

INDUSTRY

DISTRIBUTION  
LOGISTICS

Compact.  
**Versatile.**  
Variable.



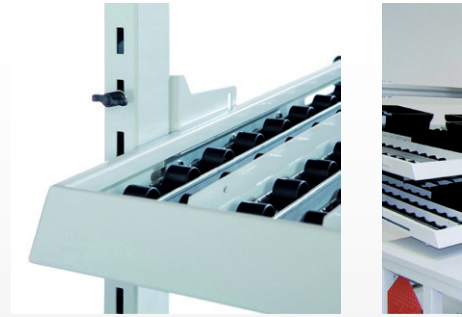
The flexible material feed.

**FIFO shelves.**

KARL original.



# Shelves for the FIFO-principle - what is fed first is also removed first.



Via inclined shelves, optionally supplemented with dividers and roller strips, containers move automatically from the loading side to the removal position. Material provision and value-adding assembly are mutually exclusive separated, mutual interference is avoided.

Due to the low-waste design of the workplace and a reduction of the picking distances results in considerable time savings.

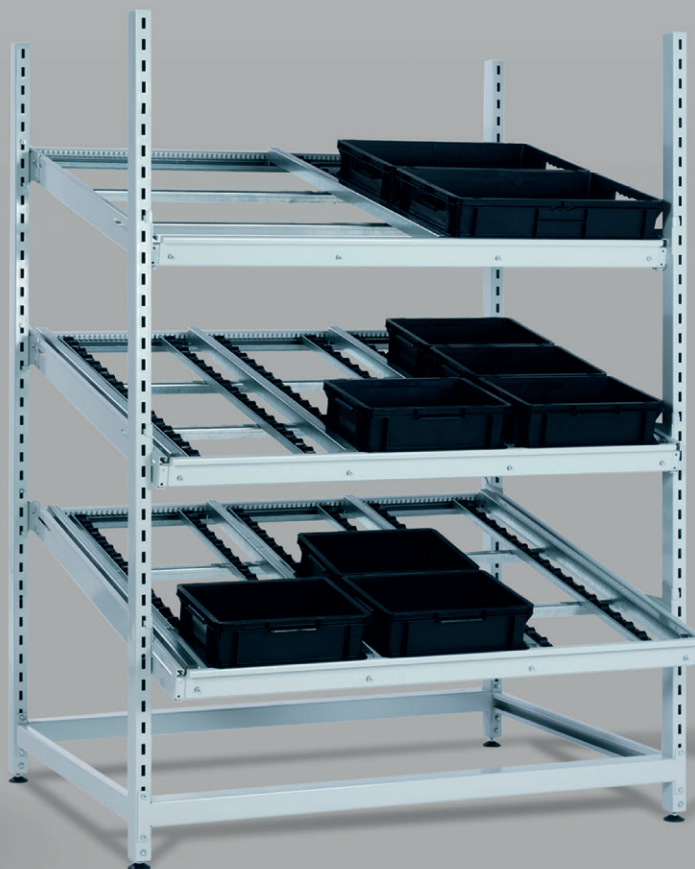




## Optimal and save space use of the available area.

Productivity is significantly increased according to the principles of lean production. Batches and production series can be optimally monitored, the risk of errors is reduced and the reduced by clear and compact material presentation.

At KARL of course:  
An ESD-compliant design of the FIFO racks according to IEC 61340-5-1.





## Detailed **Perfection.**

Material staging according to the FIFO principle.  
Custom-made for the requirements of Lean Production.  
Stable steel construction with high load capacity.

FIFO shelves can be attached at variable heights, depths and inclinations.  
Dividers and roller strips can be added quickly and flexibly.

Ideal dimensions for the use of grab trays and Euronorm containers.  
Quick changeover due to modular construction system, highest flexibility  
and a wide range of expansion options.



Optional in ESD version according to IEC 61340-5-1



# FIFO shelves

KARL original.

