sides without having to crawl into a dark, confined, or hazardous pit space. This significantly reduces maintenance time and service costs.

Simpler and Faster Installation

Building a surface foundation requires significantly less civil work. There is no need for deep excavation, complex retaining walls, or specialized pit drainage systems. You simply pour a flat concrete slab, which drastically speeds up the installation process.

Ideal for Large Sites

It is highly suitable for facilities that already have existing, well-compacted concrete yards capable of bearing heavy loads, as it eliminates the need to dig up and destroy the existing infrastructure.

Requires More Space

Long concrete approach ramps must be installed on both ends so trucks can drive up and down safely. This increases the total linear footprint of the installation.



Pit Type



Massive Space Savings

Because the platform is flush with the ground, you do not need long concrete approach ramps. This makes it the absolute best choice for facilities with limited space or tight turning radiuses.

Safer and Easier Truck Maneuvering

Vehicles can approach and exit the scale from multiple angles or turn immediately after leaving the platform, as there are no elevated edges or ramps to fall off of.

Dual-Direction Weighing

It easily accommodates cross-traffic and non-weighing vehicles driving over it when the scale is not in use, maximizing yard efficiency.

Difficult Maintenance

Debris, mud, and water naturally collect in the pit over time. Technicians must crawl into a confined space beneath the platform to clean out debris or service the load cells.

High Risk of Flooding

Requires a highly reliable, heavy-duty sump pump and drainage system to prevent rainwater from submerging and destroying the load cells.

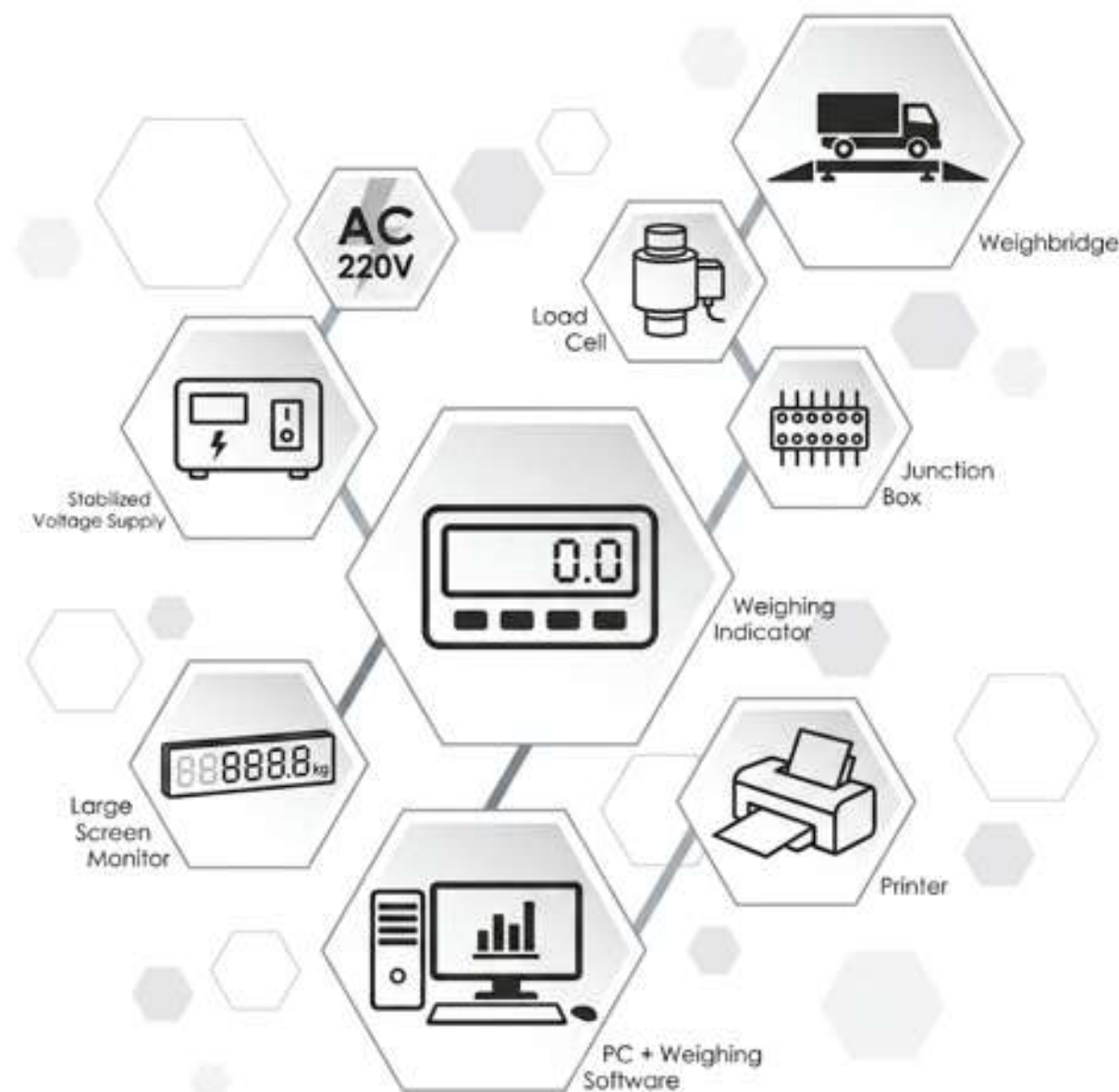
More Civil Work & Cost

Excavation, building reinforced concrete retaining walls, and setting up proper drainage channels significantly increase the initial construction time and cost.



