Transport and installation instructions

as from serial No. 5004001

TNA300

142954 - 01.2017
TAAL-en/K

Note on applicability

Illustrations in this publication may deviate from the product supplied. Errors and omissions due to technical progress expected.

A word on copyright

Symbols

This chapter describes the symbols used in the documentation for users to highlight risks and tips.

This symbol draws attention to imminent danger to life and health. Failure to observe this danger sign can result in serious damage to health, as well as potentially fatal injuries and even death.

This symbol draws attention to imminent danger due to electricity. Failure to observe this danger sign can result in serious damage to health, as well as potentially fatal injuries and even death.

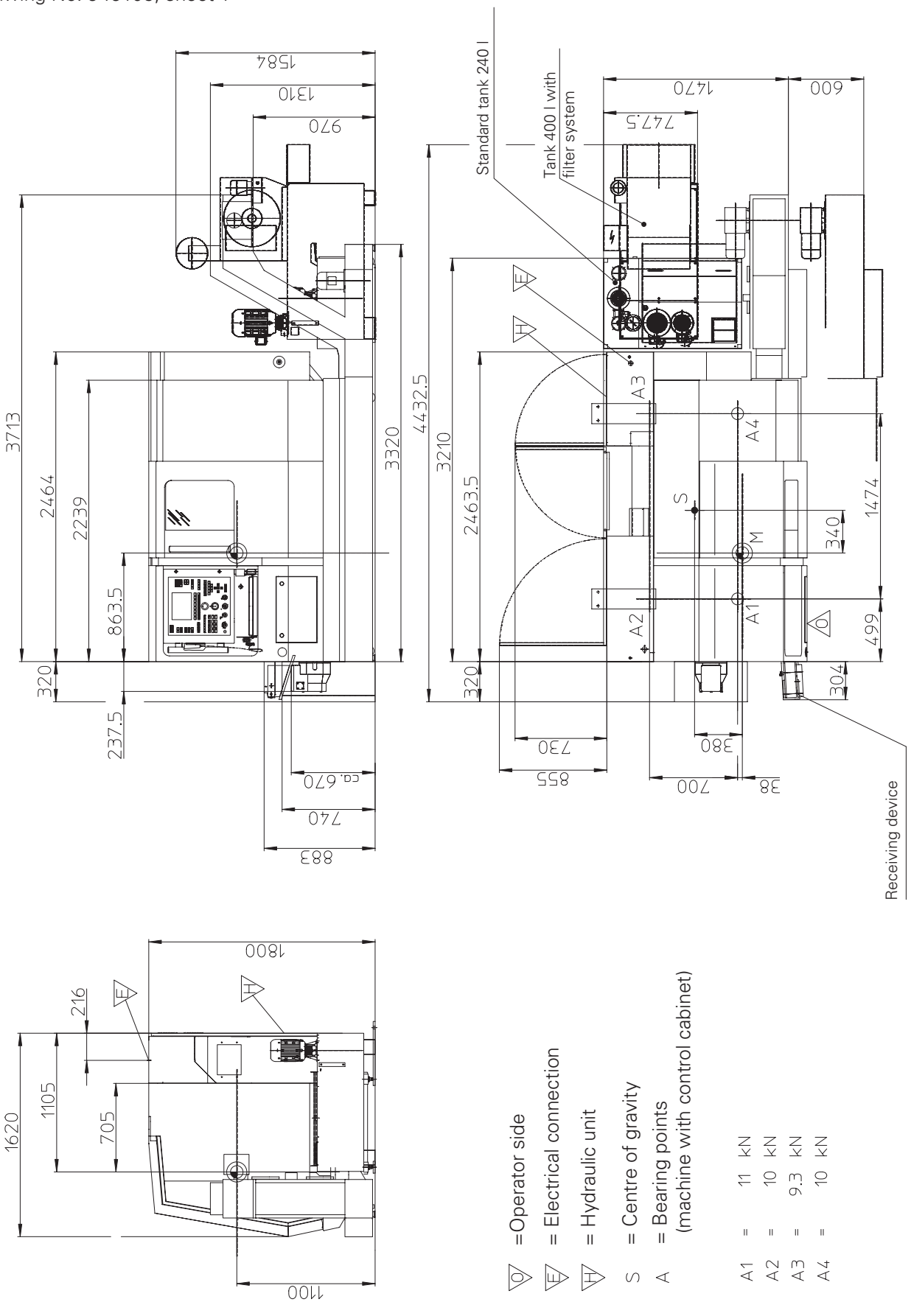
This symbol draws attention to important information on correct operation of the machine. The machine or parts of the machine may be damaged or malfunction if these instructions are not observed.

Documentation safety instructions

The documentation for users and particularly the safety instructions must be observed.
The safety instructions are set out in a separate document forming part of the TRAUB documentation for users.

