## PALLET RACKING SYSTEMS

2020 2021

Extract from general catalog

**Chapter D** 

ssi-schaefer.com



## Pallet racking – a modular system with limitless versatility



SSI SCHAEFER's pallet racking systems are so handy as the Euro and Industrial pallets themselves. It doesn't matter what kind of load carrier – pallets, mesh boxes or any other – longitudinal beam racks for single- or multiple place storage ensure high mobility of ware and quick goods turnover. Multi-place longitudinal beam rack systems are used in diverse branches from wholesale or spare parts warehouses in the electronics, mechanics and automotive industries.

Single-place rack systems are ideal for storing goods with the same base carrier and varying heights. Drive-in rack systems have proven their value especially when storing a very large quantity of a limited range of articles.

Using adequate accessories, pallets and containers, even with varying sizes, this kind of rack system enables optimal storage.

Changed frame depth in 2021

for PR 350 and PR 600 from 1,050 mm to 1,100 mm











PR 350 longitudinal beam racking

page **D4** 



PR 600 longitudinal beam racking

page D8

Accessories for pallet racking

page **D12** 

Safety accessories

page **D16** 

Storage and storage space labeling

page D20

PR 600 front-to-back beam racking page D24

Drive-in and drive-trhough racking

page D26

Mobile racking

page D28

Pallet live storage racking

page D30

High rise racking

page D32



#### Overview of pallet racking systems

	Longitudinal beam rackings PR 350	Longitudinal beam rackings PR 600
Areas of use	Pallet storage of medium and high-volume goods with medium to high loads, e.g. in production areas and for on-line shelving	Pallet storage of medium and high-volume goods with medium to high loads, e.g. for logistics services or in distribution warehouses
Advantages	<ul> <li>Solid and robust construction</li> <li>Easy assembly with only a few components</li> </ul>	<ul> <li>Light and economical</li> <li>Sturdy due to special design</li> <li>Highest dimensional accuracy</li> </ul>
Design	▶ Welded frame construction with longitudinal beams, 3 types of upright profiles each with 3 frame depths, 10 frame heights, 2 beam profile types, 7 bay widths	▶ Bolted frame construction with longitudinal beams, 4 stand profiles each with 3 frame depths, 10 frame heights, 2 beam types, 7 bay width
Beam connection	▶ Bolt-free system	▶ Bolt-free system
System hole pattern	▶ 50 : 50 mm	▶ 50 : 50 mm
Upright profile widths	▶ 70, 80, 100 mm	▶ 75, 90, 100, 120 mm
Frame load capacity	▶ Up to 12,500 kg	▶ Up to 30,000 kg
Beam load capacity	▶ Up to 4,500 kg per pair	▶ Up to 4,500 kg per pair
Frame surface	▶ Painted RAL 7037, Dust Gray	▶ Galvanized
Beam surface	▶ Painted RAL 5010, Gentian Blue	▶ Painted RAL 5010, Gentian Blue
	A WINGS	STATE OF THE STATE



from pages

D4





#### Safety equipment for racks according to German regulation DG-UV 108-007

#### 1.1 Row end frame height increase

by at least 500 mm above the top rack height

#### 1.2 Passage overhead protection

These must be covered by chipboard, grating or similar. Clear passage height must be at least minimum 2,000 mm

#### 1.3 Safety distance between load carriers

Safety distance between load carriers lower than 100 mm? Back stops will be necessary inside double-sided racks

#### 1.4 End Frames

Corner protectors must be installed at all free-standing end frames. This also applies to passages

#### 1.5 Single-sided rack rows

If one side of a free-standing single-row rack is not used for loading or unloading, this side must be secured, preventing ware units from falling out. For example using nets, solid or mesh back panels

#### 1.6 Transposed storage

If the skids or feet of load carriers are parallel to beams, or not directly supported by beams, they must be secured by front-to-back supports, chipboards, mesh grates or similar devices

#### 1.7 Load signs

These must be provided for all rack installations



#### Technical regulations for the pallet racking

#### 2.1 Rack rows

A rack row must consist of at least 3 rack bays

#### 2.2 Beam levels

There must be at least 2 beam levels per rack bay

#### 2.3 Compartment heights

The compartment heights must not differ by more than 200 mm. The maximum compartment height is 2,500 mm

#### 2.4 Concrete quality of the hall floor

Minimum concrete quality of the hall floor: C20/25 as per EN 1992. Concrete thickness 200 mm



Information regarding inspection requirements

for rack systems

Chapter J, page J1



#### PR 350 pallet racking

Longitudinal beam racks can be used universally for all tasks in the ware-house. Using adequate accessories, pallets and containers, even with varying sizes, this kind of rack system enables optimal storage.

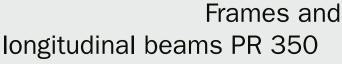
The PR 350 longitudinal beam rack is the development of the robust and solid rack technology and represents the continuity at SSI SCHAEFER. This modular storage system has been in use and thoroughly proven its qualities for more than 15 years.

The compatibility to other systems and the high range of accessories allow the continuous expansion of existing equipment and rack solutions.







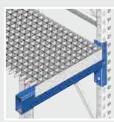


▶ High load capacity Frame load capacity of up to 12,500 kg (for min. 2 beam pairs INP 100 per rack bay and 5 rack bays per rack row), beam load capacity up to 4,500 kg per pair ► Sturdy due to special design **High-quality materials** System hole pattern with adjustment spacing 50:50 mm Support widths 70, 80, 100 mm Easy assembly Front-to-back with only a few components supports Welded Page **D14** frame construction Solid base Robust design with a material thicknesses up to 4 mm Mesh back panels Page **D18** Fork spacer **Frame** Page **D6** Fork spacers Page **D14** Front-to-back support from the

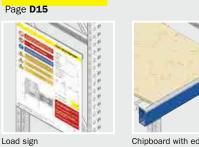
angled profile Page **D14** 

Steel panels on INP beam profile Page **D15** 

Load sign Page **D19** 



Mesh panels, attached



Mesh panels on

beam profile INP

Chipboards attached

Corner protector

Page **D16** 

Longitudinal

beams

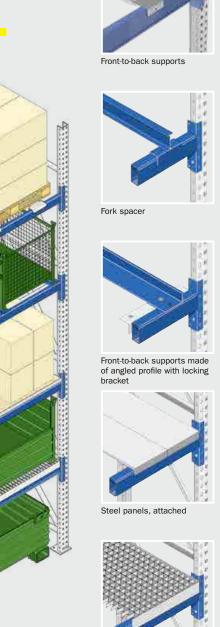
Page **D7** 

Corner protector

Page **D16** 

Chipboard with edge protection, attached

D5



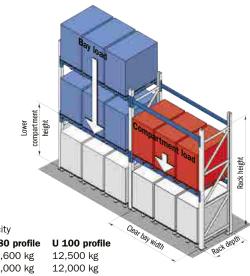
#### Pallet racking systems

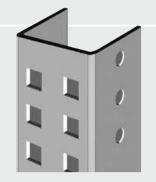
#### PR 350 frame

#### Frame load capacity

The permissible load capacity of the frame depends on the compartment height and the planned beam profile. The specified values apply for racks with at least 2 pairs of longitudinal beams/rack bays, rows with at least 5 rack bays and INP 100 beam profiles. The values vary depending on the beam profile.

If you have any questions please contact our technical consultants.





Compartment height Frame load capacity U 70 profile U 80 profile 1,000 mm 5,500 kg 10,600 kg 1,250 mm 5,200 kg 10,000 kg 4,600 kg 4,000 kg 1,500 mm 9,600 kg 11,800 kg 1,750 mm 9,300 kg 11,600 kg 2,000 mm 3,650 kg 8,000 kg 10,000 kg 7,200 kg 2,250 mm 3,300 kg 9,000 kg 6,000 kg 7,500 kg 2,500 mm 2,900 kg

3.300				0000	007.700	8.500 WWWWWWWW 8.500 WWWWWWWWWWWWWWWWWWWWWWWWWWWWWWWWWWW	0000	0.200 NNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNN	0001	11,800 MNNNNNN 12,100 NNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNN
Frame height (mm)	Frame depth (mm)	Order no.	Item	Other star Frame height (mm)	Frame depth (mm)	Order no.	Item	Frame height (mm)	Frame depth (mm)	Order no
2,500 3,000 3,600	850 850 850	126030 126090 126150	RN 70251 RN 70301 RN 70361	2,500 3,000 3,600	1,050 1,050 1,050	126390 126450 126510	RN 70252 RN 70302 RN 70362	2,500 3,000 3,600	1,250 1,250 1,250	126750 126810 126870
4,100 4,700 5,200	850 850 850	126210 126270 126330	RN 70411 RN 70471 RN 70521	4,100 4,700 5,200	1,050 1,050 1,050	126570 126630 126690	RN 70412 RN 70472 RN 70522	4,100 4,700 5,200	1,250 1,250 1,250	126930 126990 127050
2,500 3,000 3,600 4,100 4,700 5,200	850 850 850 850 850	126040 126100 126160 126220 126280	RN 80251 RN 80301 RN 80361 RN 80411 RN 80471	2,500 3,000 3,600 4,100 4,700 5,200	1,050 1,050 1,050 1,050 1,050	126400 126460 126520 126580 126640	RN 80252 RN 80302 RN 80362 RN 80412 RN 80472	2,500 3,000 3,600 4,100 4,700 5,200	1,250 1,250 1,250 1,250 1,250 1,250	126760 126820 126880 126940 127000
5,800 6,300 6,900 7,400	850 850 850 850	127120 127180 127240 127300	RN 80581 RN 80631 RN 80691 RN 80741	5,800 5,800 6,300 6,900 7,400	1,050 1,050 1,050 1,050	127480 127540 127600 127660	RN 80582 RN 80632 RN 80692 RN 80742	5,800 6,300 6,900 7,400	1,250 1,250 1,250 1,250 1,250	127840 127900 127960 128020
3,600 4,100 4,700 5,200 5,800 6,300	850 850 850 850 850 850	126170 126230 126290 126350 127130 127190	RN 10361 RN 10411 RN 10471 RN 10521 RN 10581 RN 10631	3,600 4,100 4,700 5,200 5,800 6,300	1,050 1,050 1,050 1,050 1,050 1,050	126530 126590 126650 126710 127490 127550	RN 10362 RN 10412 RN 10472 RN 10522 RN 10582 RN 10632 RN 10692	3,600 4,100 4,700 5,200 5,800 6,300 6,900	1,250 1,250 1,250 1,250 1,250 1,250 1,250	126890 126950 127010 127070 127850 127910
	Frame height (mm)  ofile  2,500 3,000 3,600 4,100 4,700 5,200  ofile  2,500 3,000 3,600 4,100 4,700 5,200 5,800 6,900 7,400  rofile  3,600 4,100 4,700 5,200 5,800 6,900 7,400	Frame height (mm) (mm)  ofile  2,500 850 3,000 850 4,100 850 4,700 850 5,200 850 4,100 850 4,700 850 5,200 850 6,300 850 4,100 850 6,300 850 6,300 850 6,300 850 7,400 850 7,400 850 7,400 850 7,400 850 7,400 850 7,400 850 5,200 850 5,800 850 6,900 850 7,400 850 5,200 850 5,800 850 6,900 850 7,400 850 5,200 850 5,800 850 6,900 850 7,400 850 5,200 850 5,800 850 6,900 850 7,400 850 7,400 850 6,900 850 7,400 850 6,900 850 7,400 850 6,900 850 7,400 850 6,900 850 7,400 850 6,900 850 7,400 850 6,900 850 6,900 850 7,400 850 6,900 850 6,900 850 6,900 850 6,900 850 6,900 850 6,900 850 6,900 850 6,900 850 6,900 850 6,900 850 6,900 850 6,900 850 6,900 850 6,900 850 6,900 850 6,900 850 6,900 850	Frame height (mm) (mm)  ofile  2,500 850 126090 3,600 850 126150 4,100 850 126270 5,200 850 126330  ofile  2,500 850 126040 3,000 850 126160 4,700 850 126200 4,700 850 126200 4,700 850 126300  ofile  2,500 850 126300  ofile  2,500 850 126300  ofile  3,600 850 126100 3,600 850 126100 4,700 850 126200 4,700 850 126300  ofile  3,600 850 127120 6,300 850 127120 6,300 850 127120 6,300 850 127120 6,300 850 127120 6,300 850 127120 6,300 850 127120 6,300 850 127120 6,300 850 127120 6,300 850 127120 6,300 850 127240 7,400 850 126230 4,700 850 126230 4,700 850 126290 5,200 850 126350 5,800 850 127130	Frame height depth (mm) (mm) (mm) (mm) (mm) (mm) (mm) (mm	Frame height (mm)	Frame height depth (mm)	Frame height (mm) (mm) (mm) (mm) (mm) (mm) (mm) (mm	Frame height depth (mm) (mm) (mm) (mm) (mm) (mm) (mm) (mm	Frame height (mm) (mm)	Frame Height (mm) Cotter standard heights    Frame Gorder no.   Item   Frame height (mm) (mm)   Item   Frame height (mm) (mm) (mm)   Item   Item   Frame height (mm) (mm) (mm)   Item   Item