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# FIFO shelf

- for material staging according to the FIFO principle
- all metal parts conductive powder-coated, light grey (RAL 7035)
- standard ESD-compliant due to exclusive use conductive materials
- height compensation elements for levelling uneven floors

## Basic shelf

- vertical struts with grid perforation
- D = 750 mm, H = 1990 mm
- load capacity: 500 kg
- height compensation elements for levelling uneven floors

W = 510 mm	<b>68.529.70</b>
W = 790 mm	<b>68.531.70</b>
W = 930 mm	<b>68.533.70</b>
W = 1230 mm	<b>68.535.70</b>



## FIFO storage

- the FIFO storage can be connected to the height, depth and inclination variable vertical braces of the basic rack are bolted together
- with the help of a grid connection system, the shelf can optionally be roller tracks and / or dividers are fitted
- D = 1200 mm (clear dimension)
- the dimensions are primarily designed for the use of grab trays and Euronorm containers
- load capacity / storage: 75 kg
- D = 830 mm (clear dimension)

W = 815 mm (clear dimension: 776 mm), for base shelf W = 930 mm	<b>69.726.70</b>
W = 1115 mm (clear dimension: 1076 mm), for base shelf W = 1230 mm	<b>69.728.70</b>

- D = 1200 mm (clear dimension)

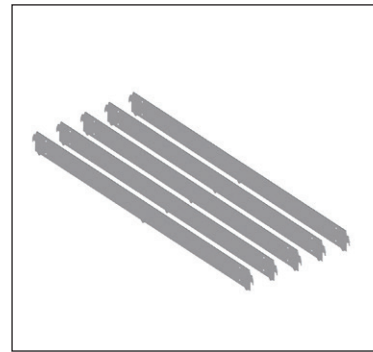
W = 460 mm (clear dimension: 423 mm), for base shelf W = 510 mm	<b>69.721.70</b>
W = 680 mm (clear dimension: 645 mm), for base shelf W = 790 mm	<b>69.723.70</b>
W = 815 mm (clear dimension: 776 mm), for base shelf W = 930 mm	<b>69.725.70</b>
W = 1115 mm (clear dimension: 1076 mm), for base shelf W = 1230 mm	<b>69.727.70</b>



## Dividers

- H = 55 mm

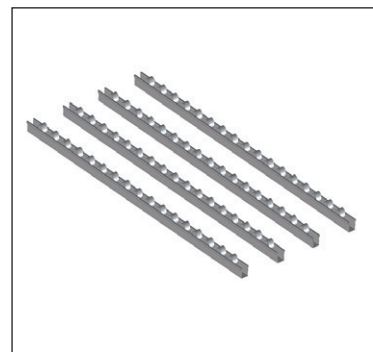
Set dividers (5 pieces) for D = 830 mm	<b>69.962.70</b>
Set dividers (5 pieces) for D = 1200 mm	<b>69.964.70</b>



## ESD roller tracks

- ESD roller tracks

Set ESD roller tracks (4 pieces) for D = 830 mm	<b>69.972.70</b>
Set ESD roller tracks (4 pieces) for D = 1200 mm	<b>69.974.70</b>



- Stainless steel bracket (2 pieces) for mounting the roller tracks on the shelf

for W = 460 mm	<b>69.956.70</b>
for W = 680 mm	<b>69.958.70</b>
for W = 815 mm	<b>69.954.70</b>
for W = 1115 mm	<b>69.952.70</b>

## ESD swivel castors

- 4 swivel castors (Ø 100 mm), 2 with brakes
- mounting on the base parts

	<b>69.560.98</b>
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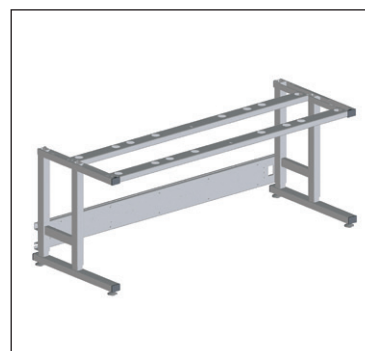


# Table range SINTRO

## SINTRO base frame

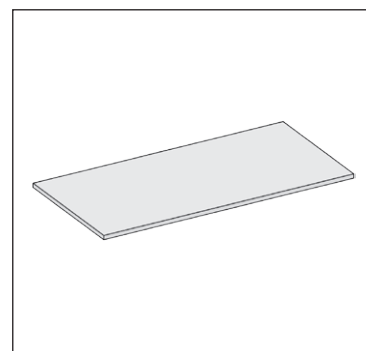
- infinitely variable height adjustment with clamping screws

W x D in mm	930 x 750	1230 x 750	1530 x 750
Standard	<b>25.003.70</b>	<b>25.005.70</b>	<b>25.025.70</b>
ESD	<b>26.003.70</b>	<b>26.005.70</b>	<b>26.025.70</b>



