

# SYSTEM-FREE ACCESSORIES CATALOGUE 2021/2022



Edition 04.2021  
Ref. No. 8103.260

Quality management  
certified according  
to DIN EN ISO 9001





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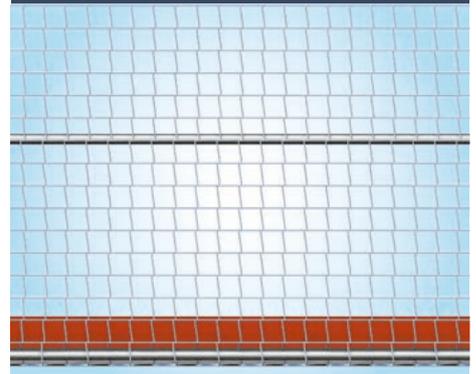
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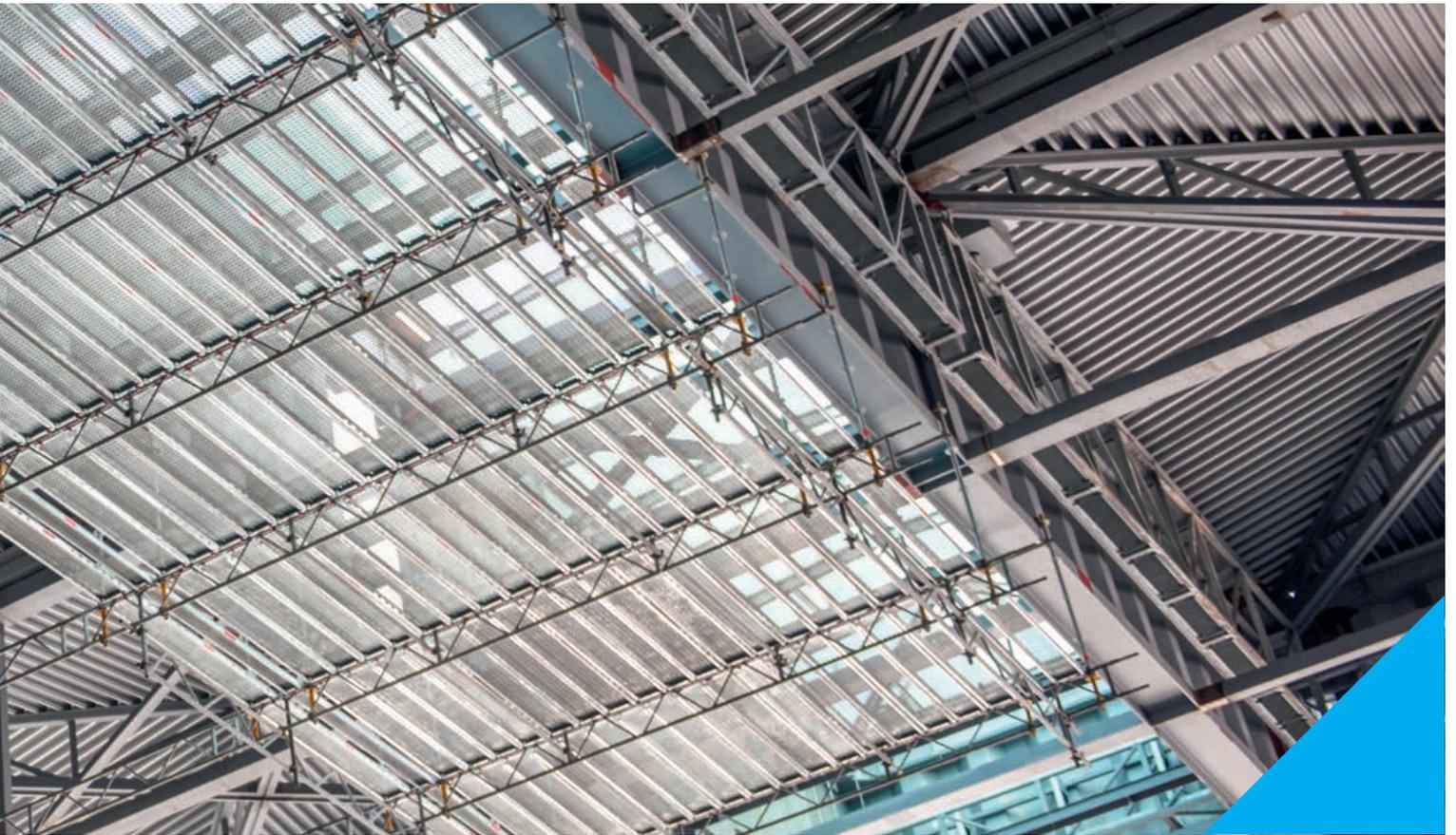


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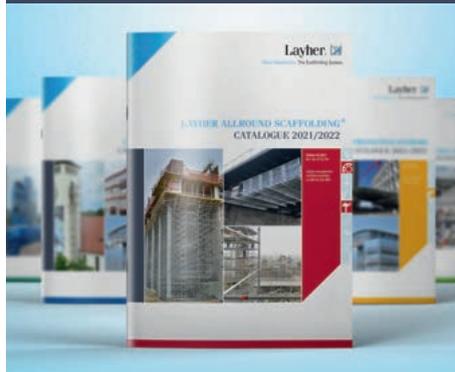


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## PRODUCT-PORTFOLIO



The Layher product range – all catalogues at a glance	
Speedyscaf System	Ref. No. 8102.262
Allround Scaffolding	Ref. No. 8116.258
System-free Accessories	Ref. No. 8103.260
Protective Systems	Ref. No. 8121.260
Event Systems	Ref. No. 8111.233
Access Technology	Ref. No. 8118.233

## NOTICE

Subject to technical modification. Component weights are subject to fluctuations due to tolerances and may therefore diverge from what is specified.

Steel components are hot-dip galvanized according to EN ISO 1461 and DAST guideline 022. Connection parts or other small pieces can be galvanized according to EN ISO 4042.

Our deliveries shall be made exclusively in accordance with our at the conclusion of contract valid General Terms of Sale. These include the following provisions: The place of performance is Gueglingen-Eibensbach. Title to the delivered goods shall be retained until full payment has been made. The fully GTC you can find here: [gtc.layher.com](https://www.gtc.layher.com)

Please request the specific instructions for assembly and use when ordering. Protected by copyright. Not to be reproduced, either in whole or in part. Misprints and errors excepted.

# QUALITY MADE BY LAYHER



Headquarters in Eibensbach



Plant 2 in Gueglingen

## QUALITY MADE IN GERMANY.

Quality made by Layher comes from Gueglingen-Eibensbach. Our company has set down deep local roots since it was established. Right up until today, development, production and management, sales and export department are all in one place, where the conditions are best for achieving quality made by Layher: in Gueglingen-Eibensbach. The two locations together cover a surface area of 318,000 m<sup>2</sup>. This includes more than 148,000 m<sup>2</sup> of covered production and storage areas.

## MORE POSSIBILITIES. THE SCAFFOLDING SYSTEM.

This brand promise made by Layher is the expression of a brand philosophy that we've been living by for over 75 years. More speed, more safety, more proximity, more simplicity and more future: values with which we strengthen our customers' competitiveness in the long term. With our innovative systems and solutions, we're working all the time on making scaffolding construction even simpler, even more economical and, above all, even safer.

## SUSTAINABILITY AT LAYHER.

We've long been acting with a clear focus, with a view to both economic and ecological sustainability in all our process steps. Social responsibility towards employees, clients and society as a whole are at the very centre of this. We're a dependable employer, active in protecting our resources. The sparing use of work materials as a feature of our sustainable approach is fundamental to how we see ourselves: we already take care to ensure sustainable building methods when planning a new production facility, for example by greening the roofs or using photovoltaic systems. We also value locations that are close by, avoiding unnecessary CO<sub>2</sub> emissions due to long traffic routes. The topic of sustainability is firmly embedded in Layher's organisational structure thanks to its energy management team. Their work has paid off in particular in the form of DIN EN ISO 50001 certification.

Discover the world of Layher in its company film at:  
[yt-image-en.layher.com](http://yt-image-en.layher.com)





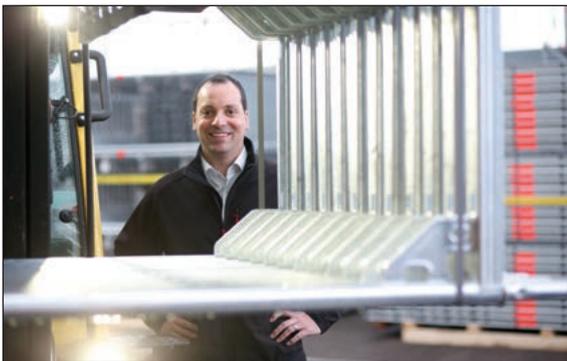
### MORE SPEED

High level of material availability, effective delivery service and quick assembly and dismantling of the scaffolding systems thanks to 100% fitting accuracy.



### MORE SAFETY

Outstanding quality and precision coupled with a long service life – confirmed internationally through independent certifications, inspections and approvals. Continuity and long-term partnership.



### MORE PROXIMITY

Comprehensive personal consultation and close-knit delivery network. Global presence through our own subsidiaries. Family-owned company that works closely with its customers.



### MORE SIMPLICITY

Economical scaffolding systems that have been proven in practice, available with an extensive product range. Cross-system combinations for versatile use. Rapid decision making thanks to efficient structures and processes.



### MORE FUTURE

Thanks to permanent product innovations and the improvement of existing parts. By opening up new areas of business. With an integrated system to ensure high profitability and retention of investment value. Through an extensive range of training opportunities and seminars to ensure that customers are always right up-to-date with the latest technical and commercial developments.

Layher Lightweight: Through the use of high-tensile steel, a new production process, and an improved design, we have succeeded in minimising the weight of the core components of our systems – while maintaining or raising load-bearing capacity.

## Base plates and accessories

To adjust to the ground, choose between the non-height-adjustable **base plate 1** or height-adjustable **base plates 2-6** with sturdy and selfcleaning round threads, with colour and notch markings to provide protection against overwinding. Make sure that there are sufficient load-distributing surfaces.

The round threads of all Layher scaffolding spindles have an outside diameter of 38 mm. The wing external dimension of the spindle nut is 205 mm. The dimensions of the foot plate are 150 x 150 mm.

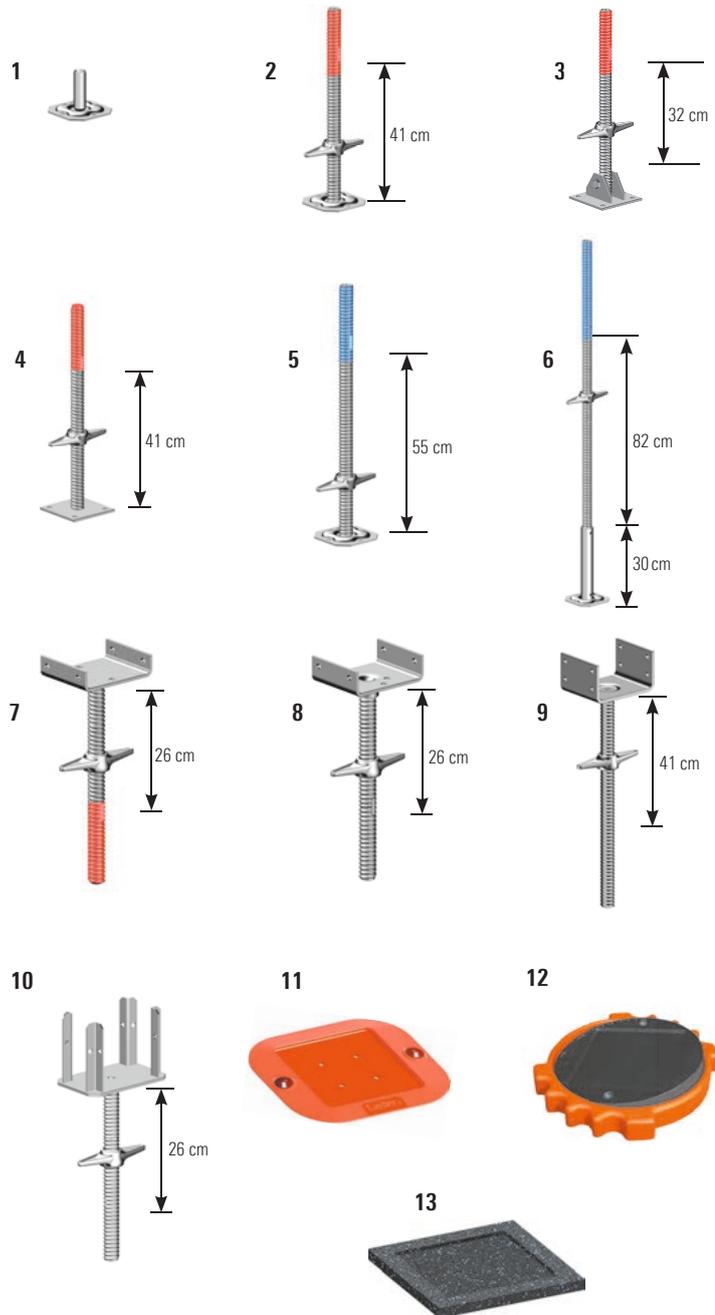
### Load capabilities of spindle cross-section as per DIN EN 12811-1, Annex B

Spindle type	$N_{Rd}$ [kN]	$M_{Rd}$ [kNcm]	$V_{Rd}$ [kN]
normal	97.7	83.0	36.0
reinforced	119.9	94.5	44.1
solid	288.0	157.0	106.0

The **swivelling head jack 8** can be used to install supports (e.g. wood sections) with an inclination of up to max. 5% to the horizontal in the longitudinal and transverse directions, thus eliminating the need to level with a wedge. Greater loads can be supported thanks to the articulated mounting of the top plate and the resulting centric introduction of vertical forces into the spindles.

The **cross head jack 45, solid 10** serves to accommodate wood sections, glued binders or steel beams in falsework and supporting scaffolding. It stabilises the supports against tilting, and it is possible to use one or two formwork supports. Height adjustment is performed using the spindle nut. The cross head jack is suitable for all common formwork supports.

The **protective base for base plates 11** conserves sensitive floorings from damages made of the base plate. By using the **adjustment plate 12**, base plates with steep plate can be used on inclined ground. By turning the top against the bottom part, the inclination from 0 to 16% can be adjusted. The load increasing static remains completely.



## Lattice beams, lattice beam connectors

Lattice beams of steel and aluminium are used to provide:

- ▶ Bridging
- ▶ Projections and strengthening
- ▶ Roof structures and enclosures
- ▶ Surface scaffolding

The top and bottom chords and the end posts have an external diameter of 48.3 mm and are designed for the connection of scaffolding couplers.



