

SAVEGUARD SAFETY SYSTEM

Part. N° 95.0575/1

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ABOUT US



The Company

MiniTec was founded on the sales of miniature linear guides and has successfully evolved into designing complete machines and devices for many industrial processes around the world.

The Production Program

Our linear technology combined with the Profile System is the ideal partnership for machine builders.

The components work together to provide optimum performance and the modular assembly system makes it possible to design and manufacture to unique specifications quickly and cost effectively.



The Quality

To meet the demands of linear technology precision and exceed quality expectations, we invest in the latest machines and newest technologies and manufacturing techniques. Our quality management has been certified according to ISO 9001 since 1994.

The Environment

Our Company mission stresses an active role in environmental protection and the conservation of our natural resources. As an example we locate our service partners in close proximity to our customers to avoid long transits. Our environment management system is certified according to ISO 14001.



The Innovation

For us innovation means more than just new products. All our processes are constantly optimized. Continuous training of our staff and close cooperation with research and education facilities are the base for a steady innovation process.

MiniTec CAD Support

Our CAD tools are the logical supplement to the hardware of our construction system. All planning and assembly requirements are comprehensively considered. The combination of components and software opens up the full potential for efficient, flexible, and modern machinery construction.

Time is a key factor in modern and economic machine construction. The time expended for a construction affects the costs to a great extent as well as the speed of implementation. It is not unusual that the expenditure for calculation, design, operation scheduling, and assembly to amount to more than half of the total costs. The ergonomic design of all the components of our system and the ease of assembly with our power-lock fastener without drilling results in a significant saving of time.

Planning and operations scheduling often offer an even greater potential for saving time. A fundamental step forward with regard to planning and avoidance of errors are our MiniTec CADmenu for AutoCAD and MiniTec iCAD design tools with more than 50 formats for all other CAD systems. The design time is reduced by more than 60% with these tools compared with conventional designing.

All components are contained in 2D and 3D in the electronic catalog. Defined insertion points facilitate positioning in the drawing. Any processing and the connectors that may be required are displayed for each of the components and can be added if desired. A parts-list is automatically created in which the overmeasurements for panel elements are correctly calculated. Identical parts are summarized in a order list. The weight of the individual items and the total weight is displayed. The parts list can be generated in German, English, or French. Interfaces to Word and Excel enable the data-transfer to planning systems and the creation of documentations or the further processing of the data.

MiniTec CADmenu for AutoCAD* 2004 | 2005 | 2006 | 2007

Part N° 95.0857/0



- Design tool using AutoCAD commands
- Automated design modules for
 - Linear axes
 - Safety equipment
 - Conveyor belts
 - Roller belts
 - Workplaces

° Installation routine for AutoCAD 2002 can be downloaded from our website www.minitec.de/cadsupport

MiniTec iCAD 3.4 for all CAD Systems

Part N° 95.0863/0



- Autonomous design tool that can also be used without a CAD system
- Direct interfaces to all common CAD systems such as Mechanical Desktop, ProEngineer, Solid Works, Solid-Edge, MegaCAD, etc.
- More than 50 data output formats in 2D and 3D
- Automated design module for linear axes

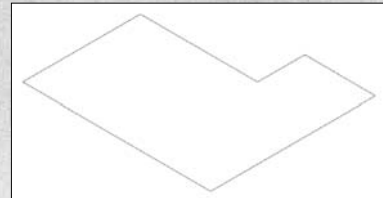
*AutoCAD is a registered trademark of AUTODESK, Inc. - Word and Excel are registered trademarks of Microsoft

Planning

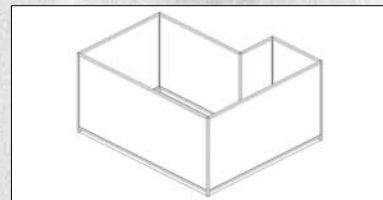


Our MiniTec CADmenu planning tool enables individual and reliable planning of any safety system within the shortest time.

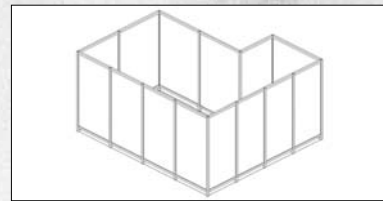
Step 1: Make a sketch of the area to be protected by drawing a polyline.



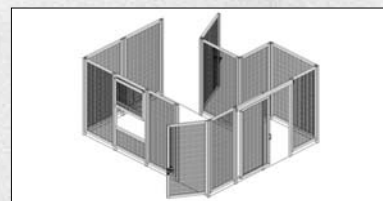
Step 2: Enter the total height HG.



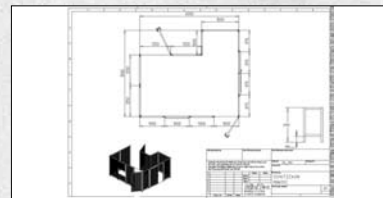
Step 3: Divide the installation into reasonable field sizes (the system automatically places the additional posts into the centre of the field selected).



Step 4: Fill the fields with the elements desired such as fields with corrugated mesh or other panel elements, swinging doors, sliding doors, windows, openings or lifting doors. The height or ground clearance of individual fields can easily be changed.



Step 5: Create the general drawing with 3D view and all connection dimensions.



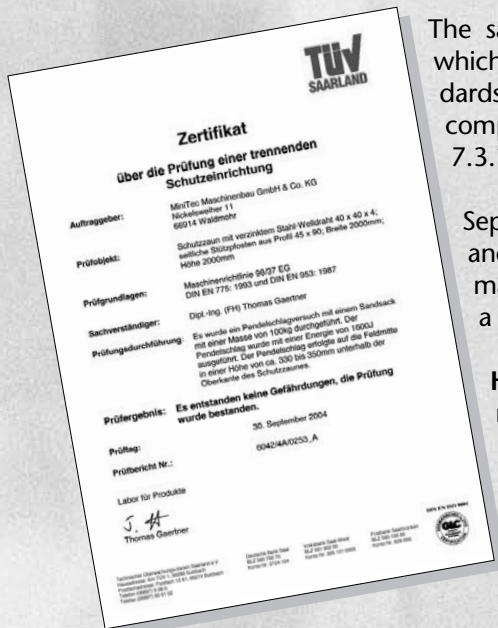


**SAFETY SYSTEM
SAVEGUARD**

HS=1800

MiniTec Safety system SaveGuard

Individual safety installations are a frequent application of the comprehensive MiniTec profile system. Our MiniTec CADmenu design software allows you to design and calculate separating safety installations within the shortest time which are precisely adjusted to customer's needs, with high demands made on safety standards visual appearance. All components for designing individual protection fields, doors, lifting doors, sliding doors etc. are specified in our MiniTec Profile System main catalogue.



