

Knürr Miracel®



Knürr Miracel®

19" Server Rack Platform

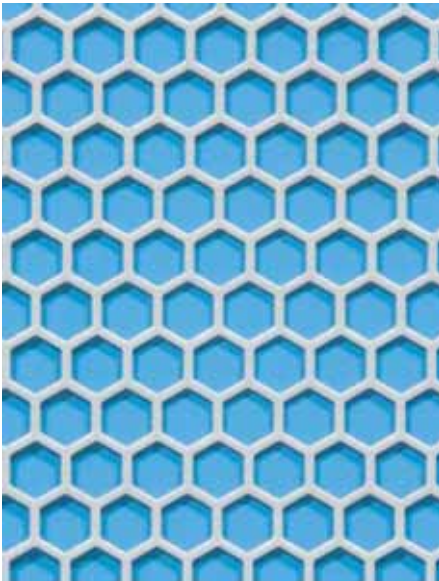


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**Knürr Miracel®
Strong points**



1 MIR20265



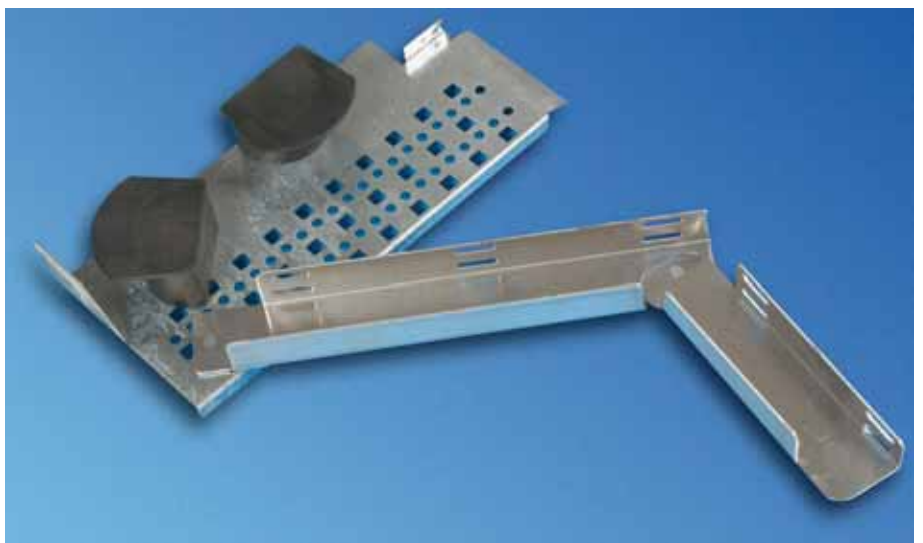
2 MIR20054

- 1 Different concepts and designs for airflow from front to rear. 83% perforation level guarantees optimum airflow.
- 2 Optional tilt restraint provides safety for service personnel. Also available integrated into the plinth.
- 3 Different variants for cable management enable adjustment to the set-up conditions.
- 4 Special server extrusions guarantee easy mounting of 19" servers of all manufacturers.



Glass door example

1 MIR00407



3 MIR20058



2 MIR20053



4 MIR20082

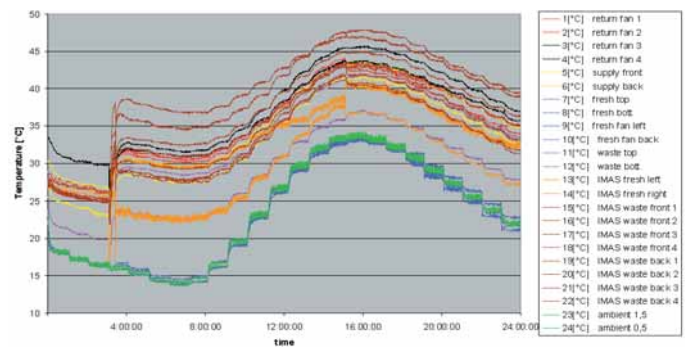
Proven safety with airflow measurements in the thermal management lab



TEC00279

Knürr products meet the requirements of most environmental influences: thermal, chemical and mechanical

- IP requirements
- Electro-Magnetic Compatibility
- Corrosive resistance
- Earthquake stability
- Environmental tests

