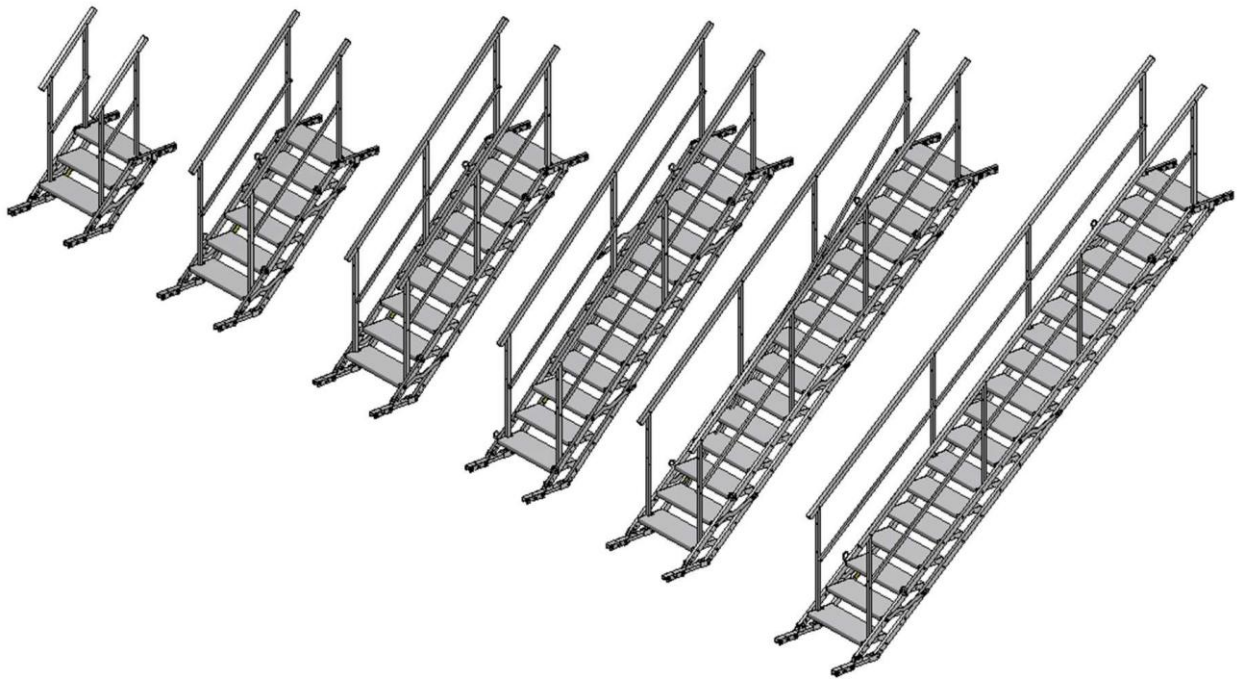
Aluminium SAT stairs



General Safety Principles

The installation instructions are included as an appendix to the aluminium SAT trench stair technical documentation. The trench steps consist of components according to the specifications attached to the delivery. Read this manual before starting installation and use. Incorrect installation or use can lead to a risk to health or life. Due to the considerable size and weight of the individual components, special care must be taken during transport, installation and use of the staircase. Keep this manual as a source of information for users of the staircase and its service personnel..

1. Installation or use of the staircase which is not in accordance with the contents of these instructions may adversely affect the performance of the product and/or be a source of danger.
2. The manufacturer is not responsible for any damage caused by incorrect installation of the product or its misuse.
3. No modifications to the construction of the staircase components are permitted.
4. The staircase is designed for use in an industrial environment, i.e. for use by adults who comply with health and safety regulations, are trained and are not under the influence of alcohol.
5. It is not permitted to be under the stairs while they are being used by others.
6. Do not allow the simultaneous use of the staircase by a number of persons having more weight than the permitted load of the staircase.
7. Stairs are used to move people to reach the lower levels of deep excavations as well as in the opposite direction. Staying on the steps as well as placing objects that are not stair equipment in these areas is against the operating rules.
8. Do not use the stairs to transport objects other than tools, instruments, etc.
9. Since in most cases the support for the staircase is unpaved ground, the possibility of the ground slipping and becoming wet must be taken into account, which can disturb the stability of the staircase.
10. If there is a risk of falling from height, a safety harness should always be used during assembly and disassembly.

Aluminium SAT Stairs

The EasyStairs Universal aluminium staircase SAT is quick and easy to install. The perfect and safe alternative to wooden stairs. This temporary staircase system consists of 6 basic modules with 3,6,9,12,15 and 18 steps with an angle adjustment range of 0 to 50 degrees for 3 to 12 steps and an angle adjustment range of 25 to 50 degrees for 15 and 18 steps stairs. The staircase is mounted on a horizontal base of which the lower and upper parts are fixed with anchors, but otherwise without support posts.

Application options:

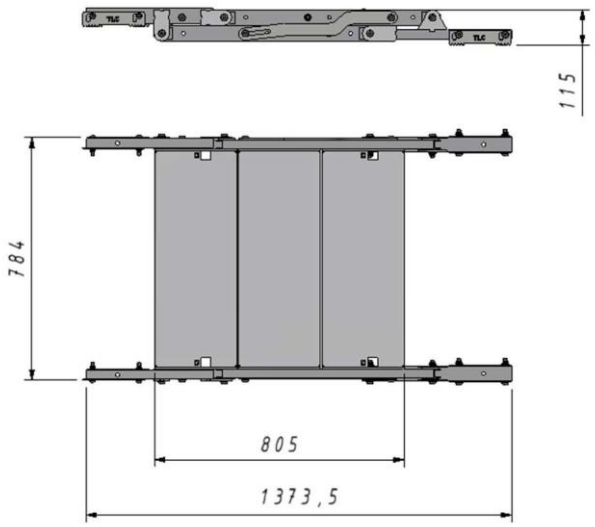
- As a temporary staircase to overcome small differences on the ground floor of different places (excavations, construction layers, etc.).
- As a temporary passage for road works, construction pits and ditches.
- As a temporary staircase for level differences (buildings, deep foundation excavations and underground parking garages).

Belangrijkste kenmerken:

- Wide incline angle from 0 to 50 degrees (for stairs with up to 12 steps).
- Modular, available in modules for 1 staircase from 3 to 18 steps.
- Possibility to connect the floors (e.g. 18+18 steps, 15+12 steps, etc.).
- Possibility to mount railings on one or both sides.
- Possibility to change the location of use at any time (by means of a crane).
- According tot the EN12811 standard.

