

Fully Electronic 100 Ton Heavy Duty Weighbridge - Overview

Specifications	Particulars
Construction Type	Pit Less Type / Pit Type
Weighbridge Assembly Max. Capacity	100 tons
Platform Type	Steel Deck
Weighbridge-MS Platform size	18.0 meter x 3.0 meter
Weighbridge Plate Thickness	10mm
Type / Capacity of Load cell	COMPRESSION Type Load cells. Brand: "FLINTEC" (GERMAN) Model No: RC3 Hermetically Sealed with IP68, Calibrated in mV/V/Ω, Cable Entry sealed by Glass to Metal Header.
Load cell Excitation & Sensitivity	12V DC & 2 ± 0.1% mV/V
Weighbridge Indicator	IT 5405
Indicator Readability	10kg

TECHNICAL SPECIFICATION of INDIVIDUAL PARTS

1. Weighbridge Mild Steel Platform

Make	VELMAC (India)
Type	Electronic Load cell based Pit type or Pit less Weighbridge
Model	HWC183 ES Series (Heavy Duty)
Platform Material	IS 2062 STRUCTURAL STEEL MS Structure Painted with <ul style="list-style-type: none"> • One coat of Epoxy polyamide based Red Oxide – Zinc Phosphate Primer. • One coat of Epoxy resin based paint with MOI, DFT/COAT finish.
Top Deck	MS Plate with adequate section suitably ribbed to avoid skidding.
Overload Capacity	SAFE: 150% of rated capacity
Ultimate Load	200% of rated capacity.

2. Load cells

TYPE OF LOAD CELL	COMPRESSION TYPE LOAD CELLS – "FLINTEC" MAKE, MODEL NO. RC3, HERMETICALLY SEALED WITH IP68, IP69K CALIBRATION IN MV/V/Ω, CABLE ENTRY SEALED BY GLASS TO METAL HEADER
CAPACITY OF EACH LOAD CELL	Rated Capacity :- 30T each
EXCITATION VOLTAGE	5 - 15 VDC
RATED OUTPUT	2.0mv/v ± 0.1%
SAFE LOAD LIMIT	200% of rated capacity
ULTIMATE OVERLOAD	300% of rated capacity
INPUT RESISTANCE	1150 ± 50 Ω
OUTPUT RESISTANCE	1000 ± 2 Ω
INSULATION RESISTANCE (100 V DC)	≥ 5000 MΩ
COMBINED ERROR	≤ ± 0.0200 of rated capacity
NON-LINEARITY	≤ ± 0.0166 of rated capacity
HYSTERESIS	≤ ± 0.0166 of rated capacity
SEALING	complete hermetic sealing; cable entry sealed by glass to metal header
PROTECTION CLASS	IP68 & IP 69K
APPROVALS	<ul style="list-style-type: none"> • OIML (International Organization for Legal Metrology) approval to C1 (Y = 5 000), C3, C3 MI8 and C4 (Y = 15 000) • NTEP (National Type Evaluation Program, USA) approval to 6 000 intervals, Class III (for 7.5 to 75 t) • ATEX hazardous area approval for Zone 0, 1, 2, 20, 21 and 22 • FM hazardous area approval
KEY FEATURES	<ul style="list-style-type: none"> • Environmental Protection IP68 with complete hermetic sealing • Stainless steel construction (stainless steel 17-4 PH (1.4548)) • Self restoring design • High input resistance • Calibration in mV/V/Ω

3. Weigh bridge-Load Indicator

MAKE & MODEL NO	IT 5405
KEY FEATURES	<ul style="list-style-type: none"> • Single or dual range • High internal resolution, display up to 60 000 counts • Approved sensitivity 0.4μv/e • Calibration with weight or eCal (electronic Calibration without test weights) • Serial Interface RS232C • Conversion rate max. 100/s • Integrated power supply • 4 – 20 ma out put for plc Interface (Optional)
APPROVAL	Approved by weight & measures for use in CLASS III Applications
INTERNAL RESOLUTIONS	High internal resolutions, display up to 1,00,000 counts
CALIBRATION	Calibration with weight
A/D CONVERTER RESOLUTIONS	Internal up to 8 million counts; display up to 60,000 counts
POWER SUPPLY	230 vAC, 50/60Hz, max 12VA
LINEARITY & TEMPERATURE COEFFICIENT	Within 0.0015 % FS; \leq 2 ppm/ $^{\circ}$ C
NUMBER OF LOAD CELLS	Up to 6 load cells (350 Ω) or 18 load cells (1100 Ω) in Parallel
OPERATION TEMPERATURE	-10 $^{\circ}$ C to +40 $^{\circ}$ C legal for trade; 85% RH max, non-condensing
WEIGHING FUNCTIONS	Tare, zero, auto zero tracking, motion detection, auto-zero at power-up

SCOPE OF SUPPLY:

S.No	Particulars	Quantity (Unit)
1	Weighbridge Platform	1
2	Load cells	8
3	Weighing Indicator	1
4	Junction box with IP65 protection & Surge Arrestors	1
5	Printer for Weighbridge	1
6	Platform Stopper	4
7	Standard Weighbridge Software	1
8	Foundation Plates	8
9	Foundation Bolts	32

SCOPE OF WORK:

Erection, Testing, Commissioning & Calibration of the weighbridge.

Warranty: We offer a warranty of One year from the date of invoice & 5 yrs for structure.

Delivery: Within 2 - 3 Weeks of Advance Payment.

Delivery Method: CIF – Al Shuwaikh Port, Kuwait

Additional Info:

Pit Type:



Advantages of Pit type Weighbridge:

- Occupies lesser space
- No requirement of ramps for loading & unloading of

Disadvantages of Pit type Weighbridge:

- Requires Expensive Pit Construction
- Not good for high water table location
- Hazardous Gases can collect in Scale Pit
- Safety Issues related to Pit

Pit less Type:



Advantages of Pit less Weighbridge:

- 40% lower civil construction cost
- Maintenance is easy as all electronics components and weighbridge structure are accessible above ground level
- No need for Guiding Girders Main i-beams acts as guiding girders Problem of Pit maintenance is eliminated
- Less complex foundation requirement
- Fewer problems with water drainage
- Accessibility to the weighing component is easier

Disadvantages of Pit less type Weighbridge:

- Requires large area to install
- Requires loading & unloading Ramps