COSBER

INSTALLATION REQUIREMENTS

Car brake tester

COSBER C-BTC Series

CONTENT

1 General

1.1 Important notes

The following requirements must be met to ensure the correct installation of brake tester. This document shows the minimum basic requirements.

- All designs must comply with local and national standards, guidelines, and regulations.
- The company is not liable for any defects or quality problems resulting from the violation of national or regional regulations.
- It is forbidden to distribute the design folder, foundation drawings, construction drawings, circuit diagrams, and other documents to third parties without the permission of COSBER.

1.2 Delivery

- For unloading and moving, lifting tools (such as forklifts or cranes) required and must be provided by the customer.

1.2.1 Scope of delivery

The following products are NOT included in the standard scope of delivery:

- Foundation frame or edge protection
- Cable ducts
- Mounting material for control cabinet
- Mounting material for analog display or PC display

The products listed above can be purchased from COSBER.

1.3 Tool

To facilitate the installation, please prepare the following tool:

- Lifting tool for installing the brake tester.
- Electric line threading tool.
- Standard tool set for work on control box and brake tester.

1.4 Units

Unit Conversion Table:

Unit	Conversion unit

1 ft	0.305 m
1 m	3,281 ft
1 Inch	0.0254 m
1 m	39.37 Inch
10 N	1 kgf

2 Location

- The system and its components should be assembled in the workshop at the most suitable location.
- Always consider the needs of your customers, local or national regulations, safety requirements, operational or technical specifications, and take all requirements into account when deciding on a location and planning it.

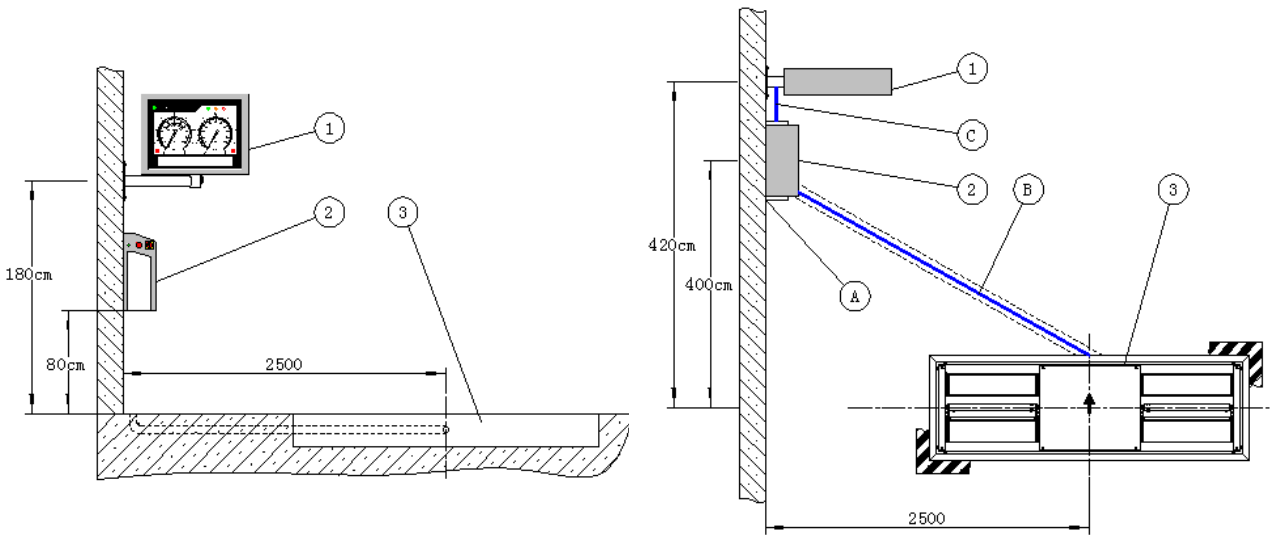
HINT!

WHEN CHOOSING LOCATION, MAKE SURE THAT THERE IS A POSSIBILITY TO ATTACH THE CONTROL CABINET AND, IF NECESSARY, ANALOGUE DISPLAY OR SCREEN. (MOUNTING MATERIAL NOT INCLUDED)