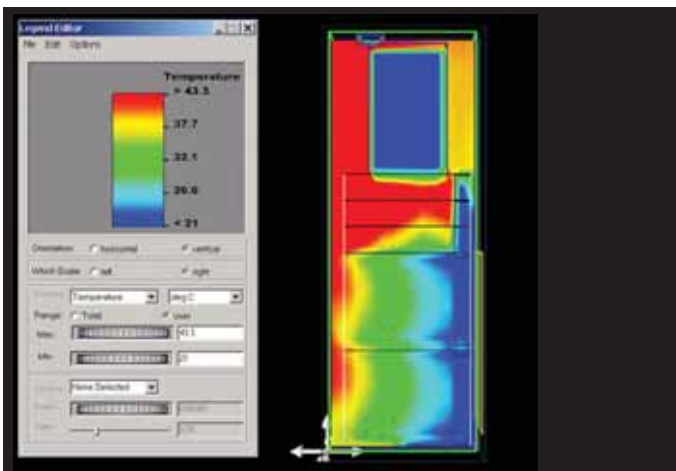


MIR20130

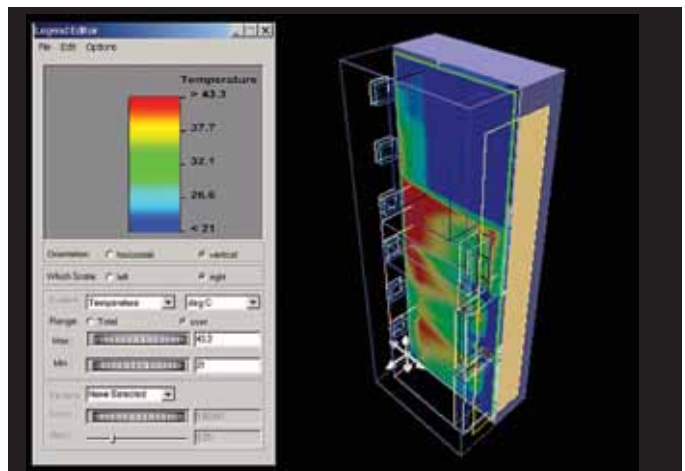
Knürr Thermal Management Lab
Measurements, calculations and tests

- Internal dimensions (3.0 x 3.0 x 3.0) m²
- Temperature range -45 to 60 °C
- Humidity range 10% bis 95%

