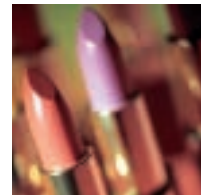## SQC16

Statistical quality control

For the control of process errors and optimization in meeting economic and legal requirements in industries such as:

- **foodstuffs**
- **cosmetics**
- **chemistry**

Security and reliability
for filling processes

METTLER TOLEDO

Whatever the volume: It's all under control and documented.

- A compact system for efficient net weight control and fill quantity control
- Flexible and powerful for 300 articles
- A variety of statistical analyses and graphical representations
- Output to graphic display as well as to an A4 printer or a strip printer
- Can be connected to a PC for data entry and archiving
- Optional internal storage battery
- IP65 terminal available

If quality assurance is paramount.

Do you work in accordance with relevant guidelines and are you looking for a simple control system? The SQC16 is the ideal stand-alone solution for statistical quality control. This compact system comprises a precision scale with built-in software and a printer.

More than just a system.

The SQC16 software is incredibly flexible: You can choose between four different tolerance systems. Tolerances are entered as absolute or relative values, as percentages or weighing units. Three different statistics periods are available for each article, one of which may be a batch statistic. In individual tare mode, 50 preweighings are possible. New density groups can be created and assigned globally for liquid products of the same type. The sample report and statistical printed records can be configured very flexibly.

Entries made simple.

Thanks to its transparent menu structure, the SQC16 is very easy to operate. Data is entered using an alphanumeric keypad similar to those on mobile phones. Additional function keys related to menu items appear underneath the graphic display. However, the entire system can also be controlled via an external PC keyboard. In addition, a barcode reader can also be connected, providing an extremely simple means of selecting articles or acting as an additional input device.

SQC16 product features

Article database

No. of articles	300
Article definition	For each article, up to 25 different parameters can be entered directly via the balance keypad using an external keyboard or PC.
Article search	Alphanumeric or via barcode reader

Legal compliance

Tolerance systems	European system with built-in tolerance limits as well as 3 freely definable tolerance systems
2. Tolerance system	For simultaneous evaluation vis-à-vis two different regulations
Tolerance monitoring	If a critical number is reached - and if the legally permitted number of violations is exceeded, appropriate messages are generated.
Mean value monitoring	If the production mean value moves outside definable tolerances, a warning is generated.
Adjustment instructions	The production mean value is continuously monitored. As soon as the system detects deviations from the norm, it automatically generates appropriate correction instructions.
Statistics	2 with freely selectable time basis per production unit, 1 batch-related
Common statistics	Measurement values of articles of a similar type can be combined into a common statistic.

Documentation

Sample report	At the end of each random sample, the measurement values appear on the balance display together with a graphical representation of the distribution of the measured products. Furthermore the mean values and standard deviations of the last 10 random samples are presented in a trace so that an overview of the filling process can be gained at any time. Every random sample is printed out in a configurable report.
Statistics report	As for the random sample report, the statistical values are displayed or printed out depending on the configuration. The statistical item(s) are stored until they are manually deleted. They can also be loaded onto a computer with the BR16 PC software where they can be viewed and printed out.

Operation

User	16 password-protected users with various authorizations can be defined.
Simple menu	Thanks to its self-explanatory menu structure, the SQC16 is very simple to operate.
Operating instructions	You can find all the information that you require for the use of your SQC in the document supplied.

SQC16 – compact scales and industrial terminal

MonoBloc models	BBK462SQC-3XS	BBK462SQC-3LXS	BBK462SQC-6XS	BBK462SQC-6SM	BBK462SQC-15LA	BBK462SQC-35LA
Dimensions (mm)	small model, 265 x 335 x 100				large model, 360 x 370 x 115	
Platform size (mm)	165 x 165	165 x 165	165 x 165	200 x 240	240 x 350	240 x 350
Capacity (g)	3100	3100	6100	6100	15100	35100
Readability (g)	0,01	0.1	0.01	0.2	0.5	0.1
Verification scale interval (g)	0.1	0.1	0.1	0.2	0.5	1
Linearity (typ.) (g)	±0,005	±0.005	±0.01	±0.02	±0.03	±0.05
Repeatability [s] (typ.) (g)	0.005	0.005	0.005	0.01	0.02	0.03
Calibration weight (g)	3000	3000	6000	6000	15000	35000
Degree of protection	IP43[1]				IP43[1]	

[1] not with built-in Ethernet interface

Options:
– verified model (for XS and SM models, there is no internal battery available with this option)
– internal calibration weight (already included in verified models)

MonoBloc inside

Strain gauge models	BBA462SQC-3SM	BBA462SQC-6SM	BBA462SQC-15LA	BBA462SQC-35LA
Dimensions (mm)	small model, 265 x 335 x 100		large model, 360 x 370 x 115	
Platform size (mm)	200 x 240	200 x 240	240 x 350	240 x 350
Capacity (kg)	3	6	15	35
Readability (g)[1]	**1**/0.5/0.2/0.1	**2**/1/0.5/0.2	**5**/2/1/0.5	**10**/5/2/1
Verification scale interval (g)[1]	1/0.5	2/1	5/2	10/5
Linearity (typ.) (g)	±0.15	±0.1	±0.2	±0.5
Repeatability (typ.) (g)	0.05	0.1	0.2	0.5
Max. displayed resolution	150,000 points	120,000 points	150,000 points	175,000 points
Degree of protection	IP43 [2]		IP43 [2]	