Technical Specification

Basic Equipment of Truck Scale



Main Parts	Accessories
Weighbridge	Large Screen Monitor
Load Cell	PC & Weighing Software
Junction Box	Printer
Weighing Indicator	Stabilized Voltage Supply

Main Electrical Sensor Configuration

Digital System Truck Scales

A&D AD-4329A-DLC & LCC20 Series
A&D Digital Weighing Indicator & Compression Digital Loadcell



Analogue System Truck Scales

A&D AD-4329 & LCC-11 Series
A&D Weighing Indicator & Compression Analogue Loadcell



A&D AD-4329A & ACIS LA-1101
A&D Weighing Indicator & Compression Analogue Loadcell



Lightning Protection

Weighing Indicator

AD4329A-DLC

Digital load cell

LCCD20



AD4329A-DLC



LCCD20

Weighing Indicator for Digital Load Cell

AD4329A-DLC



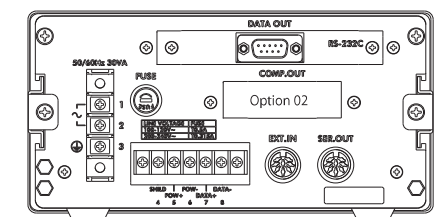
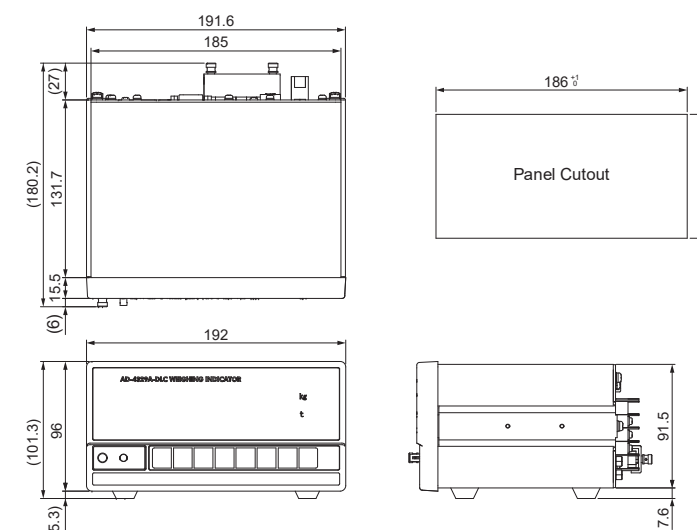
- Standard RS-232C Interface
- Comparator output to an optional relay
- Accumulated data can be stored in memory manually or automatically.
- Up to 8 units of digital load cells
- OIML R76 Class III or IIII
- Preset tare function
- Can be controlled via external device

Specification

Digital load cell input	DC8V $\pm$ 5% 230 mA	Power Supply	AC100 / 120 / 200 / 220 / 240 V $\pm$ 10% $\pm$ 15%
	Up to 8 units of digital load cells		(Please request preferred voltage rating at time of order)
Sampling rate	10 times/second		50/60Hz, Max.30VA
Weight Display	7-digit LED with character height of 13 mm	Net Weight	Approximately 1.8kg / 4.0lb
Annunciator	M+, MD, GROSS, NET, PT, ZERO, kg/t	Dimensions	192(W) $\times$ 96(H) $\times$ 180(D) mm (compliance with DIN)
Keys	[OPR/STB], [PRESET TARE], [M+], [MODE], [NET/GROSS], [ZERO], [TARE], [PRINT]	Panel Cut Out Dimensions	186(W) $\times$ 92(H) mm
Standard Interface	RS-232C interface D-sub 9-pin Male	Operating Temperature	-10°C to 40°C (23°F to 104°F)
	Standard serial output	humidity range	Less than 85%RH, non-condensing
	External control input 7 points	Standard accessories	Connector for the external control input 1 Connector for the standard serial output 1 Spare fuse 1, Rubber foot 4
		Option	
		AD4329A-02	Comparator output (relay 3 output)

External Dimensions

Unit:mm



Digital Load Cell

LCCD20 Series



With mounting bracket



Without mounting bracket

- OIML R60 C4, C6
- The stainless steel cover makes this product highly resistant to corrosion and the environment, and its protection grade is IP68 (Water depth: 1.5 m/100 hours).
- Digital load cells are easy to adjust, diagnose and maintenance.
- Advanced load design for truck scales.
- Compression type.

Specification

Maximum safe overload ————— 150% of R. C.
Combined error ————— C4 : 0.025% of R.O. C6 : 0.016% of R.O.
Recommended excitation voltage — DC8 V
Maximum excitation voltage — DC12 V
Compensated temperature — -10°C to 40°C
Operating temperature — -20°C to 60°C
Temperature coefficient ————— Zero 0.019% of R.O./10°C Typ.
Span 0.010% of Load/10°C Typ.
Output signal ————— RS-485 2 wire type
Cable diameter/Length ————— 4 core shielded cable ϕ 8 / 12m
Dustproof/Waterproof ————— IP68 (Depth of water 1.5m / 100h)
Surge countermeasure Built-in gas tube arrester etc.
Mass Approx.11kg (including mounting bracket) Approx.6kg (load cell body)