Order no. = on stock

Longitudinal

beams





#### Support profiles

made from thick-walled U-profile. Welded together with horizontal and diagonal braces to create a stable frame.

System hole pattern 50 : 50 mm steps. Solid floor plates safely transfer the loads to the floor.

#### Longitudinal beams

with welded 5-hook rear lips. These guarantee an interlocking connection with the rack supports.

Adjustable using the system hole pattern 50:50 mm.

2 retaining pins (included in the scope of delivery) per section are required to prevent unintentional removal.

The load specifications apply for uniformly distributed loads.

The order numbers apply for one beam.

#### Longitudinal beam rack system dimensions Storage in depth direction

Pallet dimensions	Insertion depth	Rack depth
800 x 1,200 mm	1,200 mm	1,050 mm
1,000 x 1,200 mm	1,200 mm	1,050 mm
1,200 x 1,200 mm	1,200 mm	1,050 mm

#### Storage in transverse direction

 Pallet dimensions
 Insertion depth
 Rack depth

 800 x 1,200 mm
 800 mm
 850 mm

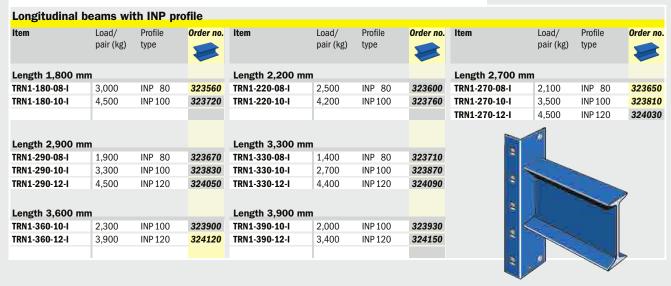
 1,000 x 1,200 mm
 1,000 mm
 1,050 mm





PR 350 accessories

from page **D14** 



tem	Load/	Profile	Order no.	Item	Load/	Profile	Order no.	Item	Load/	
.cm	pair (kg)	type	Order no.	Itom	pair (kg)	type	order no.	Tom	pair (kg)	t
ength 1,800 mn	1			Length 2,200 mm	l			Length 2,700 mm	1	
RN1-180-085-30 CE	3,200	CE 80	324220	TRN1-220-085-30 CE	2,500	CE 80	324230	TRN1-270-085-30 CE	1,700	С
RN1-180-105-30 CE	4,200	CE 100	on req.	TRN1-220-105-30 CE	3,500	CE 100	on req.*	TRN1-270-105-30 CE	2,600	С
RN1-180-115-30 CE	4,500	CE 110	324300	TRN1-220-115-30 CE	3,900	CE 110	324310	TRN1-270-115-30 CE	3,000	C
								TRN1-270-125-30 CE	3,600	CI
								TRN1-270-145-30 CE	4,300	CE
ength 2,900 mn	1			Length 3,300 mm						
ength 2,900 mn RN1-290-085-30 CE		CE 80	on req.*	TRN1-330-115-30 CE		CE 110	324340		W	
	1,500	CE 80 CE 100	on req.*	- '	2,200	CE 110 CE 120	324340 on req.*		W	
RN1-290-085-30 CE	1,500 2,300			TRN1-330-115-30 CE	2,200 2,600					
RN1-290-085-30 CE RN1-290-105-30 CE	1,500 2,300 2,700	CE 100	on req.*	TRN1-330-115-30 CE TRN1-330-125-30 CE	2,200 2,600	CE 120	on req.*	n 1		
RN1-290-085-30 CE RN1-290-105-30 CE RN1-290-115-30 CE	1,500 2,300 2,700 3,200	CE 100 CE 110	on req.* 324330	TRN1-330-115-30 CE TRN1-330-125-30 CE	2,200 2,600	CE 120	on req.*	n 11		
RN1-290-085-30 CE RN1-290-105-30 CE RN1-290-115-30 CE RN1-290-125-30 CE	1,500 2,300 2,700 3,200	CE 100 CE 110 CE 120	on req.* 324330 on req.*	TRN1-330-115-30 CE TRN1-330-125-30 CE	2,200 2,600	CE 120	on req.*	n n n		
RN1-290-085-30 CE RN1-290-105-30 CE RN1-290-115-30 CE RN1-290-125-30 CE	1,500 2,300 2,700 3,200 3,800	CE 100 CE 110 CE 120	on req.* 324330 on req.*	TRN1-330-115-30 CE TRN1-330-125-30 CE	2,200 2,600 3,100	CE 120	on req.*	n m m		
RN1-290-085-30 CE RN1-290-105-30 CE RN1-290-115-30 CE RN1-290-125-30 CE RN1-290-145-30 CE	1,500 2,300 2,700 3,200 3,800	CE 100 CE 110 CE 120	on req.* 324330 on req.*	TRN1-330-115-30 CE TRN1-330-125-30 CE TRN1-330-145-30 CE	2,200 2,600 3,100	CE 120	on req.*	n a n a		
RN1-290-085-30 CE RN1-290-105-30 CE RN1-290-115-30 CE RN1-290-125-30 CE RN1-290-145-30 CE ength 3,600 mn	1,500 2,300 2,700 3,200 3,800	CE 100 CE 110 CE 120 CE 140	on req.* 324330 on req.* 312870	TRN1-330-115-30 CE TRN1-330-125-30 CE TRN1-330-145-30 CE Length 3,900 mm	2,200 2,600 3,100	CE 120 CE 140	on req.* 312910	n n n n		

<sup>\*</sup> Minimum order quantity on request.

## PR 600 – the modern pallet racking system

The PR 600 rack system is characterized by its diverse, versatile configuration options. This enables the implementation of all designs including longitudinal beams, front-to-back beams and drive-in racking systems for maximum storage capacity with a minimum volume.

One advantage that frequently does not come into play until later is the

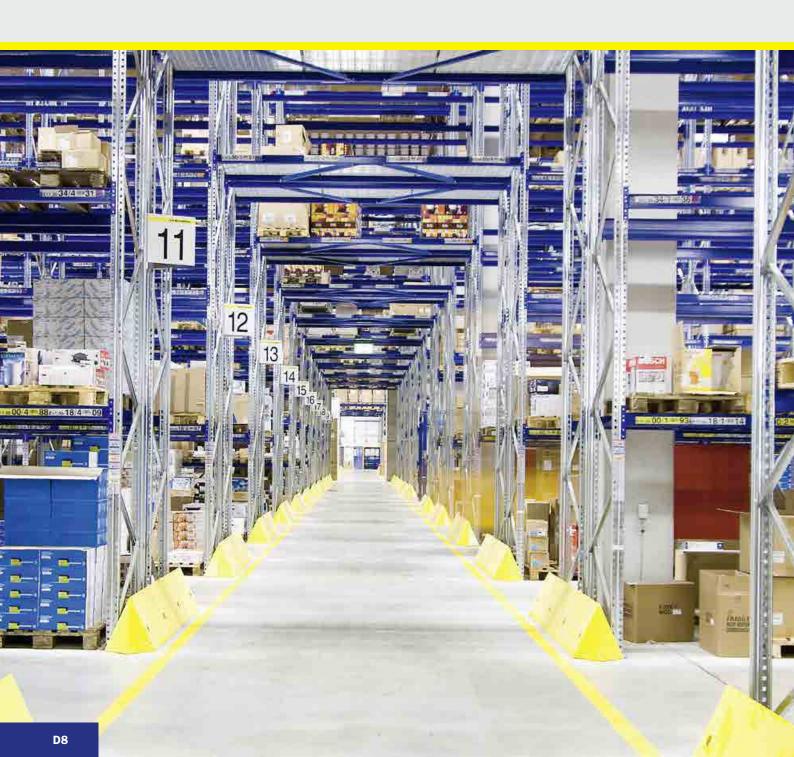
ability to adapt the system to changing circumstances. The rack frames are bolted together and also designed for the highest loads.

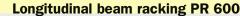
This is a modern pallet racking system – a versatile stacking system for individual solutions.

