

# Fall protection

## FABA® climbing protection

SYSTEM A12

**FABA**  
SAFETY

Steel/Stainless steel



## FABA CLIMBING PROTECTION APPLICATIONS

FABA Climbing protection systems enable fall-protected use of fixed vertical ladders/manhole steps, such as those found in or on

- towers, stacks, high storage tanks, bridge piers, masts, antenna masts, machines and operating facilities
- high-rise racks and industrial plants, buildings and facades
- pits, mines as well as water and wastewater basins

### Operating principle

The user to be secured wears a harness with fall-arresting device attached to it. This device travels inside a fixed guide rail. In the event of a fall, the arresting device locks within the rail to prevent an accident.

### Advantages

Thanks to its fall prevention shuttle (guided fall arrester), the climbing protection system allows secure ascent and descent to any height or depth. FABA offers the only fall arrest system on the market with an enclosed glide roller system. In this system, the rollers of the fall prevention shuttle travel inside the rail. The result is optimal compensation of local constructive tolerances as well as consistently smooth running of the shuttle at all times. Ultimately, this translates into the elimination of detrimental friction losses. This fact is corroborated by all the professionals using this system on a daily basis. The range of easy to install systems comprises a series of components which can be combined to provide a versatile solution whilst ensuring that all the requirements are fulfilled.

The key component of all the climbing protection systems is the FABA arresting device, also known as guided fall arrester. All systems conform to DIN 18799 parts 1 and 2, EN 353-1 and 89/686/EEC



## SYSTEM A 12

- Available as complete ladder or as climbing protection rail only
- In hot-galvanized steel or stainless steel
- Climbing protection rail dimensions: width 48 mm, height 32 mm
- Material thickness 3 mm
- Catchment spacing for the arresting device 40 mm
- Rung spacing 280 mm
- Max. support bracket distance: Ladder A12 = 1400 mm / Rail A12 = 1960 mm
- Fall prevention shuttle also suitable for system AL 2
- The system can also be used for confined space access



Confined space access



FABA anchor devices:  
see inside back cover

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(e.g. step irons)			

## Scope of application

This catalogue presents our FABA System A12 climbing protection ladders and climbing protection rails, which enable fall-protected negotiating of vertical climbing ways. This type of ladders and rails are required on structures and buildings such as

- high-rise buildings and building parts, radio towers and antenna masts,
- different types of towers, such as cooling towers, etc. bridge piers,
- high storage tanks, masts, cable car supports, machines and other equipment,
- as well as on industrial.

**Installation:** see installation guide for the system A12.

## FABA climbing protection system A12

- Climbing protection ladder A12 with double rungs
- Climbing protection rail A12 without rungs (for retrofitting to existing climbing facilities)

### Technical data:

- Hot-galvanized steel (Hot dip galvanized to ISO 1461 – tZn o) or stainless steel (1.4571 pickled)
- C – rail made of 3 mm thick sectional steel
- Rail slot arranged asymmetrically
- The back side of the rail is provided with cut-outs in 40 mm intervals for the fall prevention shuttle to catch
- A12 climbing protection ladder with welded rungs
- Double rung with high-grip anti-slip tread
- Double rung with lateral 20 mm high anti-slip protectors

### NOTE:

Climbing protection systems may only be installed and operated by the employer or operator if a **test certificate** can be provided.

FABA components are type-tested by a certified test centre:

DEKRA EXAM GmbH, Dinnendahlstraße 9, 44809 Bochum, Germany, notified body 0158 (Test and certification centre for personal protective equipment according to 89/686/EEC).

Quality assurance of the final products is also carried out by DEKRA EXAM GmbH.

**Damaged components or components which have been used in a fall may not be used until tested by a technical expert.**

## Installation planning aid

- Climbing protection ladders and climbing protection rails with associated accessories may **only be installed and used for the intended purpose:**  
Climbing protection ladders are designed for secured climbing only. They are not designed for lifting or transporting loads.
- The installation base or building **must have adequate load bearing capacity.**
- There are no fundamental height restrictions. The installation of the FABA climbing protection ladders is **continuous** for the full height of the building.
- System A12 climbing ladders used in accordance with DIN 18799-2 may be mounted on buildings if the following applies:
  - the bracket distance is smaller than or equal to 1400 mm,
  - the support bracket is resistant to bending and is capable of transferring an impact force of 6 kN over at least  
4 anchoring points to the building structure;  
for support brackets see page 12 and following.

### To the bottom entry point

On the entry ladder, the start of the climbing protection rail is located at a height of 150 mm above the access level.

Alternatively, it is also possible to use a climbing protection ladder with centrally mounted guide rail with release facility.

A cover is available to secure the lower part of the climbing way / climbing protection ladder against unauthorized access.

### To the upper end of the climbing way

For this part of the system we offer a number of solutions, depending on the local requirements:

- Holding devices; also with the possibility to leave the climbing protection system, if necessary.
- Transfer devices; the user can leave the climbing protection system in order to access the building.

An end-stop must always be installed on the upper end of the system. Depending on the application, this can be a detachable or a permanent catch. It must be ensured that releasing or attaching the central fall arrestor is only possible from a secure stance. If the user wishes to leave the climbing protection system, s/he must protect himself against fall elsewhere.

**We can design the climbing protection system according to your specific needs – please contact us to discuss your requirements.**

## Materials used

Climbing protection systems are subjected to the most diverse climatic conditions and must be able to bear static loads and guarantee fall protection even after many years of service. FABA climbing protection ladders are manufactured to the highest quality standards.

For conventional applications we recommend corrosion protected hot-galvanized (according to ISO 1461) parts.

For applications involving more complex environmental conditions, such as aggressive gases, continuous moisture or similar, we recommend the use of stainless steel parts.

By using corrosion-proof 1.4571 steel, the parts manufactured in this material are capable of withstanding aggressive environments.

Please note that, for quality reasons, certain parts (e.g. connection means, fasteners) are only made in stainless steel.

## Applicable regulations

Please observe the generally accepted technical standards when installing climbing protection systems on buildings or structures; we refer in particular to the following:

EN 353-1	Personal protective equipment against falls from a height. Guided type fall arresters including a rigid anchor line
EN 354	Lanyards
EN 355	Energy absorbers
EN 358	Belts for work positioning and restraint and work positioning lanyards
EN 359	Restraint systems
EN 360	Retractable type fall arresters
EN 361	Full body harness
EN 362	Connectors
EN 363	Arrest systems
EN 364	Testing Procedures
EN 365	Instructions for use and marking
EN 795	Anchor devices



## Climbing protection ladder *(with centrally mounted guide rail)*

### Specification conforming to:

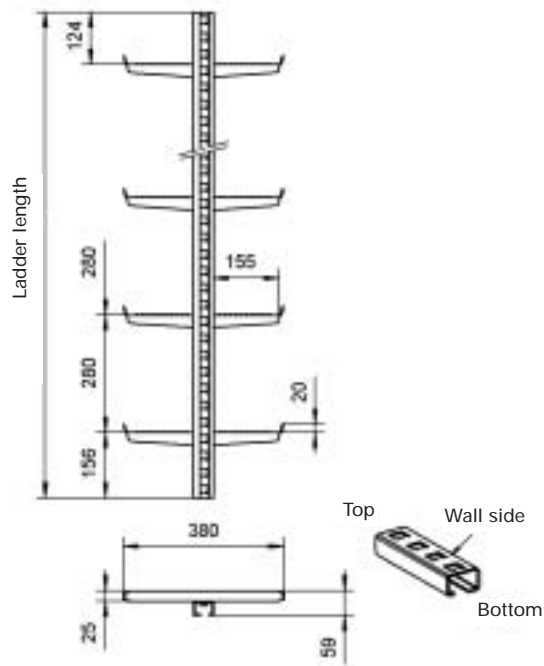
BGV D 36  
DIN 18799-2  
EN 353-1

### Side rail profile:

The climbing protection rail is manufactured from 3 mm thick sectional steel. The interior of the rail is fitted with cut-outs every 40 mm for secure catching of the FABA fall prevention shuttle; these cut-outs are also used to fasten the individual climbing protection segments to the rail ends using screws.

### Rungs:

The rungs are made of formed steel sheet and welded to the back of the rail. They have a profiled tread and are fitted with 20 mm high lateral anti-slip protectors. The distance between rungs is of 280 mm. The rungs are level on both sides.



