HELM Shelf Servicing Device -RGB-

HELM

Conveyor Technology

Group 18
Shelf servicing device -RBG-

General description

The HELM shelf servicing device can be used in the most varied businesses and industries as a loading device for shelving systems, for example for the storing of tools, spare parts, raw parts and pre-fabricated parts. This picking device is used in all kinds of shipping systems.

The shelf servicing device is mainly used where automatic feeding systems would be too complex.

The relatively low cost price pays off quickly due to its high efficiency.

The device is ceiling-mounted, easy to move manually, quick and comfortable to handle and almost maintenance-free.

Its compact construction allows for moderate assembly dimensions and maximum utilization of all three directions of movement.

As the shelf servicing device does not need a lower guiding, the type of floor surface is irrelevant.

The power supply for the lifting gear is ensured by HELM trailing cable systems or a conductor line.

The s.-s.-device can be used for

1.) max. load = 300 kg*

2.) max. lifting height = 3.500 mm*

* greater lifting heights and loads available upon request.

In many areas the rack feeder has become an indispensable helper.

Our equipment is certified by the Technical Inspection Agency *(TÜV)*

Configuration of shelf servicing device

Above the racks two side tracks ① are mounted in parallel.

These tracks hold the carriages ② for the longitudinal transport.

The two bridge-profiles ③ are holding a sidewards carriage for the cross transport (rack feeding). The rotary guiding beams ⑥ including the electric hoisting gear ⑦ are located underneath the drive frame ⑤.

Through a snap-in device with release ⑧ the entire hoisting section can be turned by 3 x 90° = 270°.

This allows two rack units opposite each other to be fed.

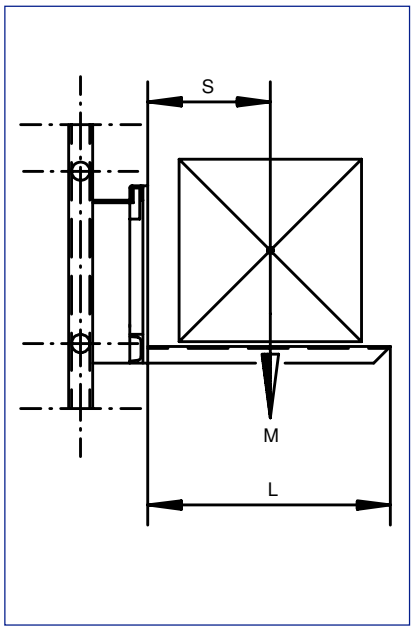
The s.-s.-device travels easily in longitudinal and transverse direction when moved manually.

The built-in electric hoisting gear with fast mode and precision mode for exact positioning is used to lift or lower the load. The necessary control panel is attached to one of the guiding beams but can be removed easily.

The ball-bearing slide ⑨ is connected to the hoisting gear. The operation width of the hoisting arms ⑩ is infinitely adjustable. The control switch is attached to the frame ⑪. For safety reasons the back (operation side) is encased up to approx. 1.20 m and equipped with an acryllic glass pane to the height of approximately 2.00 m.

The entire constrcution of the shelf servicing device is clearly laid out and convenient to handle in longitudinal or transverse movements so as to allow easy transfering and conveying of loads. Since the device does not touch the ground, there is no risk of stumbling (occupational safety). The passageway will remain available for the continued flow of goods.

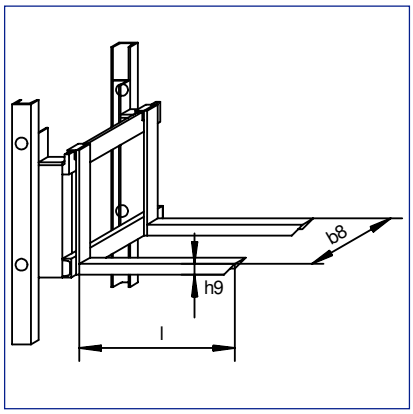
Technical specifications



Load capacity
The following shelf servicing devices are available:

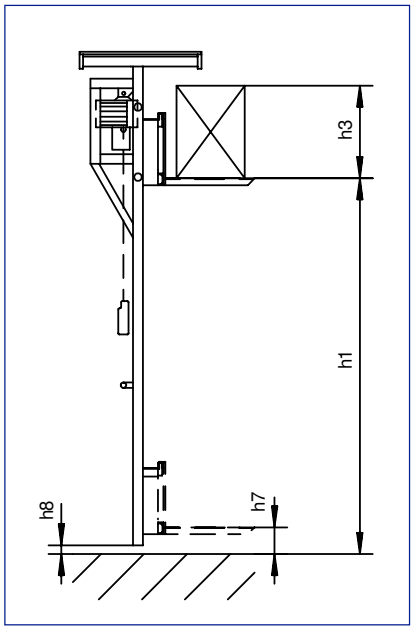
RBG 100 - 100 kg load capacity
RBG 200 - 150/200 kg load capacity
RBG 300 - 300 kg load capacity

with the load capacity referring to the distance of the point of gravity ´S' = 250 mm. In the case of larger values for 'S', the load capacity decreases.



Hoisting arms
(Can be designed individually depending on the type of load)
The operational width of the hoisting arms is infinitely adjustable.

After selecting the desired position, the hoisting arms are fixed with a set screw.



Hoisting height
The usable hoisting height refers to the distance between the upper floor edge and the upper edge of the lifting fork while assuming the max hight h_3 of the hoisted load.

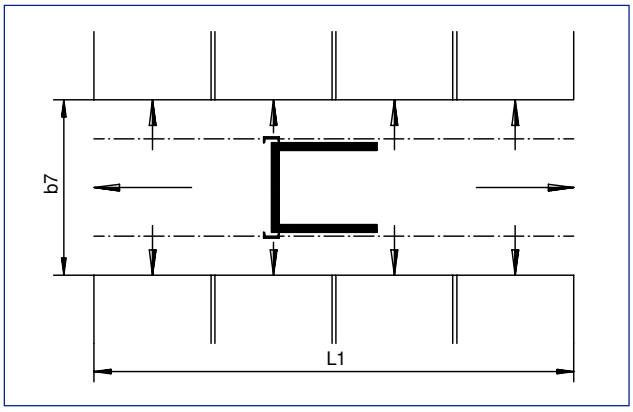
Hoisting speed
The hoisting motors (sliding rotor motor and brake motor) are designed for two velocities. The precision mode is used for the essential exact positioning of the load in the shelves. An overload protection prevents overloading the shelf servicing device. It is directly controlled with a controlling device SWH equipped with an emergency stop. The hoisting motors are available in explosion-proof design. Explosion protection according to DIN/EN de II BT 4.

