



CLOVERSCALES

COMMERCIAL & INDUSTRIAL SCALES | WEIGHBRIDGES

COMPANY BROCHURE 2022/23

Clover Scales (Pty) Ltd

2 Kya Sand Road, Kya Sand,

Randburg,

Johannesburg

Phone: 011 462 -3216

www.cloverscales.co.za

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OVERVIEW

OVERVIEW

Clover Scales (Pty) Ltd is a leading South African high technology company specializing in the weighing industry and focusing on primarily, development and supply of electronic solutions from 0-100 tons. Clover Scales (Pty) Ltd was established in 1967 and has a fully operational sales and service branch situated in Johannesburg.

VISION

Clover Scales vision is to ensure their clients receive quick and personal service and recognizing the importance of solid service, and support.

HISTORY

The company was formed in 1967 under the name Geo. Salter (Pty) Ltd. It was a wholly owned subsidiary of Geo. Salter Plc in the UK. In 1986 the Company was sold and the name was changed to Clover Scales (Pty) Ltd. Recognizing the importance of solid service, the company has a consolidated workshop and sales operation situated in Johannesburg.

Clover Scales comprises of senior management who are actively involved in the business on a day to day basis. The combined scale sales and service experience in management is more than 60 years.

The company is a leading South African high technology company specializing in the weighing industry and focusing on primarily, development and supply of electronic solutions from 0 to 200 tons. Clover Scale's mission is to ensure their clients receive personal, efficient service.

Quality and customer service distinguishes us in the market and we strive to exceed our customers' expectation and meet their requirements. As well as doing some local manufacture, The company carries the following brands:

CLOVER SCALES – Coin Scales, Table Top, Bench, Platforms, Balances

VIBRA - SHINKO DENSHI – Laboratory Balances and Analytical Balances

RICE LAKE WEIGHING SYSTEMS – Systems Digital Indicators

KEJIE ELECTRONICS – Weighbridges

LAUMAS – loadcells and indicators

NINGBO KELI – Systems and Digital Indicators

MANPOWER AND RESOURCES

Clover Scales has an operational branch in Johannesburg, with support offices in Cape Town and Durban. The Johannesburg factory premises are wholly owned. Total staff compliment is approximately 20 including service technicians, support and admin staff and qualified sales representatives to assist in their respective spheres.



ACCREDITATION

Clover Scales are registered with the NRCS (National Regulator for Compulsory Standards) and SANAS (South African National Association of Standards).

Clover Scales is proud to be certified by SANAS for:

ISO/IEC 17025

For competence in testing and calibration in the field of Mass Metrology

SANS 10378

For competence in the verification of mass meters in terms of the Trade Metrology Act

SANAS - The South African National Accreditation System is recognized by the South African Government as the National Accreditation Body that gives formal recognition that Laboratories, Certification Bodies, Inspection Bodies, Proficiency Testing Scheme Providers and Good Laboratory Practice (GLP) test facilities are competent to carry out specific tasks.

SANAS certificates are a formal recognition that an organization is competent to perform specific tasks and able to issue such certificates.



WEIGHBRIDGES

WEIGHBRIDGES

We manufacture our weighbridge using U-shaped beams with a 10mm welded top to eliminate deck bolts. This results in easier and less frequent need for maintenance. Being modular allows for ease of transportation and moving or uplifting of the weighbridge to a new site. Intuitive and easy-to-use vehicle management software manages the weighbridge from a different more sophisticated level.



200 TON 12M OFF-ROAD WEIGHBRIDGE

The Off-Road weighbridge is a high structural strength design intended to withstand the very high concentrated axle loads of articulated vehicles used in off-road applications, where the loads can range from 50t to 200t.

The steel deck is constructed from U shaped beams resulting in strength at critical stress points, giving a ridged weigh-bridge.

The weighbridge platform is a modular design suitable for easy transportation, assembly and installation. Removal and re-installation is also possible.



