

## Installation information

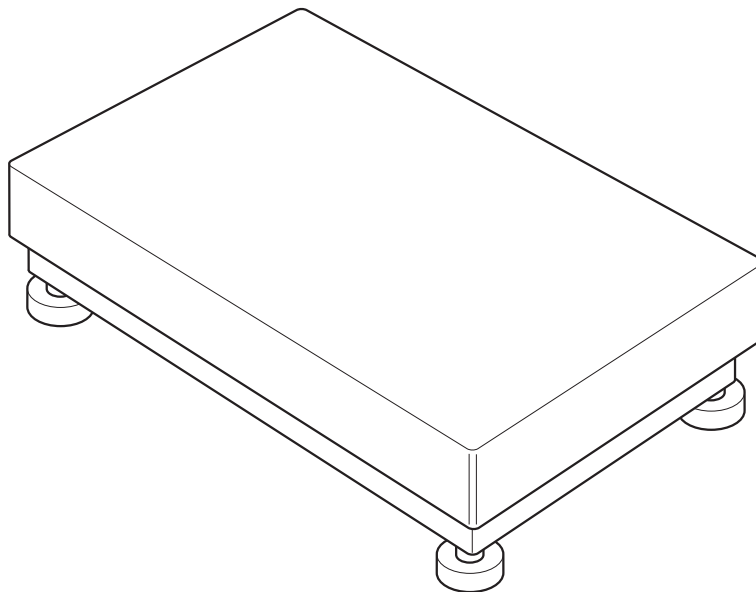
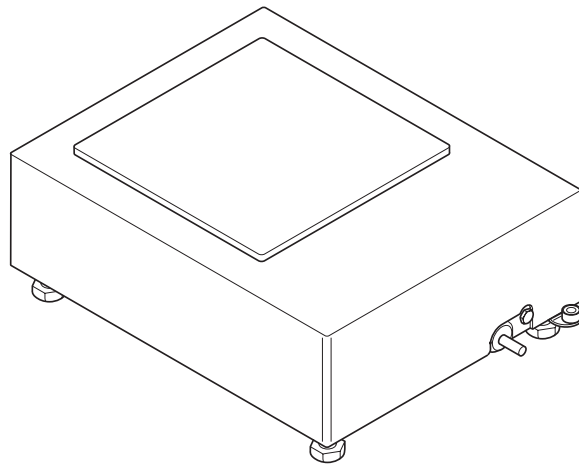
### METTLER TOLEDO MultiRange Table and stand scales

**METTLER TOLEDO**

**KA3s/KA6s**

**KA15s/KA32s**

**KB60/KCC150/KCC300**



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# 1 Safety instructions



- ▲ The K line weighing platforms are approved for operation in Zone 2 (gases) and Zone 22 (dusts) hazardous areas. There is an increased risk of injury and damage when the weighing platforms are used in a hazardous area! Special care must be taken when working in such hazardous areas. The rules for behaviour are based on the concept of "Safe Distribution" established by METTLER TOLEDO.
  - ▲ Any protective foils present in the hazardous area, e.g. on the load plate, must always be removed.
- Competence**
- ▲ The K line weighing platforms may only be installed, maintained and repaired by authorised METTLER TOLEDO service personnel.
- Ex approval**
- ▲ No modifications may be made to the device and no repair work may be performed on the modules. Any weighing cells or system modules that are used must comply with the specifications contained in the installation instructions. Non-compliant equipment jeopardises the intrinsic safety of the system, cancels the Ex approval and renders any warranty or product liability claims null and void.
  - ▲ The safety of the weighing system is only guaranteed when the weighing system is operated, installed and maintained in accordance with the respective instructions.
  - ▲ Also observe the following:
    - The regulations and standards in the respective country
    - The statutory requirement for electrical equipment installed in hazardous areas in the respective country
    - All instructions related to safety issued by the owner
  - ▲ The explosion-protected weighing system must be checked to ensure compliance with the requirements for safety before being put into service for the first time, following any service work and at least every 3 years.
- Operation**
- ▲ Prevent the build-up of static electricity. Always wear suitable working clothes when operating or performing service work in a hazardous area.
  - ▲ Do not use protective coverings for the devices.
  - ▲ Avoid damage to the system components.

- Installation**
- ▲ Only install and perform maintenance work on the weighing system in hazardous areas,
    - if the intrinsically safe characteristic values and zone approval of the individual components are in accord with one another
    - if the owner has issued a permit ("spark permit" or "fire permit")
    - if the area has been rendered safe and the owner's safety co-ordinator has confirmed that there is no danger
    - if the necessary tools and any required protective clothing are provided (danger of the build-up of static electricity)
  - ▲ The certification papers (certificates, manufacturer's declarations) must be present.
  - ▲ Lay cables in such a way that they are protected from damage.
  - ▲ Only route cables into the housing of the system modules via the suitable cable gland and ensure proper seating of the seals.

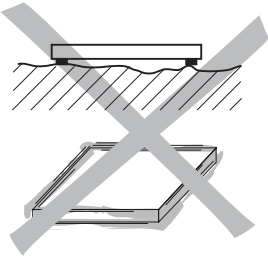
**Additional requirements  
for Category 3  
(Zones 2/22)**

- ▲ The explosion-protected K line weighing platforms can only be operated in hazardous areas in Zones 2 and 22 in conjunction with weighing terminals that have the appropriate approval and interface specification.
- ▲ The connection cable may not be separated from the weighing terminal while it is energised.
- ▲ Tighten the knurled nut of the IDNet connection cable with 10 Nm of force.

## 2 Installation

### 2.1 Preparatory work

#### 2.1.1 Selecting installation location



▲ The foundation at the installation location must be capable of safely support the weight of the weighing platform at its support points when it carries the maximum load. At the same time, it should be so stable that no vibrations occur during weighing operations. These requirements also apply when the weighing platform is integrated in conveying systems and the like.

▲ Ensure that there are no vibrations from machines near the installation site.

▲ Ensure that there are no drafts at the installation site.

#### 2.1.2 Ambient conditions

- Use powder-coated/enamelled weighing platforms only in a dry environment.
- In a damp environment, in wet operation or when working with chemicals: Use stainless-steel weighing platforms.

