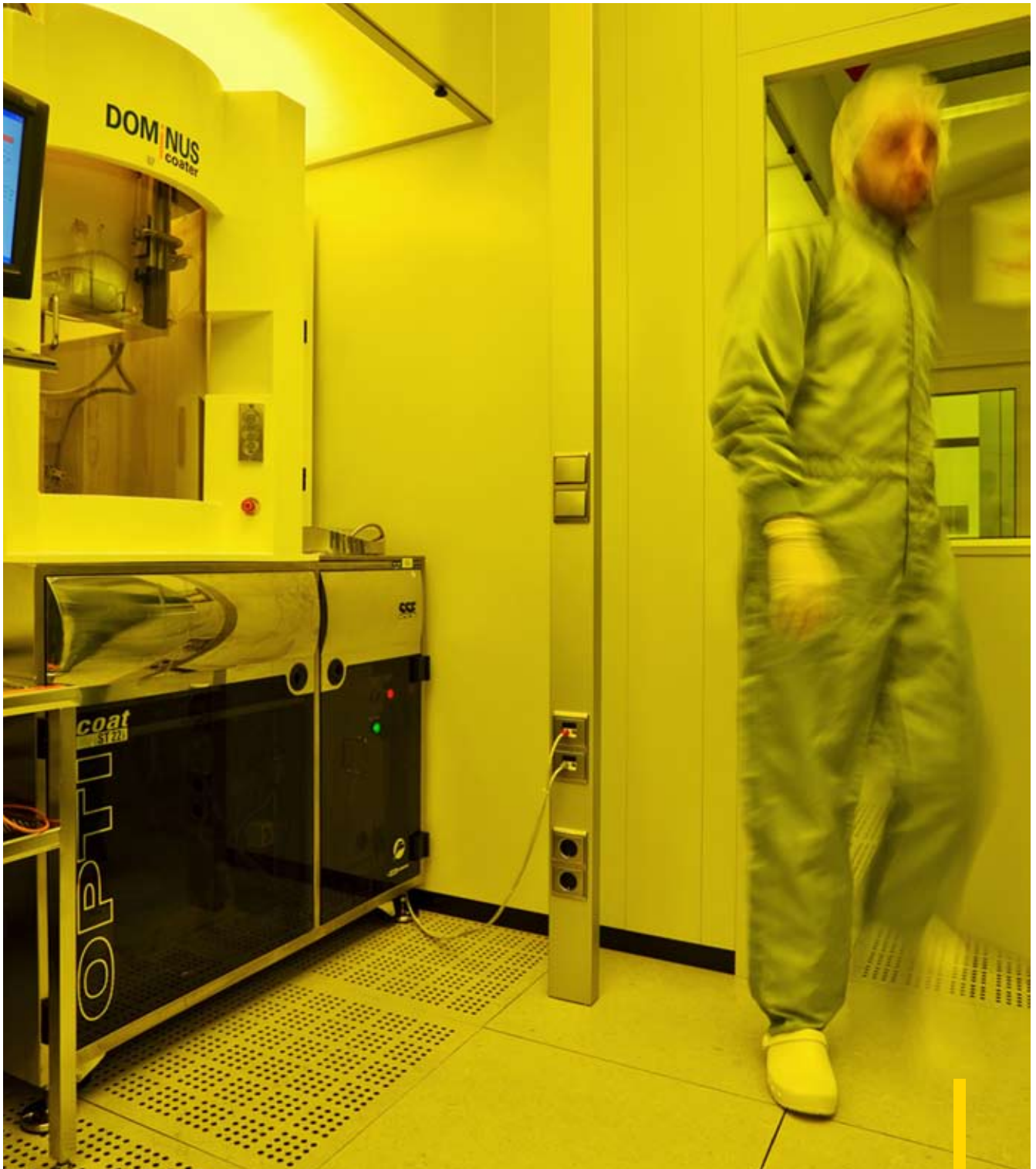


## Connection columns for clean rooms



Where size counts

## MSD 10 Ceiling connection columns The slimline clean room column

Clean rooms and laboratories employ numerous technical devices. Modern technologies that just a few years ago were not in use. It is often difficult to subsequently provide sufficient connection possibilities at the workplace. Not only for supplying electricity but also providing compressed air or network and data connections.