Installation diagram

Drawing No. 949105, sheet 1

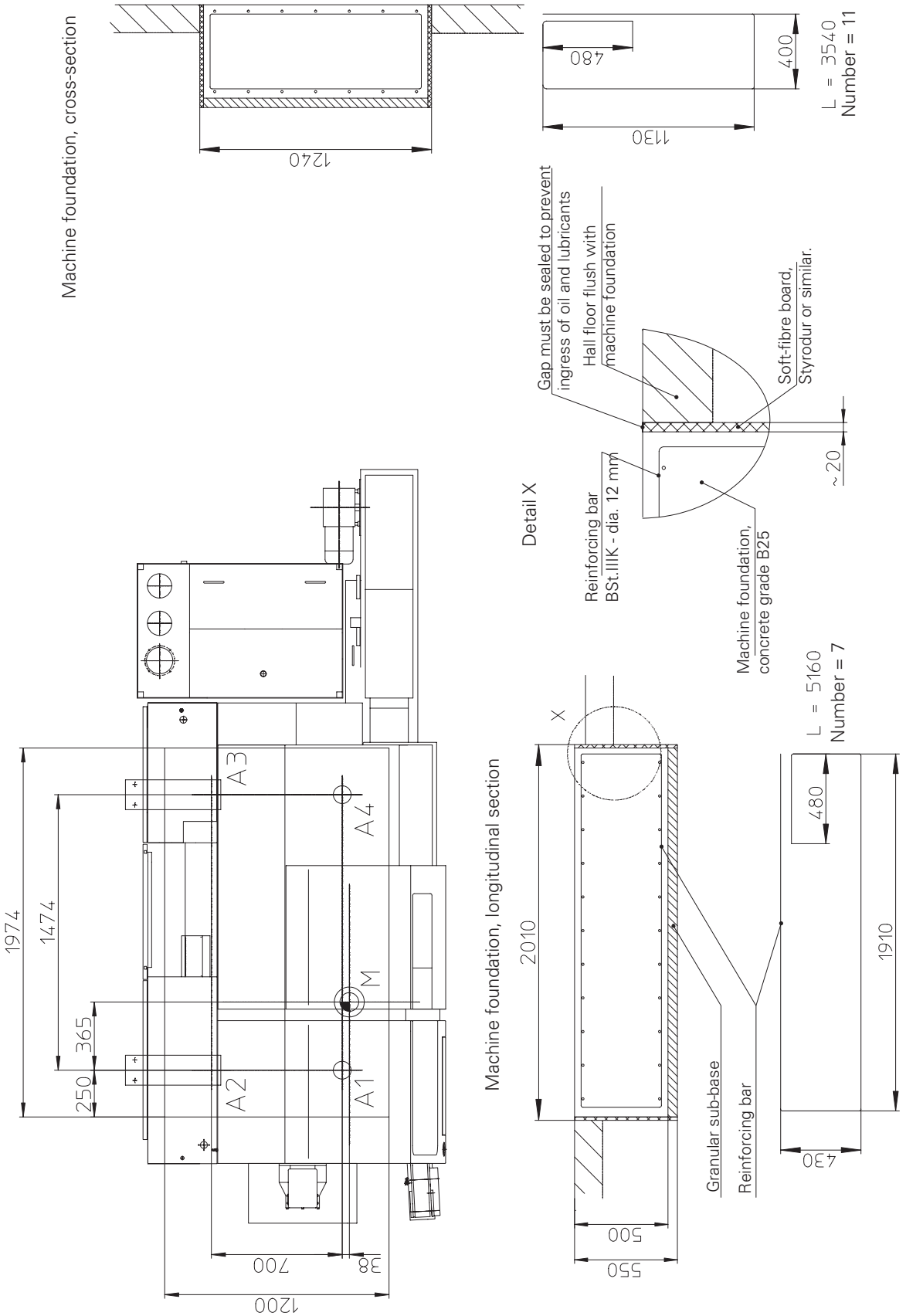


=Operator side
= Electrical connection
= Hydraulic unit
S = Centre of gravity
A = Bearing points
(machine with control cabinet)