Pos.	Description	Dimensions L/H x W [m]	Weight approx. [kg]	PU [pcs.]	Ref. No.
1	<b>Base plate</b> without height adjustment	0.11	1.0	250	<b>4001.000</b>
2	<b>Base plate 60</b> (max. spindle travel 41 cm)	0.56	3.6	200	<b>4001.060</b>
3	<b>Swivelling base plate 60</b> , reinforced (max. spindle travel 32 cm), ensure sufficient structural strength	0.58	6.1	250	<b>4003.000</b>
4	<b>Base plate 60</b> , solid, without lock (max. spindle travel 41 cm)	0.58	6.7	200	<b>5602.060</b>
5	<b>Base plate 80</b> , reinforced (max. spindle travel 55 cm)	0.73	4.9	200	<b>4002.080</b>
6	<b>Base plate 150</b> , reinforced (max. spindle travel 82 cm), ensure sufficient structural strength	1.50	10.0	25	<b>4002.130</b>
7	<b>Head jack 45</b> , solid, 16 cm (max. spindle travel 26 cm), width of fork 16 cm	0.45	6.6	100	<b>5314.045</b>
8	<b>Swivelling head jack 45</b> , solid, 16 cm (max. spindle travel 26 cm), width of fork 16 cm	0.45	7.3	100	<b>5312.045</b>
9	<b>Head jack 60</b> , reinforced, 18 cm (max. spindle travel 41 cm), width of fork 18 cm	0.60	8.0	100	<b>5316.060</b>
10	<b>Cross head jack 45</b> , solid (max. spindle travel 26 cm), opening dimensions 8.50 / 17 cm	0.45	6.9	90	<b>5315.045</b>
11	<b>Protective base for base plate</b> of polypropylene, with 2 reflectors	0.27 x 0.24	2.1	10	<b>4007.010</b>
12	<b>Adjustment plate for base plate</b> of glass-fibre-reinforced polyamide plastic, inclination 0 – 16%	dia. 0.30	1.3	250	<b>4000.400</b>
13	<b>Rubber pad for base plate</b> for slip-reduction on solid grounds like concrete, asphalt, stone or timber. Protects sensitive deckings from damages.	0.20 x 0.20	0.4	10	<b>4000.500</b>

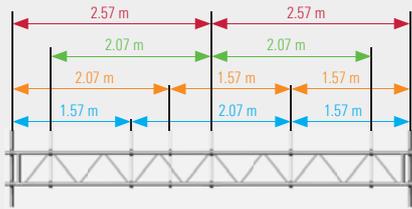
Pos.	Description	Dimensions L/H x W [m]	Weight approx. [kg]	PU [pcs.]	Ref. No.
14	<b>Steel system lattice beam 450 LW</b> , 45 cm high, 2.25 m long*				
		2.25 x 0.45	21.8	40	<b>4925.225</b>
		3.25 x 0.45	30.9	40	<b>4925.325</b>
		4.25 x 0.45	40.0	40	<b>4925.425</b>
		5.32 x 0.45	49.5	40	<b>4925.532</b>
		6.32 x 0.45	59.0	40	<b>4925.632</b>

WS = wrench size PU = packaging unit = available ex works = delivery time on request = only available in this packaging unit = the approval process is not yet completed

\*Not part of the type testing

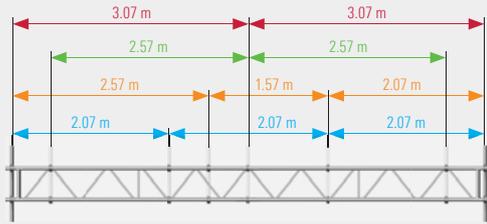
## System lattice beam 450 steel/aluminium

### Possible bay divisions



The following bay length combinations are possible with the **5.32 m long lattice beam**:

- ▶ 1.57 m + 2.07 m + 1.57 m
- ▶ 1 x 2.07 m + 2 x 1.57 m
- ▶ 2 x 2.07 m
- ▶ 2 x 2.57 m



The following bay length combinations are possible with the **6.32 m long lattice beam**:

- ▶ 3 x 2.07 m
- ▶ 1 x 2.57 m + 1 x 1.57 m + 1 x 2.07 m
- ▶ 2 x 2.57 m
- ▶ 2 x 3.07 m

The lattice beams Ref. No. 4925, Ref. No. 4922, Ref. No. 4902, Ref. No. 4904 and Ref. No. 4903 are connected to one another using **unit beam spigot T16 dia. 38 mm 2** and **lattice beam hinged pins, dia. 12 mm 4** or **special bolt M12 x 60, with nut 5**.

For lattice beams Ref. No. 4925, Ref. No. 4922, Ref. No. 4917, Ref. No. 4902, Ref. No. 4903, Ref. No. 4904 and Ref. No. 4906 the following applies: the standard lengths are extended using lattice beam connectors. Loading tables available on request.

In conjunction with the **unit beam spigots T4 dia. 38 mm, cranked 3** and standard lattice beams, 45 cm high, made from aluminium or steel, double-pitch roof structures (roof pitch 11°) can be built.

**Steel lattice beams 750 6**, 75 cm high, of steel design, are used to support high loads or to bridge wider spans. Loading tables available on request.

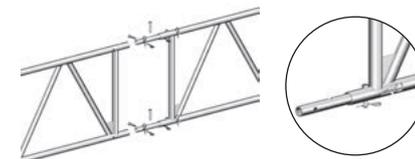
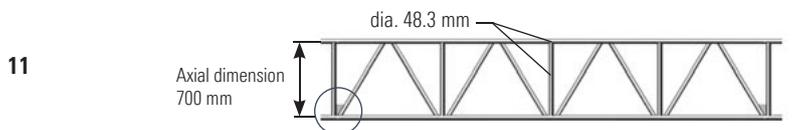
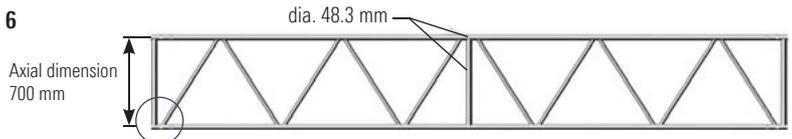
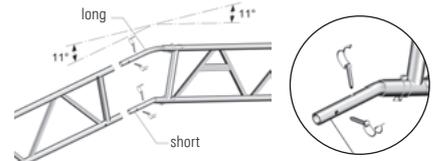
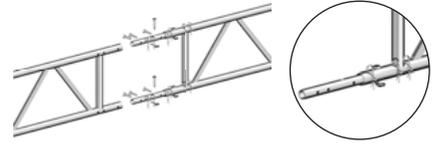
The heavy-duty lattice beams Ref. No. 4906 are connected to one another with **unit beam spigots round steel 7** Ref. No. 4916.000 and **lattice beam pin dia. 14 x 77 mm 8** with **safety clip 2.8 mm 9** or **special bolts M14 x 65 mm, with nut 10**.

The **aluminium lattice beam 750 11** is the lighter alternative for supporting higher loads or for bridging wider spans. Loading tables available on request.

For mounting at the end, **passageway markings 12** with rotating half-couplers are available. The retro-reflecting surface conforms to the requirements of the German RSA (part A).



Coupler connection as in sketch possible for Ref. No. 4904



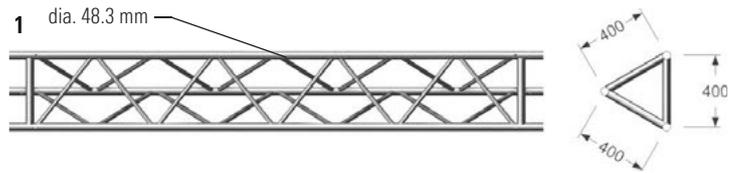
12



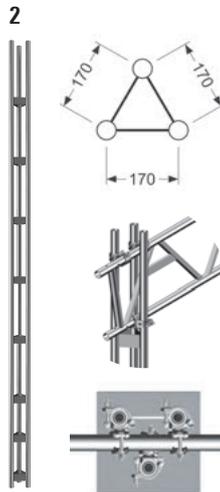
Pos.	Description	Dimensions L/H x W [m]	Weight approx. [kg]	PU [pcs.]	Ref. No.	
1	<b>Aluminium system lattice beam 450</b> , 45 cm high, aluminium, more than 50% weight saving compared to steel	2.25 m long	2.25 x 0.45	9.4	50	<b>4904.225</b>
		3.25 m long	3.25 x 0.45	14.4	50	<b>4904.325</b>
		4.25 m long	4.25 x 0.45	17.8	50	<b>4904.425</b>
		5.32 m long	5.32 x 0.45	21.7	50	<b>4904.532</b>
		6.32 m long	6.32 x 0.45	24.9	50	<b>4904.632</b>
		<b>Aluminium lattice beam 450</b> , 45 cm high, aluminium, 8.00 m long, with type calculation	8.00 x 0.45	32.7	50	<b>4902.800</b>
	2	<b>Unit beam spigot T16</b> , dia. 38 mm for straight extension of lattice beam Ref. No. 4912, Ref. No. 4922, Ref. No. 4902, Ref. No. 4903, Ref. No. 4904, Ref. No. 4925	0.54	2.4	350	<b>4925.000</b>
3	<b>Unit beam spigot T4</b> , dia. 38 mm, cranked, long for angular extension of lattice beam (45 cm high) at top chord, for double-pitch roof structures, roof pitch 11°	0.62	2.6	250	<b>4922.001</b>	
	<b>Unit beam spigot T4</b> , dia. 38 mm, cranked, short for angular extension of lattice beam (45 cm high) at bottom chord, for double-pitch roof structures, roof pitch 11°	0.48	1.9	500	<b>4922.002</b>	
4	<b>Lattice beam hinged pin</b> , dia. 12 mm, with pan head, strength class 8.8	Required: 4 pcs.	2.0	20	<b>4905.668</b>	
5	<b>Special bolt M12 x 60</b> , with nut, strength class 8.8	Required: 4 pcs.	4.0	50	<b>4905.062</b>	
6	<b>Steel lattice beam 750</b> , 75 cm high	2.00 m long	2.00 x 0.75	35.5	20	<b>4906.200</b>
		3.00 m long	3.00 x 0.75	48.5	20	<b>4906.300</b>
		4.00 m long	4.00 x 0.75	61.0	20	<b>4906.400</b>
		5.00 m long	5.00 x 0.75	78.0	20	<b>4906.500</b>
		6.00 m long	6.00 x 0.75	90.0	20	<b>4906.600</b>
		7.00 m long	7.00 x 0.75	102.5	20	<b>4906.700</b>
		7	<b>Unit beam spigot</b> , round steel, dia. 36 mm for extending lattice beam Ref. No. 4906	0.44	3.4	20
8	<b>Lattice beam pin</b> , dia. 14 x 77 mm, strength class 8.8	Required: 4 pcs.	2.2	20	<b>5906.079</b>	
9	<b>Safety clip</b> , 2.8 mm	Required: 4 pcs.	0.5	50	<b>4905.002</b>	
10	<b>Special bolt M14 x 65</b> , with nut, strength class 8.8	Required: 4 pcs.	6.5	50	<b>4908.067</b>	
11	<b>Aluminium lattice beam 750</b> , 75 cm high, aluminium	2.25 m long, with type calculation	2.25 x 0.75	14.0	25	<b>4903.225</b>
		3.25 m long, with type calculation	3.25 x 0.75	19.5	25	<b>4903.325</b>
		4.25 m long, with type calculation	4.25 x 0.75	26.0	25	<b>4903.425</b>
		5.25 m long, with type calculation	5.25 x 0.75	32.1	25	<b>4903.525</b>
		6.25 m long, with type calculation	6.25 x 0.75	38.1	25	<b>4903.625</b>
		7.25 m long, with type calculation	7.25 x 0.75	44.2	25	<b>4903.725</b>
12	<b>Passageway marking 1.50 m with rotating half-couplers</b>	1.50	5.3	70	<b>1788.150</b>	

## Lattice beams, lattice beam connectors, section beams

The **aluminium tri-lite beam 1** is a lightweight multipurpose beam. It is suitable for use as a beam subjected to bending stress, as a vertical support and as a light crosspiece, and is resistant to buckling and tilting without additional stiffening. External dimensions 45 x 45 x 45 cm, coupler connection dia. 48.3 mm possible, extension of beams with lattice beam connectors Ref. No. 4925.000 lattice beam connector T16 and special bolts Ref. No. 4905.062 or hinged pin Ref. No. 4905.668 with safety dips Ref. No. 4905.002. Loading tables on request.



**Tri-struts LW 2** are designed for high loadbearing applications, also in temporary hall construction in conjunction with lattice beams Ref. Nos. 4912, 4922, scaffolding tubes and couplers. They therefore serve as supporting structures for mono-pitch and double-pitch roofs and for special solutions. The three scaffolding tubes of the triangular support each have an external diameter of 48.3 mm and a wall thickness of 2.7 mm. The tri-strut has external dimensions of 22 x 22 x 22 cm and is designed for the connection of dia. 48.3 mm scaffolding couplers. Loading tables available on request.



View onto lattice beam in triangular support, lattice beam is connected by swivel couplers to the support



The **three-point base plate T18 3** is used to form the base for the tri-strut Ref. No. 4911 and to divert the load into the ground.

### Aluminium U-profile with half couplers 4

For screwing on a lattice beam to carry serial decks; Working surface without any trip hazards. Thanks to the half couplers, the U-profile can be installed on any lattice beam with tubing dia. 48.3 mm.



### Lattice beam mounting 0.40 m 6

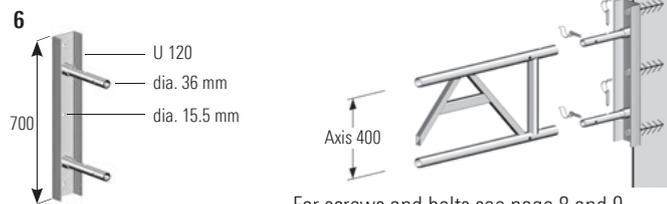
Wall connection for standard lattice beams Ref. Nos 4912, 4922, 4925 and 4902 for bridging structures and similar, structural strength calculation required.



Securing of one deck

Securing of two decks

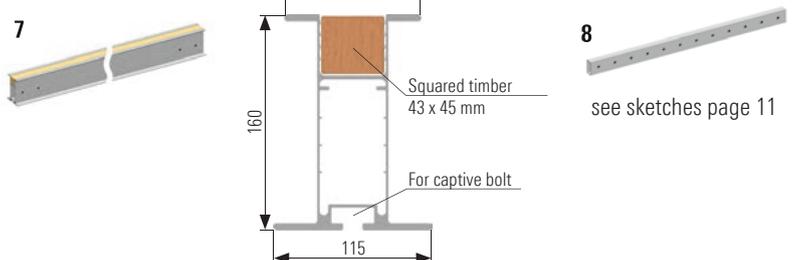
The **aluminium section beam with wood 7** is a lightweight aluminium beam with low overall height for birdcage scaffolding, walkways and bridging. Double-webbed beam of aluminium, 160 mm high, 1 flange 115 mm wide, with T-groove for connections with grooved bolts, 1 flange 100 mm wide, with replaceable wood section insert, for nailed or bolted connections. Loading tables available on request.



For screws and bolts see page 8 and 9

### Beam connector, 1.20 m 8

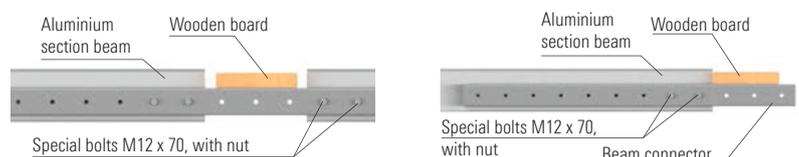
Holes drilled 10 cm apart. For continuous straight-line extension of aluminium section beams – variable joint. Permits adjustment of the aluminium section beams to the site dimensions. Rectangular tube, 40 x 80 mm cross section, steel, hot-dip galvanized.