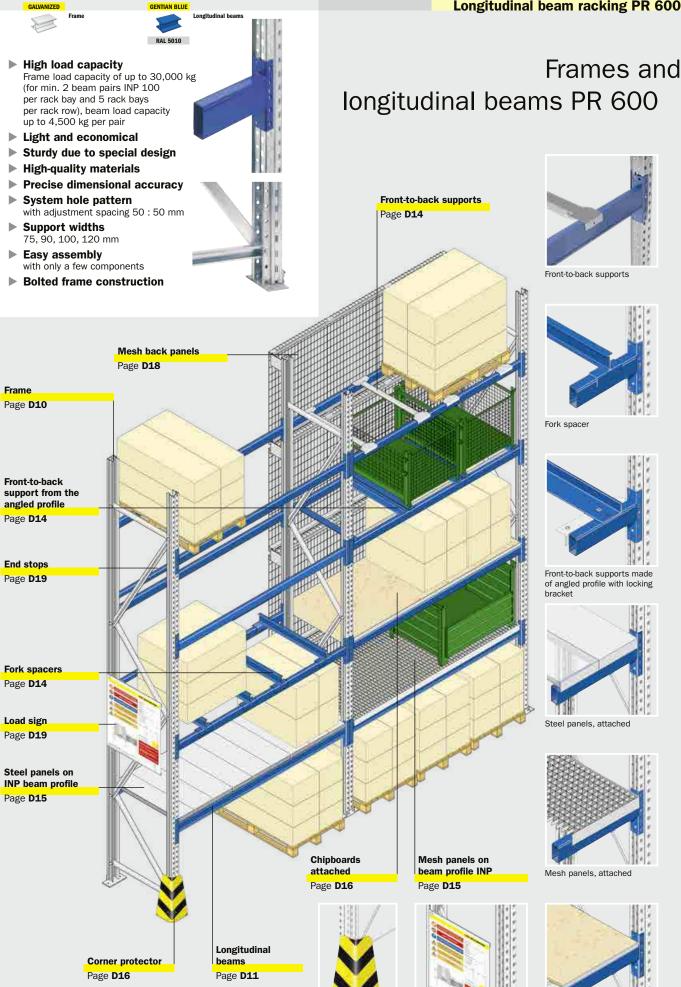
#### Tested quality

PR 600 longitudinal beam racks have the RAL-RG 614/2 seal of quality. Compliance with the criteria is checked twice per year by an independent authority. This guarantees that both the material and the production fulfill the high quality requirements.









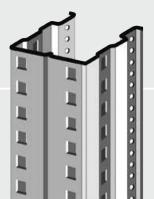
Corner protector

Load sign

On-line shelving / KDR shelving

Chipboard with edge protection, attached

#### PR 600 frame

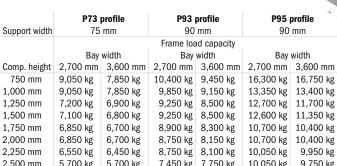


#### Frame load capacity

The permissible bay load capacity of the frame depends on the compartment height and the the planned beam profile. The specified values apply for racks with at least 2 pairs of longitudinal beams/rack bay, rows with at least 5 rack bays and CE 110 for bays width 2,700 mm along with CE 140 for bay with 3,600 mm). The values vary depending on the beam profile.

Compartment heights exceeding 2,500 mm require a separate static calculation.

If you have any questions please contact our technical consultants.



Lower compartment height

006'6

## 2,250 mm | 6,550 kg | 8,750 kg | 8,100 kg | 10,050 kg | 9,950 kg | 9,750 kg | 7,450 kg | 7,750 kg | 10,050 kg | 9,750 kg | 9,750 kg | 9,750 kg | 10,050 kg | 9,750 kg | 9,750 kg | 10,050 kg | 10,050 kg | 9,750 kg | 10,050 kg | 10,050 kg | 9,750 kg | 10,050 kg | 10,050

6,900 7,100 7,400

Other standard heights

#### P 73 profile

Item	Frame	Order no.	Item	Frame	Order no.	Item	Frame	Order no.
	height (mm)	1		height (mm)	1		height (mm)	5
Frame depth 850	) mm		Frame depth 1,05	50 mm		Frame depth 1,25	60 mm	1
RV1-773-0250-085	2,500	307280	RV1-773-0250-105	2,500	307520	RV1-773-0250-125	2,500	307760
RV1-773-0300-085	3,000	307290	RV1-773-0300-105	3,000	307530	RV1-773-0300-125	3,000	307770
RV1-773-0360-085	3,600	307300	RV1-773-0360-105	3,600	307540	RV1-773-0360-125	3,600	307780
RV1-773-0410-085	4,100	307310	RV1-773-0410-105	4,100	307550	RV1-773-0410-125	4,100	307790
RV1-773-0470-085	4,700	307320	RV1-773-0470-105	4,700	307560	RV1-773-0470-125	4,700	307800
RV1-773-0520-085	5,200	307330	RV1-773-0520-105	5,200	307570	RV1-773-0520-125	5,200	307810
P 93 profile								
RV1-973-0250-085	2,500	307340	RV1-973-0250-105	2,500	307580	RV1-973-0250-125	2,500	307820
RV1-973-0300-085	3,000	307350	RV1-973-0300-105	3,000	307590	RV1-973-0300-125	3,000	307830
RV1-973-0360-085	3,600	307360	RV1-973-0360-105	3,600	307600	RV1-973-0360-125	3,600	307840
RV1-973-0410-085	4,100	307370	RV1-973-0410-105	4,100	307610	RV1-973-0410-125	4,100	307850
RV1-973-0470-085	4,700	307380	RV1-973-0470-105	4,700	307620	RV1-973-0470-125	4,700	307860
RV1-973-0520-085	5,200	307390	RV1-973-0520-105	5,200	307630	RV1-973-0520-125	5,200	307870
RV1-973-0580-085	5,800	307400	RV1-973-0580-105	5,800	307640	RV1-973-0580-125	5,800	307880
RV1-973-0630-085	6,300	307410	RV1-973-0630-105	6,300	307650	RV1-973-0630-125	6,300	307890
RV1-973-0690-085	6,900	307420	RV1-973-0690-105	6,900	307660	RV1-973-0690-125	6,900	307900
RV1-973-0740-085	7,400	307430	RV1-973-0740-105	7,400	307670	RV1-973-0740-125	7,400	307910
P 95 profile								
RV1-975-0360-085	3,600	307440	RV1-975-0360-105	3,600	307680	RV1-975-0360-125	3,600	307920
RV1-975-0410-085	4,100	307450	RV1-975-0410-105	4,100	307690	RV1-975-0410-125	4,100	307930
RV1-975-0470-085	4,700	307460	RV1-975-0470-105	4,700	307700	RV1-975-0470-125	4,700	307940
RV1-975-0520-085	5,200	307470	RV1-975-0520-105	5,200	307710	RV1-975-0520-125	5,200	307950
RV1-975-0580-085	5,800	307480	RV1-975-0580-105	5,800	307720	RV1-975-0580-125	5,800	307960
RV1-975-0630-085	6,300	307490	RV1-975-0630-105	6,300	307730	RV1-975-0630-125	6,300	307970
RV1-975-0690-085	6,900	307500	RV1-975-0690-105	6,900	307740	RV1-975-0690-125	6,900	307980
RV1-975-0740-085	7,400	307510	RV1-975-0740-105	7,400	307750	RV1-975-0740-125	7,400	307990

Order no. = on stock

#### **Support profiles**

Made of cold rolled, high-strength steel. Their special shape makes the supports highly rigid. These are bolted together with horizontal and diagonal braces to create a sturdy frame. Delivered unassembled.

System hole pattern 50:50 mm steps.

Solid floor plates safely transfer the loads to the floor.

#### Longitudinal beams

with welded 5-hook rear lips. These guarantee an interlocking connection with the rack supports.

Adjustable using the system hole pattern 50:50 mm.

2 retaining pins (included in the scope of delivery) per section are required to prevent unintentional removal.

The load specifications apply for uniformly distributed loads.

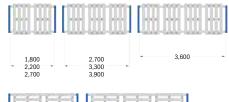
The order numbers apply for one beam.

#### ► Longitudinal beam rack system dimensions Storage in depth direction

Insertion depth Rack depth Pallet dimensions 1,200 mm 1,050 mm 800 x 1,200 mm 1,050 mm 1,000 x 1,200 mm 1,200 mm 1,050 mm 1,200 x 1,200 mm 1,200 mm

#### Storage in transverse direction

Insertion depth Rack depth Pallet dimensions 800 x 1,200 mm 800 mm 850 mm 1.000 x 1.200 mm 1.000 mm 1.050 mm





#### Compatible with WR 600 longspan racking systems

Chapter C, from page C1

#### Longitudinal beams with INP profile Profile Load/ Order no. Item Profile Order no. Item Profile Item Load/ Load/ Order no pair (kg) pair (kg) pair (kg) Length 1,800 mm Length 2,200 mm Length 2,700 mm INP 80 INP 80 TRV1-180-08-I 3.000 321500 TRV1-220-08-I 2.500 INP 80 321540 TRV1-270-08-I 2.100 321590 TRV1-180-10-I INP 100 321660 TRV1-220-10-I **INP 100** 321700 TRV1-270-10-I 3,500 **INP 100** 321750 4,500 4,200 TRV1-270-12-I 4,500 **INP 120** 321970 Length 2,900 mm Length 3,300 mm TRV1-290-08-I 1,900 321610 TRV1-330-08-I 1,400 INP 80 321650 INP 80 321770 321810 TRV1-290-10-I 3,300 **INP 100** TRV1-330-10-I 2,700 INP 100 TRV1-290-12-I 4,500 **INP 120** 321990 TRV1-330-12-I 4,400 INP 120 322030 -100 Length 3,600 mm Length 3,900 mm 2,300 2,000 TRV1-360-10-I **INP 100** 321840 TRV1-390-10-I **INP 100** 321870 TRV1-360-12-I 3,900 **INP 120** 322060 TRV1-390-12-I 3,400 **INP 120** 322090

Longitudinal be	eams wi	th CE pro	file								
Item	Load/ pair (kg)	Profile type	Order no.	Item	Load/ pair (kg)	Profile type	Order no.	Item	Load/ pair (kg)	Profile type	Order no.
Length 1,800 mm	1			Length 2,200 mm	ı			Length 2,700 mm			
TRV1-180-085-30 CE	3,200	CE 80	322160	TRV1-220-085-30 CE	2,500	CE 80	322200	TRV1-270-085-30 CE	1,700	CE 80	322250
TRV1-180-105-30 CE	4,200	CE 100	on req.*	TRV1-220-105-30 CE	3,500	CE 100	on req.*	TRV1-270-105-30 CE	2,600	CE 100	on req.*
TRV1-180-115-30 CE	4,500	CE 110	322720	TRV1-220-115-30 CE	3,900	CE 110	322760	TRV1-270-115-30 CE	3,000	CE 110	322810
								TRV1-270-125-30 CE	3,600	CE 120	on req.*
								TRV1-270-145-30 CE	4,300	CE 140	323370
Length 2,900 mm	1			Length 3,300 mm							
TRV1-290-085-30 CE	1,500	CE 80	on req.*	TRV1-330-115-30 CE	2,200	CE 110	322870	*			
TRV1-290-105-30 CE	2,300	CE 100	on req.*	TRV1-330-125-30 CE	2,600	CE 120	on req.*	\$			
TRV1-290-115-30 CE	2,700	CE 110	322830	TRV1-330-145-30 CE	3,100	CE 140	323430				
TRV1-290-125-30 CE	3,200	CE 120	on req.*								
TRV1-290-145-30 CE	3,800	CE 140	323390							1	
Length 3,600 mm	1			Length 3,900 mm	1			l. Per			
TRV1-360-115-30 CE	1,900	CE 110	322900	TRV1-390-145-30 CE	2,300	CE 140	323490			200	
TRV1-360-125-30 CE	2,300	CE 120	on req.*								
TRV1-360-145-30 CE	2,700	CE 140	323460					<b>8</b> 3			
* Minimum order qua	intity on rea	uest.									