## Worktop

W x D in mm	930 x 750	1230 x 750	1530 x 750
Hard laminate	<b>25.903.88</b>	<b>25.900.88</b>	<b>25.904.88</b>
with cutouts	<b>25.903.89</b>	<b>25.900.89</b>	<b>25.904.89</b>



## Cross connection for table construction

- Cross connection on the table frame for mounting vertical struts
- D = 38 mm, H = 160 mm

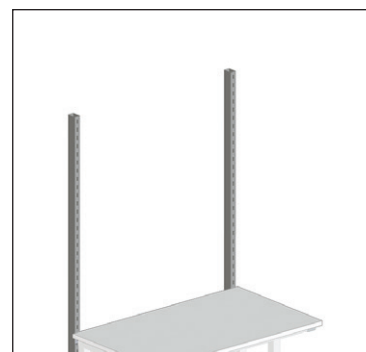
for table width 930 mm	<b>29.129.70</b>
for table width 1230 mm	<b>29.130.70</b>
for table width 1530 mm	<b>29.132.70</b>



## Vertical strut

- stable rectangular steel tube with grid perforation for variable height adaptation of table extension elements and multifunctional arm VARIO
- Mounting on the cross connection
- W = 40 mm, D = 60 mm

H = 1990 mm, usable height above table top: 1425 mm	<b>29.120.70</b>
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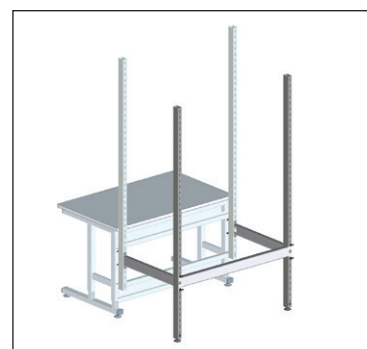
# FIFO add-on shelf for SINTRO table system

- for material staging according to the FIFO principle
- all metal parts conductive powder-coated, light grey (RAL 7035)
- standard ESD-compliant due to exclusive use conductive materials
- height compensation elements for levelling uneven floors

## Extension shelf

- vertical struts with grid perforation
- D = 750 mm, H = 1990 mm
- load capacity: 500 kg

W = 930 mm, for table width 930 mm	<b>68.433.70</b>
W = 1230 mm, for table width 1230 mm and 1530 mm	<b>68.435.70</b>

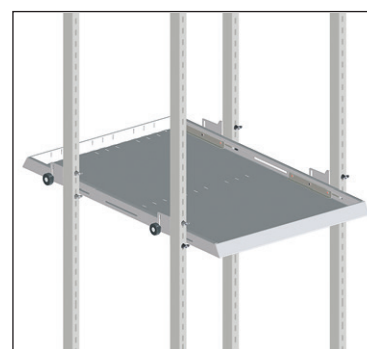


## FIFO storage

- the FIFO storage can be connected to the height, depth and inclination variable vertical braces of the basic rack are bolted together
- with the help of a rastered plug-in system, the shelf can optionally be fitted with roller tracks and / or dividers
- the dimensions are primarily designed for the use of parts containers and Euronorm containers
- load capacity / storage: 75 kg

- D = 830 mm (clear dimension)

W = 815 mm (clear dimension: 776 mm), for base shelf W = 930 mm	<b>69.726.70</b>
W = 1115 mm (clear dimension: 1076 mm), for base shelf W = 1230 mm	<b>69.728.70</b>



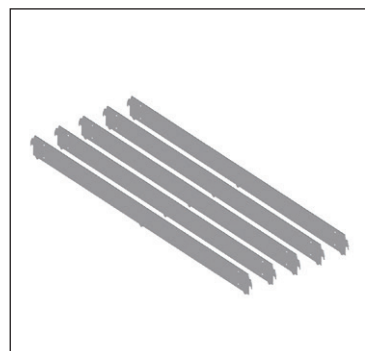
- D = 1200 mm (clear dimension)

W = 815 mm (clear dimension: 776 mm), for base shelf W = 930 mm	<b>69.725.70</b>
W = 1115 mm (clear dimension: 1076 mm), for base shelf W = 1230 mm	<b>69.727.70</b>