8 see sketches page 11

Pos.	Description	Dimensions L/H x W [m]	Weight approx. [kg]	PU [pcs.]	Ref. No.
1	<b>Aluminium tri-lite beam</b> 3.00 m long 4.00 m long 5.00 m long 6.00 m long	3.00 x 0.45	25.0	8	<b>4917.300</b> 🏠
		4.00 x 0.45	34.0	8	<b>4917.400</b> 🏠
		5.00 x 0.45	41.0	8	<b>4917.500</b> 🏠
		6.00 x 0.45	50.0	4	<b>4917.600</b> 🏠
2	<b>Tri-strut LW, steel, hot-dip galvanized</b> 3.00 m long 4.00 m long 5.00 m long 6.00 m long	3.00 x 0.22	36.2	35	<b>4911.300</b> 🏠
		4.00 x 0.22	47.3	35	<b>4911.400</b> 🏠
		5.00 x 0.22	59.9	35	<b>4911.500</b> 🏠
		6.00 x 0.22	71.0	35	<b>4911.600</b> 🏠
3	<b>Three-point base plate T18, hot-dip galvanized</b> for tri-strut LW No. 4911 with 3 spigots	0.40 x 0.40	14.8	40	<b>4911.001</b> 🏠
4	<b>Aluminium U-profile with half couplers</b> 3.00 m long 3.00 m long 3.25 m long 3.25 m long 4.00 m long 4.00 m long 4.25 m long 4.25 m long 5.00 m long 5.00 m long 5.32 m long 5.32 m long 6.00 m long 6.00 m long 6.32 m long 6.32 m long	WS 19 3.00	7.1	50	<b>4909.319</b> 🕒
		WS 22 3.00	7.1	50	<b>4909.322</b> 🕒
		WS 19 3.25	7.7	50	<b>4919.319</b> 🕒
		WS 22 3.25	7.7	50	<b>4919.322</b> 🕒
		WS 19 4.00	9.3	50	<b>4909.419</b> 🕒
		WS 22 4.00	9.3	50	<b>4909.422</b> 🕒
		WS 19 4.25	9.9	50	<b>4919.419</b> 🕒
		WS 22 4.25	9.9	50	<b>4919.422</b> 🕒
		WS 19 5.00	11.5	50	<b>4909.519</b> 🕒
		WS 22 5.00	11.5	50	<b>4909.522</b> 🕒
		WS 19 5.32	12.2	50	<b>4919.519</b> 🕒
		WS 22 5.32	12.2	50	<b>4919.522</b> 🕒
		WS 19 6.00	13.8	50	<b>4909.619</b> 🕒
		WS 22 6.00	13.8	50	<b>4909.622</b> 🕒
		WS 19 6.32	14.5	50	<b>4919.619</b> 🕒
		WS 22 6.32	14.5	50	<b>4919.622</b> 🕒
5	<b>Universal U-Lift-off preventer</b>	WS 19 0.28	1.0	500	<b>2635.000</b> 🏠
6	<b>Lattice beam mounting, 0.40 m</b>	0.70	12.1	80	<b>4920.040</b> 🏠
7	<b>Aluminium section beam with wood, with riveted-in wood section, with holes drilled for connection by means of beam connectors</b> 3.00 m long 4.00 m long	3.00	18.0	48	<b>4026.300</b> 🕒
		4.00	24.0	48	<b>4026.400</b> 🕒
8	<b>Beam connector, 1.20 m</b>	1.20	6.6	100	<b>4026.000</b> 🕒
9	<b>Beam connector bolt M12 x 70, with nut, for each joint, 4 bolts are necessary</b>		0.7	10 🏠	<b>4026.003</b> 🏠

For connecting individual **aluminium section beams with wood 7** Ref. No. 4026 a **beam connector 1.20 m 8**, Ref. No. 4026.000 and four **beam connector bolts M12 x 70 9**, with nut Ref. No. 4026.003 are required for each.



WS = wrench size PU = packaging unit 🏠 = available ex works 🕒 = delivery time on request 🏠 = only available in this packaging unit ⚙️ = the approval process is not yet completed

## Scaffolding tubes and couplers

### General assembly and extension

Standardised scaffolding tubes in steel (hot-dip galvanized) or aluminium permit, in conjunction with scaffolding couplers, special assembly and extension outside the regular version.

The **33 mm steel tube, 1.50 m 2** is intended for use with the steel deck T4. Special assemblies differ from the regular version, their stability must be verified.

### Scaffolding couplers

Connections, in steel, drop-forged; as per DIN EN 74 and general building authority approval from the DIBt (German Civil Engineering Institute). Tightening torque of collar nuts 50 Nm.

The **half-coupler with hook 4** becomes in conjunction with a steel scaffolding tube a length-adjustable wall tie

### Double coupler 5



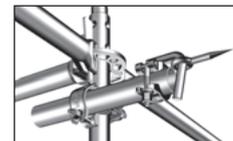
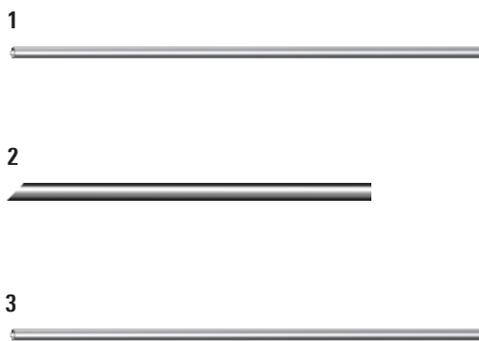
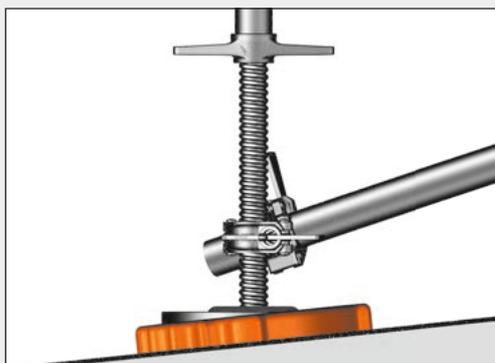
### Lattice beam coupler 11

Example for use of the lattice beam coupler



### Wedge spindle swivel coupler 14

Example of the use of the wedge spindle swivel coupler



For right-angled connection of tubes with dia. 48.3 mm – Axial dimension 53.5 mm.



For connection at any angle of tubes with dia. 48.3 mm – Axial dimension 73 mm.



For connection of two tubes with dia. 48.3 mm in one axis. Only in conjunction with internal spigot Pos. 8



Only in conjunction with sleeve coupler Pos. 7



For right-angled connection of tubes with dia. 48.3 mm



For connection at any angle of tubes with dia. 48.3 mm



For 90° connection on the axis of tubes with dia. 48.3 mm



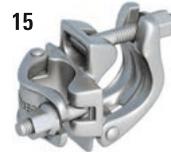
For right-angled connection of a tube dia. 33.7 mm to a tube of dia. 48.3 mm



For connection at any angle of a tube dia. 33.7 mm to a tube of dia. 48.3 mm



For connection of a tube dia. 48.3 mm to a scaffolding spindle at any angle



For right-angled connection of a tube dia. 60.3 mm to a tube of dia. 48.3 mm



For right-angled connection of a tube dia. 60.3 mm to a tube of dia. 48.3 mm

Pos.	Description	Dimensions L/H x W [m]	Weight approx. [kg]	PU [pcs.]	Ref. No.	
1	<b>Scaffolding tube</b> , steel, hot-dip galvanized Scaffolding tubes dia. 48.3 x 4.0 mm, as per DIN EN 39	0.50	2.3	250	<b>4600.050</b>	
		1.00	4.5	61	<b>4600.100</b>	
		1.50	6.8	61	<b>4600.150</b>	
		2.00	9.0	61	<b>4600.200</b>	
		2.50	11.3	61	<b>4600.250</b>	
		3.00	13.5	61	<b>4600.300</b>	
		3.50	15.8	61	<b>4600.350</b>	
		4.00	16.7	61	<b>4600.400</b>	
		5.00	22.7	61	<b>4600.500</b>	
		5.50	25.0	61	<b>4600.550</b>	
	6.00	25.0	61	<b>4600.600</b>		
2	<b>Scaffolding tube</b> , steel, hot-dip galvanized Scaffolding tubes dia. 33.7 x 2.25 mm	1.50	3.0	100	<b>4603.150</b>	
3	<b>Scaffolding tube</b> , aluminium Scaffolding tubes dia. 48.3 x 4.0 mm	0.50	0.8	250	<b>4601.050</b>	
		1.00	1.5	61	<b>4601.100</b>	
		1.50	2.3	61	<b>4601.150</b>	
		2.00	3.8	61	<b>4601.200</b>	
		2.50	3.7	61	<b>4601.250</b>	
		3.00	4.5	61	<b>4601.300</b>	
		3.50	5.3	61	<b>4601.350</b>	
		4.00	6.0	61	<b>4601.400</b>	
		4.50	6.8	61	<b>4601.450</b>	
		5.00	7.5	61	<b>4601.500</b>	
	5.50	8.3	61	<b>4601.550</b>		
	6.15	9.2	104	<b>4601.600</b>		
	8.00	12.1	104	<b>4601.800</b>		
4	<b>Half coupler with hook</b>	WS 19		0.8	25	<b>4749.019</b>
5a	<b>Double coupler</b> Class BB, EN 74-1 RA BB C3 M, quality-monitored, for use in class B and BB on steel and aluminium tube	WS 19		1.3	25	<b>4700.019</b>
		WS 22		1.3	25	<b>4700.022</b>
5b	<b>Double coupler with coarse thread</b> Description as Pos. 5a acc. to approval Z-8.331-947	WS 19		1.3	25	<b>4777.019</b>
		WS 22		1.3	25	<b>4777.022</b>
6a	<b>Swivel coupler</b> Class B, EN 74-1 SW B C3 M, quality-monitored, for use in class B on steel and aluminium tube	WS 19		1.5	25	<b>4702.019</b>
		WS 22		1.5	25	<b>4702.022</b>
6b	<b>Swivel coupler with coarse thread</b> Description as Pos. 6a acc. to approval Z-8.331-947	WS 19		1.5	25	<b>4778.019</b>
		WS 22		1.5	25	<b>4778.022</b>
7	<b>Sleeve coupler</b> Class B, EN 74-1 SF B C3 M, quality-monitored, for use in class B on steel and aluminium tube	WS 19		1.8	25	<b>4703.019</b>
		WS 22		1.8	25	<b>4703.022</b>
8	<b>Internal spigot</b> Description as Pos. 7	0.20		1.2	25	<b>4739.000</b>
9	<b>Wedge double coupler</b> Class B, DIN EN 74-B-C, on steel and aluminium tube			1.6	25	<b>4727.000</b>
10	<b>Wedge swivel coupler</b> Class A, DIN EN 74-A-C, on steel and aluminium tube			1.8	25	<b>4728.000</b>
11	<b>Lattice beam coupler</b> for lattice beam and tubes dia. 48.3 mm	WS 19		1.6	25	<b>4720.019</b>
		WS 22		1.6	25	<b>4720.022</b>
12	<b>Reduction double coupler</b> , 48.3 x 33.7 mm	WS 19		1.3	25	<b>4737.019</b>
		WS 22		1.3	25	<b>4737.022</b>
13	<b>Reduction swivel coupler</b> , 48.3 x 33.7 mm	WS 19		1.6	25	<b>4738.019</b>
		WS 22		1.6	25	<b>4738.022</b>
14	<b>Wedge spindle swivel coupler</b>			1.8	25	<b>4735.000</b>
15	<b>Reduction double coupler</b> , 60.3 x 48.3 mm	WS 22		1.9	25	<b>4744.022</b>
16	<b>Reduction swivel coupler</b> , 60.3 x 48.3 mm	WS 22		2.3	25	<b>4745.022</b>

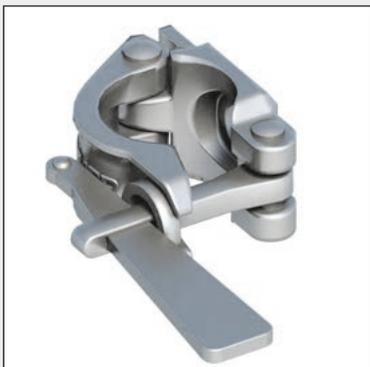
WS = wrench size PU = packaging unit = available ex works = delivery time on request = only available in this packaging unit = the approval process is not yet completed

## Scaffolding tubes and couplers

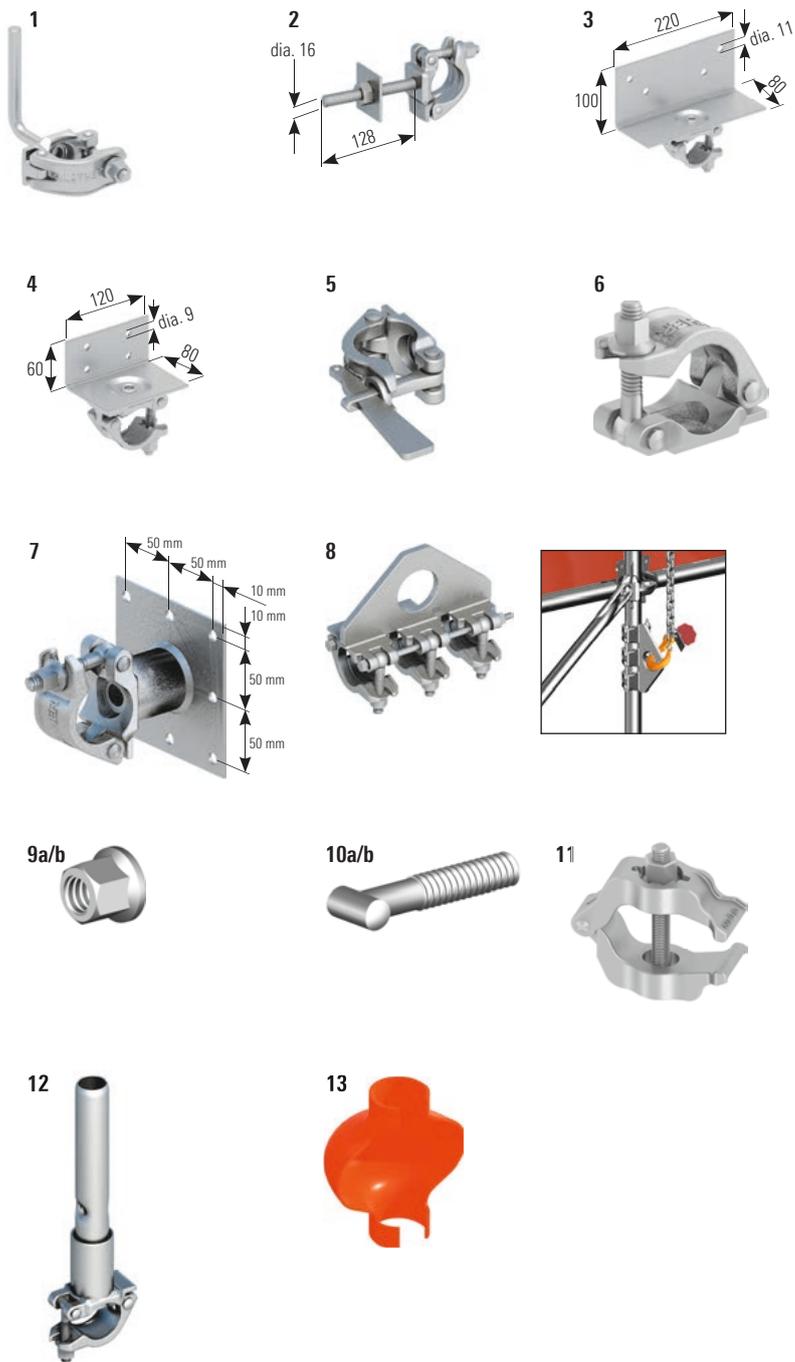
### Half-couplers

with screw and wedge connection for use on steel and aluminium tubes in accordance with approval Z-8.331-882.

#### Wedge half-coupler 5



#### Half-coupler 6



## Tools

The high-quality **scabbling pick 17** on the hammer head ensures a consistently safe use. The additional hardened inner tube provides a standard breaking strength. In addition, the reinforced scabbling pick has a patented head-stem-connection, which also forgives failures. The orange handle provides good handling, good cushioning and low-fatigue working.