Airflow and heat simulation

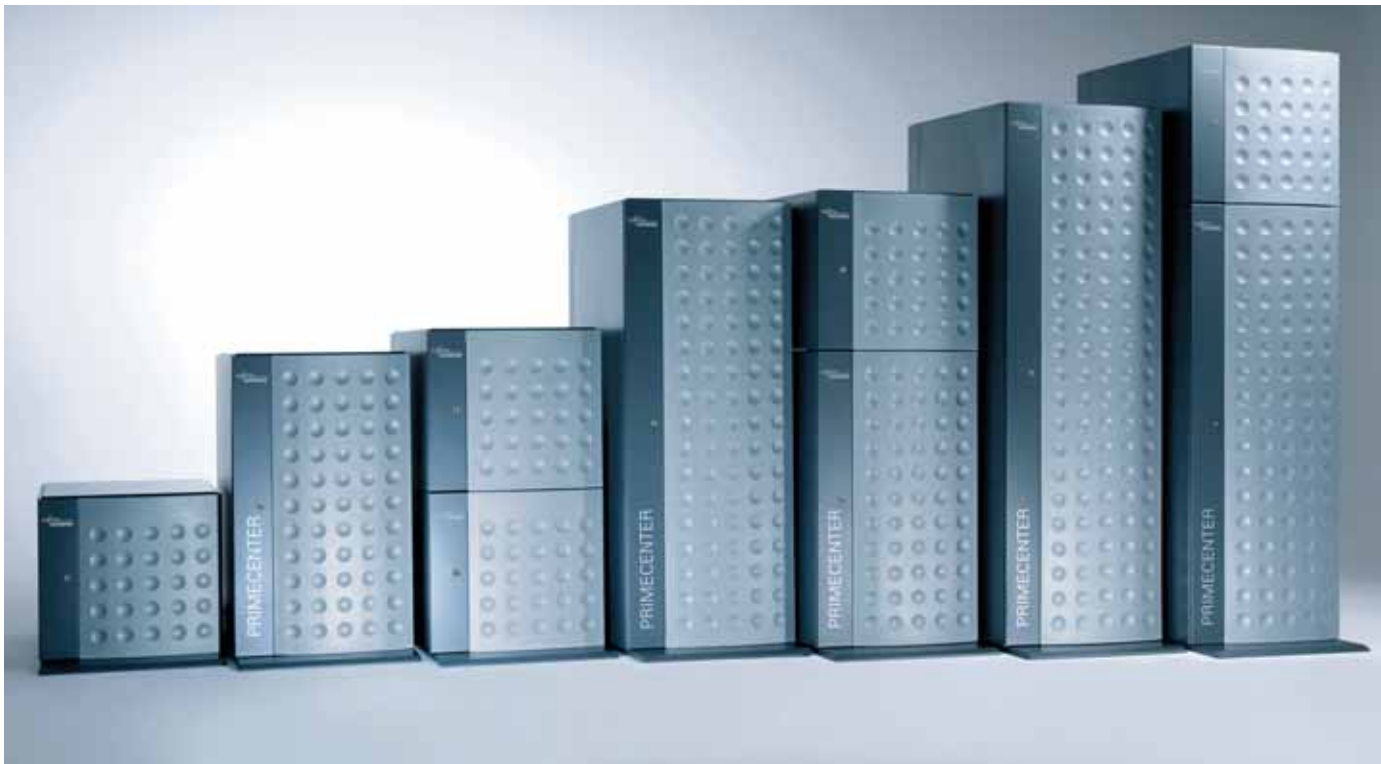


MIR20128



MIR20129

Knürr server racks as requested by the customer



MIR20125

Knürr Showroom





Also in RAL 7021 dark gray

MIR20318

Knürr Miracel® 19" ASP Rack/19" Server Rack Widths 600 mm and 800 mm, front door with perforations

- Basic version without plinth; can also be ordered if required
- With special 19" server extrusions for mounting trade standard servers
- With perforated doors on the front and rear for optimal airflow

Jumping space
At the front: 85.5 mm

Load rating
5000 N static

Protection rating
IP 20

Airflow circulation
Perforation level: 83%

- Tests**
- Earthing in acc. with VDE 0100 T 540
 - Vibration test in acc. with MIL-STD 810 E
 - IP test in acc. with DIN 40 050 / IEC 529

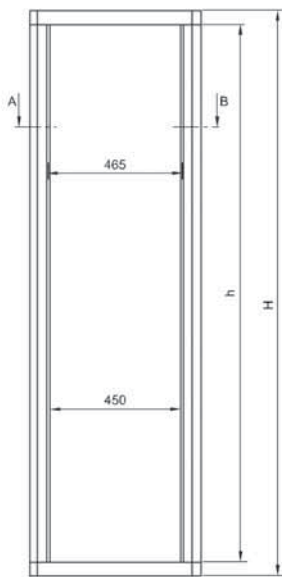
- Material/ Finish**
- Basic rack, extruded aluminum, polished
 - Corner piece, die-cast aluminum
 - Multifunctional braces and 19" bracket extrusions, sheet steel, zinc-passivated
 - Visible surface of the cover, powder-coated texture

- Color**
- Final digit of order number .1:
Visible surface of covers, RAL 7035 light gray
- Final digit of order number .8:
Visible surfaces of the covers, RAL 7021 dark gray

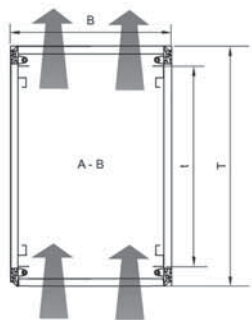
- Supply schedule**
- 1 basic frame
 - 4 19" server sheet steel mounting hole extrusions
 - 2 perforated doors (perforation: 83%)
 - 2 side panels
 - 1 top cover, closed
 - 1 complete earthing set
 - 1 complete locking set

- How supplied**
Assembled

- Note**
Also order mounting adapter for 19" server extrusion for mounting Knürr accessories (see page 1.39)



MIR20313



MIR20313

Dimensions in mm: W = Width, H = Height, D = Depth, h = installation height, d = useful depth, L = length, U = standard height unit, 1 U = 44.45 mm, UP = unit of packaging, kg = weight, = Express item