## Dividers

- H = 55 mm

Set dividers (5 pieces) for D = 830 mm	<b>69.962.70</b>
Set dividers (5 pieces) for D = 1200 mm	<b>69.964.70</b>



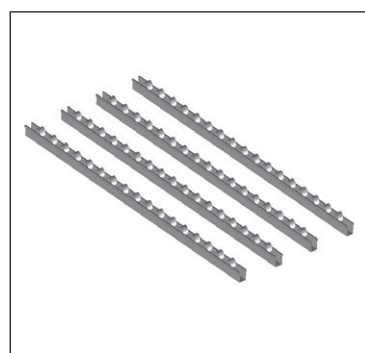
## ESD roller tracks

- ESD roller tracks

Set ESD roller tracks (4 pieces) for D = 830 mm	<b>69.972.70</b>
Set ESD roller tracks (4 pieces) for D = 1200 mm	<b>69.974.70</b>

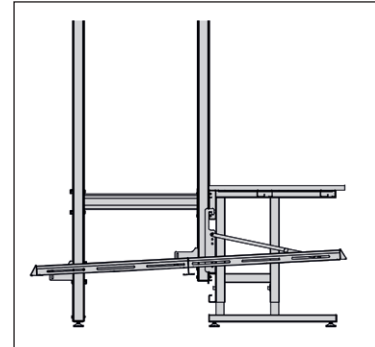
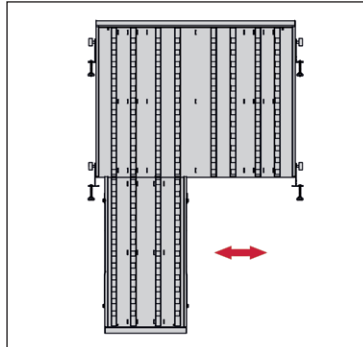
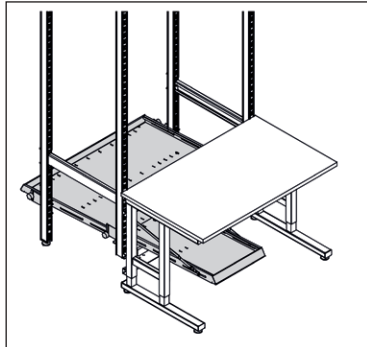
- Stainless steel bracket (2 pieces) for mounting the roller tracks on the shelf

for W = 460 mm	<b>69.956.70</b>
for W = 680 mm	<b>69.958.70</b>
for W = 815 mm	<b>69.954.70</b>
for W = 1115 mm	<b>69.952.70</b>



## Return for SINTRO table system and FIFO add-on shelf

- die ergonomisch gestaltete Rückführung besteht aus 2 Ablagen, jeweils mit einseitiger Aufkantung:
- a shelf is attached to the table frame and, depending on the table width, can also be moved continuously horizontally below the work surface, D = 900 mm (clear dimension: 836 mm)
- a shelf is attached to the FIFO add-on shelf, D = 900 mm (clear dimension: 836 mm)
- the shelves are continuously adjustable in inclination
- with a gridded plug-in system, the return can optionally be equipped with roller tracks



### Shelf for return on table frame

W = 460 mm (clear dimension 423 mm), for all table widths	<b>68.821.70</b>
W = 680 mm (clear dimension 645 mm), for all table widths	<b>68.823.70</b>

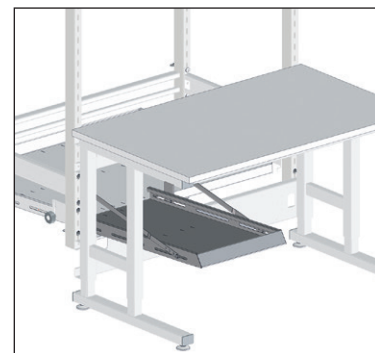
### ESD roller tracks

- ESD roller tracks

Set ESD roller tracks (4 pieces)	<b>69.972.70</b>
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- Stainless steel bracket (2 pieces) for mounting the roller tracks

for W = 460 mm	<b>69.946.70</b>
for W = 680 mm	<b>69.948.70</b>



### Shelf for return on FIFO add-on shelf

W = 815 mm (clear dimension: 776 mm), for base shelf W = 930 mm	<b>69.826.70</b>
W = 1115 mm (clear dimension: 1076 mm), for base shelf W = 1230 mm	<b>69.828.70</b>