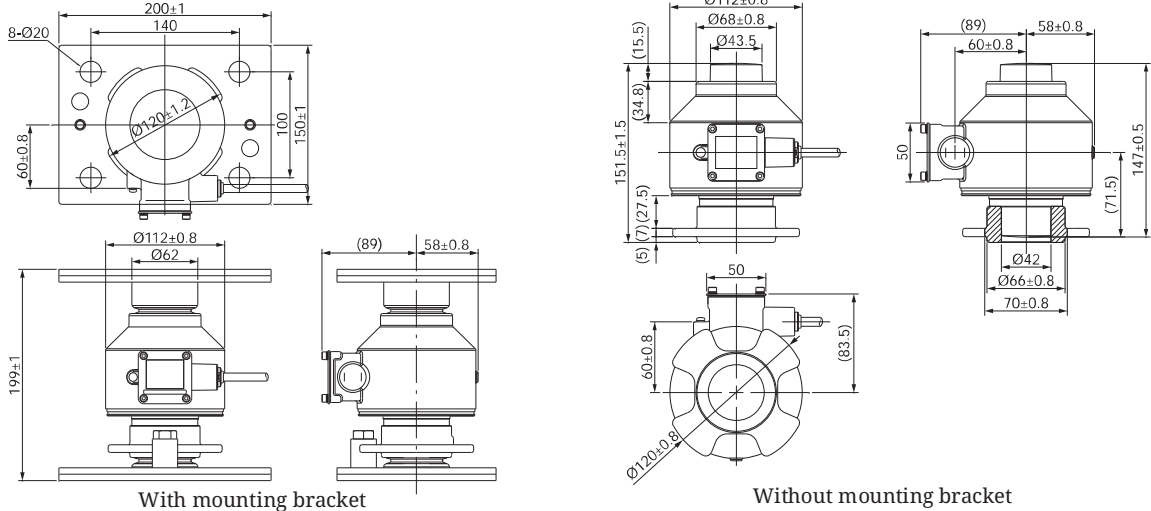
Models

Model No.	Capacity	Mounting bracket	OIML R 60
LCCD20T010K	10t (98.07kN)	Yes	C4
LCCD20T010K6	10t (98.07kN)	Yes	C6
LCCD20T010NK	10t (98.07kN)	No	C4
LCCD20T010NK6	10t (98.07kN)	No	C6
LCCD20T020K	20t (196.1kN)	Yes	C4
LCCD20T020K6	20t (196.1kN)	Yes	C6

Model No.	Capacity	Mounting bracket	OIML R 60
LCCD20T020NK	20t (196.1kN)	No	C4
LCCD20T020NK6	20t (196.1kN)	No	C6
LCCD20T030K	30t (294.2kN)	Yes	C4
LCCD20T030K6	30t (294.2kN)	Yes	C6
LCCD20T030NK	30t (294.2kN)	No	C4
LCCD20T030NK6	30t (294.2kN)	No	C6

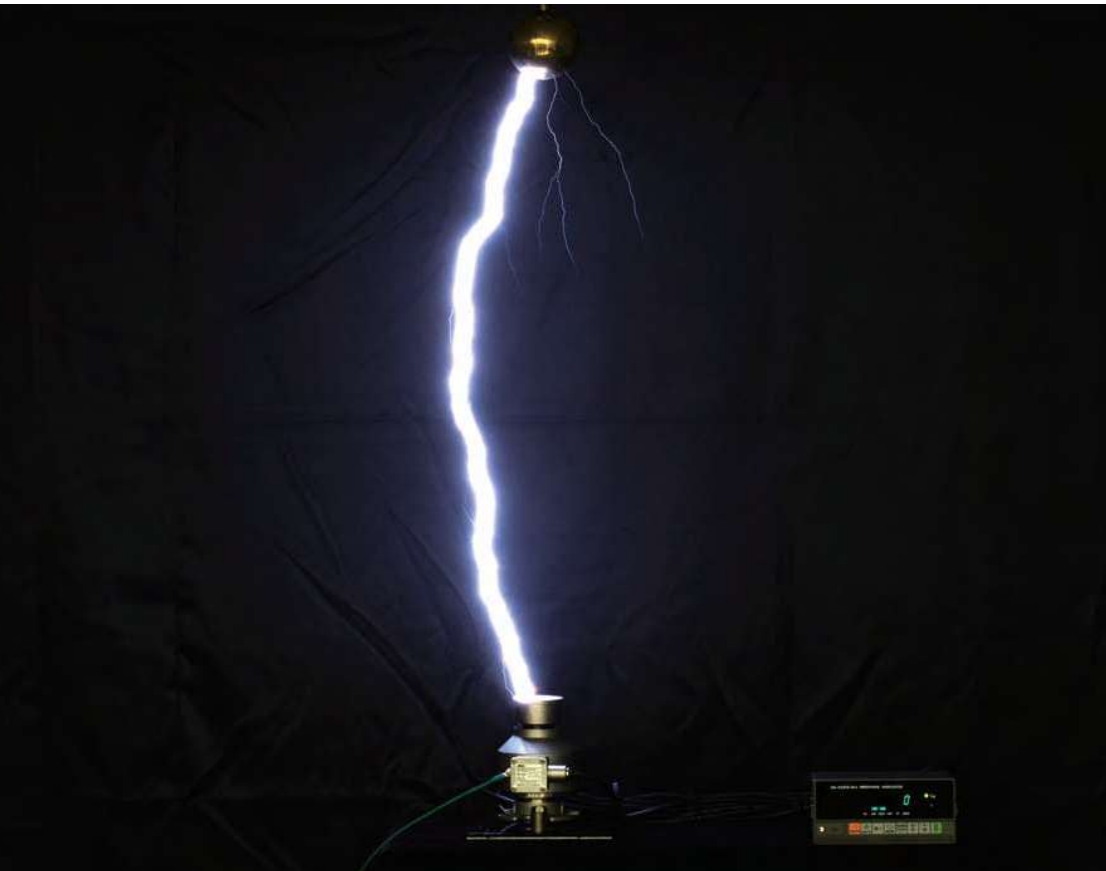
External Dimensions

Unit=mm



Lightning Protection

- If lighting strikes, the indicator and load cell will be damaged.
- The combination of the AD4329A-DLC and the LCCD20 reduces the probability of the indicator and load cell being damaged due to lightning.



