

This unique, modular construction allows for flexible mounting of accessories, as well as a complete cable management system with an extensive range of accessory components. The server rails guarantee easy mounting of 19" servers of all types plus Knurr accessories. With fully perforated doors (83% open area) this enclosure is set up for optimal thermal management – far exceeding server OEM requirements for effective heat dissipation.



### Features & Benefits

Flexibility:	Higher Availability:	Lowest Total Cost Of Ownership:
<ul style="list-style-type: none"> <li>▪ Patented aluminum extrusion creates channels allowing for easy mounting almost anywhere in the cabinet.</li> <li>▪ Cabinet and accessories designed as a system allowing customization with standard accessories.</li> <li>▪ Complete cable management system provides management for the user's needs and requirements.</li> <li>▪ Standard power strip mounting bracket allows power strips to be mounted virtually anywhere in the cabinet.</li> </ul>	<ul style="list-style-type: none"> <li>▪ Cabinet and accessory items designed as a complete system, providing a more complete and flexible solution for most applications.</li> <li>▪ Logical cable management system reduces obstructions to airflow, reducing the adverse effects of heat on computer equipment.</li> <li>▪ The power strip can be conveniently mounted in the zero U space, making it more accessible for the user.</li> </ul>	<ul style="list-style-type: none"> <li>▪ Simplified installation of components reduces overall installation time, reducing costs.</li> <li>▪ No specialized components necessary, reducing costs and lead times.</li> <li>▪ Using a standard cable management system eliminates the need for a special system, reducing costs.</li> <li>▪ Maximizes the amount of usable space in the cabinet, ultimately reducing cabinet count.</li> </ul>

## Frequently Asked Questions

Question	Resolution
<b>Your cabinet frame is manufactured from aluminum. Is that strong enough for a server cabinet?</b>	Many high load products are made from aluminum, because it offers a significantly lower product weight in tandem with a stiff, strong frame. These products include airplanes, automobiles and spacecraft. Aluminum performs very well in high weight load applications.
<b>I have been using the same cabinet manufacturer for the past few years. Why would I consider switching to Knurr?</b>	One of the primary reasons users change brands is because a change in technology renders the current cabinet obsolete. The best example of that over the past few years is due either to the depth of the cabinet or the amount of airflow through the cabinet. Knurr offers cabinets in standard depths of 40” and 44”, both with doors that offer 83% open area – the highest in the industry. Couple that with the ease of working with the Knurr cabinet and a move to Knurr is logical.
<b>What is unique about Knurr and the Miracel cabinet?</b>	Besides the lightweight, but strong aluminum frame, Knurr offers the T Slot channel in the frame. This T Slot, with a spring nut, allows for components to be mounted virtually anywhere in the cabinet. The same T Slot also allows for the easy mounting of tool-less cable management accessories.

## Competitive Comparison

Knurr Miracel	APC SX	Hewlett Packard	Rittal	The Knurr Advantage
Patented aluminum extruded frame that is 50 lbs lighter than corresponding steel cabinet	Traditional folded sheet steel design	Roll form sheet steel frame	Roll form sheet steel frame	Lighter weight frame makes it easier for one technician to install cabinets.
Patented channel allows for a spring nut to be installed virtually anywhere in the cabinet frame	Holes at 1” centers	Repeating holes on 25mm centers	Repeating holes on 25mm centers	The ability to have a spring nut installed virtually anywhere in frame channel allows for the greatest flexibility in mounting components. Also, the channel allows for the use of tool-less cable management accessories.
Wide accessory line, offering hundreds of accessory items	Less than 25 cabinet accessory items	Less than 25 cabinet accessory items	Wide accessory line, offering hundreds of accessory items	Wide range of standard accessory items allows for “customization” using standard accessory items.
Full line of structured cable accessories, including tool-less cable management items	Metal D rings	Metal D rings	Wide cable management accessory line	Full line of cable management items make it easy to effectively route cables in cabinet. Tool-less items make the installation very user-friendly.
83% open perforated area	65% open area	78% open area	65% open area	The more open area a door provides means a much greater airflow through the cabinet, reducing the buildup of heat.



