

# GROSSE

Lagertechnik . Stahlbau

02/2013

**Cantilever Racks**

**Pallet Racks**

**Shelf Racks**

**Vertical Racks**

**Cable Drum Racks**

**Rack-Clad-Systems Halls**

**Mezzanines**

**Selling platforms**

**Trade fair constructions**



**storage systems from a single source**



With 30-years history GROSSE is an experienced manufacturer of steel structures and in particular storage technology.

GROSSE is based in Weissensee, north of Erfurt/Thuringia.

**GROSSE** has the great optitude proof (Class D production certificate according to DIN 18800-7) and is thus regularly tested by the Institute for Joining Technology and Materials Testing Jena.



## Guidelines for our actions are

- maximum safety
- best cost-benefit ratio
- innovation, longevity and quality

of our products for the benefit of our customers.

Here, all the special requests of our customers will be realized and taken into account.



Structural analysis and design software are always up to the state of the art and the latest safety requirements (such as DIN EN standards and requirements of professional associations).



**The cantilever is bespoke to the customers requirements.**

A special structural analysis program determines the steel profiles.

During this process the lateral torsional buckling behavior is tested as for example a stand too small in size will twist and buckle under excessive stress.

Our structural analysis program determines this stress limit.



**Cantilever racks provide weight bearing structures of any length**

- **without disturbing shelf frameworks**
- **for maximum loads.**

In production of bilateral cantilever racks also uneven weight distribution is considered. In this case the stand tilts to the more loaded side which could result in a stronger and greater profile.

**Safety and durability are the result of this approach**

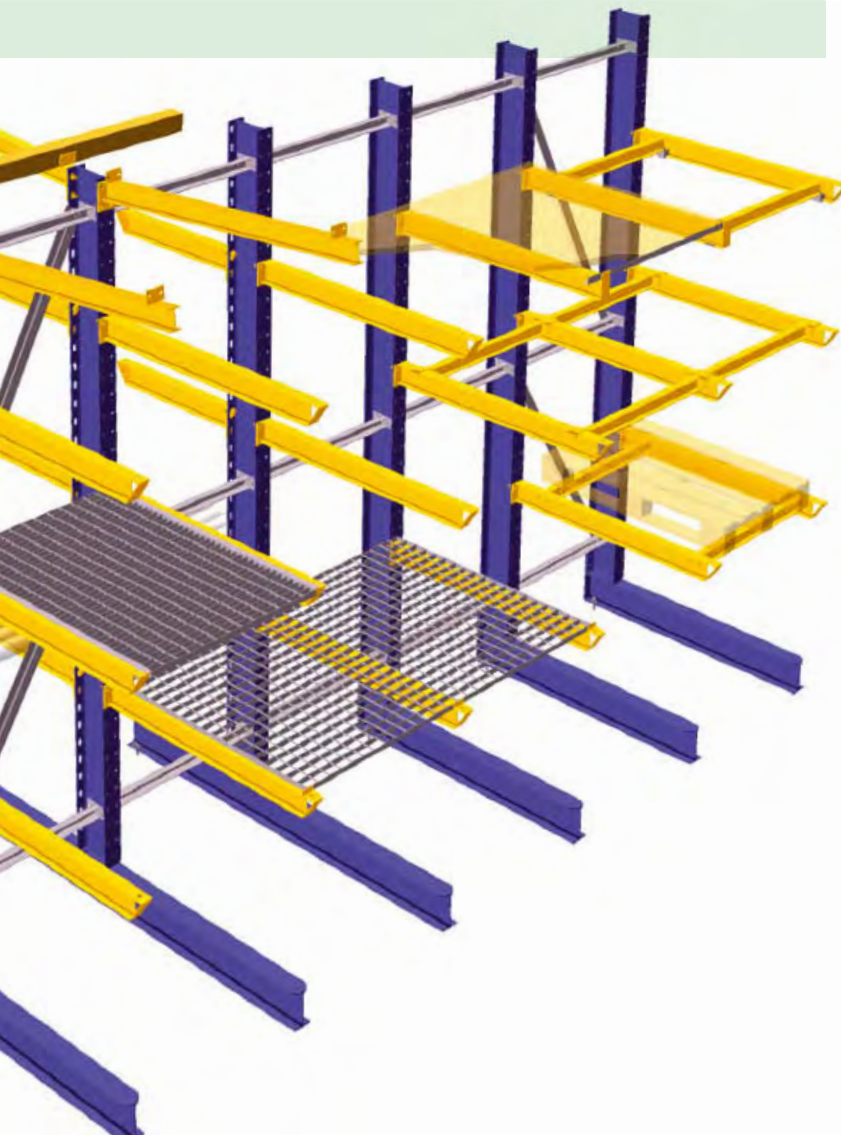


# Cantilever Rack

We exclusively use IPE-profiles (double-T profiles).