A1 = 11 kN
A2 = 10 kN
A3 = 9.3 kN
A4 = 10 kN

Foundation diagram

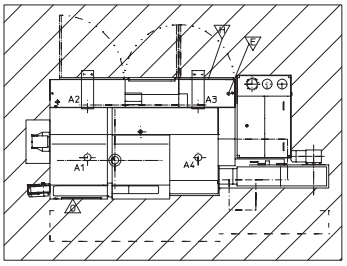
Drawing No. 949105, sheet 2



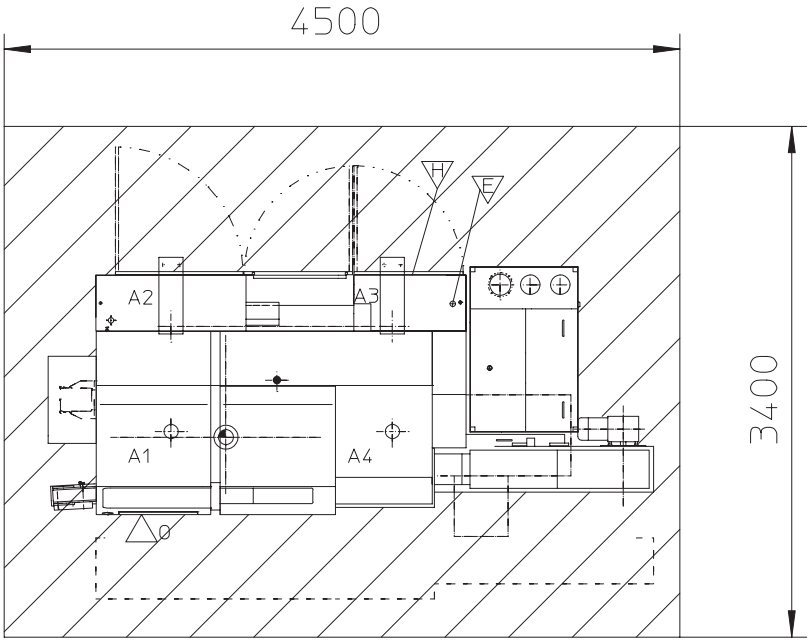
Layout diagram

Drawing No. 949105, sheet 3

Scale 1:100



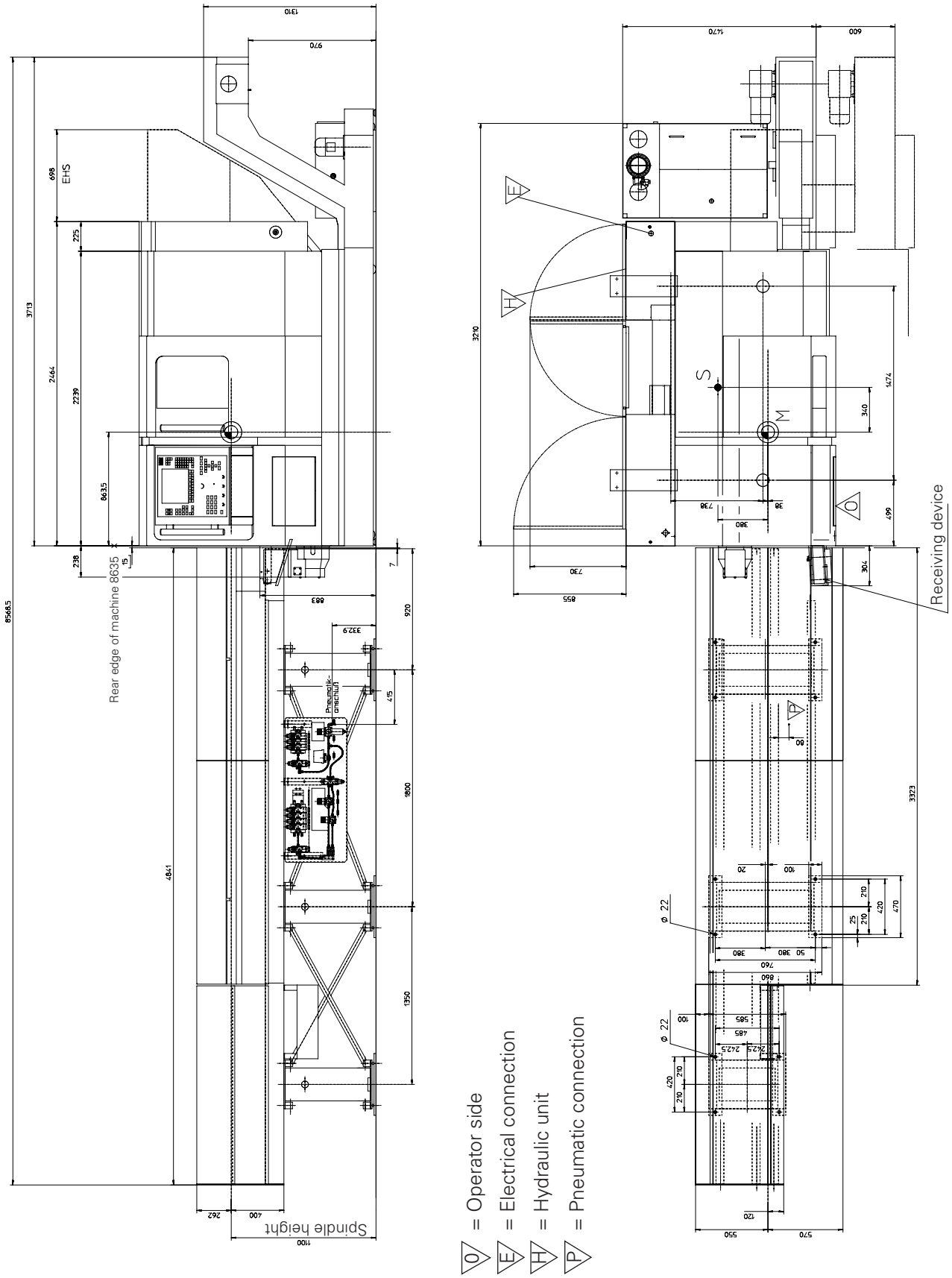
Scale 1:50



0 = Operator side
E = Electrical connection
H = Hydraulic unit

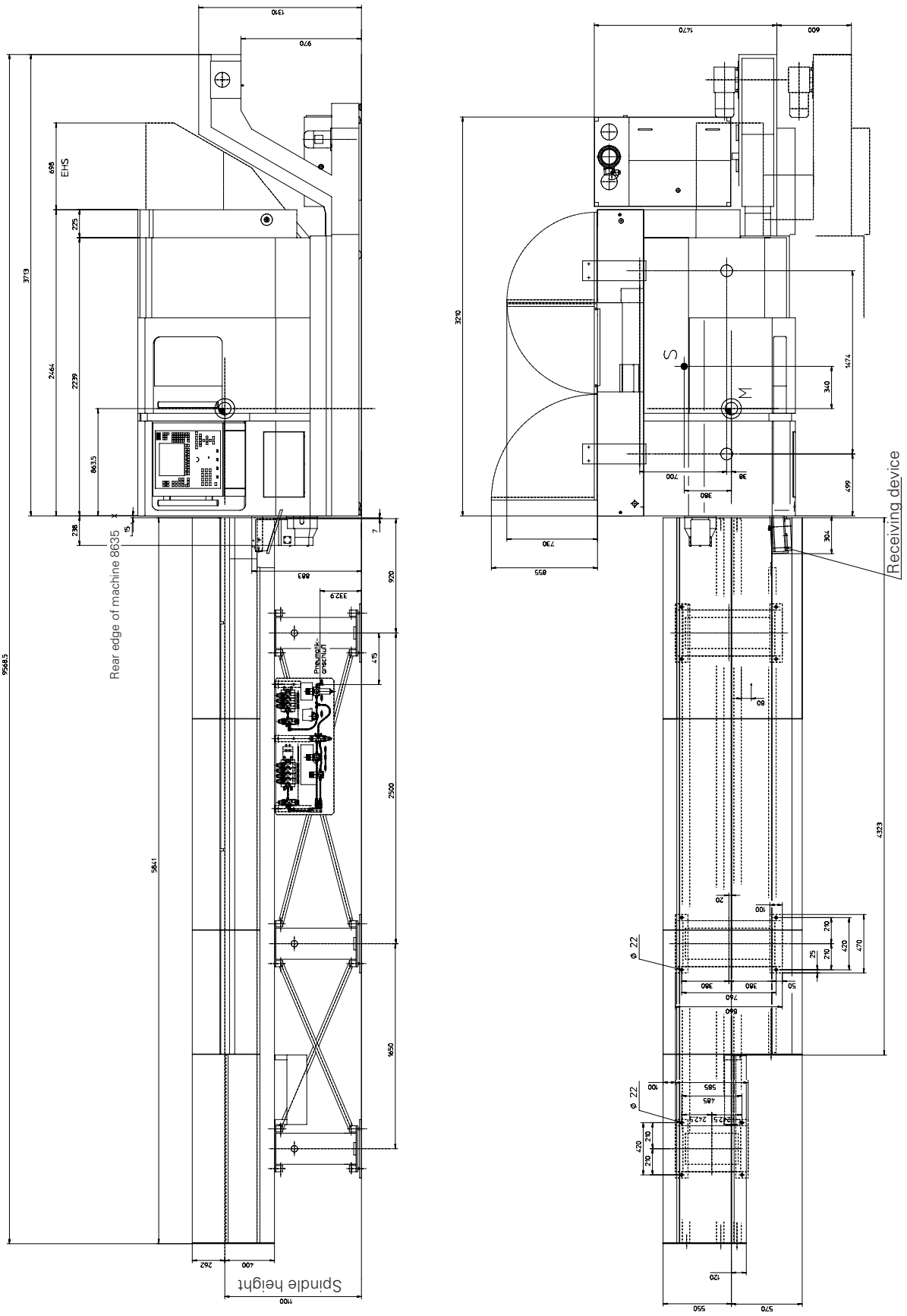