#### Longitudinal beams

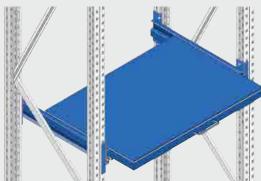
On-line shelving / KDR shelving

Semi-automated solutions

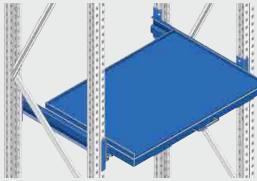


#### PR 600 accessories

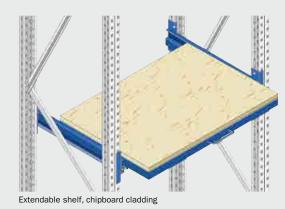




Extendable shelf, sheet metal cladding, smooth



Extendable shelf, sheet metal cladding, 3-sided rolling edge



#### Heavy duty extendable shelves

Precision construction made of welded steel profile with precise steel ball bearings. The guide rails are bolted to the frame and can be adjusted using the system hole pattern of 50:50 mm. A double lock secures the extendable shelf when it is pulled out and pushed in. Load capacity of up to 1,000 kg with an evenly distributed load.

Heavy duty	extendable	shelves, 67%	6 extendable
------------	------------	--------------	--------------

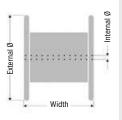
moury duc	y Oxtoliau	010 0110110	3, 01 /0 CAL	JIIGGOIG	
Item	Frame	Usable	Extension	Load	Order no.
	depth (mm)	depth (mm)	length (mm)	capacity (kg)	
Extendable	shelf, sheet	metal cladd	ing, smooth		
				lab 000	
	,		m, usable wid		
AB 08.091	850	800	530	1,000	143230
AB 12.091	1,250	1,200	830	1,000	143260
For racks with	th clear bay v	width 1,300	mm, usable v	vidth 1,200 i	mm.
AB 08.131	850	800	530	1,000	143290
AB 12.131	1,250	1,200	830	1,000	143320
Extendable	shelf. sheet	metal cladd	ing, 3-sided r	olling edge	
	•		m, usable wic		
AB 08.092	850	800	530	1.000	143240
AB 12.092	1.250	1.200	830	1.000	143270
	,			,	
For racks wit	th clear bay v	width 1,300	mm, usable v	vidth 1,200 i	mm.
AB 08.132	850	800	530	1,000	143300
AB 12.132	1,250	1,200	830	1,000	143330
Extendable	shelf, chipbo	oard cladding	g		
For racks with	th clear bay v	width 900 m	m, usable wic	Ith 800 mm.	
AB 08.093	850	800	530	1,000	143250
AB 12.093	1,250	1,200	830	1,000	143280
For racks wit	th clear hav y	width 1 300	mm, usable v	vidth 1 200 i	mm
AB 08.133	850	800	530	1.000	143310
				,	
AB 12.133	1,250	1,200	830	1,000	143340

For racks wi	th clear bay v	width 1,300	mm, usable v	vidth 1,200 i	mm.
AB 08.133	850	800	530	1,000	143310
AB 12.133	1,250	1,200	830	1,000	143340
Heavy dut	y extenda	ble shelve	s, <b>100</b> % ex	tendable	
Item	Frame	Usable	Extension	Load	Order n
	depth (mm)	depth (mm)	length (mm)	capacity (kg)	
Extendable	shelf, sheet	motal aladd	ing smooth		
	,		m, usable wid	th 200 mm	
AB 08.091 V	850	800	800	1,000	14380
AB 12.091 V	1.250	1.200	1.200	1,000	14386
AB 12.091 V	1,230	1,200	1,200	1,000	14300
For racks wi	th clear bay v	width 1,300	mm, usable v	vidth 1,200 i	mm.
AB 08.131 V	850	800	800	1,000	14383
AB 12.131 V	1,250	1,200	1,200	1,000	14389
Extendable	shelf, sheet	metal cladd	ing, 3-sided r	olling edge	
For racks wi	th clear bay	width 900 m	m, usable wid	dth 800 mm.	
AB 08.092 V	850	800	800	1,000	14381
AB 12.092 V	1,250	1,200	1,200	1,000	14387
			mm, usable v		
AB 08.132 V	850	800	800	1,000	143840
AB 12.132 V	1,250	1,200	1,200	1,000	14390
Extendable	shelf, chipbo	oard cladding	g		
For racks wi	th clear bay	width 900 m	m, usable wid	dth 800 mm.	
AB 08.093 V	850	800	800	1,000	14382
AB 12.093 V	1,250	1,200	1,200	1,000	14388
For racks wi	th clear bay v	width 1,300	mm, usable v	vidth 1,200 i	mm.
AB 08.133 V	850	800	800	1,000	143850
AB 12.133 V	1.250	1.200	1.200	1.000	143910

Order no. = on stock

#### ► Cable drum sizes as per DIN 46 391

Nominal size         External Ø (mm)         Internal Ø (mm)         Width (mm) width (mm)         Clear bay width (mm) capacity (kg)         Max. load-bea capacity (kg)           N 5         470         56         470         900         100	
N 5 470 56 470 900 100	ring
N 6 630 56 470 900 100	
N 7 710 80 550 900 250	
N 8 800 80 550 900 650	
N 9 900 80 710 1,100 800	
N 10 1,050 80 710 1,100 1,000	
N 12 1,250 80 930 1,300 1,500	

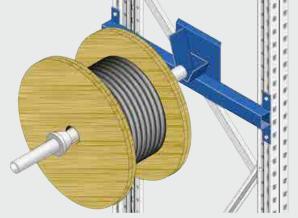


#### Accessories

#### Cable drum axles

Cable drum axles made of hollow profile for fitting the cable drum.

Item	Clear bay width (mm)	Design for	Cone type	for cable drums	Order no.
TRA KM 0905	900	Type KM	AK 33	N 5 - N 6	143410
TRA KM 0910		Type KM	AK 48	N 7 - N 8	143920
TRA KM 1105	1,100	Type KM	AK 33	N 5 - N 6	143930
TRA KM 1110		Type KM	AK 48	N 7 - N 8	143420
TRA KM 1115		Type KM	AK 60	N 9 - N 10	143430
TRA KM 1315	1,300	Type KM	AK 60	N 9 - N 12	143440



QT KM cable drum beam

#### Cable drum beams

Cable drum beams made of square hollow profile are bolted onto the rack supports. Adjustment 50:50 mm, shaft fitting with tray as a load-dependent brake and for low-noise unwinding.

Item	Frame depth (mm)	Туре	for cable drums	Order no.
QT KM 6208	850	with tray	N 5 - N 12	143370
OT KM 6210	1.050	with trav	N 5 - N 12	143390

#### Cones

With the adjusting screw for centering the cable drum on the shaft.

Item	for cable drums	Material	Order no.
AK 33	N 5 - N 6	Polyamide	143940
AK 48	N 7 - N 8	Polyamide	143350
AK 60	N 9 - N 12	Polyamide	143360

# Front-to-back support Horizontal braces

#### U 100 horizontal braces

With welded 5-hook rear lips guarantee an interlocking connection with the rack supports. Adjustment 50:50 mm steps.

4 retaining pins (included) per pair are required to prevent unintentional removal.

With holes for mounting the front-to-back supports.

Item	Length (mm)	Pallet/ container depth (mm)	Order no.
LVU 090	900	800	116930
LVU 110	1,100	1,000	116940
LVU 130	1.300	1.200	116950

#### Base shims

To compensate for uneven ground, galvanized.

Item	Thickness (mm)	Support profile	Order no.
for PR 350	pallet rackin	g systems	
AP 35.81	1	U 70	151000
AP 35.81	1	U 80	151000
AP 35.11	1	U 100	151020
for PR 600	pallet rackin	g systems	
AP 60.91	1	all	143150
AP 60.92	2	all	155010

#### Floor anchor

The frame needs to be anchored to ensure the stability of the pallet racking systems. M10 expansion anchors are used for a normal C20/25 concrete floor; M10 adhesive anchors are used for floors containing magnesium.

Item		Order no.
BA 10 SL	M 10 expansion anchor	67030
<b>BA 10 VA</b>	M 10 adhesive anchor	67390



#### **Insulation plates**

Insulation plates made of plastic are needed for each rack support in order to prevent corrosion on floors containing magnesium.

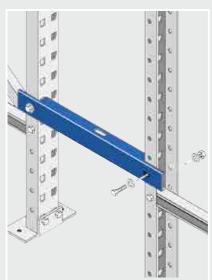
Item	Thickness (mm)	Support profile	Order no.	
for PR 350	pallet rackir	ıgs		
IP 35.81	1	U 70	151040	
IP 35.81	1	U 80	151040	
IP 35.11	1	U 100	151050	
for PR 600 pallet rackings				
IP 60.91	1	all	155020	

Appendix





### Accessories for PR 350 and PR 600



#### **Spacers**

Two single-row racks can be positioned one behind the other and then connected with spacers to form double-row racks. The length of the spacers is calculated from the difference between the rack depth and loading aids/loading unit plus 100 mm.

Item	Distance (mm)	Order no.
D 50 L	50	151060
D 100 L	100	151070
D 150 L	150	151080
D 200 L	200	151090
D 250 L	250	151100
D 300 L	300	151110
D 350 L	350	151120
D 400 L	400	151130
D 450 L	450	151140
D 500 L	500	151150



#### Fixing angle for front-to-back supports

Fitting options for front-to-back supports, either designed for euro pallets, industrial pallets or DIN-box mesh box pallets.