The same components were used to develop our standardised modules which provide especially cost-effective solutions taking account of the standards 89/392/EWG, EN ISO 12100-1 / EN ISO 12100-2 and EN 953. All components used meet the requirements of DIN EN 775, paragraph 7.3.1.1, "Fixed separating safety installations".

Separating safety installations must prevent access to the source of danger and at the same time protect against hurled-out parts, moving parts of machines and squirting liquids. The installation must be designed in such a way that it cannot be removed without tools.

However, the dimensioning of the safety installation must at any rate be preceded by a risk assessment in accordance with EN ISO 12100-1 by the manufacturer of the equipment.

Safety Distances

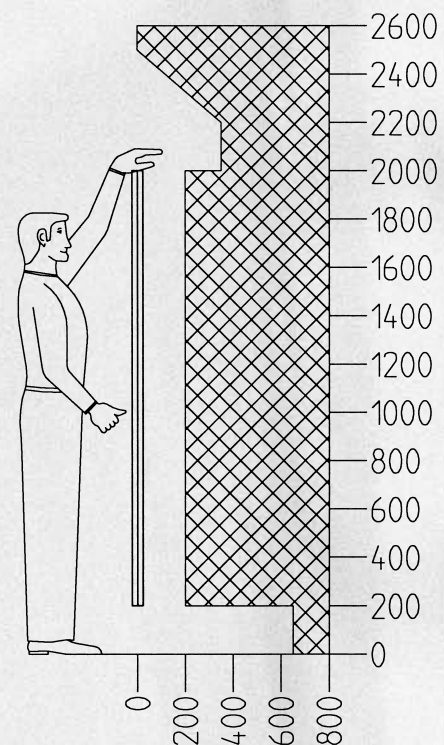
If corrugated mesh with a mesh width of 40 mm is used, then appropriate safety distances from the source of danger must be observed. The resulting distances are different if solid panel elements are used.

The necessary safety distances for upper extremities are defined in EN 294.

Protection field Height: 2,000 mm
 Distance to dangerous area: 200 mm

The safety distances for the lower extremities are defined in EN 811. The safety distance to the source of danger depends on the ground clearance of the protection field:

Protection field Ground clearance: 200 mm
 Distance to dangerous area: 665 mm



Safety System SaveGuard - Load capacity

The load rating of the standard protection fields was determined in empirical trials. In the centre of the field, a 200 mm x 200 mm plate was statically loaded until the corrugated mesh was pressed out of the clamping profile. The specified values apply to protection fields made of clamping profile 32 x 32 with corrugated mesh, galvanised steel, 40 mm x 40 mm x 4 mm.

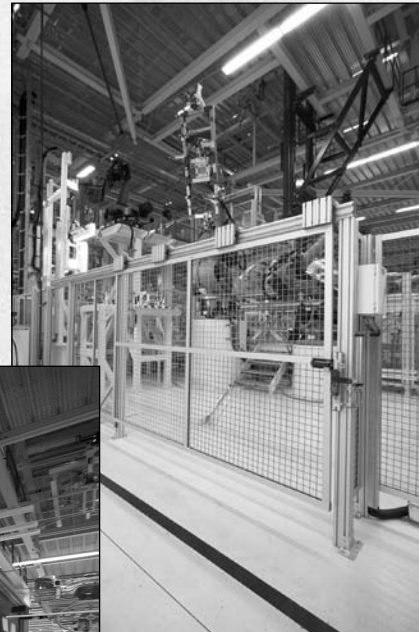
Field height HS mm	Field size B mm	Load F N
1800	500	1200
1800	750	1200
1800	1000	1000
1800	1250	1000
1800	1500	1200
1800	1750	1100
1800	2000	1000

The dynamic load rating of the protection fields was determined by TÜV-Saarland in pendulum impact tests using a mass of 100 kg. All parameters required by the machine directive 98/37 EG and DIN EN 775:1993 and DIN EN 953:1987 were complied with.



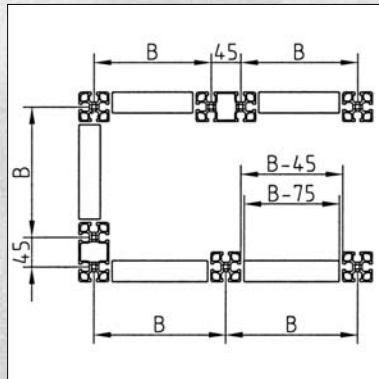
The Grid System

The standardised SaveGuard system is an especially economic and quick solution for most applications. Individual heights, field sizes, special designs for noise protection or splash water protection and optional fastening types are available for special tasks.