2.1 Outdoor installation

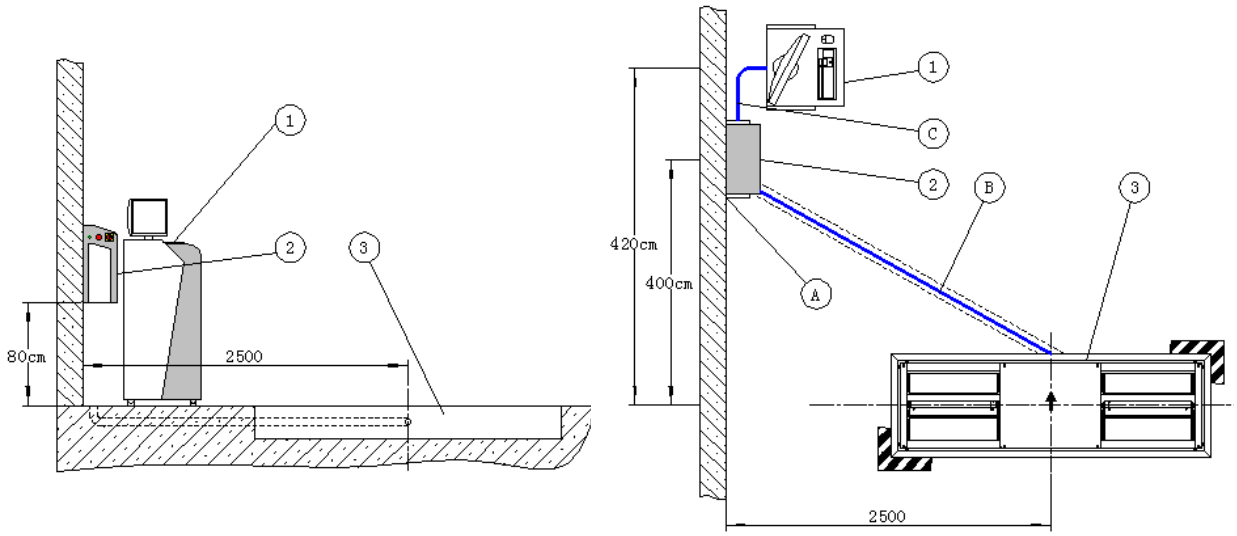
- In an outdoor installation, the power switch, monitor, printer, PC, and other electrical components/products should not be exposed to direct rain or snow.
- The test bench should be installed in suitable environments that meet the requirements for ambient temperature and humidity.

2.1.1 Installation sketch of the brake tester with analogue display



Pos.	Description	Connection
A	Power cable	Control box - main switch (to be provided by the customer)
B	Power cables, Signal cables	Control box - brake test bench. Cable length 15m (standard)
C	Communication cable	Control box - analogue display. Cable length 15m (standard)
Pos.	**Description**	**Connection**
1	Analog Display	
2	Control box	
3	Brake test bench	

2.1.2 Installation sketch of the brake tester with PC connection



Pos.	Description	Connection
A	Power cable	Control box - main switch (to be provided by the customer)
B	Power cables, signal cables	Control box - brake test bench. Cable length 15m (standard)
C	Communication cable	Control box - PC system. Cable length 15m (standard)
Pos.	**Description**	**Connection**
1	PC system	
2	Control box	
3	Brake test bench	

