

# Weigh bridge for trucks and wagons



SAT Ltd.

# Features

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




# Weigh bridge technical characteristics

- Weighing accuracy (OIML-R76) class III
- Maximal weight
  - for trucks 60 000 kg
  - for wagons 120 000 kg
- Minimal weight 400 kg
- Check division  $e = 20 \text{ kg}$
- Number of check divisions  $n = 6000$
- Number of counts internal  $I = 1\,048\,576$
- Ambient temp. range for the weighing platform (OIML)  $-10 - +40 \text{ }^\circ\text{C}$



# Weight sensors

## Technical characteristics

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

# Weight sensors

## Technical characteristics

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



# Industrial weight indicator

## Technical characteristics

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



# Industrial weight indicator

## Technical characteristics

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



# Operator station PC specifications

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## ■ Minimal requirements:

- Celeron processor @333 MHz
- RAM 64 MB
- HDD 10 GB
- FDD 3.5"
- Keyboard 101 key
- Mouse
- 15" Color Monitor
- Dot matrix printer






# Scope of supply




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

# Purpose and general functions of the software



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

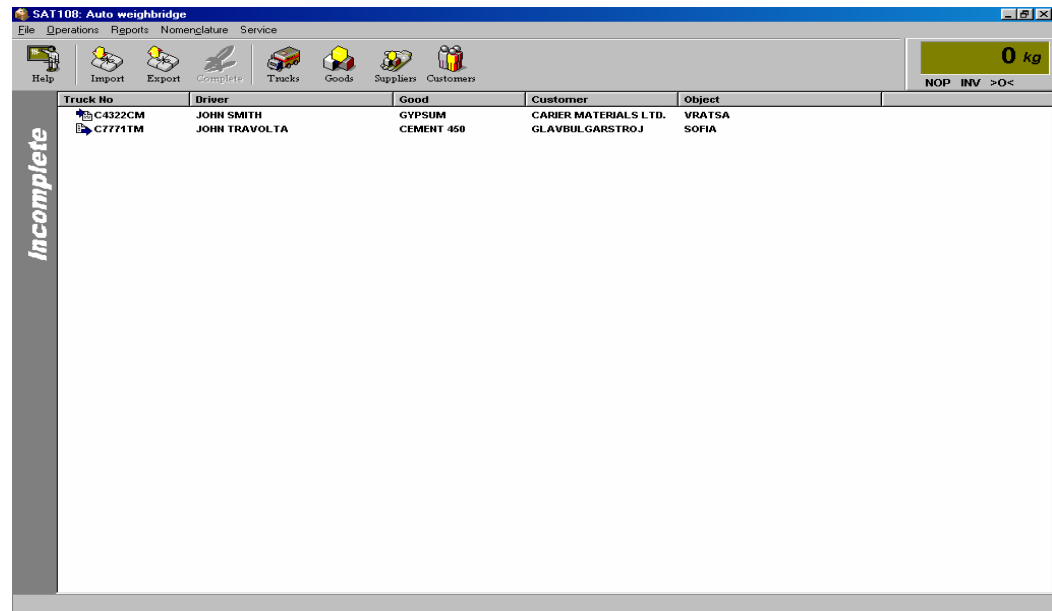
# Purpose and general functions of the software



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

# Main screen elements

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



# Import screen

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

**Delivery(Import)**

**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: CARIER MATERIALS LTD., sâşen: VRATSA

**Delivery note**

Number	Date	Quantity
1234	02-06-25	22880 kg

**Completement**

TARE: 11460 kg

GROSS: 46780 kg

NET: 35320 kg

VOLUME: 25.41 m<sup>3</sup>

Buttons: Save, Cancel, Manual entry, Print

# Export screen

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

**Dispatching (Export)**

**Dispatching (Export)**

**Completement**

**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, ialqin: SOFIA, (L/C): 9

**Order**

Quantity: 24500 Kg

**Completement**

TARE: 14380 kg  
GROSS: 38340 kg  
NET: 23960 kg  
VOLUME: 14.97 m<sup>3</sup>

Save, Cancel, Manual entry, Print

# Import/Export notes Invoices

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

SHARRCEM  
AUTO WEIGH BRIDGE

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**DISPATCH NOTE**

No : 987

Serial number for the day No:1 / 06/20/02 07:55:12

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Invoice : 25536  
Customer : SOFSTROJ  
Object : LULIN  
Truck No : 122-CS-324                      Type : MERCEDES  
Run : 52.5                                      Driver : Hasan H.

-----  
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

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OPERATOR:                                      DRIVER:  
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SHARRCEM  
AUTO WEIGH BRIDGE

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**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

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OPERATOR:                                      DRIVER:  
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# Suppliers report

- Contains information for the supplied quantities of products from different suppliers. Lines are grouped by name of the product
- 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
		<b>130230</b>	<b>159790</b>	<b>114.96</b>	<b>6</b>

**Course count: 6**  
End of the report



# Customers report

- 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
- Summarized and detailed

**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.

L/C SOFSTROI  
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	1

Material CEMENT 350

Note	Object	Invoice	Order	NET	VOLUME	Date
21255	KANALA	45690	21000	*21020	13.22	25-06-02 10:46
21254	KANALA	54667	23500	*23500	14.78	25-06-02 10:45
			44500	44520	28	2

L/C 9 OLAVBULGARSTROI  
Material CEMENT 450

Note	Object	Invoice	Order	NET	VOLUME	Date
21253	SOFIA		314560	*31880	19.93	25-06-02 10:22
21256	SOFIA		25000	*25000	15.63	25-06-02 10:47
			339560	56880	35.56	2

Course count: 5  
End of the report

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# Production report

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

*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	23500	23500	1
# 9	CEMENT 450	339560	56880	2

End of the report

# Delivery report

- Contains information for the imported quantities from all suppliers.

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. note	Supplier	Object	By note	NET	VOLUME	Date
8754	21087	CARRIER MATERIALS LTD.	VRATSA	23680	*43220	31.09	25-06-02 10:17
8755	22455	CARRIER MATERIALS LTD.	VRATSA	20560	*20580	14.81	25-06-02 11:09
8756	4355	CARRIER MATERIALS LTD.	VRATSA	23000	*33000	23.74	25-06-02 11:10
8757	3455	CARRIER MATERIALS LTD.	VRATSA	18990	*18990	13.66	25-06-02 11:13
8758	4321	CARRIER MATERIALS LTD.	VRATSA	23000	*23000	16.55	25-06-02 12:26
8759	6543	CARRIER MATERIALS LTD.	VRATSA	21000	*21000	15.11	25-06-02 12:27
				130230	159790	114.96	6

Course count: 6  
End of the report

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# Dispatching report

- Contains information for the exported quantities from all clients.

Report number: 1490  
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
21253	cash	C675SPM	GLAVBULGARSTROJ	45320	*13440	*31880	06-25-02 10:22
21256	cash	C675SPM	GLAVBULGARSTROJ	36000	*11000	*25000	06-25-02 10:47
21257	cash	C675SPM	SOFSTROJ	34000	*12000	*22000	06-25-02 10:48
						<b>78880</b>	<b>3</b>

**CEMENT 350**

Note	Payment	Trucks	Customers	GROSS	TARE	NET	Date
21254	cash	C4322CM	SOFSTROJ	37800	*14300	*23500	06-25-02 10:45
21255	cash	C4322CM	SOFSTROJ	35300	*14280	*21020	06-25-02 10:46
						<b>44520</b>	<b>2</b>

Course count: 5  
End of the report

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