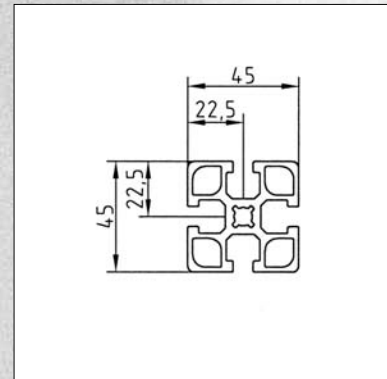
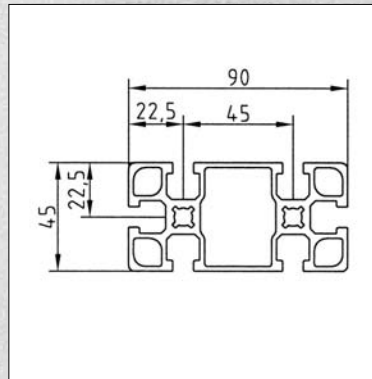


SaveGuard Standard

Widths Safety Fencing



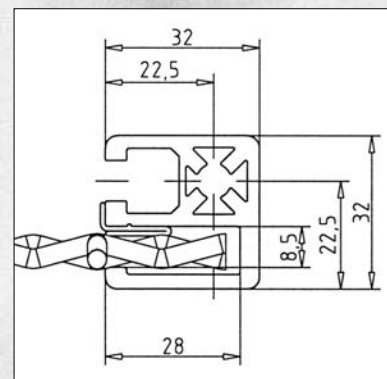
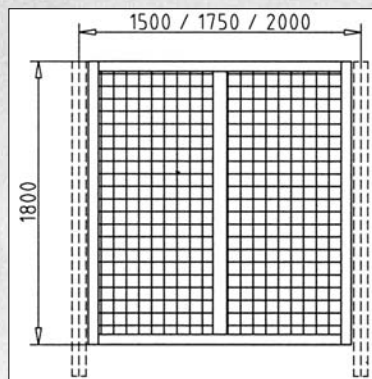
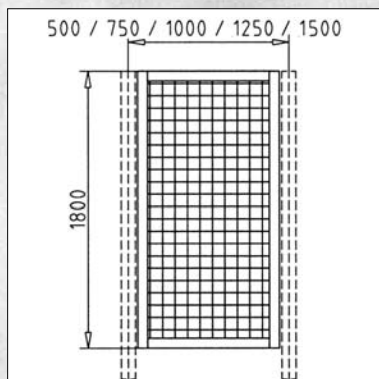
Center To Center Distance of T-Slots „B”



Standard width 500, 750, 1000, 1250, 1500 mm
 1500, 1750, 2000 mm with additional vertical strut

The SaveGuard frames consist of special designed clamp-profiles 32 x 32 mm. High stability through deep T-slots for panel elements and distance profile.

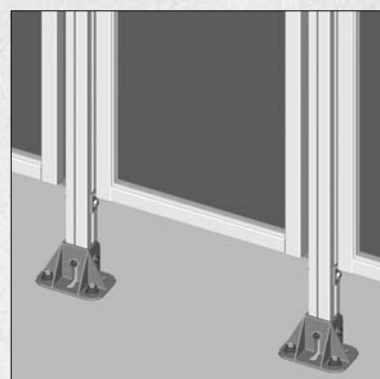
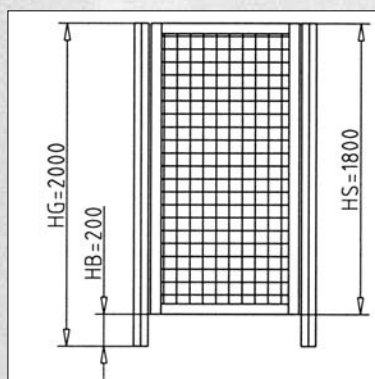
for add-on piece fastening all components of the MiniTec Profilesystem can be used.



Height

Standard Total height „HG”= 2000 mm,

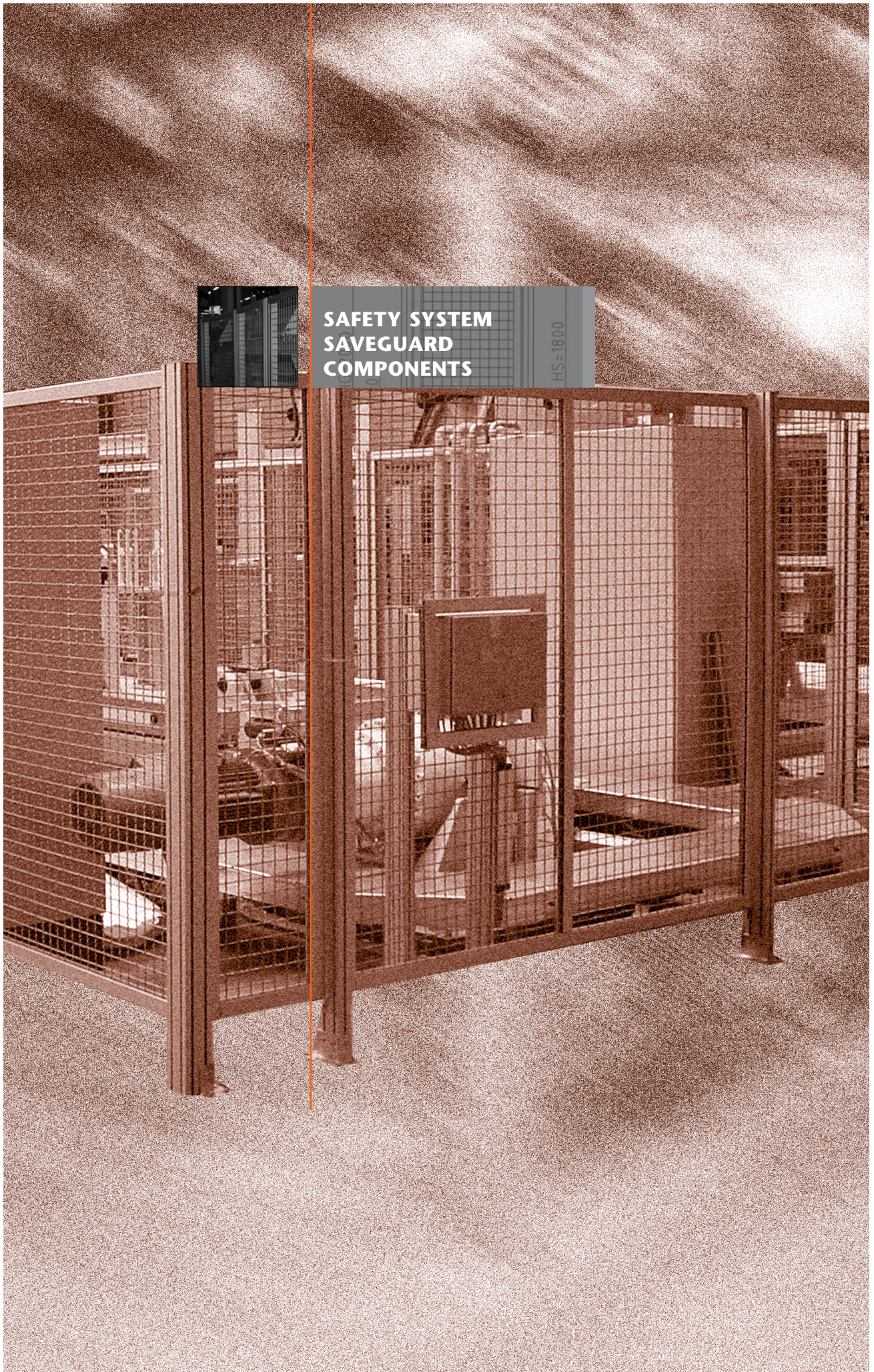
Height Safety Fencing HS 1800 mm, 200 mm ground clearance for easy cleaning