Conversion: 1 mm = 0.03937 inch, 1 kg = 2.2046 pound

W	H	D	U	h	d	kg	Model	Order no.	UP
600	2000	900	41	1852	740	87	RAL 7035	01.127.933.1	1 unit
600	2000	900	41	1852	740	87	RAL 7021	01.127.933.8	1 unit
600	2200	900	46	2052	740	93	RAL 7035	01.127.934.1	1 unit
600	2200	900	46	2052	740	93	RAL 7021	01.127.934.8	1 unit
600	2000	1000	41	1852	740	91	RAL 7035	01.127.935.1	1 unit
600	2000	1000	41	1852	740	91	RAL 7021	01.127.935.8	1 unit
600	2200	1000	46	2052	740	97	RAL 7035	01.127.936.1	1 unit
600	2200	1000	46	2050	740	97	RAL 7021	01.127.936.8	1 unit
600	2000	1200	41	1852	740	100	RAL 7035	01.128.310.1	1 unit
600	2000	1200	41	1852	740	100	RAL 7021	01.128.310.8	1 unit
600	2200	1200	46	2052	740	110	RAL 7035	01.128.311.1	1 unit
600	2200	1200	46	2052	740	110	RAL 7021	01.128.311.8	1 unit
600	2000	900	41	1852	740	74	No side panels, RAL 7035	01.127.980.1	1 unit
600	2000	900	41	1852	740	74	No side panels, RAL 7021	01.127.980.8	1 unit
600	2200	900	46	2052	740	79	No side panels, RAL 7035	01.127.981.1	1 unit
600	2200	900	46	2052	740	79	No side panels, RAL 7021	01.127.981.8	1 unit
600	2000	1000	41	1852	740	78	No side panels, RAL 7035	01.127.982.1	1 unit
600	2000	1000	41	1852	740	78	No side panels, RAL 7021	01.127.982.8	1 unit
600	2200	1000	46	2052	740	82	No side panels, RAL 7035	01.127.983.1	1 unit
600	2200	1000	46	2050	740	82	No side panels, RAL 7021	01.127.983.8	1 unit
800	2000	1000	41	1852	740	99	RAL 7035	01.128.314.1	1 unit
800	2000	1000	41	1852	740	99	RAL 7021	01.128.314.8	1 unit
800	2200	1000	46	2052	740	108	RAL 7035	01.128.315.1	1 unit
800	2200	1000	46	2052	740	108	RAL 7021	01.128.315.8	1 unit
800	2000	1200	41	1852	740	108	RAL 7035	01.128.316.1	1 unit
800	2000	1200	41	1852	740	108	RAL 7021	01.128.316.8	1 unit
800	2200	1200	46	2052	740	116	RAL 7035	01.128.317.1	1 unit
800	2200	1200	46	2052	740	116	RAL 7021	01.128.317.8	1 unit



MIR20319

Knürr Miracel® 19" ASP Rack, Server Rack Width 600 mm, doors with perforation, with mobile plinth and tilt restraint

- Basic version with mobile plinth, integrated pull-out tilt restraint
- With special 19" server extrusions for mounting trade standard servers, such as Compaq, Dell, Sun, IBM
- With perforated doors on the front and rear for optimal airflow, honeycomb shaped, perforation, 83% airflow

Jumping space
At the front: 85.5 mm

Load rating
5000 N static

Protection rating
IP 20

Airflow circulation
Perforation level: 83%

- Tests**
- Earthing in acc. with VDE 0100 T 540
 - Vibration test in acc. with MIL-STD 810 E
 - IP test in acc. with DIN 40 050 / IEC 529

- Material/ Finish**
- Basic rack, extruded aluminum, polished
 - Corner piece, die-cast aluminum
 - Multifunctional braces and 19" extrusions, sheet steel, zinc-passivated
 - Visible surface of the cover powder-coated texture

Color

- Final digit of order number .1:
Visible surface of covers, RAL 7035 light gray
- Final digit of order number .8:
Visible surfaces of the covers, RAL 7021 dark gray

Supply schedule

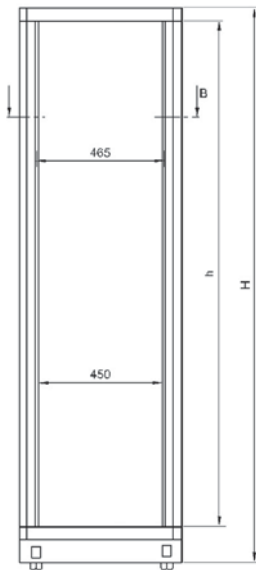
- 1 basic frame
- 4 19" server sheet steel mounting hole extrusions
- 2 perforated doors (perforation: 83%)
- 2 side panels
- 1 top cover with cable entry
- 1 complete earthing set
- 1 mobile plinth with tilt restraint

How supplied

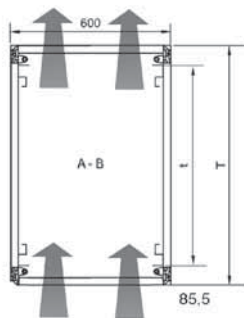
Assembled

Note

Also order mounting adapter for 19" server extrusion for mounting Knürr accessories (see page 1.39)



MIR20186



MIR20186

W	H	D	U	h	d	kg	Model	Order no.	UP
600	2100	900	41	1852	740	97	With side panels, RAL 7035	01.127.925.1	1 unit
600	2100	900	41	1852	740	97	With side panels, RAL 7021	01.127.925.8	1 unit
600	2100	1000	41	1852	740	102	With side panels, RAL 7035	01.127.926.1	1 unit
600	2100	1000	41	1852	740	102	With side panels, RAL 7021	01.127.926.8	1 unit
600	2100	900	41	1852	740	84	No side panels, RAL 7035	01.127.928.1	1 unit
600	2100	900	41	1852	740	84	No side panels, RAL 7021	01.127.928.8	1 unit
600	2100	1000	41	1852	740	89	No side panels, RAL 7035	01.127.929.1	1 unit
600	2100	1000	41	1852	740	89	No side panels, RAL 7021	01.127.929.8	1 unit

