BIZERBA

_balanced information

BIZERBA | PRÄZISIONSWAAGEN
EL·TL·TL-EX

→ SECURE PROCESSES AND QUALITY FOR
MANUFACTURERS AND LABORATORIES.

PRECISION SCALES THAT **INTEGRATE PERFECTLY INTO YOUR PROCESSES**

→ **Competent Support**

Whether you need them for goods-in, in the laboratory, for production, quality control, in the warehouse or dispatch: The range of Bizerba precision scales has been developed to the extent that we can support you as a competent partner in all weighing matters. Simply, quickly and cost effectively, we fulfil all weighing tasks for control, commissioning, inventory, packaging, dispatch and documentation.

→ **A range tailored to your needs**

User specific applications ensure efficient handling of your company's production processes. Different ranges are available so that you have a scale to hand that suits your exact needs. After all, you only want those functions that you will actually use.
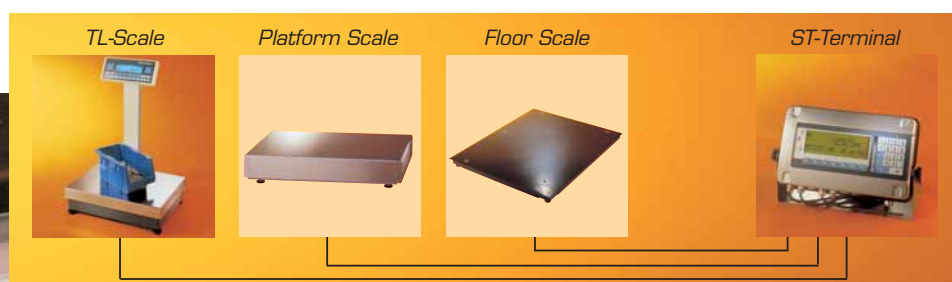
If you need mobility, then a battery pack (optional) provides mains independent operation. The proven EL-range equipped with a DMS load cell 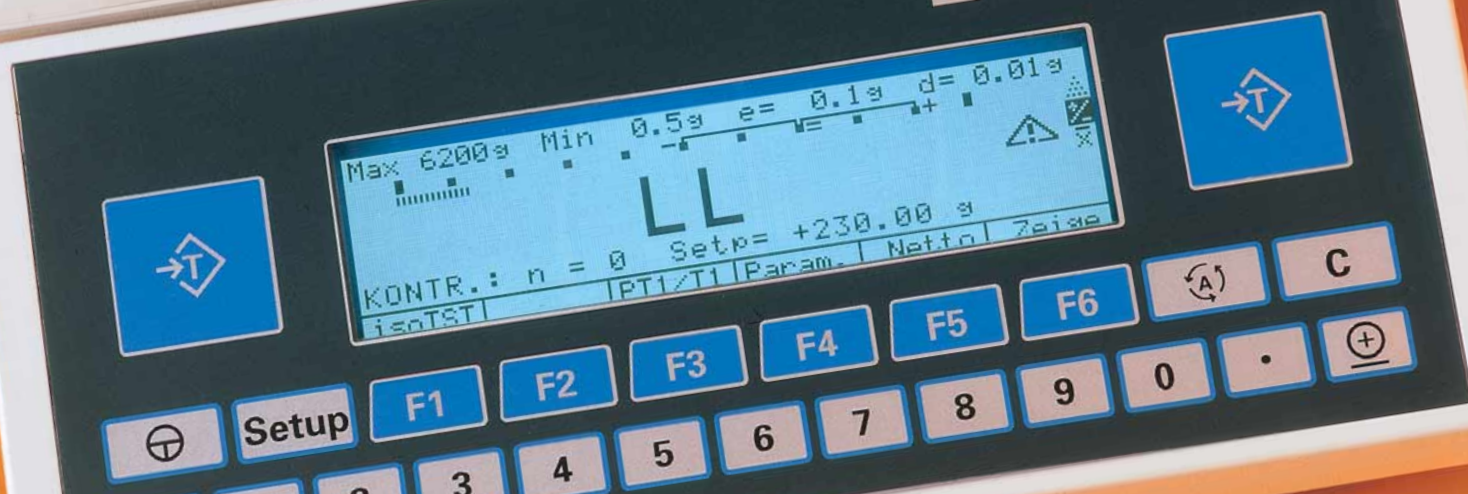is used where scales with precision class II are required, but where a high resolution is less of an issue. At the heart of our precision scales TL, TL-S and TL-EX is a electromagnetic force compensation monoblock load cell, which provides high resolution, short measurement times, long term stability and extreme robustness.