Assembly

The preassembled fields can be mounted on site by just one person. With stable feet, the posts are fastened to the ground by means of heavy-duty dowels. The posts are equipped with angles into which the protection fields are hung up and screwed tight. The fields can be aligned in any direction. Oblong holes in the angles enable spacing tolerances of the posts to be equalised.



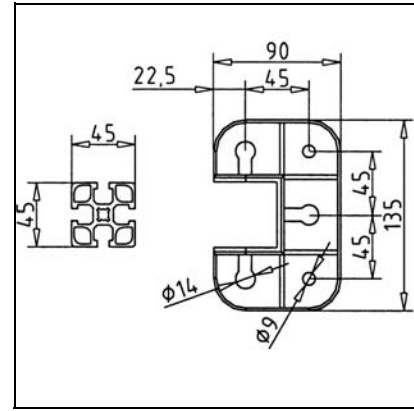
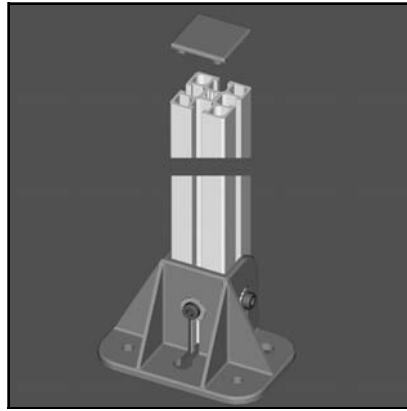
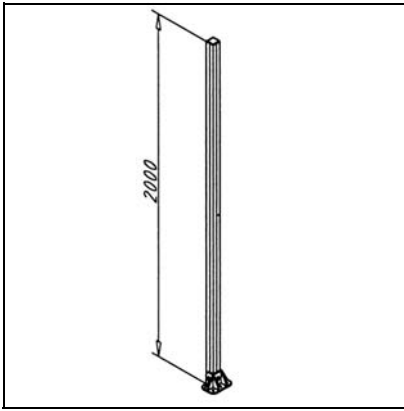


**SAFETY SYSTEM
SAVEGUARD
COMPONENTS**

HS=1800

POST SG 45 X 45

Part. N° 23.0030/0



TECH. DATA / ITEMS SUPPLIED

APPLICATION

ASSEMBLY

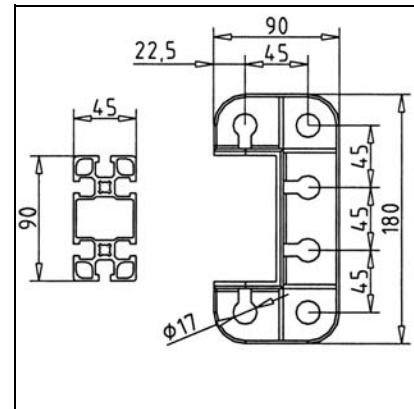
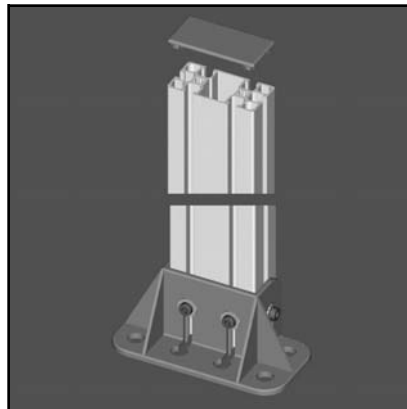
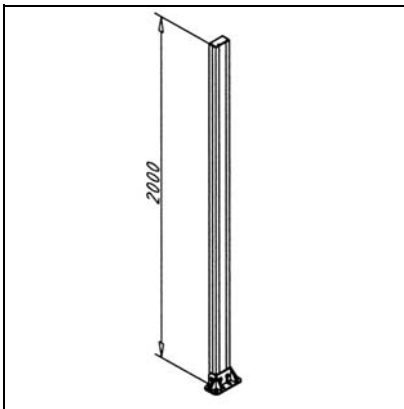
- Made of profile 45 x 45 F
- Foot 45 GD preassembled
- Without ground anchor

- As posts for protection fields and doors

- Position foot as appropriate
- Mark the position of the borings on the ground
- Install and tighten the ground anchor