*Impact withstand voltage test in the air. JEC-0202 Impulse voltage, Impulse current test. Lightning impulse voltage 1,000,000V.
*While equipment is reasonably protected from lighting, protection may fail in the event of lightning strikes with a strength above the rated level.

Optional accessories

Cable for digital load cell

AX-KO3217-5M/10M/20M/30M/50M/100M Cable Length 5m/10m/20m/30m/50m/100m

Junction Box



AD4388-4
Number of load cells 4



AD4388-6
Number of load cells 6

Digital Load cell simulator



AD4389

When using the AD4389, no weight is needed, it is able to output simulated weight data to the AD4329A-DLC.



Discover Precision

NEW

Weighing Indicator

AD-4329A

New and improved!



*Meets your needs to help
expand your business today !*



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A&D Company, Limited
<http://www.aandd.jp>

AD-4329A

Weighing Indicator

- Standard RS-232C Interface
- 4-point digital linearization across the full span
- Triple ranges for weighing capacity are available
- Comparator output to an optional relay
- Vacuum fluorescent display



CAL

Hidden behind the cover on the front panel. Enter the calibration mode/CF functions settings.

Keys

- OPR/STB** — Turns display On/Off. The load cell is still powered when the display is off.
- PRESET TARE** — Sets the preset tare weight.
- M+** — Accumulates the displayed weighing value.
- MODE** — Displays and clears the accumulated weighing values. Used in calibration.

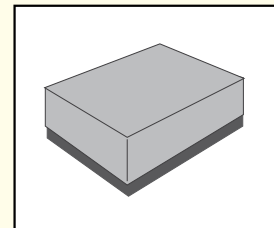
- NET/B/G NET GROSS** — Switches between net and gross weights.
- 0 ZERO** — Sets the zero point.
- T TARE** — Subtracts the tare weight.
- PRINT** — Outputs data to a peripheral device such as a printer. Save parameters in the Function settings.

The AD-4329A is your best choice for a variety of applications such as platform scale, packer scale, hopper scale, checkweigher and truck scale.

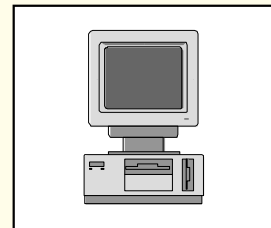
- Vacuum fluorescent display
- Accumulative data is stored into memory automatically or manually
- Comparator output (Hi/OK/Lo) to optional relays
- Set-point comparison for batching applications (Near Zero/Prelim/Target/Free Fall)
- Selectable weighing ranges (up to triple ranges)
- Standard RS-232C
- 4-point digital linearization
- 1/20,000 displayed count resolution (maximum)
- Powers up to 8 units of load cells at 350Ω
- Averaging time and width can be selected for various applications
- RFI/EMI protected
- Meets OIML Class III specifications
- Mount on panel, column or desk top
- Enters predetermined tare weight from keypad
- Can be controlled via external input

Your Best Solution

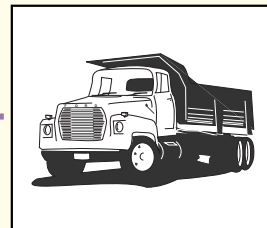
Best Price Performance for your various applications



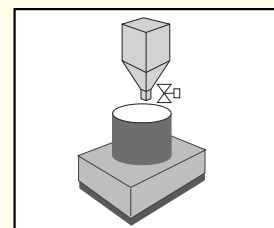
Platform Scale



PC Interface
Standard RS-232C



Truck Scale

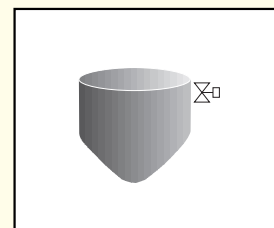


Packer Scale
Relay output
• Near Zero
• Prelim
• Target
• Free Fall

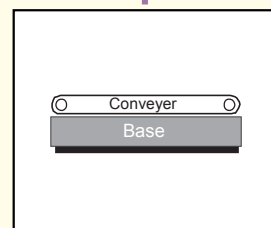
AD-4329A



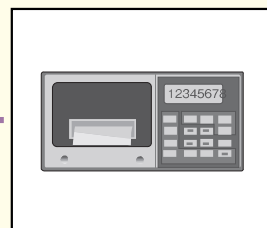
External Display
AD-8919/AD-8920



Hopper Scale
Relay output
• Near Zero
• Prelim
• Target
• Free Fall



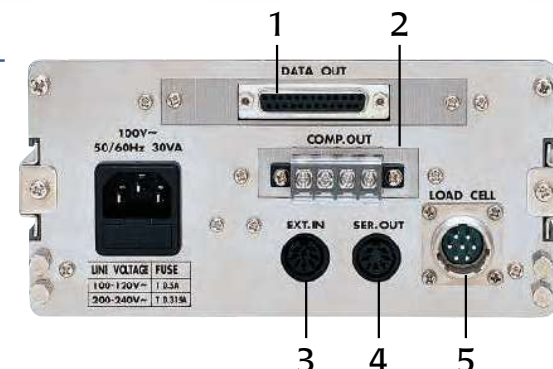
Checkweigher
Comparator output
(Hi/OK/Lo)