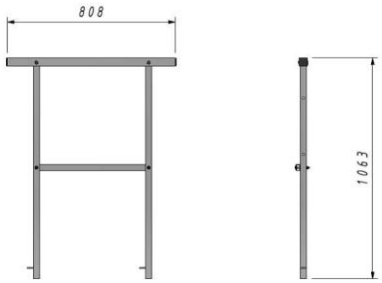
Parts

TAS-S3C



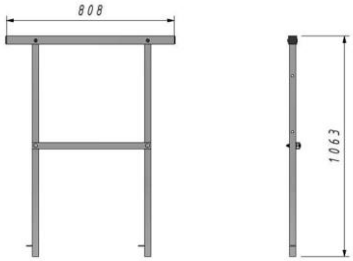
19,40 kg

TAS-BP3C



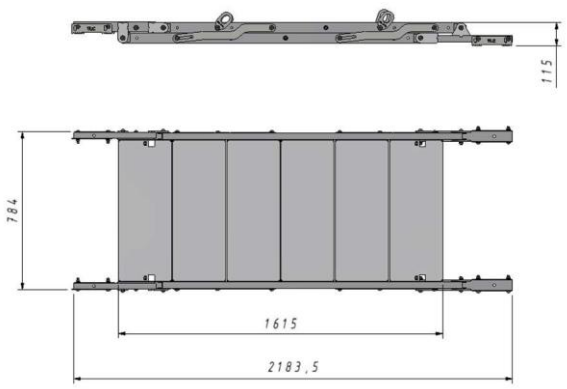
3,20 kg

TAS-BL3C



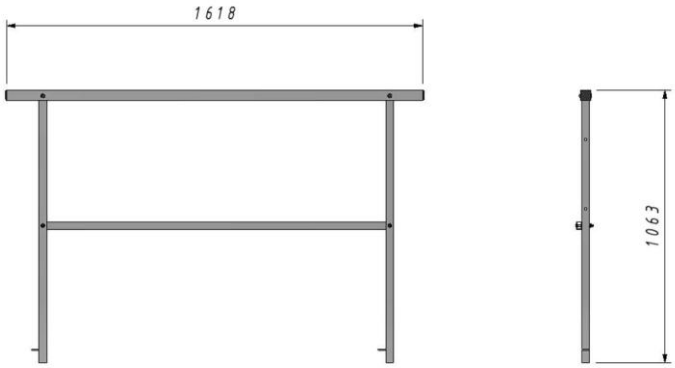
3,20 kg

TAS-S6C



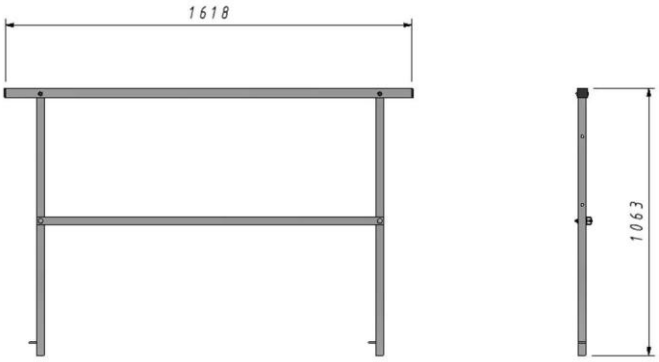
33,10 kg

TAS-BL6C



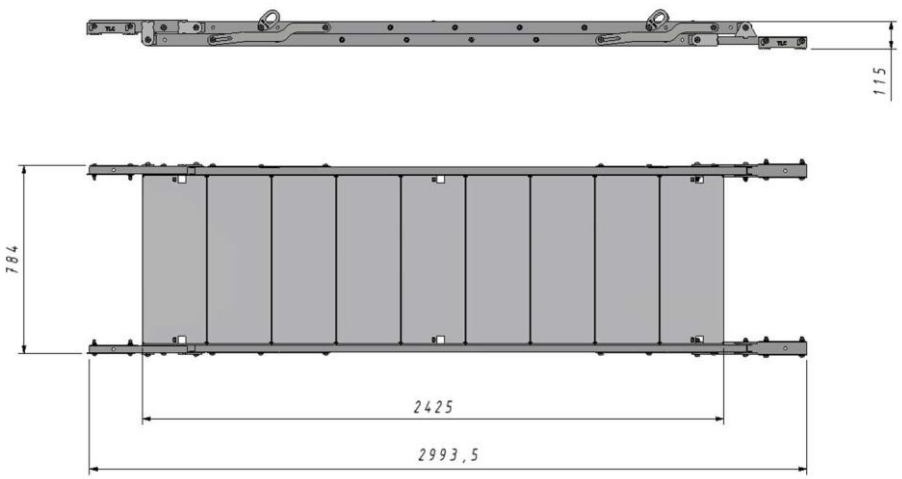
4,60 kg

TAS-BP6C



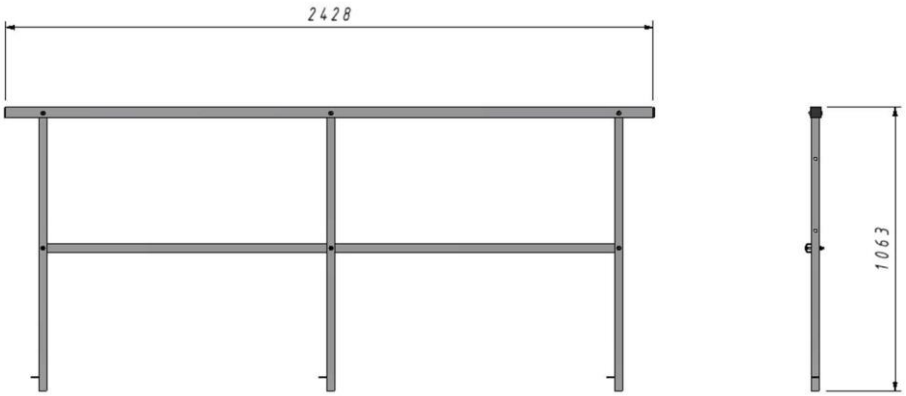
4,60 kg

TAS-S9C



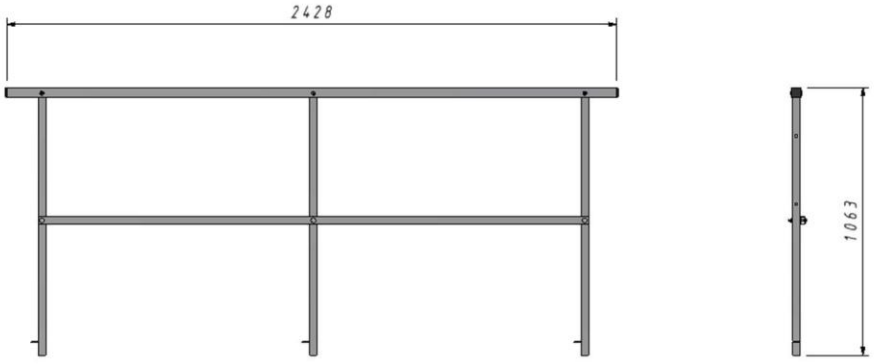
45,10 kg

TAS-BL9C



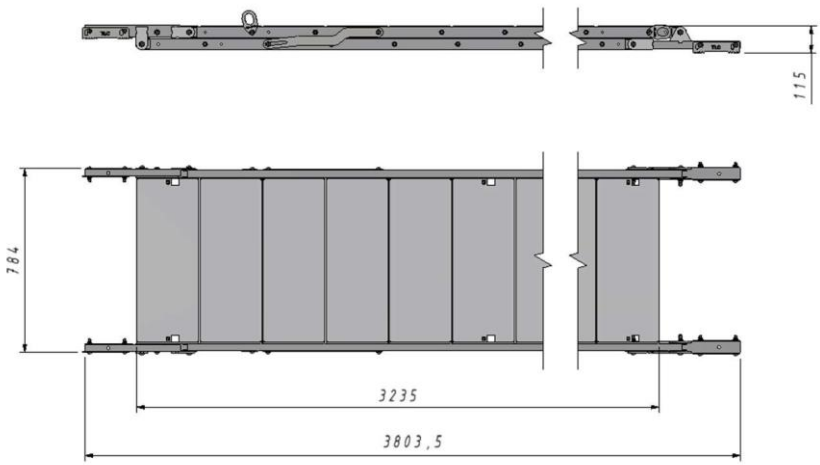
6,95 kg

TAS-BP9C



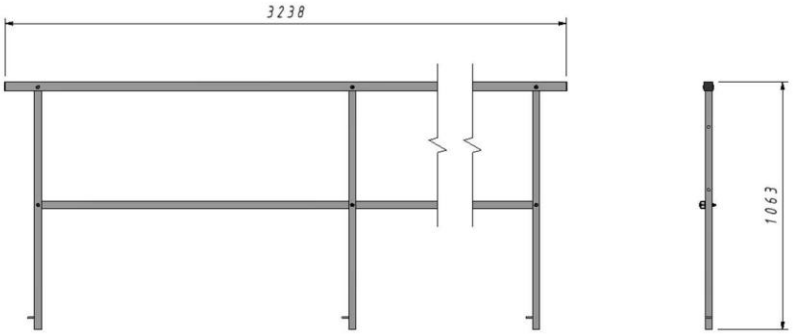
6,95 kg

TAS-S12C



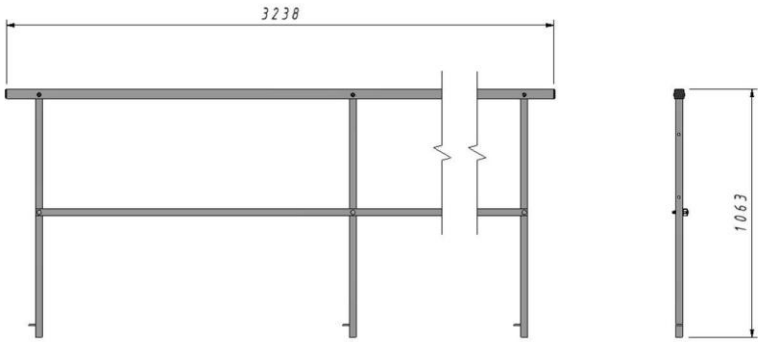
56,10 kg

TAS-BL12C



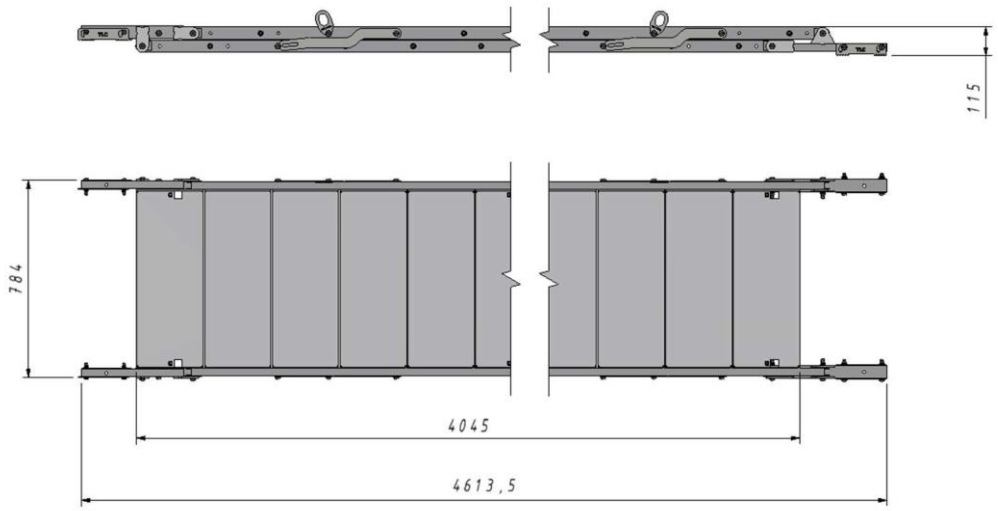
8,40 kg

TAS-BP12C



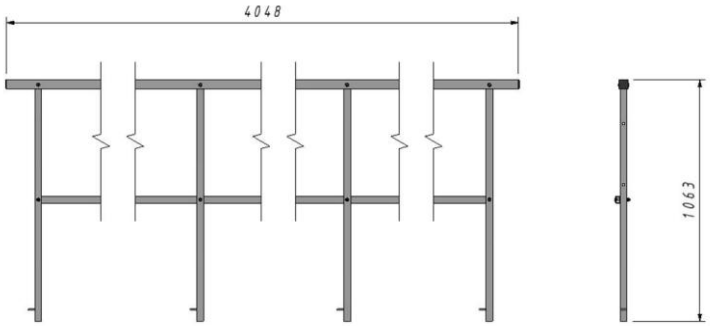
8,40 kg

TAS-S15C



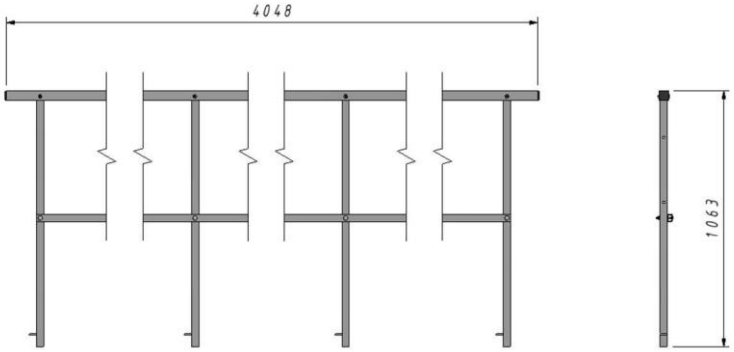
70 kg

TAS-BL15C



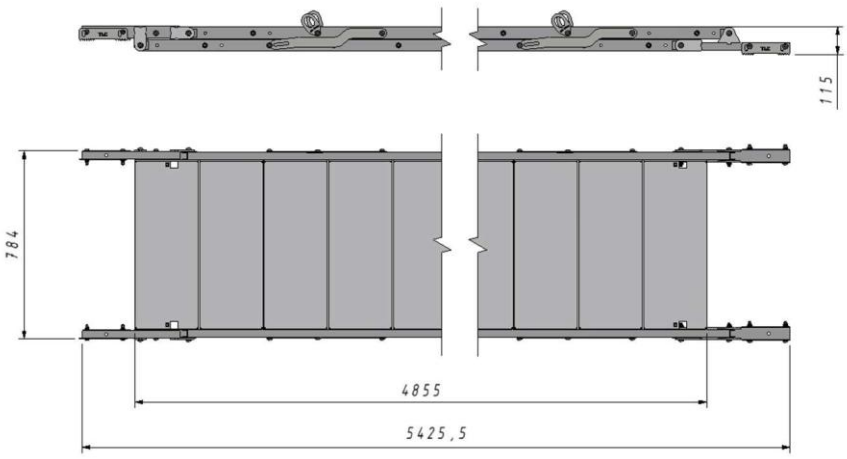
10,70 kg

TAS-BP15C