#### 2.1.3 Accessories

- Completely unpack the accessories provided with the weighing platform.
- 1 Identcard
  - 1 Set of signs for selectable configurations

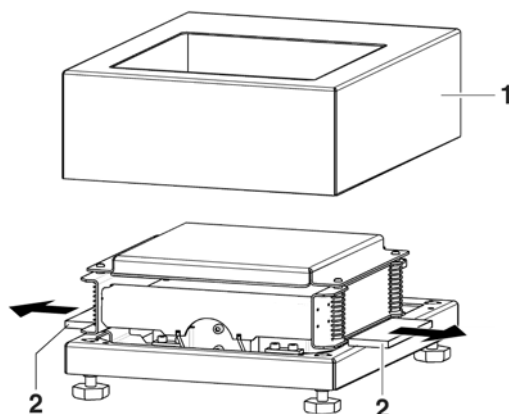
### 2.2 Setting up and levelling

#### 2.2.1 Setting up KA...

- Remove the weighing platform from the packing.

##### KA3s, KA6s

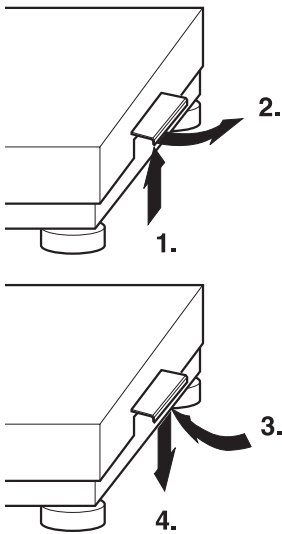
- With KA3s and KA6s, take off the draft guard (1) and remove the transport locks (2).



### 2.2.2 Setting up KB...

1. Lift the weighing platform out of the transport packing and set it down at the installation location.
2. Remove the 4 corner padding pieces between the load plate and the frame.
3. Lift off the load plate and remove the 4 pieces of cardboard.
4. Mount the load plate again.

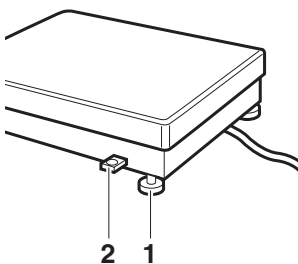
### 2.2.3 Setting up KCC...



1. Lift the weighing platform out of the transport packing and set it down at the installation location.
2. Remove the 4 corner padding pieces between the load plate and the frame.
3. Remove the load plate by lifting the two side handles vertically (1.) and pivoting outward (2.).
4. Remove the 4 pieces of cardboard.
5. Remount the load plate by swinging the handles inward (3.) and reengaging in initial position (4.), i.e. the handles must be in the bottom position and vertical.

When the handles are correctly engaged, it should not be possible to lift off the load plate.

### 2.2.4 Levelling



1. Level the weighing platform with the 4 foot bolts (1) using the level indicator (2): The air bubble of the level indicator must come to rest within the ring marking.
2. Ensure even contact of the foot bolts. Check the stability of the weighing platform by pressing down on or rocking it at the corners.
3. Lock the foot bolts with the nuts.

## 2.3 Installing connection cable

### Note

The connection cable may be lengthened to a maximum of 100 m.

- Route the connection cable to the terminal so that it is protected from possible damage.

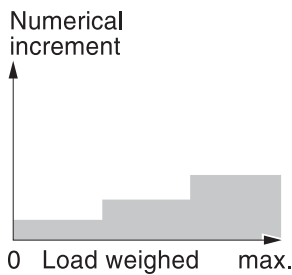
### CAUTION

- If the cable is laid in a pipe, ensure that the pipe is of a sufficient diameter or is slit open. The cable may not be cut through.

## 3 Configuration possibilities

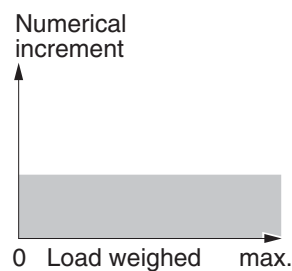
### 3.1 General information

#### 3.1.1 MultiInterval



- MultiInterval precision means automatic switchover of the numerical increment (readability) in dependence on the applied load.

#### 3.1.2 Single Range and High Resolution



- Single Range and High Resolution mean that the numerical increments (readability) remain the same across the entire weighing range.

#### 3.1.3 Additional setting options

- All other adjustment variables (adjustment to the weighing process and vibrations, as well as adjustment of stability monitoring and the zero point correction) are adjusted to the usual user conditions, however can be changed in the master mode of the weighing terminal if necessary.
- The Identcard provided is labelled with the standard configuration. Mount the Identcard in accordance with the installation instructions of the weighing terminal concerned.
- If the standard configuration does not meet your needs, it is possible to reconfigure the weighing platform with the terminal. To do this, see the terminal operating instructions or the Service Manual for the TBrick Service Mode.
- A set of measuring data signs is provided with the weighing platform. Apply the selected configuration corresponding to the factory-mounted measuring data sign to the Identcard, and the Max-Min sign near the terminal display.
- When the configuration is changed, it is also possible to change the preload range in addition to the weighing range and the readability.



## 3.2 Configuration data

### 3.2.1 Configuration data for KA3s/KA6s, factory setting

Standard configuration	KA3s	KA6s
Maximum load	3 kg	6 kg
Readability	0 ... 3 kg      0.01 g	0 ... 6 kg      0.2 g
Tare range, subtractive	3 kg	6 kg
Preload range Zero-set range $\pm 2$ % Zero-set range -2 % ... +18 %	$\pm 60$ g -60 g ... +540 g	$\pm 120$ g -120 g ... +1080 g
Calibration data as per OIML		
Calibration class	II	II
Calibration value	0.0001 kg	0.0002 kg
Minimum load	0.0005 kg	0.01 kg
Temperature range	0 °C ... +40 °C	0 °C ... +40 °C