Printer
AD-8118A/B

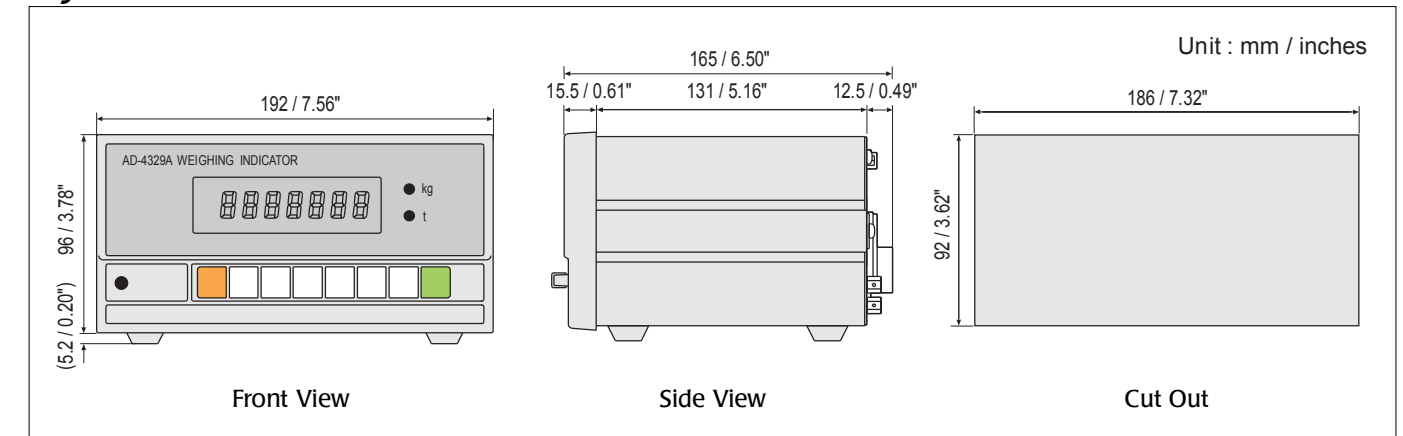
Rear Panel View

1. Standard RS-232C interface.
Optional BCD (OP-01), RS-422/485 (OP-03) or analog output 4 -20mA (OP-07)
2. Optional comparator output (OP-02)
3. External control input
4. Standard current loop output
5. Load cell connector



AD-4329A Weighing Indicator

Physical Dimensions



Specifications

Input Sensitivity	0.15μV/d (min.)
Input Signal Range	-35mV to +35mV
Load Cell Excitation	5V DC ±5%, 120mA
Load Cell Drive Capacity	Up to 8 units of load cells at 350Ω Up to 16 units of load cells at 800Ω (LCC07/LCC11/LCC12)
Zero Temperature Coefficient	±0.02μV/°C typ. ±0.1μV/°C max.
Span Temperature Coefficient	±3ppm/°C typ. ±15ppm/°C max.
Non-Linearity	0.005% of full scale
Maximum Input Noise	Less than 0.15μVp-p
Input Impedance	10MΩ or more
A/D Conversion Method	Delta-sigma modulation
A/D Internal Resolution	16,000,000 counts
Maximum Display Resolution	20,000 counts (max.)
A/D Conversion Rate	Approximately 10 times/sec.
Weight Display	Vacuum Fluorescent Display, 7-digit, 7-segment, 13mm (character height)
Annunciator	Stable, Zero Point, Gross, Net, Tare, Accumulation, kg/t or lb
Standard Serial Interface	RS-232C interface 20mA current loop

Keys	STANDBY/OPERATE, NET/GLOSS, PRESET TARE, TARE, ZERO, M+, MODE, PRINT
Power Supply	100 to 240V AC (Please request preferred voltage rating at time of order), 45 to 65Hz, 30VA
Net Weight	Approximately 1.8kg / 4.0lb
Dimensions	192(W) × 96(H) × 165(D) mm (compliance with DIN)
Panel Cut Out Dimensions	186(W) × 92(H) mm
Operating Temperature	-5°C to 40°C (23°F to 104°F)
Storage Temperature	-10°C to 70°C (14°F to 158°F)

Options

AD-4329A-01	BCD output (open collector)
AD-4329A-02	Comparator output (relay output)
AD-4329A-03	RS-422/485
AD-4329A-07	Analog output (4-20mA)

Standard accessories

•AC cable (2 meters)	•External input plug
•Load cell input plug	•Rubber foot (4 pcs)
•Capacity sticker	•Current loop output plug

Appearance and/or specifications subject to change for improvement without notice.