With reversing lever for right-hand and left-hand operation

Pos.	Description		Dimensions L/H x W [m]	Weight approx. [kg]	PU [pcs.]	Ref. No.
1	<b>Half-coupler with toe board pin</b>	WS 19		1.0	25	<b>4708.019</b>
		WS 22		1.0	25	<b>4708.022</b>
2	<b>Combination coupler</b> connects scaffolding tubes to wooden parts	WS 19		1.1	25	<b>4711.019</b>
3	<b>Squared timber coupler, large</b> with steel bracket for holding wood sections, e.g. 10 x 12 cm	WS 19	0.22	1.9	25	<b>4717.019</b>
		WS 22		1.9	25	<b>4717.022</b>
4	<b>Squared timber coupler, small</b> with steel bracket for holding wood sections, e.g. 8 x 8 cm	WS 19	0.12	1.4	25	<b>4718.019</b>
		WS 22		1.4	25	<b>4718.022</b>
5	<b>Wedge half-coupler</b> Class A, quality-monitored, with approval Z-8.331-882, for use in class A on steel and aluminium tube			0.9	25	<b>4729.000</b>
6	<b>Half-coupler with eye bolt</b> Class B, quality-monitored, with approval Z-8.331-882, for use in class B on steel and aluminium tube	WS 19		0.8	25	<b>4707.019</b>
		WS 22		0.8	25	<b>4707.022</b>
7	<b>Half-coupler with plate</b> Connection of wall panels to scaffolding tubes	WS 19	0.12 x 0.12	1.5	25	<b>4705.019</b>
8	<b>Crane eyelet coupler</b> for crane positioning of roofs, scaffolding with a perm. load capacity of 14.1 kN upright or parallel to the tube axis	WS 19		3.3	25	<b>4724.019</b>
		WS 22		3.3	25	<b>4724.022</b>
9a	<b>Collar nut standard thread M14,</b> strength class 5 acc. to ISO 989-2	WS 19		1.8	50	<b>6494.712</b>
		WS 22		1.5	50	<b>6494.713</b>
9b	<b>Collar nut coarse thread dia. 14</b> for rapid coupler, acc. to approval Z-8.331-947 strength class 5 acc. to ISO 989-2	WS 19		1.8	50	<b>6494.603</b>
		WS 22		2.4	50	<b>6494.604</b>
10a	<b>T-bolt standard thread M14</b> 82 mm; strength class 5.8 acc. to ISO 989-1			4.5	50	<b>6494.588</b>
10b	<b>T-bolt coarse thread dia. 14</b> 82 mm, for rapid coupler, acc. to approval Z-8.331-947; strength class 5.8 acc. to ISO 989-1			4.7	50	<b>6494.606</b>
11	<b>Beam clamp</b> Clamping width 5 to 70 mm, with approval Z-8.34-873			1.6	500	<b>5310.001</b>
12	<b>Spigot with half coupler</b> for extension on dia. 48.3 mm	WS 19	0.30	1.8	250	<b>4706.019</b>
		WS 22		1.8	250	<b>4706.022</b>
13	<b>Cover for coupler</b> with integrated reflector polyethylene, fixing with disposable tie 6241.002 (s. page 25, Pos. 3)			1.2	10	<b>4007.014</b>

Pos.	Description		Dimensions L/H x W [m]	Weight approx. [kg]	PU [pcs.]	Ref. No.
14	<b>Ratchet spanner</b> with reinforced head	WS 19	0.32	0.7	25	<b>4740.019</b>
		WS 22		0.7	25	<b>4740.022</b>
15	<b>Ratchet wrench</b> for 19 and 22 mm widths across flats, with reversing lever for right-hand and left-hand operation, mandrel for ring bolts	WS 19/22	0.32	0.6	25	<b>4747.000</b>
16	<b>Scaffolding ratchet</b> with reversing lever for right-hand and left-hand operation	WS 19	0.32	0.7	25	<b>4726.019</b>
		WS 22		0.7	25	<b>4726.022</b>
17	<b>Scabbling pick 600 g reinforced</b>		0.32	0.8	5	<b>4421.051</b>

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## Anchoring, testing and measuring equipment, scaffolding identification

The scaffolding must be anchored vertically to and parallel with the facade with resistance to both tensile and compressive stress. Layher offers speedy and safe solutions:

**Wall tie, 0.38 m 1**, connected using one double coupler to an upright tube.

Two **wall ties, 0.38 m 1**, connected in a V shape with double couplers to the inner standard.

**Wall ties, 0.95 m/1.45 m/1.75 m 1**, connected using two double couplers to both upright tubes.

The optimum combination of the **ring screw 3** and **plastic wall insert 2** ensures high holding strengths.

The high-quality welded connection prevents bending open of the eyelet.

The screw-in mark allows the screw-in process to be visually monitored.

High steel strength and zinc coating guarantee long-term use.

The anchoring forces in accordance with the approval or individual verification of structural strength can vary widely. The loading capacity of the anchoring, in particular of the anchoring foundation, must be carefully checked and verified. The load-bearing capacity of the plug connection must be checked with the Layher **plug-testing device 17** (see below) in accordance with our instructions for assembly and use. The plug test must be documented. Please comply with the plug manufacturer's installation instructions.

The **ETICS-tie** is constructed for carrying high loads, parallel to the facade, in use together with external thermal insulation compound systems. Assembly information, see instructions for assembly and use.



In our instructions for assembly and use, the plug-test is described. The regulations must always be respected.

### Plug-testing device, hydraulic 17

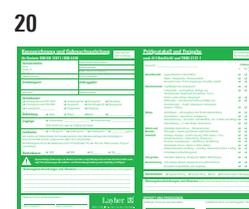
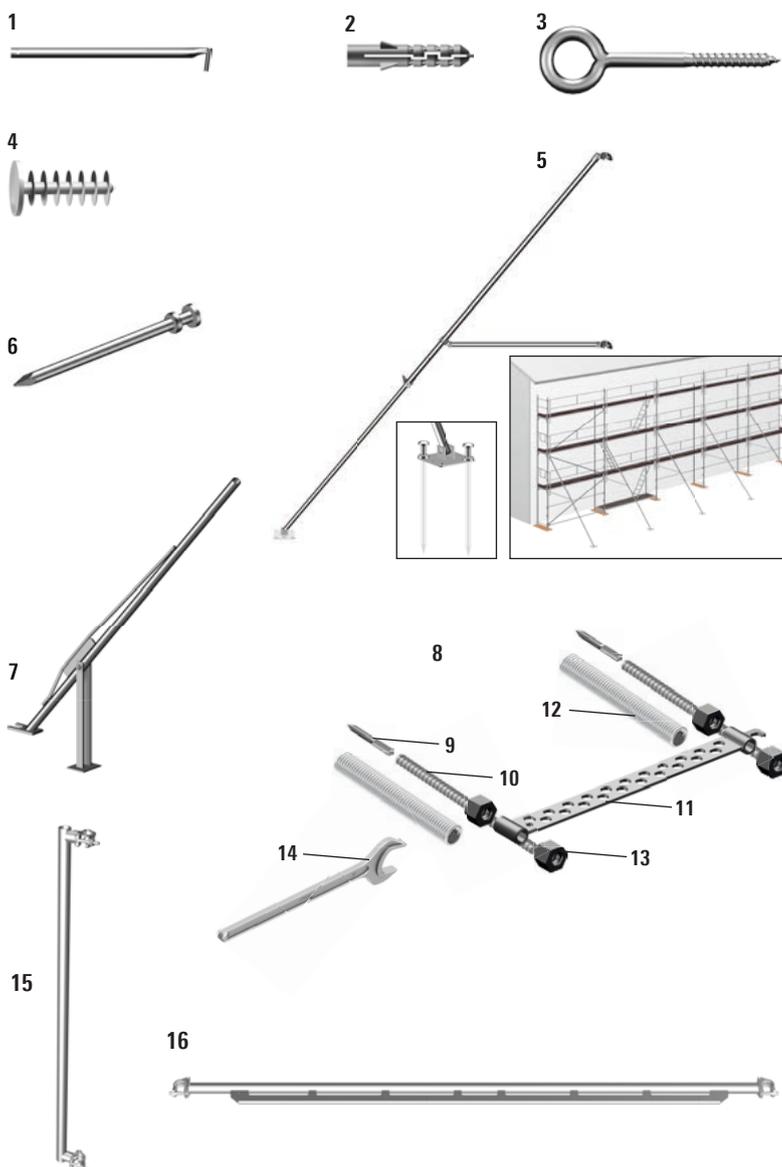
Hand-operated, hydraulic plug-testing device in practical case, which allows plug-testing easily and reliably. With a continuous measuring range from 0 – 20 kN with a high accuracy of  $\pm 2.5\%$ . The test loads are shown on the manometer and recorded in the test report.

Identification and prohibition signs for work scaffolding as per DIN EN 12811-1 and TRBS 2121-1.

The three-piece **scaffolding identification pad 20** with carbon copy developed to tag work scaffolding. The left part of the original will be put into the see-through pocket with Stopp T17. The right part is the inspection for your client. The carbon is kept by yourself for your files. On the back side of the original, important application notes are listed.

With the two-part **Speedy Vario wall tie system 15, 16** from Layher, it is now possible to freely anchor scaffolding, independently of the connector of the assembly frames, inside the scaffolding level – without any substantial reduction in the load capacity and without any complicated additional structures.

Further information to the **Speedy Vario wall tie system**, you can find in the Layher Info.



By using the **scaffolding lock**, you can secure your scaffolding against unauthorized alteration or dismantling. Use in topmost level instead of locking pins.

Pos.	Description	Dimensions L/H x W [m]	Weight approx. [kg]	PU [pcs.]	Ref. No.
1	<b>Wall tie</b>	0.38	1.6	250	<b>1754.038</b>
		0.69	2.8	50	<b>1754.069</b>
		0.95	3.7	50	<b>1754.095</b>
		1.45	5.7	50	<b>1754.145</b>
		1.75	5.8	50	<b>1754.175</b>
2	<b>Plastic wall insert,</b> plastic, drilled hole dia. 14 mm	70 mm	0.3	25	<b>4008.072</b>
		100 mm	0.3	25	<b>4008.102</b>
		135 mm	0.3	25	<b>4008.137</b>
3	<b>Ring screw,</b> steel, galvanized, dia. 12 mm, for expanding plug, strength class 4.8	95 mm	1.6	10	<b>4009.097</b>
		120 mm	1.8	10	<b>4009.122</b>
		190 mm	2.5	10	<b>4009.192</b>
		230 mm	3.0	10	<b>4009.232</b>
		300 mm	3.5	10	<b>4009.302</b>
		350 mm	5.0	10	<b>4009.352</b>
4	<b>Cap,</b> 12 mm, white, for expanding plug Ref. No. 4008	12 mm	1.0	100	<b>4007.011</b>
5	<b>Telescopic stabilizer,</b> 3.30 – 6.00 m	3.30	28.4	20	<b>4032.600</b>
6	<b>Peg solid,</b> dia. 24 mm	470 mm	1.8	50	<b>4032.100</b>
7	<b>Peg extraction device</b>		8.0	40	<b>4032.200</b>
8	<b>ETICS-tie 600 complete,</b> up to approx. 200 mm insulation <b>ETICS-tie 800 complete,</b> up to approx. 300 mm insulation comprising items 11, 9 (2 x), 10 (2 x) and 13 (4 x)	0.68	5.5	180	<b>4000.600</b>
		0.88	6.9	120	<b>4000.800</b>
9	<b>ETICS hanger bolt,</b> M12 x 125; strength class 4.8	125 mm	2.0	25	<b>4000.127</b>
10	<b>ETICS-tie rod 380,</b> up to approx. 200 mm insulation <b>ETICS-tie rod 480,</b> up to approx. 300 mm insulation	0.38	10.0	10	<b>4000.122</b>
		0.48	13.0	10	<b>4000.482</b>
11	<b>ETICS anchoring transom 600</b> <b>ETICS anchoring transom 800</b>	0.60	2.5	300	<b>4000.200</b>
		0.60	3.3	100	<b>4000.300</b>
12	<b>Plastic pipe,</b> 50 m		5.0	18	<b>4000.050</b>
13	<b>Lock nut,</b> WS 36 x 30		4.0	20	<b>2671.132</b>
14	<b>Open ended wrench,</b> WS 36		0.5	5	<b>2671.135</b>
15	<b>Speedy Vario wall tie standard LW</b>		8.9	25	<b>1754.001</b>
16	<b>Speedy Vario wall tie ledger LW</b>	1.57	9.0	25	<b>1754.157</b>
		2.07	12.1	25	<b>1754.207</b>
		2.57	15.0	25	<b>1754.257</b>
		3.07	17.7	25	<b>1754.307</b>
17	<b>Plug-testing device, hydraulic</b> for regulation testing of scaffolding anchoring, in practical equipment case	0.40	7.2		<b>4012.001</b>
18	<b>Magnetic spirit level</b> Aluminium section, milted measurement surface with V-channel, with 3 levels for horizontal, vertical and 45°-measuring, with innovative Neodym-magnet	0.25	0.4	5	<b>4006.666</b>
19	<b>See-through pocket with STOPP T 17</b> for Ref. No. 6344.500 with lock flag when inspection record is not inserted.	0.30 x 0.17	0.4	10	<b>6344.011</b>
20	<b>Scaffolding identification pad</b> Pad with 50 + 50 pieces (Original + Carbon) with centre perforation and foldover as carbon-block	DIN A4	0.5	5	<b>6344.500</b>
21	<b>Scaffolding lock</b> basic set, 2 keys and code card basic set, 2 keys and code card basic set, 4 keys and code card Expansion set with same locking as basic set Expansion set with same locking as basic set		2.2	10	<b>4000.003</b>
			4.2	20	<b>4000.004</b>
			10.5	50	<b>4000.005</b>
			4.2	20	<b>4000.006</b>
			10.5	50	<b>4000.007</b>

## Suspend scaffolding

Economical solutions for corrosion prevention, refurbishment, ceiling work and much more.



The **suspended scaffolding coupler 1** is suspended in existing brackets and I or U sections. With the three riveted-on half-couplers (for 48.3 mm scaffolding tubes) they have a permissible load of 15 kN.

The suspended scaffolding coupler must be secured with two **safety hooks 2**.



The **clamp couplers 3** for 48.3 mm scaffolding tubes are particularly advantageous for large flange widths. The connection to the flange is always made using two clamping couplers. Permissible load 9 kN per clamping coupler

in the vertical or horizontal direction.

The **beam gripper 6** is attached to the I beam. The connection to the scaffolding is made by means of the continuously adjustable **suspended scaffolding chain 5** with 2 shorter hooks, which can be connected to every chain link. The suspended structure with load hook can be subjected to a load of 15 kN per suspension point in the vertical direction. Expansion work is done with lattice beams 450 and decks. Suspended structures without load hook can be subjected to a load of 20 kN.

According to BGR 500, for sharp edges an edge protection must be used, if the edge radius is smaller than the nominal thickness of the suspending chain  $R = 8 \text{ mm}$ .

Dimensions of I beam:

Flange width max. 30 cm

Flange thickness max. 3.6 cm

Web thickness max. 1.9 cm

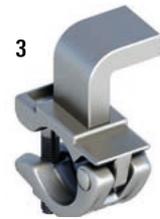
Corresponds to a wide I beam, series HE B 1000



Suspension in upright U or I sections. Maximum flange thickness 18 mm.



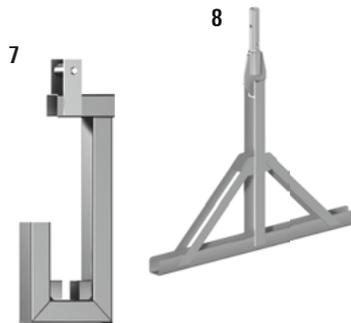
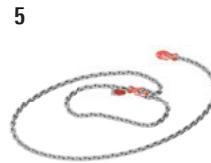
Two **safety hooks for suspended scaffolding coupler** secure the coupler Pos. 1 to the horizontal support flange. Maximum flange width of section 220 mm.



For suspending scaffolding tubes of dia. 48.3 mm on steel structures. Two pieces required.



