FOCUS ON QUALITY YOUR LIFT EXPERT



WORK PLATFORMS

Installation, maintenance and repair: When it comes to scaffold-less platforms, you can depend on our superior experience as well as effectiveness and efficiency right from the start. You can rest assured that we provide adjustable solutions, innovation and maximum safety in every single situation.



HAMBURG HAFENCITY DEVELOPMENT



With the development of HafenCity, Hamburg is setting new standards in Europe at the very least: On a site of 157 hectares, a completely new urban district with a maritime atmosphere is being created. It will unite the realms of work, home life, culture, leisure, tourism and retail. Stingl

is helping the construction project to progress in the form of a major delivery of scaffolding shoes of various designs for the erection of conventional assembly platforms.

WORK PLATFORMS

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SCAFFOLDING SOCKET

Approved solely for assembly platforms in concrete shafts (min. concrete quality German C20/25). The imbedding of scaffolding sockets into masonry and drill holes of any kind is prohibited.

Use pre-cast concrete blocks as shown below for masonry shafts. The durable synthetic sockets remain in the shafts for later maintenance activities.

| Item No. | Description | Dimensions (hxwxd mm) | Colour |
|------------|--------------------|-----------------------|--------|
| 0050100126 | Scaffolding socket | 26x26x100 | orange |
| 0050100131 | Scaffolding socket | 31x31x100 | yellow |



PLUG-IN SCAFFOLDING SHOE

The plug-in scaffolding shoe and scaffolding sockets allow the safe and simple installation of assembly platforms in lift, chimney and ventilation shafts. The durable synthetic sockets remain in the shafts for later maintenance activities.

The plug-in system is not only time- but also costefficient. No drillings are required.

TÜV Süd subjected the universal scaffold shoe $4\,\mathrm{kN}$ and $7\,\mathrm{kN}$ to a safety test according to the test specification DIN EN 12811-1: 2004. The universal scaffold shoe was awarded the TÜV test certificate with certificate No. Z1170599550002.

| Item No. 004102504001 | Description | Dimensions (hxwxd mm) 25x25x95 | bearing capacity (kN) |
|--------------------------|---|--------------------------------|-----------------------|
| 004103003501 | Plug-in scaffolding shoe Plug-in scaffolding shoe | 30x30x95 | 3.5* |
| 004103007001 | Plug-in scaffolding shoe | 30x30x95 | 7 |

* 3.5 kN not certified

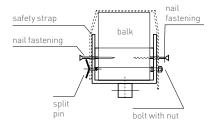
Details: Profile steel four-edged bar $25 \times 25 \, \text{mm}$, $30 \times 30 \, \text{mm}$ or profile steel tube $30 \times 30 \times 3.2 \, \text{mm}$ with welded steel shoe $90 \times 117 \times 3 \, \text{mm}$. Incl. steel plate inlay for point loads of max. F = $7.0 \, \text{kN}$

Max. point load given a min. concrete quality C12/15: F = 2.5 kN

Max. point load given a min. concrete quality C20/25: $F = 7.0 \, kN$

 $\label{prop:symmetric} Assumption: Force \, F \, was \, applied \, on \, the \, most \, unfavourable \, position.$





4



Details: Base plate and u-shaped shoe made of St37-2 steel (some versions with steel plate inlay), primed
Measures: 190x180x6mm,
base plate with 4 drillings 13mm

UNIVERSAL SCAFFOLDING SHOE

Alternative to the plug-in scaffolding shoe, the universal scaffolding shoe also allows the safe and simple instalation of assembly platforms in lift, chimney and ventilation shafts, however, with different fixing methods and without the need of additional scaffolding sockets.

Due to its moderate measures and weight, easy handling can be ensured. The universal scaffolding shoe complies with German DIN 4420-1 (12.1990) as well as DIN 175 norms and rules. It carries the GS-seal of approval No. 02045.

The universal scaffolding shoe can be fixed to structural parts in various ways like with dowels or T-head bolts as well as by welding. Depending on the fixing scenarios it can carry point loads between $3\,kN$ and $7\,kN.$ It must not be charged with dynamic loads though.

In below-mentioned scenarios, the applicable force F was applied on the most unfavourable position.

TÜV Süd subjected the universal scaffold shoe to a safety test according to the test specification DIN EN 12811-1: 2004. The universal scaffold shoe was awarded the TÜV test certificate with certificate No. Z1170599550001.