## Specifications

### ENCLOSURE DIMENSIONS

42U	Overall Frame Dimensions		Rack		Adjustable Rack Depth	Internal Rack Height		Side Panel
	Width	Depth	Internal Rack Width	IT Component Width		RACK UNITS	In. (mm)	
Model	In. (mm)	In. (mm)	In. (mm)	In. (mm)	Max In.(mm)			
010200012	23.6 (600)	39.3 (1000)	21.1 (535)	17.8 (450)	36.8 (935)	42	73.5 (1867)	No
010200013	23.6 (600)	39.3 (1000)	21.1 (535)	17.8 (450)	36.8 (935)	42	73.5 (1867)	Yes
002185450	23.6 (600)	43.3 (1100)	21.1 (535)	17.8 (450)	40.7 (1035)	42	73.5 (1867)	No
002185460	23.6 (600)	43.3 (1100)	21.1 (535)	17.8 (450)	40.7 (1035)	42	73.5 (1867)	Yes
002185250	23.6 (600)	43.3 (1100)	21.1 (535)	17.8 (450)	40.7 (1035)	42	73.5 (1867)	No
002185260	23.6 (600)	43.3 (1100)	21.1 (535)	17.8 (450)	40.7 (1035)	42	73.5 (1867)	Yes
002185410	23.6 (600)	47.2 (1200)	21.1 (535)	17.8 (450)	44.7 (1135)	42	73.5 (1867)	No
002185420	23.6 (600)	47.2 (1200)	21.1 (535)	17.8 (450)	44.7 (1135)	42	73.5 (1867)	Yes
010200016	31.5 (800)	43.3 (1100)	28.9 (735)	17.8 (450)	40.7 (1035)	42	73.5 (1867)	No
010200017	31.5 (800)	43.3 (1100)	28.9 (735)	17.8 (450)	40.7 (1035)	42	73.5 (1867)	Yes
002185270	31.5 (800)	43.3 (1100)	28.9 (735)	17.8 (450)	40.7 (1035)	42	73.5 (1867)	No
002185280	31.5 (800)	43.3 (1100)	28.9 (735)	17.8 (450)	40.7 (1035)	42	73.5 (1867)	Yes
010200008	31.5 (800)	47.2 (1200)	28.9 (735)	17.8 (450)	44.7 (1135)	42	73.5 (1867)	No
010200009	31.5 (800)	47.2 (1200)	28.9 (735)	17.8 (450)	44.7 (1135)	42	73.5 (1867)	Yes

### ENCLOSURE DIMENSIONS

47U	Overall Frame Dimensions		Rack		Adjustable Rack Depth	Internal Rack Height		Side Panel
	Width	Depth	Internal Rack Width	IT Component Width		RACK UNITS	In. (mm)	
Model	In. (mm)	In. (mm)	In. (mm)	In. (mm)	Max In.(mm)			
010200014	23.6 (600)	39.3 (1000)	21.1 (535)	17.8 (450)	36.8 (935)	47	82.25 (2089.2)	No
010200015	23.6 (600)	39.3 (1000)	21.1 (535)	17.8 (450)	36.8 (935)	47	82.25 (2089.2)	Yes
002185470	23.6 (600)	43.3 (1100)	21.1 (535)	17.8 (450)	40.7 (1035)	47	82.25 (2089.2)	No
002185480	23.6 (600)	43.3 (1100)	21.1 (535)	17.8 (450)	40.7 (1035)	47	82.25 (2089.2)	Yes
010200006	23.6 (600)	47.2 (1200)	21.1 (535)	17.8 (450)	44.7 (1135)	47	82.25 (2089.2)	No
010200007	23.6 (600)	47.2 (1200)	21.1 (535)	17.8 (450)	44.7 (1135)	47	82.25 (2089.2)	Yes
010200018	31.5 (800)	43.3 (1100)	28.9 (735)	17.8 (450)	40.7 (1035)	47	82.25 (2089.2)	No
010200019	31.5 (800)	43.3 (1100)	28.9 (735)	17.8 (450)	40.7 (1035)	47	82.25 (2089.2)	Yes
010200010	31.5 (800)	47.2 (1200)	28.9 (735)	17.8 (450)	44.7 (1135)	47	82.25 (2089.2)	No
010200011	31.5 (800)	47.2 (1200)	28.9 (735)	17.8 (450)	44.7 (1135)	47	82.25 (2089.2)	Yes

## Knurr Miracel Related Products



### Liebert OpenComms EM and Liebert OpenComms vEM-14 Controllers

Liebert OpenComms EM controllers are network-enabled devices for monitoring temperature, humidity and contact closures inside critical environments, including racks and small computer rooms.



### Liebert PowerSure PSI

The most price competitive UPS in its class with a factory-installed Liebert IntelliSlot Web Card for network communications. Available in 1000, 1440, 1920, 2200 and 3000 VA ratings.



### Liebert GXT

A fault-tolerant, network-enabled UPS capable of delivering data center quality power protection to racks and small rooms. Available in 500, 700, 1000, 1500, 2000, 3000, 6000, and 10,000 VA.



### Liebert MicroPOD™

Maintenance bypass switch that permits scheduled maintenance or UPS replacement without discontinuing power to critical equipment.



### Liebert Nform

A simple to use monitoring and communications software solution that allows network monitoring of power and cooling equipment.



### Liebert MultiLink™ Shutdown Software

Monitors UPS battery status, warns users of impending power loss and automatically shuts down systems in a safe and orderly manner.



### Liebert MP Advanced Power Strips

“Smart” power strips allow customers to monitor and control equipment at the receptacle level.

