

Weigh bridge for trucks and wagons



SAT Ltd.

Features

- n One or two platform weigh bridges
- n Resistance against vibrations while weighing
- n Complete computerized system for measurement, archiving & reports



Weigh bridge technical characteristics

n Weighing accuracy (OIML-R76) class III

n Maximal weight

n for trucks 60 000 kg

n for wagons 120 000 kg



n Minimal weight

400 kg

n Check division

$e = 20 \text{ kg}$

n Number of check divisions

$n = 6000$

n Number of counts internal


$I = 1\,048\,576$

n Ambient temp. range for
the weighing platform (OIML)

$-10 - +40 \text{ }^\circ\text{C}$

Weight sensors

Technical characteristics

n Manufacturer:		TEDEA Huntleigh
n model		220/30/C3 (OIML - IR60)
n rated capacity:		30 000 Kg
n rated output:		2 mV/V
n total error:		0.02% of applied load
n zero return after 30min:		0.017% of applied load
n temperature effect on output:		0.001% of rated output/°C
n temperature effect on zero:		0.001% of rated output/°C
n zero balance:		+/- 2% of rated output

Weight sensors

Technical characteristics

- n temperature range:
 - n operating -30 to +70 °C
 - n compensating -10 to +40 °C
- n safe overload: 150% of rated capacity
- n ultimate overload: 300% of rated capacity
- n excitation 15 Volts AC or DC
- n isolation impedance: >2000 Ohms
- n weight including cable: 3.25 Kg
- n environmental protection: IP68
- n construction: stainless steel
- n cable 6 Wire PU Dbl Scrn 20 metres (standard)



Industrial weight indicator

Technical characteristics

- n manufacturer: Measurement Systems International USA
- n model: MSI3650, MSI3750
- n standard: OIML R76 (NTEP HB-44)- class III
- n load cells: will drive up to eight 350 load cells
- n max resolution: 1 048 576 counts internal (20 bit)
- n number of check divisions: 3000
- n check division: $e=20\text{kg}$
- n drift zero: $<5\text{PPM/C}$ (with AZM)



Industrial weight indicator

Technical characteristics

- n span: < 15 PPM/C
- n weight display: 6 digits 0.9"/23 mm LCD
- n power: 180 to 280 VAC
48 to 65 Hz <3VA (opt.)
- n temperature range: -10 to +40C NTEP/OIML
-20 to +60C operating
- n programmable features: RS-232C option
- n calibration: fully digital
- n environmental protection: IP65



Operator station

PC specifications

n Minimal requirements:

n Celeron processor @333 MHz

n RAM 64 MB

n HDD 10 GB

n FDD 3.5"

n Keyboard 101 key

n Mouse

n 15" Color Monitor

n Dot matrix printer



Scope of supply



- n Loading platforms (steel or concrete construction)
- n Civil works
- n Platform mounting
- n Load cells
- n Weight indicator
- n Operator station PC
- n Matrix printer
- n Device connection
- n Weigh bridge calibration
- n Weigh bridge legalization
- n Training and education

Purpose and general functions of the software



- n Receiving data from the transmitter of the load cells and digital processing/filtering
- n Archiving received data from the transmitter and load cells
- n Accomplishing logical order for activities in passing of wagons and trucks in both directions
- n Accomplishing ordered and logical dialog with operator of the weighing station

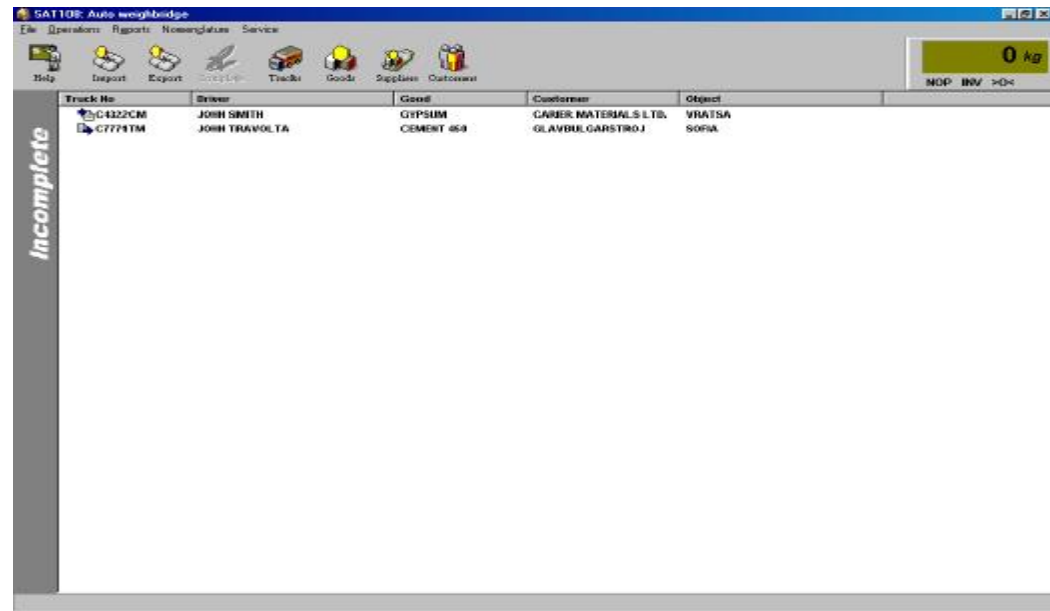
Purpose and general functions of the software