### Material: Hot-galvanized steel

Order No.:	Designation	Ladder length (m)	Weight (kg)
616 020 056	Climbing protection ladder (with centrally mounted rail)	0.56	2.70
616 030 084		0.84	4.05
616 040 112		1.12	5.40
616 050 140		1.4	6.75
616 060 168		1.68	8.10
616 070 196		1.96	9.45
616 080 224		2.24	10.80
616 090 252		2.52	12.15
616 100 280		2.8	13.50
616 110 308		3.08	14.85
616 120 336		3.36	16.20
616 130 364		3.64	17.55
616 140 392		3.92	18.90
616 150 420		4.2	20.25
616 160 448		4.48	21.60
616 170 476		4.76	22.95
616 180 504		5.04	24.30
616 190 532		5.32	26.10
616 200 560		5.6	27.00

### Material: Stainless steel 1.4571

Order No.:	Designation	Ladder length (m)	Weight (kg)
616 024 056	Climbing protection ladder (with centrally mounted rail)	0.56	2.70
616 034 084		0.84	4.05
616 044 112		1.12	5.40
616 054 140		1.4	6.75
616 064 168		1.68	8.10
616 074 196		1.96	9.45
616 084 224		2.24	10.80
616 094 252		2.52	12.15
616 104 280		2.8	13.50
616 114 308		3.08	14.85
616 124 336		3.36	16.20
616 134 364		3.64	17.55
616 144 392		3.92	18.90
616 154 420		4.2	20.25
616 164 448		4.48	21.60
616 174 476		4.76	22.95
616 184 504		5.04	24.30
616 194 532		5.32	26.10
616 204 560		5.6	27.00



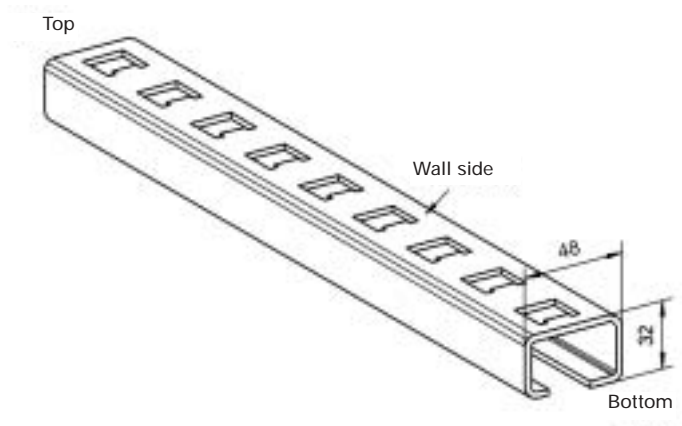
## Climbing protection rail

*(for retrofitting to existing climbing ways)*

**Specification conforming to:**  
EN 353-1

### Rail profile:

The climbing protection rail is manufactured from 3 mm thick sectional steel. The interior of the rail is fitted with cut-outs every 40 mm for secure catching of the FABA fall prevention shuttle; these cut-outs are also used to fasten the individual climbing protection segments to the rail ends using screws.



### Material: Hot-galvanized steel

Order No.:	Designation	Rail length (m)	Weight (kg)
601 060 056	Climbing protection rail	0.56	1.80
601 060 084		0.84	2.70
601 060 112		1.12	3.60
601 060 140		1.4	4.50
601 060 168		1.68	5.40
601 060 196		1.96	6.30
601 060 224		2.24	7.20
601 060 252		2.52	8.10
601 060 280		2.8	9.00
601 060 308		3.08	9.90
601 060 336		3.36	10.80
601 060 364		3.64	11.70
601 060 392		3.92	12.60
601 060 420		4.2	13.50
601 060 448		4.48	14.40
601 060 476		4.76	15.30
601 060 504		5.04	16.20
601 060 532		5.32	17.10
601 060 560		5.6	18.00

### Material: Stainless steel 1.4571

Order No.:	Designation	Rail length (m)	Weight (kg)
601 062 056	Climbing protection rail	0.56	1.80
601 062 084		0.84	2.70
601 062 112		1.12	3.60
601 062 140		1.4	4.50
601 062 168		1.68	5.40
601 062 196		1.96	6.30
601 062 224		2.24	7.20
601 062 252		2.52	8.10
601 062 280		2.8	9.00
601 062 308		3.08	9.90
601 062 336		3.36	10.80
601 062 364		3.64	11.70
601 062 392		3.92	12.60
601 062 420		4.2	13.50
601 062 448		4.48	14.40
601 062 476		4.76	15.30
601 062 504		5.04	16.20
601 062 532		5.32	17.10
601 062 560		5.6	18.00

## Climbing protection ladder with release facility

### Application:

The climbing protection ladder with release facility enables the comfortable insertion and extraction of the FABA fall prevention shuttle at the lower end of the ladder.

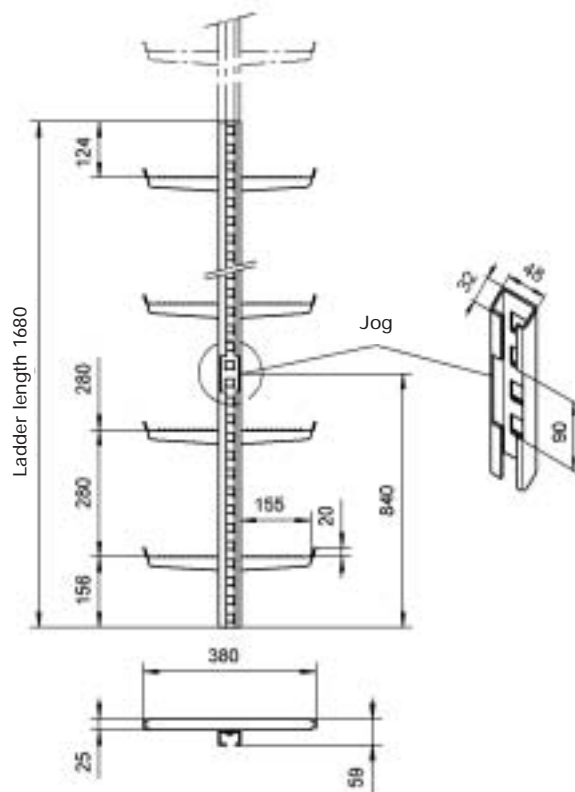
**The climbing protection ladder with release facility may only be installed as lowermost segment.**

### Execution:

For side rail profile and rung see note on page 8.

### Release facility:

The release facility (the recess in the two front side pieces of the rail) is factory-fitted.



Order No.:	Designation	Material	kg
618 060 168	Climbing protection ladder	Hot-galv. steel	8.1
618 064 168	1680 mm with central release facility	1.4571	

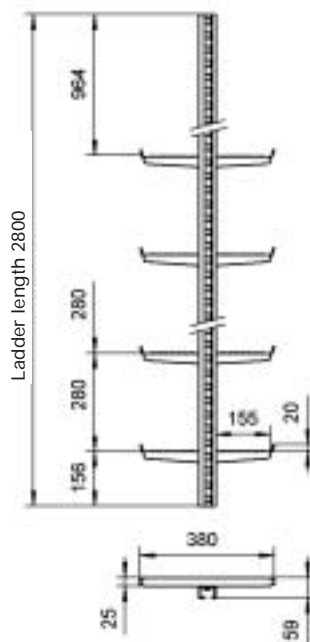
## Step-over -straight-

### Application:

- Use only as topmost ladder segment.
- Depending on the application, always install a permanent or detachable catch on the top end.
- A side rail reinforcement is required if no support bracket can be mounted on the end of this ladder section, see page 23.

### Execution:

- For side rail profile and rung see note on page 8.
- Climbing protection ladder with 7 bottom rungs.



Order No.:	Designation	Material	kg
616 070 280	Climbing protection ladder	Hot-galv. steel	12.15
616 074 280	with 7 bottom rungs	1.4571	

## Climbing protection rail or ladder -curved-

### Execution:

For side rail profile and rung see note on page 8.

### Curvature

The curvature is created by the manufacturer.

When asking for quotations or making an order, please provide a sketch with local dimensions or specify the required dimensions (dimensions A and B).

- A = offset
- B = straight length
- R1 = radius min. 500 mm
- R2 = radius min. 1000 mm
- C = distance to ground min. 160 mm

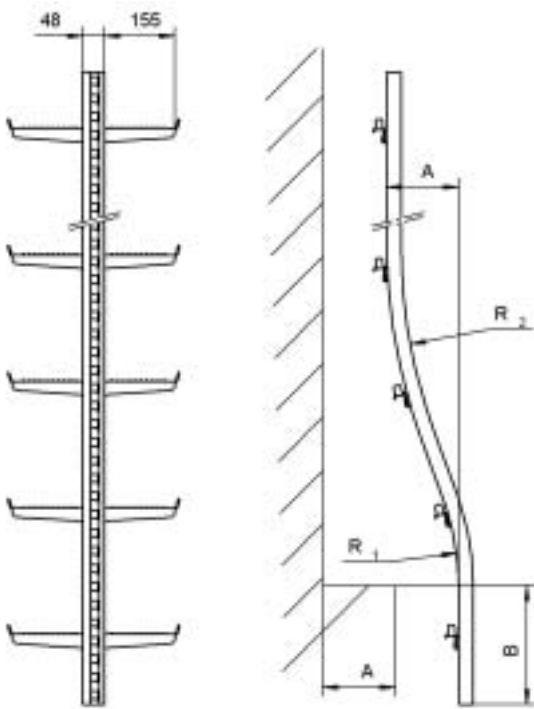


Fig. 1:

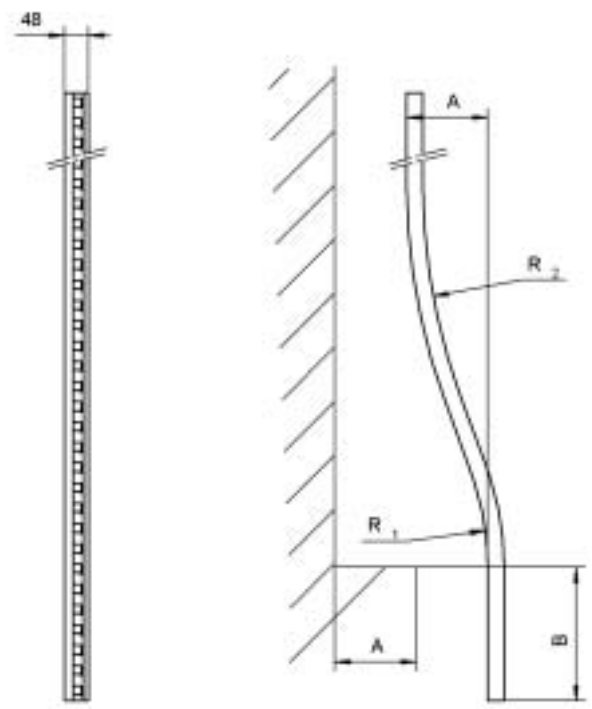


Fig. 2:

Order No.:	Designation	Material	Fig.
as per order	Curved climbing protection ladder	Hot-galv. steel 1.4571	1
as per order			
as per order	Curved climbing protection rail	Hot-galv. steel 1.4571	2
as per order			

## Fitting of support brackets

Fastening method	Implementation	
	Climbing protection ladder with double rung	Climbing protection rail
max. system distance	1400	1960
Weld-on bracket or clamping device	1400	1960
Connection to steel structures with M12	1400	1960
in manhole rings with anchor bolt FZA 14x60, M10/20 <sup>1)</sup>	1400	1960
in concrete at least B25 with anchor bolt FZA 14x60, M10/20 <sup>1)</sup>	1400	1960
with brickwork <sup>2)</sup>	1120	1120
on existing twin-rail ladder	not applicable	1960
on existing step irons	not applicable	1960

### Notes:

- <sup>1)</sup> Fastening can also be carried out using other similar anchor fittings authorized by the building authorities.
- <sup>2)</sup> Since there are no approved anchor fittings for use with brickwork, it will be necessary for an anchor fitting manufacturer to check and determine the type and size of anchor fittings to be used by means of tensile tests carried out on-site prior to installation. Documentation and certification of the anchor fittings used must be available.

### Number of support brackets

- Calculation = total ladder or rail length divided by separation distance given above between support brackets, round up, + 1 support bracket
- Example (ladder length = 15000 mm, distance between support brackets = 1400 mm) =  $15000 / 1400 = 10.7$  round up + 1 = 12 support brackets, or = 12 + x, if special components require the use of additional support brackets.

- When using special components, such as entry and exit sections or gates, etc., additional support brackets must be incorporated and their minimum distances observed in accordance with the applicable system installation manual. The support brackets required therefore must be included in the example calculation shown above.

#### PLEASE OBSERVE

- FABA A12 Climbing protection systems with an overall height of less than 2800 mm must be connected to the ground beneath by means of at least 3 fasteners
- For climbing protection systems with a total height of more than 2800 mm, at least 4 brackets are to be used.
- The ground to which the FABA A12 climbing protection system is secured, must be capable of absorbing a falling load of at least 6 kN.
- Each FABA A12 ladder or rail element is to be fastened to the floor with at least one bracket. Climbing protection systems installed before 07/2005 do not require upgrading.

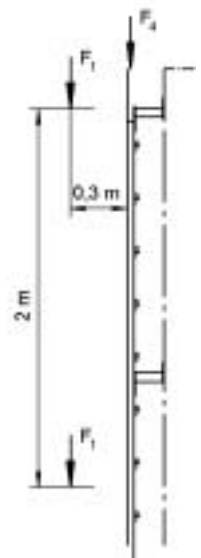
#### Mounting on brickwork

The maximum bracket distance is dependent on what loading can be absorbed by the anchor fastening. If it can be demonstrated in an anchor pull-out test that the pull-out force in an unfavourable position is at least 10 kN, the maximum bracket distance is 1120 mm.

Since there are no approved anchor fittings for use with brickwork, it will be necessary for an anchor fitting manufacturer to check and determine the type and size of anchor fittings to be used by means of tensile tests carried out on-site prior to installation. Documentation and certification of the anchor fittings used must be available.

The climbing protection system must be secured with at least 4 brackets. We recommend brackets with square tubing for fastening on brickwork.

The falling load (extreme effects) should be assumed to be equal to an equivalent load along the rail axis of  $F_4 = 6 \text{ kN}$ . Derivation of the load may be carried out on a square element (see also DIN 18799, part 2). The traffic load (variable effect) is to be set with  $F_1 = 1.5 \text{ kN}$  in a line of action 30 cm parallel to the longitudinal axis of the ladder every 2 m (see drawing on right).

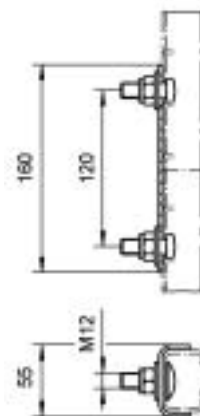


## Connectors

### Application:

For FABA climbing protection ladder and FABA climbing protection rail.

Order No.:	Designation	Material	kg
652 210 045	U-connector complete	Hot-galv. steel / A4	0.5
652 210 047	with mounting screws	1.4571 / A4	



## Mounting screws

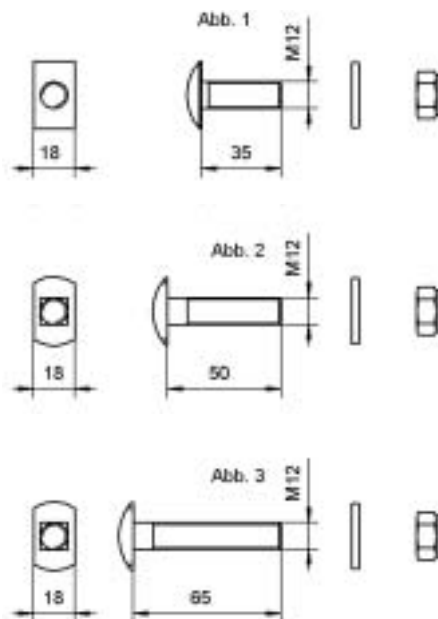
### Application:

For mounting the FABA A12 climbing protection ladder or rail on support means constructed on-site.

### Execution:

The T-head bolts are special designs with customised head.  
Do not use standard bolts.

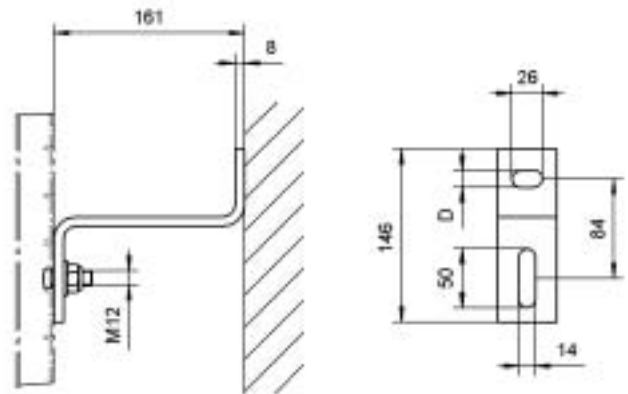
Order No.:	Fig.	Designation	Remark	Material	kg
652 210 041	1	T-head bolt M12x35 Spring washer 12 DIN 6796 Hex. nut M12 ISO 4032	Packaging unit	A4	0.08
652 210 043	2	T-head bolt M12x50 Spring washer 12 DIN 6796 Hex. nut M12 ISO 4032	Packaging unit	A4	0.09
652 210 044	3	T-head bolt M12x65 Spring washer 12 DIN 6796 Hex. nut M12 ISO 4032	Packaging unit	A4	0.11



## Fastening to a building (*Z-bracket*)

### Application:

- Fastening of the FABA climbing protection ladder.
- See table for bracket distance
- Anchor base reinforced concrete min. B 25 (observe edge distances and wall thickness).
- Use approved anchor fittings only.



Order No.:	Designation	Material	D (mm)	kg
652 210 035 •	Z-bracket	Hot-galv. steel / A4	10.5	1.0
652 210 030			14	
652 210 031 •		1.4571 / A4	10.5	
652 210 032			14	

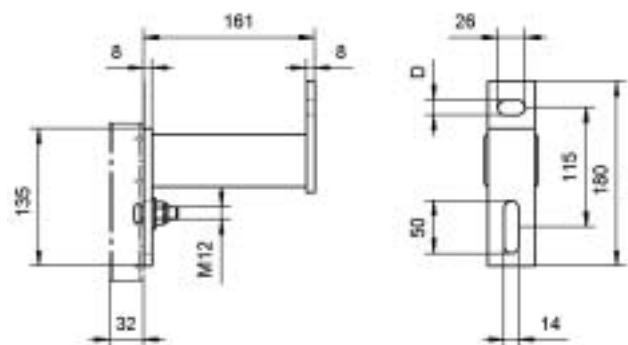
- Designated anchor fitting, see page 30

## Fastening to a building (*square tube*)

Recommended for mounting on walls due to reduced shear forces.

### Application:

- Fastening of the FABA climbing protection ladder.
- See table for bracket distance
- Anchor base reinforced concrete min. B 25 (observe edge distances and wall thickness).
- Use approved anchor fittings only.