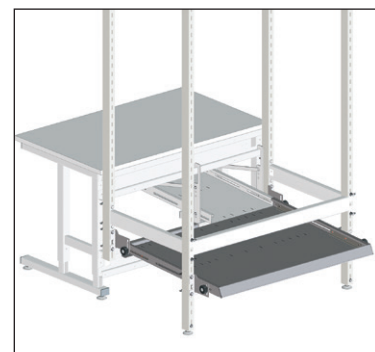
### ESD roller tracks

- ESD roller tracks

Set ESD roller tracks (4 pieces)	<b>69.972.70</b>
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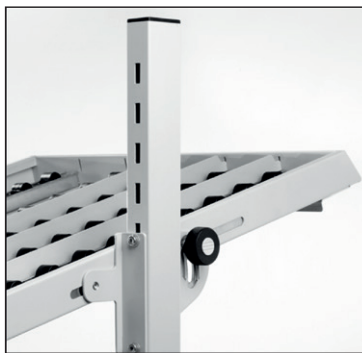
- Stainless steel bracket (2 pieces) for mounting the roller tracks

for W = 815 mm	<b>69.944.70</b>
for W = 1115 mm	<b>69.942.70</b>



# FIFO-CAR with 2 vertical struts

- for material supply according to the FIFO principle
- all metal parts conductive powder-coated, light grey (RAL 7035)
- ESD-compliant as standard through exclusive use of conductive materials



## Base frame

- sturdy tubular steel construction
- optionally with 4 swivel castors (Ø 100 mm, 2 lockable) or with 4 floor glides
- vertical struts with grid perforation
- D = 870 mm, H = 1600 mm
- incl. base tray for holding Euronorm containers
- load capacity: 200 kg

## Base frame with castors

W = 570 mm	<b>68.228.70</b>
W = 790 mm	<b>68.230.70</b>



## Base frame with floor glides

W = 570 mm	<b>68.328.70</b>
W = 790 mm	<b>68.330.70</b>



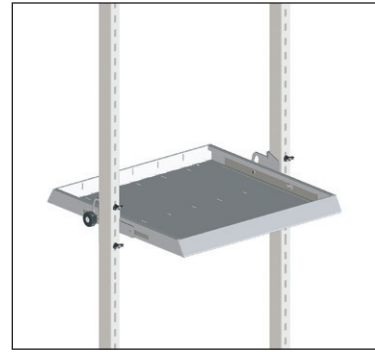
## FIFO storage

- the shelf can be bolted to the vertical struts of the base frame at variable heights, depths and inclinations
- with the help of a rastered plug-in system, the shelf can optionally be fitted with roller tracks and / or dividers
- the dimensions are primarily designed for the use of parts containers and Euronorm containers
- load capacity / storage: 50 kg
- W = 460 mm (clear dimension: 423 mm), suitable for base frame W = 570 mm

D = 700 mm (clear dimension: 630 mm)	<b>69.521.70</b>
D = 900 mm (clear dimension: 830 mm)	<b>69.523.70</b>

- W = 680 mm (clear dimension: 645 mm), suitable for base frame W = 790 mm

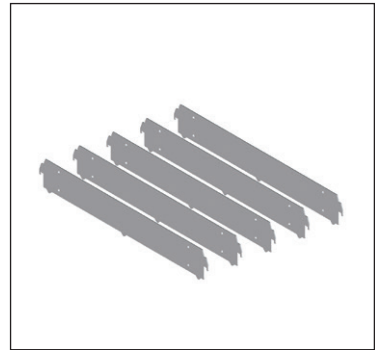
D = 700 mm (clear dimension: 630 mm)	<b>69.525.70</b>
D = 900 mm (clear dimension: 830 mm)	<b>69.527.70</b>



## Dividers

- H = 55 mm

Set dividers (5 pieces) for D = 700 mm	<b>69.960.70</b>
Set dividers (5 pieces) for D = 900 mm	<b>69.962.70</b>