Dimensions in mm: W = Width, H = Height, D = Depth, h = installation height, d = useful depth, L = length, U = standard height unit (1 U = 44.45 mm), UP = unit of packaging, kg = weight, = Express item

Conversion: 1 mm = 0.03937 inch, 1 kg = 2.2046 pound



MIR20262

Auch in RAL 7021 Schwarzgrau

Knürr Miracel® 19" Server Rack Width 600, mobile, glass front door

- With fixed 19" installation on the front and rear for components in accordance with IEC297-3
- Prepared for mounting trade standard servers with special server extrusions
- Cable entry via plinth
- Door opening angle 180°
- Airflow from the front to the rear with recessed glass panel on the front door and perforation on the rear doors

■ Jumping space
At the front: 85.5 mm

■ Load rating
5000 N static

■ Airflow circulation
1500 cm² with 41 U
1700 cm² with 46 U

- Tests**
- Earthing in acc. with VDE 0100 T 540
 - Vibration test in acc. with MIL-STD 810 E
 - IP test in acc. with DIN 40 050 / IEC 529

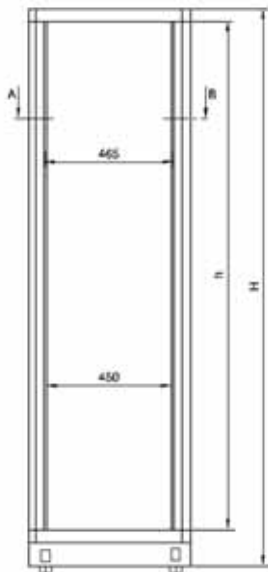
- Material/ Finish**
- Basic rack, extruded aluminum, polished
 - Corner piece, die-cast aluminum, polished
 - Covers, zinc-passivated sheet steel, powder-coated texture
 - Doors, sheet steel, powder-coated texture, glass infill, front door, single safety glass panel, 4 mm
 - Multifunctional braces, sheet steel, zinc-plated

- Color**
- Final digit of order number .1:
Visible surface of covers, RAL 7035 light gray
- Final digit of order number .8:
Visible surfaces of the covers, RAL 7021 dark gray

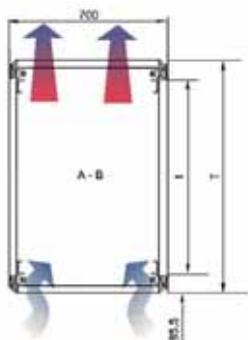
- Supply schedule**
- 1 basic frame
 - 4 19" sheet steel server extrusions
 - 2 side panels with quick connectors
 - 1 top cover, closed
 - 1 front door with single safety glass panel
 - 1 rear door, sheet steel with perforation, large air intake cross section
 - 1 mobile plinth with rear cable entry and leveling feet
 - 1 complete earthing set
 - 1 complete locking set

- How supplied**
Assembled

- Note**
Also order mounting adapter for 19" server extrusion for mounting Knürr accessories (see page 1.39)



MIR20288




MIR20288

W	H	D	U	h	d	kg	Model	Order no.	UP
600	2100	900	41	1852	740	120	RAL7035	01.128.300.1	1 unit
600	2100	900	41	1852	740	120	RAL7021	01.128.300.8	1 unit
600	2300	900	46	2052	740	135	RAL7035	01.128.301.1	1 unit
600	2300	900	46	2052	740	135	RAL7021	01.128.301.8	1 unit
600	2100	1000	41	1852	740	127	RAL7035	01.128.302.1	1 unit
600	2100	1000	41	1852	740	127	RAL7021	01.128.302.8	1 unit
600	2300	1000	46	2052	740	144	RAL7035	01.128.303.1	1 unit
600	2300	1000	46	2052	740	144	RAL7021	01.128.303.8	1 unit

Dimensions in mm: W = Width
H = Height
D = Depth
h = installation height
d = useful depth
L = length

U = standard height unit
1 U = 44.45 mm
UP = unit of packaging
kg = weight

 = Express item

Conversion: 1 mm = 0.03937 inch 1 kg = 2.2046 pound



Also in RAL 7021 dark gray

MIR20319

Knürr Miracel® 19" Server Rack Width 700, doors with perforation

- Front door with large area perforation for ventilation
- Prepared for side cable management with asymmetric layout of the extrusions
- Front, on the side, 3 x 2 U additional 19" installation space