Item	Clear bay width (mm)	Order no.
		1
AW 18	1,800	155030
AW 22	2,200	155040
AW 27	2,700	155050
AW 29	2,900	155060
AW 33	3,300	155070
AW 36	3,600	155080
AW 39	3,900	155090

#### Front-to-back support made of angled profile for pallet and container storage

For the fitting loading aids in pallet racking systems. Loading aids for each pair of front-to-back supports are required for containers without a stable support surface on longitudinal beams. In the case of transverse storage of pallets and containers, one pair of front-to-back supports are required for each loading aid. Locking brackets are required for fastening and securing against sliding on the longitudinal beams (as fig. above).

#### Cross section L 80/40/6

Load capacity up to 1,000 kg

Without backstop				
Item	Frame depth (mm)	Pallet/ container depth (mm)	Order no.	
QA85	850	800	155100	
QA105	1,050	1,000	155120	
QA125-10	1,050	1,200	155260	
QA125	1,250	1,200	155140	

Item	Frame depth (mm)	Pallet/ container depth (mm)	Order no.
QA85A	850	800	155110
QA105A	1,050	1,000	155130
QA125-10A	1,050	1,200	155280
QA125A	1,250	1,200	155150

With 30 mm backstop

#### Cross section L 100/50/6

Load capacity up to 1,500 kg

Without backston

Without Da	cnstup		
Item	Frame depth (mm)	Pallet/ container depth (mm)	Order no.
QA855	850	800	155160
QA1055	1,050	1,000	155180
QA1255-10	1,050	1,200	155270
QA1255	1,250	1,200	155200

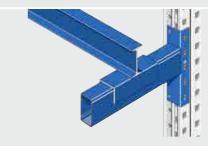
With 40 mm backstop				
Item	Frame depth (mm)	Pallet/ container depth (mm)	Order no.	
QA855A	850	800	155170	
QA1055A	1,050	1,000	155190	
QA1255-10A	1,050	1,200	155290	
0Δ1255Δ	1 250	1 200	155210	



#### Front-to-back supports

The front-to-back supports are placed between the beams. The load specifications apply for uniformly distributed loads. For point loads they are not suitable.

Item	Frame depth (mm)	Max. pallet weight with 2 front-to-back supports (kg)	Order no.
TA-C-085-10	850	1,000	6700196
TA-C-105-10	1,050	1,000	6700197



#### Fork spacers

For storing wooden pallets, sheet metal packages, boxes, containers or other large storage objects. Ground clearance for forklifts 100 mm, max. load per piece 2,000 kg for evenly distributed loads.

Item	for frame depth (mm)	Order no.
QU 851	850	155220
QU 1051	1,050	155230
QU 1251	1,250	155240

Order no. = on stock



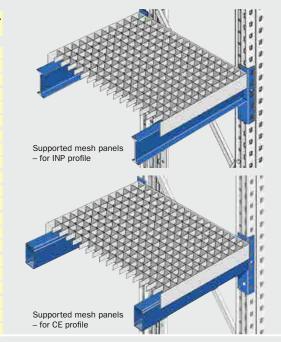
## Accessories for PR 350 and PR 600

#### Mesh panels

Placed on longitudinal beams and locked in place. Mesh size 33 x 33 mm. Two-piece for clear bay width 2,200 mm. The load specifications apply for evenly distributed loads. The variants listed are not suitable for point loads. Other versions available on request.

#### Supported mesh panels for INP and CE beam profiles

Supported mesn par	iicis iui iiti	and or bea	iii pioilies		
Item	Frame depth (mm)	Clear bay width (mm)	Support member height (mm)	Compartment load (kg)	Order no.
					4
FGA18-085-30-134X	850	1,800	30	1,600	156090
FGA18-105-30-134X	1,050	1,800	30	1,400	156160
FGA18-125-35-140X	1,250	1,800	35	1,500	156230
FGA22-085-30-134X	850	2,200	30	2,000	156100
FGA22-105-30-134X	1,050	2,200	30	1,700	156170
FGA22-125-35-140X	1,250	2,200	35	1,900	156240
FGA27-085-30-134X	850	2,700	30	2,500	156110
FGA27-105-30-134X	1,050	2,700	30	2,100	156180
FGA27-125-35-140X	1,250	2,700	35	2,300	156250
FGA29-085-30-134X	850	2,900	30	2,700	156120
FGA29-105-30-134X	1,050	2,900	30	2,300	156190
FGA29-125-35-140X	1,250	2,900	35	2,500	156260
FGA33-085-30-134X	850	3,300	30	3,000	156130
FGA33-105-30-134X	1,050	3,300	30	2,600	156200
FGA33-125-35-140X	1,250	3,300	35	2,900	156270
FGA36-085-30-134X	850	3,600	30	3,300	156140
FGA36-105-30-134X	1,050	3,600	30	2,800	156210
FGA36-125-35-140X	1,250	3,600	35	3,100	156280
FGA39-085-30-134X	850	3,900	30	3,500	156150
FGA39-105-30-134X	1,050	3,900	30	3,100	156220
FGA39-125-35-140X	1,250	3,900	35	3,400	156290



#### Sheet steel panels

C-shaped bevel. Locking in depth direction through short-side overlap of the beams. Individual or multiple covers can be used. The load specifications apply for evenly distributed loads.

Clear bay width (mm)	Panel width (mm)	Number of panels
1,800	300	6
2,200	300	6
	200	2
2,700	300	9
2,900	300	9
	200	1

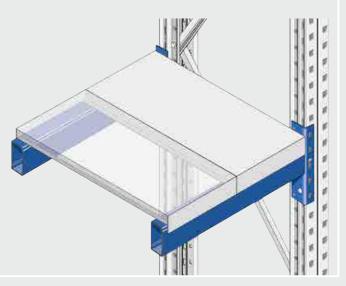
Clear bay width (mm)	Panei width (mm)	Number of panels
3,300	300	11
3,600	300	12
3,900	300	13

#### Panel width 200 mm

Item	for frame depth (mm)	Load (kg)	Order no.
FPA 20-070-40-40X	700	740	193140
FPA 20-085-40-40X	850	680	193150
FPA 20-105-40-40X	1,050	550	193160
FPA 20-125-40-40X	1,250	460	193170

#### Panel width 300 mm

Failer Width 300 III	!!!		
Item	for frame depth (mm)	Load (kg)	Order no.
			1
FPA 30-070-40-30X	700	270	193100
FPA 30-070-40-50X		730	193180
FPA 30-085-40-30X	850	340	193110
FPA 30-085-40-50X		700	193190
FPA 30-105-40-30X	1,050	200	193120
FPA 30-105-40-50X		630	193200
FPA 30-125-40-30X	1,250	190	193130
FPA 30-125-40-50X		500	193210



Modular shelving

> Longspan racking

Pallet racking

Cantilever racking

> Mezzanines / platforms

On-line shelving /

Semi-automated solutions

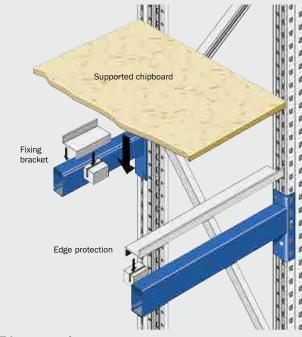
Logistics systems

Appendix

## Accessories for PR 350 and PR 600, safety accessories for pallet racking systems

#### Chipboard

Placed on the profile of the INP or CE longitudinal beams. Secured against moving with fixing brackets. Two-piece for clear bay widths exceeding 3,300 mm. The load specifications apply for evenly distributed loads. The variants listed are not suitable for point loads. Other versions available on request. Surface: untreated.



#### **Edge protection**

For 38 mm chipboard and INP/CE longitudinal beams, incl. spacers.

Item	Clear bay width (mm)	Order no.
		4
KN 1824	1,800	157140
KN 2224	2,200	157150
KN 2724	2,700	157160
KN 2924	2,900	157170
KN 3324	3,300	157180
KN 3624	3,600	157190
KN 3924	3,900	157200

#### Fixing bracket

For 38 mm chipboard and INP/CE longitudinal beams. 4 fixing brackets are required for the clear bay width 1,800 to 2,900 mm and 8 for the clear bay width 3,300 to 3,900 mm.

FSHB 24	Fixing bracket, incl. spacer block (plastic)	1 pc.	156910
---------	--	-------	--------

38 mm thick, nor	mal compress	sion for INP an	d CE profiles	
Item	Frame depth (mm)	Clear bay width (mm)	Comp. load (kg)	Order no
FSA 18-085-38-NX	850	1,800	1,300	306840
FSA 18-105-38-NX	1,050	1,800	950	306980
FSA 18-125-38-NX	1,250	1,800	600	307120
FSA 22-085-38-NX	850	2,200	1,600	306850
FSA 22-105-38-NX	1,050	2,200	1,100	306990
FSA 22-125-38-NX	1,250	2,200	750	307130
FSA 27-085-38-NX	850	2,700	2,000	306860
FSA 27-105-38-NX	1,050	2,700	1,400	307000
FSA 27-125-38-NX	1,250	2,700	900	307140
FSA 29-085-38-NX	850	2,900	2,200	306870
FSA 29-105-38-NX	1,050	2,900	1,500	307010
FSA 29-125-38-NX	1,250	2,900	1,000	307150
FSA 33-085-38-NX	850	3,300	2,500	306880
FSA 33-105-38-NX	1,050	3,300	1,700	307020
FSA 33-125-38-NX	1,250	3,300	1,100	307160
FSA 36-085-38-NX	850	3,600	2,700	306890
FSA 36-105-38-NX	1,050	3,600	1,900	307030
FSA 36-125-38-NX	1,250	3,600	1,200	307170
FSA 39-085-38-NX	850	3,900	2,900	306900
FSA 39-105-38-NX	1,050	3,900	2,000	307040
FSA 39-125-38-NX	1,250	3,900	1,300	307180
38 mm thick, high			•	
Item	Frame depth (mm)	Clear bay width (mm)	Comp. load (kg)	Order no
FSA 18-085-38-HX	850	1,800	2,100	306910
FSA 18-105-38-HX	1,050	1,800	1,500	307050
FSA 18-125-38-HX	1,250	1,800	1,000	307190

38 mm thick, highly compressed for INP and CE profiles							
Item	Frame depth (mm)	Clear bay width (mm)	Comp. load (kg)	Order no.			
FSA 18-085-38-HX	850	1,800	2,100	306910			
FSA 18-105-38-HX	1,050	1,800	1,500	307050			
FSA 18-125-38-HX	1,250	1,800	1,000	307190			
FSA 22-085-38-HX	850	2,200	2,600	306920			
FSA 22-105-38-HX	1,050	2,200	1,900	307060			
FSA 22-125-38-HX	1,250	2,200	1,300	307200			
FSA 27-085-38-HX	850	2,700	3,200	306930			
FSA 27-105-38-HX	1,050	2,700	2,300	307070			
FSA 27-125-38-HX	1,250	2,700	1,600	307210			
FSA 29-085-38-HX	850	2,900	3,500	306940			
FSA 29-105-38-HX	1,050	2,900	2,500	307080			
FSA 29-125-38-HX	1,250	2,900	1,700	307220			
FSA 33-085-38-HX	850	3,300	4,000	306950			
FSA 33-105-38-HX	1,050	3,300	2,800	307090			
FSA 33-125-38-HX	1,250	3,300	1,900	307230			
FSA 36-085-38-HX	850	3,600	4,000	306960			
FSA 36-105-38-HX	1,050	3,600	3,100	307100			
FSA 36-125-38-HX	1,250	3,600	2,100	307240			
FSA 39-085-38-HX	850	3,900	4,000	306970			
FSA 39-105-38-HX	1,050	3,900	3,300	307110			
FSA 39-125-38-HX	1,250	3,900	2,300	307250			