The flexibility of the design allows for customization and can be adjusted to your special needs. A typical scenario is to obtain the off-road vehicle details, analyse the length and width of the vehicle and access the axle loading. From this information one then determines what design would be best suited for the application. The design pictured here was for a CAT 740 and CAT 777 vehicle.

The weighbridge deck consists of four (4) modules. The maximum axle load will be 135tons.

One bridge consists of 2 separate scales, with a platform size for each scale of 8m x 3m. Each scale includes four (4) bridge modules and three (3) weigh-bars. Height of the Deck – 385mm from the load cell base plate to the top of the weigh-bridge deck. The deck plate is manufactured from smooth 14mm plate. All cables run through conduit to the point of load cell/junction boxes. Each deck is joined together by Weigh-Bars. Side rails will be planted into the ground next to the bridge.



STANDARD 60 TON 24M WEIGHBRIDGE AND TEST WEIGHTS



LOAD CELLS

LOAD CELLS

Clover Scales' range of load cells ensures high precision weighing. We stock various premium-quality load cells for weighing scales. Our industrial-grade shear beam load cells are made of nickel-plated alloy steel and are commonly found in truck, hopper, and medical scales. These load cells are designed to withstand rigorous loads.

Different types of load cells include:

SINGLE-POINT LOAD CELLS:

A load cell is located beneath a platform loaded from above with a weight.

BENDING-BEAM LOAD CELLS:

Several load cells are positioned beneath a steel structure and are loaded from above.

COMPRESSIVE-FORCE LOAD CELLS:

Several high-capacity load cells are placed beneath a steel structure loaded from above.

TENSILE LOAD CELLS:

One or more load cells are used to suspend a weight.

Many load cells have unique characteristics like a specific design or material properties. For example, some load cells can easily withstand high stress levels, while others cannot. In addition, load cells can be classified according to the type of signal transmission. For example, digital load cells use built-in electronics, while analogue load cells require a measuring amplifier.



TANK MODULE INCLUDING LOADCELL

Model	YTB M10	YTB M20
Capacity	10ton	20ton

DESCRIPTION

- Tank module complete with load cell
- Typical Applications – Tank Weighing Alloy Steel
- Suitable for non trade applications



SCALES

SCALES

HIGH PRECISION COUNTING SCALE

- High resolution counting scale
- Counting by sample or unit weight
- Tare to 100% of weight capacity
- Auto zero tracking function
- Memory function
- Alarm for Upper & Lower limits
- Power saving mode
- Low battery indicator bar
- Built in rechargeable battery



Model	CS-3	CS-15	CS-30
Capacity	3 kg	15 kg	30 kg
Divisions	0.1 g	0.5 g	1 g
Plate Size	225mm x 310mm		
Scale Size	345mm (l) x 310mm (w) x 105mm (h)		
Function Keys	ZERO - TARE - COUNT - M+ - ACC - CAL - UW		
Tare	Full capacity range		
Housing	ABS with stainless steel top plate		
Power	Re-chargeable battery + mains - 220VAC - DC 6v 4Ah		
Environment	-10°C ~ +40°C @ >85%		
Display	LCD - Backlit WEIGHT - AVERAGE PIECE WEIGHT - COUNT		

K-TCS SERIES ELECTRONIC PLATFORM SCALE

- Bright LED display
- Hi / Lo check weigh function
- Animal weighing with lock function
- TOTAL accumulation + clear function
- Tare to 100% of capacity
- Zero tracking mode
- Low power + charge indicator
- Power saving Auto shutoff
- RS232 communication interface
- OIML R76 approved



K-TCS 60	K-TCS 150	K-TCS 300	K-TCS 600	Model
60kg	150kg	300kg	600kg	Capacity
10g	20g	50g	100g	Division Size
400 x 500mm	300 x 300mm	600 x 800mm		Platform Size
ABS with stainless steel bracket				Indicator Housing
Mild steel power coated with Stainless Steel top plate				Platform
LED				Display
ON/OFF - ZERO -- TARE - TOTAL ACC/CLEAR				Functions
Σ - Δ conversion chip at 20 times per second				A/D conversion rate
Lead Acid Re-chargeable battery + mains			DC	Power
6v4Ah - 220VAC, 10.5V 1amp charger				
0°C ~ +40°C @ >85%				Operating Temp.
280 x 170 x 98mm (l x w x h) - 1,8kg				Dimensions - Ind