■ **Jumpering space**
At the front: 85.5 mm

■ **Protection rating**
IP 20

■ **Airflow circulation**
Perforation level: 83%

- **Material/ Finish**
- Basic rack, extruded aluminum, polished
 - Corner piece, die-cast aluminum, polished
 - Covers, zinc-passivated sheet steel, powder-coated texture
 - Doors, sheet steel, powder-coated texture
 - Multifunctional braces and 19" extrusions, sheet steel, zinc-passivated

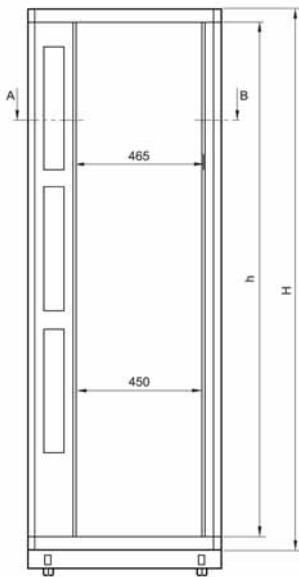
■ **Color**
Final digit of order number .1:
Visible surface of covers, RAL 7035 light gray

Final digit of order number .8:
Visible surfaces of the covers, RAL 7021 dark gray

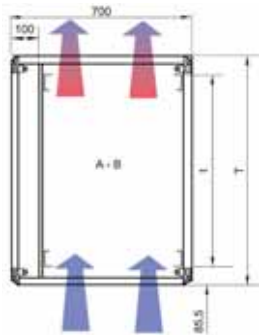
- **Supply schedule**
- 1 basic frame
 - 4 19" sheet steel server extrusions
 - 1 panel, side with 3 x 2 HU vertical installation space
 - 2 side panels
 - 1 top cover, closed
 - 1 front door with large area perforation
 - 1 rear door with large area perforation
 - 1 mobile plinth with rear cable entry and leveling feet
 - 1 complete earthing set
 - 1 complete locking set

■ **How supplied**
Assembled

■ **Note**
Also order mounting adapter for 19" server extrusion for mounting Knürr accessories (see page 1.39)



MIR20279



MIR20279

W	H	D	U	h	d	kg	Model	Order no.	UP
700	2100	900	41	1852	740	100	RAL 7035	01.127.960.1	1 unit
700	2100	900	41	1852	740	100	RAL 7021	01.127.960.8	1 unit
700	2300	900	46	2052	740	107	RAL 7035	01.127.961.1	1 unit
700	2300	900	46	2052	740	107	RAL 7021	01.127.961.8	1 unit
700	2100	1000	41	1852	740	104	RAL 7035	01.127.962.1	1 unit
700	2100	1000	41	1852	740	104	RAL 7021	01.127.962.8	1 unit
700	2300	1000	46	2052	740	111	RAL 7035	01.127.963.1	1 unit
700	2300	1000	46	2052	740	111	RAL 7021	01.127.963.8	1 unit

Dimensions in mm: W = Width, H = Height, D = Depth, h = installation height, d = useful depth, L = length, U = standard height unit, 1 U = 44.45 mm, UP = unit of packaging, kg = weight, = Express item

Conversion: 1 mm = 0.03937 inch, 1 kg = 2.2046 pound



MIR20320

Knürr Miracel® 19" Server Rack
Width 700, front glass door

- Front door with single safety glass panel and opening for air intake
- Prepared for side cable management with asymmetric layout of the extrusions
- Side, patented cable management saves on a high portion of the cable lengths required for extension
- Support brackets are required at the respective positions for mounting servers etc.
- The cable trays with swivel arm are prepared for mounting and routing cables without cable ties

■ **Jumpering space**
 At the front: 85.5 mm

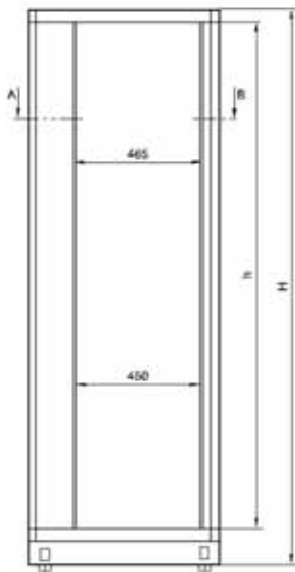
■ **Protection rating**
 IP 20

- **Material / Finish**
- Basic rack, extruded aluminum, polished
 - Corner piece, die-cast aluminum, polished
 - Covers, zinc-passivated sheet steel, powder-coated texture
 - Doors, sheet steel, powder-coated texture, glass infill, front door, single safety glass panel, 4 mm
 - Multifunctional braces and 19" extrusions, sheet steel, zinc-passivated