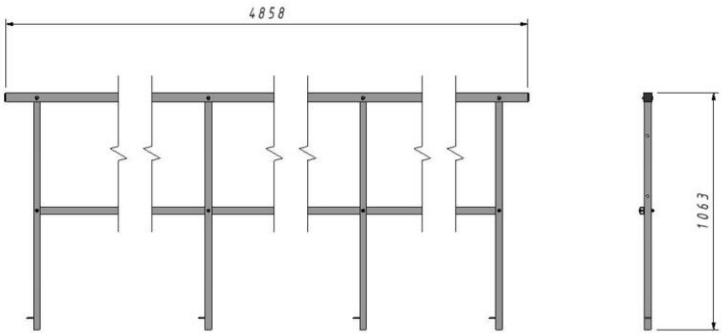
10,70 kg

TAS-S18C



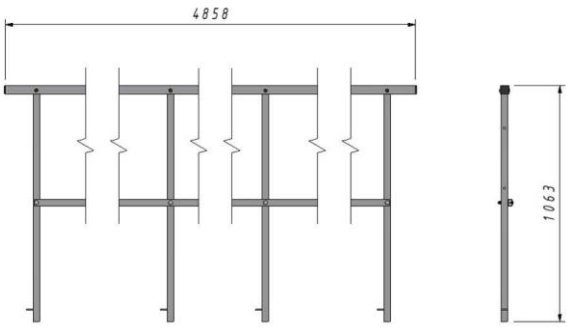
81,60 kg

TAS-BL18C



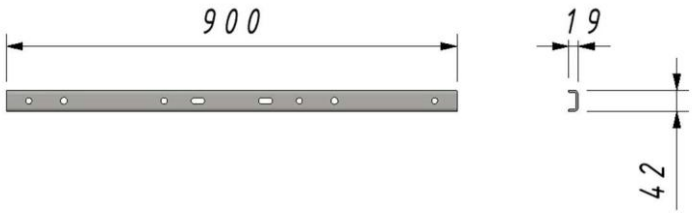
12,10 kg

TAS-BP18



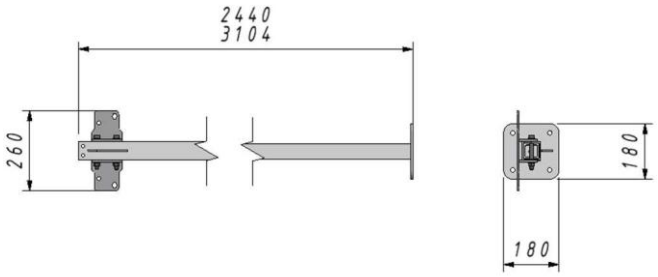
24,81 kg

TAS-L7



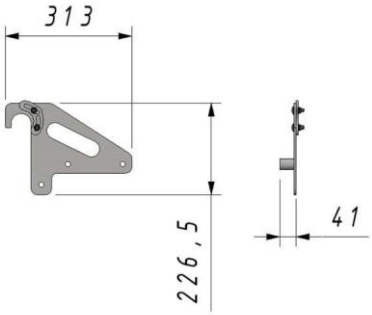
1,90 kg

TAS-PR6



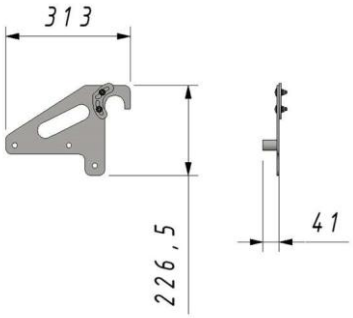
9,76 kg

TAS-SGLH4



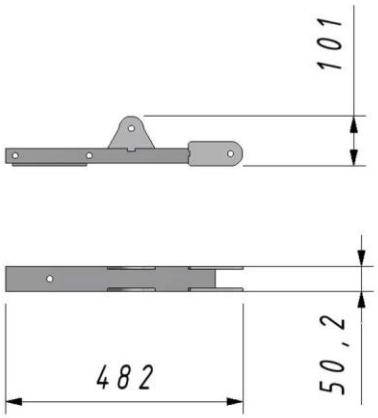
1,54 kg

TAS-SGPH4



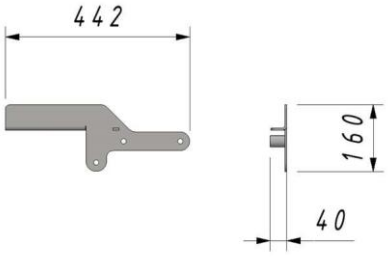
1,54 kg

TAS-SDAL1



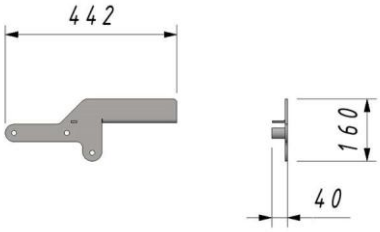
0,84 kg

TAS-SGLH3



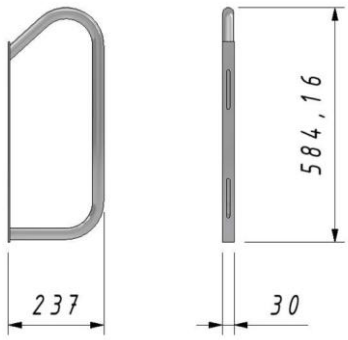
1,50 kg

TAS-SGPH3



1,50 kg

TAS-UB-CH



0,50 kg

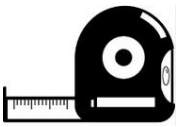
Connectors

		3 Steps	6 Steps	9 Steps	12 Steps	15 Steps	18 Steps
Number	**Connectors**						
1	Lock screw DIN 603 – M8x65 A2	4 Stuks	4 Stuks	6 Stuks	6 Stuks	8 Stuks	8 Stuks
2	Bolt ISO 7380 A4 M12 × 80	8 Stuks	8 Stuks	8 Stuks	8 Stuks	8 Stuks	8 Stuks