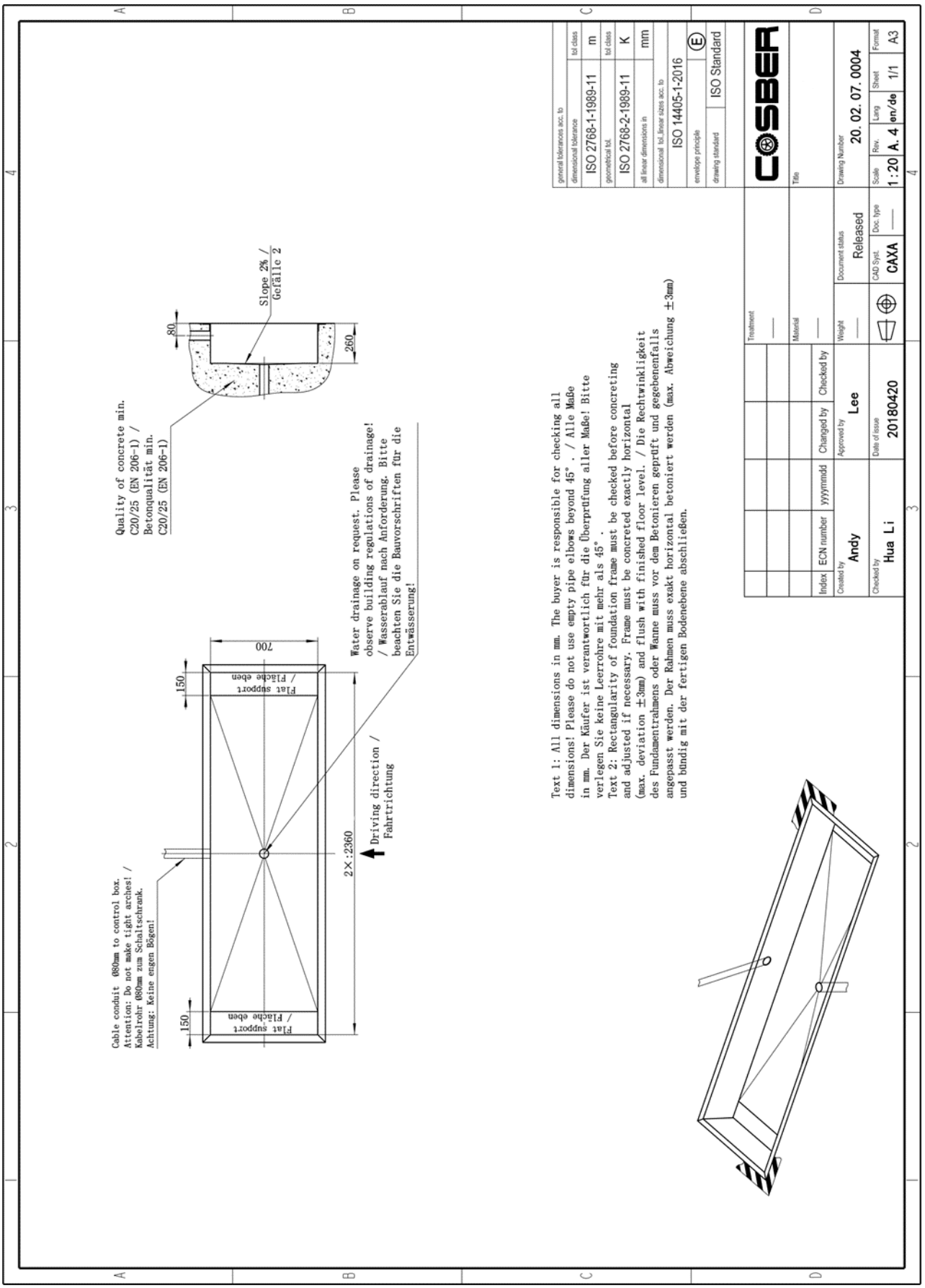
3 Foundation

3.1 General information

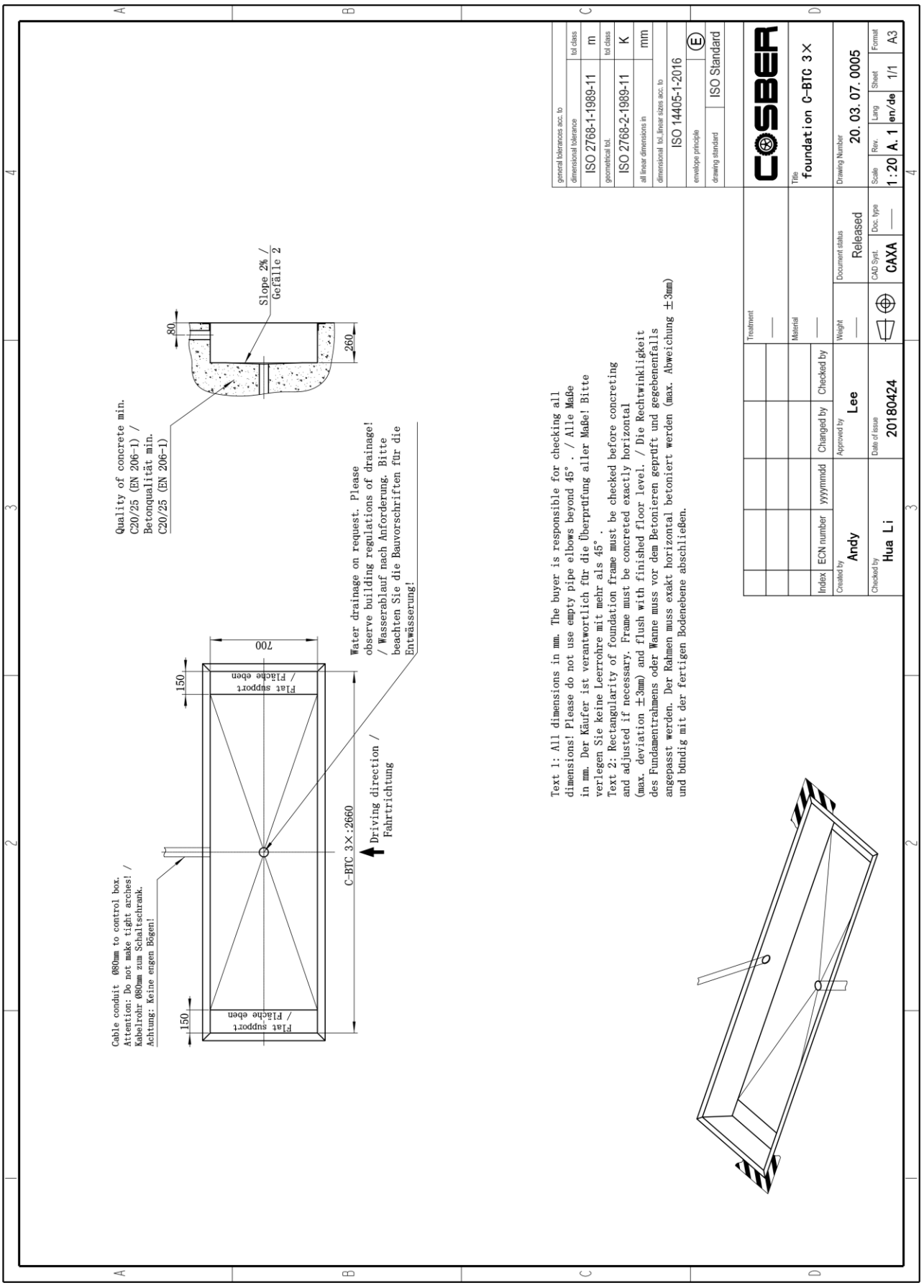
- The excavation pit as well as all connections and outlet openings must be created according to the foundation drawing.
- The excavation pit must stand on load-bearing soil.
- The size of the excavation pit must comply with the state conditions.
- The concrete quality meets at least the requirements of C20/25 DIN EN 19992-1-1 and includes a reinforced concrete network in the concrete that can withstand the maximum load on the test station.
- The floor level meets the requirements of DIN 18202.
- The bottom of the pit is flat on both sides, and the middle of the pit has a slope of 2% up to the water drainage.
- The maximum tolerance allowed for all sizes in the drawings is ±1cm.
- The cables (connections) run through cable ducts provided for this purpose. These are to be equipped according to the drawing.
- Cable duct must be placed underground.
- The cable duct must not be clogged under any circumstances.
- If you are using a foundation frame, edge protector or other accessories, fasten them in such a way that there are no floating movements or displacements during concreting.