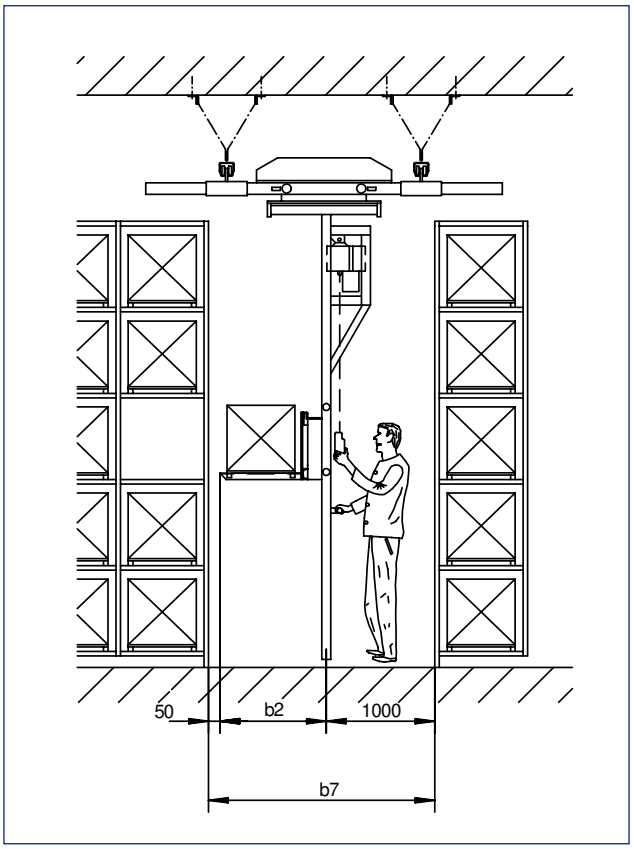
Type		RBG - 100	RBG - 200		RBG - 300
loadcapacity		100 kg	150 kg	200 kg	300 kg
s	mm	250	⇦	⇦	⇦
h1	mm	3.500	⇦	⇦	⇦
h3	mm	380	480	⇦	550
h7	mm	45	62	⇦	⇦
h8	mm	20	⇦	⇦	⇦
h9	mm	25	42	⇦	⇦
b8 min.	mm	150	165	⇦	⇦
b8 max.	mm	465	555	⇦	575
l	mm	435	⇦	⇦	⇦
v1	mm	8,00	⇦	⇦	10,00
v2	mm	2,00	⇦	⇦	2,50
N	KW	0,40	⇦	⇦	1,00

Technical specifications

Width of passageway
The width of the passageway calculates as detailed in the opposite illustration. So as to keep the width to a minimum, the load cannot always be rotated in the passageway. This way the operation side can be reduced to up to 200 mm, although this affects the convenient handling.

The effective width of the passageway is recalculated each time.

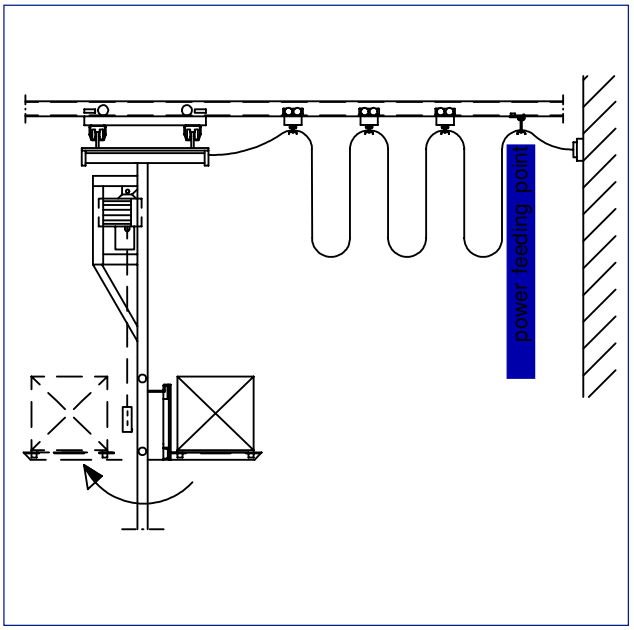




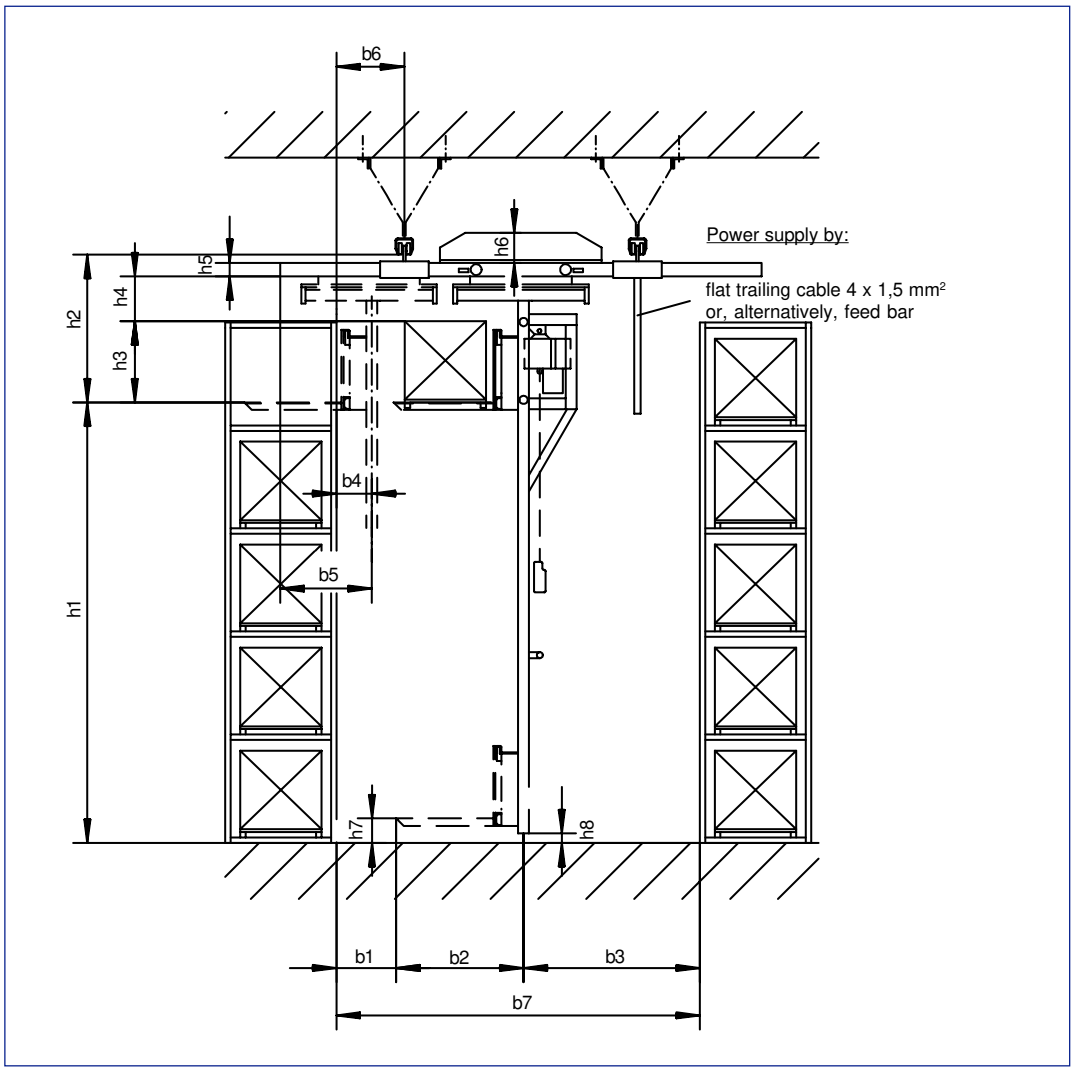
Moving the shelf servicing device
Manual longitudinal and transverse movements. The shelf servicing device's easy movability ensures exact positioning of the load in the correct shelf.

