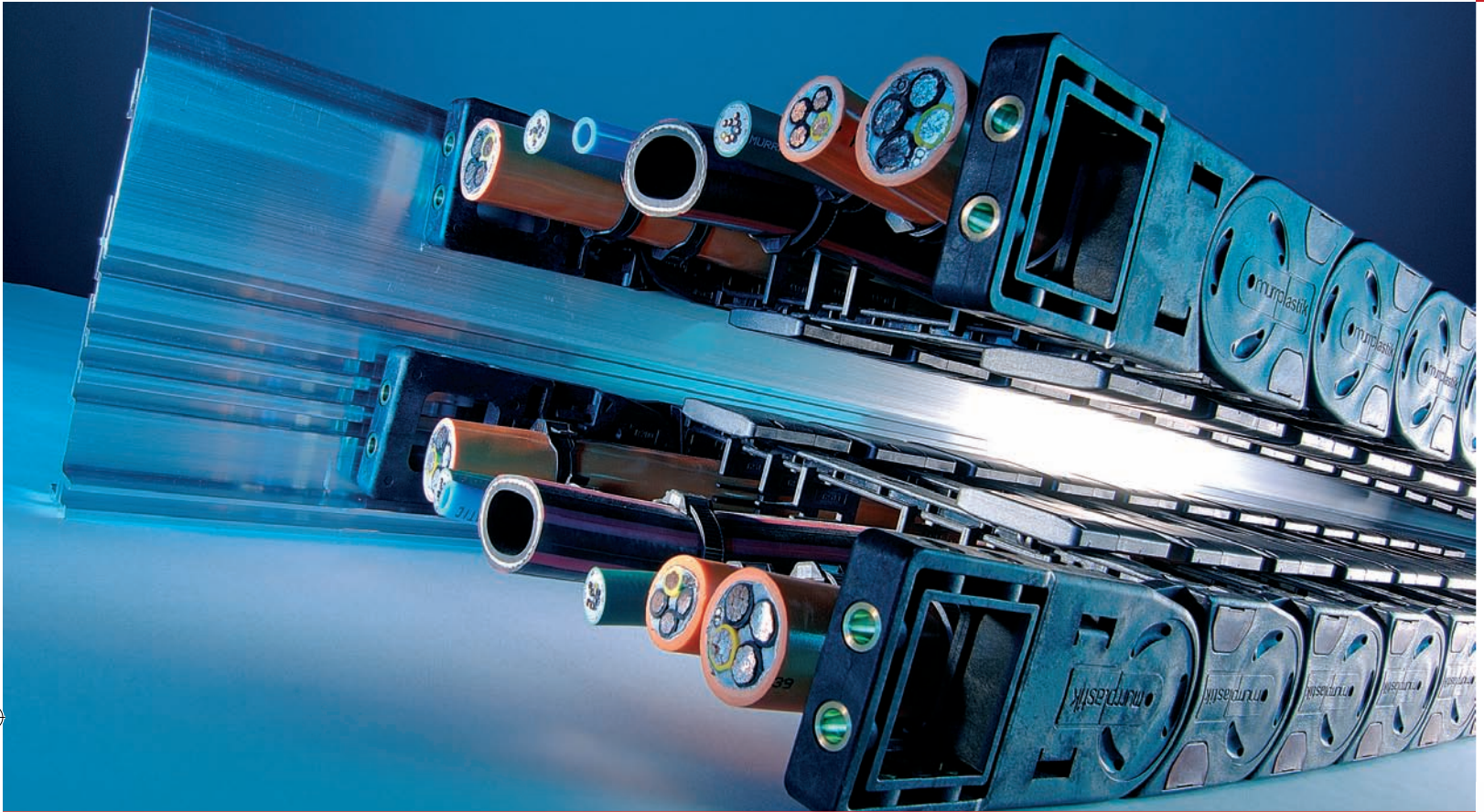


Magnetic chain technology for non-contact gliding!