Installation diagram with DNH 61 - 3000

Drawing No. 946440



Installation diagram with DNH 61 - 4000

Drawing No. 946441

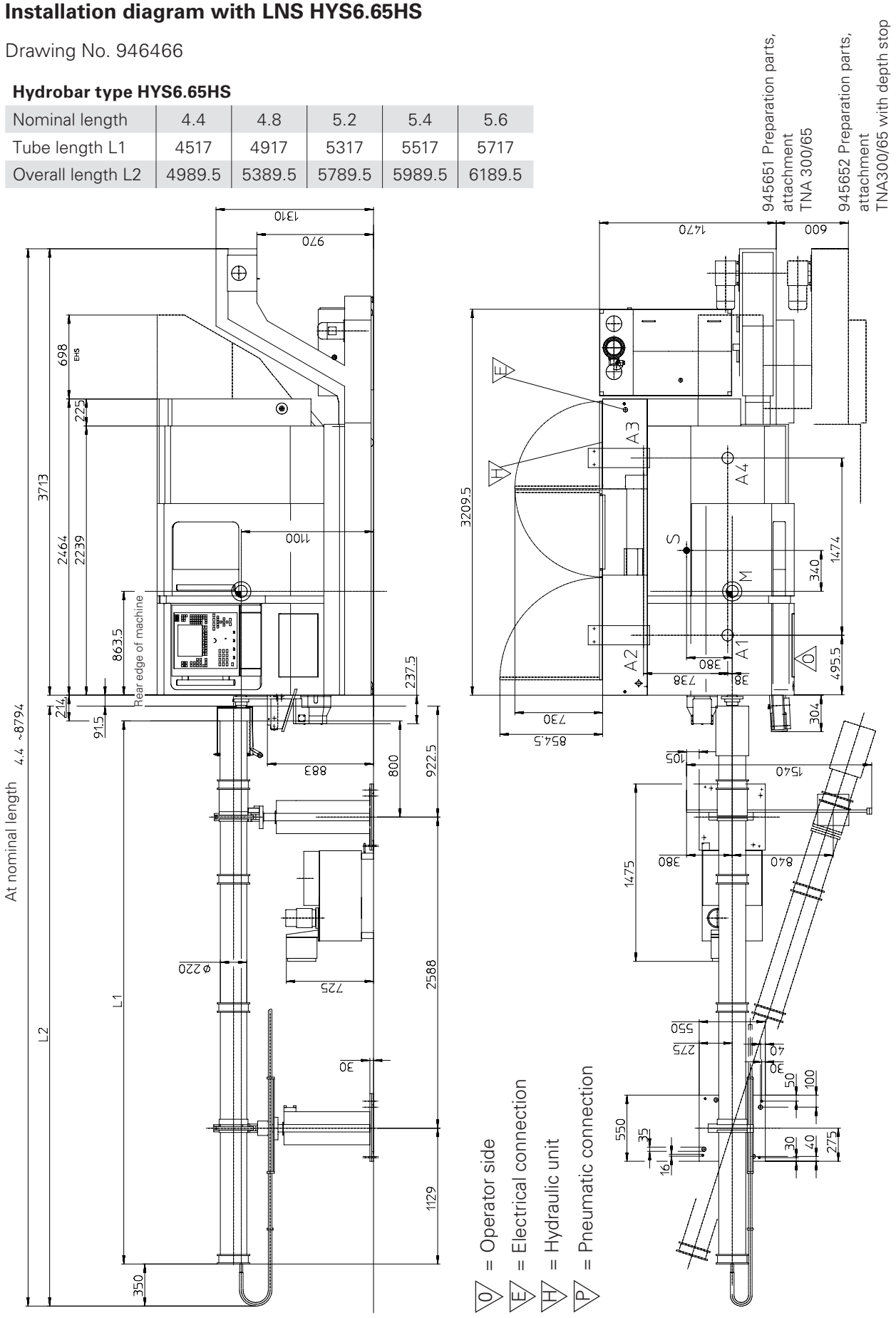


Installation diagram with LNS HYS6.65HS

Drawing No. 946466

Hydrobar type HYS6.65HS

Nominal length	4.4	4.8	5.2	5.4	5.6
Tube length L1	4517	4917	5317	5517	5717
Overall length L2	4989.5	5389.5	5789.5	5989.5	6189.5