SCALES

SCALES

K-XK3-T1 WEIGHING INDICATOR

Suitable for platform + floor scales
 LED display
 Hi / Lo check weigh function
 Animal weighing function
 TOTAL accumulation + clear function
 Tare - 100% of capacity

Zero tracking mode
 Low power + charging indicator
 Power saving switch off mode
 RS232 communication interface
 OIML R76 approved



Model	K-XK3-T1
Functions	ON/OFF - ZERO → TARE - TOTAL ACC/CLEAR
Housing	ABS with stainless steel bracket
Display	LED
Load Cells	1-6 loadcells at 350 Ω
A/D conversion rate	Σ - Δ conversion chip at 20 times per second
Power	Lead acid re-chargeable battery + mains 6v4Ah, 220VAC 10.5V 1amp charger
Operating Temp.	0°C ~ +40°C @ >85%
Dimensions	280 x 170 x 98mm (l x w x h) - 1.8kg

K-XK3-T4 STAINLESS STEEL WATERPROOF INDICATOR

Suitable for platform + floor scales
 Basic COUNTING function
 Animal weighing function
 TOTAL Accumulation &
 Clear functions
 Backlit LCD high contrast display

Tare - 100% of capacity
 Zero tracking mode
 Low power & charging indicators
 Power saving switch off mode
 RS232 Communication interface



K-XK3-T4	Model
ON/OFF - ZERO → TARE - ACC - FUNCTION	Functions
Stainless Steel / IP65	Housing / Enclosure Rating
LCD backlit - high contrast	Display
1-6 loadcells at 350 Ω	Load Cells
Σ - Δ conversion chip at 24 times per second	A/D conversion rate
Lead acid Re-chargeable battery + mains 220VAC - 6v2.5Ah 8v 1amp charger	Power
0°C ~ +40°C @ >85%	Operating Temp.
290 x 75 x 185mm (l x w x h) - 2.1kg	Dimensions



LAUMAS MODEL WINOXRBP WEIGHING INDICATOR

Suitable for platform and floor scales
as well as tank weighing applications
4-20Ma OPTION AVAILABLE



STAINLESS STEEL IP68 WEIGHT INDICATOR (FOR WEIGHING AND BATCHING)

- Possible installations: wall, panel, column, desk
- Multiprogram: single loading/unloading and multi-product batching, max 99 formulas
- Six-digit red LED display, 20 mm height
- RS232 and RS485 ports (Modbus RTU/Laumas ASCII protocol)
- 3 logic inputs, 5 relay outputs
- OIML R76:2006 approved, class III, 10000 divis. 0.2µV/VSI
- OIML R61 approved – WELMEC Guide 8.8:2011 (M.I.D.)
- Optional fieldbuses: Profibus DP, DeviceNet, CANopen, Profinet IO, Modbus/TCP, Ethernet/IP. Ethernet TCP/IP port for remote management via internet from PC, smartphone or tablet, etc.

STAINLESS STEEL IP68 WEIGHT INDICATOR (FOR WEIGHING AND BATCHING)

- Possible installations: wall, panel, column, desk
- Multiprogram: single loading/unloading and multi-product batching, max 99 formulas
- Backlit LCD graphic display, 128×75 mm, 240×128 pixel
- RS232 and RS485 ports (Modbus RTU/Laumas ASCII protocol)
- 3 logic inputs, 5 relay outputs
- OIML R76:2006 approved, class III, 10000 divis. 0.2µV/VSI
- OIML R61 approved – WELMEC Guide 8.8:2011 (M.I.D.)
- Optional fieldbuses: Profibus DP, DeviceNet, CANopen, Profinet IO, Modbus/TCP, Ethernet/IP. Ethernet TCP/IP port for remote management via internet from PC, smartphone or tablet, etc.