→ **Suitable for integration into comprehensive systems**

All Bizerba precision scales can be connected to Bizerba terminals via a serial interface RS232 or via a TTY interface (TL-EX). This means they can be used as reference scales, for instance in complete counting systems. Wide-ranging functions, applications and interfaces to other Bizerba terminals offer a multitude of options for complex solutions.

TL-Scale *Platform Scale* *Floor Scale* *ST-Terminal*

→ EL, SL, TL OR TL-EX: OUTSTANDING IN ITS OPERATOR CONVENIENCE

BIZERBA EL RANGE: PRECISION
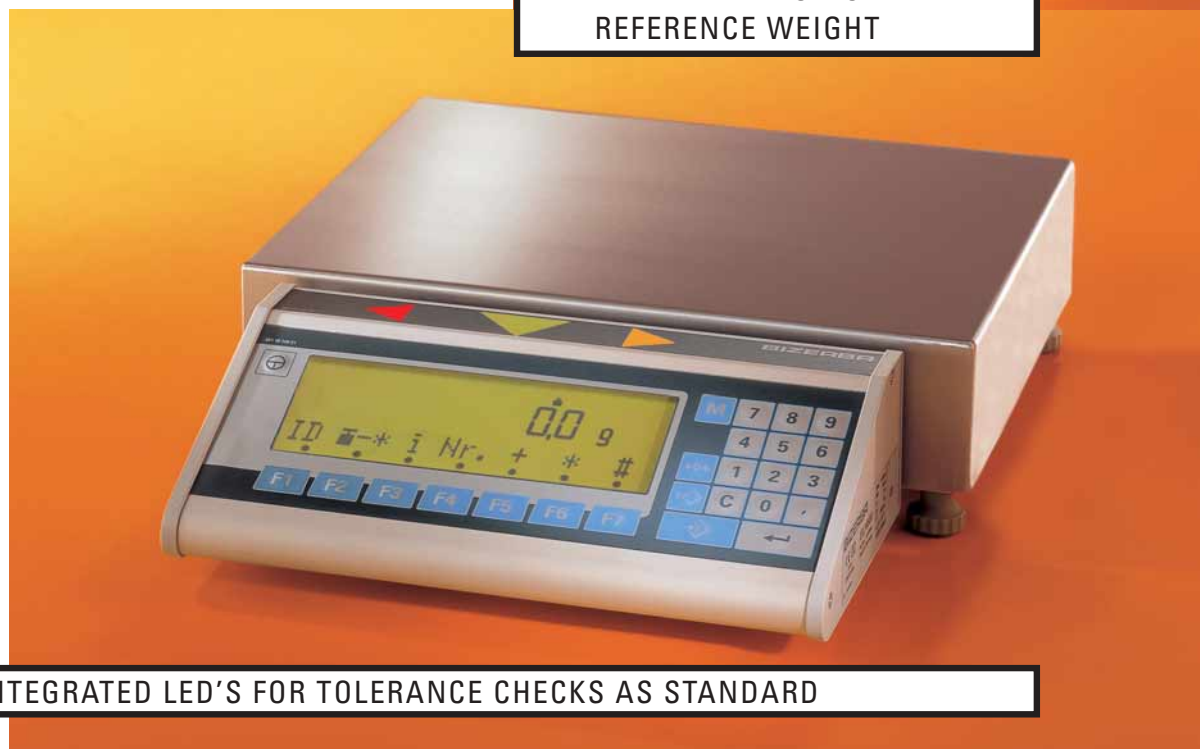# AT COMPETITIVE PRICES

→ **High functionality is standard with the EL range**

Our Economic Line is available in two options: either in protection class IP 41 or IP 65. Practical application programs simplify your day to day processes. Whether it's weighing, standard counting, autocount or tolerance checks for weight or quantity including simple statistical reports: The EL precision scales meet your needs simply, quickly and cost effectively. Memory for 99 articles and 40 tares for frequently recurring articles and tare weights, result in considerable time savings. Display prompts provide a high level of operating convenience. A serial interface RS 232, an interface for connection of reference scale EL 1000 and static in- and outputs mean that the scales of the EL range are equipped with the best possible features.