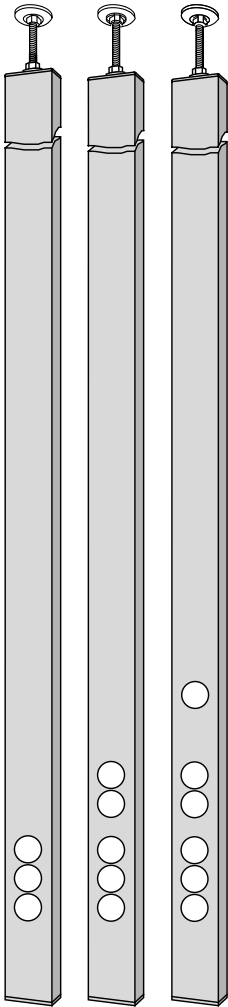
The connection columns of MOSER SYSTEMELEKTRIK with headquarters in Schönwald in the Black Forest provide GMP-conform solutions.



### The distinguishing features of MOSER media connection columns:

- **IPA certificate (MSD 10)**  
as per ISO 14644-1 suitable for use in clean rooms of the air cleanliness class 1
- **Hygienic Design (MSD 10)**  
Easy to clean and disinfect
- **Support of laminar flow**  
Low turbulence displacement flow by ceiling mounting
- **Good Manufacturing Practice**  
GMP-conform, thanks to the use of anodised aluminium
- **Easy installation**  
Simply installation of the ready-to-install complete systems, also subsequently
- **Designed to meet requirements**  
up to a room height of max. 6 metres and suitable for equipping with all standard device ranges and connection fittings

## MSD 10 Technical Data



**Fraunhofer**

**TESTED  
DEVICE<sup>®</sup>**

Moser Systemelektrik  
MSD10

Report No. MO 0912-499

### Qualifizierungsurkunde

Hiermit wird bescheinigt, dass für unten genanntes Produkt, untersucht im Auftrag der Firma

**Moser Systemelektrik**

Erikaweg 1  
78141 Schönwald

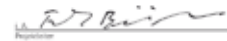
das Fraunhofer-Zertifikat TESTED DEVICE Nummer MO 0912-499 vergeben wurde.

Die Deckenanschlusskategorie MSD10 ist geeignet, um in Reinsäumen der Luftreinheitsklasse 1 gemäß ISO 14644-1 eingesetzt zu werden.

Detaillierte Informationen sowie die Parameter der Prüfumgebung entnehmen Sie bitte dem Prüfbericht des Fraunhofer IPA.

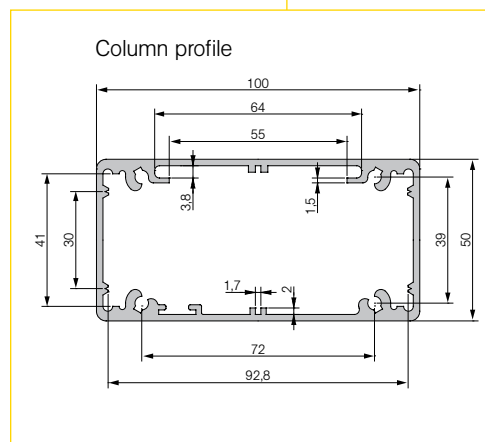
Die Gültigkeit dieser Bescheinigung bezieht sich ausschließlich auf obenstehendes Produkt in unveränderter Form.  
Weitere Informationen: [www.ipa-qualification.com](http://www.ipa-qualification.com)

Stuttgart, den 15. Dezember 2009

  
Repräsentant

DUPLIKAT





### MSD 10 Standard range (non-equipped)

#### Drilling units in position

1	2	3	4	5	6	Height (mm)	Protection Class	Colour	Order No.
G	-	-	-	-	-	3000	IPX5	silver	<b>MSD 10-3000-G0000s5</b>
G	F	-	-	-	-	3000	IPX5	silver	<b>MSD 10-3000-GF0000s5</b>
G	F	E	-	-	-	3000	IPX5	silver	<b>MSD 10-3000-GFE000s5</b>