These rugged and durable, hot-rolled profiles are guarantee for safety and durability of our products

Each stand has a perforation in vertical of 100 mm (or 50 mm) thus the position of the arms can be adapted to the size of the stock.



**GROSSE** produces cantilever racks with arms to be screwed or hooked on to the stand.

## Screwed Arms

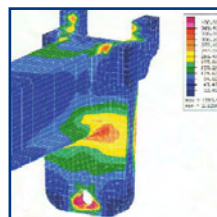
The fitting of the arm is below the storage level. This avoids damage to the goods stored by protruding screws.



## Hooked Arms

This arm evades strong pushes by the forklift and returns immediately back to its original position - **both in height and laterally.**

Thus stock and shelves are spared. The hooked arm has a specially forged top plate the hook of which takes even the heaviest loads.



The arm can be easily hooked in any position without any tools by one person without assistance.

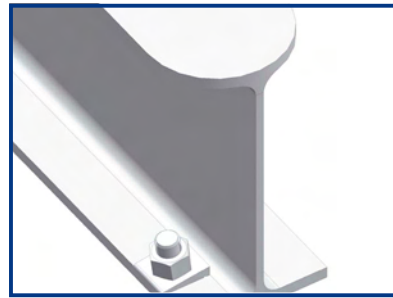


Hooked to the column the arm remains in its position without any further help. To avoid slipping out from extreme impacts (e.g. by the forks) a locking pin has to be inserted into one hook.

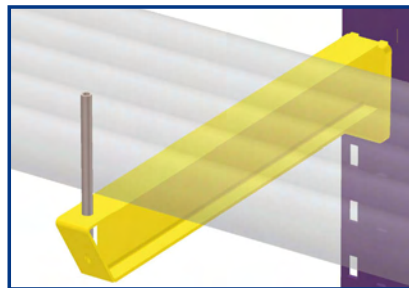


To rehang, the arm only has to be slightly lifted, arms hooked above not to be unhooked before.

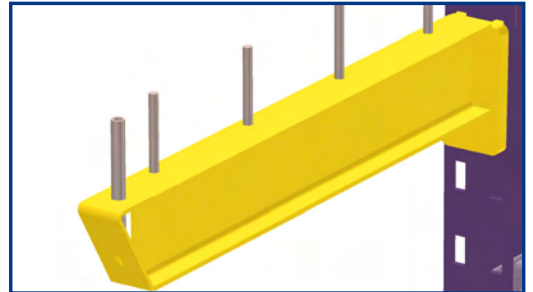
All cantilever racks have a tire protection. The profiles` corners, therefore, are rounded.



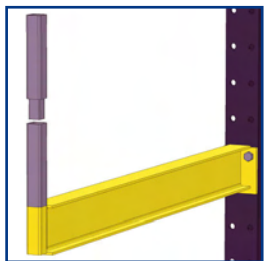
If desired, the arms are supplied with additional holes for subdividers and with plug-in dividers which can be divisible in order to adapt their longitude to the changing height of the stored goods.



Standard-deflector with plug-in roll-off



With removable dividers



Arms all have a tip of the arm, which is prepared for the reception of standard-deflectors.

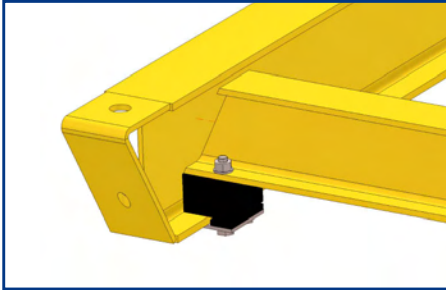


If desired, any other form of roll-off protectors can be supplied (e.g. round shape or welded flat steel)



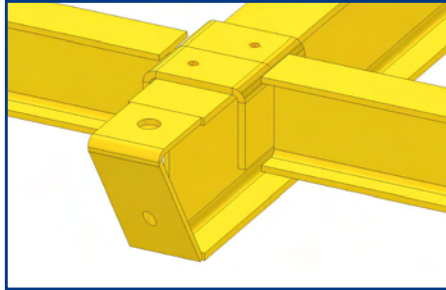
## Arm bridges and footbridges

provide continuous levels into which the bound product (such as on EURO pallets) can be stored at any position.