3.2 COSBER Foundation Plans for Passenger Car Brake Test Benches

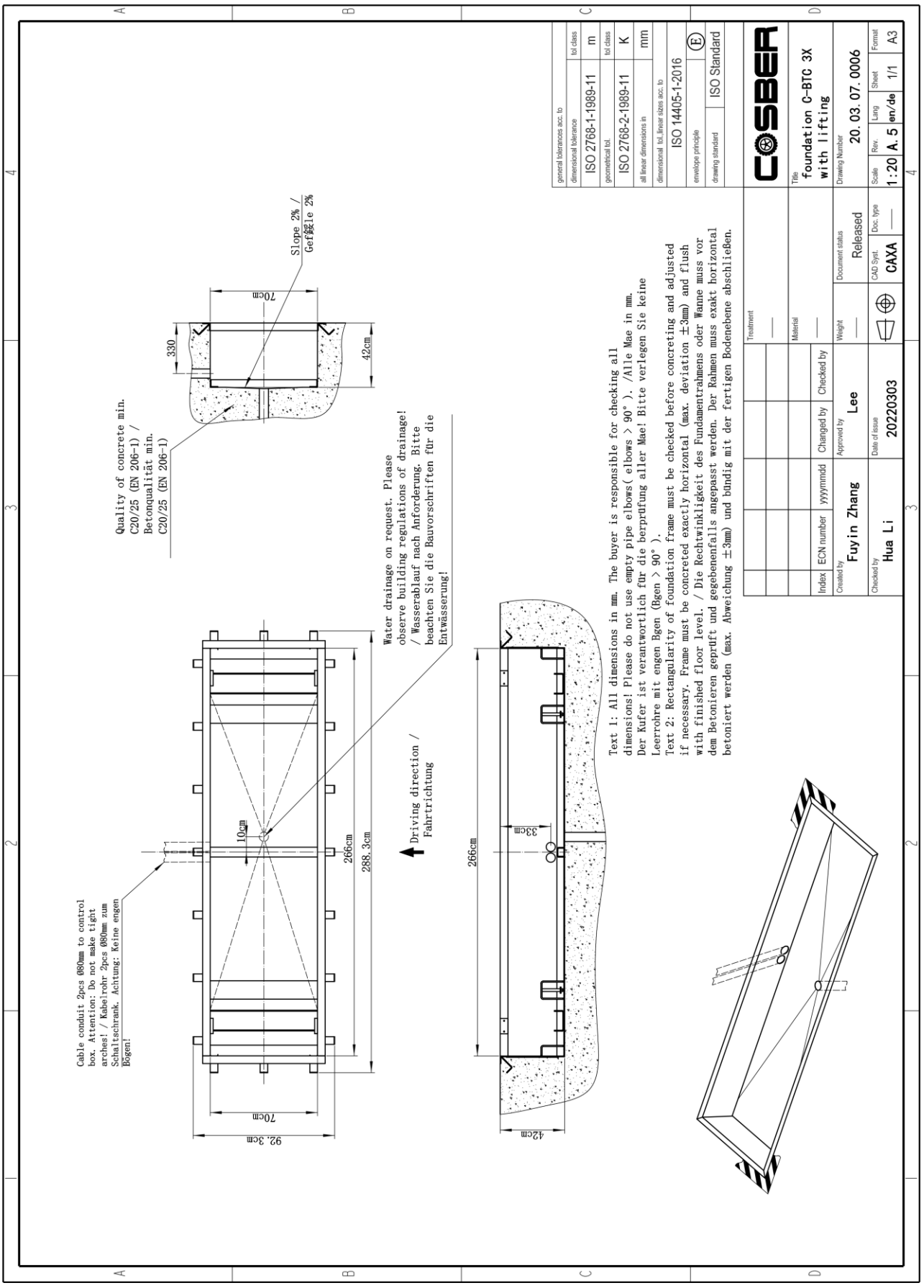
3.2.1 Foundation plan COSBER C-BTC22



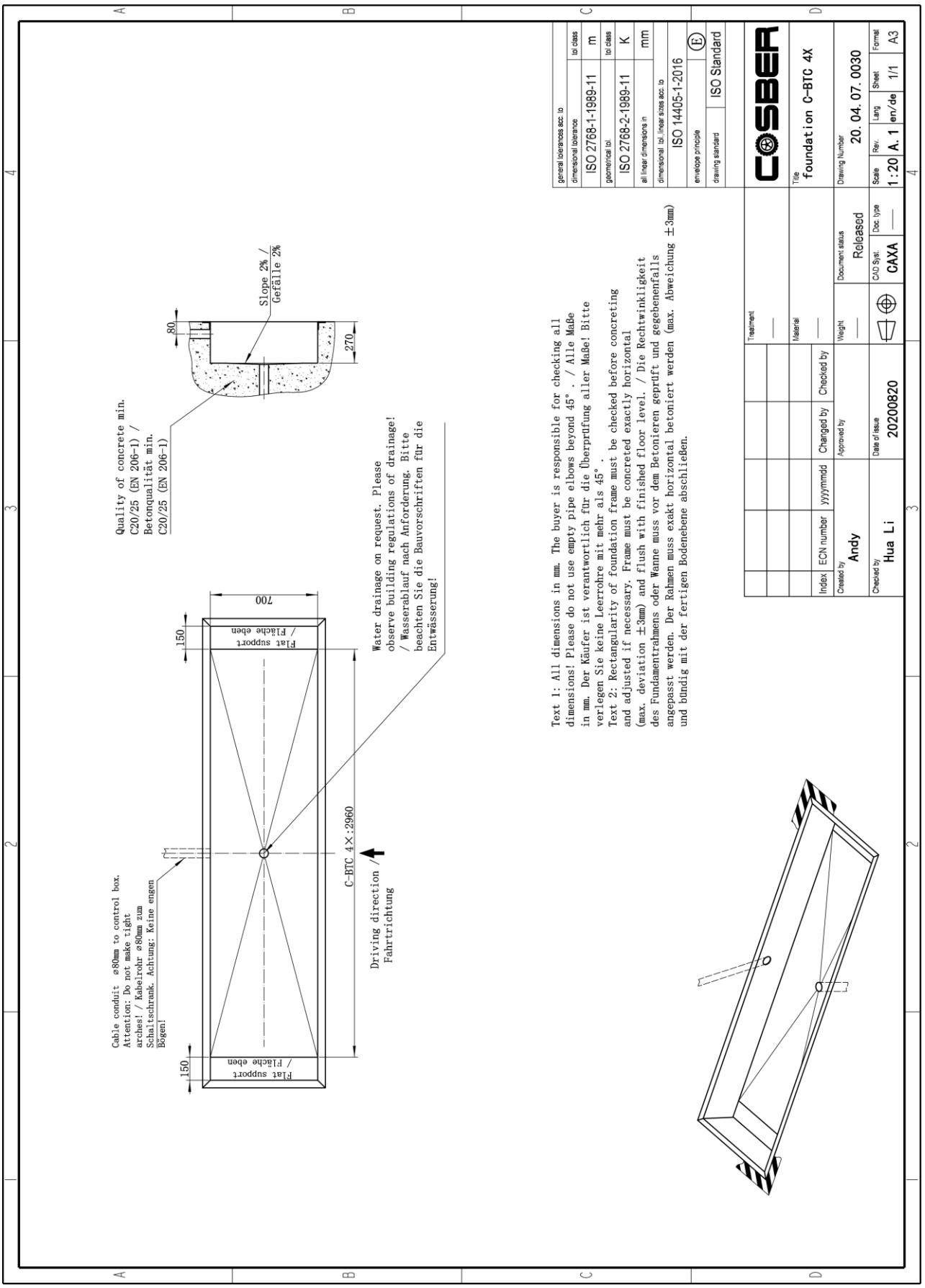
3.2.2 Foundation plan COSBER C-BTC32



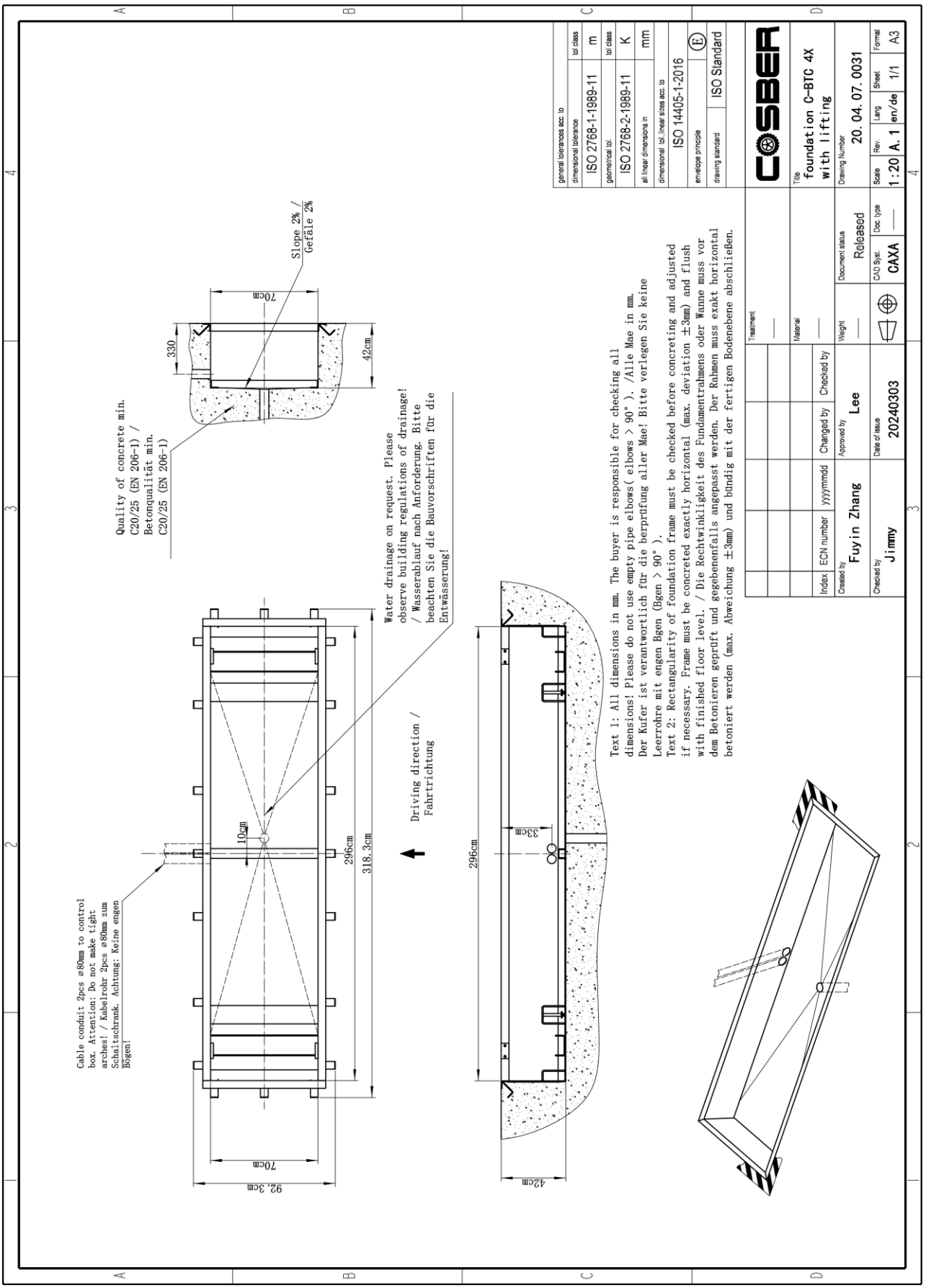
3.2.3 Foundation plan COSBER C-BTC32 LIFT



3.2.4 Foundation plan COSBER C-BTC4x



3.2.5 Foundation plan COSBER C-BTC42 LIFT



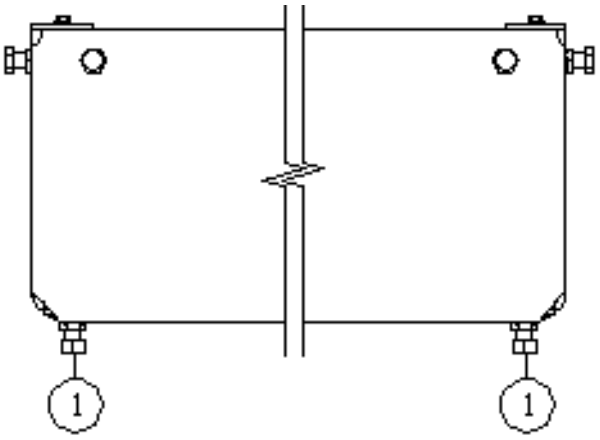
3.3 Installation in existing foundations

For installation in existing foundations, COSBER does not guarantee function.