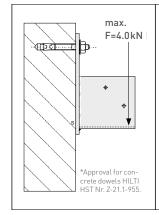
| Item No. | Description | Dimensions (hxwxd mm) | bearing capacity (kN) |
|--------------|----------------------------|-----------------------|-----------------------|
| 004200004001 | Universal scaffolding shoe | 190x180x6 | 4 |
| 004200007001 | Universal scaffolding shoe | 190x180x6 | 7 |

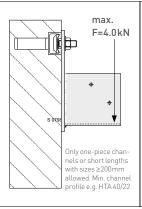
In concrete C 20/25 Dowel fixing with 2 dowels HILTI HST3 M12x115* or equiv. with proof.

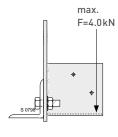
In concrete C 20/25 screw connection with anchor channel, 2 T-head screws 40/22 M12 x (≥30) FV/GV-S 4.6

Steel frame connection St37-2 with 2 machine screws M 12 x 40 (strength classification 5.6).

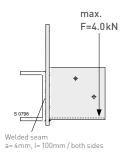
Steel frame connection St37-2 welded. Bearing structural part must go flush with at least bottom part of steel plate. In the masonry shaft using chemical wall plugs. The load-bearing capacity must in each case be calculated by a design planner!



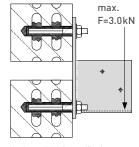




The bottom 60mm of the shoe's steel plate must lie near the wall or girder. Construction personnel have to ensure that charges in the bottom pressure zone of the steel plate can be absorbed by the girder.



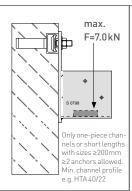
Construction personnel have to ensure, that charges in the bottom pressure zone of the steel plate can be absorbed by the girder.

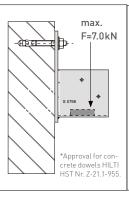


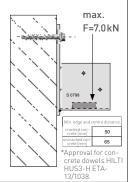
Use is possible after verification, e.g. by means of tensile tests.

In concrete C 20/25 screw connection with anchor channel, 2 T-head screws 40/22 M12 x [≥30] FV/GV-S 4.6 In concrete C 20/25 Dowel fixing with 2 dowels HILTI HST3 M12x115* or equiv. with proof.

In concrete C 20/25 Dowel fixing with 2 dowels HILTI HUS3-H $10 \times 90^*$ or equiv. with proof.







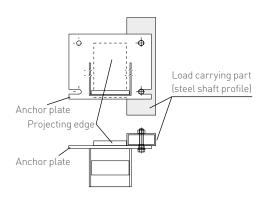
The force F was set at the most unfavorable position.

UNIVERSAL SCAFFOLDING SHOE FOR STEEL SHAFTS

The universal scaffolding shoe for steel shafts allows mounting on steel profiles with sufficient thickness. For fixing on steel profiles with 2 hexagon bolts M12, vertically attached to the left or to the right and screwed or mounted otherwise with equiv. proof.

Prepared to carry a balk of 100 mm width; Maximum load capacity 5,5kN; Screwing or welding to a steel shaft profile.

Base plate and u-shaped shoe made of st37-2 steel, primed; Measures base plate: 228x180x8mm, with 2 drillings 14mm and 2 open long holes 14x28mm







UNIVERSAL SCAFFOLDING SHOE REVOLVING

The revolving scaffolding shoe eases the mounting of work platforms in difficult shafts with abnormal measures. The fixing is made with 4 anchor dowels HILTI HSA M 12/150/75 Type S or equivalent. Minimum concrete quality German C20/25.

Prepared to carry a square balk of $80\,\mathrm{mm}$ width, max. load $4.0\,\mathrm{kN}$, min. bearing length of the balk on the shoe $95\,\mathrm{mm}$.

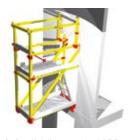
Requirements by the fixing material manufacturer must be followed exactly, e.g. edge distances, installation depth. This includes also the transmission of forces within the structural part. It is assumed that fixing material for the stage shoe is not charged with additional forces.



| Item No. | Description | Dimensions | bearing capacity |
|--------------|--------------------------------------|------------|------------------|
| | | (lxwxh mm) | (kN) |
| 004200004005 | Universal scaffolding shoe revolving | 150x150x8 | 4 |
| 004200007003 | Universal scaffolding shoe revolving | 150x180x10 | 7 |



Variant 1: Scaffolding made of GRP with one working level incl. lateral fall protection devices according to DIN EN 12811-1. The perfect configuration for modernisation and maintenance work like drive change, rope change, rescue or loosening brakes.