- n Issuing delivery notes - weighing and dispatching
- n Issuing invoices
- n Keeping up nomenclature for suppliers, clients, products (materials) and wagons (trucks)
- n Keeping up archives in logical integrity and rejecting controversial data
- n Creating and printing accounts
- n Integration with existing plant account software

Main screen elements

- n Operations - Import, Export, Complete, Duplicate note
- n Reports - Dispatching (detailed), Dispatching (Generalized), Goods reports, Customers reports, Run
- n Nomenclature — Goods, Transport, Suppliers, Customers
- n Service — Password, Options



Import screen

- n All data concerning imported material is filled in the import screen

The screenshot shows a software window titled "Delivery(Import)" with a "Completement" (Completion) section on the right. The main area is divided into several sections for data entry:

- Goods:** Name: GYPSUM, Rel.weight: 1390
- Transport:** Reg No: C4322CM, Type of the vehicle: VOLVO, Price t/km: (empty), Run: (empty), Driver: JOHN SMITH
- Supplier:** Code: (empty), Name: CARRIER MATERIALS LTD., sâşleñ: VRATSA
- Delivery note:** Number: 1234, Date: 02-06-25, Quantity: 22880 kg

The "Completement" section displays the following summary values:

TARE	11460	kg
GROSS	46780	kg
NET	35320	kg
VOLUME	25.41	m ³

At the bottom right, there are four buttons: Save, Cancel, Manual entry, and Print.

Export screen

- n All data concerning exported material is filled in the export screen

Dispatching (Export)

Dispatching (Export)

Goods

Name: CEMENT 450
Rel.weight: 1600
Code: 4

Transport

Reg No: C7771TM
Type of the vehicle: VOLVO
Group:
Run:
Driver: JOHN TRAVOLTA

Customer

Code:
Name: GLAVBULGARSTROI, i&ljn: SOFIA
(L/C): 9

Order

Quantity: 24500 Kg

Completement

TARE: 14380 kg
GROSS: 38340 kg
NET: 23960 kg
VOLUME: 14.97 m³

Save
Cancel
Manual entry
Print

Import/Export notes Invoices

- n Import note (Weighing note) - reflects the imported material from suppliers
- n Export note (Dispatch note) - reflects the exported material from clients
- n Invoices - optional along with export notes

```
SHARRCEM
AUTO WEIGH BRIDGE
-----
                DISPATCH NOTE
                No : 997
Serial number for the day No:1 / 06/20/02 07:55:12
-----
Invoice : 25536
Customer : SOFSTROJ
Object : LULIN
Truck No : 122-C9-324      Type : MERCEDES
Run : 52.5                Driver : Hasan M.
-----
Code : 1                Material : CEMENT 350
TARE : 15260 kg, measured on 07:12:00
GROSS : 40520 kg, measured on 07:55:12
NET : 25260 kg, executed 14.86 m3
-----
OPERATOR:                DRIVER:
```

```
SHARRCEM
AUTO WEIGH BRIDGE
-----
                WEIGHING NOTE
                No : 654
Serial number for the day No:1 / 06/20/02 08:56:12
-----
Invoice : 25536
Supplier : TRANSPORTSTROJ
Object : LULIN
D.note No: 2341
Truck No : 442-KS-754      Driver : Hasan M.
-----
Code : 3                Material : GYPSUM
TARE : 11360 kg, measured on 07:12:00
GROSS : 31560 kg, measured on 08:56:12
NET : 20200 kg, executed 13.56 m3
-----
OPERATOR:                DRIVER:
```

Suppliers report

- n Contains information for the supplied quantities of products from different suppliers. Lines are grouped by name of the product
- n Summarized and detailed

Report Suppliers
Report number: 1490
date of printing: 02-06-25 4:31:51 MD
beginning of the period: 02-06-25
end of the period: 02-06-25 4:31:00 MD