Use as clamp coupler



When using the load hook, the permissible load of the suspended structure is 15 kN.



## Standard brick guard and protection for pedestrians

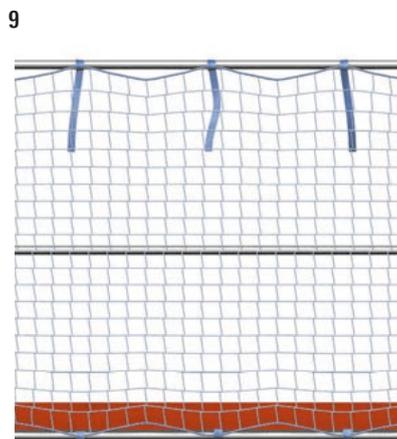
### Protection net 9

The nets are attached at the bottom (at scaffolding deck height) and at the top (2 m above the scaffolding deck) to a tube.

With quick strap fasteners, the protection net is attached to the tubes at every 750 mm. A toe board and a handrail are required in any event.

Protection net 10.00 x 2.00 m, specification:

Mesh width 100 mm, blue, made of PPM 4.5 mm, knotless, as per DIN EN 1263-1.



Pos.	Description		Dimensions L/H x W [m]	Weight approx. [kg]	PU [pcs.]	Ref. No.
1	<b>Suspended scaffolding coupler</b> Permissible load: 15 kN Coupler secured by 2 securing hooks Pos. 2	WS 22		3.8	25	4713.022
2	<b>Safety hook</b> for suspended scaffolding coupler	WS 24	0.24	0.9	25	4714.000
3	<b>Clamp coupler</b> for I beam Permissible load 9 kN vertical or parallel to the tube axis	WS 19		1.1	25	4716.019
		WS 22		1.1	25	4716.022
4	<b>Clamp half-coupler</b> for I beam Permissible load: 3.6 kN vertical to the tube axis	WS 19		1.4	25	4750.019
		WS 22		1.4	25	4750.022
5	<b>Suspended scaffolding chain. 4.00 m</b> Permissible load: 20 kN  Short link round steel chain dia. 8 mm, galvanized, for lifting purposes according to EN 818-2 grade 8 with 2 shorter hooks. About the chain inspection, a inspection certificate 3.1 can be issued according to EN 10204.		4.00	7.1	10	4015.444
6	<b>Beam gripper</b> automatically locking when closed Permissible load: 20 kN		0.50 x 0.41	11.2	45	4015.000
7	<b>Load hook 450</b> for beam gripper Permissible load: 15 kN		0.68 x 0.24	6.9	40	4016.000
8	<b>Lattice beam suspension</b> for O-/U-lattice beams, 45 cm high		1.0 x 0.98 m	14.6		4017.000

### Side protection nets must be checked every year!

Side protection nets may only be used within a year of their being tested. If older protection nets are used, it must be verified in tests that the maximum tensile strength of the net yarn is still at least 2 kN. This testing of your Layher side protection nets is free of charge for you.

To do so, a test mesh must be sent to Layher. In DIN EN 1263-1, Type U "Protection Nets and Protection Net Accessories, Safety Requirements, Testing" details are also given in 4.3 Instructions for Use, on the "time of removal from service".

Pos.	Description		Dimensions L/H x W [m]	Weight approx. [kg]	PU [pcs.]	Ref. No.
9	<b>Protection net</b> with quick strap fastener		10.00 x 2.00	5.9	40	6232.002
10	<b>Quick strap fastener</b>		0.50	1.5	50	6235.002

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## Parts for rolling towers

### Castors

The mobile solution for birdcage, bridge or suspended scaffolding is often the best alternative in terms of technical suitability, scheduling and price. In this field too, the choice, the delivery capability and not least the experience of the manufacturer point to Layher. If scaffolding is made mobile using castors, DIN 4420-3 applies. For these rolling towers, verification of structural strength is required.

Robust castors with twin brake (it brakes wheel and slewing ring) for various loads, offer a safer mobility of the scaffolding – without high effort.

The spindels, which are inserted into the scaffolding standards offer an exact adjustment and lead the loads centrally into the wheel. This system offers highest stability and smooth production flows. For special applications, e.g. on sensitive floorings or work in explosive areas, we suggest the use of castors with polyurethane coatings (see article description). In scaffolding structures with a high proportion of permanent loads (e.g. dead weight), we recommend the use of the castor 1000 / 1200.

For rolling towers using **mobile beam with bar 6**. All the provisions of DIN 4420-3 must be met. This applies particularly for sufficient ballasting, safe internal access via hatch-type decks with ladders, and the necessary side protection on every deck level.

The **adjustable spigot 8** is fastened to the mobile beam with bar at the required point. For further extensions, the scaffolding elements are attached to the spigots. This permits flexible working on the ceiling or wall (in the middle or at the side).

For heavy rolling towers:

### Double flange castor 9

For use on rails.

Steel wheel: External dia. 238 mm, internal dia. 200 mm. The bolted-on half-coupler permits, in conjunction with a scaffolding tube, locking and alignment of all the castors in the direction of travel.

### Flange castor for 48.3 mm tube 10

For use on 48.3 mm tubes.

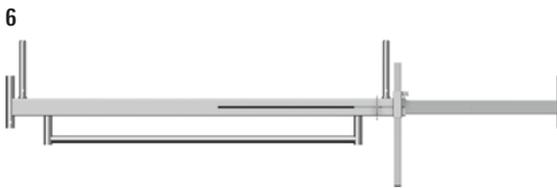
Steel wheel: External dia. 230 mm.

The welded-on half-coupler permits, in conjunction with a scaffolding tube, locking and alignment of all the castors in the direction of travel.

The scaffolding joints are secured with **locking pins 11** in special cases against unintentional lifting off, for example when scaffolding units are moved with a crane or in particular wind conditions.



The welded-on halfcoupler permits, in conjunction with a scaffolding tube, locking and alignment of all the castors in the direction of travel.



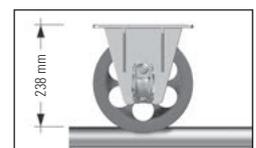
The telescopic device: width max. 3.20 m, min. 2.30 m. The mobile beam can be used for all scaffolding systems (rolling towers, frame, modular and other scaffolding tube-and-coupler) with a tube diameter of 48.3 mm.



Example for use:  
Trolley with  
doubleflange castor  
on rails



Example for use:  
Trolley with flange  
castor on 48.3 mm  
tube



Pos.	Description	Dimensions L/H x W [m]	Weight approx. [kg]	PU [pcs.]	Ref. No.
1	<b>Castor 700</b> Plastic wheel, dia. 200 mm. With base plate, adjustment range 0.30 – 0.60 m, spindle nut with lock, castor with twinbrake lever and load centering when braked. Wheel and slewing ring can be locked. Permissible load capacity: braked 7.0 kN. Max. dynamic load 350 kg unbraked	dia. 0.20	6.8	70	1359.200
2	<b>Castor 700, with polyurethane coating</b> Plastic wheel dia. 200 mm. With base plate, adjustment range 0.30 – 0.60 m, spindle nut lock, castor with twin brake lever and load centering when braked. Wheel and slewing ring can be locked. Permissible load capacity: 7.0 kN. Max. dynamic load 350 kg unbraked	dia. 0.20	7.0	70	1258.200 
3	<b>Castor 1000</b> Plastic wheel, dia. 200 mm. With base plate, adjustment range 0.30 – 0.60 m, spindle nut with lock, with twin brake lever and load centering when braked. Wheel and slewing ring can be locked. Permissible load: 10 kN (braked and unbraked)	dia. 0.20	6.3	70	1260.201
4	<b>Castor 1000, with electroconductive polyurethane coating</b> Plastic wheel dia. 200 mm of polyamide with coating of electroconductive polyurethane. With base plate, adjustment range 0.30 – 0.60 m, spindle nut lock, with twin brake lever and load centering when braked. Permissible load capacity: 10 kN (≈ 1,000 kg). Special castor for sensitive floorings and thanks to electroconductability also usable in explosive or ESD areas. Bleeder resistance according to DIN EN 12526 < 10 <sup>4</sup> Ω	dia. 0.20	6.8	70	1260.202 
5	<b>Castor 1200, with half-coupler</b> Reinforced plastic wheel, dia. 200 mm. With base plate, adjustment range 0.30 – 0.60 m, spindle nut with lock, wheel and slewing ring can be locked. Wheel and slewing ring can be locked. Permissible load: 12 kN (braked and unbraked)	dia. 0.20	12.0	50	1267.200 
6	<b>Mobile beam with 2 spigots, adjustable</b> Steel rectangular tube, hot-dip galvanized. For base widening in special rolling tower structures.	2.30–3.20	42.6	20	1338.320
7	<b>Castor 750, with polyurethane coating and locking brake</b>	dia. 0.25	11.3	50	5207.250 
8	<b>Spigot, adjustable</b> Steel, hot-dip galvanized. For use with mobile beam Ref. No. 1338.320	0.46	2.1	200	1337.000
9	<b>Double flange castor T17, 75 mm</b> Secured by top plate, hole pattern 170 x 170 mm, dia. 18 mm. external dia. 238 mm, internal dia. 200 mm, without brake. Permissible load: 31 kN	dia. 0.238	21.4	40	5216.076 
10	<b>Flange castor for 48.3 mm tube</b> Secured by top plate, outer hole pattern 170 x 170 mm, dia. 18 mm, inner hole pattern 126 x 126 x 13 mm (slot hole 13 x 28 mm) without brake. Permissible load: 31 kN	dia. 0.23	16.8	40	5221.048 
11	<b>Locking pin, red, dia. 11 mm</b>		0.2	100	4000.001

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## Scaffolding enclosures

### Keder rail system

The Layher keder rail system is a weather protection system for scaffolding comprising **aluminium keder rails 1/2** and ready-made **keder tarpaulins**. It forms a continuous covering of the scaffolding surfaces to a level above the eaves of the building to be enclosed and is thus an almost watertight and dustproof enclosure. The aluminium keder rails are connected with **rail holders 5** and **capitive bolts 14**.

The wind loads that the weather protection system for scaffolding has to transmit must be calculated and verified in accordance with DIN EN 12810/12811. The spacing of the rail holders is max. 1 m. Transmission of forces must be structurally verified. Structural strength verifications are available for Layher scaffolding.

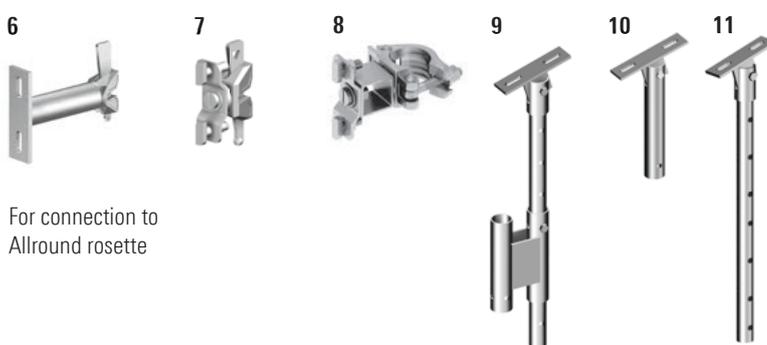
The load-bearing capacity of the keder rail system from Layher is designed such that scaffolding bays of up to 3.07 m can be used up to a height of 50 m. Above the 50 m level. The maximum possible scaffolding bay size is 2.57 m. The assembly instructions are available on request.



Keder tarpaulins in use on the scaffolding



For tube diameter  
48.3 mm



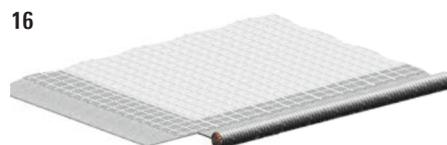
For connection to  
Allround rosette



Angled connection between  
two keder rails



Used to stabilize and secure the keder  
tarpaulins at the tarpaulin closure / joint



15



Lattice-reinforced and UV-stabilized PE tarpaulin with welded-on keder trim on both sides, dia. 13 mm. For scaffolding bay lengths of 2.07 m, 2.57 m and 3.07 m. Weight 300 g/m<sup>2</sup>. Keder tarpaulins are available in other (e.g. metric) lengths and widths, please enquire for details.

Pos.	Description	Dimensions L/H x W [m]	Weight approx. [kg]	PU [pcs.]	Ref. No.
1	<b>Aluminium keder rail 2000</b>	1.30	2.0	50	<b>4201.130</b>
		2.00	3.0	50	<b>4201.200</b>
		2.25	3.3	50	<b>4201.220</b>
		2.50	3.8	50	<b>4201.250</b>
		3.00	4.5	50	<b>4201.300</b>
		4.00	6.0	50	<b>4201.400</b>
2	<b>Aluminium keder rail 3000</b>	2.00	6.1	20	<b>5574.200</b>
		3.00	9.2	20	<b>5574.300</b>
		4.00	12.2	20	<b>5574.400</b>
		5.00	15.3	20	<b>5574.500</b>
		6.00	18.3	20	<b>5574.600</b>
3	<b>Aluminium keder bow 2000 eaves T18</b> , for roof pitch 11°	0.80	1.7	150	<b>4205.005</b>
4	<b>Aluminium keder bow 2000 ridge</b> , for roof pitch 11°	0.30	0.5	50	<b>4205.002</b>
5	<b>Rail holder with half-coupler</b> , 19 WS 2 grooved bolts (Pos. 14) are required	0.20	1.7	50	<b>4201.000</b>
6	<b>Rail holder with wedge head</b> 2 grooved bolts (Pos. 14) are required	0.20	1.7	50	<b>4201.001</b>
7	<b>Keder rail holder</b> , rotatable	0.10	0.9	25	<b>5573.000</b>
8	<b>Rail holder</b> , swivelling with half-coupler	0.16	1.0	25	<b>5573.006</b>
9	<b>Height adjuster for weather cap</b> adjustable in 8 cm intervals, 2 grooved bolts (Pos. 14) are required	0.60	4.5	100	<b>4203.000</b>
10	<b>Hinge fitting for weather cap</b> 2 grooved bolts (Pos. 14) are required	0.30	1.6	100	<b>4202.000</b>
11	<b>Hinge fitting for Event roof</b>	0.70	3.4	25	<b>5573.001</b>
12	<b>Keder bow 2000 flexible</b> , 0.60 m	0.60	1.0	100	<b>4205.003</b>
13	<b>Tube brace</b> Steel, 2 grooved bolts (Pos. 14) are required. Metric and other lengths available on request	2.07	4.2	150	<b>4204.207</b>
		2.57	5.1	150	<b>4204.257</b>
		3.07	6.0	150	<b>4204.307</b>
14	<b>Captive bolt for keder rail M12 x 40</b> , with nut		5.0	50	<b>4206.003</b>
15	<b>Joint strap for aluminium keder rail</b> 2 grooved bolts (Pos. 14) are required	0.17	0.5	50	<b>4208.000</b>
16	<b>Keder tarpaulin 300</b> , white	10.00 x 2.07	5.9	10	<b>6229.207</b>
		10.00 x 2.57	7.3	12	<b>6229.257</b>
		10.00 x 3.07	8.7	10	<b>6229.307</b>

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## Scaffolding enclosures

### Scaffolding tarpaulins and nets

To protect passers-by and traffic during spraying work and other site work causing dirt, facade scaffolding is covered with tarpaulins and nets. Layher scaffolding tarpaulins and nets meet the requirements of DIN 4420-1. Compliance with design parameters prevents objects falling from the scaffolding level.

**Scaffolding tarpaulins 1:** Lattice-reinforced and UV-stabilized PE tarpaulin with eyelet bands welded on lengthways. For scaffoldings in the standard dimensions of 2.57 m and 3.07 m. Eyelet spacing 10 cm. For scaffolding heights up to 10 m, minimum one fixation point per sqm is necessary. Above 10 m, there should be 2.