Power supply
Power is supplied by cable trolleys (see Group 17) which travel along the track or separate side tracks.

Power supply by lateral conductor line.



Technical specifications
Assembly and servicing dimensions



Type	RBG - 100	RBG - 200		RBG - 300
loadcapacity	100 kg	150 kg	200 kg	300 kg
cross bridge	P 500	⇦	P 600	⇦
crane gantry	P 500	⇦	P 600	⇦
h1 mm	3.500*	⇦	⇦	⇦
h2 mm	599	703,4	745,5	806,5
h3 mm	380	480	⇦	550
h4 mm	128	132,4	140,5	130,5
h5 mm	60	⇦	75	⇦
h6 mm	120	⇦	150	⇦
h7 mm	45	62	⇦	⇦
h8 mm	20	⇦	⇦	⇦
h9 mm	91	⇦	126	⇦
b1 mm	50	⇦	⇦	⇦
b2 mm	584	574	⇦	544
b3 mm	450	⇦	⇦	⇦
b4 mm	149	139	⇦	109
b5 mm	362,5	⇦	402,5	⇦
b6 mm	50	⇦	⇦	⇦
b7 mm	1.084	1.074	⇦	1044

Track profiles nos. 500 and 600 are used for longitudinal and transverse movements.

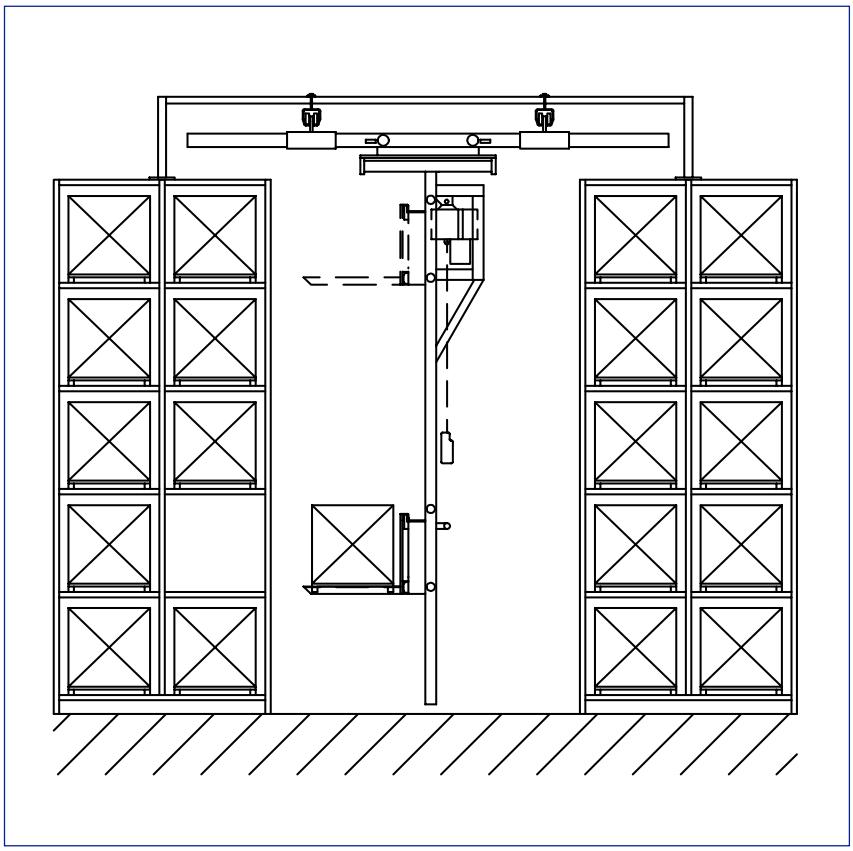
The dimensions opposite refer to these profile types.

* larger hoisting heights are available upon request

Technical specifications
Fixture of HELM-profiles

For a new rack system, the necessary track fixture points are usually considered on-site by the rack builder in close cooperation with HELM.

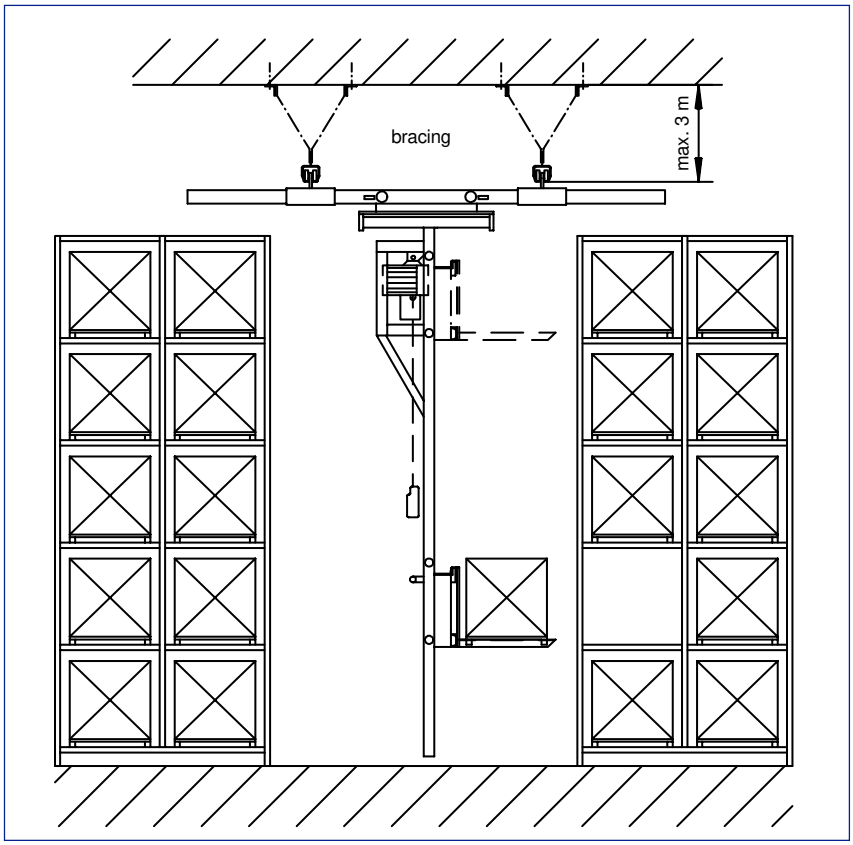
For existing rack systems, possible fixture points have to be evaluated and adopted to on-site conditions.