Order No.:	Designation	Material	D (mm)	kg
652 210 204 •	Support bracket with square tube	Hot-galv. steel / A4	10.5	1.5
652 210 202			14	
652 210 205 •		1.4571 / A4	10.5	
652 210 203			14	

- Designated anchor fitting, see page 30



## Fastening to a mast with a clamp

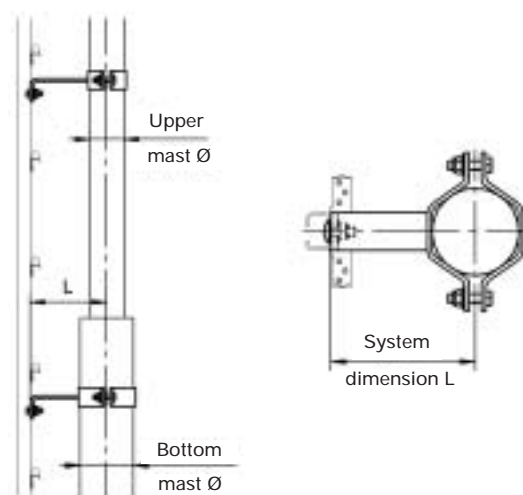
### Application:

- Fastening of the FABA climbing protection ladder.
- See table for bracket distance
- Clamps and support spacers in hot-galv. steel, all screws in A4

The coding of the bracket consists of:

- the mast diameter at the position where the individual bracket is to be mounted,
- the system dimension L (mast centre to back side of rail).

Example:        diameter 80 mm,  
                      system dimension 213 mm  
 Designation:   support bracket Ø80 / 213  
 Order No.:      652 211 010



### Allocation table for mounting clamps:

for Ø in mm	Amend the order number 652 211 _ _ _ with the respectively associated end numbers in the individually specified system dimension L= (see below) mm										
	178	184	190	203	213	217	230	243	255	269	308
80.0					010	011					
88.9		012	013	014	015	016	017	018	019		
101.6			020	021	022	023	024	025	026		
114.3				027	028	029	030	031	032	033	
139.7					034	035	036	037	038	039	
159.0						040	041	042	043	044	
168.3							045	046	047	048	
193.7								049	050	051	
219.1									052	053	
244.5											
273.0											
350.0											

Other executions are available upon request

### INSTALLATION NOTE:

The system dimension L used in an installation is always defined by the **lowermost** mast diameter. This dimension is crucial for the selection of the other support brackets to be used in the same system dimension L.

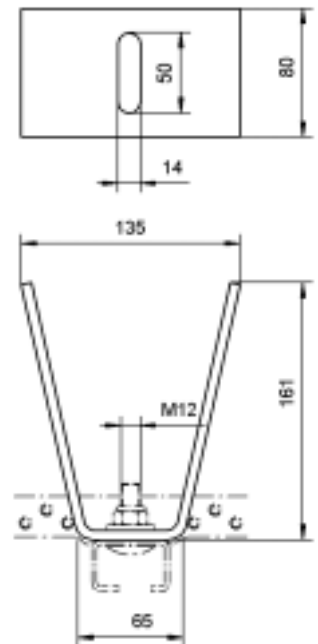
## Fastening to steel structures

for welding

### Application:

- Fastening of the FABA climbing protection ladder.
- See table for bracket distance.
- For welding – by a certified welder – on a steel base.
- After welding, protect bracket against corrosion.
- Installation screws must be ordered separately, see page 14.

Order No.:	Designation	Material	kg
652 205 035	U-bracket	Steel (untreated)	1.4
652 205 037		Steel (primed with welding primer)	
652 205 036		1.4571 (untreated)	

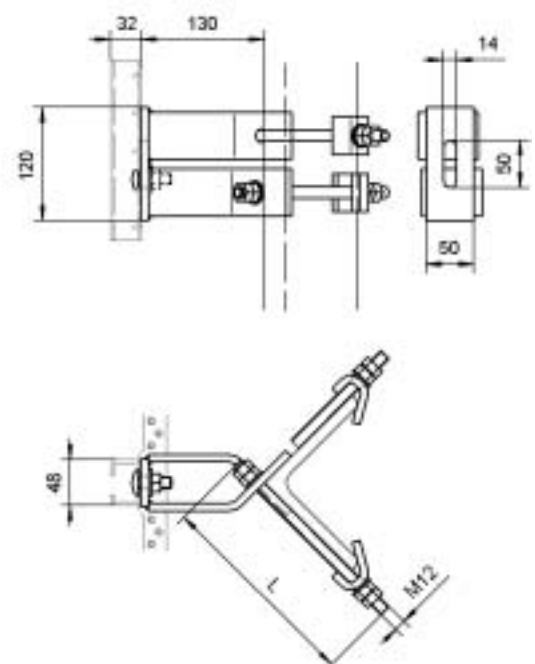


## Fastening to a corner post

### Application:

- Fastening of the FABA climbing protection ladder to an angle section (e.g. to the corner profile of a lattice mast).
- See table for bracket distance.
- Fastening kit to be ordered to suit the angle profile of the building.
- For angle profiles up to 250 x 250 mm.

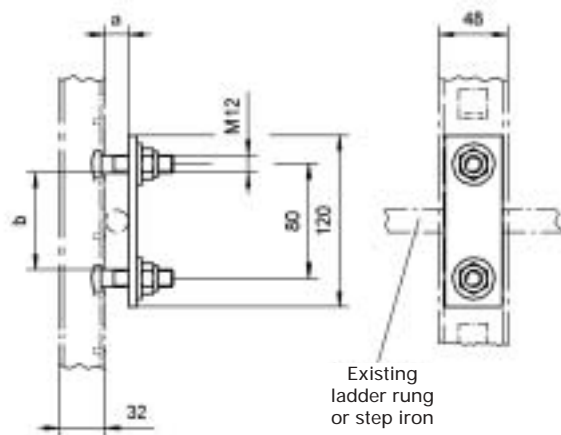
Order No.:	for angle profile dimensions (mm)	L (mm)	kg
652 211 000	up to 130 x 130	220	1.6
652 211 001	greater 130 x 130 to 200 x 200	300	1.8
652 211 002	greater 200 x 200 to 250 x 250	350	1.9



## Fastening to the centre of a climbing facility

### Application:

- Fastening of the FABA climbing protection rail.
- See table for bracket distance.
- The bracket is suitable for **round and square profiles**.
- Clamping area for round profiles up to  $\varnothing$  40 mm.
- Clamping area for square profiles up to 40 x 65 mm.

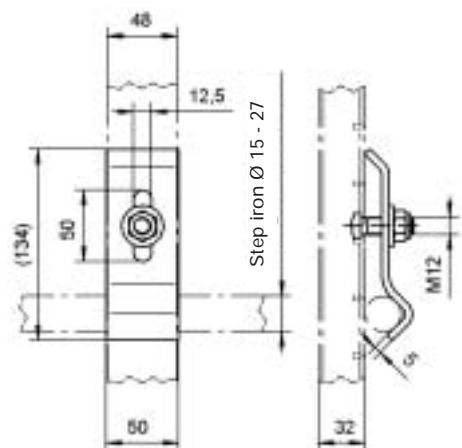


Order No.:	Designation	Clamping area round profile a	Clamping area square profile a      b	Material	kg
652 210 005	Support bracket on existing rungs	16 – 25	16 – 25      up to 65	Hot-galv. steel / A4	0.3
652 210 010		25 – 40	25 – 40      up to 65	1.4571 / A4	
652 220 210		16 – 25	16 – 25      up to 65	1.4571 / A4	
652 220 211		25 – 40	25 – 40      up to 65	1.4571 / A4	

## Fastening to the centre of a climbing facility (e.g. step irons)

### Application:

- Fastening of the FABA climbing protection rail.
- See table for bracket distance.
- The bracket is only suitable for **round profiles**.
- Clamping area for round profiles from  $\varnothing$  15 to  $\varnothing$  27 mm.



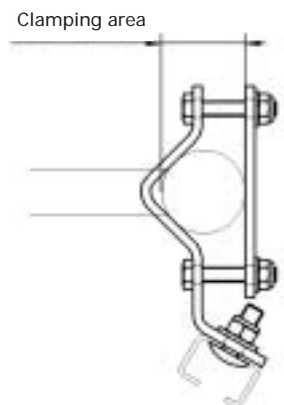
Order No.:	Designation	Clamping area round profile	Material	kg
652 210 140	Support bracket centrally mounted on the step iron	15 – 27	Hot-galv. steel / A4	0.3
652 210 141			1.4571 / A4	

## Support bracket mounted laterally on round side rails

### Application:

- Lateral mounting on the side rail of the FABA climbing protection rail.
- The bracket is only suitable for round profiles. Clamping area for round profiles  $\varnothing$  25 mm to  $\varnothing$  80 mm.
- Support bracket distance max. 1400 mm.

Order No.:	Clamping area $\varnothing$ (mm)	Material	kg
652 205 270	25 to 33	Hot-galv. steel / A4	0.9
652 212 000	34 to 55		1.1
652 212 010	56 to 80		1.2
652 205 271	25 to 33	1.4571 / A4	0.9
652 212 001	34 to 55		1.1
652 212 011	56 to 80		1.2

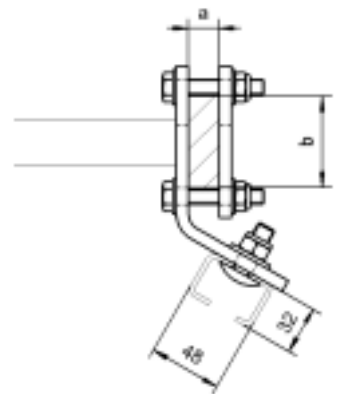


## Lateral fastening on square side rails

### Application:

- Lateral mounting on the side rail of the FABA climbing protection rail.
- See table for bracket distance.
- The support bracket is suitable for rectangular side rails.  
Clamping area a x b see table.