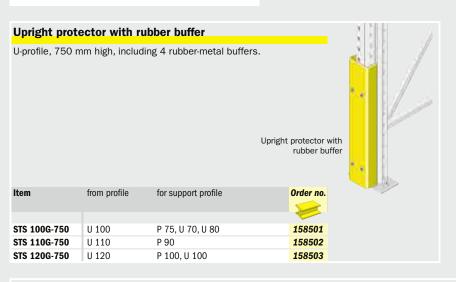




#### **Security regulations**

Fixed racks that are served by non-track-bound ground conveyors require adequate protection against damage to the rack frame on the corners and gangways

#### Safety accessories for pallet racking systems





For reinforcing the front rack supports and as a protection against damage, 750 mm high, including fixing kit.

for PR 350 system:				for PR 600 sys	stem:				
Item	for support width (mm)	Height (mm)	for support profile	Order no.	Item	for support width (mm)	Height (mm)	for support profile	Order no.
STS 70-3-400	70	400	U 70	158500	STS 75-6-400	75	400	P 75	158530
STS 70-3-750		750	U 70	158570	STS 75-6-750		750	P 75	158600
STS 80-3-400	80	400	U 80	158510	STS 90-6-400	90	400	P 90	158540
STS 80-3-750		750	U 80	158580	STS 90-6-750		750	P 90	158610
STS 100-3-400	100	400	U 100	158520	STS 100-6-400	100	400	P 100	158550
STS 100-3-750		750	U 100	158590	STS 100-6-750		750	P 100	158620
					STS 120-6-400	120	400	P 120	158560
					STS 120-6-750		750	P 120	158630

Order no.

151430

151440

151450

151500

#### Buffer

Particularly vulnerable areas of pallet racking systems, such as gangways or heavily frequented passages. require sturdy buffers.

#### Form B

RS26 1804 B

RS26 2204 B

RS26 2354 B

RS26 2604 B

1,800

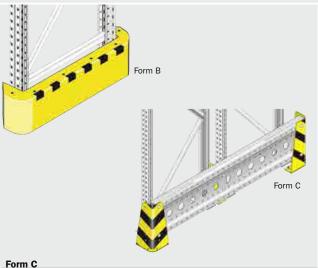
2,200

2,350

2,600

 $400~\mbox{mm}$  high,  $245~\mbox{mm}$  wide, including floor anchors. For support profiles Type P 75 and P 90. for frame depth

	(mm)	1
		1
RS24 0854 B	850	151510
RS24 1054 B	1,050	151520
RS24 1254 B	1,250	151530
RS24 1804 B	1,800	151540
RS24 2204 B	2,200	151550
RS24 2354 B	2,350	151560
RS24 2604 B	2,600	151610
Form B		
400 mm high, 2	265 mm wide, including floor anchors.	
For support pro	files Type P 100 and P 120.	
RS26 0854 B	850	151400
RS26 1054 B	1,050	151410
RS26 1254 B	1.250	151420



With a sturdy C-Sigma profile, 400 mm high, 75 mm wide, including floor anchor, with additional support above 1,800 mm long.

Item	for frame depth (mm)	Order no.
		· Control of the cont
RS 854 C	850	157430
RS 1054 C	1,050	157440
RS 1254 C	1,250	157450
RS 1804 CZ	1,800	157690
RS 2204 CZ	2,200	157700
RS 2354 CZ	2,350	157710
RS 2604 CZ	2,600	157720



## Safety accessories for pallet racking systems

#### Mesh back panel cladding

The rear sides of free-standing racks must be secured to prevent the loading units from falling out. Observe the applicable safety regulations or ask our technical consultants.

The mesh back panels are made of mesh mats with defined lengths and heights. They are combined depending on the rack height and clear bay widths. The mesh spacing is 100 x 50 mm. A GRM mesh segment consists of 2 C-profiles and the necessary mesh mats. Depending on the number of mesh mats, mesh connectors and compensating rods are required to secure the bracket sets (including fixing kit) – please order separately.

Spacing: 180 mm outer edge of the rack supports – GRM inner edge; 220 mm outer edge of the rack supports – inner edge GRM.

#### Ordering note

The mesh and fittings should not protrude beyond the frame. The top edge of the mesh back panel is identical to the rack height. All of the frames in a rack row must also be the same height. Load securing must also be fitted to prevent the loading units from falling out of the sides and must also be taken into consideration.

#### Number of mesh connectors

Rack		Clear bay width					
height	1,800	2,200	2,700	2,900	3,300	3,600	3,900
2,500	1	1	2	2	2	3	2
3,000	2	2	4	4	4	6	4
3,600	2	2	4	4	4	6	4
4,100	3	3	6	6	6	9	6
4,700	3	3	6	6	6	9	6
5,200	3	3	6	6	6	9	6
5,800	4	4	8	8	8	12	8
6,300	4	4	8	8	8	12	8
6,900	5	5	10	10	10	15	10
7,400	5	5	10	10	10	15	10

#### Ordering example

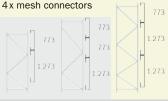
For 3,600 mm high rack you require:

1 723 mm high mesh segment height 723 mm and 2 1,273 mm high mesh segments.

#### For a 3,600 mm high pallet racking and the bay width 3,900 mm order:

1x GRM-3907, 2x GRM-3912, 4x bracket set,

4x compensating rods, 4x mesh connectors





Rack height in mm	2,500	3,000	3,600	4,100	4,700	5,200	5,800	6,300	6,900	7,400
Lower dimension in mm	345	45	45	45	45	45	45	45	45	45
The number of required r	mesh segi	ments								
H 773 mm	1	2	1	2	1	_	1	_	2	-
H 1,173 mm	-	-	-	2	2	1	4	3	1	5
H 1,273 mm	1	1	2	_	1	3	-	2	3	1
No. of console sets	3	4	4	5	5	5	6	6	7	7
No. of compensating rods	2	2	4	4	4	4	6	6	6	6

#### Mesh segment height 773 mm

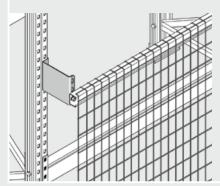
Item	Clear bay width (mm)	Order no.
		4
GRM-0907	900	6686319
GRM-1107	1,100	6686320
GRM-1307	1,300	6686321
GRM-1807	1,800	6686328
GRM-2207	2,200	6686329
GRM-2707	2,700	6686330
GRM-2907	2,900	6686331
GRM-3307	3,300	6686332
GRM-3607	3,600	6686333
GRM-3907	3,900	6686334

iviesn	segment	neignt	1,173	mı
	01			

Item	Clear bay width (mm)	Order no.
		4
GRM-0911	900	6686322
GRM-1111	1,100	6686323
GRM-1311	1,300	6686324
GRM-1811	1,800	6686336
GRM-2211	2,200	6686337
GRM-2711	2,700	6686338
GRM-2911	2,900	6686339
GRM-3311	3,300	6686340
GRM-3611	3,600	6686341
GRM-3911	3,900	6686342

Mesh segmen	t height	1,273	mm
-------------	----------	-------	----

Item	Clear bay width (mm)	Order no.
		1
GRM-0912	900	6686325
GRM-1112	1,100	6686326
GRM-1312	1,300	6686327
GRM-1812	1,800	6686344
GRM-2212	2,200	6686345
GRM-2712	2,700	6686346
GRM-2912	2,900	6686347
GRM-3312	3,300	6686348
GRM-3612	3,600	6686349
GRM-3912	3,900	6686350



Console set	(incl.	fixing	kit)
-------------	--------	--------	------

Item	Lenge (mm)	Frame depth (mm)	Order no.
without cons	ideration	of a end stop	
GRM-K2-060-S	60	850, 1,250	6690045
GRM-K2-130-S	130	1,050	6690046
with consider	ation of a	end stop	
GRM-K2-180-S	180	850, 1,250	6690047
GRM-K2-340-S	340	1,050	6690050

An adapter plate is required to install brackets on U 70 profile.
Further information is available on request.





6 × 10 × 10 × 10	II	127.4	HIPHI	DESTINATE DE
Item				Order no.
Mesh connecto	r (see	table at	oove)	
GRM-GVS				6687406
Compensating	rods (	incl. fixir	ng kit)	
GRM-ASS				6686298

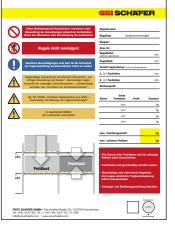
Order no. = on stock

#### i

#### Mandatory labeling

The regulations of the trade associations demand labeling of rack facilities with all the necessary load specifications





## Safety accessories for pallet racking systems

Load signs			
Item	W x H (mm)	Material	Order no.
PRTS 7050 LTR	450 x 600	Aluminum, incl. fixing kit	on req.*
PRTS 7050 QTR	450 x 600	Aluminum, incl. fixing kit	on req.*
TS 0615	60 x 150	PVC adhesive film	on req.*

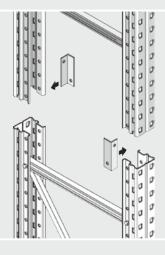
\* The technical data is defined via a time sheet. It is offered and invoiced as part of the price of the sign.

#### Frame extension at row end

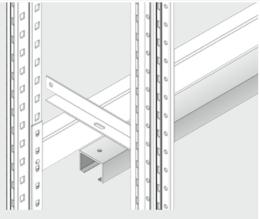
Protects against lower units from falling out of the sides, 500 mm high including fixing kit.

Surface: Dust Gray, RAL 7037 or galvanized.