Side tracks can also be suspended from the ceiling construction. It is essential, however, to reinforce the installation (vibration-free) with longitudinal and transverse bracings.

In any case it is recommended to plan for height-adjustable types of suspension since experience has shown that there are always height differences which require additional adjustment of the side tracks.

We recommend the use of our assembly kit (standard specifications sheet on pages 8-10)

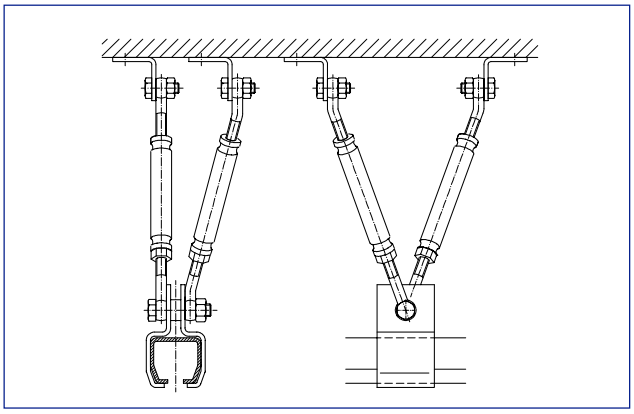


Technical specifications
HELM track suspension examples

Varying on-site conditions require different track suspensions. A few examples are listed below:

1. Assembly suspension (assembly material)

Suspension from a reinforced concrete ceiling
– dowelled –



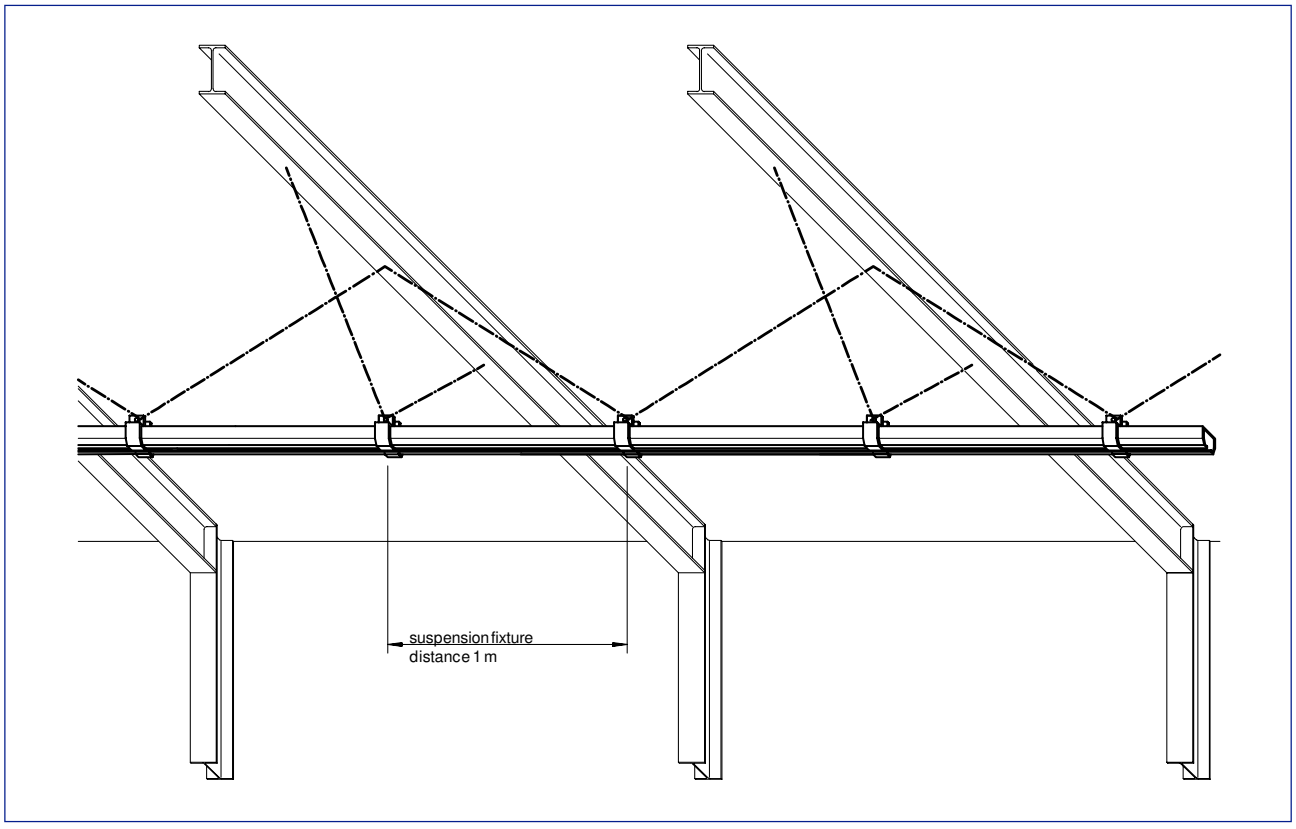
The following assembly material will be included in the delivery of each 10 m manual suspension conveyor unit, if no other type of track suspension is selected:

42 m	suspension tube
je 22 pcs.	eye bolt M10x140 rs/ls
je 22 pcs.	thread plug M10 rs/ls
22 pcs.	screw down angles
12 pcs.	hexagonal bolt M10x70 Mu
22 pcs.	hexagonal bolt M10x30 Mu
34 pcs.	hexagonal locknut M10
je 12 pcs.	spacer part 1 and 2
3 pcs.	inserters part 3
12 pcs.	adapter part 4

For concrete suspensions the following items are also required (number of items depend on required quantities):
- Zykon-Anker FZA 14x40, M 10
- Special drill for FZUB 14x40
- Cartridge-operated hammer FZE

The following item is available on a loan basis and will be credited to your account when returned to us free of charge:
- Fine-tuning device

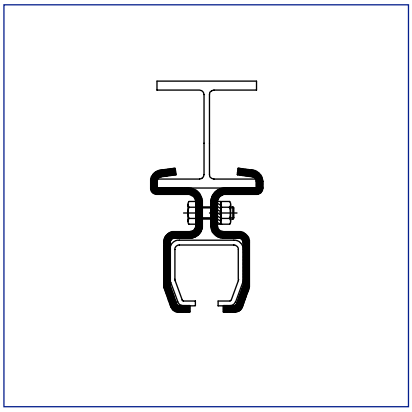
For further details please see Group 14 Assembly and Maintenance Instructions.