### 3.2.2 Configuration data for KA15s/KA32s, factory setting

Standard configuration	KA15s	KA32s
Maximum load	15 kg	32 kg
Readability	0 ... 15 kg      0.1 g	0 ... 32 kg      0.1 g
Tare range, subtractive	15 kg	32 kg
Preload range Zero-set range Zero-set range (typ.)	$\pm 0.3$ kg 6.0 kg	$\pm 0.64$ kg 3.0 kg
Calibration data as per OIML		
Calibration class	II	II
Calibration value	0.001 kg	0.001 kg
Minimum load	0.005 kg	0.005 kg
Temperature range	0 °C ... +40 °C	0 °C ... +40 °C

### 3.2.3 Configuration data for KB.../KCC..., factory setting

Standard configuration	KB60	KCC150	KCC300
Maximum load	60 kg	150 kg	300 kg
Readability	0 ... 60 kg    0.001 kg	0 ... 150 kg    0.001 kg	0 ... 300 kg    0.002 kg
Tare range, subtractive	60 kg	150 kg	300 kg
Preload range Zero-set range Zero-set range (typ.)	± 1.2 kg 25 kg	± 3 kg 64 kg	± 6 kg 120 kg
Calibration data as per OIML			
Calibration class	II	II	III
Calibration value	0.01 kg	0.01 kg	0.05 kg
Minimum load	0.05 kg	0.05 kg	1.0 kg
Temperature range	0 °C ... +40 °C	0 °C ... +40 °C	-10 °C ... +40 °C

## 4 Planning assemblies

### 4.1 Notes on planning

Due to their design characteristics, the weighing platforms are suitable for installation in conveying systems. The following specifications and dimensional drawings form the basis for the design of the required assemblies.

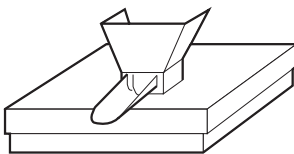
- The weighing platform may only be supported by the support feet, and never by the frame or lever parts.
- The weighing platform may only be permanently installed on the support feet.
- Moving or rotating parts on the weighing platform must be designed so that they do not affect the weighing result. Balance rotating parts.
- The load plate must be free on all sides so that not connection between the load plate and permanently mounted parts is made, even by falling parts or dirt deposits.
- Lay cables or hoses between the weighing platform and other machine parts so that they do not exert any force on the weighing platform.

#### CAUTION

When mounting assemblies, make sure that no metal chips get into the weighing platform.

→ Remove the load plate to machine the weighing platform.

### 4.2 Preload range



The weight of the structural parts permanently mounted on the weighing platform is referred to as "preload". The preload is electrically compensated in the weighing platform so that the full weighing range is available.

The maximum preload (or the zero-set range) that can be compensated is dependent on the configured weighing range.

#### CAUTION

The assemblies must already be mounted when connecting the weighing platform.

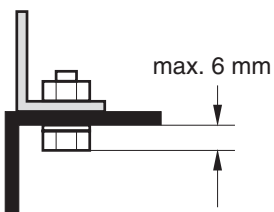
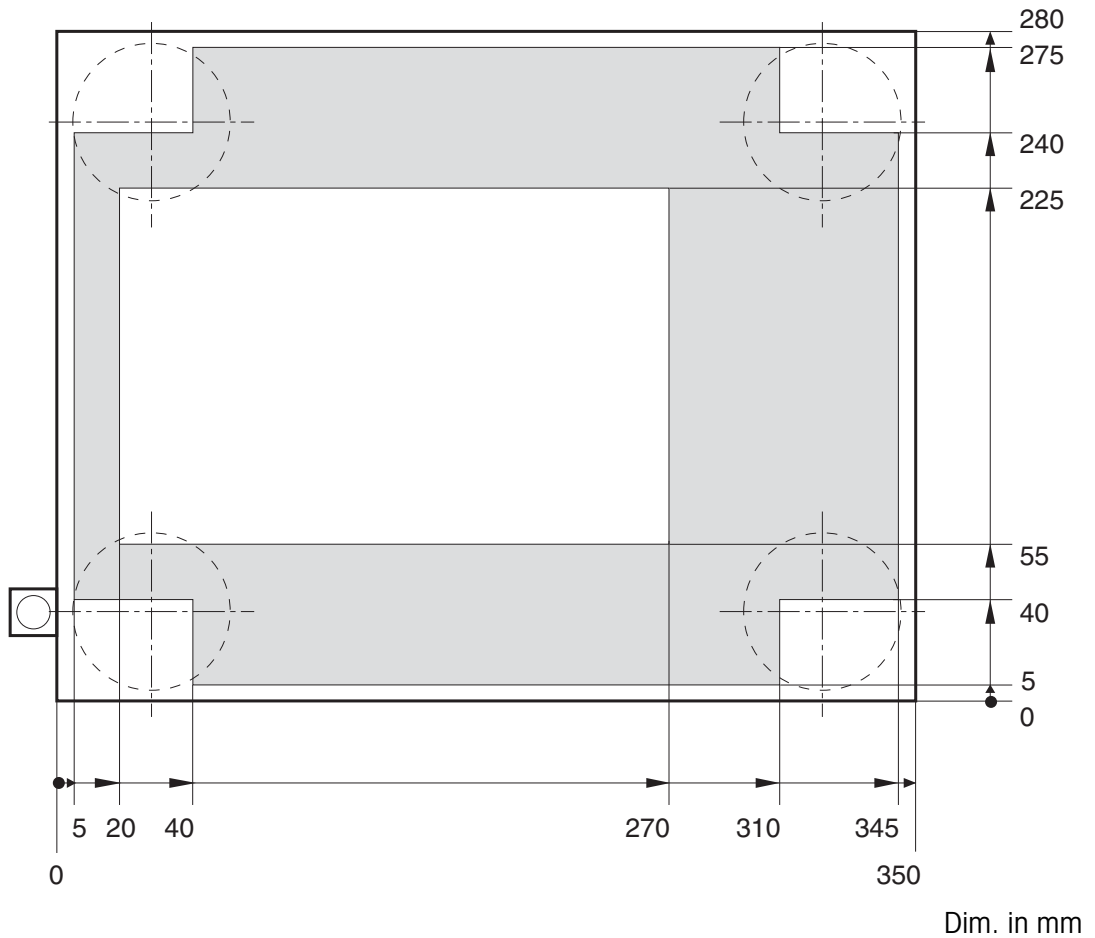
Model	Weighing range	Max. preload
KA3s	3 kg	3.2 kg
KA6s	6 kg	1.6 kg
KA15s	15 kg	6 kg
KA32s	32 kg	3 kg
KB60	60 kg	25 kg
KCC150	150 kg	64 kg
KCC300	300 kg	120 kg

### 4.3 Mounting possibilities

#### Mounting possibilities for KA3s/KA6s

No assemblies can be mounted to the load plate on the KA3s and KA6s weighing platforms.