**Scaffolding nets 2:** Highly tear-resistant and UV-stabilized scaffolding protection net with fine fabric structure, gauze fabric of PP bands with three compressed eyelet bands. Eyelet spacing 10 cm. For scaffoldings in the standard dimensions of 2.57 m and 3.07 m.

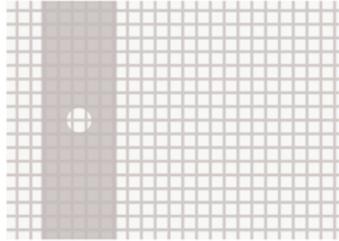
Scaffolding tarpaulins and scaffolding nets are only supplied in rolls of 20 m length.

Scaffolding tarpaulins with printed advertising:  
Delivery time and additional printing costs on request.

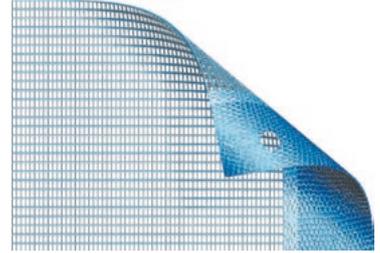
### Load-capacity of the disposable tie:

Ref. No. 6242.002 (380 x 7.6) = 530 N

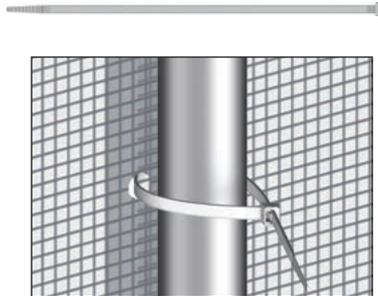
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2



3



### Disposable tie for tarpaulins and nets 3:

With a scaffolding height up to 10 m, one fixation point per squaremetre is recommended. With scaffolding heights higher than 10 m, at least two fixation points are required.

## Ladder access



For constructing outward-facing accesses, **simple scaffolding ladders 4/5** are the ideal solution.

The stile connections must have proper support and be secured with **spring clips 7**. The regulations in DGUV 38 must be followed.

The **access ladder 6** is a flexible aid to

climbing inside the scaffolding to a storey height of 2 m. Layher access ladders conform to the DIN EN 131 up to a maximum length of 3 m.

4



5



6



The stile sections of **4/5** are designed for dia. 48.3 mm coupler connection.

7



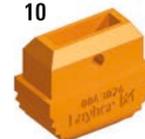
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9



10



Pos.	Description	Dimensions L/H x W [m]	Weight approx. [kg]	PU [pcs.]	Ref. No.
1	<b>Scaffolding tarpaulin 200</b> , white 2.70 m wide, working width 2.57 m 3.25 m wide, working width 3.07 m  Lattice reinforced, very tearproof PE tarpaulin, 5 eyelet tapes, tear resistance approx. 750 N/5 cm, weight approx. 200 g/m <sup>2</sup> , temperature resistance from -40 °C to +80 °C				
		20.00 x 2.70	10.8	46	<b>6217.257</b>
		20.00 x 3.20	13.0	46	<b>6217.307</b>
2	<b>Scaffolding net 90</b> , blue Weight 90 g/m <sup>2</sup> . 2.60 m wide, working width 2.57 m 3.20 m wide, working width 3.07 m				
		20.00 x 2.60	4.7	20	<b>6219.257</b>
		20.00 x 3.20	5.8	20	<b>6219.307</b>
3	<b>Disposable tie for tarpaulins and nets</b> , 380 x 7.6 mm		1.0	100 	<b>6242.002</b>

Pos.	Description	Dimensions L/H x W [m]	Weight approx. [kg]	PU [pcs.]	Ref. No.	
4	<b>Aluminium pole ladder</b>	10 rungs	2.90 x 0.46	8.2	50	<b>1004.010</b>
		14 rungs	4.00 x 0.46	11.3	50	<b>1004.014</b>
		17 rungs	4.90 x 0.46	13.8	50	<b>1004.017</b>
		20 rungs	5.70 x 0.46	16.1	50	<b>1004.020</b>
5	<b>Steel pole ladder</b> hot-dip galvanized	6 rungs	1.50 x 0.43	12.0	50	<b>1002.006</b> 
		8 rungs	2.00 x 0.43	15.0	50	<b>1002.008</b> 
		12 rungs	3.00 x 0.43	21.5	50	<b>1002.012</b> 
		16 rungs	4.00 x 0.43	28.0	50	<b>1002.016</b> 
6	<b>Access ladder T15</b> , steel, 7 rungs for Allround Scaffolding and SpeedyScaf	2.15 x 0.35	7.6	70	<b>4009.007</b>	
7	<b>Spring clip</b> , 11 mm pin, for securing the joint connections of the extended simple steel/aluminium scaffolding ladder Ref. No. 1004/1002		0.1	200	<b>1250.000</b>	
8	<b>Rubber base</b> for tube dia. 48.3 mm		0.1	100	<b>1020.000</b>	
9	<b>Spare part foot</b> , for 1004, 10 – 20 rungs, pair		0.1	2 	<b>6492.039</b> 	
10	<b>Spare part foot</b> , for 4005.007, 4008.007 and 4009.007, pair		0.2	2 	<b>6492.400</b> 	

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## Scaffolding pallets

### Tube pallets

in square shape (85) with or without skeleton box insert or in rectangular shape (125/265). The pallets are open on all sides. Tubes, standards, guardrails, diagonal braces, toe boards and, with the box insert, also couplers and other small parts are transported and stored with this pallet. The empty pallets, stored permanently in the base frame using pallet posts, can be transported and stored in a space-saving way.



### Tube pallet 125 1

The following can be transported, for example:

- 13 Frames, 0.73 m or
- 75 Standards or
- 99 toe boards
- 155 ledgers (pay attention to the perm. load of 1,500 kg) or
- 11 Robust decks 0.61 m or
- 15 Stalu decks 0.61 m or
- 28 Steel decks 0.32 m.

### Tube pallet 85 2

The following can be transported, for example:

- 500 couplers or
- 120 scaffolding anchors 0.38 m or
- 100 base plates 60.

### Tube pallet 265 3

The following can be transported, for example:

- about 13 Ridge cassettes or
- 20 Roof cassettes or
- 15 Brick guards.

### Modular skeleton box 4

The skeleton box can be stacked with Euro pallets. Crane eyelets at top; an opening allows stacked material to be removed even if several pallets are stacked one above the other. The integrated timber base plate is 30 mm thick and it's nailed onto 50 x 50 mm square timbers.

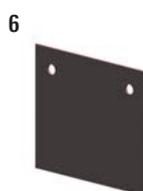
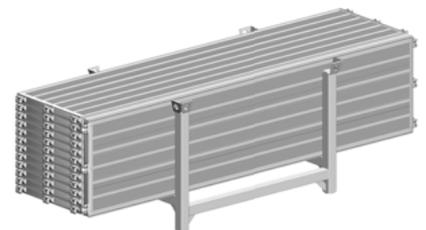
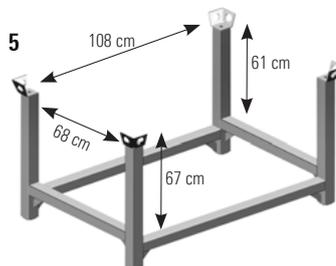
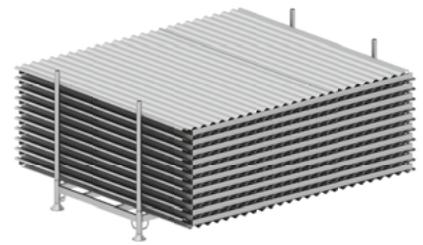
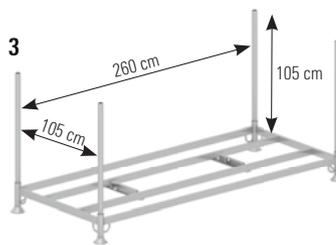
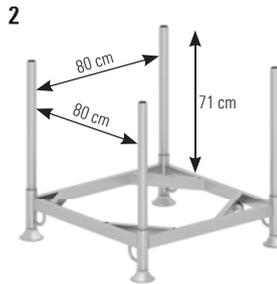
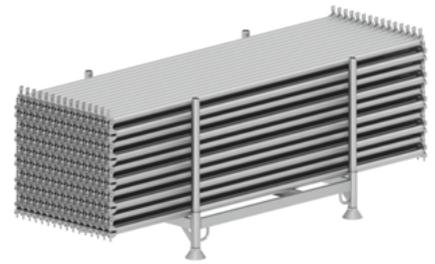
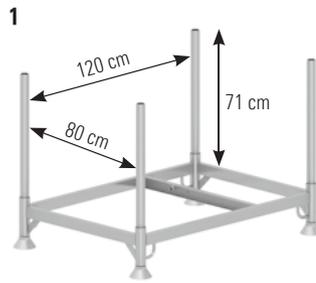
The following can be transported, for example:

- 1,200 couplers or
- 180 scaffolding anchors 0.38 m or
- 200 base plates 60.

### Modular pallet 5

The pallet is also stackable with Euro pallets and has crane eyelets. Thanks to the higher mounted cross struts, the storage goods can be placed by fork-lift truck.

One tube pallet 125 and 6 steel decks resp. 3 Robust- or Xtra-N decks can be used together with the **end plates for transport box 6** as a practical transport box. This can be used for protectively stocking and transport of the AGS.



Pos.	Description	Dimensions L/H x W [m]	Weight approx. [kg]	PU [pcs.]	Ref. No.
1	<b>Tube pallet 125</b> Steel, hot-dip galvanized, length of pallet posts: 0.86 m, load 1,500 kg	1.37 x 0.97	32.0	10	5105.125
2	<b>Tube pallet 85</b> Steel, hot-dip galvanized, length of pallet posts: 0.86 m, load 1,500 kg	0.97 x 0.97	30.8	10	5105.085
2a	<b>Mesh box insert</b> Steel, hot-dip galvanized, length of pallet posts: 0.86 m, load 1,500 kg	0.85 x 0.60	22.0	10	5104.086 
2b	<b>Timber base plate</b>	0.88 x 0.88	4.1	50	5104.088 
	<b>Plug tubes</b> for tube pallets 125 and 85	0.86	2.6	4	6494.751 
3	<b>Tube pallet 265</b> Steel, hot-dip galvanized, length of pallet posts: 1.20 m, load 1,300 kg	2.77 x 1.22	50.6	10	5113.265 
4	<b>Modular skeleton box</b> Steel, hot-dip galvanized, internal dimensions 1.08 x 0.68 x 0.61 m load 2,000 kg, perm. onload 6,000 kg stackable with Euro pallets	1.20 x 0.80	85.8		5113.002
	<b>Timber base plate for modular skeleton box</b> IPPC treated = according to import regulations for packagings made of solid timber IPPC-Standard (International Plant Protection Convention)	1.07 x 0.76	15.2	20	6494.514 
5	<b>Modular pallet</b> Steel, hot-dip galvanized, internal dimensions 1.08 x 0.68 x 0.61 m load 2,000 kg, perm. onload 6,000 kg stackable with Euro pallets	1.20 x 0.80	45.0	5	7042.004
6	<b>End plate for transport box</b> of plywood, easy fixation by the u-claws of the scaffolding decks	0.72 x 0.60	2.4		5105.072

## Bridging

The **aluminium bridging beam 600 1** is a sturdy and versatile work deck of up to 10 m length which can be used quickly and easily as a lightweight aluminium component either individually or in scaffolding structures.

In accordance with DIN EN 12811-1, the Layher **aluminium bridging beam 600 1** with a width of 0.60 m is permissible for load class 3 (2 kN/m<sup>2</sup>; lengths up to 7.10 m) and also for load class 2 (1.5 kN/m<sup>2</sup>; lengths up to 10.00 m).

It can therefore be used as a deck in work, safety and birdcage scaffolding and also as a bridging element in façade scaffolding. If the height exceeds 2.00 m, a three-part brick guard is required.

### Double guardrail with toe board 3

Folds together for transport

### Guardrail fixing 4

for fastening the double guardrail to the aluminium bridging beam 600

### Guardrail locking clip 5

for securing the double guardrail on the guardrail fixture

### Guardrail post 1.20 m 6

for connecting the three-part brick guard made from scaffolding tubes, double couplers and toe boards. The **clamp 7** can be used to combine several aluminium bridging beams 600 as a platform for common support applications.

### Alu telescopic beam 8

The automatic locking mechanism ensures that the inner extending element cannot slide out by mistake.

### Toe board 9

Easy fitting into the toe board pins of the guardrail mounting standard, for complete three-part side protection.

The **steel plank 11** is a safe bridging element capable of bearing high loads for all scaffolding systems. It is preferred to wooden planks for use in areas with stringent fire protection requirements.

- ▶ Long service life, reusable
- ▶ Lower weight compared with wooden planks
- ▶ Non-slip and non-inflammable
- ▶ Easy to secure in position with locking pins when placed on steel decks

The support length must be at least 10 cm at every support.

### Individual toe boards

The toe boards can be individually designed in printing and painting.

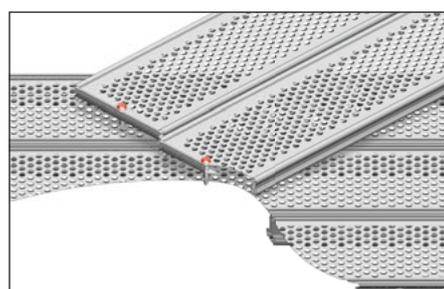
Minimum order quantity 500 pcs.



Assembly with **guardrail post**, scaffolding tubes and double couplers.



Assembly with **guardrail fixing** and **double guardrail with toe board**.