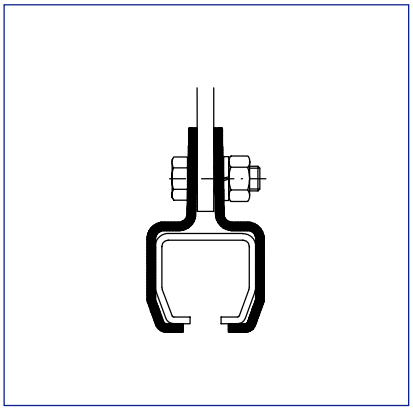
Technical specifications
HELM track suspension examples

3. Standardized suspension variants / Splice joints

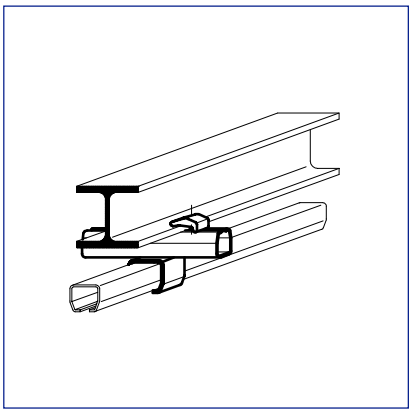
Suspensions



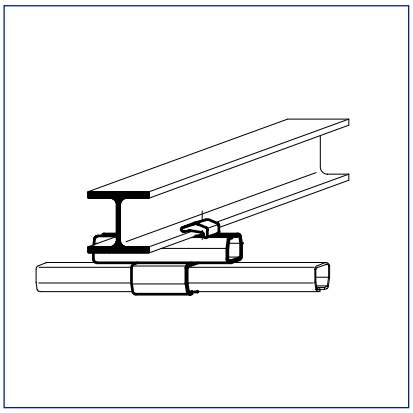
clamp support bracket
no. 1305 - 1705
for I 80 - I 260



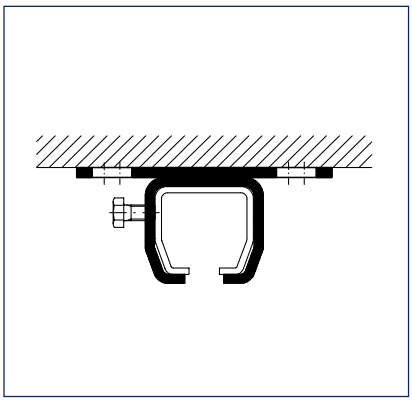
split support bracket
no. 1308 - 1708



suspension assembly
no. 1302 - 1702
design "A"

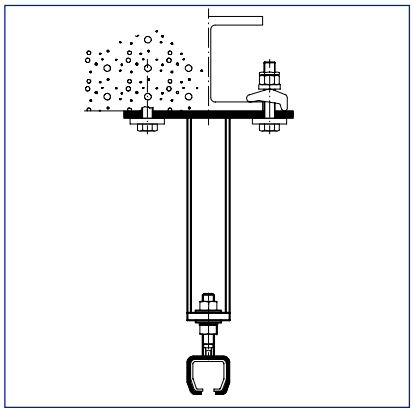


suspension assembly
no. 1302 - 1702
design "B"

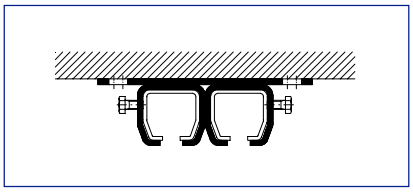


ceiling support bracket
no. 302 - 702

Technical specifications
HELM track suspension examples

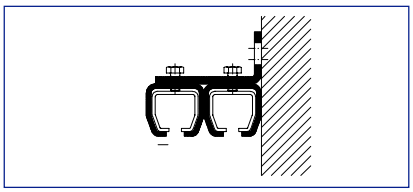


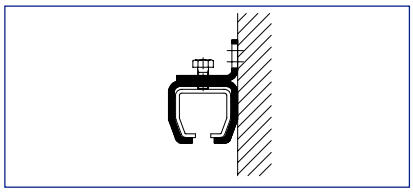
double ceiling support bracket
no. 302 - 502 D



height-adjustable
special suspension

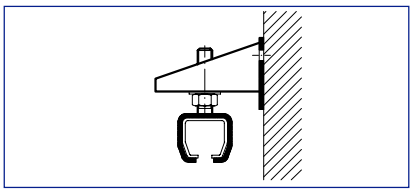
double wall bracket
no. 301-501D

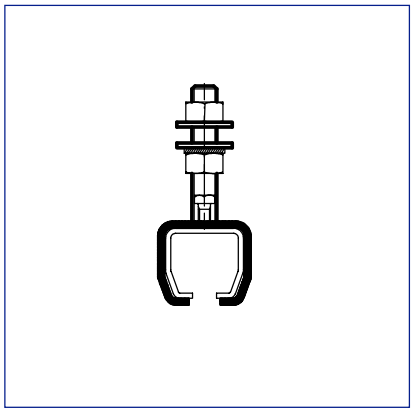




wall bracket
no. 301-701

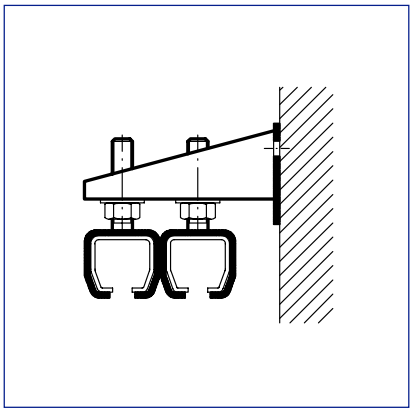
angle fixation
no. 404 W / 604 W
with height-adjustable
bracket no. 304-704