Variant 2: Scaffolding made of GRP with one working levels incl. lateral fall protection devices according to DIN EN 12811-1. The working level is reached by means of an access ladder. This variant allows safe working for example in 2,70m to 3,20m high shaft heads of machine roomless lifts.

TELESCOPIC WORK PLATFORM STINGL-MOBIL PANO

Telescopic work scaffolding made of glass reinforced polyester (GRP), which can be used in various shafts.

Stingl-mobil PANO can be installed at any shaft door opening independent of the number of landings. The areas of application range from panoramic lifts to all those lifts where the shaft walls cannot be used as fixing ground for platforms. Stingl-mobil PANO is the perfect tool for installation of machine roomless lifts with machinery located in the shaft head as well as for service and repair work on existing units.

TELESCOPIC WORK SCAFFOLDING MADE OF GLASS REINFORCED POLYESTER (GRP): Unlike conventional, static working platforms, Stingl-mobil PANO is designed for multiple use in shafts with depths ranging from 1,000 mm to 2,000 mm (in 250 mm steps). The scaffolding is designed for a working load of max. 300 kg/m² per level. It does not require a substructure. The following scaffolding widths (working area) are available: 700 mm and 1,000 mm. Due to the favourable properties of GRP as well as an intelligent lightweight construction, installation can be performed by one trained person (e.g. elevator fitter).

BENEFITS: • Guarantees a safe and approved solution. • The platform can be used in shafts without rear wall (e.g. panoramic lifts, open throughlifts). • The requirement of one-man-assembly is met by the moderate weight of the scaffold elements (the heaviest subassembly weighs approx. 31 kg). • No dependence on third parties for scaffolding erection and thus administrative savings. • Considerable savings compared with conventional wooden scaffolds as the mobile scaffold can be re-used. • Since no substructures are required, the mobile scaffold can be installed quickly; it is also flexible in use and thus highly economical. • The modular design allows the assembly of a single or bi-level mobile scaffolding. • Defined material properties of GRP, such as high loading capacity, high impact strength, long service life, low weight, high corrosion resistance as well as electrical insulation are the advantages of GRP over conventional materials such as wood, steel or aluminium. • Low installation time of approx. 50 minutes by trained personnel.

300 kg/m² • Stingl-mobil PANO may only be mounted on sufficiently stable parts of structural works capable of taking up and passing on the forces which are produced • The lintel section must be able to withstand horizontal forces of min. 3,5kN • The door threshold must be able to withstand horizontal forces of min. 4,2kN and vertical forces of min 6,6kN • Base plates or screw jacks with base plates must be in firm contact with both the sills and the legs of the scaffolding. Compensate for uneven ground with screw jacks with base plates. NEVER USE unstable objects such as blocks, loose bricks, etc. • The vertical wall with the door opening for mounting must be concrete (wall thickness min. 100 mm) • The front vertical girder must extend higher than the door opening by at least 100 mm. The distance between floor and ceiling must not be shorter than 2,350 mm • Before setting foot on the upper work platform, at least two telescopic spacers must be mounted as per the installation instructions and extended out to the surrounding shaft wall, profiled girder or guide rails. If the spacers are placed between the working platform and existing elevator guide rails, this must be done with adapters, which can be supplied additionally • It must be ensured that the spacers (telescopic rods) can be placed perpendicular to the working platform and push against the shaft wall • The gap between the perimeter of the working platform and the shaft wall may not exceed 1,000 mm. The following maximum shaft widths must be observed when using the platform: • Platform width of 700 mm: maximum shaft width 2,800 mm • Platform width of 1,000 mm: maximum shaft width 3,100 mm • Required minimum opening widths to ensure proper installation: platform width plus 100 mm • Guardrails must be used on all open sides and ends

of scaffold platforms. Top, midrails and toeboards

are required • All socket pins must be secured with

split pins at any time • A detailed drawing and spec-

ifications must be kept with the scaffold on the job •

Safety gear for fitters like for example fall arrester,

full body harness, suitable anchorage point etc. must

be used in accordance with local requirements at all

times during the erection, use and dismantling of the

platform • Be careful while handling inner and outer GRP tubes as well as guard rail sections with inner and outer parts. Interior parts might slide out easily

causing damage or injuries.