The magnetic chain principle



Murrplastik Magnetic chain Technology MMT – a forward-looking innovation

The principle of the magnetic chain is as simple as it is unique in this form. Strong magnets, poled in such a way that they reject each other when opposed, are mounted on all links on the inside bend along the entire length of the new Murrplastik magnetic chain.

What does not glide or roll, but instead floats above without touching, does not generate any wear, vibration or noise.

And where there is no friction to overcome, drive units such as the motor and gearbox can be dimensioned significantly smaller even with a sometimes considerable increase in running speeds.

This technology enables a sharp improvement in service life while at the same time permitting extensive loads such as those required in crane and materials handling technology.

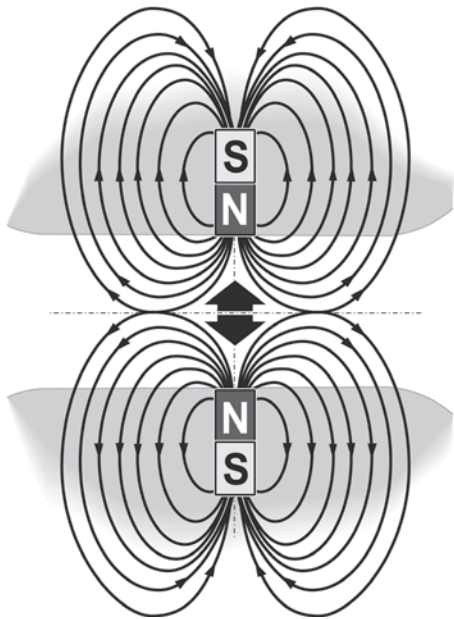


The idea

Magnets have the property of being mutually attractive. With two magnets of the same kind, the plus pole is attracted to the minus pole and vice versa. We took advantage of the fact that the reverse is also true - identical poles will repel each other when they meet - to develop an innovation for long travel distances.

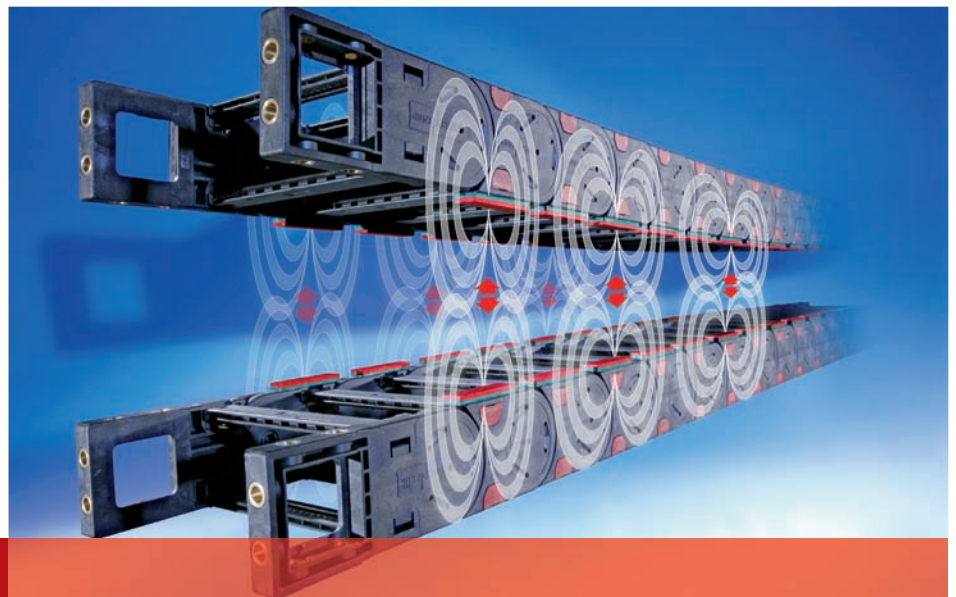
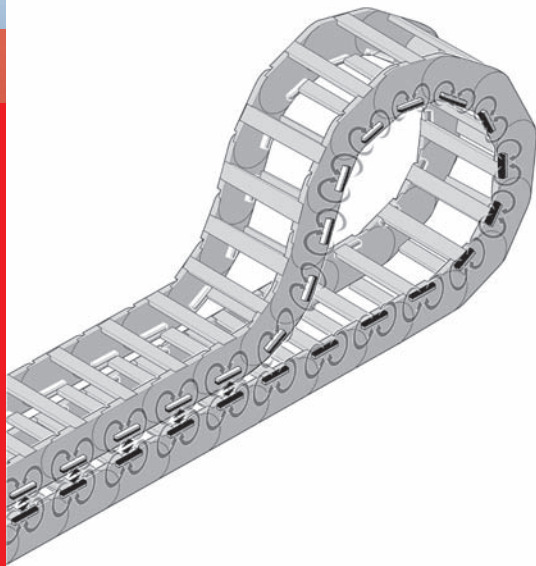
Murrplastik Magnetic chain Technology – MMT for short – is based on the idea of placing homopolar magnets on the inside bend of the cable drag chain.