3	Bolt ISO 7380 A4 M12 × 70	10 Stuks	18 Stuks	18 Stuks	18 Stuks	22 Stuks	22 Stuks
4	Bolt ISO 7380 A2 M8 × 35	4 Stuks	4 Stuks	6 Stuks	6 Stuks	8 Stuks	8 Stuks
5	Bolt ISO 7380 A2 M10 × 60	4 Stuks	4 Stuks	4 Stuks	4 Stuks	4 Stuks	4 Stuks
6	Bolt ISO 4762 A2 – M12 × 30	4 Stuks	8 Stuks	20 Stuks	32 Stuks	40 Stuks	52 Stuks
7	Bolt ISO 4762 A2 – M10 × 25	4 Stuks	4 Stuks	6 Stuks	6 Stuks	8 Stuks	8 Stuks
8	Washer ISO 7089 A2-8 – 200 HV	4 Stuks	4 Stuks	6 Stuks	6 Stuks	8 Stuks	8 Stuks
9	Washer 7089 A2-12 – 200 HV	26 Stuks	34 Stuks	34 Stuks	34 Stuks	38 Stuks	38 Stuks
10	Washer 7089 A2-10 – 200 HV	12 Stuks	12 Stuks	14 Stuks	14 Stuks	16 Stuks	16 Stuks
11	Nut ISO 10511 A2 – M8	4 Stuks	4 Stuks	6 Stuks	6 Stuks	8 Stuks	8 Stuks
12	Nut ISO 10511 A2 – M12	22 Stuks	34 Stuks	46 Stuks	58 Stuks	70 Stuks	82 Stuks
13	Nut ISO 10511 A2 – M10	4 Stuks	4 Stuks	4 Stuks	4 Stuks	4 Stuks	4 Stuks
14	Crown nut M8	4 Stuks	4 Stuks	6 Stuks	6 Stuks	8 Stuks	8 Stuks