Order No.:	Clamping area (mm)		Material	kg
	a	b		
652 211 301	6 to 20	40 to 60	Hot-galv. steel / A4	1.1
652 211 302	21 to 30			1.1
652 211 303	31 to 50			1.1
652 211 304	6 to 20	61 to 80		1.3
652 211 305	21 to 30			1.3
652 211 306	31 to 50			1.3
652 211 307	6 to 20	40 to 60	1.4571 / A4	1.1
652 211 308	21 to 30			1.1
652 211 309	31 to 50			1.1
652 211 310	6 to 20	61 to 80		1.3
652 211 311	21 to 30			1.3
652 211 312	31 to 50			1.3



## End-stops

for climbing protection ladders or climbing protection rails

### General use:

- End-stops must be installed on all the entry and exit points of the rails in order to prevent an unwanted rolling out of the FABA fall prevention shuttle.
- Detachable catches must be installed in those locations where the fall prevention shuttle is to be extracted.
- Fixed catches must be installed in those locations where the fall prevention shuttle is not to be removed.

## Detachable catch (bottom)

Use only for vertical climbing facilities

- The detachable catch (bottom) may only be arranged on the lower end of the ladder via a release facility or be arranged on the rail end.
- The catch can be manually unlocked and automatically closes itself later (own weight).
- It must be installed in the second cut-out on the back side of the rail via the release facility or, alternatively, at the end of the rail.

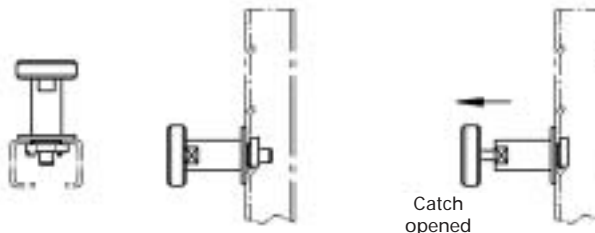


Order No.:	Designation	Material	kg
652 210 065	Detachable catch	1.4301 / A4	0.2
652 220 065	-bottom-	1.4571 / A4	

## Detachable catch (top) Type DS

Suitable for all types of climbing facilities

- The detachable, type DS catch (top) is arranged on the upper end of the ladder at the end of the rail.
- The catch must be manually unlocked and automatically closes itself later (spring).
- It is mounted on the back of the rail, in the third cut-out from the top, at the end of the rail.

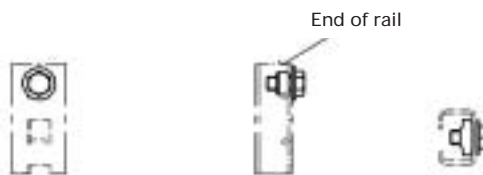


Order No.:	Designation	Material	kg
652 220 021	Detachable catch -bottom- type DS	1.4571 / A4	0.3

## Permanent catch

Suitable for all types of climbing facilities

- The permanent catch is mounted on the end of the ladder. It blocks the ladder and can not be unlocked.



Order No.:	Designation	Material	kg
652 210 016	Permanent catch	A4	0.1

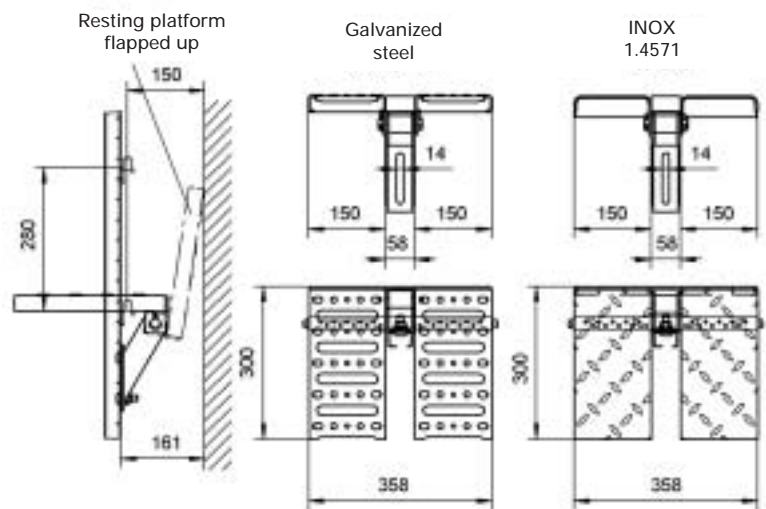
## Type I resting platform

### Application:

- For FABA climbing protection ladder with double rung.
- For ladder with double handrail min. 380 mm free distance b/w handrails), where the FABA climbing protection rail was mounted on the rungs.
- Distance b/w rungs min. 280 mm.
- The resting platform is screwed on the climbing protection rail, no fastening to the ground is required.
- The resting platforms are disposed every 10 m (or 25, depending on building, Standard or legal regulation requirements).

### Execution:

- 2 platforms: each platform 150 x 300 mm; in operating position, they rest on the rung; when folded up, no obstruction of the climbing way.

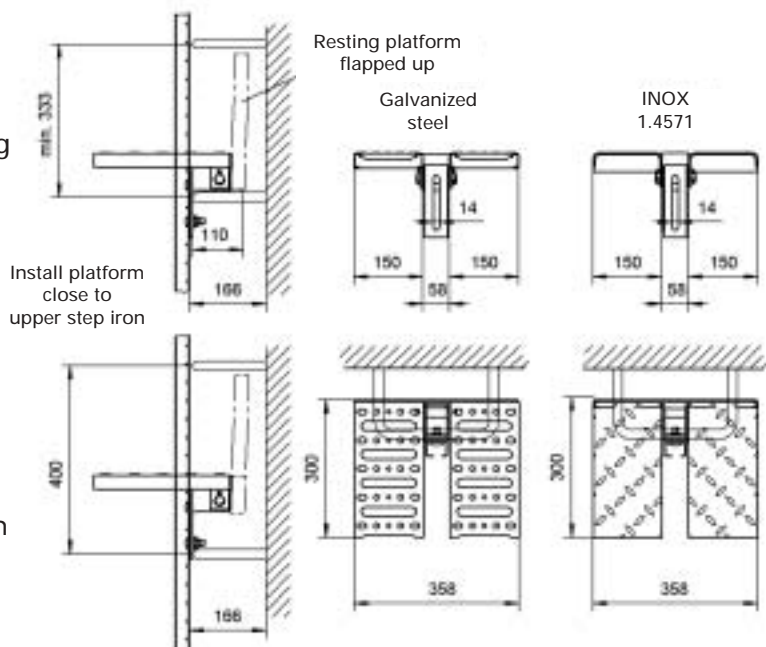


Order No.:	Designation	Platform	Material	kg
652 210 050	Type I resting platform	profiled/punched	Hot-galv. steel/A4	3.8
652 220 050		chequer plate	1.4571 / A4	5.0

## Type II resting platform

### Application:

- For manhole steps in which the FABA climbing protection rail was mounted centrally on the step irons.
- Distance b/w step irons min. 333 mm.
- For distances b/w the step irons of 333 mm, the free space on the platform is restricted to 110 mm. There are no restrictions for 400 mm distances.
- The resting platform is screwed on the climbing protection rail, no fastening to the ground is required.
- The resting platforms are disposed every 10 m (or 25, depending on building, Standard or legal regulation requirements).



### Execution:

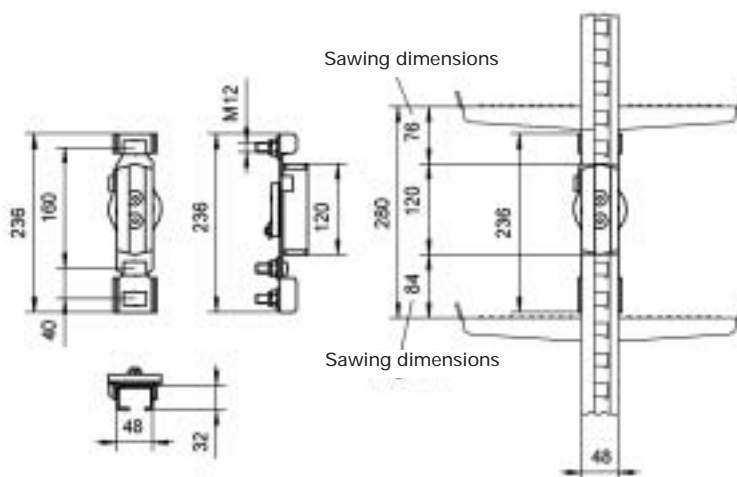
- 2 platforms: each platform 150 x 300 mm; in operating position they are not resting on the step iron. No obstruction of the climbing way when folded up.

Order No.:	Designation	Platform	Material	kg
652 210 051	Type II resting platform	profiled/punched	Hot-galv. steel/A4	3.8
652 210 056		chequer plate	1.4571 / A4	5.0

## Entry and exit sections

### Application:

- The entry and exit section allow the comfortable insertion and extraction of the FABA fall protection shuttle and must be installed at every position of the climbing facility that is intended to ensure safe release from the climbing protection system (e.g. work platforms).
- It should be installed approx. 1000 mm above the base.
- After its unlocking, the central rail piece can be rotated by 90° and the fall prevention shuttle removed laterally.
- Vertical movement is blocked while the rail piece is turned.