A&D ...Clearly a Better Value

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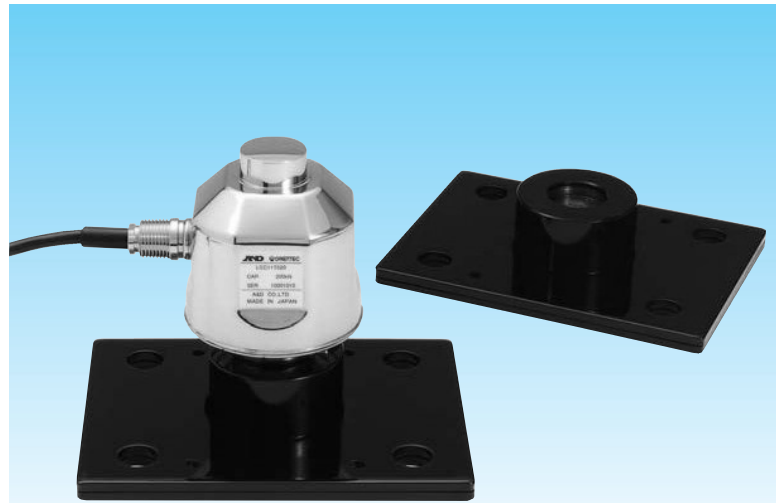
A&D Instruments India Private Limited
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Haryana, INDIA
Telephone: [91] (124) 471-5555 Fax: [91] (124) 471-5599

Compression Type

LCC11/N Series

Hermetically Sealed Stainless Steel Load Cell with Very Large Weighing Capacity

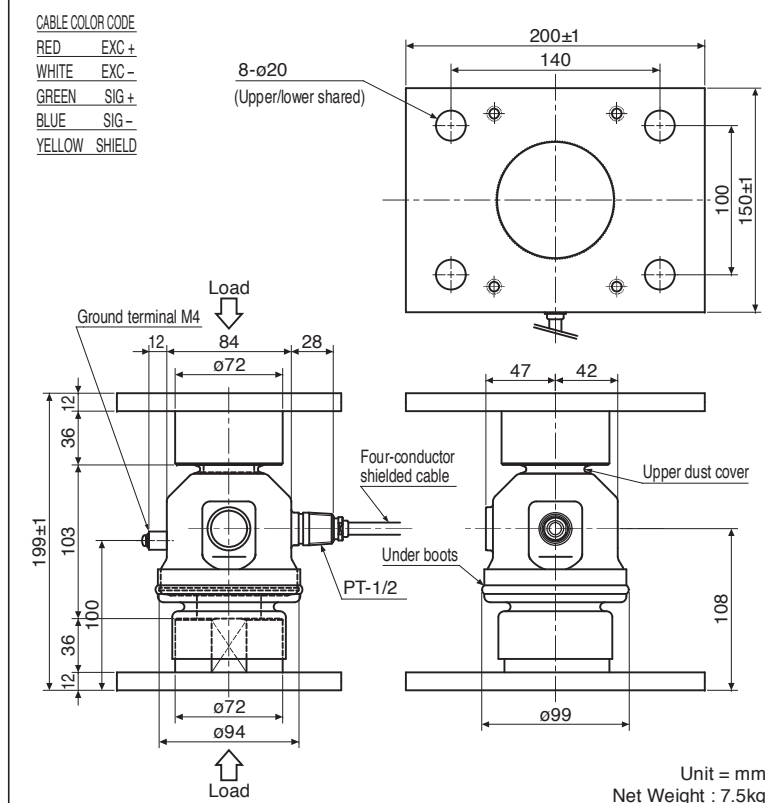
*High resistance to adverse environmental conditions and corrosion (IP68)
Available with or without mounting kit*



Model No.	Capacity
LCC11T010/LCC11T010N	10.20t (100kN)
LCC11T020/LCC11T020N	20.39t (200kN)
LCC11T030/LCC11T030N	30.59t (300kN)

Specifications

Rated output	2mV/V $\pm$ 0.1%
Safe load limit	200% of R.C.
Combined error	0.016% of R.O.
Recommended excitation voltage	DC5 to 12V
Maximum excitation voltage	DC15V
Zero balance	$\pm$ 1% of R.O.
Input terminal resistance	800 $\pm$ 80 Ω
Output terminal resistance	2200 $\pm$ 10 Ω
Insulation resistance	5000M Ω /DC50V
Compensated temperature range	-20 $^{\circ}$ C to 60 $^{\circ}$ C
Temperature effect on	
Zero balance	0.019% of R.O./10 $^{\circ}$ C Typ.
Span	0.010% of Load/10 $^{\circ}$ C Typ.
Cable diameter/length	$\varnothing$ 8/12m
Dustproof/waterproof	IP68 (100h at 1.5m immersion)



AC:S LA-1101 Series

Truck Scale, Tank Weighing, Rail Weighing, Hopper, Floor Scales, Silo

*Compression System *Lightning Protection *Stainless Steel Material *Dust & Waterproof *IP-68