Number	Connector for TAS-L7	Number of pieces
1	Bolt ISO 4762 – M12 x 30	6
2	Washer ISO 7089 8-ZO-12 – 200 HV	6
3	Nut ISO 10511 ZN – M12	6

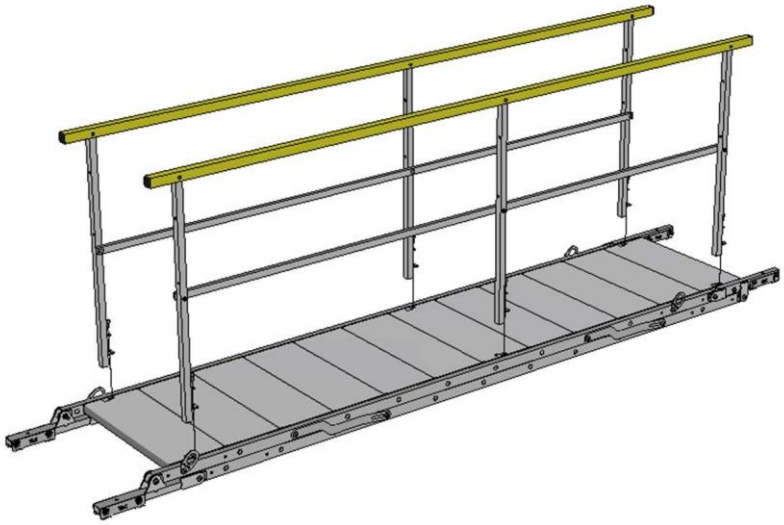
Number	Connector for TAS-PR6	Number of pieces
1	Washer ISO 7089 A2-12 – 200 HV	4
2	Bolt ISO 4762 A2 – M12 × 100	2
3	Nut I SO 4032 A2 – M12	2

Tools

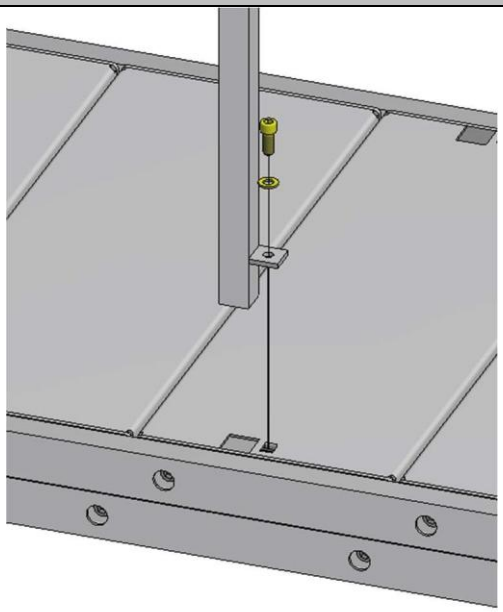
	Wrenches: 13, 16, 18
	5, 8, 10
	Spirit level
	Measuring tape
	Lifting devece with a lifting capacity of min. 1 t when assembling lon sets

Assembly

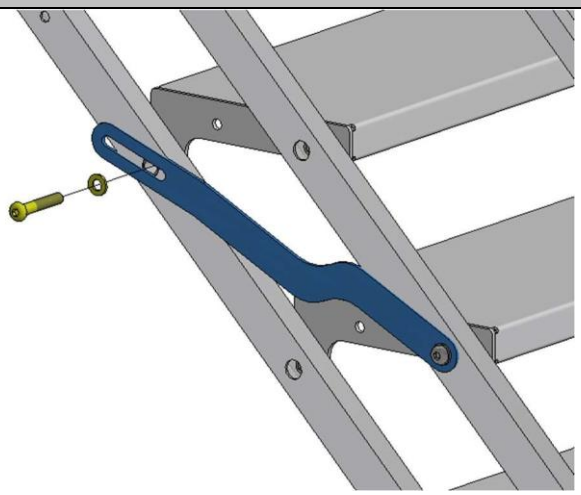
Installing the handrails tot he staircases. Slide the handrail posts into the sockets in the steps.



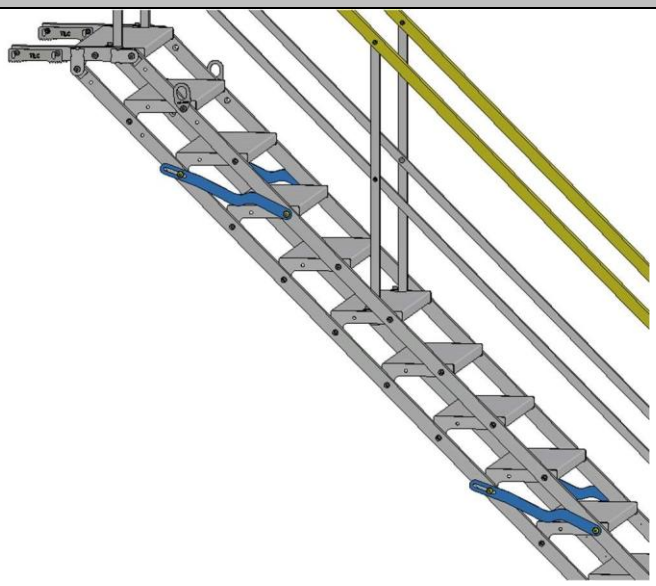
Tighten the handrail locks – tighten the screws in the step sockets.



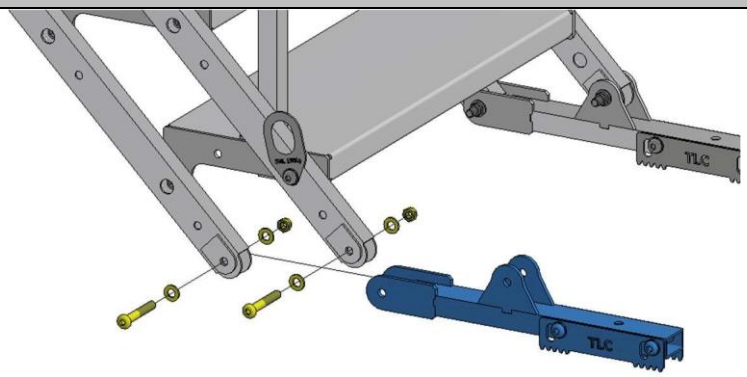
For the 15, 18 step stairs, the locking device, which is unscrewed for transport, must be fitted back in place. Remove the bolt together with the washer, put through the other side of the lock (oval hole) tighten.

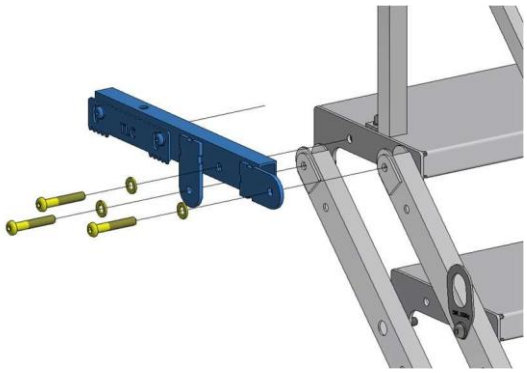


In order to ensure the rigidity of the staircase, the bolts securing all locks must be tightened. Tighten connections with approximately 60% of the tightening torque prescribed for the diameter and class of connector.