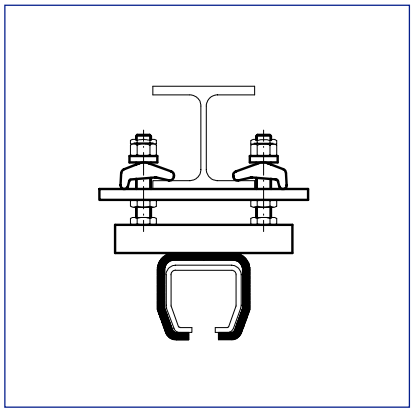




height-adjustable
bracket

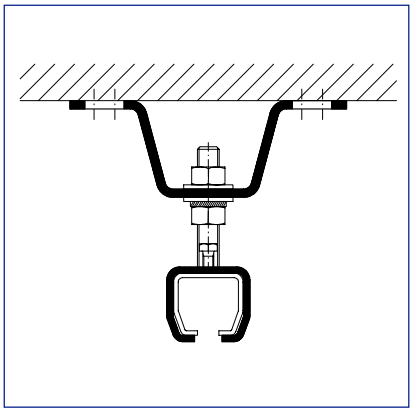
double angle fixation
no. 404 WD / 604 WD / 704 WD

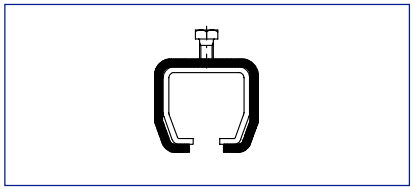




height-adjustable suspen-
sion assembly
no. 1309-1709

height-adjustable ceiling
support bracket
no. 404

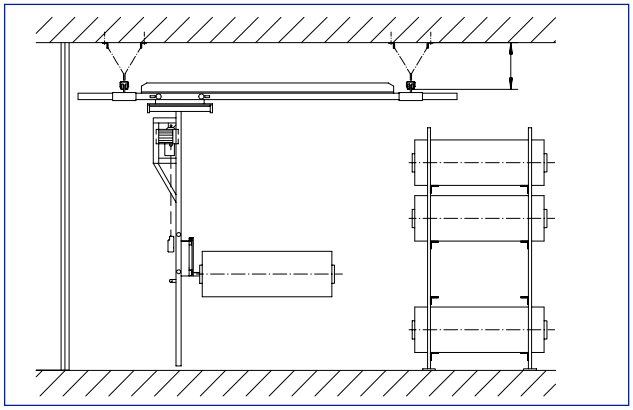




slide-on bracket
no. 1304-1704
(welded sleeve)

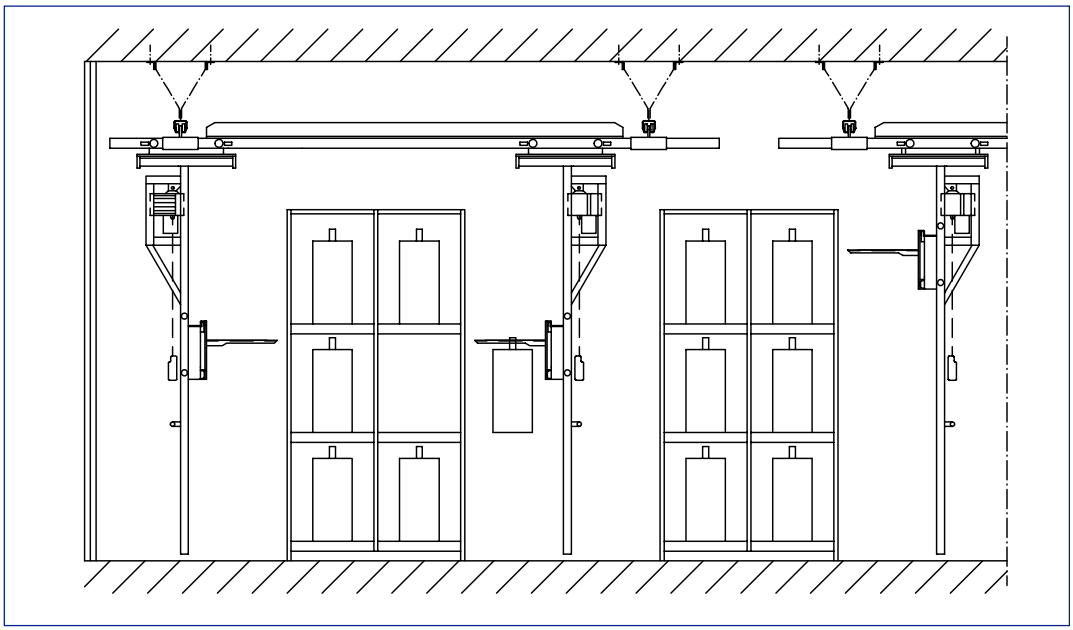
Fields of application

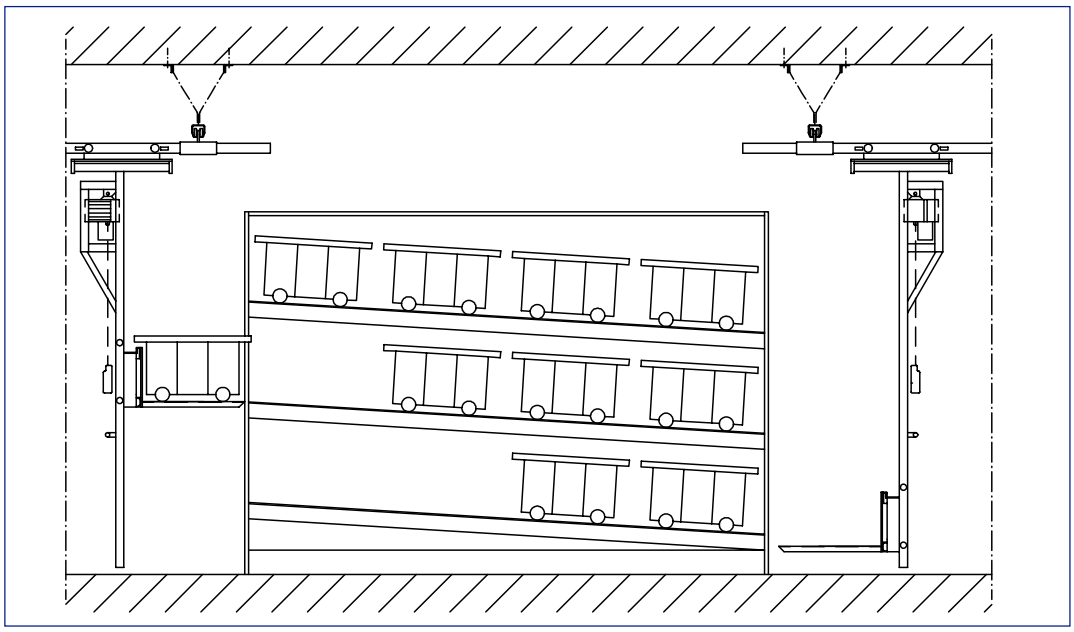
The HELM rshelf servicing device will be modified to meet the requirements of its wide range of potential fields of application.