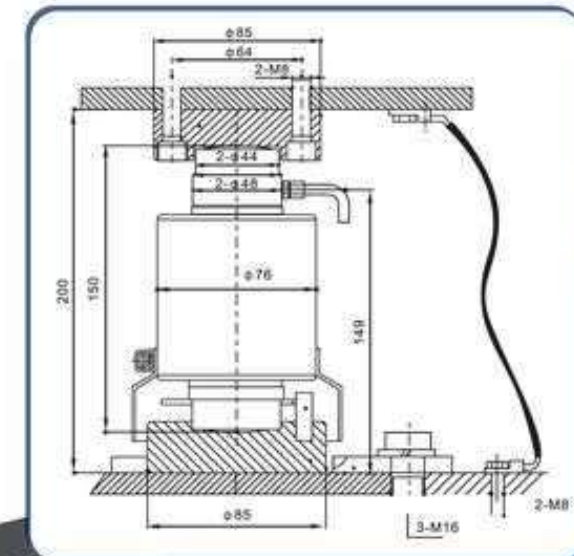


Specification

Rated capacities(Emax)	10, 20, 30, 50t
Sensitivity	2.0±0.002mV/V
Accuracy class	C2~C5
Zero balance	±1% F.S
TCO	±0.02%FS/10°C
TC SPAN	±0.02%FS/10°C
Input impedance	400±20Ω
Output impedance	352±5Ω(L≥15m)
Insulation impedance	≥5000MΩ
Temperature range, compensated	-10°C~+40°C
Temperature range, operating	-30°C~+70°C
Maximum safe overload	150% F.S
Ultimate overload	250% F.S
Excitation, recommend	10~12V DC
Excitation, maximum	15V DC
Protection class	IP68
Construction	Stainless Steel
Cable	Length:8m(10t),14m(30t),16m(40~50t)

Models & Capacities

Model	Capacity
LA-1101-T010	10tf
LA-1120-T020	20tf
LA-1130-T030	30tf
LA-1150-T050	50tf



PT LIBRA EMAS PERMATA

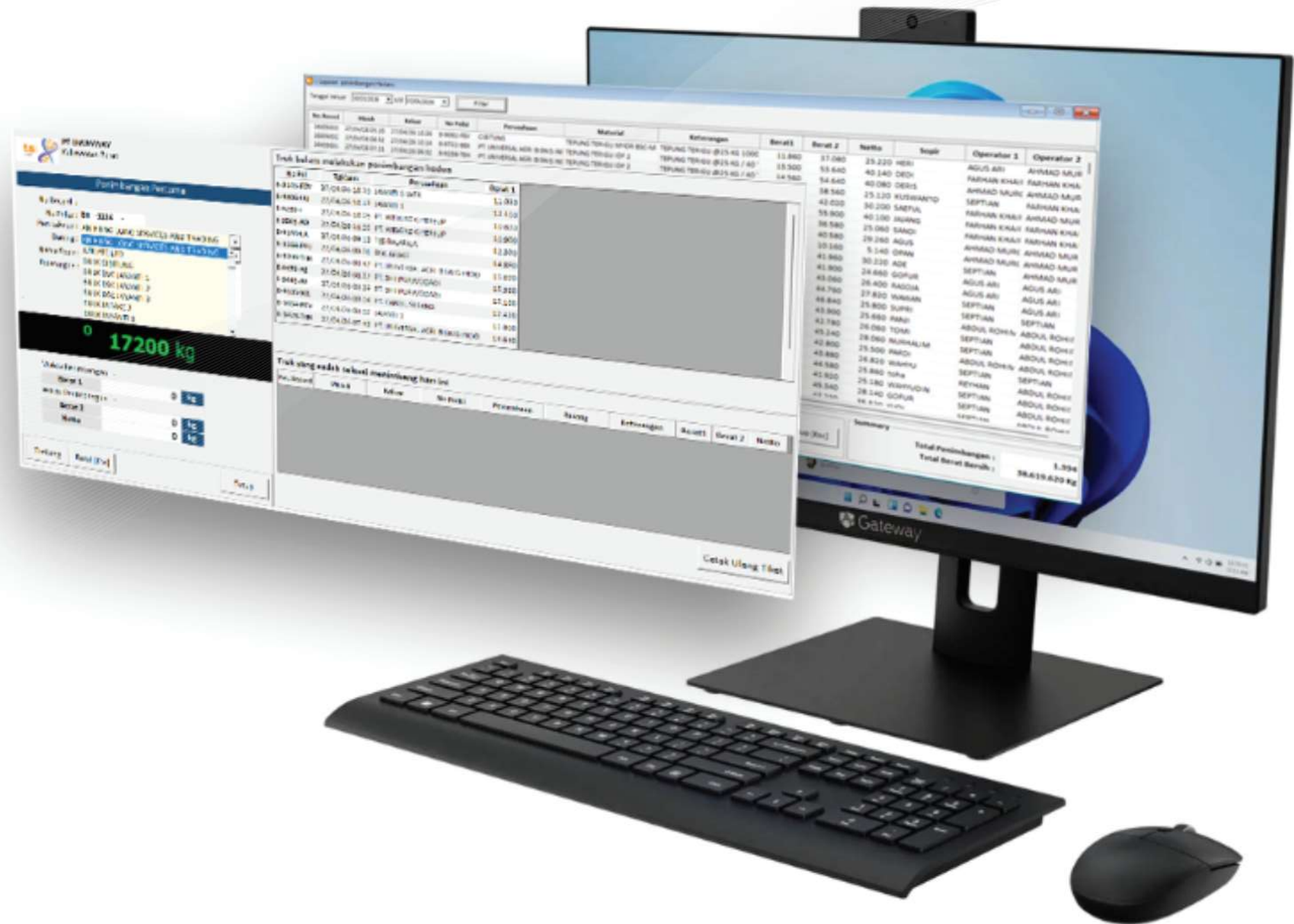
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Technical Specification



TSi Software

- Simplify interface menu, more user friendly, operations can be done only by using the keyboard
- Security function more complete, access rights can be made to the access restrictions for each type of software functions
- "Click Vehicle License" facilities to conduct the second weighing
- Data can not be processed if the scale number had unstable, or not in accordance with minimum weight
- Fast ticket printing processing using default Epson LX-300+ Printer
- The existence of options to print the tickets at the time of weigh 1
- All reports can be exported to Microsoft Word, Excel, or PDF document
- Self customize report using crystal report program
- All data except weight data, can be edited by the user who has the right, every activity will be automatically recorded in the log history of data changes, thus avoiding the possibility of abuse authority



Manufacturing Process



1 Metal Plate Cutting process
Exceptional dimensional accuracy can be achieved using the **plasma cutting machine** process.