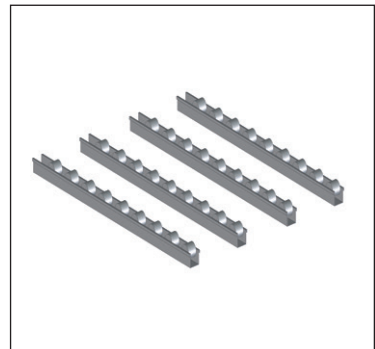
## ESD roller tracks

- ESD roller tracks

Set ESD roller tracks (4 pieces) for D = 700 mm	<b>69.970.70</b>
Set ESD roller tracks (4 pieces) for D = 900 mm	<b>69.972.70</b>

- Stainless steel bracket (2 pcs.) for fixing the roller bars to the shelf

for W = 460 mm	<b>69.956.70</b>
for W = 680 mm	<b>69.958.70</b>



The FIFO storage 69.525.70 (D = 700 mm) can optionally be adapted directly to the SINTRO table

Vertical strut	<b>29.122.70</b>
Foot extension of the table frame	<b>39.970.70</b>



## FIFO-CAR with 4 vertical struts

- for material supply according to the FIFO principle
- all metal parts conductive powder-coated, light grey (RAL 7035)
- ESD-compliant as standard through exclusive use of conductive materials



### Base frame

- sturdy tubular steel construction
- with 4 swivel castors (Ø 100 mm, 2 lockable)
- vertical struts with grid perforation
- 930 x 1050 x 1600 mm (W x D x H)
- incl. base tray for holding Euronorm containers
- load capacity: 200 kg



Base frame with castors

68.432.70

## FIFO-Ablage

- the shelf can be bolted to the vertical struts of the base frame at variable heights, depths and inclinations
- with the help of a rastered plug-in system, the shelf can optionally be fitted with roller tracks and / or dividers
- the dimensions are primarily designed for the use of parts containers and Euronorm containers
- load capacity / storage: 75 kg
- W = 815 mm (clear dimension: 776 mm)

D = 1200 mm (clear dimension)

**69.725.70**

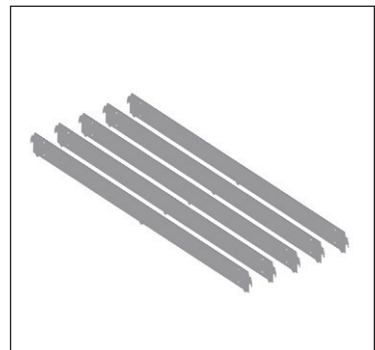


## Dividers

- H = 55 mm

Set dividers (5 pieces) for D = 1200 mm

**69.964.70**



## ESD roller tracks

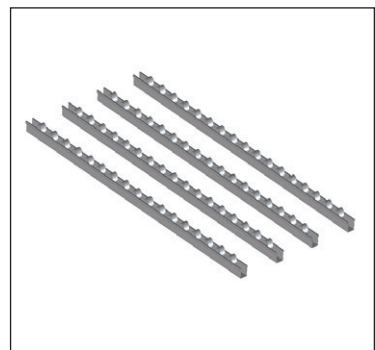
- ESD roller tracks

Set ESD roller tracks (4 pieces) for D = 1200 mm

**69.974.70**

Stainless steel bracket (2 pcs.) for fixing the roller bars

**69.954.70**



# FIFO rack for increased loads

## Basic shelf

- tubular steel construction, conductive powder coated, light grey (RAL 7035)
- vertical struts with double-sided grid perforation for variable height and inclination of the transfer shelves
- 1503 x 1225 x 1990 mm (W x D x H)  
clear width: 1420 mm
- height compensation elements for levelling uneven floors
- load capacity: 1000 kg

Scope of delivery included:

- 4 vertical struts with grid perforation
- 2 cross connections
- 2 longitudinal connections



Freestanding base shelf

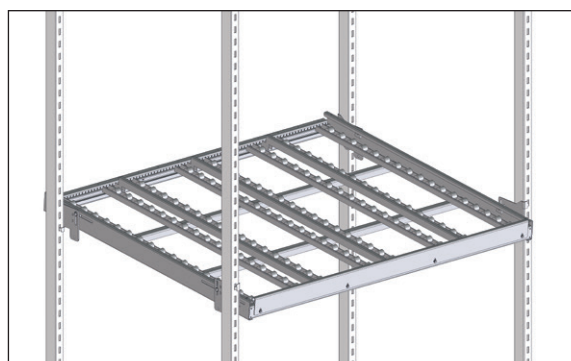
**57.270.70**

## Transfer shelf

- the transfer shelf can be hooked into the shelf with variable height, depth and inclination
- The transfer shelf is variably equipped with roller strips and dividers by means of a rastered plug-in system
- clear width: 1360 mm, clear depth: 1200 mm
- the dimensions of the transfer shelf are designed primarily for the use of Euronorm containers
- both in width and depth, it offers room, for example, for
  - 3 container 400 x 300 mm
  - 4 container 300 x 400 mm
  - 2 container 600 x 400 mm
- load capacity / shelf: 250 kg