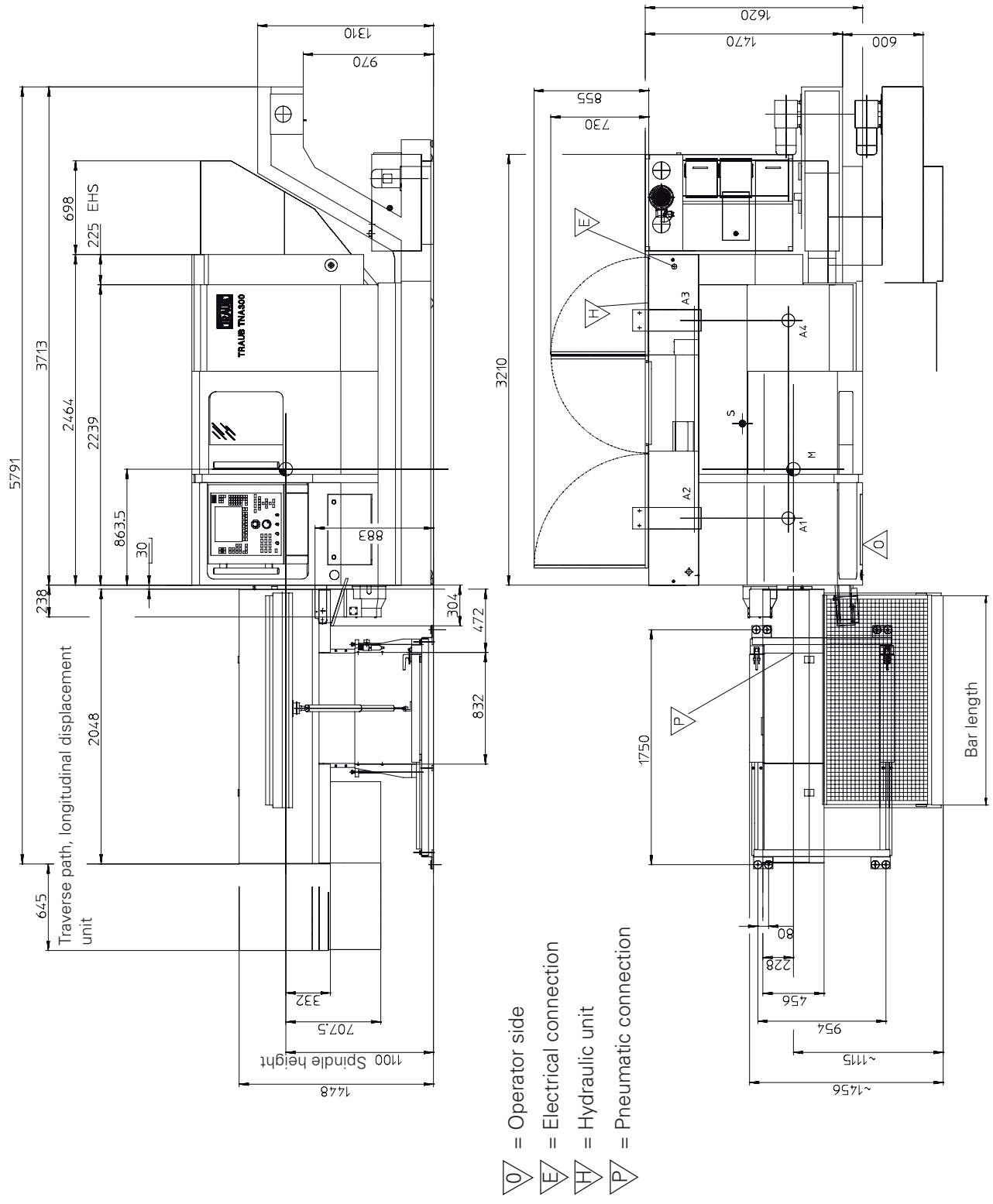


Installation diagram with LNS QL SERVO 2 BEL V

Drawing No. 946680

Version: Loading side at front
Max. material length 1000 mm

Loading side at rear, drawing No. 946679



Beware of being crushed
The installation site must be selected in such a way that there is no risk of anyone or anything being crushed against walls, pillars or hall installations by moving parts or the machine, including manually operated doors and flaps, etc.

Danger due to falling machine / parts
Ensure there is no-one underneath the suspended load!

Transporting the machine
The machine can be transported with the aid of a fork lift truck or crane.

The machine with bar loading magazine must in all cases be anchored in the ground.

The machine can be transported at temperatures down to -20 °C.
Special precautions must be taken when transporting the machine in regions with temperatures below -20 °C.

Ambient conditions

Min. room temperature	5°C
Max. room temperature	40°C
Max. humidity	50%
Transport temperature	max. - 20°C

Concrete flooring and/or intermediate floors

The load-bearing capacity must be verified by a structural engineer on the basis of the load per unit area and the resultant distribution of forces in the concrete flooring or intermediate floor.

Ground floor

The load-bearing capacity of the substrate must be verified on the basis of the load per unit area:
Maximum floor pressure: 173 kN/m^2

A concrete foundation must be established on native soil if the load-bearing capacity is insufficient!

Foundation data

Concrete quality B 25, ready-mix concrete K 2
Reinforcing bars: BSt. III K - dia. 12 mm

A foundation diagram can be requested if necessary.

Dimensions (without supplementary attachments)

Foundation length:	2010 mm
Foundation width:	1240 mm
Foundation depth:	500 mm

Bottom sump
If the machine is installed in a bottom sump, the convexity of the floor in the area of the bottom sump should not exceed 5 mm at most; if possible, it should be level or concave. If the maximum unevenness is exceeded, the bottom sump may come into contact with the underside of the machine or with machine components.

Machine weight and dimensions

The above weights refer exclusively to the basic machine, i.e. **without** chip conveyor, emulsion tank and workpieces.

Machine weight (kg)	**TNA 300**
with control cabinet	3500
Machine dimensions (mm)	
Length	2710
Width	1620
Height	1800
Bearing points* (kN)	
A1	11
A2	10
A3	9.3
A4	10

* Bearing points A see chapter *Installation and layout diagrams*

Position of the turret-type tool head

In order to transport the machine, the turret-type tool head must be located in the specified positions so that the transport retainers can be fitted.

Turret-type tool head	
X =	Top limit position +
Y =	0
Z =	500

Close open hose or pipe lines

To prevent any remaining cutting oil or lubricoolant dripping from the lines, the open hose lines and pipes must be sealed with plugs.

Attach transport retainer

- on the control console
- on the working area door
- between ATC mount and turret

Corrosion protection

All parts which are susceptible to corrosion must be sprayed with a corrosion-inhibiting agent. The corrosion protection must be re-applied whenever the parts are transported again.

Details on corrosion protection can be found in the documentation **Notes on Operating Materials.**

Packaging of the machine, machine components and accessories

- Machine mounted on planks complete with control cabinet.
  (The adjusting screws must be removed first.)
- Machine components and accessories mounted on pallets and secured

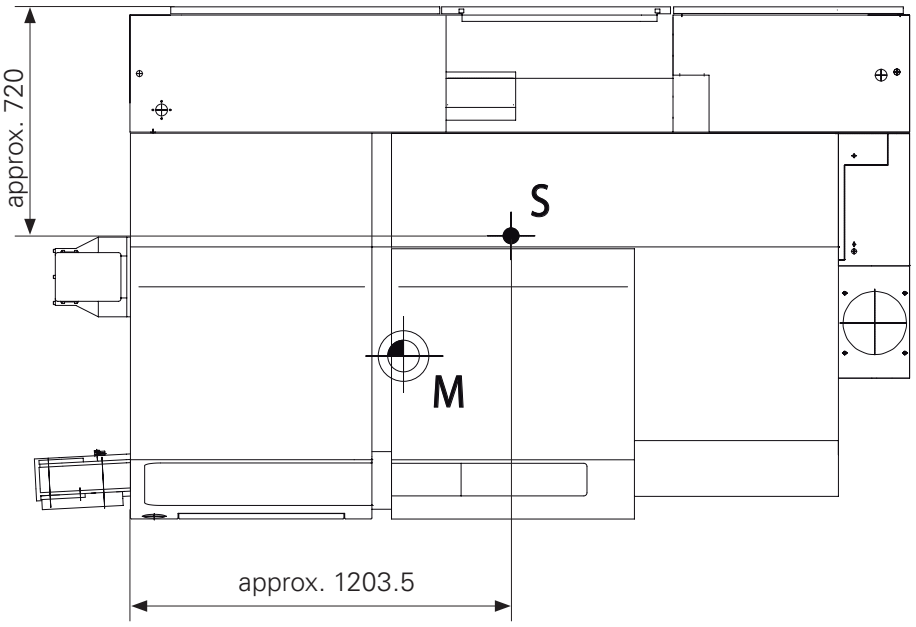
The following are located in the control cabinet, for example:

- Required records, such as geometry record or safety record
- Installation diagram
- Key for the control console
- Key for the fire protection system
  (depending on machine equipment)

The following are located in the chip conveyor, for example:

- Footplates (4x)
- Adjusting screws and locknuts (4x)
- Tools for the operator (such as special wrenches)

Centre of gravity of the machine (S) TNA 300 TX8i-s



Loading and shipping in crate

Machines shipped within Europe are always packed as described on page 21. When shipped to countries with extreme climates, the machine must be protected more extensively during transport. The machines are packed by special packaging companies for shipment to such countries. Only bolted (never nailed) crates are used here.
The period for which protection against corrosion is required must be known. A period of six months is normally assumed. The precise markings depend on the national regulations and customer's specifications.

Machine ready for shipment

Machine mounted on wooden planks and covered with plastic sheeting.