2 Scale Platform Welding
Panel arc welding efficiently joins large plates with high speed and deep penetration.



3 Metal Plate Shaping
Safely shapes metal plates to exact specification without compromising structural integrity using Heavy Duty **Press Brake Bending Machine**



6 Shot Blasting Process
We Utilize **Roller conveyor Shot Blasting Machine** to thoroughly clean rust and roughen the metal surface to ensure maximum paint adhesion



5 Welding Process
This process utilizes **multiple automated welding heads** to efficiently weld large structural components and ensuring uniform weld quality.



4 Pre-arch Scale Platform
Align the U-shape beams into their proper positions



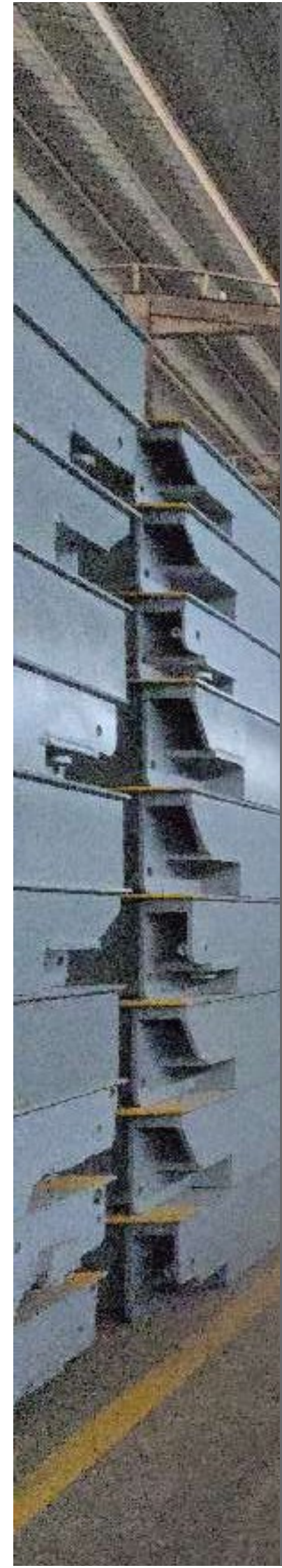
7 Finishing & Painting
To ensure paint quality, an automated painting machine is used to spray the primer and finishing coats



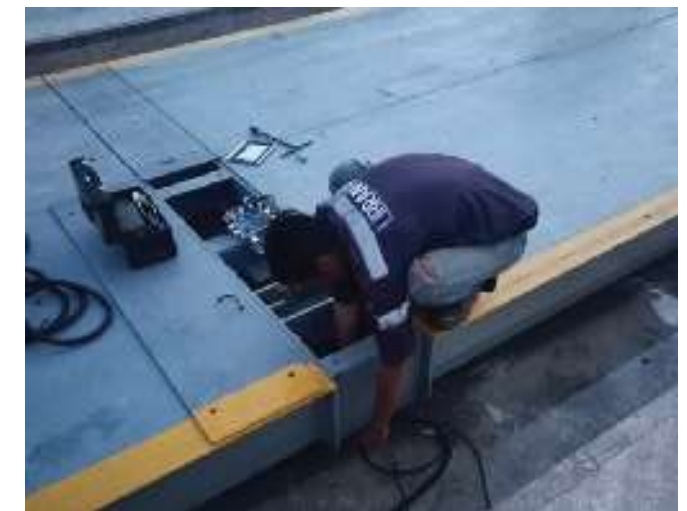
8 Final Inspection
The last step in manufacturing involves final inspection and quality control to detect any potential defects



9 Packaging & Shipping
To preserve paint quality during shipping, our platforms are securely wrapped in thick plastic material



Installation Process



Installation Process



Calibration & Stamping Process



Metrology Certification & Calibration

All weighbridge must be tested by local Metrology Department with calibrated weights when first installed, and then re-verified at regular periods or when any critical components are replaced. This ensures that the weighbridges are maintained and certified for reliable precision and the weight data is legal for commercial transaction.

Our trained service technicians provide fast response to your service needs, whether installation, maintenance or repair. Our technicians operate throughout all over Indonesia up to other African States. We will also provide you with a complete maintenance programs of necessary inspections and preventative maintenance at fixed annual rates.

Contract Service

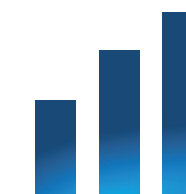
The contract service gives our existing customers regular scheduled service & maintenance visits to keep their weighbridges in good working order and performing accurately.

Our standard contract & maintenance programs included :

- ✓ Support from a quick-response service centre operating 365 days a year
- ✓ Priority visits, inspection & repairs
- ✓ Cleaning & greasing all moving parts
- ✓ Special discount on spare parts
- ✓ Preparation for calibration service
- ✓ Detailed calibration report & calibration stickers places on all applicable devices
- ✓ Written service track record by our authorized technicians
- ✓ The contract covers a mixture of weighbridges and other industrial weighing equipments
- ✓ We have numerous weighbridge service technicians in each branch that regularly perform repairs, calibration and certification of weighbridges.



Aftersales Service



Our Customer



your best **WEIGHING** solution



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