Scope of delivery included:

- 8 roller tracks
- 3 dividers
- 1 stop bar



Transfer shelf, standard

**57.338.70**

Transfer shelf, ESD version with conductive rollers

**57.335.70**

additional set of roller strips (4 pieces), standard

**57.302.70**

additional set of roller strips (4 pieces), ESD version

**57.300.70**

additional set of dividers (2 pieces)

**57.310.70**



## Extension shelf

- the add-on shelving can be attached directly to the vertical struts of the SINTRO assembly table system
- suitable for table widths 1530 mm and 1830 mm
- 1503 x 1225 x 1990 mm (W x D x H)
- clear width: 1420 mm
- load capacity: 400 kg

Included in delivery:

- 2 vertical braces with grid perforation
- 2 cross connections
- 2 longitudinal joints

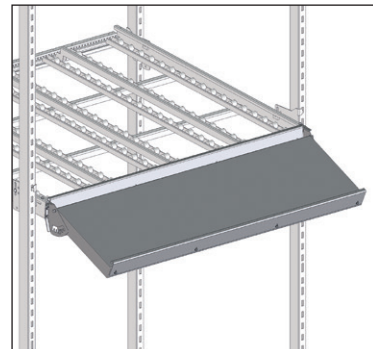


Add-on shelf for assembly table system SINTRO

**57.275.70**

## Inclining shelf

- Optionally, an inclinable shelf can be adapted to the transfer shelf to enable ergonomically optimal material removal
- D = 400 mm
- Tilt angle can be adjusted up to 50° in a grid
- load capacity: 50 kg

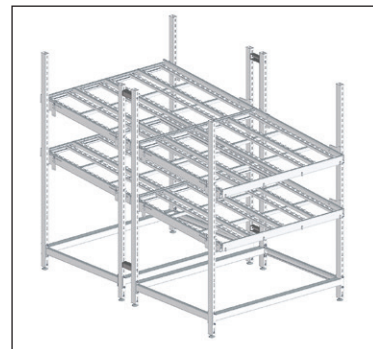


Inclining shelf

**57.352.70**

## Extension set

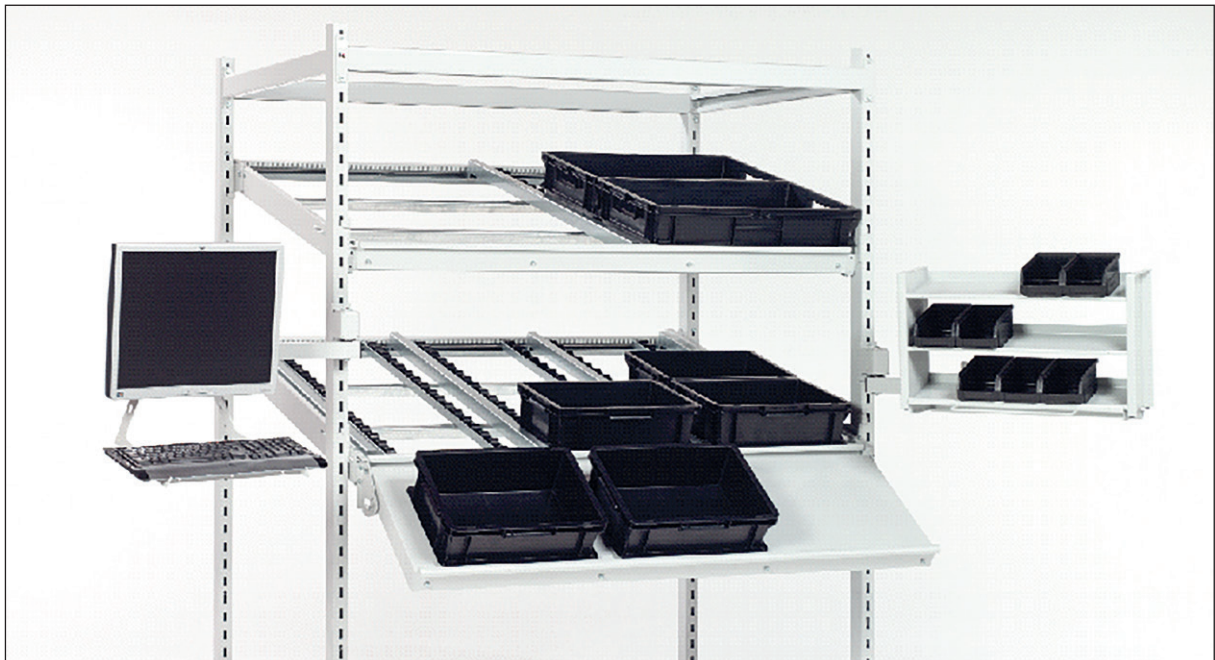
- by connecting 2 shelves, the throughput length can be doubled