INSTALLATION REQUIREMENTS

STINGL-MOBIL PANO: • Save working load



Patent-No. PCT 202700; 229243; US 7,108,100







| TELESCOPIC | WORK | PLATFORM | STINGL-MOBIL | PAN0 |
|-------------------|------|-----------------|--------------|------|
| | | | | |

VARIANT 1 – SINGLE LEVEL PLATFORM

 Item No.
 Description (platform width/platform depth)

 16001062001
 Stingl-mobil PANO 600 mm/1.000-2.000 mm

 $16001062002 \quad Stingl-mobil \, PANO \, 600 \, mm/1.000-2.000 \, mm, \, without \, fall \, protection$

16001072003 Stingl-mobil PANO 700 mm/1.000-2.000 mm

 $16001072005 \quad Stingl-mobil \, PANO \, 700 \, mm/1.000-2.000 \, mm, \, without \, fall \, protection$

16001102001 Stingl-mobil PANO 1.000 mm/1.000-2.000 mm

16001102003 Stingl-mobil PANO 1.000 mm/1.000-2.000 mm, without fall protection

ACCESSORIES FOR VARIANT 1

Item No. Description

16005062001 GRP panel kit 600 mm/1.000-2.000 mm, 8-part 16005072001 GRP panel kit 700 mm/1.000-2.000 mm, 8-part 16005102001 GRP panel kit 1.000 mm/1.000-2.000 mm, 8-part

VARIANT 2 - ELEVATED PLATFORM

 Item No.
 Description (platform width/platform depth)

 16001082001
 Stingl-mobil PANO 830 mm/1.000-2.000 mm

 16001112001
 Stingl-mobil PANO 1.130 mm/1.000-2.000 mm

ACCESSORIES FOR VARIANT 2

Item No. Description

16005072006 GRP panel kit 700+830 mm 16005102006 GRP panel kit 1000+1130 mm

VARIANT 3 – DOUBLE LEVEL PLATFORM

 Item No.
 Description (platform width/platform depth)

 16002062001
 Stingl-mobil PANO 600 mm/1.000-2.000 mm

 16002072001
 Stingl-mobil PANO 700 mm/1.000-2.000 mm

 16002102001
 Stingl-mobil PANO 1.000 mm/1.000-2.000 mm

ACCESSORIES FOR VARIANT 3

Item No. Description

16005062002 GRP panel kit 600 mm/1.000-2.000 mm 16005072002 GRP panel kit 700 mm/1.000-2.000 mm 16005102002 GRP panel kit 1.000 mm/1.000-2.000 mm

ACCESSORIES FOR ALL VARIANTS

Item No. Description

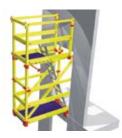
01311000002 Full body harness AX 20, EN 361

013999003 Fall arrester EN 360 with steel wire HWPS 4.5 m

01311000003 Safety gear set for the lift industry

01609070002 Stowage box kit for Stingl-mobil PANO (3 boxes)

08004102001 Stowage box type 4 08004263001 Stowage box type 5 08004193003 Stowage box type 6.1



Variant 3: Scaffolding made of GRP with two elevated working level incl. lateral fall protection devices according to DIN EN 12811-1. The upper scaffolding level can be accessed over a rung ladder. This variant allows safe working for example in 3,40m to 3,90m high shaft heads of machine roomless lifts.



Full body harness AX 20, EN 361

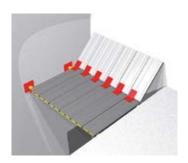


Fall arrester EN 360 with steel wire HWPS $4.5\,\mathrm{m}$

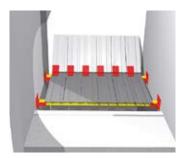


Safety gear set for the lift industry

Maintenance platform with 3-piece side protection



Maintenance platform with inclined side panels



Installation parallel to the shaft door

TELESCOPIC WORK PLATFORM STINGL-MOBIL SERVICE

The mobile platform made of glass reinforced polyester (GRP) is a safe and approved alternative compared to conventional platforms made of wood. Stingl-mobil service can be fixed to the shaft wall from the car roof or by way of other access means. The platform lengths can vary in an interval of 1.500 up to max. 2.700 mm. The platform width is determined by the chosen floor panel length.