Entry and exit section:  
dimensions for installation

### Installation note:

- In order to maintain the distance between rungs of 280 mm, it will necessary to adapt the FABA climbing protection ladders.

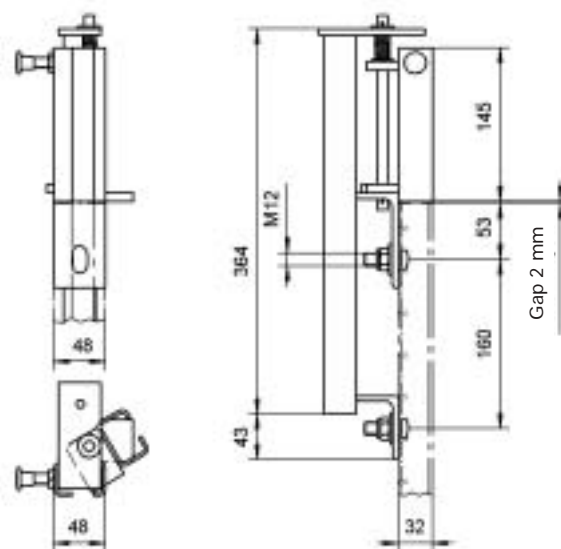
Order No.:	Designation	Material	kg
652 210 080	Entry and exit sections	H-galv. steel/1.4301/A4	1.6
652 210 081		1.4571/A4	

## Entry and exit (*pivotable*)

for base arranged laterally or behind the climbing facility

### Application:

- Entry and exit allow comfortable insertion and removal of the fall protection shuttle at that end of a climbing facility, at which point safe release from the climbing protection has to be ensured.
- It should be installed approx. 1000 mm above the base.
- An approx. 145 mm long rail section can be swivelled out by approx. 120°.
- Vertical upward movement is blocked while the rail section is swivelled out.
- In this case, the climber rests laterally beside the climbing protection system.



### Note:

- The climbing protection ladder has no rungs above the platform. A side rail reinforcement is required for the installation of a step-over section, see [page 24](#).

Order No.:	Designation	Material	kg
652 210 110	Entry and exit right	H-galv. steel/1.4301/A4	1.3
652 210 111		1.4571 / A4	
652 210 112	Entry and exit left	H-galv. steel/1.4301/A4	1.3
652 210 113		1.4571 / A4	



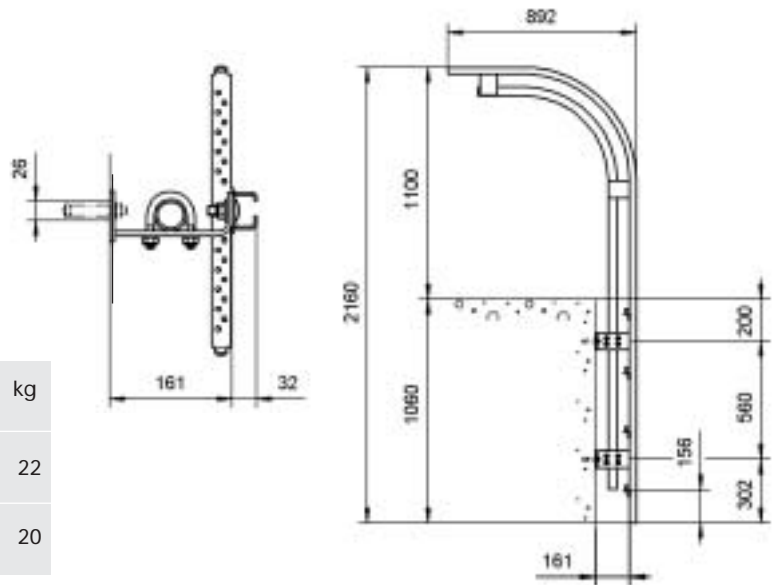
## Step-over -curved-

### Application:

- Step-over onto a platform on the top end of a fixed ladder, e.g. step-over onto a roof.
- The step-over is fastened to the ground with two support brackets (see sketch).
- A detachable, type DS catch is required at the end of the rail, see page 20.

Order No.:	Designation	Material	kg
652 210 070	Step-over -curved- with 4 rungs	Hot-galv. steel / A4 / A4	22
652 210 071		1.4571 / A4	
652 210 072	Step-over -curved- without rungs	Hot-galv. steel / A4	20
652 210 073		1.4571 / A4	

Designated anchor fitting, see page 30



## Step-over -straight- for climbing protection ladder

### Side rail reinforcement

### Application:

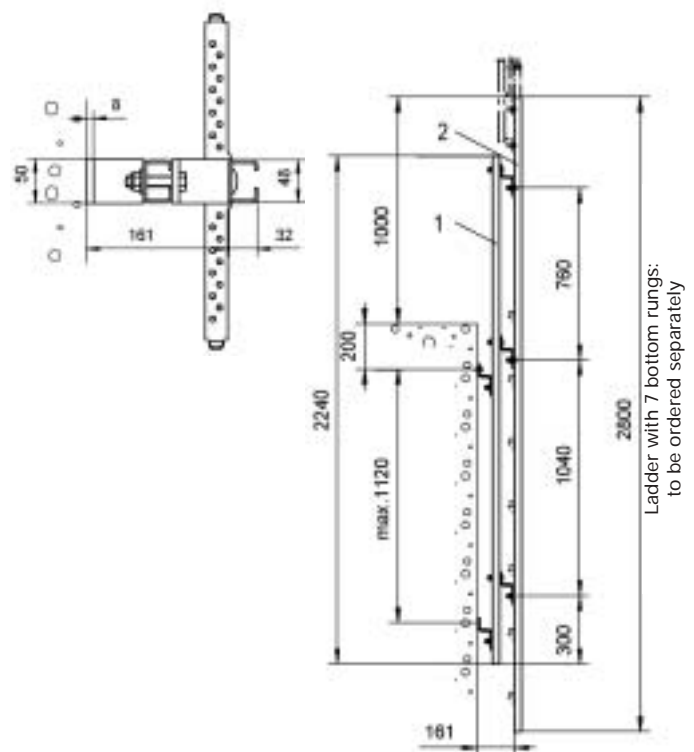
- For climbing protection ladder used as straight step-over when, no support bracket can be fitted on the upper end.
- The side rail reinforcement is fastened to the ground with two support brackets and to the climbing protection ladder with three support brackets (see sketch)

### Attention:

- The FABA climbing protection ladder must be ordered separately.

Order No.:	Pos.	Designation	Material	kg
652 210 310	1	Side rail reinforcement	Hot-galv. steel / A4	1.6
652 220 310			1.4571 / A4	
616 070 280	2	Climbing protection ladder with 7 bottom rungs.	Hot-galv. steel / A4	11
616 074 280			1.4571 / A4	

Designated anchor fitting, see page 30



## Step-over -straight- for climbing protection rail

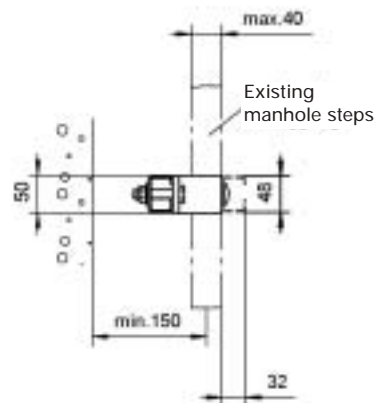
Side rail reinforcement on existing climbing facility

### Application:

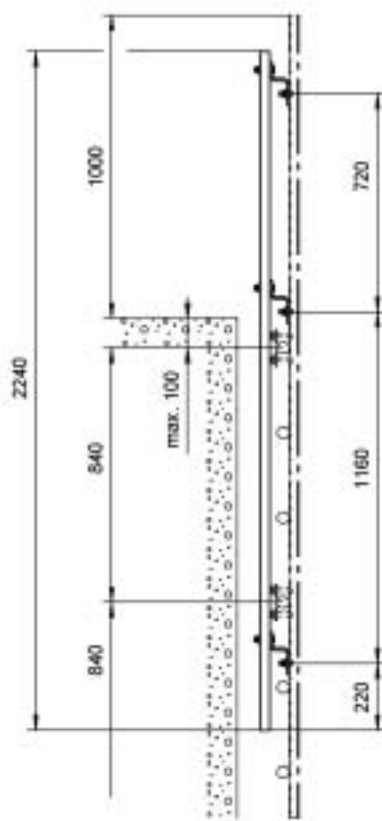
- For climbing protection rail used as straight step-over, when no support bracket can be fitted on the upper end.
- The step-over is fastened to the climbing protection rail with three support brackets (see sketch).
- No fastening to the ground required.
- The wall clearance of the existing rungs must be at least 150 mm.

### Attention:

The FABA climbing protection rail must be ordered separately.



Order No.:	Designation	Material	kg
652 210 311	Side rail reinforcement	Hot-galv. steel / A4	1.6
652 220 311		1.4571 / A4	



## Horizontal transfer with gate

Horizontal transfer with gate (e.g. 360° – embracing of a round mast) is designed as a function of the individual project.

### Application:

- The gate can be turned by 90° and allows the transfer from a vertical climbing protection device to a horizontal rail, without having to leave the climbing protection device.