Machine	**TNA 300TX8i-s**
• Dimensions LxWxH (mm)	2750 x 1800 x 1900
• Weight (kg)	3500
• Packaging	Planks

Machine in wooden crate	
• Dimensions LxWxH (mm)	4200 x 2100 x 2250
• Weight (kg)	4610
• Packaging	Crate

Chip conveyor	
• Dimensions LxWxH (mm)	3750 x 700 x 1500
• Weight (kg)	430
• Packaging	Pallet

Chip tray	
• Dimensions LxWxH (mm)	3350 x 100 x 850
• Weight (kg)	260
• Packaging	Pallet

Lubricoolant tank	
• Dimensions LxWxH (mm)	1100 x 800 x 950
• Weight (kg)	200
• Packaging	Planks

Packagings are invoiced at cost price. They will be taken back in accordance with the new German regulations on packagings if delivered free of charge to TRAUB.

Transporting the machine with a fork lift truck

Danger due to falling machine / parts
Ensure there is no-one underneath the suspended load!

Beware of tipping over!
The machine must be secured to prevent it tipping over when transported by a fork lift truck!
Note the machine's centre of gravity!

- Non-slip mats should be placed on the fork arms when transporting the machine.
- When setting the machine down, ensure that the fork arms are not tilted, otherwise the planks will break.

Lifting and transporting the machine from the operator side

Fork lift truck requirements		
Lifting force, min.	kg	4000
Fork length, min.	mm	1400
Centre of gravity of the load	mm	approx. 1100
Distance of working area door	mm	100

Lifting and transporting the machine from the control cabinet side

Fork lift truck requirements		
Lifting force, min.	kg	4000
Fork length, min.	mm	1400
Centre of gravity of the load	mm	approx. 850
Distance of control cabinet	mm	approx. 100

Transporting the machine by crane (min. load capacity 5 t)

Danger due to falling machine / parts
Ensure there is no-one underneath the suspended load!

The machine must not be lifted via the control cabinet!

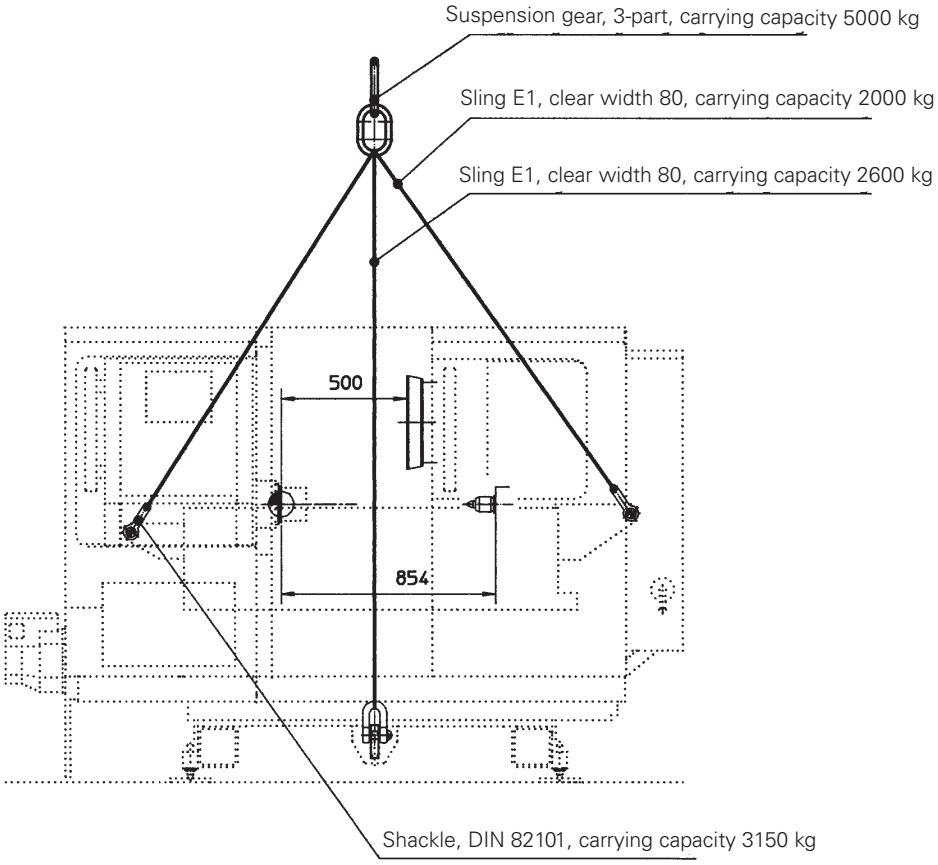
Beware of being crushed
The installation site must be selected in such a way that there is no risk of anyone or anything being crushed against walls, pillars or hall installations by moving parts or the machine, including manually operated doors and flaps, etc.

Set of hoisting gear and fittings

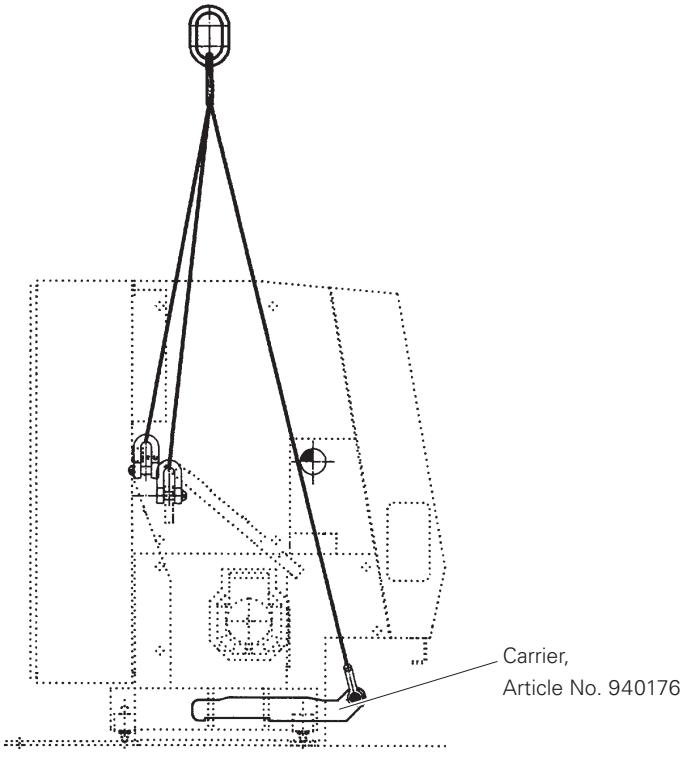
The complete set of hoisting gear and fittings, Article No. 083287, is available from TRAUB on loan and must be returned **completely and without delay** after use.