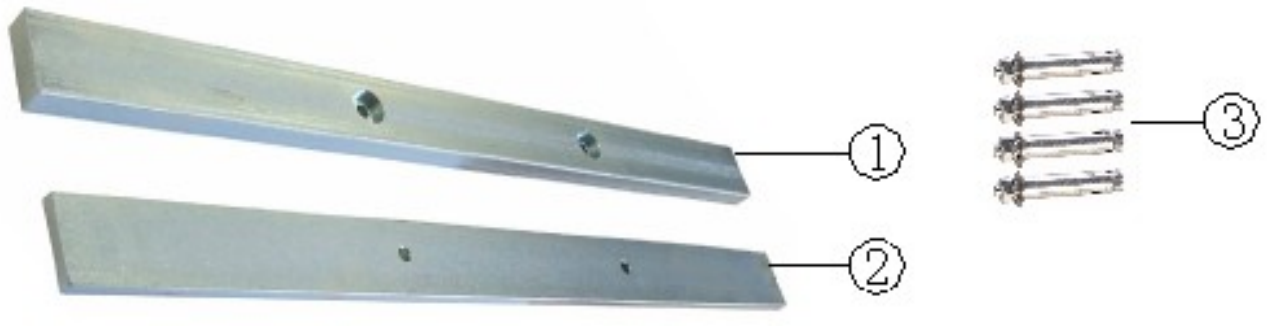
- Compare the existing foundation with the given external dimensions of the respective brake test bench:

Type	Length [mm]	Width [mm]	Height [mm]
C-BTC2x	2.320	660	240
C-BTC3x	2.620	660	240
C-BTC3x LIFT	2.620	660	400
C-BTC4x	2.920	660	240
C-BTC4x LIFT	2.920	660	400

- If the depth of the pit is not correct, minor differences in height can be compensated for with the screw (1) on the test bench. After adjusting the height, you need to tighten the lock nut on the adjusting screw.

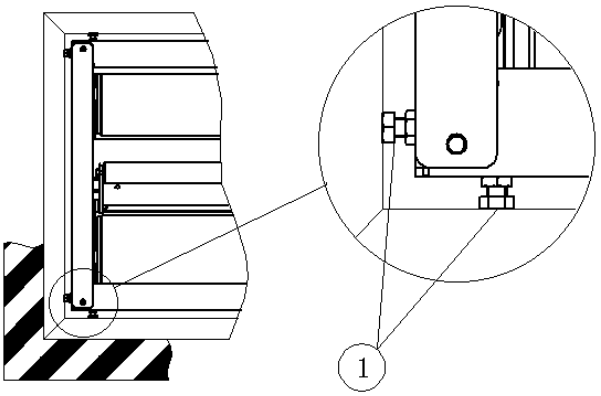


  - Larger differences in height can be compensated by installing adjustment plates. These are placed under the adjustment screw of the test bench and fixed in the concrete with suitable anchors.



No.	Description	Quantity	Art. No.
1	Adjustment plate 20 mm	2	20.02.02.0013
2	Adjustment plate 10 mm	2	20.02.02.0014
3	Anchors bolts	8	70.05.16.1209

- If the length and width of the pit is not correct, minor differences in length and width can be compensated with the help of the lateral clamping screws (1) on the test bench. After adjustment, you need to tighten the lock nut on the adjusting screw.