POST SG 45 X 90

Part. N° 23.0060/0



TECH. DATA / ITEMS SUPPLIED

APPLICATION

ASSEMBLY

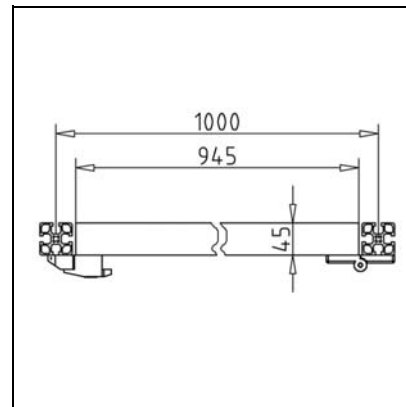
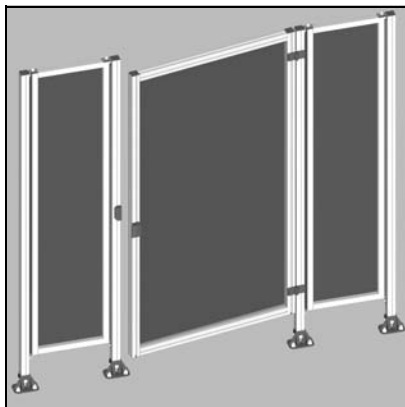
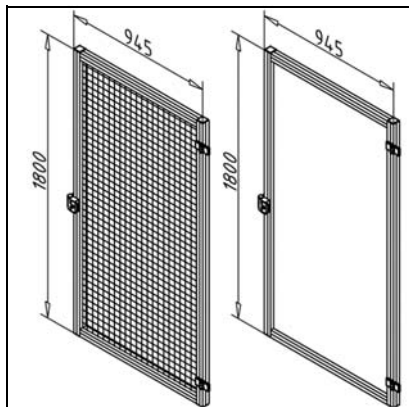
- Made of profile 45 x 90 F
- Foot 90 GD preassembled
- Without ground anchor

- As corner post for protection fields or in case of greater lateral loads of normal fields

- Position foot as appropriate
- Mark the position of the borings on the ground
- Install and tighten the ground anchor

DOOR SG 1000

Part. N° 23.1404/0



TECH. DATA / ITEMS SUPPLIED

- Made of profile 45 x 45 F
- Completely preassembled with lock and hinges
- With corrugated mesh 40x40x3 mm, steel Part N° 23.1404/0
- With PETGS Part N° 23.1414/0
- Further constructions on demand

APPLICATION

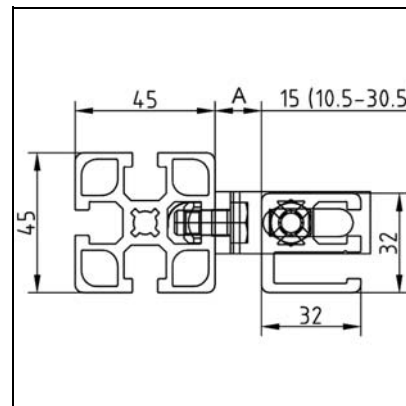
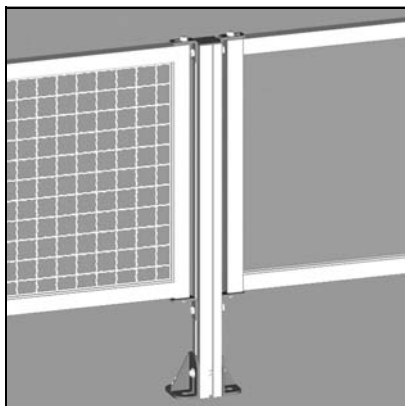
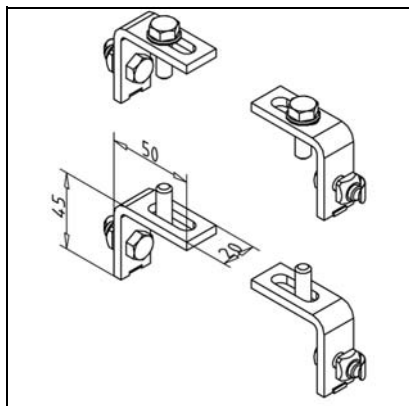
- As access to enclosures e.g. for maintenance

ASSEMBLY

- Install between two posts with groove spacing 1000
- Install lock fitting in post with two borings

FASTENING KIT 19 FOR PROTECTION FIELDS

Part. N° 23.0010/0



TECH. DATA / ITEMS SUPPLIED

- 4 protection field suspensions, galvanised steel
- With fastening material
- Weight/Piece 0,091 kg

APPLICATION

- Fastening of protection fields made of clamping profile 32x32, 45x32 or standard profiles
- Fastening of protection fields at any angle

ASSEMBLY

- Insert protection field into preassembled suspension. Tighten with screws included in delivery
- A = 10,5 mm - 30,5 mm

Field SG 500/750/1000/1250/1500

Tech. data / items supplied

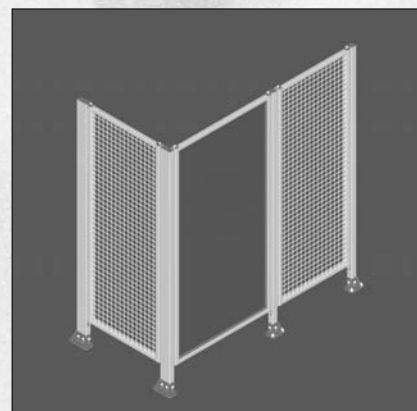
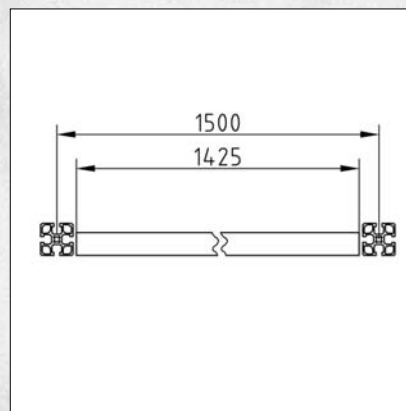
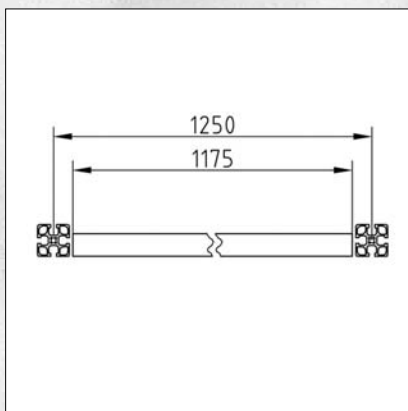
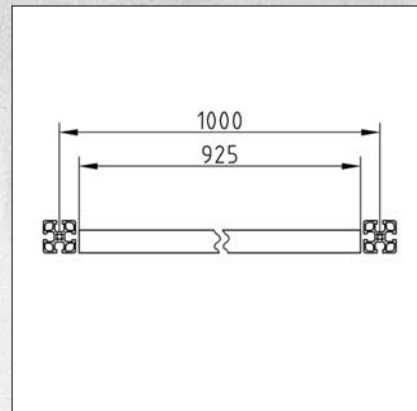
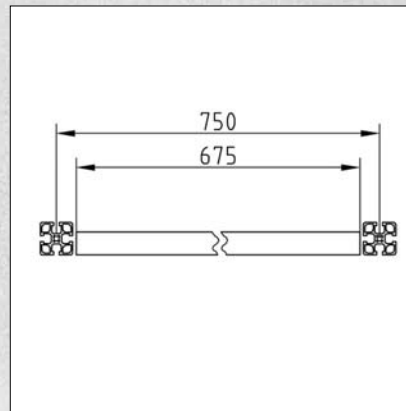
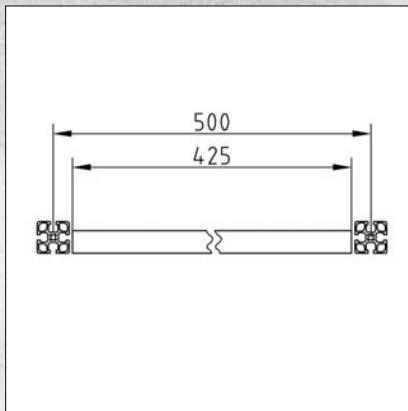
- Made of clamping profile 32 x 32 UL
- Completely preassembled
- With corrugated mesh 40 x 40 x 4 mm, galvanised steel or with PETG5
- Standard height HS: 1,800 mm