[1] **standard**/option; [2] not with built-in Ethernet interface

- **METTLER TOLEDO offers a range of compatible platforms from 6 – 3,000 kg**

- **In addition it is possible to connect any type of analog scales**

IP65

Terminal model	IND465SQC
Dimensions (mm)	277 x 200 x 71
Dim. option box (mm)	277 x 200 x 36
Max. resolution	300,000d (not calibratable)
Max. resolution	1 x 7000e, OIML (certifiable)
Linearization	3-point/5-point selectable
Linearity [s](g)	1/-0.01% of the def. max. capacity
A/D converter input signal	1.3µ V/e
Output signal	2mV/V
Power requirements, cell	8.2V/V
Impedance	80 - 1000 Ohm
Degree of protection	IP65 [1]

[1] not with built-in Ethernet interface
Option: Option box (required for internal battery)

SQC16 pays for itself even with slight overfill!

Parameters	Value	Unit
Raw materials costs	1.–	EUR/kg
Packages produced	100'000	Quantity per day
Nominal fill quantity	100	g
Production days	250	Days per year
Production mean value	**101**	**g**
Overfill per package	1	g
Overfill per day	100	kg
Overfill per year	25'000	kg
Overfill losses	**25'000.–**	**EUR/year**

SQC16 options

- internal battery
- external power supply 17V-24V
- BR16 PC program – Backup/Restore/Edit SQC16 Data
- Ethernet interface*

* upgrading to a network system

If you subsequently wish to upgrade to a METTLER TOLEDO network system, simply order your SQC16 with the "Ethernet interface" option and this will guarantee that the connections will be available.

SQC16 accessories

Input devices

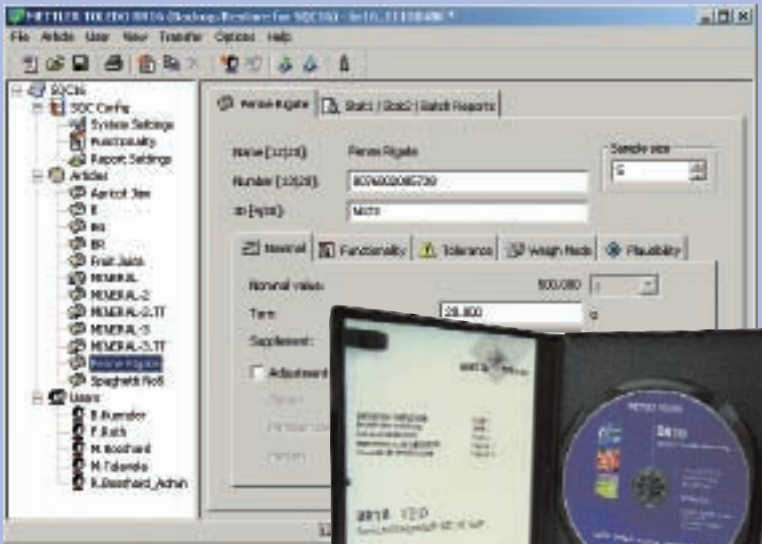|	
External keyboard	Mini PS/2 keypad (protective cover available)
Barcode reader	Can be connected in parallel to the keypad with so-called Y cable (cordless version also available)

Output devices

Strip printer	~~RS-P42~~ RS-P25 Sprinter 1
A4 printer	Epson LX300 or compatible
Relay box	LC-I/O (for controlling signal lamps, sirens, etc.)

Software

PC program	BR16 - Backup/Restore/Edit SQC16 Data

Miscellaneous

Antitheft device

Scale protective cover

BR16 – Backup/Restore/Edit SQC16 Data
PC program for MS Windows 98/ME™ or
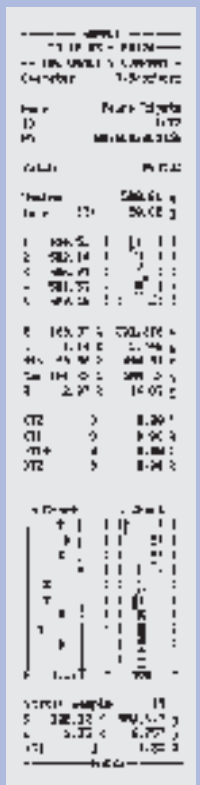NT V4.0/2000/XP™

The advantages:
- Storage of SQC16 data to the PC (article database with statistics, user and SQC configuration)
- Customize/Edit article databases and users
- Definition of SQC configurations
- Display and printing of statistics

Your gain:
- Backup of your SQC16 data onto PC
- Virtually unlimited article quantity for your SQC16 (300 per backup file)
- Simple and time-saving SQC16 data management on your PC
- Greater flexibility thanks to display/print function for statistics

Minimum hardware requirements:
- NT V4.0™/Win98™/ME™: Pentium™ 90MHz / 32MB RAM
- 2000™/XP™: Pentium II™ 266 MHz / 64MB RAM

Printouts as necessary
Depending on the used SQC16-printer, sample- and statistics reports can be printed in strip- or letter size.

■ Compliance with the minimum fill quantities is stipulated by the legal authorities. However, overfilling results in high costs that jeopardize the efficiency of a production run. SQC16 supports you in complying with the two basic provisions and therefore in satisfying the requirements of consumers as well as keeping your costs under control. The consistently good quality resulting from this strengthens the reputation of your products from the areas of:

foodstuffs
cosmetics
chemistry

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