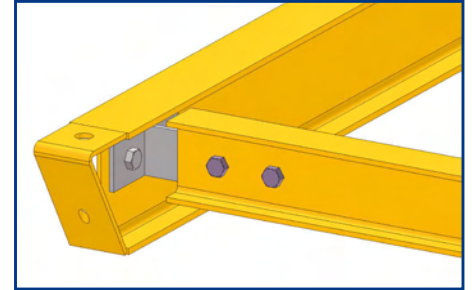


jammed bridges

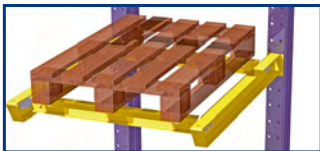
ensure a level flush with the arms



lying arms on

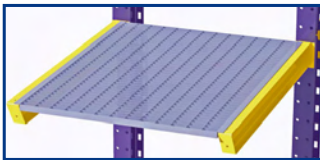


bridge screwed



- Gratings
- Chipboard
- cassettes

enable the storage of free goods.



Side- and back walls can be closed with corrugated sheet metal. Alternatively, sheet piles of wood can be used (to be installed also by the customer). For this in the stand inner side a u-profile is welded.



Upon request, the cantilever will be prepared for the roof structure to be assembled by the customer (e.g. purlin shoe for purlins or support for laminated header).



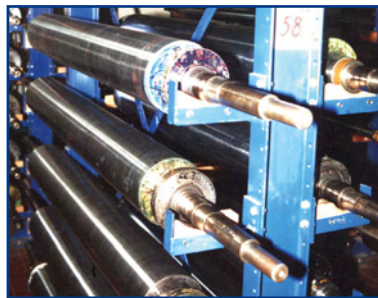
## Halls



## Industry-specific solutions



Sheet metal storage



Printing rollers



Auto Recycling

### KR1000+ Cantilever racks for light loads to ensure

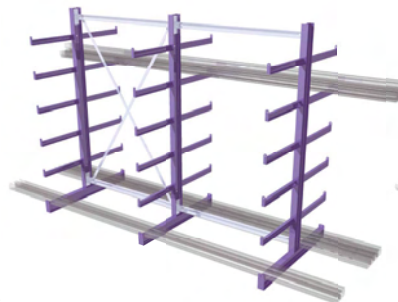
- an easy storage
- a simple and rapid construction

The shelves are manufactured

- as single- and double-sided shelves
- with equal or graded arm lengths
- with arms welded to the column
- in the measurements of height: 2000 mm, storage depth: 500 mm



KR1000+ 1



KR1000+ 2



KR1000+ 3



KR1000+ 4





**Goods and the way of storage determine the system of the pallet rack. There is not only one right system of pallet rack.**

**GROSSE** offers shelf frameworks and beams out of

- hot and
- cold rolled steel-profiles.

Hot-rolled frame profiles are recommended in the rough storage-handling such as storage business of the building trade. The profiles are characterized by their greater thickness and are very resistant and less sensitive to shocks from the forklift truck.

Cold rolled frame profiles are the classic, worldwide employed frame profiles for normal warehouse operations.

Both frame profiles have an adjustment grid of 50 mm.

This allows fine tuning of the height requirements and saves storage space. For non-flat surfaces vertical adjustment is often possible only through this grid





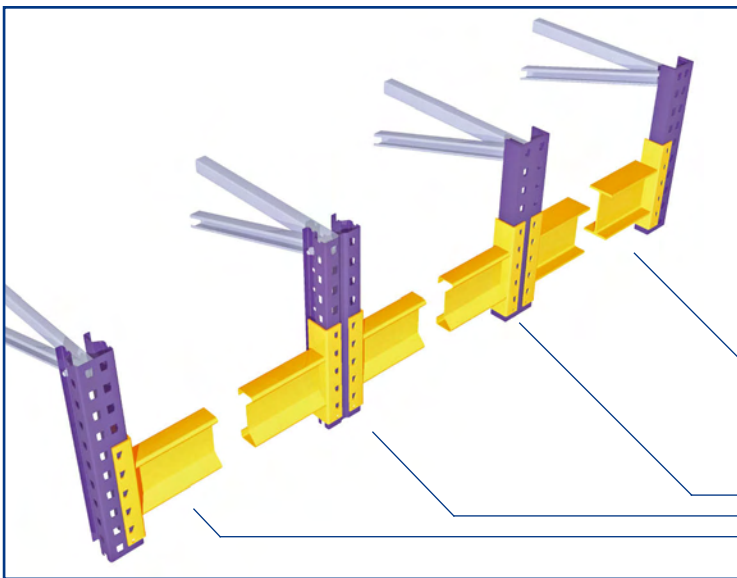


12 tonnes and still no limit.