Fixed or foldable thorn-shaped hoisting arms designed for the transport of rolls of cloth or carpet.

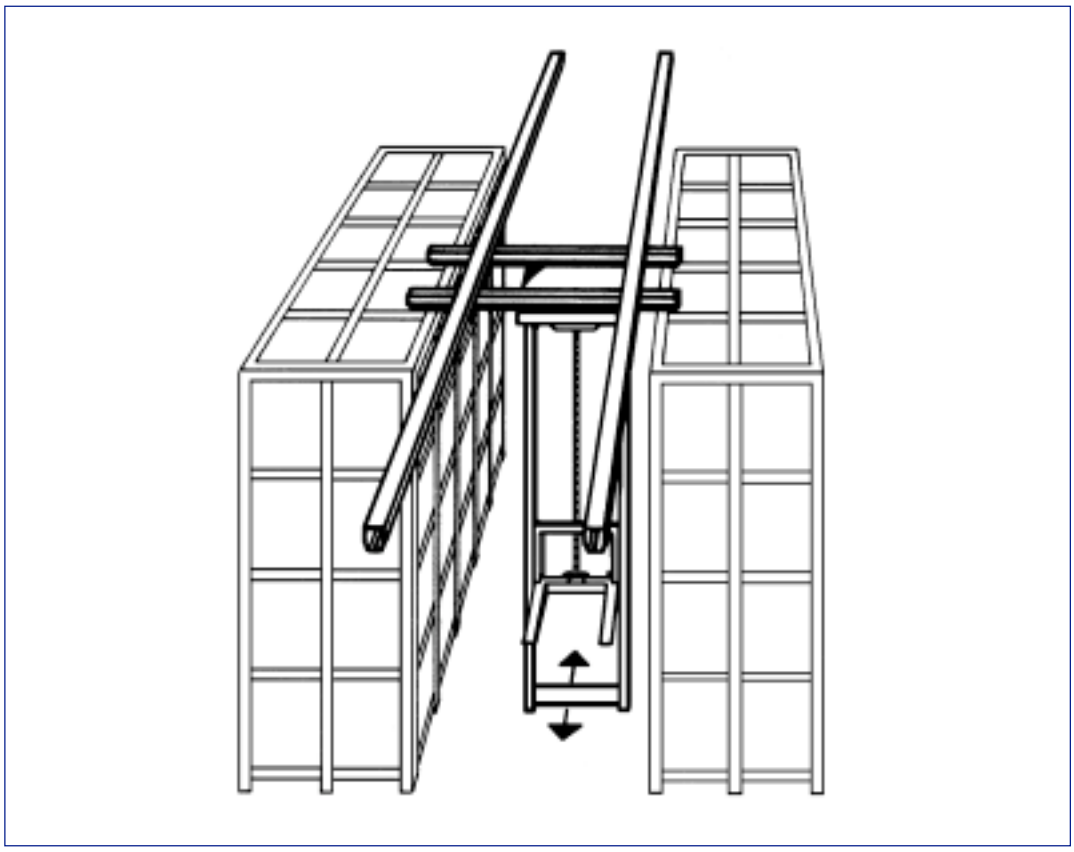
Shelf servicing device for the stapling of drawing tools, M max. 300 kg