**Note:** Frame extensions at row end cannot be used in conjunction with mesh back panels.



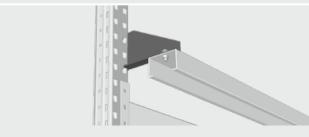
item	System	profile (mm)	depth (mm)	Surface	Oraer no.
AN 78	PR 350	70	850	RAL 7037	33160
AN 68	PR 600	75	850	Galvanized	34870
AN 88	PR 350	80	850	RAL 7037	33170
AN 98	PR 600	90	850	Galvanized	34860
AN 18	PR 350	100	850	RAL 7037	33180
AN 71	PR 350	70	1,050	RAL 7037	33190
AN 61	PR 600	75	1,050	Galvanized	34880
AN 81	PR 350	80	1,050	RAL 7037	33200
AN 91	PR 600	90	1,050	Galvanized	34840
AN 11	PR 350	100	1,050	RAL 7037	33210
AN 72	PR 350	70	1,250	RAL 7037	33220
AN 62	PR 600	75	1,250	Galvanized	34890
AN 82	PR 350	80	1,250	RAL 7037	33230
AN 92	PR 600	90	1,250	Galvanized	34850
AN 12	PR 350	100	1,250	RAL 7037	33240



#### **End stops**

Double-row racks require end stops if the distance between the loading aids or the load unit is less than 100 mm. On single-row racks, end stops prevent the load units from unintentionally falling out. Depending on the requirements, a 60 or 100 mm wide profile can be used.

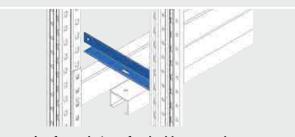
Item	Clear bay width (mm)	Profile	Order no.
DSC060FW1900	1,900	C 60/40	6689260
DSC060FW2300	2,300	C 60/40	6689264
DSC060FW2700	2,700	C 60/40	6689268
DSC100FW2900	2,900	C 100/60	6689270
DSC100FW3300	3,300	C 100/60	6689274
DSC100FW3600	3,600	C 100/60	6689277
DSC100FW3900	3,900	C 100/60	6689280



#### Accessories for end stops for single-row racks

Single-row racks require 2 brackets with 126 mm spacing for each end stop.

Item	for frame depth (mm)	Order no.
DSC-K105	1,050	6689690



#### Accessories for end stops for double-row racks

For double-face rack rows require 2 spacers as brackets for each end stop.

Further information is available on **page D14.** 

Appendix



The potentials for accelerating logistics processes and, thus, permanently reducing costs are extremely high.

Both manual and computer-controlled warehouses can be optimized with visual warehouse organization procedures and systems.

Rapid and safe storage, retrieval and relocation significantly enhance the employees' productivity. Pickers and forklift drivers are guided to the right location in the shortest possible time.

The solution is a clearly understandable guidance system that can be implemented quickly and easily. At the same time, the investment to install the visual warehouse organization is particularly low.

Systematic numbering of all storage spaces and the number key form the basis and the prerequisite for efficient warehouse organization.

Each storage space is the signed a unique and unmistakable code, which consists of at least three coordinates: rack row, longitudinal position and height position.

Additional information can also be printed on the labels such as storage areas, check digits, barcodes and position arrows.

A diverse range of fonts, colors and sizes for signs, labels, label holders and ground markings are available.

Please inquire if you would like a version that is not listed here.



Further versions

on request



5-128-07

012-05-3

06-03-05

from 2,000 units on request

 up to 8 characters including separators.

 Minimum order quantity: 100 pieces.

 Quantity scale: 1 – 1,999 pieces

 Item
 W x H (mm)

 R SK 1230 SG
 120 x 30
 189900

 R SK 1438 SG
 140 x 38
 189901

220 x 65

5-128-07

012-05-3

06-03-05

from 2,000 units on request

**Storage space labels**Self-adhesive polyethylene film,

R SK 2265 SG

Storage space labels

Self-adhesive polyethylene film, Color: yellow, lettering: black,

Color: white, lettering: black, up to 8 characters including separators. Minimum order quantity: 100 pieces.

 Quantity scale: 1 - 1,999 pieces

 Item
 W x H (mm)
 Order no. (mm)

 R SK 1230 SW
 120 x 30
 189903

 R SK 1438 SW
 140 x 38
 189904

 R SK 2265 SW
 220 x 65
 189905

Order no. = on stock

189902



#### Storage space labels

Self-adhesive polyethylene film, Color: yellow, lettering: black, up to 8 characters including separators, additionally with barcode. Minimum order quantity: 100 pieces. 5-128-07

012-05-3||||||||

#### Ouantity scale: 1 - 1.999 pieces

Item	W x H (mm)	•	Order no.
R SK 1230 SGB	192 x 38		189906
R SK 1438 SGB	224 x 38		189907
R SK 2265 SGB	380 x 65		189908



from 2,000 units on request

## 18



#### Storage space labels

Self-adhesive polyethylene film, Color: white, lettering: black, up to 8 characters including separators, additionally with barcode. Minimum order quantity: 100 pieces.





#### Quantity scale: 1 - 1,999 pieces

Item	W x H (mm)	Order no.
R SK 1230 SWB	192 x 38	189909
R SK 1438 SWB	224 x 38	189910
R SK 2265 SWB	380 x 65	189911



from 2,000 units on request



Appendix





#### Floor markings

For the identification of pallet and (block) storage areas or driving and walking lanes, self-adhesive, thickness: 0.3 mm, color: yellow.

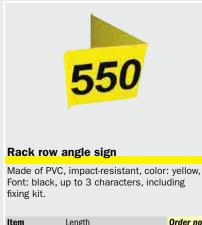
Item	Forms	PU	Order no.
R BM K	Circle	1	189917
R BM R	Circular blank	50	189918
R BM T	T-piece	10	189919
R BM KR	Cross	1	189920
R BM E	Corner piece	10	189921
	with label		on req.



#### Rack row signs

Made of PVC, impact-resistant, color: yellow, Font: black, up to 2 characters, including fixing kit.

Item	W x H (mm)	Order no.
R RZ 20200	200 x 200	189912
R RZ 30300	300 x 300	189913
R RZ 50500	500 x 500	189914



Item	Length (mm)	Order no.
R RW 30300	300 x 300	189915



#### Label holder

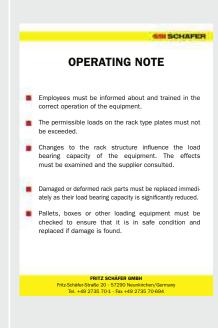
Self-adhesive plastic label holders, total height 33 mm (for label height 30 mm). Without label inserts.

Item	Length (mm)	Order no.
K EH 0880	780	442518
K EH 1080	980	442538
K EH 1280	1,180	442558
K EH 1350	1,250	442565
K EH 1800	1,700	442610
K EH 2200	2,100	442650
K EH 2700	2,600	442700



Pre-perforated labels made of 120 g/m<sup>2</sup> paper, white, 20 labels on one DIN A4 sheet for self printing. Label format: 100 x 30 mm.

Item	Format (form)	Order no
R EE 1030	DIN A4	189916



## **SAFETY NOTE** report all damage for safety purpo Responsible safety officer:

#### Operating note / Safety note

FEM regulations for storage facilities.

Made of aluminum composite, W 420 x H 600 mm, multi-colored printing, incl. fixing kit.

Item		Order no.	Item		Order no.
TS 7050 BH	Operating note	992305	TS 7050 SH	Safety note	992305

Order no. = on stock



For cleaning and preparing the adhesive surfaces for self-adhesive labels.

Item		Order no.
R RM	Cleaning agent 0.5 I	189922
R RA	Scraper	189923
R RT	Cleaning cloths 50 pcs.	189924

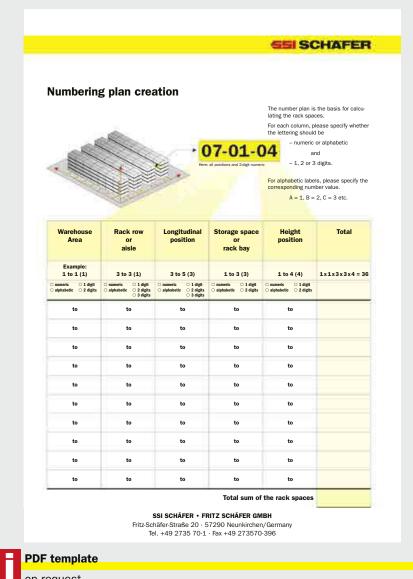


#### Chains

Red/white; chain stand with triangular, cement filled stand, including 2 hooks made of plastic – for fastening the chain barrier to the chain stand; chain barriers made of plastic, color change every 50 cm, colorfast and weather-resistant.

Item	Туре	Order no.
R KS	Chain stand	189928
R KG	Chain barrier	189929









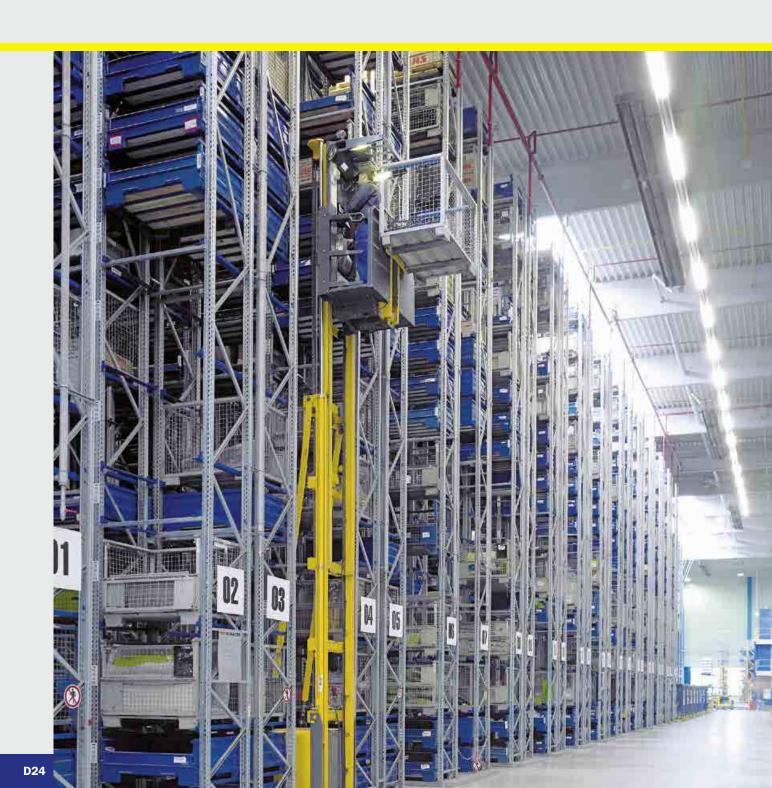


#### PR 600 front-to-back beam racks

SSI SCHAEFER's front-to-back beam racks are outstanding for single-space storage. They are the ideal solution for this warehousing tasks. They make optimum use of the room height as almost none of the construction elements restrict the height of the goods being stored.