DIGITAL-ANALOG WEIGHT TRANSMITTER (RS485)

- 4 independent reading channels for load cells (individual load cell monitoring, total weight displaying, digital equalization).
- 16-bit Analog output: 0/4-20 mA; 0-5/10 V; ±5/10 V
 - RS485 port (Modbus RTU/Laumas ASCII protocol)
 - 2 logic inputs, 3 relay outputs
 - OIML R76:2006 approved, class III, 10000 divis. 0.2µV/VSI
 - Mounting on Omega/DIN rail for front/back panel



CRANE SCALES

CRANE SCALES

Model	OCS-D-3T	OCS-D-5T	OCS-D-10T
Capacity	3000 kg	5000 kg	10000 kg
Divisions		2 kg	5 kg
Display	LED		
Hook	Alloy steel swivel (1-5ton) and 320A hook (10ton)		
Shackle	Alloy steel		
Housing	Die-cast aluminium		
Power	Re-chargeable battery + mains - 220VAC - DC 6v4Ah		
Environment	-10°C ~ +40°C @ >85%		
Functions	Zero - Tare - Hold - Auto Power Off - Overload Alarm		
Remote	Infrared remote - approx. 20m		

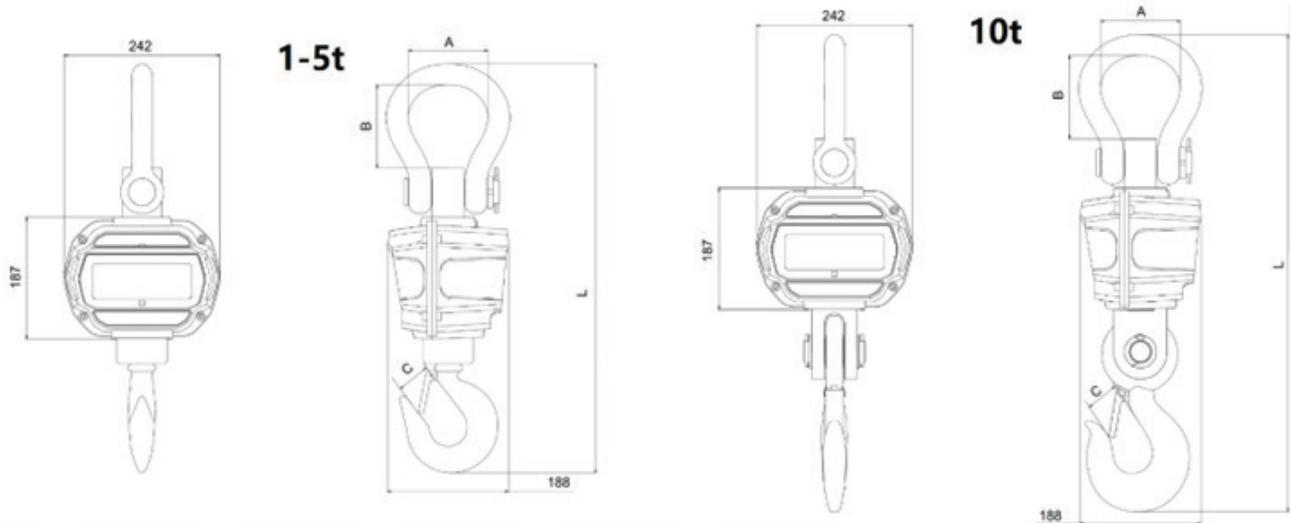
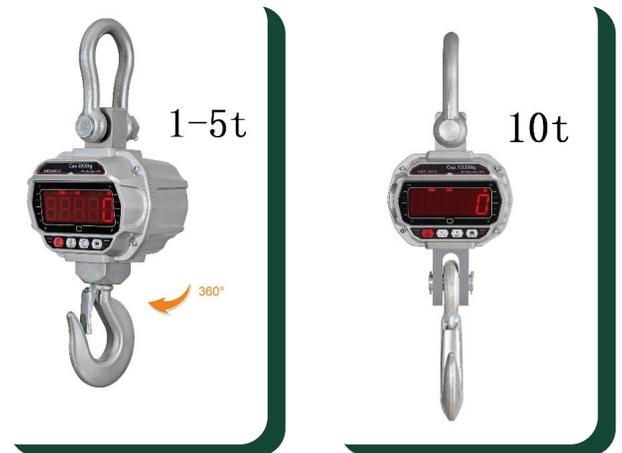
CRANE SCALE - PORTABLE