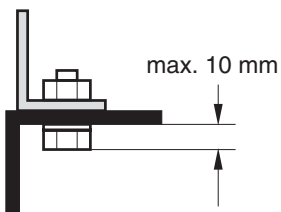
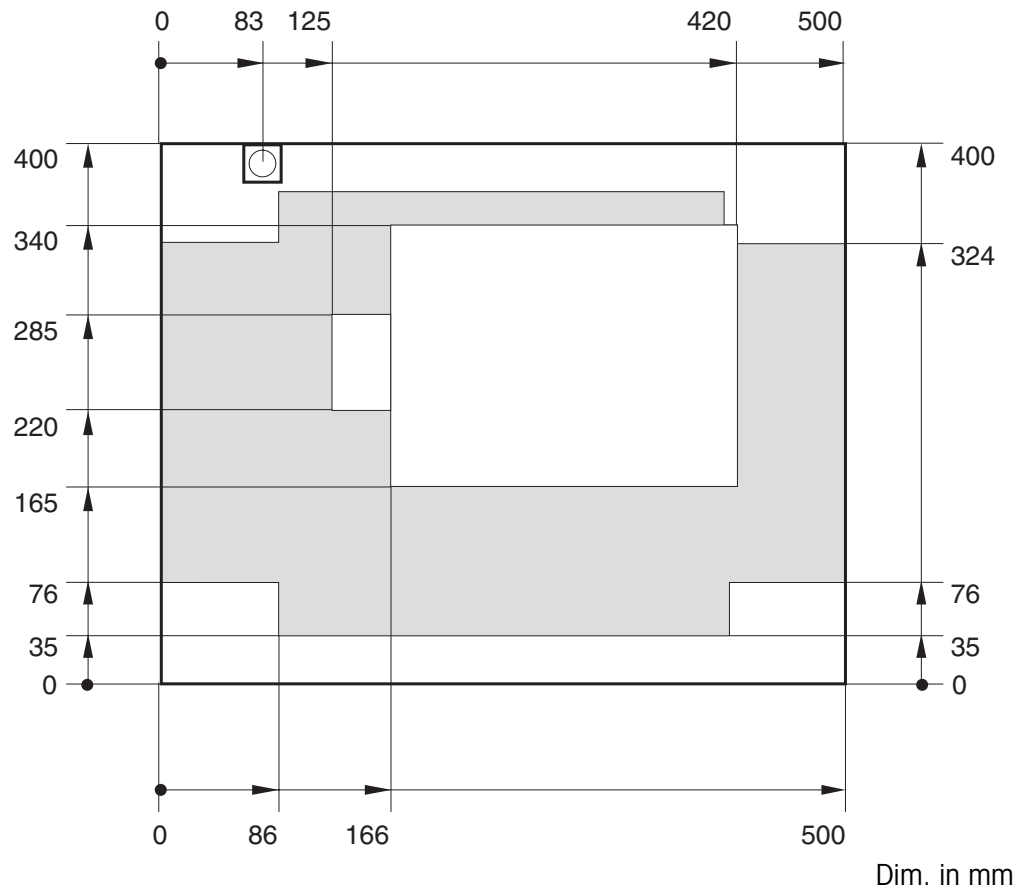
#### Mounting possibilities for KA15s/KA32s



- Bridge assemblies can be mounted in the shaded areas.
- Recommended mounting type: Bolting on, welding on.  
Remove the load plate and drill through for this purpose.
- Mounting parts (e.g. bolts and nuts) may extend a maximum of 6 mm beyond the underside of the load plate.