Front-to-back beam racks are especially suitable for order picking from laterally positioned containers and pallets. The

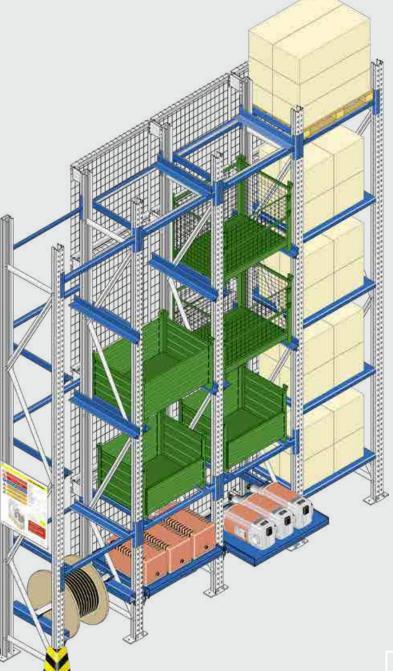
order picking height can be used optimally. The single-row design is also beneficial for high racks, especially when heavy goods are stored in high stacks.

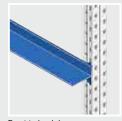


#### Staging PR 600 front-to-back beams

#### Advantages of the front-to-back beam rack:

Virtually no restriction of storage height due to construction elements enables you to make optimum use of the room height. Front-to-back beam racks are especially suitable for order picking from laterally positioned containers and pallets. The crosspieces are self-locking and can be adjusted very easily without the

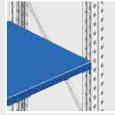




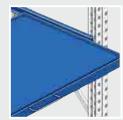
Front-to-back beam



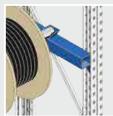
Front-to-back support with horizontal brace



She



Extendable shelf



Cable drum beams



Corner protector



Load sign

Boxes / containers

Modular shelving

ongspan acking

Pallet racking

Cantilever racking

Mezzanines /

On-line shelving / KDR shelving

Semi-automated solutions

ogistics /stems

\_\_\_\_\_

#### Drive-in and drive-through racking

SSI SCHÄFER's pallet racking systems are practically designed for use as drive-in and drive-through racking. This storage system proves its value especially when storing a small range of different articles in very large quantities. It provides maximum storage capacity in a minimum spatial volume.

The systems are loaded and unloaded using conventional forklifts that drive into the rack channels. Although direct access to all the stored pallets is only

possible to a limited extent, drive-in racking systems are an integral part of modern warehouse logistics, typically in transshipment warehouses.

Drive-in and drive-through pallet racking systems are accessed with front forklifts or reach trucks. The typical applications include the food and non-food industry, in particular a small range of articles stored in large quantities, such as fruit, fruit juices or care products. The design of the

front-to-back supports is an important aspect of the functionality of drive-in and drive-through racking. Preferably, drive-in and drive-through racking should be equipped with floor rails to protect the rack supports and provide forklift drivers with better guidance.

Consider the following system features if you are planning a new warehouse or intend to restructure an existing facility. We help you to plan and develop the most efficient logistics solution.



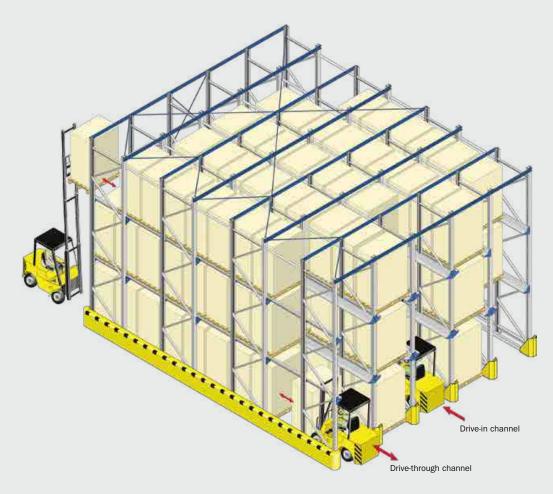
#### Staging drive-in and drive-through racking

#### Advantages of the drive-in racking:

Maximum storage capacity with minimum spatial volume is the unique characteristic of drive-in racking systems. The racks are loaded and unloaded from one side. The channels can only be accessed in one direction.

#### Advantages of the drive-through racking:

Free-standing rack units can be accessed from both sides. A forklift can be driven through the racks. The advantage is that loading and unloading can be carried out separately.

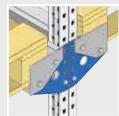




Front-to-back support



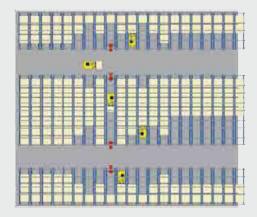
Attachment bracket



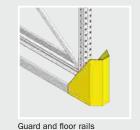
End stop



Horizontal brace







Horizontal cross brace

#### Mobile racking for pallets and long goods

Available storage spaces cannot always be expanded to any desired extent. Space needs to be saved for new production areas. Mobile racking storage is worth considering wherever these requirements exist. Modern management concepts and sound planning enable previously unimagined options.

The mobile racking system is both simple and impressive. Any desired number of rack rows are mounted on traveling units and moved on rails using an electric motor. The access aisle is only opened where it is currently needed.

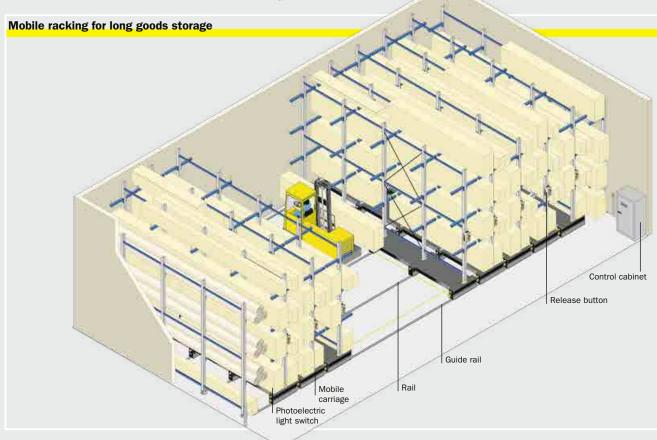
Consider these system advantages if you are planning a new warehouse or intend to restructure an existing facility.

- ▶ 85% increase in capacity with the same surface area.
- ▶ 60% less construction volume if you are planning a new construction.
- ▶ 40% space savings that you can use without having to construct a new building.

We help you to plan and develop the most efficient logistics solution.



#### Mobile rack staging



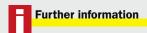
#### Pallet live storage racking

Pallet live storage racking systems are used as buffer storage for shipping, in production and also for incoming and outgoing goods. The racks are usually accessed using front forklifts and reach trucks. Manual lifting trolleys can also be used for the lowest level on the removal side. The storage utilizes the first-in-first-out principle (FiFo). Stored goods with an expiry date or product batches are easier to monitor. The design of the gravity roller conveyors can be

adapted to the specific goods using different roll divisions and brake rollers. The other advantages of this storage system are the optimum use of surface area and volume as well as the ability to integrate the system into the automated material flow.

Furthermore, the pallets can also be accessed on multiple stories with additional order picking levels or tunnels.





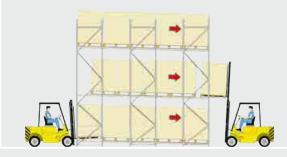
on request



#### Staging live storage and pushback racks

#### Pallet live storage

The live storage warehouse consists of gravity roller conveyors installed in a rack as live storage levels. The space it is used highly efficiently as multiple channels are positioned next to each other and the room height is optimally utilized. The storage and retrieval sides are separated. Roller conveyors provide both storage and transport functions.

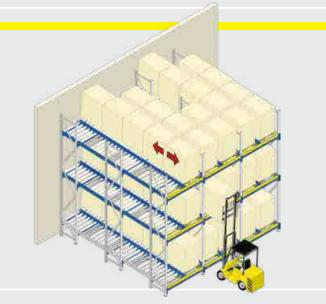




#### Pallet pushback racking

Pallets pushback racking is space-saving buffer storage with only one access aisle. This storage technology pushes the stored goods up the incline of the roller conveyor and into a channel with the help of a feeding device. During removal, the following pallets are braked by the removal process with the forklift. Eliminating brake rollers and separators creates a cost-effective solution. All of the articles are always accessible on the removal side of the rack. Pallet pushback racking utilizes the LiFo principle (last-in-first-out).





#### Pallet live storage rack storage with order picking tunnel

Pallet live storage racking systems are becoming an increasingly important part of warehouse logistics due to the consistent combination of buffer storage and order picking. Pallet live storage racking with order picking tunnels utilizes the FIFO principle (first-in-first-out). The resupply and order picking operations are separated and large article volumes are possible. These systems provide optimum solutions for a beverage trade or electrical equipment manufacturers.



Appendix

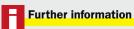
#### Narrow aisle high rise racking system

High rise warehouse solutions with narrow-aisle designs enable the highest storage capacity even with confined areas and restricted storage space.

SSI SCHAEFER systems have proven themselves in numerous applications. We apply our worldwide expertise and many years of experience gained through collaboration with manufacturers of floors, storage and retrieval devices, aisle protection and fire protection equipment when implementing a storage solution for our customers.

SSI SCHAEFER sees itself as a professional service provider.





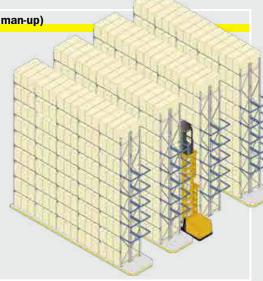
on request

#### High rise racking staging

Narrow aisle system with order picking trucks (man-up)

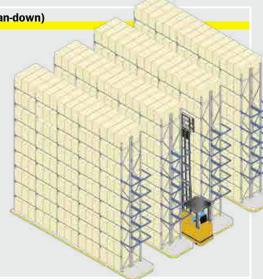
This is by far the most frequently used storage type. The advantages are:

- Operator constantly at removal height, therefore no positioning aid is required.
- Order picking from the pallet is possible.



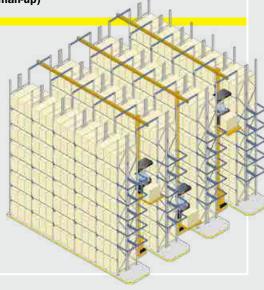
#### Narrow aisle system with high-bay stackers (man-down)

This type storage is used when entire loading aids need to be stored and retrieved. In contrast to man-up devices, higher racks and smaller tolerances for the floor and rack need to be observed and both horizontal and vertical positioning aids are required.



#### Narrow aisle system with order picking trucks (man-up) and upper guide rail

This additional upper guide rail with integrated power rail allows large rack heights (up to 19 m) and rack lengths (> 100 m) together with high traveling speeds. Compliance with very small floor and rack tolerances is an important prerequisite to ensure a perfect functioning.





Boxes /

Modular shelving

ongspan acking

Pallet racking

Cantilever racking

Mezzanines / platforms

On-line shelving / KDR shelving

Semi-automated solutions

Logistics systems

Appendix