- Easy to read LED display
- Tare to 100% of weight capacity
- Safe overload: 120% of full capacity
- Ultimate overload: 400% of full capacity
- Die cast aluminium enclosure - shock resistant
- Heavy duty shackle
- Heavy duty hook (swivel 1-5ton)
- Power saving switch off mode
- Built in rechargeable battery
- Infrared remote

OCS-D CRANE SCALES

WEIGHTS AND DIMENSIONS

Max. Cap (Kg)	A (mm)	B (mm)	C (mm)	L (mm)
1 t	55	96	35	535
2 t	55	96	35	535
3 t	55	96	35	535
5t	78	96	38	600
10 t	90	123	45	740



Model	Max Capacity	Min. Capacity	Division	N.W.	Package
OCS-D-1T	1000kg	10kg	0.5kg	10.5	carton
OCS-D-2T	2000kg	20kg	1kg	10.5	carton
OCS-D-3T	3000kg	20kg	1kg	10.5	carton
OCS-D-5T	5000kg	40kg	2kg	14	carton
OCS-D-10T	10000kg	100kg	5kg	21.5	carton



CRANE SCALES

CRANE SCALES

WIRELESS CRANE SCALE - PORTABLE

Easy to read LCD backlit display
 Tare to 100% of weight capacity
 Safe overload: 120% of full capacity
 Ultimate overload: 400% of full capacity
 Loadcell with hook + shackle connected to wireless digital indicator in a carry case + printer



Model	OCS-E-10T	OCS-E-20T	OCS-E-30T
Capacity	10000 kg	20000 kg	30000 kg
Divisions	5 kg	10 kg	10 kg
Display	LCD - backlit		
Hook	Eye Hook		
Shackle	Bow Shackle		
Housing	Steel - polished		
Power	Re-chargeable battery - 220VAC - DC 6v 3.2Ah Battery life of 100 hours		
Environment	-10°C ~ +40°C @ >85%		
Functions	Zero - Tare - PRINT Totals, delete, clear, view - Power Off - Overload Alarm		



OCS-E CRANE SCALES

WEIGHTS AND DIMENTIONS

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1 t	55	96	35	535
2 t	55	96	35	535
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5t	78	96	38	600
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OCS-D-1T	1000kg	10kg	0.5kg	10.5	carton
OCS-D-2T	2000kg	20kg	1kg	10.5	carton
OCS-D-3T	3000kg	20kg	1kg	10.5	carton
OCS-D-5T	5000kg	40kg	2kg	14	carton
OCS-D-10T	10000kg	100kg	5kg	21.5	carton

ACCESSORIES



BALANCES

BALANCES

VIBRA

Clover Sales are proud to be associated with Shinko Denshi in Japan and have been marketing their "VIBRA" balances for over 15 years.

The attention to detail makes this company stand out from the competition.