Technical version: 08/2000

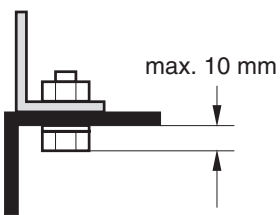
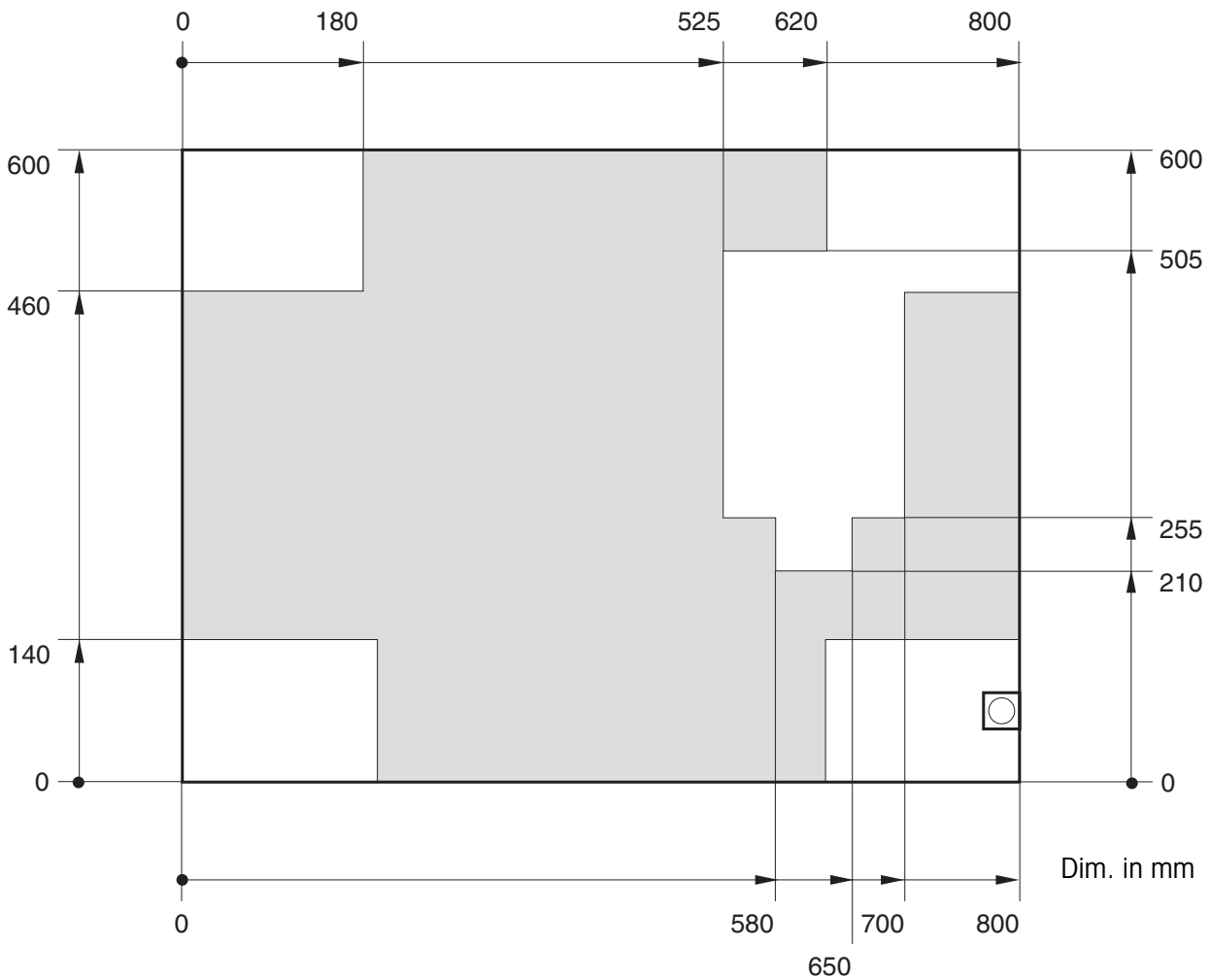
**Mounting possibilities for KB...**



- Bridge assemblies can be mounted in the shaded areas.
- Recommended mounting type: Bolting on.  
Remove the load plate and drill through for this purpose.
- Mounting parts (e.g. bolts and nuts) may extend a maximum of 10 mm beyond the underside of the load plate.

Technical version: 08/2000

**Mounting possibilities for KCC...**

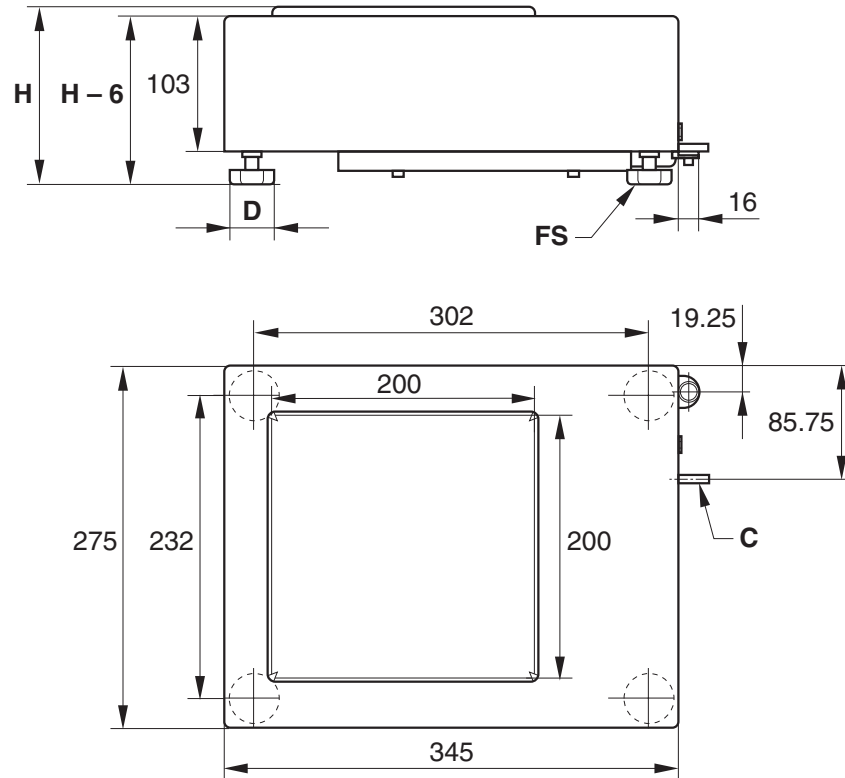


- Bridge assemblies can be mounted in the shaded areas.
- Recommended mounting type: Bolting on.  
Remove the load plate and drill through for this purpose.
- Mounting parts (e.g. bolts and nuts) may extend a maximum of 10 mm beyond the underside of the load plate.