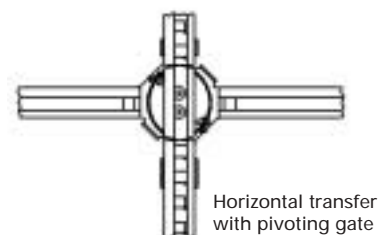
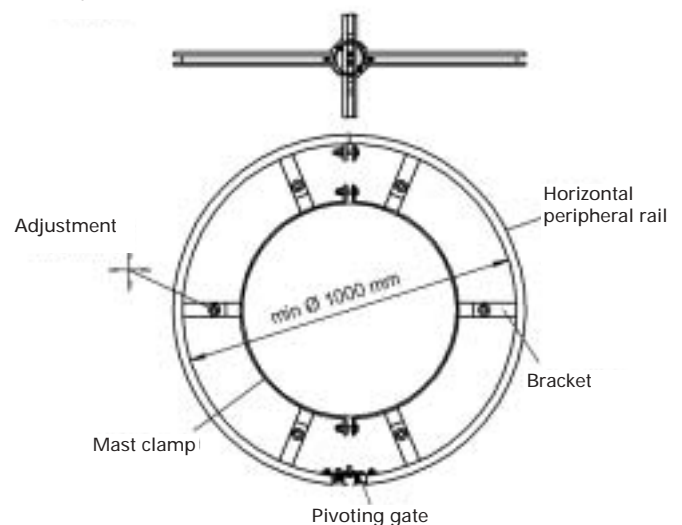
### Installation note:

- In order to maintain the distance between rungs of 280 mm, it will necessary to adapt the FABA climbing protection ladders in the region of the gate.  
When mounting a horizontal rail, remember that the rail is asymmetric and place it so that the wide side is on the top.

### ATTENTION:

The peripheral rail and the horizontal transfer section are each only available in “hot-galvanized steel”.

Example

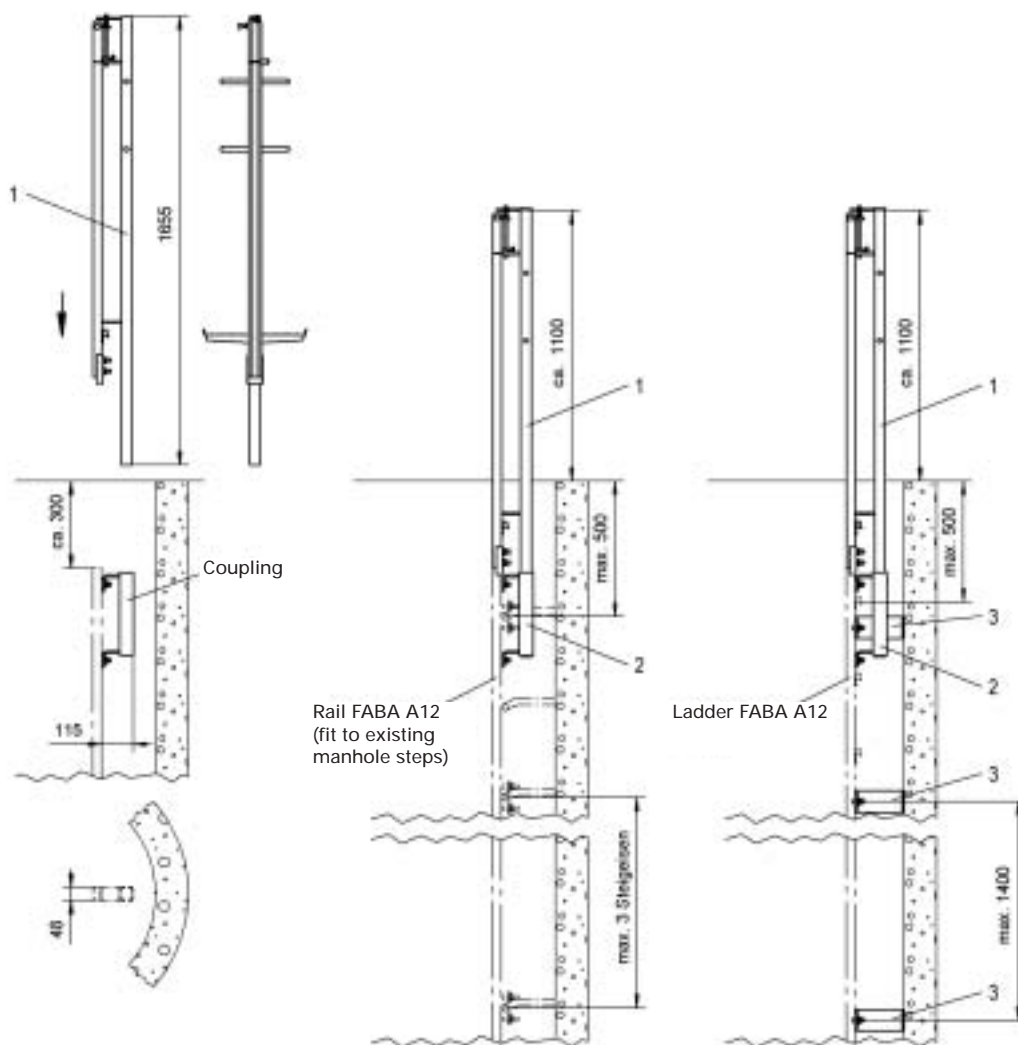


## Components and accessories for confined spaces

### *Entry aid - portable -*

#### Application:

- Specially designed for confined spaces or covered climbing ways with FABA climbing protection A12.
- In order to enter a confined space maintaining an ergonomic, upright body posture, the entry aid is placed on the existing A12 climbing protection system and removed after work is completed, respectively.
- The user is therefore able to secure him/herself already when standing beside the confined space opening.
- This system may only be used in conjunction with a stationary mounted connection to the climbing protection ladder.



Order No.:	Pos.	Designation	Material	kg
652 222 000	1	Entry aid -portable-	1.4571 / A4	12
652 222 010	2	Coupling	1.4571 / A4	1.9
652 210 220 •	3	Support bracket in confined space, for ladder	1.4571 / A4	1.4

• Designated anchor fitting, see page 30

## Warning sign

### Application:

- The warning sign is to be placed at the insertion point of the climbing protection system or climbing protection ladder / manhole steps.
- A suitable location for the sign is in viewing height of the lower access level beside the climbing facility.
- The sign is attached in accordance with the local conditions.
- The warning side is delivered free of charge.

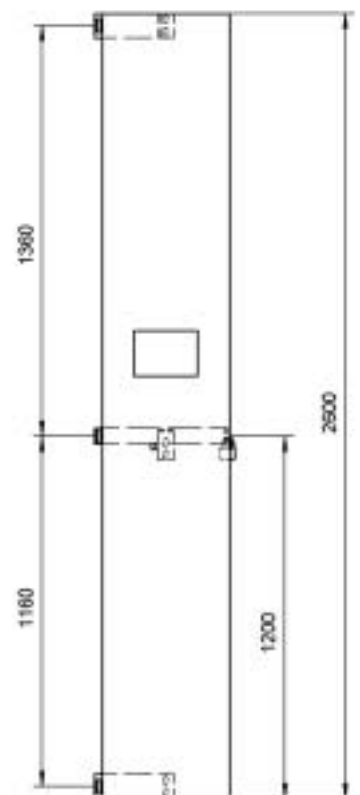
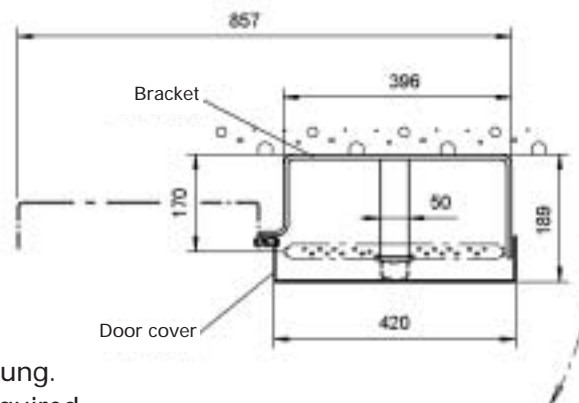
Order No.:	Size (mm)	Material
518015	210 width x 148 height	Anodised aluminium

## Door cover

for securing the system against unauthorized access

### Application:

- Lockable door cover for climbing protection ladder. Can be swivelled by 180°.
- The door cover is fastened to the FABA climbing protection ladder by means of three support brackets, with the first bracket being mounted underneath the 1st rung. No fastening to the ground required.
- Securing via padlock (included in the delivery).



Order No.:	Designation	Material	kg
652 210 091	Door cover	Anodised aluminium, Bracket in hot-galv. steel / A4	8.2

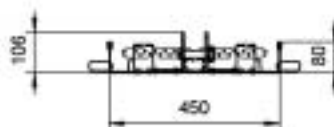
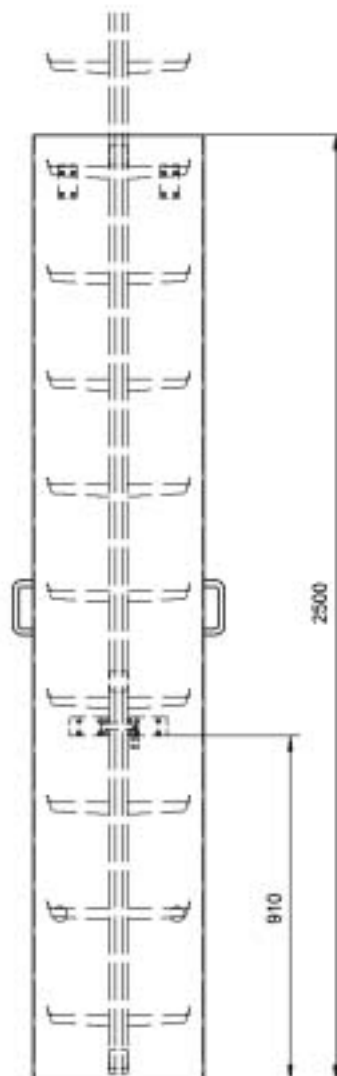
## Cover plate

for securing the system against unauthorized access

### Application:

- Lockable cover plate for climbing protection ladder.
- The cover plate is hung from two rungs.  
No fastening to the ground required.
- Securing via padlock (included in the delivery).