The Vibra balances have a unique Tuning Fork technology weighing mechanism resulting in very stable readings, and a high degree of accuracy. Conditions like temperate and secular change are compensated by the balances resulting in high accuracy and robustness. There is no warm up time and the balances can be used after an immediate power up. Loaded with features pertaining to the laboratory environment and industrial high-end applications makes this range an outright winner
Ranges between 120 g x 0.0001g to 60kg x 1g

EYE FRIENDLY DISPLAY



LCD DISPLAY

Crisp and clear contrast LCD display



BACK-LIGHT LCD DISPLAY

It is equipped with back-light LCD so that indication is visible in the dark

AJ - PRECISION BALANCES

Model	AJ-420E	AJ-4200E	AJ-6200E
Capacity	420g	4200g	6200g
Divisions	0.001g	0.001g	0.001g/225mm x
Plate Size	118mm dia	170x142mm	180x160mm



BALANCES

BALANCES

KELI

Clover Scales are the South African and Sun Saharan suppliers of Keli and associated products. Keli are an international manufacturer and supplier of load cells, weighing equipment, balances and special solutions to a worldwide market.

Their range of balances include Analytical, Semi Analytical and Top pan balances.

Model	K-XY3000 1BF	K-XY600 2C	K-XY3000 2C
Capacity	3100 g	610 g	3100 g
Resolution	0.1 g	0.01 g	0.01 g
Min Weight	0.4 g	0.04 g	0.04 g
Stability Time	≤2s		
Repeatability / Linearity	±0.2g / ±0.3g	±0.02g / ±0.03g	±0.02g / ±0.03g
Display	LED		
Pan Size	160 x 160mm	Φ130mm	Φ130mm
Power	AC adaptor 9V/500mA - rechargeable (6v)		
Operating Temp.	5°C ~ +25°C @ >85%		
Dims: unpacked / boxed - C/Weight	Inside: 310x230x130mm - 2kg Outside: 660x470x320mm - 22 kg		



EXPLOSION-PROOF

EXPLOSION-PROOF SCALES

EXPLOSION-PROOF SCALES

These explosion proof scales are used in hazardous areas, and their energy level is too low to cause a spark and possibly ignite.

Equipment for protection systems or components intended for use in potentially explosive atmospheres – Directive 94/9/EC. Compliance with the essential health and safety is assured by compliance with EN 60079 series and SANS 60079 series

STAINLESS STEEL IP68 WEIGHING INDICATOR - EX RATED

- Stainless steel enclosure – AISI 304
- IP 68 water protected
- Cable glands are all ATEX certified · Six-digit red LED display, 20mm height
- Real-time clock/calendar with buffer battery
- Power supply 12-24Vdc +/- 10%, 6W
- Theoretical calibration (via keyboard) and real calibration (with sample weights and the possibility of weight linearization up to 5 points)
- Operating Temperature: -20°C to 60°C

DEFINITIONS OF SOME EX TERMS

G - Gas, vapours or Mist

D - "Restricted breathing enclosure" – electrical protection against conductive dust Corresponding to a "dust tight enclosure"

Ila - Propane, acetone, benzene, butane, methane, petrol, hexane, paint solvents

IIB - Ethylene, propylene oxide, ethylene oxide, butadiene, cyclopropane, ethyl ether

IIC - Hydrogen, acetylene, carbon disulphide

T Temperature

EX - CERTIFIED AS PER BELOW

II 3GD Ex nR [ic] IIC T6 Ex tc {icD} IIIC T72°C -20°C ≤ T amb ≤ +60°C Approval:

Mtex Laboratory in South Africa

BATTERY OPTION: Battery pack made up of 8 NiMH rechargeable elements,

1.2 V, AA type Non-removable Charge indicator in SAFE AREA

POWER OPTION: 24 VDC/1 A stabilized power supply – 6watt





CLOVERSCALE

COMMERCIAL & INDUSTRIAL SCALES | WEIGHBRIDGES

CONTACT DETAILS:

Managing Director: **Jacques Du Toit**

082 417 8155 | jacques@cloverscales.co.za

Snr. Workshop Administrator: **Desre Naude**

082 321 6698 | des@cloverscales.co.za

FINANCE

Finance Director: **Debra Botha**

071 351 7524 | debra@cloverscales.co.za

SALES DEPARTMENT

Sales Director: **Ian Gregson**

082 927 3031 | ian@cloverscales.co.za