Technical version: 08/2000

## 5 Dimensions

### Dimensions, KA3s/KA6s

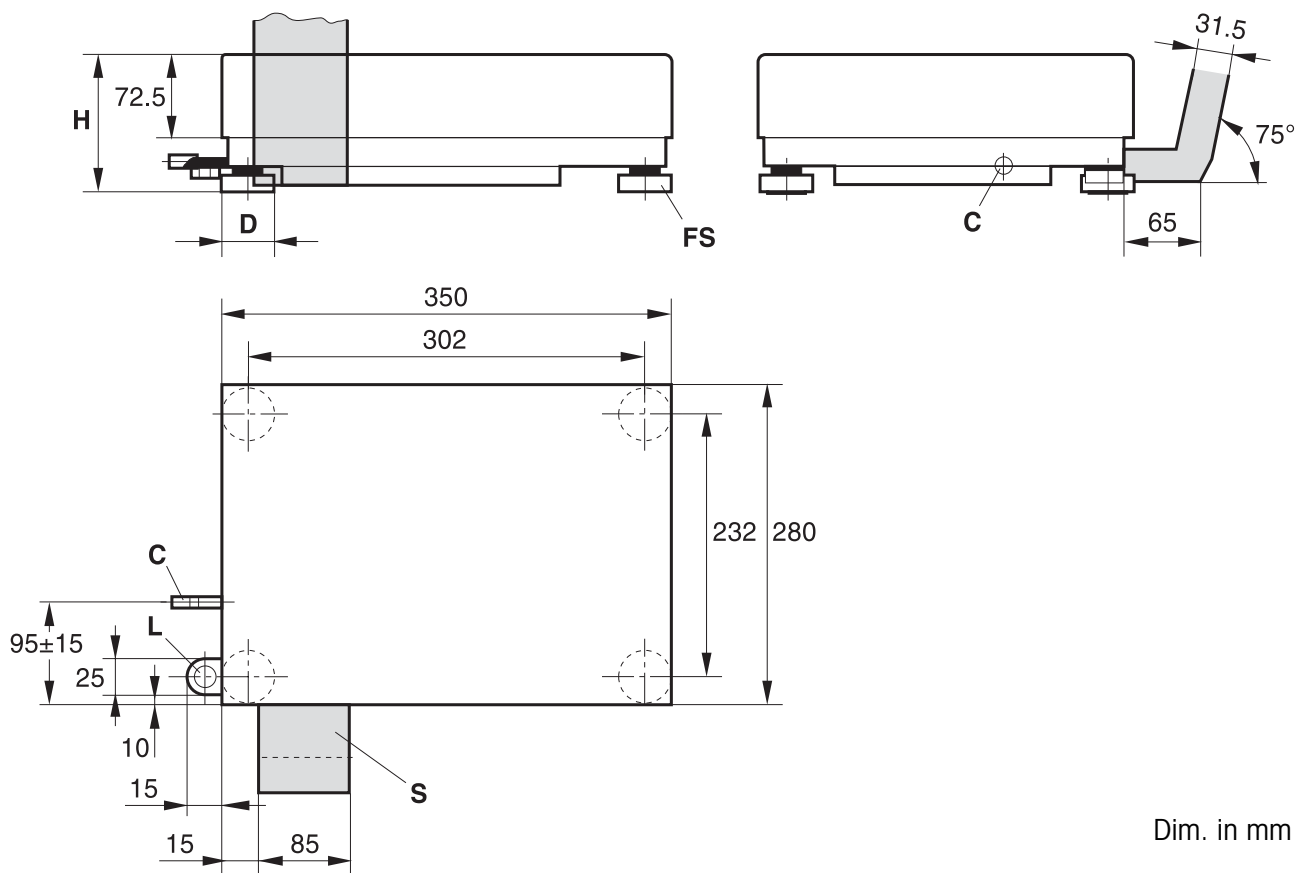


Dimensions in mm

- H Adjustable with 4 foot bolts  
Min. H = 130 mm  
Max. H = 140 mm
- FS Foot bolt  
Required area D = 35 mm dia.  
Spanner size = 17 mm  
Thread = M10
- C Cable connection

Technical version: 12/2007

**Dimensions of KA15s/KA32s**



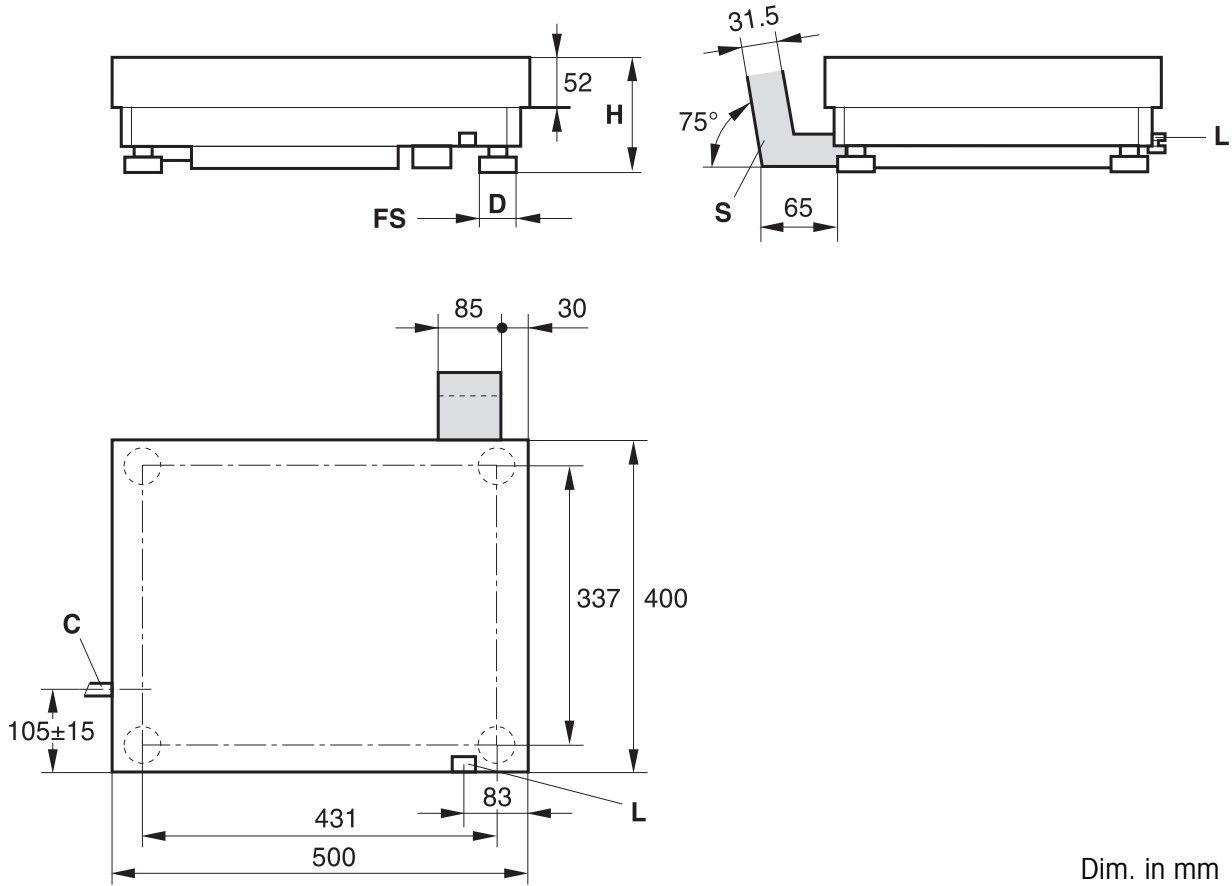
Dim. in mm

- H Adjustable with 4 foot bolts  
Min. H = 117 mm  
Max. H = 130 mm
- FS Foot bolt  
Spanner size = 17 mm  
Thread = M10  
Required area D = 35 mm dia.
- S Tripod
- L Level indicator
- C Cable connection