→ COUNTING SCALE SYSTEM WITH ONLY 1 DISPLAY

→ DETERMINATION OF THE REFERENCE WEIGHT

→ INTEGRATED LED'S FOR TOLERANCE CHECKS AS STANDARD

BIZERBA TL RANGE: PRECISION FOR COMPLEX TASKS

→ Tailored applications

Our Top Line is available in protection class IP 54 (models up to 12 kg) or IP 65 (models from 16 kg).

Applications tailored to each task allow individual configuration: Counting, tolerance checks, net-total-weighing, calculating (formulas), statistics, percentage weighing, animal weighing, unit toggling. By combining up to 3 different applications the scales can be adapted to individual operating procedures.

→ Operator guidance

The back-lit, high-contrast graphic display with operator prompts and well-arranged keyboard layout leads the user safely through the process; lengthy instructions and operator errors are a thing of the past. By omitting the bar graph, the size of the numeric display can be increased.

→ Built-in calibration/adjustment weight

All TL models can be calibrated/adjusted automatically at the touch of a key, at a pre-set time, or triggered by temperature changes. Without the need to handle expensive external weights, these functions support integration in quality management systems. If a printer is connected to the standard interface a calibration protocol is automatically printed. Standard memory can hold up to 50 calibration protocols. Meets GLP, GMP and ISO depending on configuration.
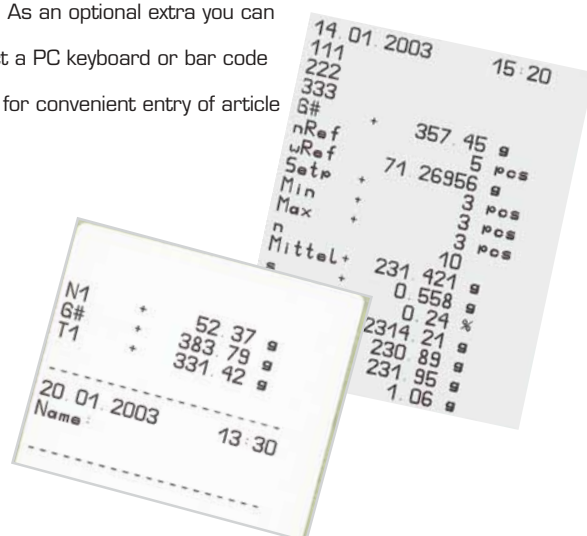
An RS 232 interface and configuration options for customizing printouts are provided as standard. A four-line protocol header can be configured with your company name and address. With up to four alpha-numeric identifiers 'real' product names can be entered and printed ensuring identification and batch traceability. You determine the extent of the print layout. After all key information has to be available at a glance. As an optional extra you can connect a PC keyboard or bar code reader for convenient entry of article data.

→ CONFIGUR-
ABLE GRAPHIC
DISPLAY

→ TL WITH COUNTING PROGRAM

→ 300 password protected data memories

Saving article data and tare values leads to faster and simpler operating, due to the built-in search function even for a multitude of different articles. The display/operating unit can be

→ TL-S FOR CONTROL OF PREPACKAGES

→ TL/TL-S-RANGE

stand-mounted, flanged to the platform or located remotely to ensure the most ergonomic working conditions.

→ TL-S range with statistic program for prepackages

Regardless of whether you're working with fixed or individual tares: Combined with a printer connected to the standard RS 232 interface, the TL-S precision scales offer a space saving system for the control of prepackages (random sampling). Three different statistical reports can be run for up to 100 articles. Statistical figures and histograms either displayed or printed, guarantee a fast overview over the distribution of individual weight values, without the need to evaluate long series of numbers. Deviations can be recognised at a glance and allow immediate reactions. Production control is made easier due to test weighings to adjust the machines and easy to understand adjustment instructions. These features offer quality control in compliance with prevailing prepackage regulation and at the same time avoid expensive overfilling.

→ SPC- and Pharma-mode

Tolerance limits can be individually defined for statistical process control. In addition four pharma modes are available for checking tablets, capsules and powders as well as suppositories according to European Pharmacopoeia. It goes without saying that the TL-S range benefits from the same features as the TL-range (exception: 100 article memory store).