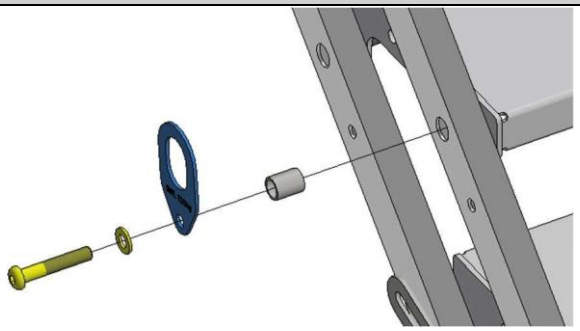


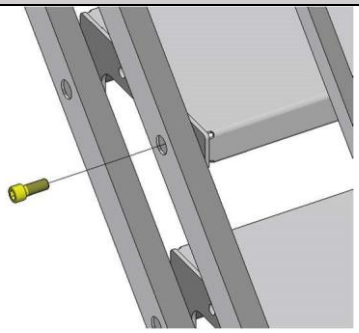
Joining the stairs.
Removing of the staircase foot – unscrew bolted connections the stair steps are bolted tot he stringers with. Remove the bottom feet in one staircase and the top feet in the other.



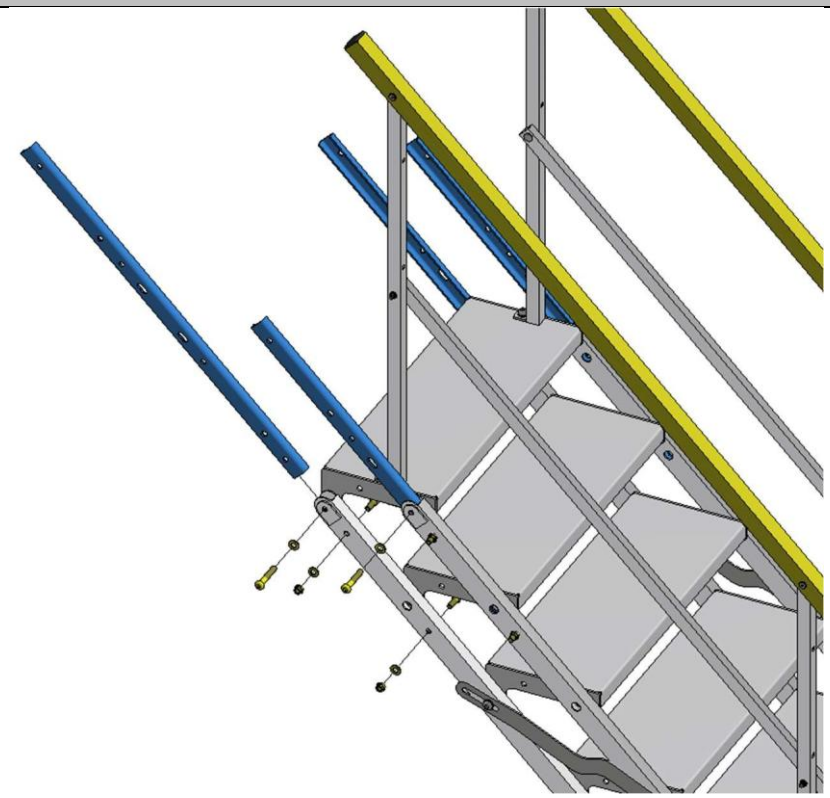


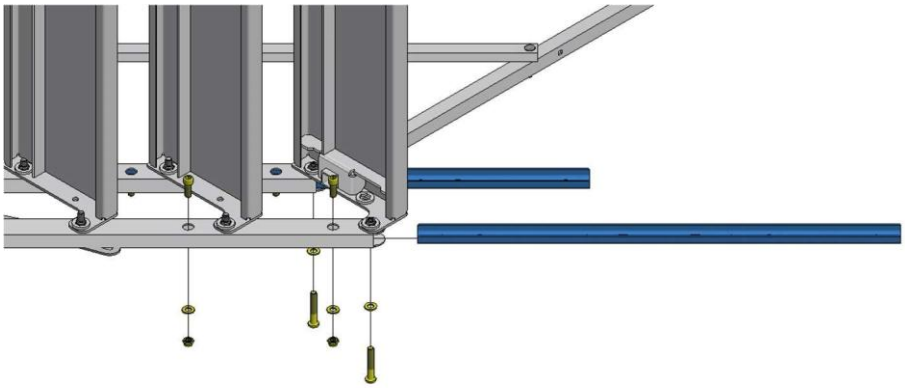
Removing the L30 handle connector, unscrew the bolt fixing the handle, pull off the handle, pull out the sleeve, screw in the bolt. Note: bot screwing in required.



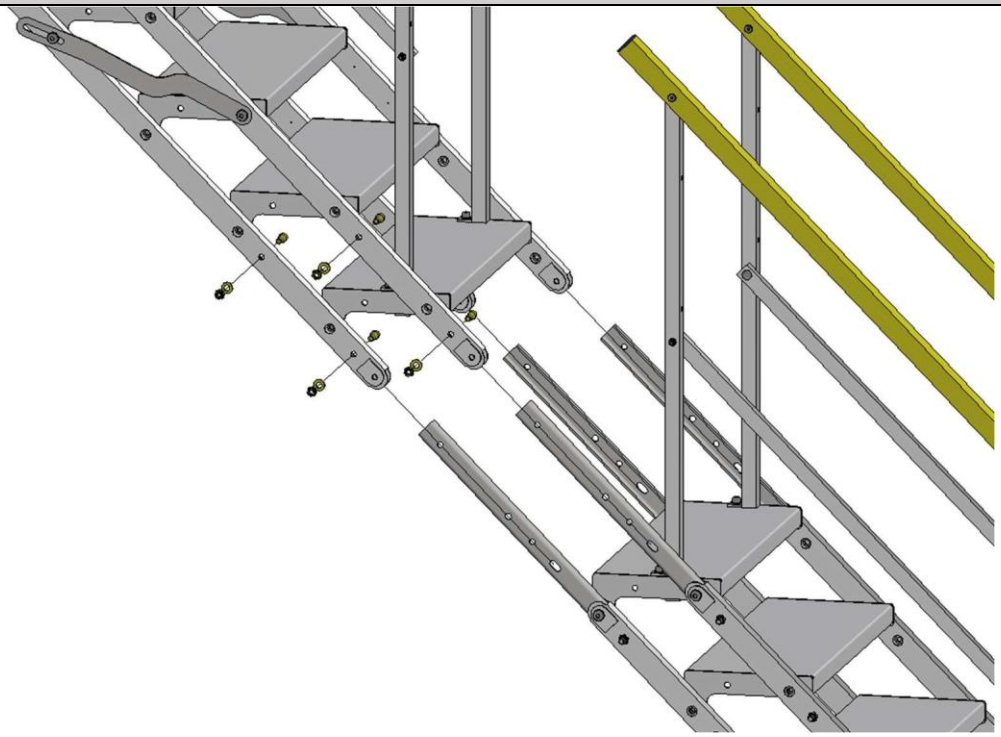


Installing the L7 connector.
For the staircase in its unfolded state, remove the upper feet then slide the connector into the centre of the cheek beam and fasten with bolts.