Application

- Separation of dangerous areas
- As machine protection

Assembly

-Mount protection field to protection field post using fastening kit 19 art. no. 23.0010/0.



Field size B	Corrugated mesh	PETG5
500	Part N° 23.0102/0	Part N° 23.0112/0
750	Part N° 23.0103/0	Part N° 23.0113/0
1000	Part N° 23.0104/0	Part N° 23.0114/0
1250	Part N° 23.0105/0	Part N° 23.0115/0
1500	Part N° 23.0109/0	Part N° 23.0119/0

Field SG 1500/1750/2000

Tech. data / items supplied

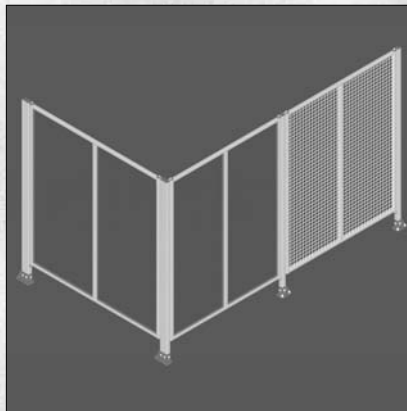
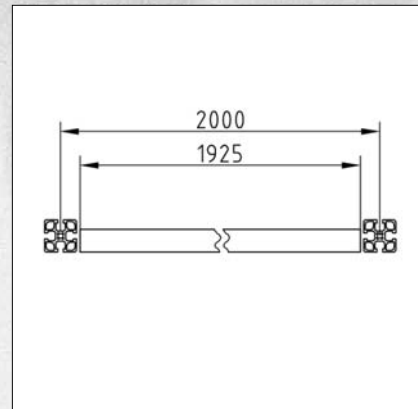
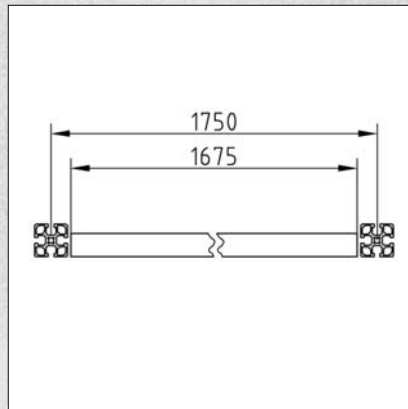
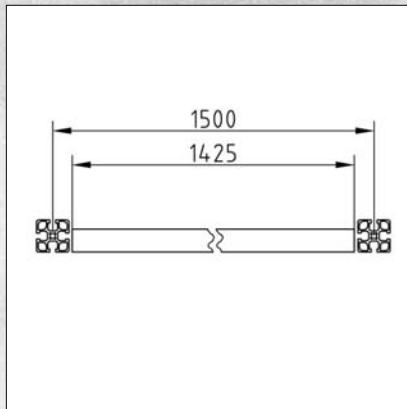
- Made of clamping profile 32 x 32 UL
- Completely preassembled
- With corrugated mesh 40 x 40 x 4 mm, galvanised steel or with PETG5
- Standard height HS: 1,800 mm
- Vertical brace, clamp profile 45x32
- Additional vertical strut

Application

- Separation of dangerous areas
- As machine protection

Assembly

- Mount protection field to protection field post using fastening kit 19 Part N° 23.0010/0.