→ ON-SCREEN STATISTICAL DATA

BIZERBA TL-EX RANGE: PRECISION FOR HAZARDOUS AREA

→ Top function with highest safety

The explosion-proof scales of our Top Line combine ultimate ease of operation with the extraordinary functionality of the TL-range. The TL-EX range features the same back-lit configurable graphic display. Obviously they offer you the same applications as the TL-range including motorised internal adjustment function and standard RS232 interface. Data transfer into the safe area is handled via a zener barrier/databarrier. Depending on the installation, you can choose between power supply for hazardous or safe areas depending.

EN certification to regulation 94/9/EG (ATEX) and international approvals allow use of the TL-EX range in EX-zone 1 for ⬡ II 2G EEx ib IIC T4 or FM/CSA-approval IS CLI DIV1 GP A, B, C, D T4 (USA, CND).

Power supply flameproof enclosure "d" for hazardous areas. Standard cable length: primary side 3 m (open cable ends) secondary side 3 m.

Power supply flameproof enclosure "d" for safe areas. Standard cable length: primary side 3 m (country specific mains plug) secondary side 20 m.

→ BIZERBA TL-EX RANGE

TECHNICAL SPECIFICATIONS

→ EL / EL ... M range (M = verifiable model)

Model protection class IP41	Model protection class IP65	Weighing range (g)	Readability (g)	Verification value (g)	Platform dimensions (mm)	Minimum capacity 90/384/EEC (g)
EL 1000	-	1000	0,01	-	240 x 190	-
EL 1000 M	-	1000	0,01	0,1	240 x 190	5
EL 7500	EL 7500 I	7500	0,1	-	335 x 260	-
EL 7500 M	EL 7500 I/M	7500	0,1	1,0	335 x 260	5
EL 16500	EL 16500 I	16500	0,2	-	335 x 260	-
EL 16500 M	EL 16500 I/M	16500	2,0	2,0	335 x 260	100
EL 35000	EL 35000 I	35000	0,5	-	400 x 300	-
EL 35000 M	EL 35000 I/M	35000	5,0	5,0	400 x 300	250
EL 65000	EL 65000 I	65000	1,0	-	500 x 400	-
EL 65000 M	EL 65000 I/M	65000	1,0	10	500 x 400	50

→ TL/TL...M range (M = verified by manufacturer)

Model	Weighing range (g)	Readability (g)	Verification value (g)	Platform dimensions (mm)	Min. capacity 90/384/EEC (g)	IP Protection Class
TL 2200 M	2200	0,01	0,1	218 x 200	0,5	54
TL 5200 P	3800/5200	0,05/0,1				
TL 5200 P/M	3800/5200	0,05/0,1				
TL 6200	6200	0,1	-	218 x 200	-	54
TL 6200 M	6200	0,1	1	218 x 200	5	54
TL 12000	12000	0,1	-	218 x 180	-	54
TL 12000 M	12000	0,1	1	218 x 180	5	54
TL 16000	16000	0,1	-	400 x 300	-	65

→ TL/S...M Baureihe (M = herstellergeeicht)

Model	Weighing range (g)	Readability (g)	Verification value (g)	Platform dimensions (mm)	Min. load NSCV to European Prepackage Regulation (g)	Min. capacity 90/384 EEC (g)	IP Protection Class
TL-S 2200 M	2200	0,01	0,1	218 x 200	0,5 (D/EU)	0,5	54
TL-S 6200 M	6200	0,1	1	218 x 200	5 (D),150 (EU)	5	54
TL-S 16000 M	16000	0,1	1	400 x 300	5 (D),150 (EU)	5	65

→ TL-EX/TL-EX...M Baureihe (M = herstellergeeicht)

Model	Weighing range (g)	Readability (g)	Verification value (g)	Platform dimensions (mm)	Min. capacity 90/384 EEC (g)	IP Protection Class
TL-EX 6200	6200	0,1	-	218 x 200	-	54
TL-EX 6200 M	6200	0,1	1	218 x 200	5	54
TL-EX 16000	16000	0,1	-	400 x 300	-	65

→ EL / EL ... M series (M = verifiable model)