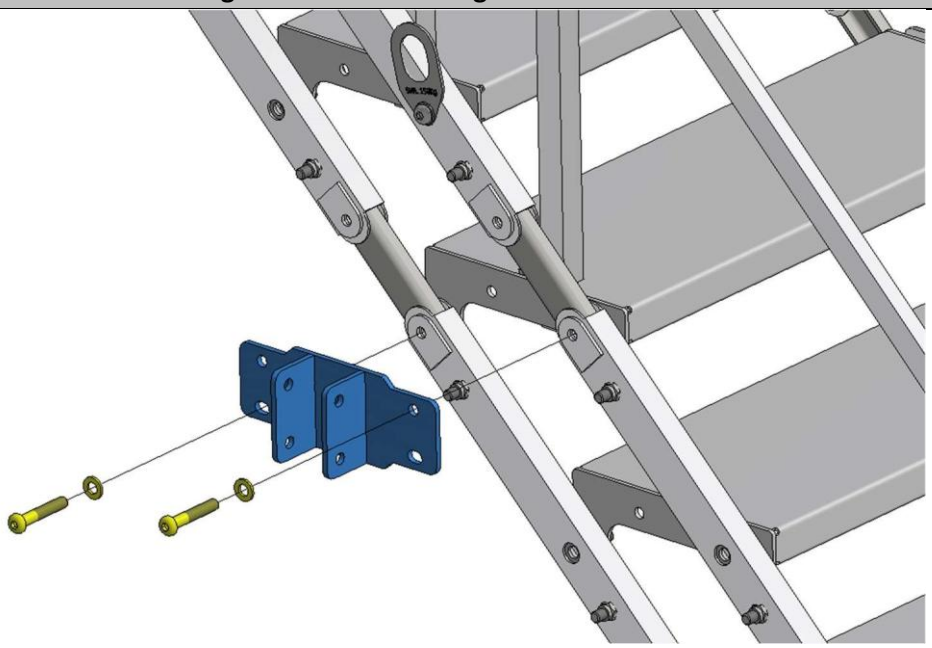


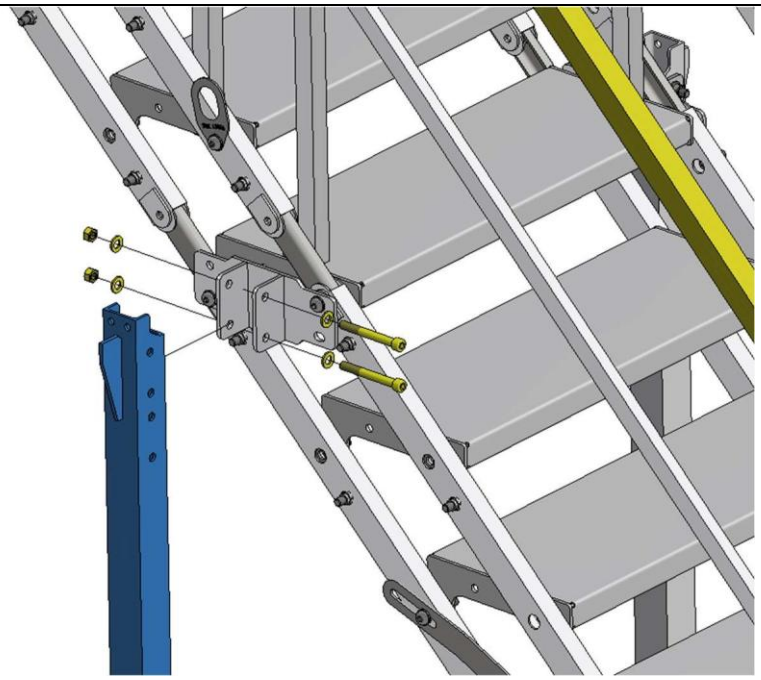


Slide the stairs with the dismantled base feet onto the stairs with the fastened L7 connectors and bolt in place.

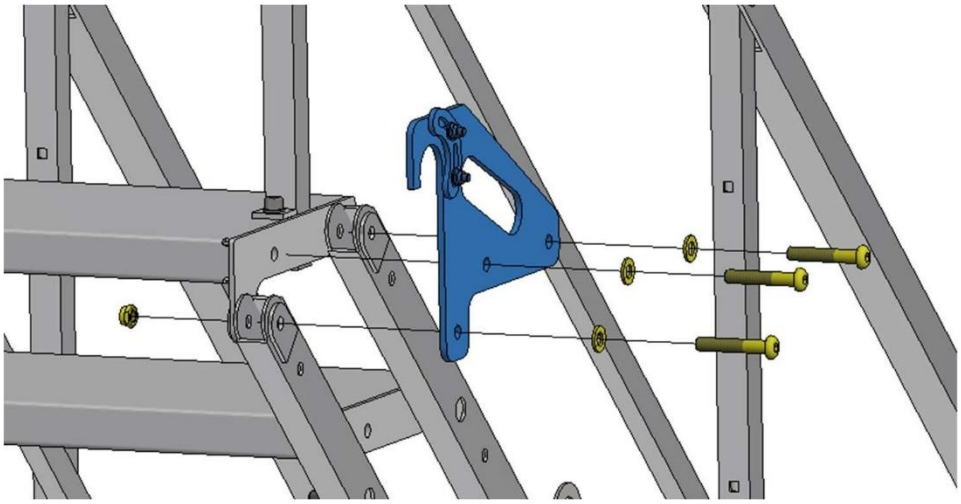


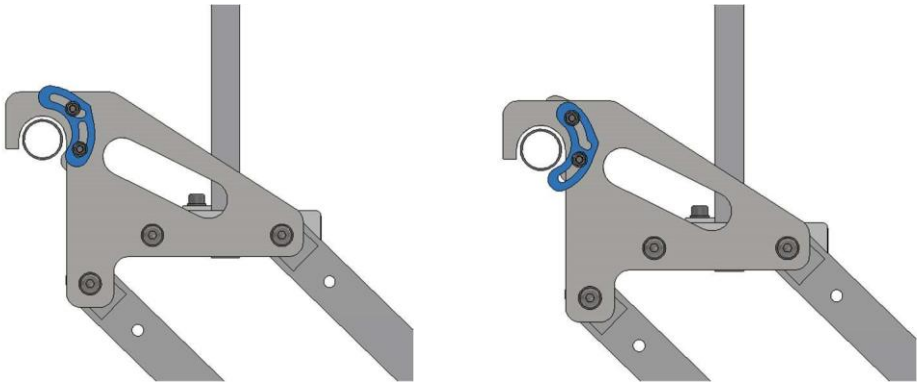
Assembly of PR6 supports – if a set of steps has tob e supported.
Unscrew the bolt connections securing the step, insert the fixing bracket fort he PR7 supports, put the bolt and washer through the bracket and tighten with te nut.





Push the post onto the PR7 and screw it in place.
Installing the top bracket: remove the top foot according to p. 4.5.1., use the same set of bolts to attach the TAS-SGLH4/TAS-SGPH4 bracket. Before mounting on the round section, release the bolts holding the locking mechanism, move it to the upper position, place the bracket and secure it by moving the locking mechanism to the lower position and tighten the bolts.