The advantages and disadvantages concerning cold and hot rolled profile are also valid for the beams. Suspension brackets are equipped with five hooks. This means a very strong bond to the frame and thus high levels of shelf and field loads.

The suspension bracket for the frame profiles fit to the

- hot-rolled U 120, U 100 and U 80 as well as to the
- cold-rolled shelf frame-profiles K 100 and K 80.



With one suspension bracket all frame-profiles are covered.

A change between the different frame profiles is possible at any time.

**GROSSE** offer a wide range of accessories for pallet racking.

## Collision



L-Form



U-form

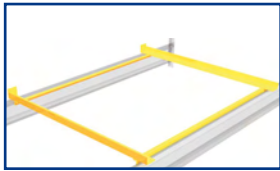


Side protection

Also out of hot-rolled profiles for especially heavy warehouse operations.



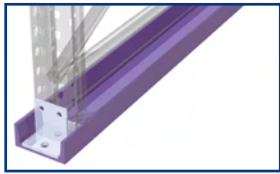
# Pallet Rack



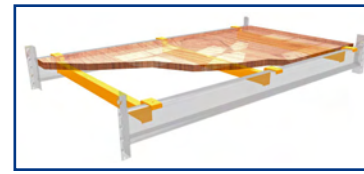
**Support for  
Grid boxes**



**End stop**



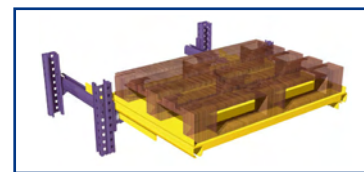
**Load distributor**



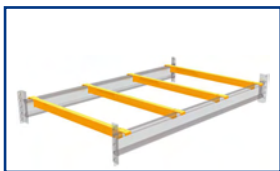
**Joist**  
(for flush insertion  
of floors)



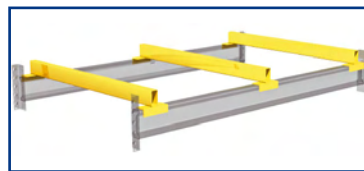
**Pallet Support  
Barrel cradle**



**Pull-out shelves**



**Bars**



**Forklift bridges**  
(up space between the  
support & stored goods  
for the forklift tines)

**GROSSE** offers for every purpose an appropriate solution:



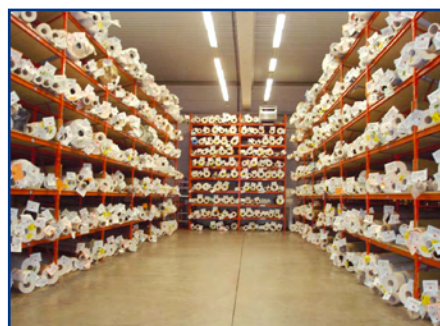
**Flow rack**



**Drive-in  
Drive-through  
racking**



**Pallet racks  
with integra-  
ted platform  
with lift**



**Pallet rack for  
carpet rolls**

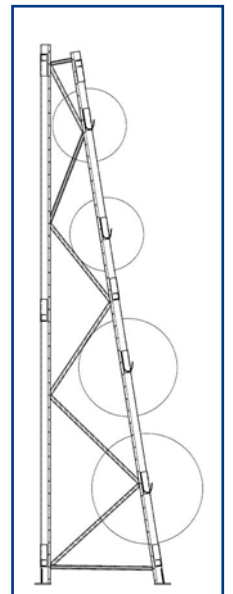
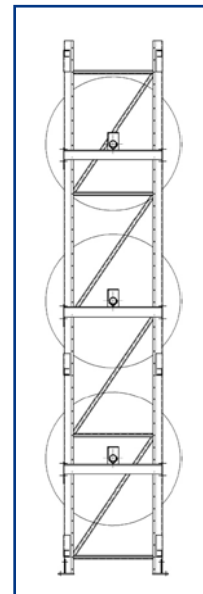
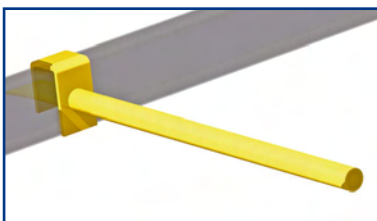
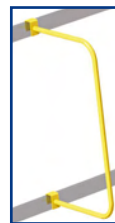