Technical version: 08/2000



**Dimensions of KB...**

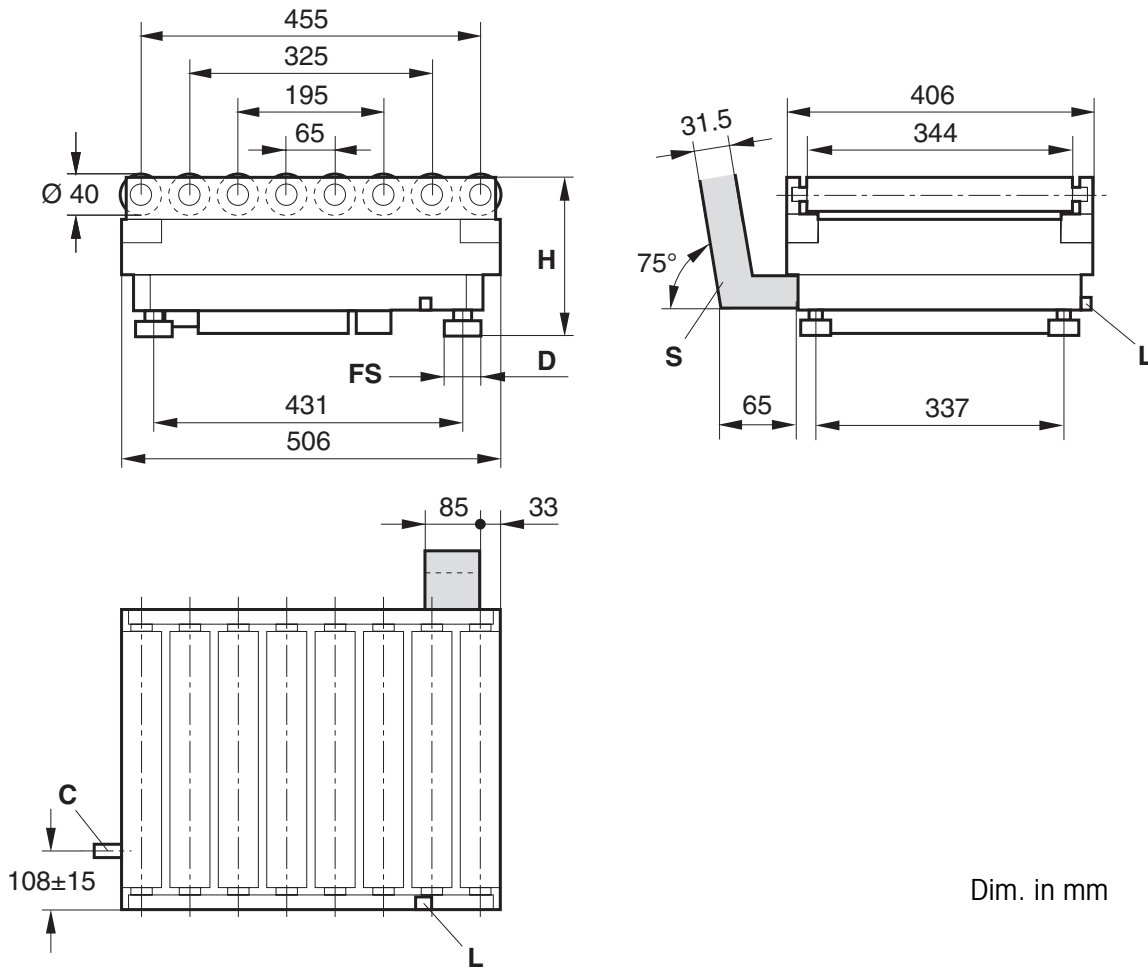


Dim. in mm

- H Adjustable with 4 foot bolts  
Min. H = 123 mm  
Max. H = 148 mm
- FS Foot bolt  
Spanner size = 17 mm  
Thread = M10  
Required area D = 35 mm dia.
- S Tripod
- L Level indicator
- C Cable connection

Technical version: 08/2000

**Dimensions of KB... roller conveyor**

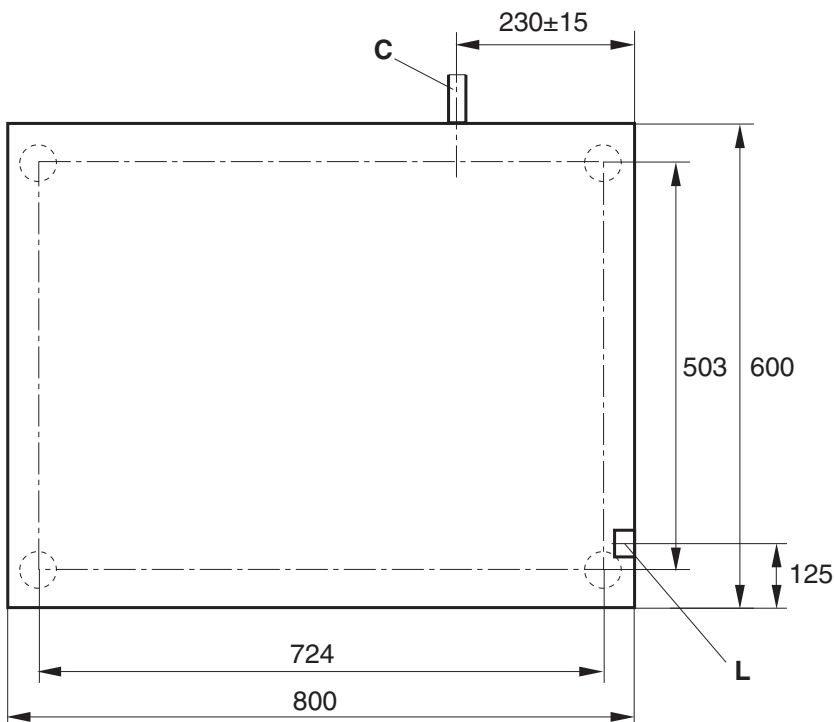
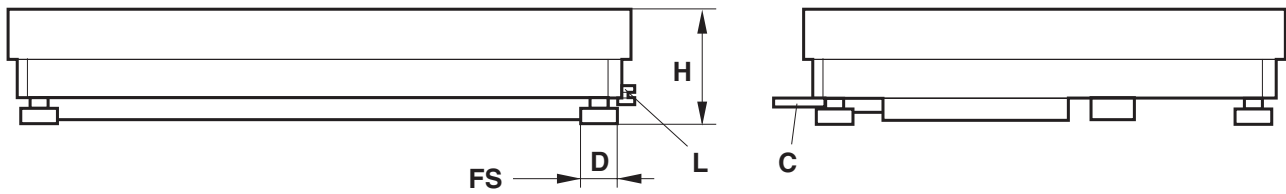