**2 locking pins or 1 securing screw** for each support secure the steel plank against slipping and lifting off.

Pos.	Description		Dimensions L/H x W [m]	Weight approx. [kg]	PU [pcs.]	Ref. No.
1	<b>Alu bridging beam 600</b> 	Permissible load-bearing capacity 2.0 kN/m <sup>2</sup> , height 0.09 m	3.18 x 0.60	20.0	12	<b>1348.318</b>
			4.12 x 0.60	26.0	12	<b>1348.412</b>
			4.75 x 0.60	29.0	12	<b>1348.475</b>
		Permissible load-bearing capacity 2.0 kN/m, height 0.12 m	5.20 x 0.60	38.0	16	<b>1348.520</b>
			6.15 x 0.60	45.0	16	<b>1348.615</b>
			7.10 x 0.60	52.0	12	<b>1348.710</b>
			Permissible load-bearing capacity 1.5 kN/m <sup>2</sup> , height 0.15 m	8.00 x 0.60	68.0	12
		9.10 x 0.60		76.0	12	<b>1348.910</b> 
10.00 x 0.60	85.0	12		<b>1348.100</b> 		
2	<b>Alu bridging beam 600 folding</b>	Perm. load-bearing capacity 1.5 kN/m <sup>2</sup> , height 0.12 m	5.10 x 0.60	47.0	8	<b>1349.510</b> 
			7.30 x 0.60	61.0	8	<b>1349.730</b> 
		Perm. load-bearing capacity 1.5 kN/m <sup>2</sup> , height 0.15 m	9.15 x 0.60	86.0	8	<b>1349.915</b> 
3	<b>Double guardrail</b> , 2.00 m with toe board Aluminium		2.00 x 1.10	9.7	30	<b>1332.200</b>
		<b>Double guardrail</b> , 3.00 m with toe board Aluminium		3.00 x 1.10	12.9	30
4	<b>Guardrail fixing</b> for Pos. 3, aluminium		0.50	0.9	10	<b>1330.000</b>
5	<b>Guardrail locking clip</b> for Pos. 4, steel		0.08	0.1	10	<b>1333.000</b>
6	<b>Guardrail post</b> , 1.20 m Aluminium		1.20	2.4	10	<b>1334.000</b>
7	<b>Clamp</b> , steel		0.10	0.4	10	<b>1331.000</b>
8	<b>Alu telescopic beam</b>		1.64 – 2.90 x 0.31	13.0	30	<b>1351.290</b>
			1.92 – 3.50 x 0.31	16.0	30	<b>1351.350</b>
			2.27 – 4.00 x 0.31	18.0	30	<b>1351.400</b>
			2.49 – 4.40 x 0.31	20.0	30	<b>1351.440</b>
9	<b>Toe board</b> , wood		1.57 x 0.15	3.1	140	<b>1757.157</b>
			2.07 x 0.15	4.7	140	<b>1757.207</b>
			2.57 x 0.15	5.6	140	<b>1757.257</b>
			3.07 x 0.15	6.8	140	<b>1757.307</b>
10	<b>Locking pin for steel plank</b> , plastic, dia. 11 mm		0.08	0.5	100 	<b>3800.013</b>
11	<b>Steel plank</b> , 0.30 m	Load class 6	1.00 x 0.30	6.5	30	<b>3880.100</b> 
		Load class 6	1.50 x 0.30	10.3	30	<b>3880.150</b> 
		Load class 5	2.00 x 0.30	12.8	30	<b>3880.200</b> 
		Load class 3	2.50 x 0.30	15.3	30	<b>3880.250</b> 
	<b>Steel plank</b> , 0.20 m	Load class 6	1.00 x 0.20	4.8	100	<b>3878.100</b> 
		Load class 6	1.50 x 0.20	7.2	100	<b>3878.150</b> 
		Load class 5	2.00 x 0.20	9.5	100	<b>3878.200</b> 
		Load class 3	2.50 x 0.20	11.8	100	<b>3878.250</b> 
12a	<b>Securing screw</b> , long (red), steel, hot-dip galvanized	19 WS	0.08 x 0.03	4.0	50 	<b>3800.016</b> 
		22 WS	0.08 x 0.03	3.9	50 	<b>3800.017</b> 
12b	<b>Securing screw</b> , short (blue), steel, hot-dip galvanized	19 WS	0.04 x 0.02	2.3	50 	<b>3800.018</b> 
		22 WS	0.04 x 0.02	2.3	50 	<b>3800.019</b> 

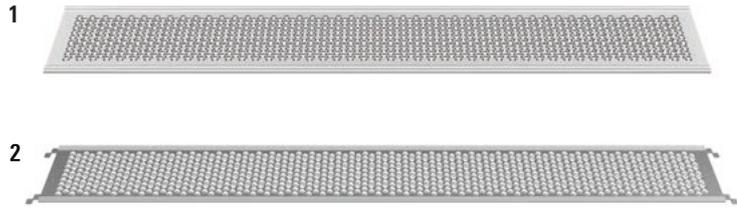
WS = wrench size PU = packaging unit  = available ex works  = delivery time on request  = only available in this packaging unit  = the approval process is not yet completed

## Bridging

The **steel gap sheet 1** and the **gap sheet 2** can be used between two scaffolding decks on SpeedyScaf and Allround Scaffolding. For use on gap widths up to 20 cm.

### Advantages:

- ▶ Fast and easy mounting, independent of the gap width
- ▶ Long life
- ▶ Lightweight
- ▶ Cost effective
- ▶ Flexible use
- ▶ Not flameable, no fire load
- ▶ Low height (h = 10 mm), meaning: low tripping hazard

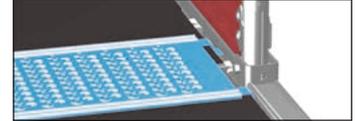


For 1



One securing screw (on page 28, Pos. 12 b) for each bearing secure the steel gap sheet against slipping and lifting off.

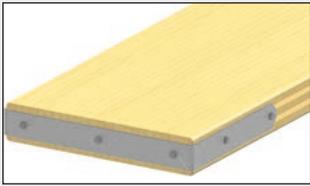
For 2



Securing is achieved by fitting an assembly frame and / or the bracket lift-off preventer. For Allround Scaffolding, the standard lift-off preventer is used.

## Scaffolding planks

Our planks conform to sorting category S 10 as per DIN 4074. They can be used as scaffolding planks. They can be protected against splitting at the ends with **sheet metal fitting for plank 0.60 m 4**.



### Scaffolding plank 3

freshly sawn, sorting category S 10



## Software for scaffolding construction

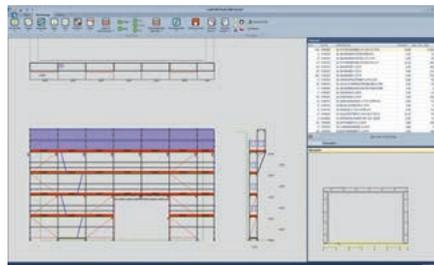
### Layher LayPLAN

Time and material are crucial factors in scaffolding construction. To make the most efficient use of both, the Layher range includes the practical LayPLAN scaffolding planning software.

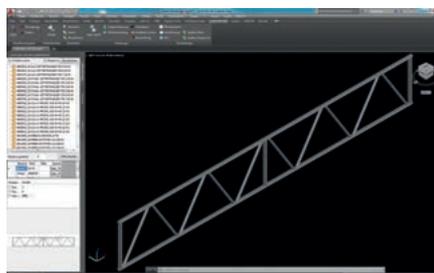
With the several software packages LayPLAN CLASSIC and LayPLAN CAD, it is possible to plan scaffolding structures from simple, small facade scaffolding up to complex industrial scaffoldin or protective roofs and grandstands.

Once the dimensions and the required assembly variant have been entered, LayPLAN CLASSIC delivers within seconds a scaffolding proposal, including anchoring, bracing and side protection.

The data are then simply exported into LayPLAN CAD, which offers further possibilities for detailed 3D planning. A visual collision check is possible with the aid of volume rendering. Using a convenient search function with preview image, scaffolding planners will find not only an extensive library of individual Layher parts, but also assemblies already prefabricated for even faster design work.



Speedy facade scaffolding with console brackets, brick guards and drive-trough cut-out



Planning of individual scaffolding structures with LayPLAN CAD

Pos.	Description	Use up to load class	Dimensions L/H x W [m]	Weight approx. [kg]	VE [St.]	Ref. No.
1	<b>Steel gap sheet</b>					
	for 0.73 m bay length	6	0.73 x 0.32	2.6	150	<b>3881.000</b>
	for 1.09 m bay length	6	1.09 x 0.32	3.8	150	<b>3881.001</b>
	for 1.57 m bay length	6	1.57 x 0.32	4.2	100	<b>3881.002</b>
	for 2.07 m bay length	6	2.07 x 0.32	6.3	100	<b>3881.003</b>
	for 2.57 m bay length	6	2.57 x 0.32	8.5	100	<b>3881.004</b>
	for 3.07 m bay length	6	3.07 x 0.32	12.0	100	<b>3881.005</b>
2	<b>U-gap sheet with hooks</b>					
	for 1.57 m bay length	6	1.57 x 0.32	4.5	100	<b>3882.157</b>
	for 2.07 m bay length	6	2.07 x 0.32	6.6	100	<b>3882.207</b>
	for 2.57 m bay length	6	2.57 x 0.32	8.8	100	<b>3882.257</b>
	for 3.07 m bay length	6	3.07 x 0.32	12.3	100	<b>3882.307</b>

Pos.	Description	Dimensions L/H x W [m]	Weight approx. [kg]	PU [pcs.]	Ref. No.
3	<b>Scaffolding plank</b> 45 mm high, freshly sawn, sorting category S 10	1.00 x 0.24	5.2	80	<b>3816.100</b>
		1.50 x 0.24	7.8	80	<b>3816.150</b>
		2.00 x 0.24	10.4	80	<b>3816.200</b>
		2.50 x 0.24	13.0	80	<b>3816.250</b>
		3.00 x 0.24	15.6	80	<b>3816.300</b>
		3.50 x 0.24	18.2	80	<b>3816.350</b>
		4.00 x 0.24	20.8	80	<b>3816.400</b>
4	<b>Sheet metal fitting</b> for plank 0.60 m	0.60	0.1	80	<b>3817.000</b>

### How can I acquire LayPLAN?

Registration and all the ordering processes can be conveniently accessed at the Layher website: <http://software.layher.com>

A contact form gives you the data to access our software portal, where you can download a 30-day test version and also find the order form for the full version.

Pos.	Description	Ref. No.
5	<b>LayPLAN CLASSIC</b> scaffolding configurator for SpeedyScaf, Allround Scaffolding, weather protection roofs and rolling towers	<b>6345.102</b>
6	<b>LayPLAN CAD</b> plug-in for AutoCAD, for designing complex scaffolding in 3D and for developing scaffolding proposals from LayPLAN CLASSIC	<b>6345.103</b>

## Fall protection

The **PSA-safety harness AX 60 C 1** has impressive features:

- ▶ Comfortable, padded and ergonomic back support
- ▶ Convenient tool holders and click-locks for easy fastening
- ▶ High operational dependability and absolute freedom from maintenance, plus very simple fastening
- ▶ Operating errors are not possible, as the equipment operates in any position
- ▶ Excellent running even under gruelling working conditions
- ▶ Enormous distribution of forces in the event of a fall

Before use, visual checks must be performed regularly to ensure correct working order. In accordance with German BGR 198 regulations, all personal safety equipment must be inspected at least once a year by an expert. The maximum permissible period of use for the equipment must not be exceeded.

The **advance guardrail post 4**, the **telescopic assembly guardrail 1.57/2.07 m**, the **telescopic assembly guardrail 2.57/3.07 m 5** and the **End-AGS 6** are used for temporary protection against falls during assembly of scaffolding parts.

### Extension lengths

Article	L min.	L max.
Assembly guardrail 1.57/2.07 m	1.57 m	2.90 m
Assembly guardrail 2.07/3.07 m	2.07 m	3.70 m

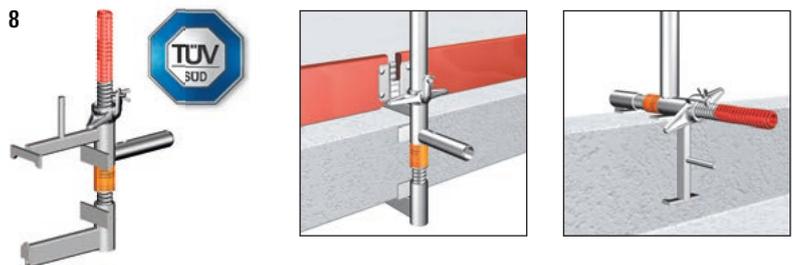
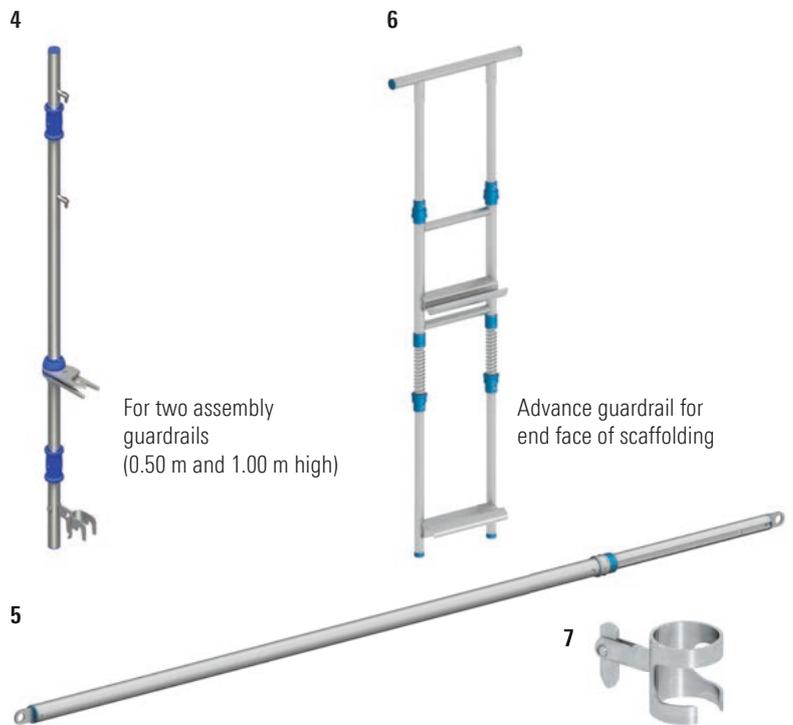
PSA: Personal safety apparatus  
AGS: Advance guardrail system



### Railing clamp 8

According to German regulations DGUV 38 relating to construction work, a fall protection system must be provided for work areas and walkways on roofs and intermediate levels where the height of the fall is more than 2.00 m. The Layher railing clamp meets these requirements for securing of concrete floors and fascias of 16 – 33 cm height and of flat roofs.

The back guard must be made in accordance with applicable regulations from tube/coupler, modular or frame scaffolding. The bay widths can be freely selected, max. 3.07 m long.

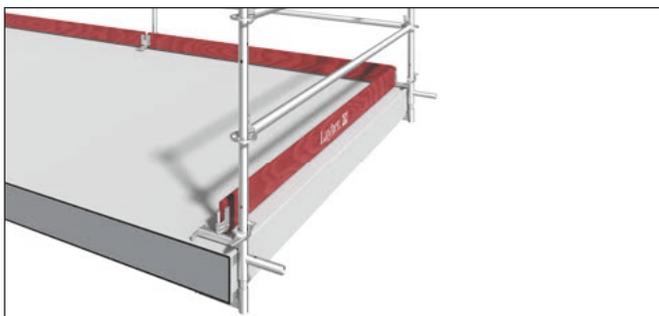


When attached the floors, toe boards must be provided, and the vertical stile must be attached over the spindle.

When attached to fascias, no toe boards are required, and the vertical stile must be attached over the spigot.

Pos.	Description	Dimensions L/H x W [m]	Weight approx. [kg]	PU [pos.]	Ref. No.
1	<b>PSA-safety harness AX 60 C</b> , with extension 0.50 m conforms EN 361		1.8		<b>5969.160</b> 🕒
2	<b>PSA-Flex-safety rope</b> , 2.00 m with fall arrester and snap hook FS 90; as per EN 354 / EN 355 self-shortening to reduce tripping hazards	2.00	1.1		<b>5969.501</b> 🏠
3	<b>PSA scaffolding construction set</b> Pos. 1 and 2 Safety harness, safety rope 2.00 m, backpack (Use only in scaffolding construction)		3.5		<b>5969.170</b> 🏠
4	<b>Advance guardrail post T19</b> Aluminium for two advance guardrails (0.50 m and 1 m high); rapid attachment of guardrails with tilting pins		6.0	50	<b>4031.003</b>
5	<b>Assembly guardrail T19</b> , 1.57 / 2.07 m <b>Assembly guardrail T19</b> , 2.57 / 3.07 m Aluminium, telescopic	1.70	2.9	50	<b>4030.207</b>
		2.30	3.7	50	<b>4030.307</b>
6	<b>End-AGS</b> Aluminium for securing the scaffolding end for bay widths of 0.73 m to 1.40 m	2.20 x 0.70	9.8	5	<b>4031.000</b>
7	<b>Tilting pin adapter</b> for use of the AGS at outer and inner corners		0.3	10	<b>4031.005</b> 🕒
8	<b>Railing clamp</b>	0.58	7.0	40	<b>4015.100</b> 🏠

Example for use of the railing clamp on floor slab:



Example for use of the railing clamp on fascia:



WS = wrench size PU = packaging unit 🏠 = available ex works 🕒 = delivery time on request 🏠 = only available in this packaging unit ⚙️ = the approval process is not yet completed

## Vertical transport

### Rope hoists

The rope hoist **Mini 60 S, Maxi 120 S and Maxi 150 S 1** is suitable for vertical transport of scaffolding material weighing from 6 up to 150 kg.