→ Display	• Backlit 8-digit 7-segment LCD display. Character height 17 mm • Bar graph • 21-digit dot matrix display for inscription of softkeys and operator prompting. Character height 12 mm Display / control unit optionally fastened on a stand (stand on load receptor or for table-top mounting) or positioned in a remote location.
→ Membrane keypad	7 softkeys directly under the 21-digit dot matrix display, Decimal keypad with Clear and Enter key, Memory key, Keys for basic weighing functions tare, delete tare, zeroing, On/Off key, Keys with mechanical action point and acoustic feedback. The keypad can be locked
→ Plus-minus display	3 LEDs (red/green/yellow) as standard in the display housing, integrated above the bar graph of the LCD display. Additional activation of the acoustic signal possible.
→ Measuring transducer: (ADW)	Integrated analogue-digital converter with its own microprocessor. Internal non-verifiable precision resolution of max. 750000 d.
→ Mains connection Single-phase alternating voltage	230 V AC, +6/-10%, 35 mA, 50(60) Hz, +2 to -2%, connection by means of plug-in power supply (output max. 12 V DC) with appr. 2 m connecting cable.
→ Protection class	EL- and EL… M models: IP 41 EL… I and EL… I/M models: IP 65 as per DIN 40050 (EN60529)

→ Operating modes	Weighing, Counting with enhanced resolution andoptimization, Autocount function, Euro counting function, Tolerance control for piece numbers or weight with calculation of statistical values mean value, standard deviation, process capability cp and cpk, range, Net-total weighing
→ Memory	99 article/reference weight memory locations 40 tare memory locations
→ Interfaces	One serial RS 232 interface as standard (without control and data line) 4 static outputs / 3 static inputs (not galvanically isolated) and an RS232 for connection of the reference scale EL 1000. Another RS232 interface is optionally available.
→ Ambient temperature	Operation: +5° to +30°C Storage: -10°C to 50°C
→ Housing/materials	Load plate in stainless steel, control unit in anodized aluminium.
→ Scale weight (with plug-in power supply unit)	EL 7500/16500 (I/M) models appr. 11 kg EL 35000 (I/M) appr. 12 kg EL 65000 (I/M) appr. 15 kg With optional storage battery weighing 2 kg
→ EU type approval by the PTB	Issued under no. D00-09-013

→ TL / TL-EX/TL...M/TL-S...M/TL-EX...M series (M = verified by manufacturer)

→ Display	Backlit graphic LC display with contrast and brightness control: line for measured values, digit height 10 mm or 13 mm (configurable), metrology line with display of max, d, and , for verified scales, min and e. Bar graph, text line for operator guidance and prompts, display/operator unit flange mounted, stand mounted or remote mounted. Cable length to display: 0.8 m.
→ Foil keyboard	6 softkeys (operator prompts), ten keyboard with decimal point, delete key and ABC-key for switching to alpha-entry, data output/print, setup-key, application key, 2 large tare keys to the left and right of the display. This positions the key tare function ideally both for left- and right-handed operators, keys for basic weighing functions: tare, cancel tare, zero, on/off-key.
→ Mains connection	Mains connection via country specific mains adapter. Mains lead for scales to 12 kg: 2 m scales from 1 6 kg: 4.5 m Mains frequency: 48-60 Hz
→ Battery pack	Optional external battery pack, operating time approx. 14h
→ Protection class	Scales to 12kg: IP 54 Scales from 16kg: IP 65
→ Housing/materials	Load platform stainless steel, operating console glass sphere reinforced PBT (highly resistant industrial polymer), floor pit in pressure moulded aluminium

→ Operating modes TL/TL-EX	Weighing, counting with increased resolution (adjustable 10 or 100x more accurate) and manual or automatic optimisation, tolerance check, net-total-weighing, recalculation, addition, calculation, (formula with basic operators +; -; /; *), statistics, percentage weighing, animal weighing, unit conversion, timed function (internal clock). Combination of 3 different applications (i.e. counting and tolerance checks) adapts flexibly to customer requirements
→ Operating modes TL-S	Control of prepackages (tare mean value, destructive test, non-destructive test), statistical process control SPC, European Pharmacopoeia
→ Memory	300 article data memory for article data, tare weight, ID's (TL and TL-EX), 100 article data memory for TL-S models
→ Interfaces	One serial interface RS 232 as standard, configurable as control input/output for set point/over/under, optional double data interface.
→ Ambient temperature	Operation: +5 °C to +30 °C Storage: TL and TL-EX 0 °C to +40 °C, TL-S +5 °C to +40 °C
→ Scale weight	Scales to 12kg: 7 to 9kg, depending on model, scales from 16kg; 16kg, each without mains adapter