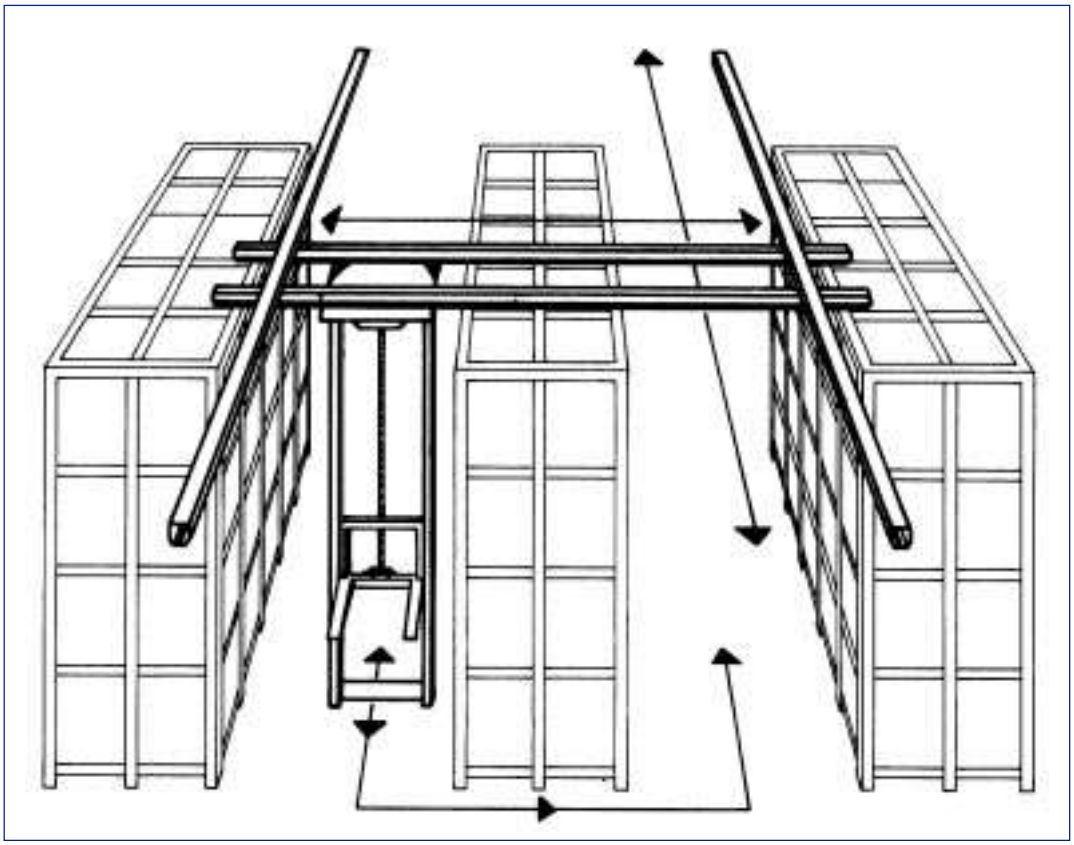


Shelf servicing device for live storage racks

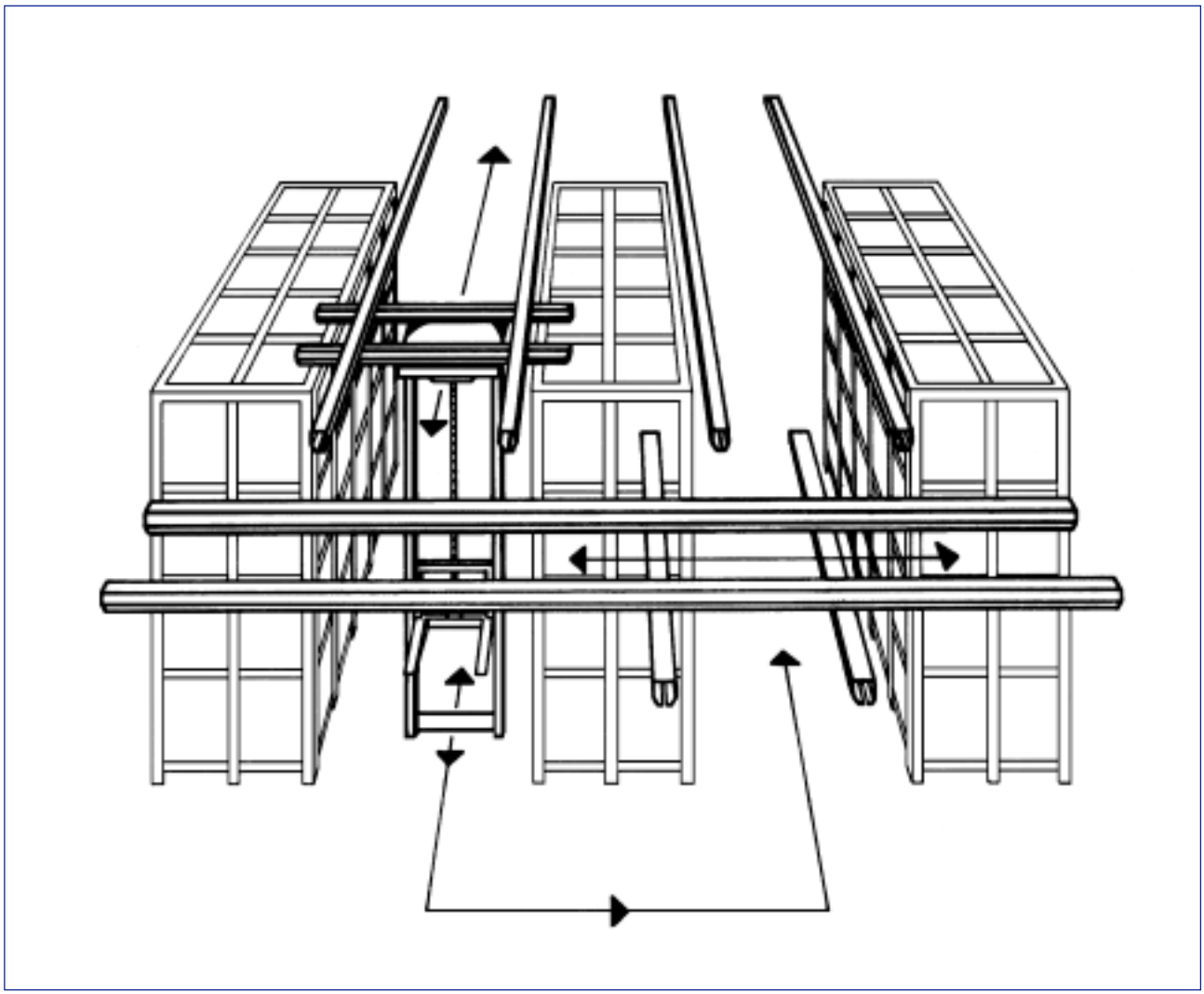
Design examples



Pos. 1
For each passageway a separate shelf servicing device is used.



Pos. 2
One shelf servicing device operates 3 rack units.



Pos. 3
One shelf servicing device is used for several passageways. Operation via transfer track at the front end. Load can also be taken up on transfer track.

Questionnaire

Please answer the following questions so as to enable us to workout a quotation:

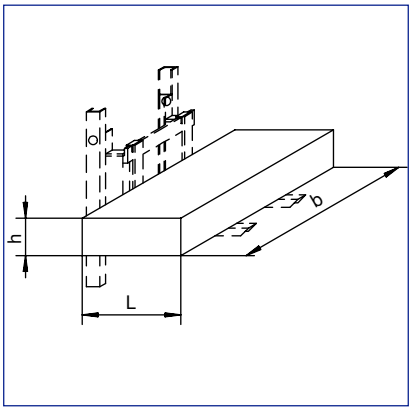
1. Goods to be stored

1.1 Type of goods to be stored _____

1.2 Weight of goods to be stored _____

1.3 Dimensions of goods to be stored (corresponding the hoisting arm dimensions)

length L _____mm
width b _____mm
height h _____mm



1.4 Special type and form of goods to be stored, e.g. beaded plastic containers, pallets, rolls of cloth on past eboard tubes, etc.

Please include drawing

2. Storage rack

Please include drawings as appropriate.

2.1 Rack height _____
2.2 Ceiling height _____
2.3 Rack length _____
2.4 Width of passageway _____
2.5 Type of track suspension _____
2.6 Preferred track configuration _____
2.7 Load capacity M = _____ kp according to illustration on page 4
2.8 Hoisting height h1 = _____ mm according to illustration on page 4
2.9 Width of passageway b7 = _____ mm according to illustration on page 5
2.10 Rack length L1 = _____ mm according to illustration on page 5

HELM-Range

TEH_14	Selection and Planning Criteria
TEH_14A	Light Crane Systems
TEH_17	Power Supply Systems
TEH_18	Shelf Servicing Device - RGB-
TEH_50	Circular and Power & Free Conveyors

HELM

Code with link to download the catalogue TEH_18

Part no.: TEH_18/06.2002
This catalogue supersedes all previous catalogues.g.

Woelm GmbH
Hasselbecker Str. 2-4
D-42579 Heiligenhaus
Tel.: +49 (0) 20 56 - 18 - 0
Fax: +49 (0) 20 56 - 18 - 21
www.woelm.de
contact@woelm.de

Woelm Austria GmbH
Seewalchen 5a
A-5201 Seekirchen
Tel.: +43 (0) 62 12 - 25 02
Fax: +43 (0) 62 12 - 69 95
www.woelm.at
contact@woelm.at