(Suspension points see next page).

Suspension points, front view



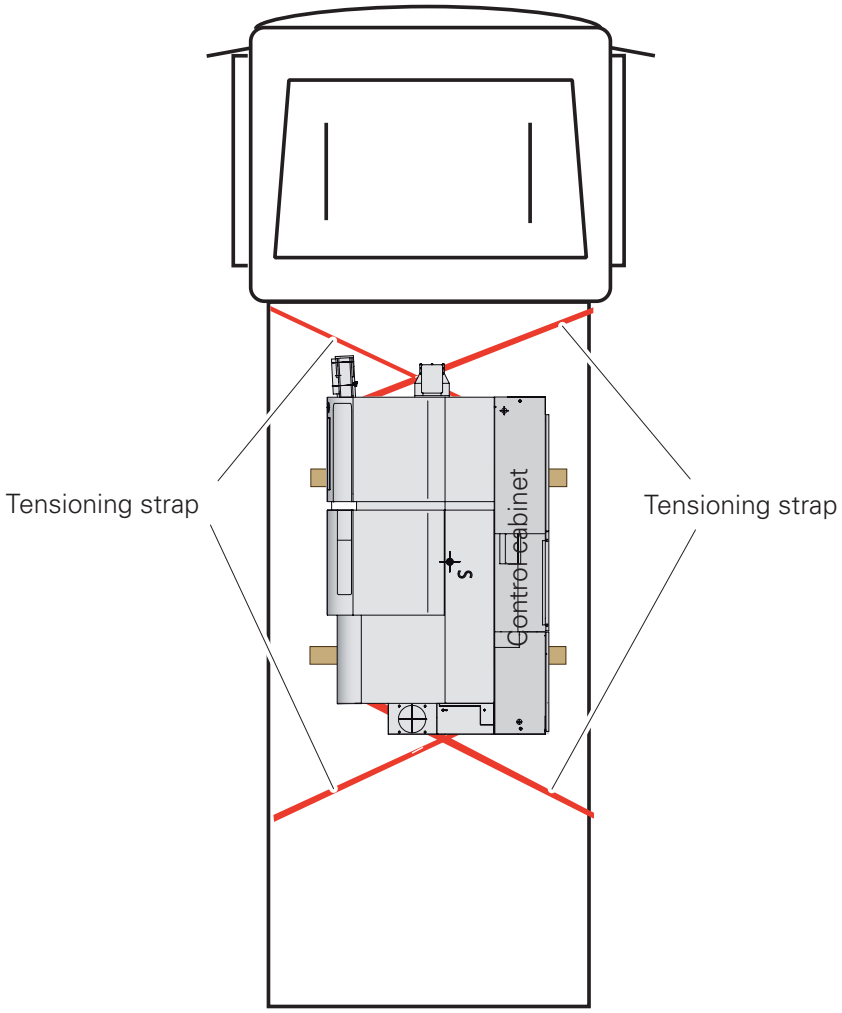
Suspension points, side view



Transporting the machine by truck

The truck should have pneumatic suspension in order to avoid major bumps during transport!

Example for transporting the machine on a truck



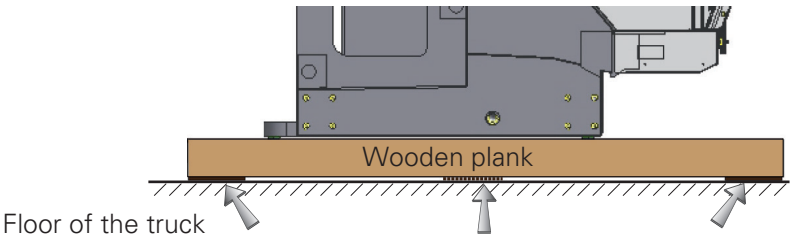
Securing the load

The load must be secured as follows so that it cannot slip.

- **Non-slip rubber mats**
  9 mm thick non-slip rubber mats must be placed between the floor and the wooden planks under the four (or six) bearing points of the machine.

The two wooden planks should only rest on the non-slip rubber mats at the outer bearing points of the machine.
The wooden planks should not rest on the floor in the middle.
If the wooden planks sag in the middle and rest on the floor, non-slip rubber mats must also be fitted there.

- The two wooden planks must be wider than the machine to improve its stability.



- **Diagonal lashing**
  The machine must be diagonally lashed to the floor of the truck with suitable straps.

Danger due to falling machine / parts
Ensure there is no-one underneath the suspended load!

Beware of being crushed
The installation site must be selected in such a way that there is no risk of anyone or anything being crushed against walls, pillars or hall installations by moving parts or the machine, including manually operated doors and flaps, etc.

Remove wooden planks

Remove the two wooden planks which have been screwed onto the machine's four feet.

- Raise machine approx. 200 mm above ground level.
- Steady machine with suitable supports.
- Each wooden plank is connected to the machine with two screws (width across flats 19-M12).
- Unscrew the wooden planks and screw the adjusting screws (in the chip conveyor) into the machine feet (with a protrusion of approx. 50 mm at the bottom).
- Move the machine to its installation position with a crane and place it in the required position.

Installing the machine

- Place the four footplates under the adjusting screws and lower the machine slowly and evenly onto the footplates (remove the guards beforehand if necessary). Ensure that the adjusting screws engage the recesses in the footplates.
- The rear footplates (control cabinet side) must be drilled into place with the dowels provided.

The bar feeding mechanisms and other accessories must be mounted, aligned and anchored in the ground in accordance with the manufacturer’s instructions.

Remove transport retainer

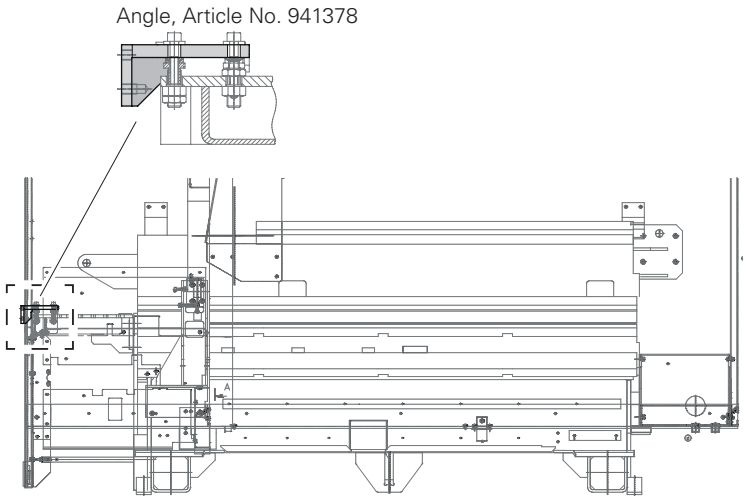
- on the control console
- on the working area door
- between ATC mount and turret

Aligning and anchoring the machine

The permissible deviation in longitudinal and transverse direction equals 0.02 mm over 1000 mm.