If the moving end bracket of the chain leaves the unsupported area, the upper run descends but, because of the carrying capacity of the homopolar magnets, glides without touching rather than coming to rest. As the load on the magnetic chain rises, the distance between the upper and the lower run reduces to the defined carrying force. If this limit is exceeded, another magnet is simply placed on the chain and the carrying force rises sharply again.



EMC - not an issue for Murrplastik magnet technology

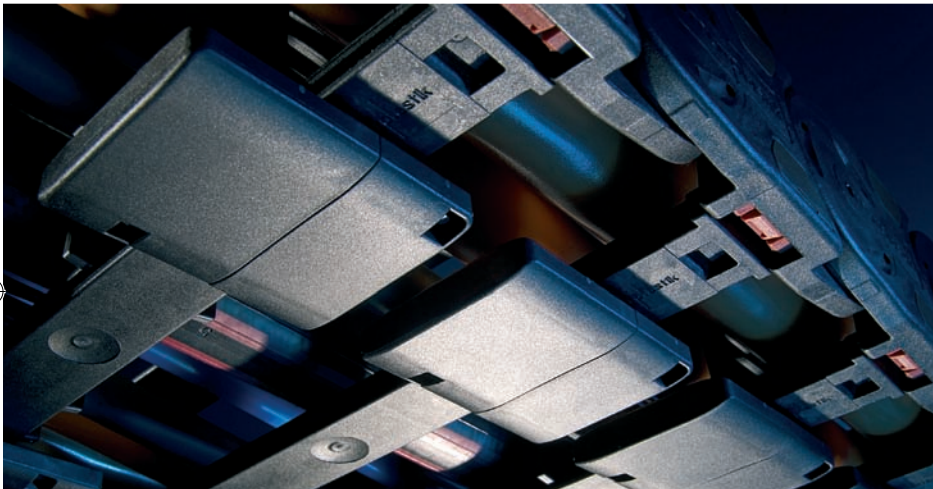
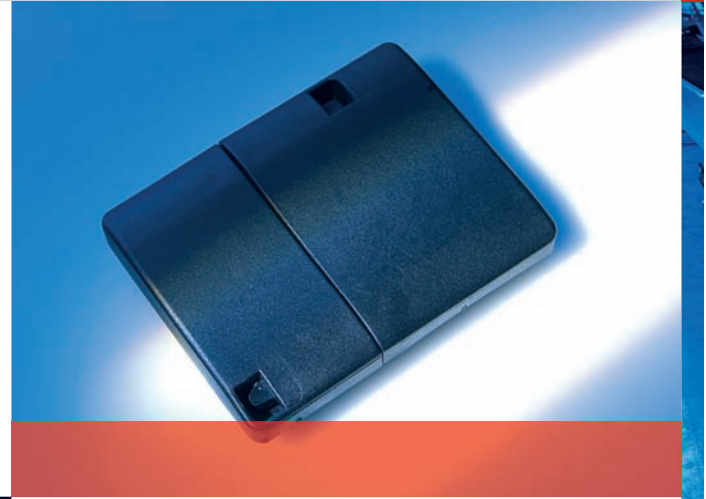
The attachment of magnets to the chain links means that there is no relative movement between the carried lines and the magnets. This is a critical advantage. If a coil – in our case a line – moves in a magnetic field, for instance, a voltage is always induced. Such voltages could lead to EMC problems with data cables (EMC = electromagnetic compatibility). Murrplastik magnetic chain technology, however, has been proven to eliminate these interfering voltages.