Order No.:	Designation	Material	kg
673 003 006	Cover plate	Anodised aluminium	6.5



## Climbing protection rail with mounting hook

for securing the system against unauthorized access

### Application:

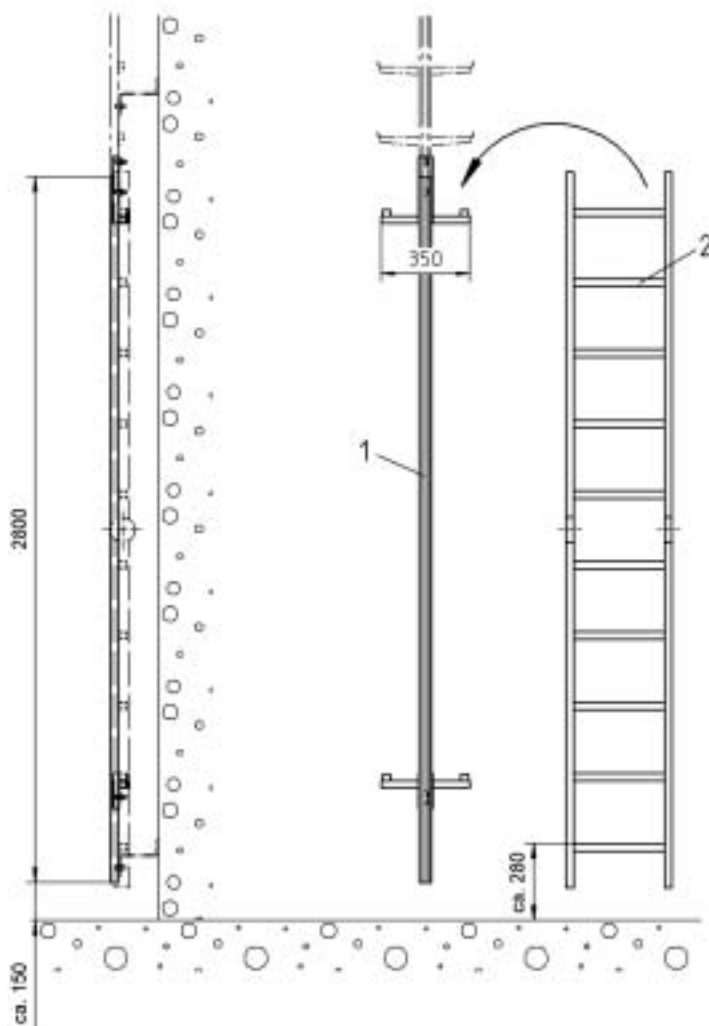
- The aluminium ladder with double handrail (pos. 2) is hung from the lower climbing protection rail (pos. 1) in order to allow access to the climbing protection installation. The ladder is removed again after its use.
- The climbing protection rail is thus located **in front** of the ladder with double handrail and can accept the FABA fall arrest shuttle in order to ensure secure climbing.

### Execution:

- Climbing protection rail without rungs with mounting hook.
- Portable aluminium ladder with double handrail – foldable.

### Note:

- The climbing protection rail with mounting hook may only be installed as lowermost segment.
- The distance between the lowest rung of the aluminium ladder and the base may not exceed 560 mm.
- The lowermost support bracket must be mounted as far down on the climbing protection rail as possible.



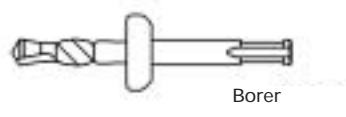
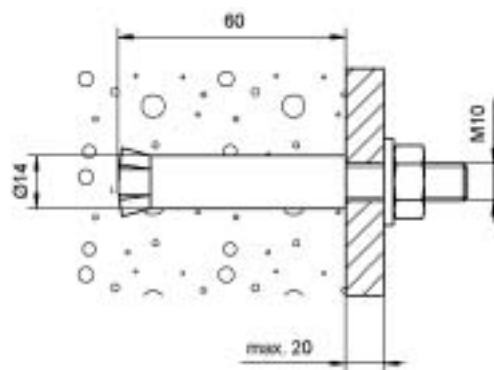
Order No.:	Pos.	Designation	Material	kg
652 210 810	1	Climbing protection rail with mounting hook	Hot-galv. steel / A4	10.0
515 000 001	2	2-part aluminium ladder with joint	Aluminium	6.7



## Anchor bolt

Anchor bolt FZA 14 x 60. M 10/20

- Approved by the building authority;
- For strength class Z B25 concrete;
- Load class 3.5 kN.
- For confirmed pressure zones, the permitted load force is 7.35 kN.
- Thanks to the reduced bore depth (only 65 mm) required, the bolt can also be used in components of limited thickness (e.g. concrete shaft rings).
- No drilling through;
- No untight anchorage points!
- The cylindrical/conical safety borehole is created easily and quickly using a simple special drill bit.
- This drill bit fits into all hammer drills with SDS-plus adaptor.
- After insertion of the anchor bolt, the expansion sleeve is expanded with the adequate installation device.
- For max. fastening distances, see table page 12.



Borer



Battering device

Order No.:	Designation	Remark	Material	kg
501 814 040	Anchor bolt FZA 14 x 60		Mat. no 1.4571	0.4
501 814 050	Drill bit FZUB 14 x 60	For hammer drills with SDS-plus adapter		
501 814 051	Installation device FZE 14			

## Guided fall arresters

### FABA fall arrest traveller AL-D

for use without leaning back

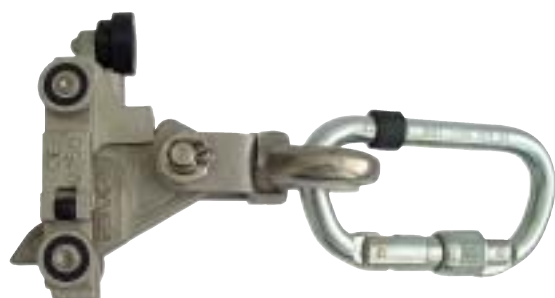


This system is used for limited free space behind the climber (also for laterally mounted rails)



### FABA fall arrest traveller AL-R

for use with leaning back



This system is used for climbing with leaning back.  
**Please observe:**  
Sufficient free space must be available behind the climber.



Order No.:	Designation	Application	Material	kg
690 208 034	FABA fall prevention shuttle <b>Type AL-D</b> (with shock absorber) with steel safety hook	<b>with no</b> leaning back	Stainless steel Zinc-plated hook	1
690 208 040	FABA fall prevention shuttle <b>Type AL-R</b> with steel safety hook	<b>with</b> leaning back	Stainless steel Zinc-plated hook	0.9







## FABA ANCHOR DEVICES

### APPLICATIONS

*Fall-protected negotiation of elevated workplaces and access ways, e.g.*

- *work and access ways on dam walls, bridges, silos and cranes*
- *on towers, sloped and flat roofs, on agitating plants, furnaces and sewage treatment plants, in shafts and pits*
- *on installations intended to facilitate work on vehicle roofs or tank wagons*
- *on walls and facades, e.g. for cleaning tasks*

### OPERATING PRINCIPLE AND ADVANTAGES

*The user wears a harness to which a connector is attached (e.g. safety line with shock absorber). This is secured to a travelling shuttle that moves with the user in a fixed rail. Thanks to its smooth running properties, the protection system ensures maximum freedom of movement. The range of systems covers components for all requirements.*



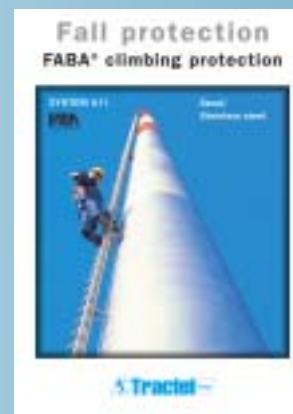
#### SYSTEM AL 2

- Available as complete ladder or as fall protection rail only
- In anodised aluminium
- Climbing protection profile dimensions: width 48 mm, height 65 mm
- Material thickness 3 mm
- Catchment spacing for the arresting device 70 mm
- Rung spacing 280 mm
- Max. support bracket distance 2520 mm
- Fall prevention shuttle also suitable for system A 12
- Also available as mobile, relocatable system



#### SYSTEM A 11

- Launch of the first ever fall protection system on the German market in 1965
- Available as complete ladder or as fall protection rail only
- In hot-galvanized steel or stainless steel
- Climbing protection profile dimensions: width 68 mm, height 56 mm
- Material thickness 2.5 mm
- Catchment spacing for the arresting device 140 mm
- Rung spacing 280 mm
- Max. support bracket distance 1960 mm
- Fall prevention shuttle also suitable for horizontal anchor device
- The system can also be used for confined space access





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