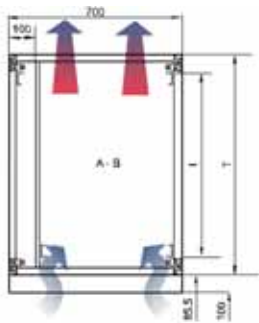
■ **Color**
 RAL 7035 light gray

- **Supply schedule**
- 1 basic frame
 - 4 19" sheet steel mounting hole server extrusions
 - 2 side panels
 - 1 top cover, closed
 - 1 front door with single safety glass panel and openings for air intake
 - 1 rear door with large area perforation
 - 1 mobile plinth with rear cable entry and leveling feet
 - 6 cable trays with swivel arm (7 with 46 U)
 - 4 19"- support brackets, 2 U (5 with 46 U) (BN 01.132.053.9)
 - 2 19"- support brackets, 3 U (2 with 46 U) (BN 01.132.054.9)
 - 1 complete earthing set
 - 1 complete locking set

■ **How supplied**
 Assembled



MIR20280



MIR20280

W	H	D	U	h	d	kg	Model	Order no.	UP
700	2100	900	41	1852	740	124		01.132.043.1	1 unit
700	2300	900	46	2052	740	133		01.132.044.1	1 unit

Dimensions in mm: W = Width, H = Height, D = Depth, h = installation height, d = useful depth, L = length, U = standard height unit, 1 U = 44.45 mm, UP = unit of packaging, kg = weight, = Express item

Conversion: 1 mm = 0.03937 inch, 1 kg = 2.2046 pound



MIR20059

Trim for 19" vertical installation, 3 x 2 U

- For installation in W 700 server racks with asymmetric layout of the 19" extrusions

- Material**
Sheet steel, 1.5 mm
- Finish**
Powder-coated, RAL 7035
- Installation**
Can be mounted on the left rack side 19" vertical installation, 3 x 2 U
Max. depth of installation components, 300 mm
(only for installation in server rack BN 01.132.043.1 / 01.132.044.1)
- Supply schedule**
1 trim
Mounting material
- How supplied**
Flat-packed kit

W	H	D	U	h	d	kg	Model	Order no.	UP
			41				Left	01.132.048.1	1 unit
			46				Left	01.132.049.1	1 unit



MIR20058

Cable Tray

- For carrying light installation equipment (max. 5 kg)
- For orderly storage of excess cables
- Only for installation in server rack BN 01.132.043.1 / 01.132.044.1

- Supply schedule**
1 storage tray
Mounting material
- How supplied**
Flat-packed kit

W	H	D	U	h	d	kg	Model	Order no.	UP
								01.132.050.9	1 unit
							With swivel arm	01.132.051.9	1 unit



MIR20106

Support Bracket

- Only for server rack B 700 with BN 01.132.043.1 / 01.132.044.1
- For mounting chassis on the 19" level with 4 fixing points

W	H	D	U	h	d	kg	Model	Order no.	UP
			2					01.132.053.9	1 unit
			3					01.132.054.9	1 unit

Dimensions in mm: W = Width U = standard height unit
 H = Height 1 U = 44.45 mm
 D = Depth UP = unit of packaging
 h = installation height kg = weight
 d = useful depth
 L = length = Express item

Conversion: 1 mm = 0.03937 inch 1 kg = 2.2046 pound



MIR20050

Knürr Miracel® Plinth, mobile and stationary with tilt restraint, height 100 mm

- Type 1:** mobile
Type 2: fixed
- Cable entry possible on the rear
- Load rating**
5000 N static
- Material**
Sheet steel, 2 mm
- Finish / Color**
powder-coated texture, RAL 7035 light gray
- Supply schedule, type 1:**
1 plinth frame
2 fixed castors with snib
2 swivel castors
4 leveling feet
1 tilt restraint
Mounting material
- Supply schedule, type 2:**
1 plinth frame
4 leveling feet
1 tilt restraint
Mounting material
- How supplied**
Flat-packed kit