Consistent modular system offers retrofit capability

Murrplastik's magnetic chains offer even more advantages

The MMT components are based on the standard components of the PowerLine series with all the variations in internal heights and widths as well as the advantages of easy chain opening by the "Click-lock" system and rapid configuration through the proven hinged shelving system.



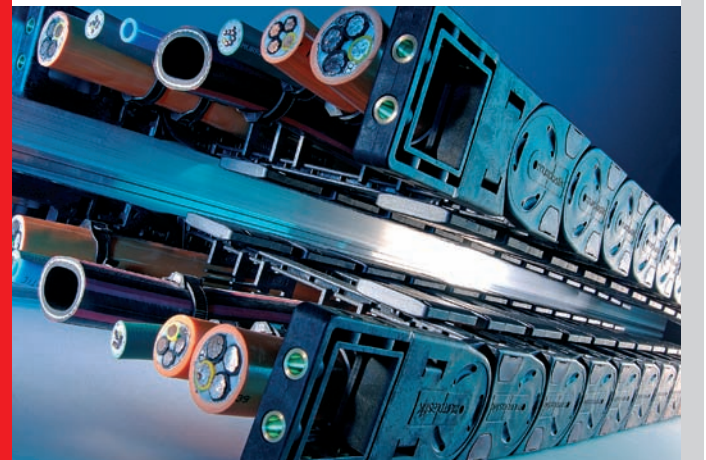
The ability to adapt the housing of the magnet holder (see illustrations) to the cable drag chains removes the need for special - and therefore expensive - components.