Extension set for connecting 2 shelves

**57.280.70**

# Equipment



- FIFO shelves can be adapted to the accessories of the SINTRO assembly table system and the VARIO table extension program
- in combination with the KARL program transfer system, the FIFO racks form an ideal modular system for designing your material flow in production and assembly



Detailed information about the SINTRO assembly table range and transfer systems can be found in the special sales documents or in the KARL general catalogue.

## Parts container

- System Schäfer, size 5
- 95 x 160 x 75 mm (W x D x H)

ESD black	red	blue	green
<b>96.505.98</b>	<b>96.507.98</b>	<b>96.509.98</b>	<b>96.511.98</b>



## Euronorm container

- optionally in non-conductive polyethylene (red) or ESD-compliant in conductive polypropylene (black)

### Standard

width x depth	height	
300 x 400 mm	120 mm	<b>96.540.98</b>
300 x 400 mm	170 mm	<b>96.542.98</b>
300 x 400 mm	220 mm	<b>96.544.98</b>
600 x 400 mm	120 mm	<b>96.560.98</b>
600 x 400 mm	170 mm	<b>96.562.98</b>
600 x 400 mm	220 mm	<b>96.564.98</b>
600 x 400 mm	320 mm	<b>96.566.98</b>



### ESD

width x depth	height	
300 x 400 mm	120 mm	<b>96.550.98</b>
300 x 400 mm	170 mm	<b>96.552.98</b>
300 x 400 mm	220 mm	<b>96.554.98</b>
600 x 400 mm	120 mm	<b>96.570.98</b>
600 x 400 mm	170 mm	<b>96.572.98</b>
600 x 400 mm	220 mm	<b>96.574.98</b>
600 x 400 mm	320 mm	<b>96.576.98</b>







# The **KARL-product range.**

Optimal solutions require a precise analysis of the work processes.  
KARL defines itself as a system supplier for modern, ergonomic workplace design.

The intensive cooperation and the qualified dialogue with our customers is the basis  
for a tailor-made solution for your task.

We also take production-specific requirements and spatial conditions  
like the individual needs of each employee into account.

We visualize functionality, ergonomics, handling and implementation of the spatial specifications  
in a three-dimensional layout.



**QUADRO.**  
The workplace system for the highest demands.



**QUADRO twin.**  
The classic table system with all options.



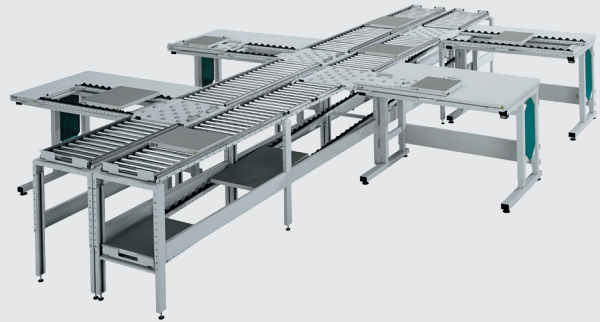
**SINTRO.**  
The variable assembly workstation.



**SINTRO pack.**  
The solution for packing stations.



**BASIC.** The economic workplace system.



**Transfer systems.**



**FIFO shelves.** The flexible material feed.



**Deployment shelves.**



**Cupboard and shelf systems.**



**Measuring and testing technology.**

Ergonomics.  
**Functionality.**  
Custom design.



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