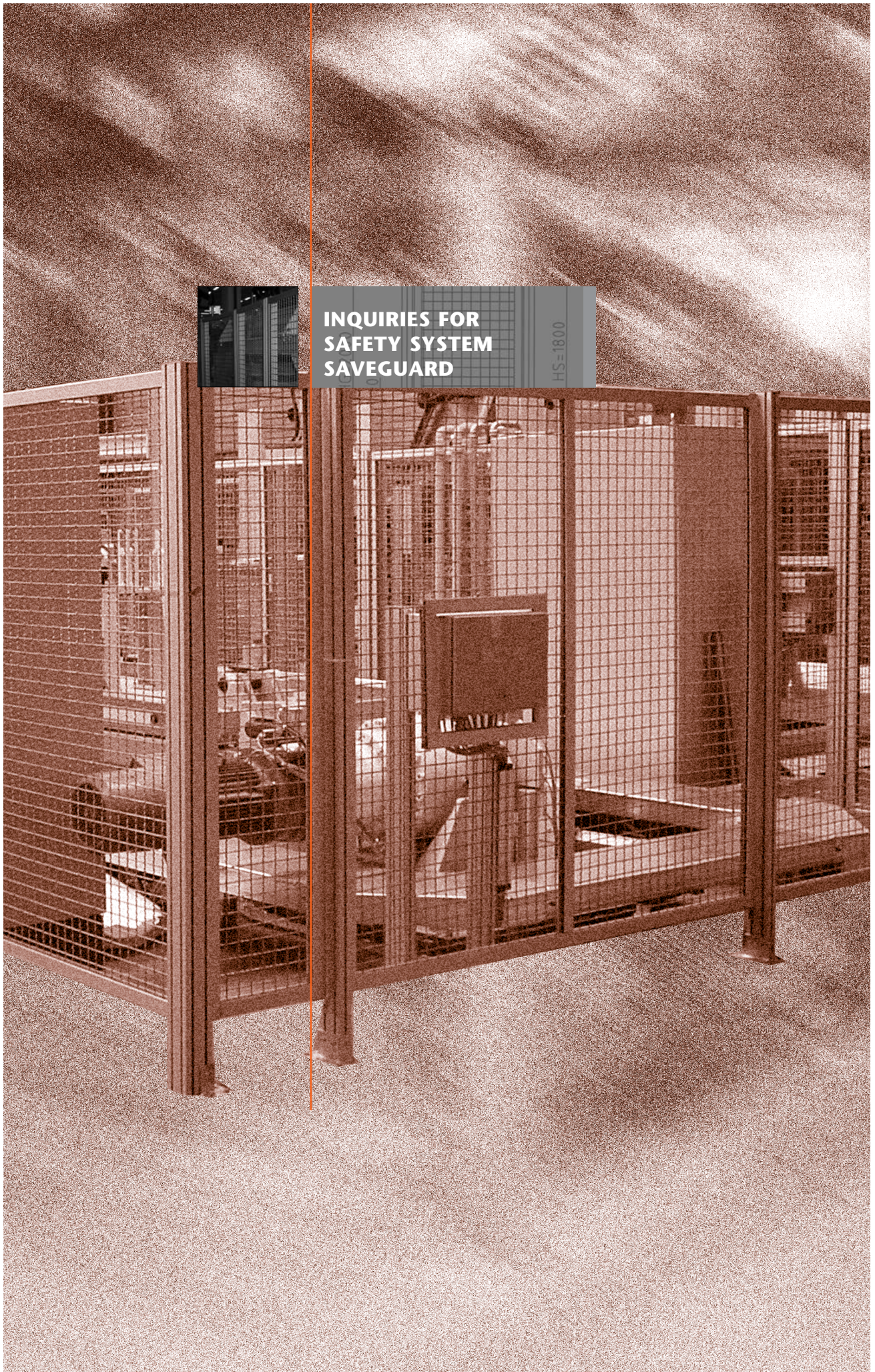


Field width B	Corrugated mesh	PETG5
1500	Part N° 23.0106/0	Part N° 23.0116/0
1750	Part N° 23.0107/0	Part N° 23.0117/0
2000	Part N° 23.0108/0	Part N° 23.0118/0



**INQUIRIES FOR
SAFETY SYSTEM
SAVEGUARD**

HS=1800



INQUIRY ABOUT FITTING FIELD

Please specify ...

Height of protection field HS mm (standard 1,800 mm)

Width of protection field B-75 mm

or ...

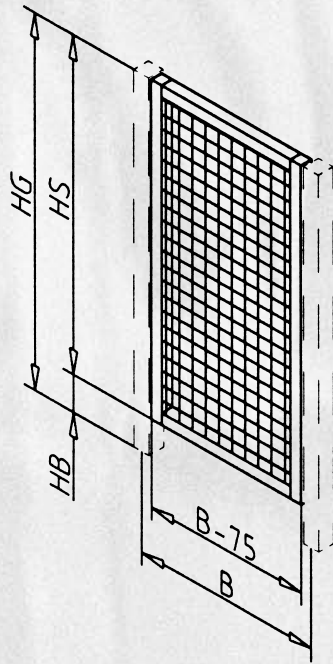
Height total HG mm (standard 2,000 mm)

Ground clearance HB mm (standard 200 mm)

Groove centre spacing B mm

Panel element

Corrugated mesh PETG5



Company

Please call me back

Name

Please send me an offer

Phone no

Fax no

E-Mail

INQUIRY ABOUT SLIDING DOOR

Post spacing B mm (standard 1000 mm)

Post height HG mm (standard 2000 mm)