Stingl-mobil SERVICE can optionally be equipped with either a 3-part guard rail system or an inclined fall protection system. Both systems can also be combined

BENEFITS: • Approved for a work load of $300 \, kg/m^2$. • A GS-seal (certificate no. 00023) awarded by a German notified body guarantees a safe and approved solution. • Fast amortisation as the mobile platform can be used for more than one project. • One product for shafts with different depths and widths. • Moderate weight combined with high stability. • The requirement of one-man-assembly is met. • Single, non-conductive floor panels with anti-skid surface. • Lateral side protection optionally available. Either 3-piece side protection consisting of handrail, knee board and kick board or inclined panel sections. • The platform width is determined by the chosen floor panel length. Thus, different panel kits can be used to vary the platform size. • Either plug-in scaffolding shoes or dowel scaffolding shoes can be used to fix the platform. • No dependence on third parties for scaffolding erection and thus administrative and time savings. • Defined material properties of GRP such as high loading capacity, high impact strength, bong service life, low weight, high corrosion resistance as well as electrical insulation are the advantages over conventional materials such as wood, steel or aluminium. • Also usable in shafts with centrally guided ropes.

INSTALLATION REQUIREMENTS STINGL-MOBIL SERVICE: • The lift shaft walls must be made of reinforced concrete (grade ≥ German C20/25). • The installation site as well as the erecting position in the hoistway must be accessible without any danger. Stingl-mobil SERVICE can be mounted either from the shaft pit or the car roof. • During erection, use and dismantling of the platform, the fitter must secure himself with a fall arrester and full body harness (or similar safety devices) attached outside of the hoistway to an DIN EN 795 compliant anchor point with a min. capacity of 750 kg. The safety gear must always comply with local health and safety requirements. • The shaft walls where the universal scaffolding shoes are fixed to must be parallel to each other. • The shaft surface must be free of holes or any projecting parts so that the universal scaffolding shoes make full contact with the wall. Possible holes in the shaft wall surface must have a minimum distance of 20 cm to the fringe of each universal scaffolding shoe. • Before installation and usage of the platform, all parts have to be checked on damage, ageing and wear. Damaged or worn parts may not be used. • Stingl-mobil SERVICE may only be mounted on sufficiently stable parts of structural works capable of taking up and passing on the forces which are produced. • Never modify the original parts. • Always observe federal, state and local safety and accident prevention regulations. • Only allow properly qualified and trained personnel to install the platform.

| TELESCOPIC WORK PLATFORM STINGL-MOBIL SERVICE | | | |
|---|--|--|--|
| Item No. | Description (platform width/platform depth) | | |
| 34002060001 | Stingl-mobil SERVICE 600 mm/1.500-2.150 mm | | |
| 34002060002 | Stingl-mobil SERVICE 600 mm/1.500-2.700 mm | | |
| 34002070001 | Stingl-mobil SERVICE 700 mm/1.500-2.150 mm | | |
| 34002070002 | Stingl-mobil SERVICE 700 mm/1.500-2.700 mm | | |
| 34002100001 | Stingl-mobil SERVICE 1.000 mm/1.500-2.150 mm | | |
| 34002100002 | Stingl-mobil SERVICE 1.000 mm/1.500-2.700 mm | | |
| 34002113001 | Stingl-mobil SERVICE 1.130 mm/1.500-2.150 mm | | |
| 34002113002 | Stingl-mobil SERVICE 1.130 mm/1.500-2.150 mm | | |

| ACCESSORIES | | | |
|-------------|--|--|--|
| Item No. | Description | | |
| 34003215001 | Guard rail kit for Stingl-mobil SERVICE 1.500–2.150 mm | | |
| 34003270001 | Guard rail kit for Stingl-mobil SERVICE 1.500–2.700 mm | | |
| 34003215002 | Fall protection kit, inclinable 1.000, 1.500-2.150 mm | | |
| 34003215003 | Fall protection kit, inclinable 700, 1.500–2.150 mm | | |
| 34003270002 | Fall protection kit, inclinable 1.000, 1.500-2.700 mm | | |
| 34003270003 | Fall protection kit, inclinable 700, 1.500-2.700 mm | | |
| 08004102001 | Stowage box type 4 | | |
| 08004263001 | Stowage box type 5 | | |
| 08004193003 | Stowage box type 6.1 | | |
| 01609070002 | Set of 3 stowage and transportation boxes | | |

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