**GROSSE** supplies pallet racks with roof and walls as well as structural parts for storage silo.



**GROSSE** produces

- vertical Racks for unilateral and bilateral storage
- Cable Drum Racks





**Mezzanines enable the best utilization of space utilization by the ceiling height for more storage, manufacturing or office space**

**These are basically designed as rigid frame structures - thus eliminating troublesome cross ties.**

**Free access from all sides is guaranteed.**



The client determines the design of the mezzanine.

This includes:

- stairs in various designs
- with steps made of steel gratings, corrugated sheet metal or wood

Covering of

- shifting plates, also with white underside
- checker plate
- high-strength tension plate
- gratings
- multiplex board
  
- Railings of any form desired in strict observance of safety requirements

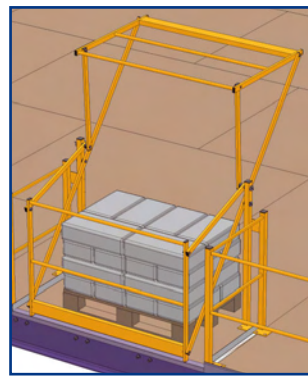
Transfer stations

- with pivoting railing
- sliding railing
- barrier chain

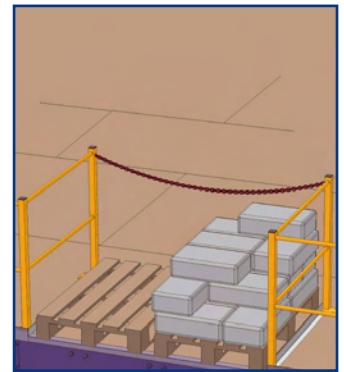
Elevators and other support structures for the connection of the different levels

The modular design allows quick assembly of the stage, which can also be performed during operation of the customer on request

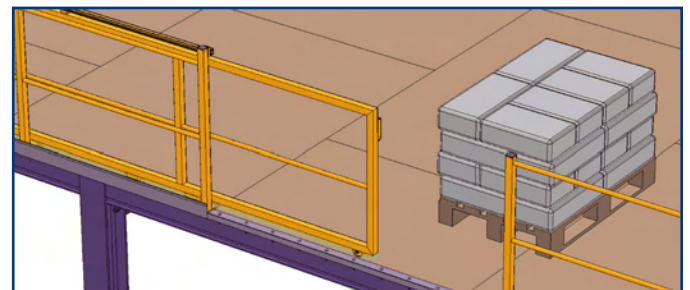
### Transfer stations



Pivoting railing



Barrier chain



Sliding railing



Selling platforms meet every architect`s wishes of design, materials and specifications



Selling platforms make an optimal use of high rooms possible and make burst for

- **Sale**
- **Exhibition:** Bulky exhibits are held out of the zones with a strong turnover and can still be presented, like bathrooms, garden furniture, etc., under the stage lighting department can be set up - pet shops in this area is ideal for aquariums.
- **Communication**

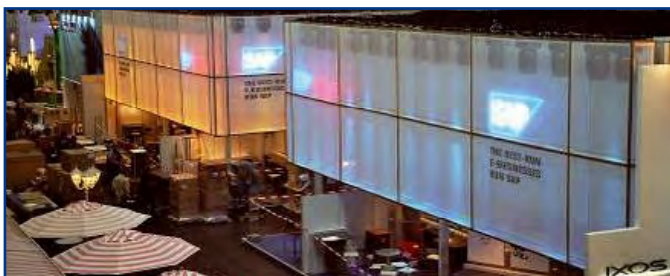




**GROSSE** handles the entire management of the steel structure.

**GROSSE** constructions

- work entirely towards customers` requirements
- specialize in complicated bespoke design,
- include innovative design and perfectly tailored solutions which included stairs, covered and exposed steel designs with different design standards.



**GROSSE** assists boothbuilders worldwide. Rented exhibition stands can be offered in individual cases.

**GROSSE** delivers the entire steel construction including static, design, manufacturing, assembly, disassembly, storage and modifications.



**GROSSE** is a well established and experienced manufacturing and service company which is proven in the qualified production of a quality product in short and punctual time.



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