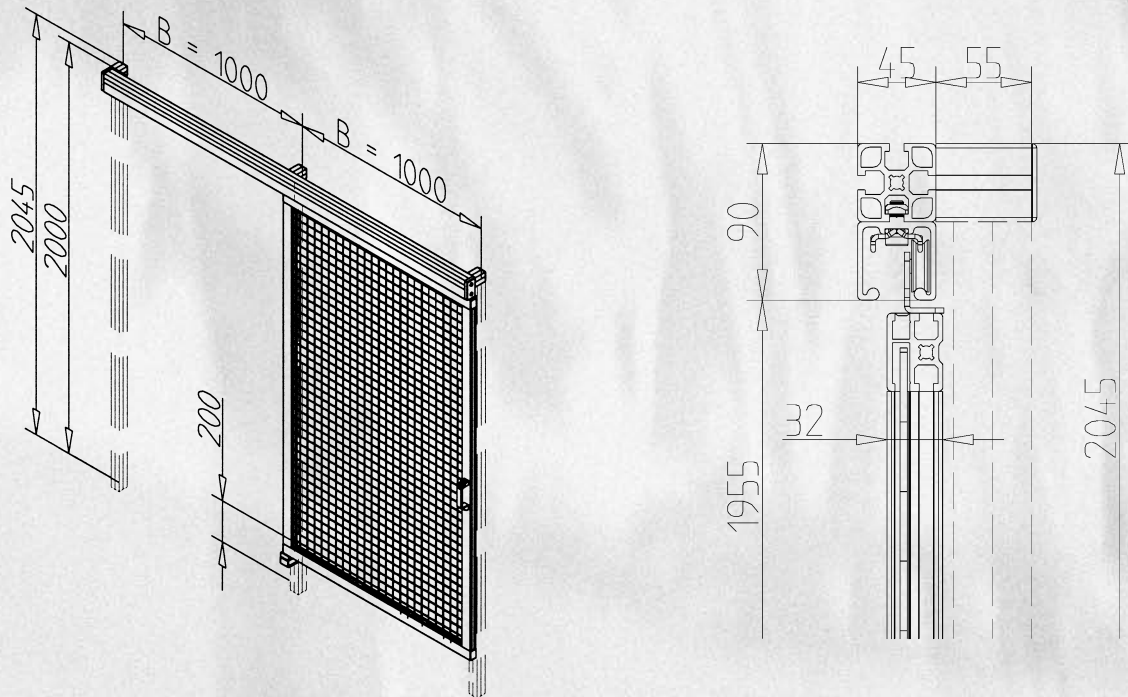
Handle one side both sides

Panel element Corrugated mesh PETG5

Additional field fixed

right yes no

left yes no



Company Please call me back

Name Please send me an offer

Phone no

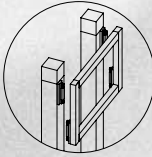
Fax no

E-Mail

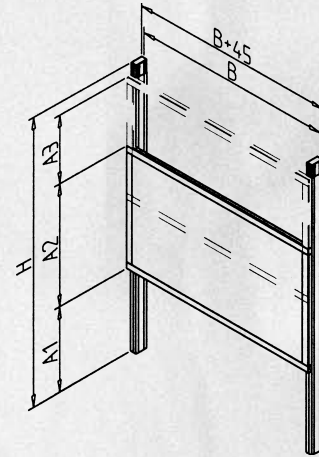
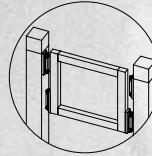
INQUIRY FOR LIFTING DOOR

Lifting door arrangement

outside



inside



Groove centre spacing B mm

Lifting field height A2 mm

Lift A3 mm

Stand-up dimension A1 mm

Actuation manual pneumatic

Panel element Corrugated mesh PETG5

Liftings per hour

Additional field fixed

top yes no

bottom yes no

Company Please call me back

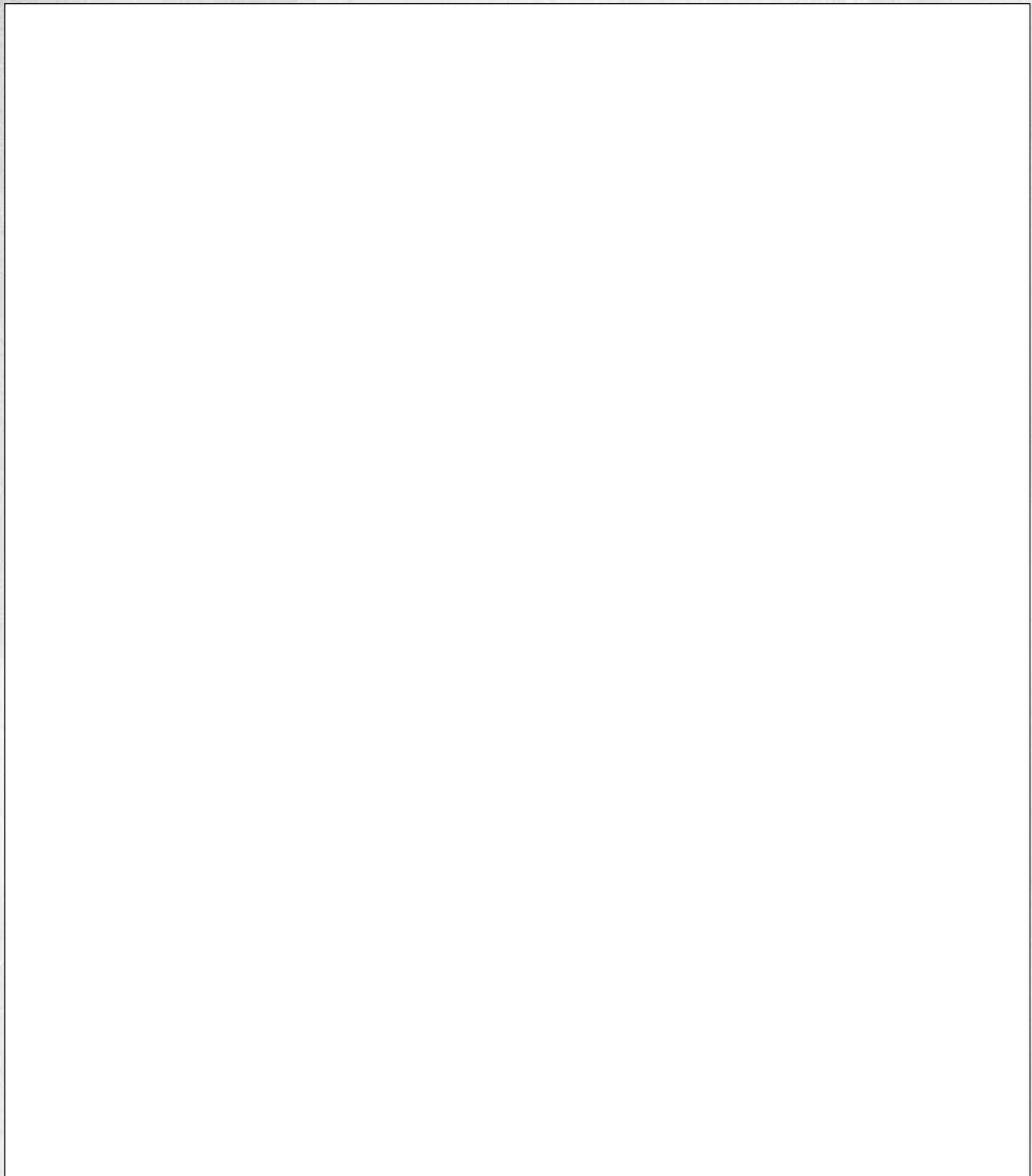
Name Please send me an offer

Phone no

Fax no

E-Mail

INQUIRY BASED ON DRAWING



Company Please call me back

Name Please send me an offer

Phone no

Fax no

E-Mail