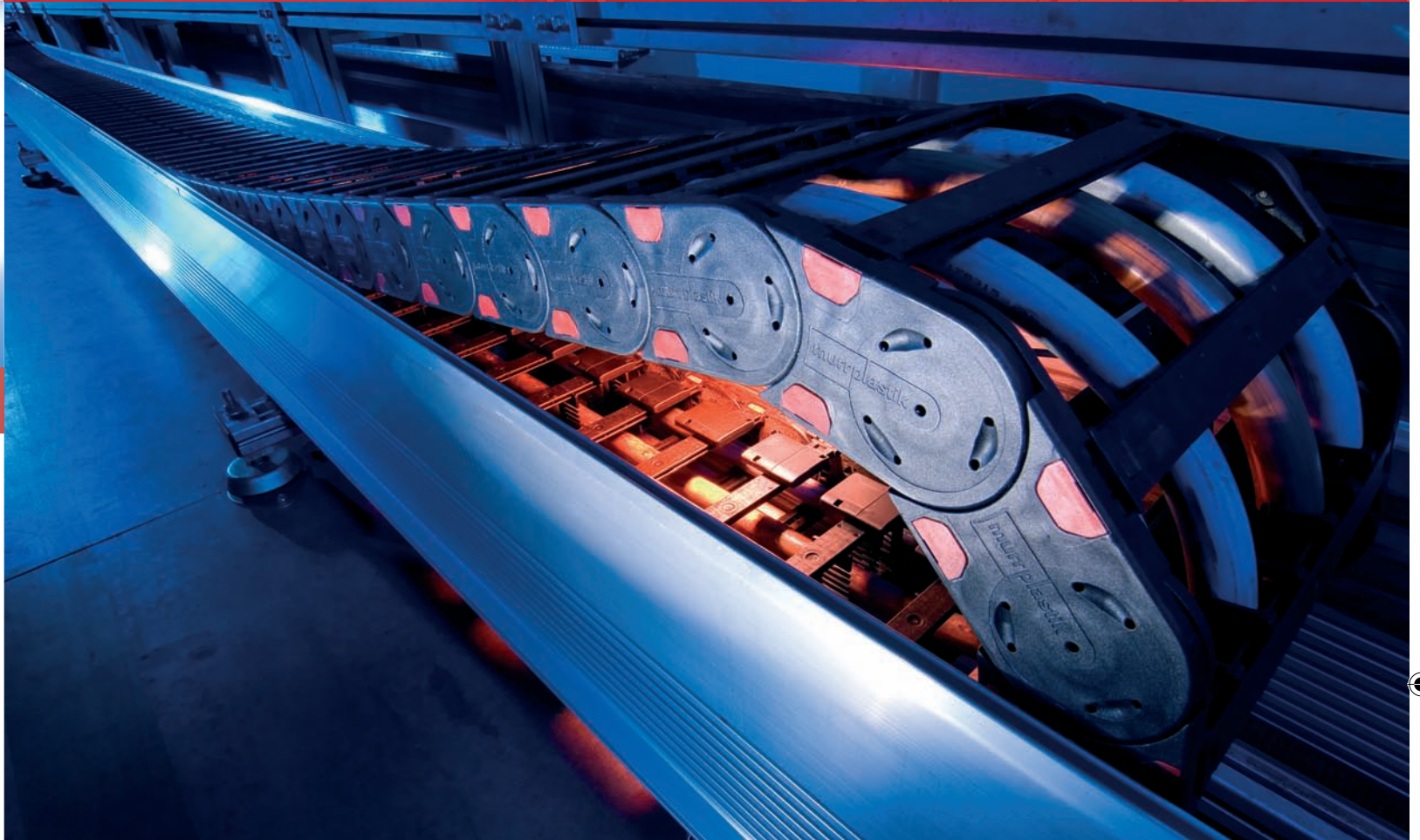
Another advantage of the modular construction principle is that it is possible to retrofit preassembled gliding cable drag chains with the magnet holder housings, thus converting the chains to floating magnetic chains.

Variable guide channel ensures reliable guidance of the system

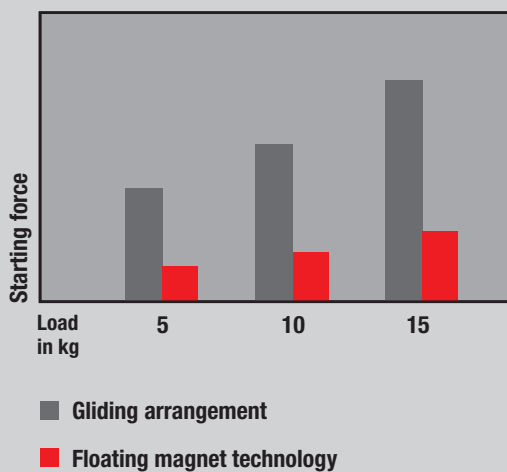
Any lateral guidance of the magnetic chains that may be required, such as that necessary for gliding applications, is guaranteed by the VAW aluminium variable guide channel system. The guide channel is yet another product that has proven its worth over the years and is a part of the modular system.

The versions of the MMT series boast particularly high stability and long life, something that we guarantee for the whole system.





Low starting forces



The complete concept – Murrplastik Magnetic chain Technology (MMT)


A complete system for long travel distances, heavy loads, high velocities and long life.

The MMT components were subjected to months of testing with a wide variety of travel parameters and loads both indoors and outdoors before being brought to series readiness.

Service life achievable with the MMT is many times greater than that possible in traditional gliding applications.