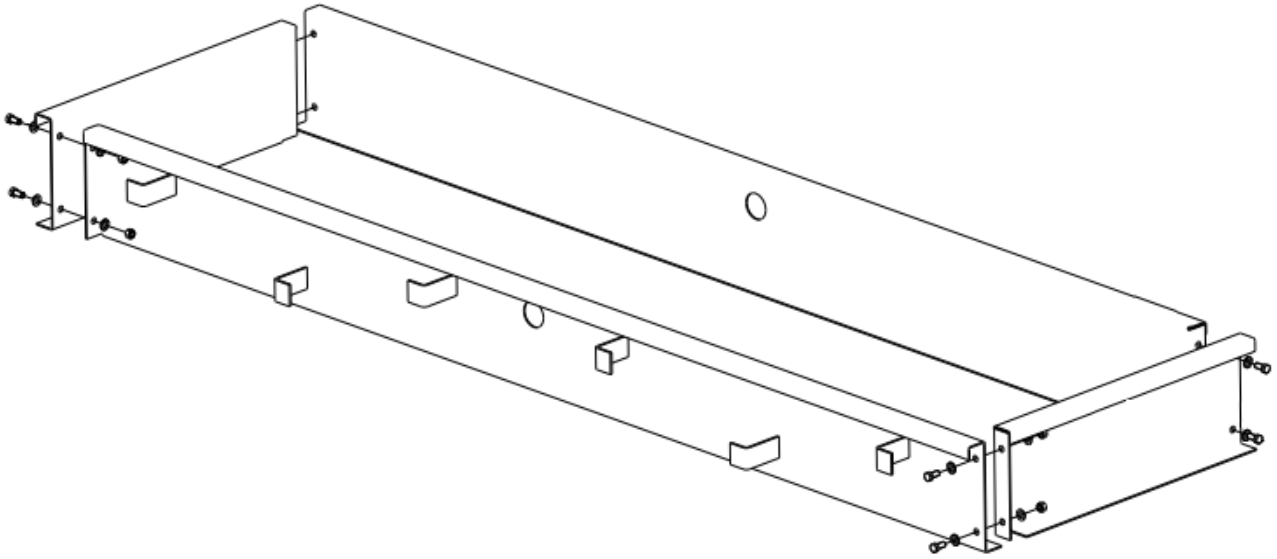


  - In the case of brake test benches with a weighing function, the screw heads on the upper edge should not touch the pit and the screws should not bear any load. Otherwise, the measurement accuracy may be impaired.

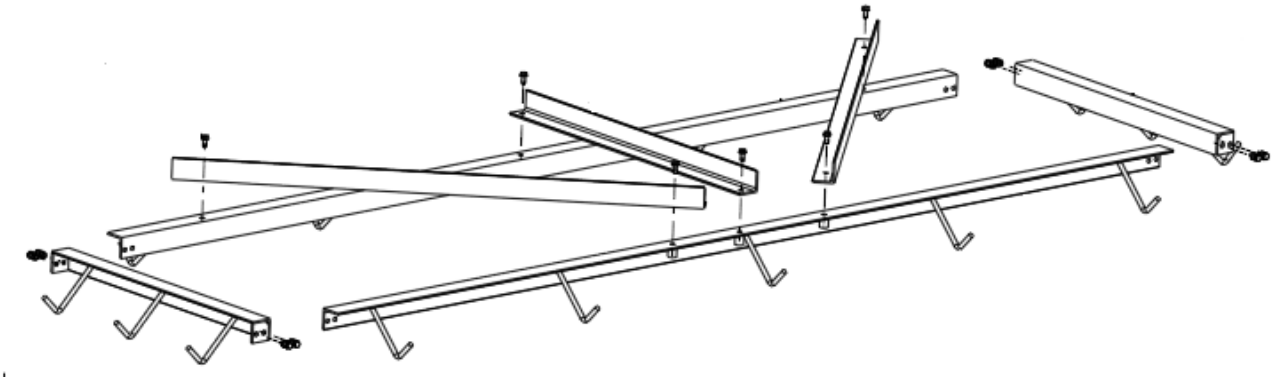
3.4 Foundation formwork

Customers can choose various foundation formwork aids according to their actual needs.

3.4.1 Assembly drawing foundation frame



3.4.2 Assembly drawing edge protection



4 Power

WARNING!

THE POWER SUPPLY OF DEVICE MUST COMPLY WITH LOCAL STANDARDS.
THE POWER SUPPLY AND THE ELECTRICITY CONNECTION MUST BE PROVIDED BY A LOCAL, CERTIFIED ELECTRICIAN (QUALIFIED PERSONNEL).

- Power supply of 400V
- Structure of the 3Ph + N + PE cables
- The power source must not be more than 3m away from the control cabinet.
- To ensure trouble-free operation of the device, the power supply must be equipped with a three-phase circuit breaker. In addition, appropriate grounding that meets local standards is required.
- Cable entry to the control box is made from below. The car control cabinet is designed (as standard) for wall mounting.
  Insertion of the power cable is done through a plate at the bottom.
- Additional sockets:
  - For ASA livestream, a free 230V socket must be available within a radius of no more than approx. 2m around the control cabinet, which a test engineer can use as part of the main inspection.
  - Depending on the equipment and customer requirements (PC, monitor, printer, etc.), additional 230V sockets must be available.

Type	Power	Fuse	Cable cross-section*
C-BTC2x	3.0 kW	25 A	5x 4.0 mm²
C-BTC2x	4.0 kW	32 A	5x 6.0 mm²
C-BTC3x	4.0 kW	32 A	5x 6.0 mm²
C-BTC3x LIFT	4.0 kW	32 A	5x 6.0 mm²
C-BTC4x	4.0 kW	32 A	5x 6.0 mm²
C-BTC4x LIFT	4.0 kW	32 A	5x 6.0 mm²

*According to the current carrying capacity table (Germany)

5 Installation requirements

- The infrastructure should meet all requirements.
- The concrete/foundation must meet all requirements and be fully cured.
- When assembling brake test bench, the customer must supply the required lifting equipment (such as a forklift truck or crane).
    - If it is not possible to provide a suitable lifting device, it must be clarified in advance with our employees.
- Scope of assembly:
    - Commissioning (electrical connection must be made by a locally certified electrician)
    - Instruction of the operating personnel
    - Calibration (includes former inspection)
- NOT in the scope of assembly:
    - Necessary additional services for adaptations
    - Other material or ancillary costs
    - Concrete and foundation work.
    - Removal of the old brake tester.

6 Notes

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