Place spirit levels on the areas provided.

Longitudinal alignment	Area at the top, on the clamping cylinder
Transverse alignment	Use the fixture Art. No. 090729. Alternatively, place a metal plate on the four machined points of the angle Art. No. 941378 as bearing area.



- Turn the adjusting screws to align the machine lengthwise and crosswise, as well as at the spindle height 1100.

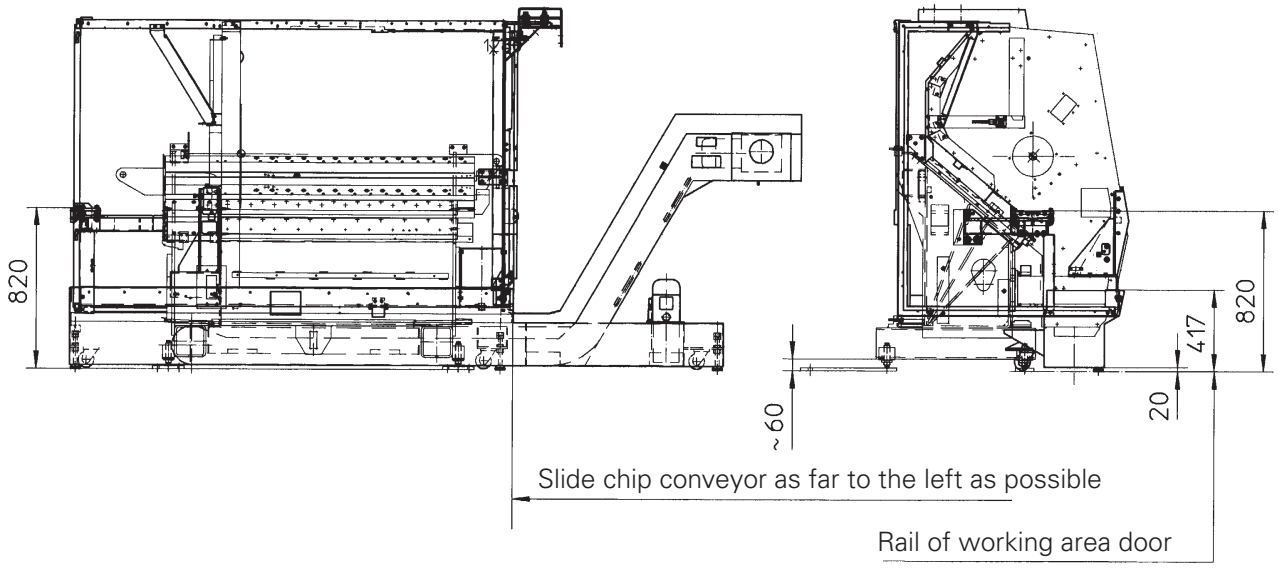
  The machine must be adjusted to exactly the **main spindle height of 1100 mm**.

- The rail of the working area door must be located 417 mm above ground level and the feed unit support 820 mm above ground level. These auxiliary dimensions must be maintained in order to ensure the tightness of the machine in combination with the chip conveyor (see drawing).
- The adjusting screws are fixed in position when the necessary accuracy has been obtained. Place washers in position (Article No. 687403), insert and tighten the screws.

Transport and installation of the chip conveyor

Note the manufacturer's user manual

- Transport the chip conveyor to the machine, then lift them off the pallet and set them down with the aid of suitable hoisting gear.
- Remove the accessories and documentation from the chip conveyor or chip pan if this has not been done already.
- From the operating side, push the chip conveyor under the machine as far as possible, then slide them to the right as far as possible.
- Raise the chip conveyor by means of the four adjustable feet until a horizontal clearance of 30 mm is obtained all-round.
- Remove the plugs from the hose lines and connect the hose lines.
- Connect the lubricoolant pumps to the power supply.



Transport and installation of the lubricoolant unit

Note the manufacturer's user manual

- Transport the lubricoolant unit to the machine, then lift it off the pallet with the aid of suitable hoisting gear.
- Position the lubricoolant unit beside the machine as specified in the layout and installation diagram.
- Remove the plugs from the hose lines and connect the hose lines.
- Connect the lubricoolant pumps to the power supply.

Indicator lamp

Connect the indicator lamp on the machine if removed for transport.

Fuels

Fill with fuels. Refer to chapter ***Fuels***.

Switching on the machine

Before switching on the machine, the key-operated switch must be set to ***"Production mode"*** in order to prevent the machine starting or moving unexpectedly.

Before starting up the machine for the first time, the operator must ensure that the machine and its safety mechanisms are in perfect working order. This must also be checked regularly during normal operation of the machine, but at least whenever it has been repaired or serviced.

- Switch the machine on via the master switch
- Press "NC ON"
- Press "Drives ON"
- Open / close working area door (activate safety function)

The control cabinet may only be opened when the master switch is off and must be locked in accordance with the applicable safety standards whenever the master switch is on.

Notes

- The electrical connections may only be made by duly qualified electricians.
- The electrical documentation supplied is definitive and binding.
  It must be available to the machine manufacturer's service personnel at all times.
- Potentiometer and switch settings, machine parameters, etc. may only be changed by the machine manufacturer's service personnel.
- The machine must be connected to the power supply via the master switch (multi-wire cable).
  It is essential to ensure a clockwise phase sequence when connecting the machine.
- The feeder to the master switch on the control cabinet can be routed from above or through a duct in the base of the control cabinet.
- The control voltages are connected to the PE on one side in accordance with EN 60204 Part 1 (VDE 0113).

Note the information in the circuit diagrams

Overview of fuels

The information in the data sheets of the fluid manufacturers and in the document **Notes on Operating Materials** must be observed during all work involving fuels and fluids.

The filling quantities of the fuels and fluids are stated in the respective fluid schedules.

	Quantity [litres]	Designation	Initial start-up
Central lubrication	1.8	Slideway lubricant CGLP68	Factory-filled by **TRAUB**
Hydraulic system	70	Hydraulic fluid DIN 51502 HLP(D)32	To be provided by the **customer**
Lubricoolant unit	275	Cutting oil / emulsion	
Chip conveyor **Gear lubrication**	Note the manufacturer's user manual		
Bar loading magazine	Note the manufacturer's user manual		

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