The winch is fastened to the scaffolding at the bottom. For assembly and dismantling of the scaffolding, only the swing arm has to be attached to the topmost scaffolding standard. The maximum working height of the hoist is 40 m, or 67 m if the winch is positioned higher.

The hoist winch is operated with 230 V/50 Hz. A slack rope switch shuts down the hoist when there is no longer any rope tension or when the end of the rope is reached. The hoist winch is equipped with an automatic final shutdown feature and a limiter against overloading of the hoist and scaffolding. For scaffolding hoists with a higher loading capacity, please request our special brochure. Loads additionally applied to the scaffolding must be transmitted into the structure or into the ground by special measures, and additional anchoring may be necessary. Please ask for further information about vertical transport.



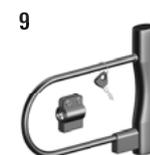
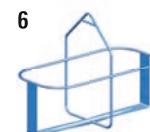
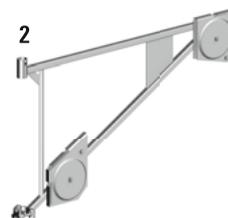
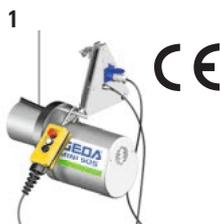
### Manual vertical transport



**Bracket 12** with **hoist wheel 13** for manual vertical transport of scaffolding material weighing up to 50 kg. Loads additionally applied to the scaffolding must be transmitted into the structure or into the ground by special measures, and additional anchoring may be necessary.



**Secure pulley 15**  
An integrated drop brake prevents the load from dropping when the rope is released and hence speeds up work procedures. The hoisted material is left suspended, thus permitting more flexible working both on the ground and on the scaffolding.



Pos.	Description	Dimensions L/H x W [m]	Weight approx. [kg]	VE [St.]	Ref. No.
1	<b>Mini 60 S</b> with 51 m of wire rope, catch and hook, control with emergency stop, 10 m, perm. load 60 kg hoisting speed 23/69 m/min		50.0		4415.060
	<b>Mini 60 S</b> with 81 m steel cable, otherwise as 4415.060		55.0		4416.116
	<b>Maxi 120 S</b> perm. load 120 kg, with 81 m steel cable, hoisting speed 20/60 m/min		65.0		4416.114
	<b>Maxi 150 S</b> perm. load 150 kg, with 81 m steel cable, hoisting speed 15/45 m/min		65.0		4416.115
2	<b>Swing arm</b> for Mini 60 S, Maxi 120 S and Maxi 150 S with deflecting wheel, permissible load: 150 kg		11.7		4416.015

### LOAD-BEARING EQUIPMENT

3	<b>Load hook</b> for scaffolding parts		0.5		4416.001
4	<b>Hook holder</b> for 5 load hooks		2.3		4416.014
5	<b>Rope sling</b> (5 mm dia., 35 cm long) for holding several load hooks		0.1		4416.002
6	<b>Bucket holder</b> for 2 buckets		4.4		4416.005
7	<b>Lifting sling</b> , 1.50 m for transport of scaffolding decks		0.5		4416.013

### ACCESSORIES

8	<b>Control unit</b> , 30 m with emergency stop		7.0		4416.021	
		<b>Control unit</b> , 50 m with emergency stop		13.0	4416.055	
9	<b>Security lock</b>		1.1		4416.010	
10	<b>Swing arm holder</b> for Mini 60 S (fitted in any scaffolding level)		8.0		4416.003	
	<b>Swing arm holder</b> for Maxi 120 S and Maxi 150 S (fitted in any scaffolding level)		12.9		4416.779	
11	<b>Wire rope</b> , 51 m, 4.5 mm <b>Wire rope</b> , 81 m, 4.5 mm		4.5		4416.011	
			6.3		4416.036	
12	<b>Bracket</b> , 0.73 m with eyelet for hoist wheel	WS 19	0.73	6.4	100	1744.719
		WS 22	0.73	6.4	100	1744.722
13	<b>Hoist wheel</b> up to max. 50 kg load, dia. 350 mm, with CE-mark	0.50 x 0.40	2.7	10	4419.000	
14	<b>Shackle clip</b> Connection of bracket with hoist wheel (before 06/2016)		0.2	10	4418.000	
15	<b>Secure pulley</b> up to max. 50 kg load, with CE-mark	0.40 x 0.40	5.0	10	4419.001	
16	<b>Bracket adapter</b> for hoist wheel Ref. No. 4419.001	0.26	1.7	10	4419.003	
17	<b>Rope for hoist wheel</b> , without drop brake Plastic rope, dia. 20 mm, for hoist wheel Ref. No. 4419.000; load capacity 50 kg; manufactured as per DIN EN 1261 Shape A; with spliced loops as per DIN 83 319; fitted at one end with 1 shackle clip as per DIN 82 101, colour blue	20 m	3.2	10	4420.200	
		40 m	5.8	10	4420.400	
18	<b>Rope for hoist wheel</b> , with drop brake Plastic rope, dia. 18 mm, for hoist wheel Ref. No. 4419.001, colour orange, otherwise as rope for hoist wheel without drop brake	20 m	2.6	10	4419.020	
		40 m	4.8	10	4419.040	

WS = wrench size PU = packaging unit = available ex works = delivery time on request = only available in this packaging unit = the approval process is not yet completed

## Vertical transport

### Scaffolding construction hoist Layher 200

The **Layher 200** is suitable for vertical transport of scaffolding material weighing up to 200 kg and transport height of 35 m.

The **base unit 1** includes chassis, cable bin, trailing cable and control unit.

The mast with toothed rack can be fixed to the scaffolding using only one tube.

The anchoring distances are 4 m.

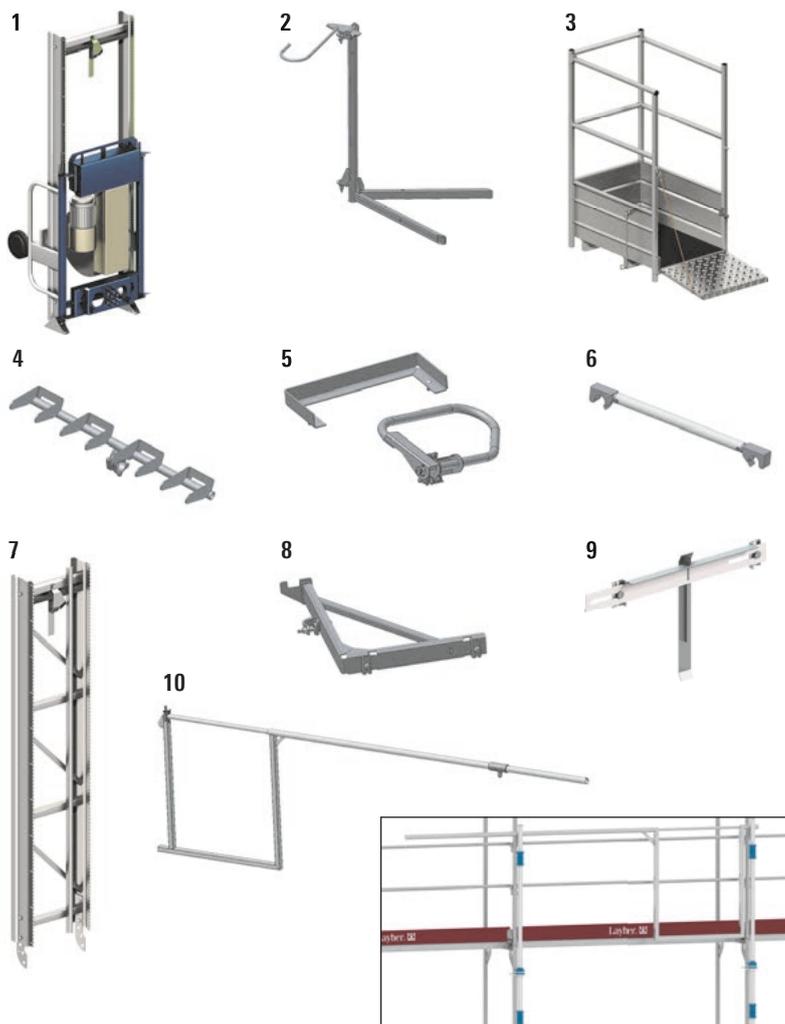
The entire unit only requires an area of 1.50 x 1.50 m on the ground, which makes it possible to load the hoist parallel to the building without any problems.

Unloading at the landing levels can be easily done by turning the platform.

The lightweight **platform 3** (only 51 kg) can be turned by 90° to the right.

The Layher 200 is easily serviced and maintained, i.e. easy access to handy components.

For stopping the loading platform in the right height, without mounting an additional position switch bracket, it is possible to place a **1.60 m ladder piece** directly above the base unit.



Please ask for further information about vertical transport.

## Various accessories

### Wood lacquer, red-brown 12

Painting or rolling: unthinned onto clean surface

Spraying: with 5% synthetic resin thinner onto cleaned surface

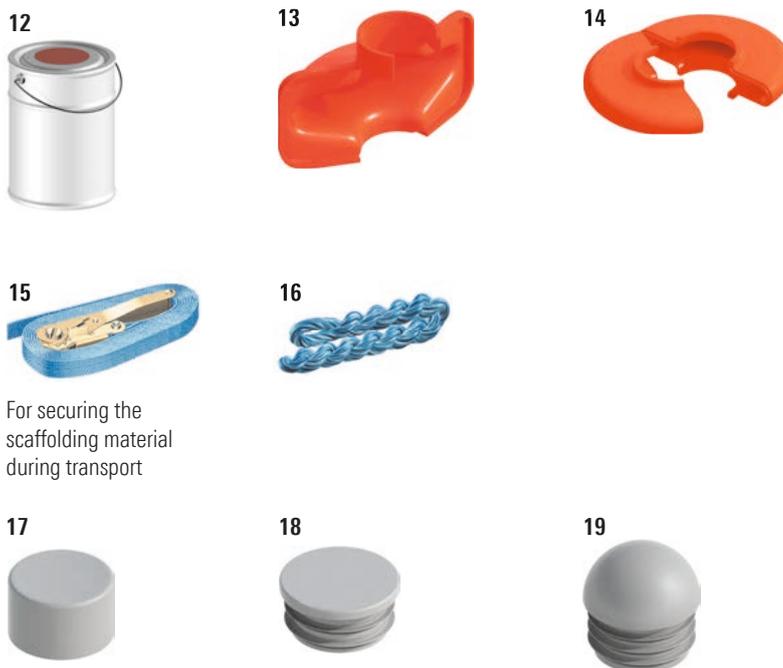
Dust-dry: about 45 mins.

Dry to touch: about 4 – 5 hrs.

Thoroughly dry: about 24 hrs.

The **tube end cap 17/18/19** is the visual closure for the tube and keeps out dirt, water and the like. It can be fitted over or into the tube.

For the use with aluminium tubes the spigots of the **tube end caps 18** and **19** must be cut longitudinally.



For securing the scaffolding material during transport

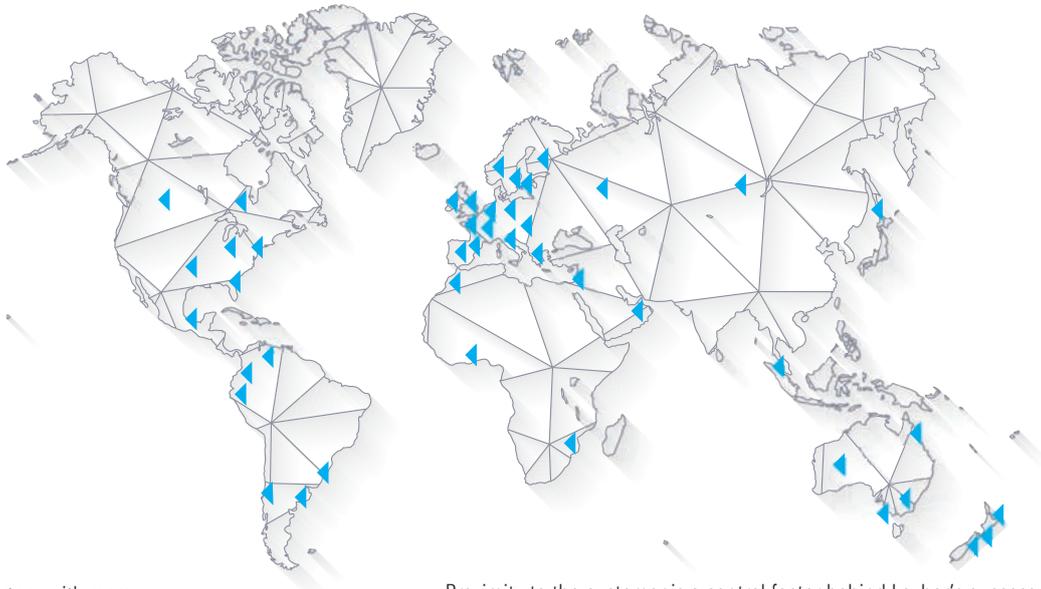
Pos.	Description	Dimensions L/H x W [m]	Weight approx. [kg]	PU [pcs.]	Ref. No.
1	<b>Base unit Layher 200</b> 1.7 kW / 230 VAC / 50 Hz, load capacity 200 kg, hoisting speed 25 m / min, max. hoisting height 35 m (Not allowed for passenger transportation) Scope of delivery: base part 2.00 m, electrical driven carriage, gripping device, control unit 5 m, cable bin, chassis		142.0		4416.883
2	<b>Swivelling frame</b> right, 90° swivelling		18.0		4416.822
3	<b>Loading platform</b> interior dimensions 1.20 x 0.75 x 1.80 m		51.0		4416.884
4	<b>Holding rack</b> for scaffolding parts (decks, toe boards or similar)		3.6		4416.885
5	<b>Support for scaffolding tubes</b> swivelling, 2-parts (with screwed on base bracket)		6.2		4416.886
6	<b>Load secure bar</b> with snap-on claws		2.4		4416.887
7	<b>Ladder piece</b> with toothed rack	2.00	24.0		4416.825
		1.60	20.3		4416.894
		1.00	14.0		4416.826
8	<b>Ladder support</b> holder spacings 4.00 m		9.4		4416.888
9	<b>Position switch bracket</b> for unloading break		2.6		4416.827
10	<b>Advanced loading side guardrail</b> for use with advance guardrail post (see page 34, pos. 4)		9.3		4416.889
11	<b>Cable extension, 20 m, for control unit, 5-pins</b>		5.0		4416.331

Pos.	Description	Dimensions L/H x W [m]	Weight approx. [kg]	PU [pcs.]	Ref. No.
12	<b>Wood lacquer, red-brown, 10 kg can</b>		10.2	30	4020.000
13	<b>Allround rosette cover with connected ledger</b> Polyethylene, fixing with disposable tie 6241.001 (see page 25, Pos. 3)		0.7	10	4007.012
14	<b>Allround rosette cover without connected ledger</b> Polyethylene, fixing with disposable tie 6241.001 (see page 25, Pos. 3)		0.9	10	4007.013
15	<b>Lashing strap</b> with 0.5 t ratchet	4.00	0.2		6306.004
16	<b>Poly cord, blue-white</b> with fused ends, with spliced eyelet on one side, 3-strand, rope dia. 8 mm	2.50	1.0	10	4017.003
17	<b>Tube end cap, dia. 48.3 mm, flat, external attachment</b> Plastic		0.5	50	6494.584
18	<b>Tube end cap, dia. 48.3 mm, flat, internal attachment</b> Plastic		0.5	50	6494.586
19	<b>Tube end cap, dia. 48.3 mm, round, internal attachment</b> Plastic		1.0	50	6494.585

WS = wrench size PU = packaging unit = available ex works = delivery time on request = only available in this packaging unit = the approval process is not yet completed

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