Dim. in mm

- H Adjustable with 4 foot bolts  
Min. H = 170 mm  
Max. H = 195 mm
  - FS Foot bolt  
Spanner size = 17 mm  
Thread = M10  
Required area D = 35 mm dia.
  - S Tripod
  - L Level indicator
  - C Cable connection
- Weight of roller conveyor = 9.0 kg net

Technical version: 08/2000

**Dimensions of KCC...**

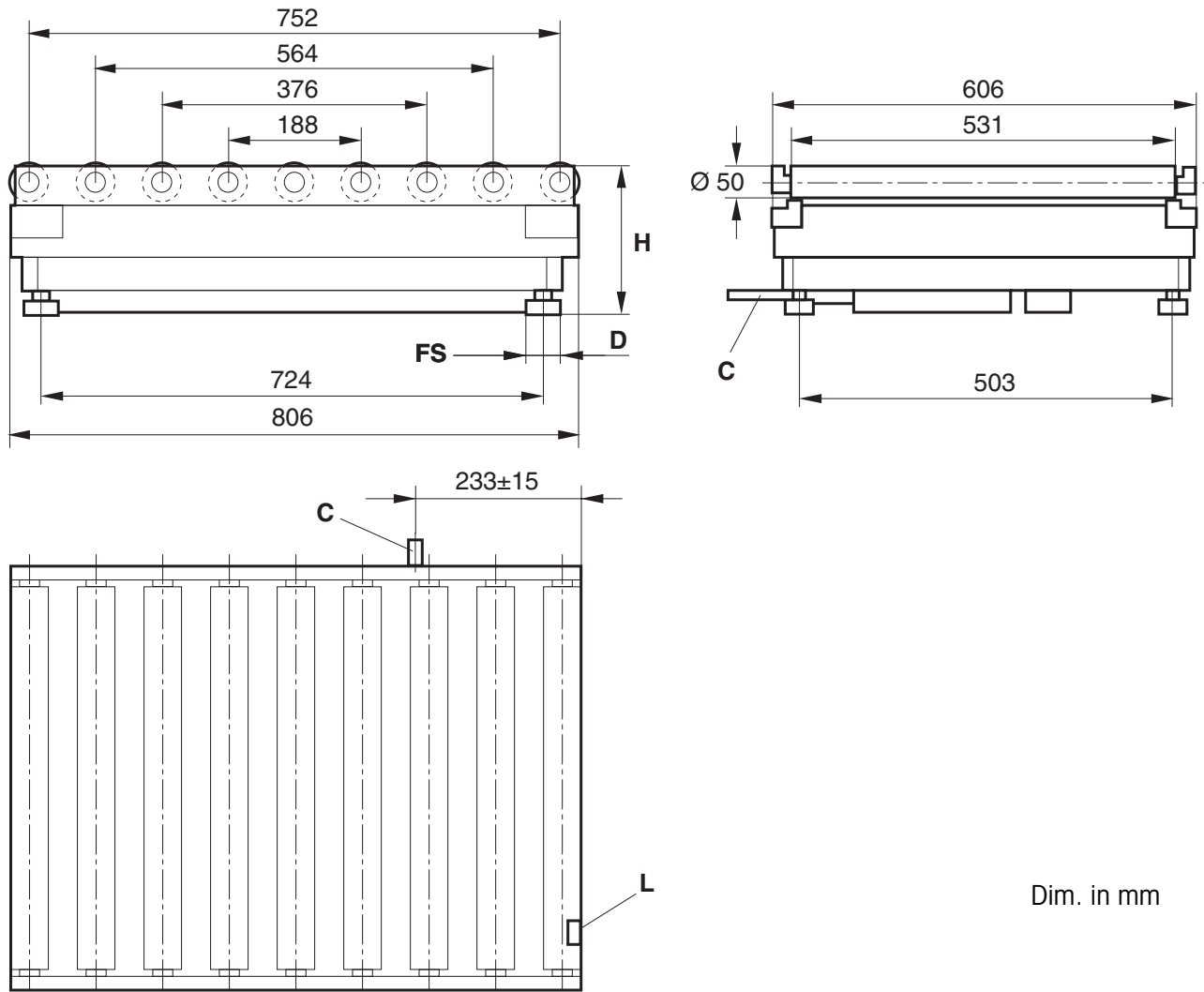


Dim. in mm

- H Adjustable with 4 foot bolts  
Min. H = 130 mm  
Max. H = 155 mm
- FS Foot bolt  
Spanner size = 17 mm  
Thread = M10  
Required area D = 35 mm dia.
- L Level indicator
- C Cable connection

Technical version: 08/2000

**Dimensions of KCC... roller conveyor**



Dim. in mm

- H Adjustable with 4 foot bolts  
Min. H = 185 mm  
Max. H = 210 mm
  - FS Foot bolt  
Spanner size = 17 mm  
Thread = M10  
Required area D = 35 mm dia.
  - L Level indicator
  - C Cable
- Weight of roller conveyor = 22.0 kg net

Technical version: 08/2000





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