## Knurr Miracel® Side Panel

- **Material:** Sheet steel, 1.0 mm
- **Finish/Color:** Powder-coated texture, black
- **Supply Schedule:** 1 side panel & mounting material
- **Supplied:** Flat packed kit

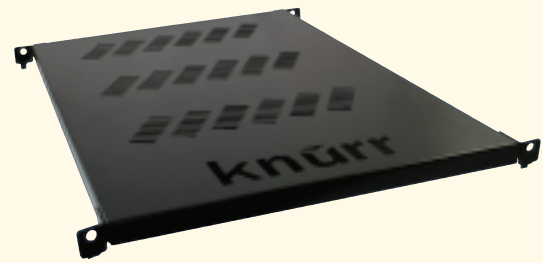
Depth In. (mm)	Height In. (mm)	HU/U	Order Number	Up
39.37" (1000)	78.74" (2000)	42	01.020.002.2	1 unit
39.37" (1000)	86.61" (2200)	47	01.020.002.4	1 unit



## Knurr 19" Tool-less Shelf

With perforation to optimize airflow

- **Material/Finish:** Sheet steel, Powder-coated texture
- **Color:** Black
- **Load Rating:** 150 lbs static per item
- **Supply Schedule:** 1 complete shelf
- **Supplied:** Flat box, fully assembled

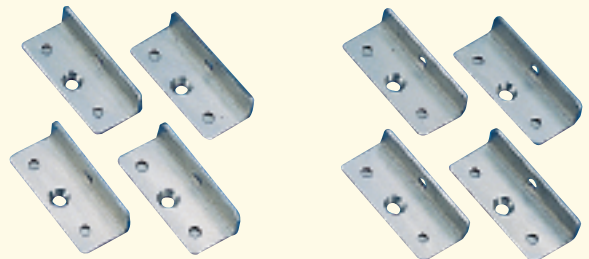


W	D	W	L	for rack type	Order Number	Up
In. (mm)	In. (mm)	In. (mm)	In. (mm)			
19"	23.75" (603)	17.25" (438)	23.75" (603)	all EIA racks with square	00.218.500.0	1 unit

## Knurr Miracel® Baying Kit

For mechanical, stable connection of rack and cabinet units.

- **Material/Finish:** Sheet steel, 0.08" (2 mm), zinc passivated
- **Supply Schedule:** 8 mounting brackets (for connecting 2 racks/cabinets), mounting material
- **Supplied:** Flat packed kit

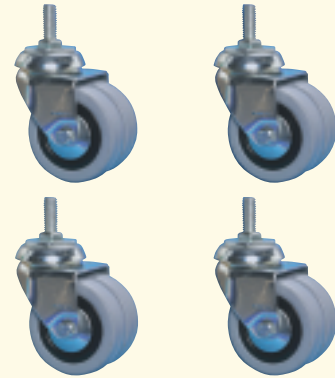


Order Number	Up
01.130.935.7	1 unit

### Knurr Miracel® Casters

Can be mounted on the threaded eyelet of the basic rack.

- **Caster Diameter:** 2.95" (75 mm)
- **Threaded Bolt:** M12
- **Loaded Capacity Per Caster:** 220 lbs
- **Supply Schedule:** 2 Casters swivel locking, 2 Casters swivel non locking, 4 Casters brackets
- **Supplied:** Flat packed kit



Height In. (mm)	Order Number	Up
4.31" (109.5)	01.350.615.9	1 unit

### Cable Management — Lobster Claw

Easy to install cable management piece that holds bundles of cable for efficient routing in the cabinet. The Lobster Claw installs, without the need for any tools, in less than one second, making installation the easiest in the industry. For custom cable routing, the Lobster Claw can be mounted in the T-Slot in every face of the frame extrusion.

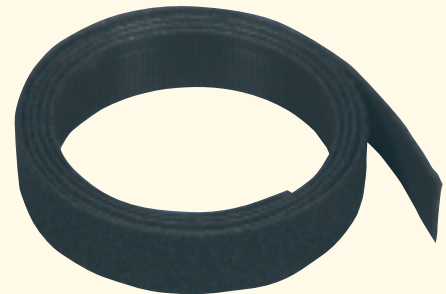


Dimensions	Order Number	Up
4.75" x 3"	002185050	Pack of 10

### Cable Management — Velcro Loop

For stress-free mounting and bundling of copper and fiber-optic cables. Can be cut to any length required.

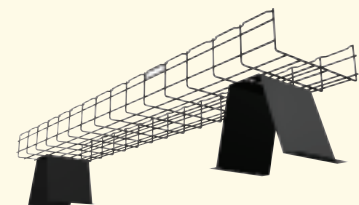
- **Material/Color:**  
Black: One Wrap Fastener, F.R.T., UL 94-V2
- **Supply Schedule:** 1 meter or 25 meter Velcro strip
- **Supplied:** Meter Strips



Order Number
050400609

### Cable Management — Laddering

Today's racks hold more critical equipment than ever before. Inadequate cable management can block critical airflow or access. Knurr wire basket provides proper cable management for power or data cables within the rack.



Dimensions	Order Number
5' section x 12"	002185230