CARRIER MATERIALS LTD.
Object VRATSA

Trucks	Goods	By note	Net[kg]	Volume[m3]	Date
C6755PM	GYPSUM	23680	43220	31.09	25-06-02 10:17
C4322CM	GYPSUM	20560	*20580	14.81	25-06-02 11:09
C4322CM	GYPSUM	23000	*33000	23.74	25-06-02 11:10
C6755PM	GYPSUM	18990	*18990	13.66	25-06-02 11:13
C4322CM	GYPSUM	23000	*23000	16.55	25-06-02 12:26
C7771TM	GYPSUM	21000	*21000	15.11	25-06-02 12:27
		130230	159790	114.96	6

Course count: 6
End of the report

Customers report

- n Contains information for the produced quantities of products for different clients. Lines are grouped in two levels: by name of the product and by name of the client
- n Summarized and detailed

Preview of a report

Report Customers
Report number: 1490
date of printing: 02-06-25 4:33:36 MD
beginning of the period: 02-06-25
end of the period: 02-06-25 4:33:00 MD
NOTE: All customers are involved.

LC: SORSTROJ
Material: CEMENT 450

Note	Object	Invoice	Order	NET	VOLUME	Date
21257	KANALA	45669	22000	*22000	13.75	25-06-02 10:48
				22000	22000	13.75

Material: CEMENT 350

Note	Object	Invoice	Order	NET	VOLUME	Date
21255	KANALA	45690	21000	*21000	12.22	25-06-02 10:48
21254	KANALA	54667	23500	*23500	14.78	25-06-02 10:48
				44500	44820	28

LC: P GLAVULGARSTROJ
Material: CEMENT 450

Note	Object	Invoice	Order	NET	VOLUME	Date
21253	SCPIA		314500	*31850	19.93	25-06-02 10:22
21256	SCPIA		25000	*25000	15.63	25-06-02 10:47
				339500	66880	35.56

Course count: 5
End of the report

Page 1 (Overall: 1)

Production report

- n Contains information for the produced quantities for the different clients. Lines are grouped by name of the product.
- n Summarized and detailed

Preview of a report

Report (L/C)/Invoices
Report number: 1490
date of printing: 02-06-25 4:36:03 MD
beginning of the period: 02-06-25
end of the period: 02-06-25 4:36:00 MD

(L/C)Inv	Goods	Ordered(Kg)	Executed(Kg)	Courses
# 45669	CEMENT 450	22000	22000	1
# 45690	CEMENT 350	21000	21020	1
# 54667	CEMENT 350	23300	23300	1
# 9	CEMENT 450	339560	56880	2

End of the report

Delivery report

n Contains information for the imported quantities from all suppliers.

Preview of a report

Report Delivery(detailed)
Report number: 1490
date of printing: 02-06-25 12:36:51 MD
beginning of the period: 02-06-25
end of the period: 02-06-25 12:36:00 MD

GYPSUM

Note	D. code	Supplier	Object	By note	NET	VOLUME	Date
8754	21067	CARIER MATERIALS LTD.	VRATZA	23690	*43120	31.59	25-06-02 10:17
8755	20455	CARIER MATERIALS LTD.	VRATZA	20560	*20380	14.81	25-06-02 11:09
8756	4335	CARIER MATERIALS LTD.	VRATZA	23000	*23000	23.74	25-06-02 11:10
8757	3435	CARIER MATERIALS LTD.	VRATZA	18990	*18990	13.66	25-06-02 11:13
8758	4321	CARIER MATERIALS LTD.	VRATZA	23000	*23000	16.53	25-06-02 12:28
8759	6543	CARIER MATERIALS LTD.	VRATZA	21000	*21000	15.11	25-06-02 12:27
				138230	150790	114.96	6

Course count: 6
End of the report

Page 1 (Density 1)

Dispatching report

- Contains information for the exported quantities from all clients.

Preview of a report

Report Dispatching (Detailed)

Report number: 1480
date of printing: 02-06-25 4:43:21 MD
beginning of the period: 02-06-25
end of the period: 02-06-25 4:43:00 MD

CEMENT 450

Note	Payment	Trucks	Customers	GROSS	TARE	NET	Date
21223	cash	06755PM	SLAVBULGARSTROI	45200	*12440	*32860	06-25-02 10:22
21226	cash	06755PM	SLAVBULGARSTROI	36000	*11000	*25000	06-25-02 10:47
21227	cash	06755PM	SOPOSTROI	34000	*12000	*22000	06-25-02 10:48
						78080	3

CEMENT 350

Note	Payment	Trucks	Customers	GROSS	TARE	NET	Date
21224	cash	04322CM	SOPOSTROI	37800	*14300	*23500	06-25-02 10:45
21225	cash	04322CM	SOPOSTROI	35300	*14380	*20920	06-25-02 10:46
						44520	2

Course count: 5
End of the report

Page 1 (Generally 1)