MIR20053



MIR20260

MIR20261

W	H	D	U	h	d	kg	Model	Order no.	UP
600	100	900					Type 1, mobile	01.127.260.1	1 unit
600	100	900					Type 1, mobile	01.127.260.8	1 unit
700	100	900					Type 1, mobile	01.127.261.1	1 unit
700	100	900					Type 1, mobile	01.127.261.8	1 unit
800	100	900					Type 1, mobile	01.127.262.1	1 unit
800	100	900					Type 1, mobile	01.127.262.8	1 unit
600	100	1000					Type 1, mobile	01.127.263.1	1 unit
600	100	1000					Type 1, mobile	01.127.263.8	1 unit
700	100	1000					Type 1, mobile	01.127.264.1	1 unit
700	100	1000					Type 1, mobile	01.127.264.8	1 unit
800	100	1000					Type 1, mobile	01.127.265.1	1 unit
800	100	1000					Type 1, mobile	01.127.265.8	1 unit
600	100	1200					Type 1, mobile	01.127.266.1	1 unit
600	100	1200					Type 1, mobile	01.127.266.8	1 unit
800	100	1200					Type 1, mobile	01.127.268.1	1 unit
800	100	1200					Type 1, mobile	01.127.268.8	1 unit
600	100	900					Type 2, stationary	01.127.270.1	1 unit
600	100	900					Type 2, stationary	01.127.270.8	1 unit
700	100	900					Type 2, stationary	01.127.271.1	1 unit
700	100	900					Type 2, stationary	01.127.271.8	1 unit
800	100	900					Type 2, stationary	01.127.272.1	1 unit
800	100	900					Type 2, stationary	01.127.272.8	1 unit
600	100	1000					Type 2, stationary	01.127.273.1	1 unit
600	100	1000					Type 2, stationary	01.127.273.8	1 unit
700	100	1000					Type 2, stationary	01.127.274.1	1 unit
700	100	1000					Type 2, stationary	01.127.274.8	1 unit
800	100	1000					Type 2, stationary	01.127.275.1	1 unit
800	100	1000					Type 2, stationary	01.127.275.8	1 unit
600	100	1200					Type 2, stationary	01.127.276.1	1 unit
600	100	1200					Type 2, stationary	01.127.276.8	1 unit
800	100	1200					Type 2, stationary	01.127.278.1	1 unit
800	100	1200					Type 2, stationary	01.127.278.8	1 unit



MIR20051

Tilt Restraint for Miracel® Racks Quick assembly system

- For fixing on the front vertical posts of all variants of MIRACEL racks
- Quick and easy mounting and removal without tools
- Use only as required

- **Supply schedule**
2 Anti-tilt restrainers
- **How supplied**
Flat-packed kit

W	H	D	U	h	d	kg	Model	Order no.	UP
								01.127.310.9	1 unit



MIR20095

Combi Lock

- Mechanical solution for a high-grade lock system
- Access either via a three digit code that can be individually set on the handle or via a master key that enables access to the rack independently of the code setting
- Suitable for Miracel rack single doors with swing handle
- Later upgrade without mechanical alteration also possible

W	H	D	U	h	d	kg	Model	Order no.	UP
								01.137.013.9	1 unit



MIR00066

Door Locking Set

- **Supply schedule**
1 lock set
2 keys (half-cylinder)
- **Note**
Further cylinder locks on request!

W	H	D	U	h	d	kg	Model	Order no.	UP
								05.041.299.9	1 unit



MIR00069

Complete Locking Set

- **Supply schedule**
2 cylinders with 2 keys each
2 lockable fasteners for side panel with 2 keys each

W	H	D	U	h	d	kg	Model	Order no.	UP
								01.130.940.9	1 unit



MIR20092

Miracel® Extension Kit, 100 mm

- For extending rack depths, even at later stages
- Can be used in combination with doors (cannot be used for rear panel)
- Additional cabling space, space for airflow etc. can be easily generated

- **Material**
Sheet steel
- **Finish/ Color**
Powder-coated texture, RAL 7035

- **Supply schedule**
2 trims, vertical
1 horizontal trim, top
Extension adapter
Mounting material

- **How supplied**
Flat-packed kit

- **Note**
With use of double doors, please also order lock bracket set: Order no. 01.127.649.9



MIR20273



MIR20274

W	H	D	U	h	d	kg	Model	Order no.	UP
600	1200	23						01.127.550.1	1 unit
600	1800	37						01.127.553.1	1 unit
600	2000	41						01.127.554.1	1 unit
600	2200	46						01.127.555.1	1 unit
700	1800	37						01.127.559.1	1 unit
700	2000	41						01.127.560.1	1 unit
700	2200	46						01.127.561.1	1 unit
800	1200	23						01.127.562.1	1 unit
800	1800	37						01.127.565.1	1 unit
800	2000	41						01.127.566.1	1 unit
800	2200	46						01.127.567.1	1 unit

Dimensions in mm: W = Width
H = Height
D = Depth
h = installation height
d = useful depth
L = length
U = standard height unit
1 U = 44.45 mm
UP = unit of packaging
kg = weight
Express item

Conversion: 1 mm = 0.03937 inch 1 kg = 2.2046 pound