Data sheet


Murrplastik Magnetic chain Technology (MMT) for long travel distances

MMT-MP 41.2	External width in mm	Internal width in mm	Radius in mm	Ridge variant	Carrying force = 12 kg/m load (2 magnets)	Carrying force = 20 kg/m load (3 magnets)
						
MMT-MP 41.2.121	153	121		full-ridged		
MMT-MP 41.20.133	165	133				
MMT-MP 41.20.144	176	144				
MMT-MP 41.20.146	178	146				
MMT-MP 41.20.158	190	158				
MMT-MP 41.20.171	203	171				
MMT-MP 41.20.182	214	182				
MMT-MP 41.20.196	228	196				
MMT-MP 41.20.220	252	220				
MMT-MP 41.20.246	278	246				
MMT-MP 41.20.296	328	296				
MMT-MP 41.20.346	378	346				
MMT-MP 41.20.396	428	396				
MMT-MP 41.20.446	478	446				
MMT-MP 41.20.496	528	496	250			
MMT-MP 41.20.546	578	546	300			

Chain bracket	Item no.		Pack
MMT-KA 41-FB	0411 0000 54	with bushing	1
MMT-KA-41-FG	0411 0000 55	with thread	1
MMT-KA 41	0410 0000 51		1

Shelving system	Item no.		Pack
MMT-TR 41.1	0411 0000 9200	Separator	1
MMT-RTT 41	1000 9041 2000	RTT 41 Shelf support, divisible	1
MMT-RB 28-5	1000 0000 2800	Shelf 28 mm	1
MMT-RB 56-5	1000 0000 5601	Shelf 56 mm	1
MMT-RB 84-5	1000 0000 8400	Shelf 84 mm	1
MMT-RB 112-5	1000 0001 1200	Shelf 112 mm	1
MMT-RB 140-5	1000 0001 4000	Shelf 140 mm	1
MMT-RB 168-5	1000 0001 6800	Shelf 168 mm	1
MMT-RB 196-5	1000 0001 9600	Shelf 196 mm	1

Murrplastik Magnetic chain Technology (MMT) for long travel distances

MMT-MP 52.2	External width in mm	Internal width in mm	Radius in mm	Ridge variant	Carrying force = 12 kg/m load (2 magnets)	Carrying force = 20 kg/m load (3 magnets)
						
MMT-MP 52.2.121	153	121		full-ridged		
MMT-MP 52.20.133	165	133				
MMT-MP 52.20.144	176	144				
MMT-MP 52.20.146	178	146				
MMT-MP 52.20.158	190	158				
MMT-MP 52.20.171	203	171				
MMT-MP 52.20.182	214	182				
MMT-MP 52.20.196	228	196				
MMT-MP 52.20.220	252	220				
MMT-MP 52.2..246	278	246				
MMT-MP 52.20.296	328	296				
MMT-MP 52.2.0.346	378	346				
MMT-MP 52.20.396	428	396				
MMT-MP 52.20.446	478	446	250			
MMT-MP 52.2.0.496	528	496	300			
MMT-MP 52.20.546	578	546	350			

Chain bracket	Item no.		Pack
MMT-KA 52.1-FB hole	0521 0000 56	with bushing	1
MMT-KA 52.1-FB bolt	0521 0000 57	with bushing	1
MMT-KA 52.1-FG hole	0521 0000 58	with thread	1
MMT-KA 52.1-FG bolt	0521 0000 59	with thread	1

Shelving system	Item no.		Pack
MMT-TR 52.1	0521 0000 9200	TR 52.1 Separator	1
MMT-RTT 52	1000 9052 2000	RTT 52.1 Shelf support, divisible	1
MMT-RB 28-5	1000 0000 2800	Shelf 28 mm	1
MMT-RB 56-5	1000 0000 5601	Shelf 56 mm	1
MMT-RB 84-5	1000 0000 8400	Shelf 84 mm	1
MMT-RB 112-5	1000 0001 1200	Shelf 112 mm	1
MMT-RB 140-5	1000 0001 4000	Shelf 140 mm	1
MMT-RB 168-5	1000 0001 6800	Shelf 168 mm	1
MMT-RB 196-5	1000 0001 9600	Shelf 196 mm	1



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