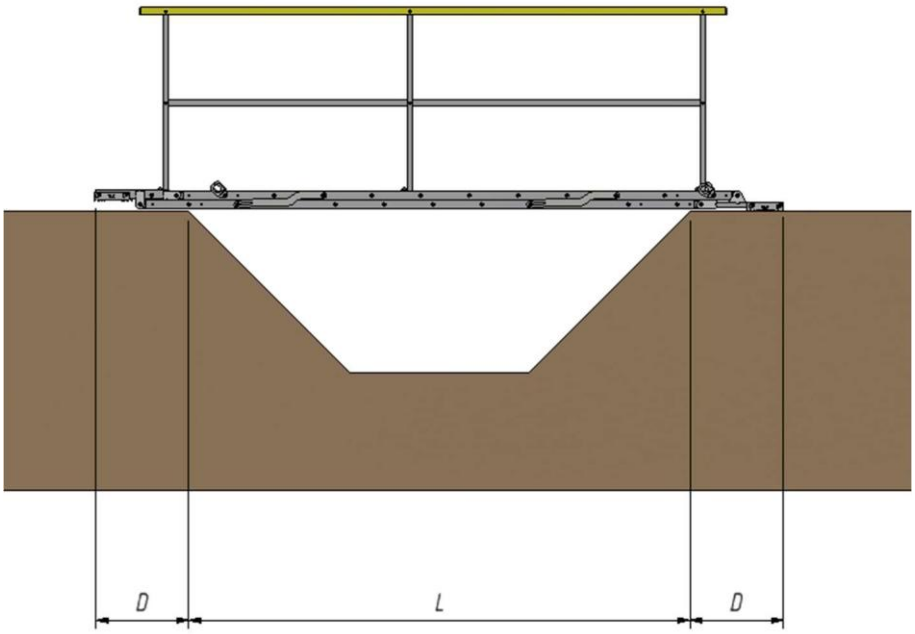
Assembly of the complementary handrail: slide the handrail on and fasten with the bolt washer nut kit.


Staircase assembly

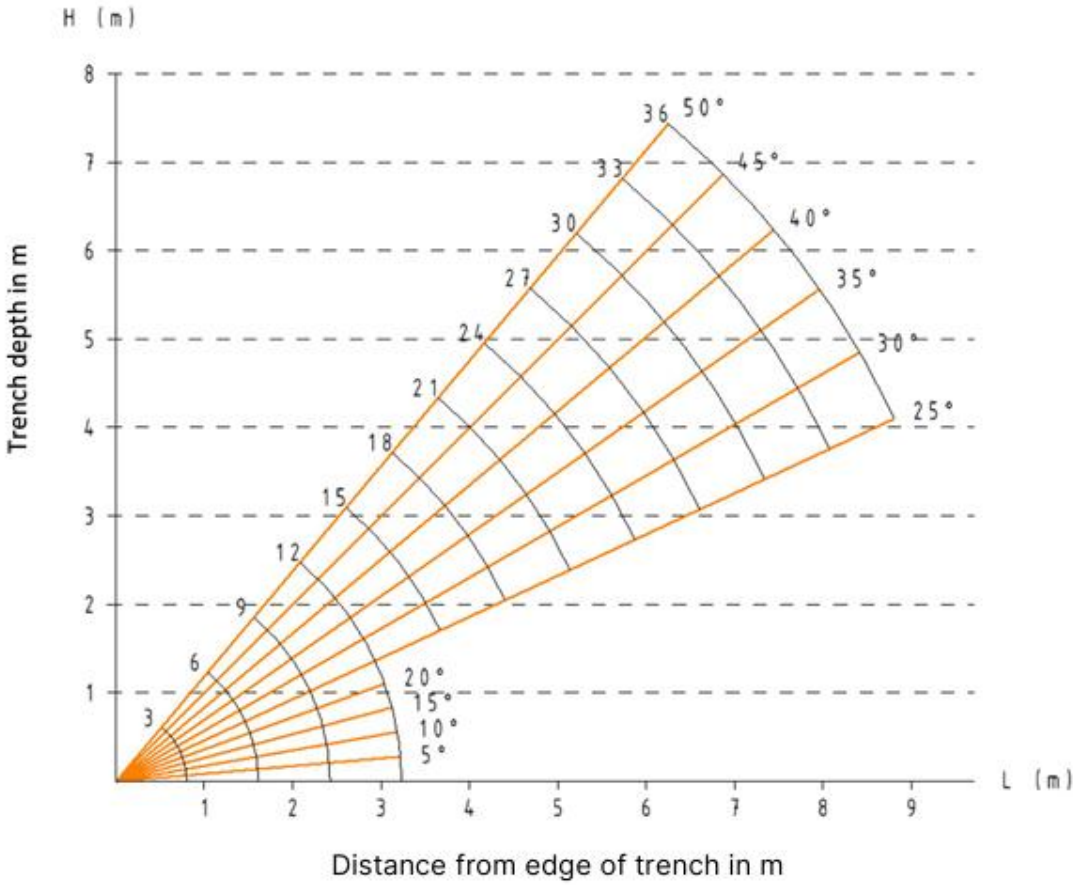
Assembly should take place on a pre-prepared substrate that is level and provides a stable support for the staircase throughout its service life, Due to the temporary use of the staircase, assembly on reinforced concrete slabs, concrete blocks or wooden blocks is permitted. If timber blocks and blocks are used, it is a prerequisite that they are set into a hardened gravel bed with an effective drainage system in a secure and stable manner. When installing on the ground, an effective drainage system is required. In addition, the staircase must be anchored using the holes in the base feet; if the staircase is installed on the ground, the minimum anchor length is 400 mm.

It is possible to combine stairs to create a circulation route leading to the building floors. In this case, a combination of two staircases with a maximum of 24 steps in a flight is permitted. E.G. 12+12=24, 18+6=24. It is necessary to support the flight halfway along its length; two PR6 supports should be used for this purpose.

Stairs of 3, 6, 9, 12 steps can be used as a footbridge over the excavation, the minimum distance at which the footbridge must support the edge of the excavation on one side and the other side is D = min 500 mm. In addition, the footbridge must be anchored to the ground.



Slope diagram



The stairs must be installed in the excavation with at least two skilled workers and a crane.

1. Prior to installation, the installation zone must be demarcated so that it does not interfere with ongoing construction work and does not create a hazard.
2. Determine the location of the foundation of the stairs so that they do not interfere with the construction work being carried out and do not create a hazard.
3. Prepare the location of the stairs.
4. Lift the stairs using a lifting device and place in the excavation on the prepared ground.
5. Rest the whole against the top edge of the trench.
6. Immobilse by anchoring and tightening the locks.

For staircases with 15 and 18 steps, it is recommended to set the angle of the staircase in advance and to tighten all bolt connections to approximately 60% of the tightening torque prescribed for the respective diameter and class of connector.

Operating conditions

Assembly.
The basis for the proper use of the staircase is its correct positioning. This mainly concerns the proper levelling of the substrate on which the stairs will be placed. Too much deviation from the horizontal will cause all the steps to be misaligned, which can cause operational difficulties and the danger of an accident. Therefore, the staircase should be checked periodically to ensure that the substrate on which it stands has not moved, which could cause the staircase to deviate from the horizontal, and the threaded connections should also be checked to ensure that they are tight.

To ensure proper operation when using the staircase, the following steps must be taken when assembling the individual components.

- Restrain the lower part of the staircase to prevent sliding and rising.
- Restrain the top of the staircase by ensuring that it is supported by a stable edge in the form of a concrete block or wooden block.
- Tighten the lock.

Dismantling.
Before dismantling, a safety zone must be defined. Removal of the footbridge involves pulling it down from above the excavation using a lifting device after first ensuring that it is not restrained to either edge of the excavation. The dismantling of the staircase must be carried out in the reverse order to the installation. The operation should be carried out by at least two qualified personnel.