**Drilling unit E**      1 Standard device

**Drilling unit F**      2 Standard devices

**Drilling unit G**      3 Standard devices

**MS-Be-E**

**MS-Be-F**

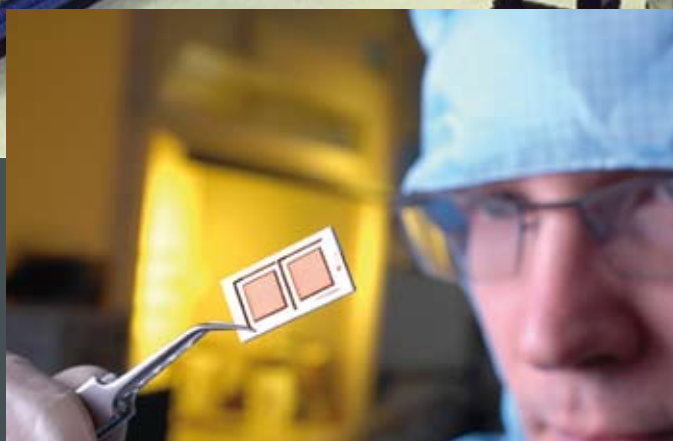
**MS-Be-G**

### MSD 10 Accessories

Designation	Protection Class	Colour	Order No.
<b>Clamp attachment set</b> (for false ceilings and suspended ceilings)	IPX5	silver	<b>MSD 10-SpZ5s</b>
<b>Screw fastening set with supporting flange</b> (for false ceilings)	IPX5	silver	<b>MSD 10-SSS5s</b>
<b>Screw fastening set with adjustment bracket</b> (for false ceilings and suspended ceilings)	IPX5	silver	<b>MSD 10-SwZ5s</b>
<b>Separating rail</b> , 3000 mm long			<b>MSD 10-Ts3000</b>

Further equipment options on request

## MSD 15 Ceiling connection column The sturdy connection column for clean rooms



### Special requirements require special solutions

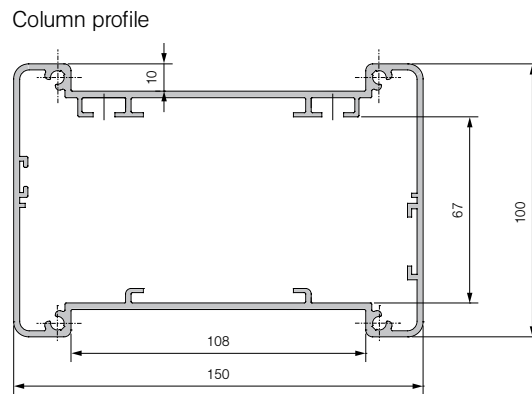
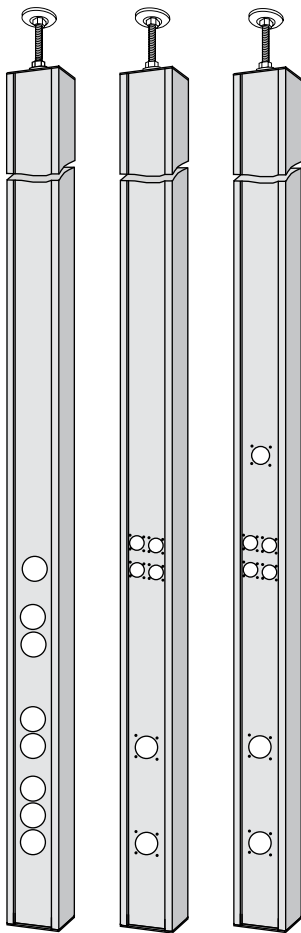
Thanks to the sturdy yet slimlinedesign and the flexible installation site the laminar airflow in the clean room is not disturbed.

Even when converting, extending or dismantling and reconstructing a clean room the flexible connection column foris an intelligentsolution.

Electricity can be supplied via the ceiling or the floor, thus achieving optimum protection against dust.

Thanks to our mounting solutions, the supply towers are not only suitable for false and suspended ceilings but also for slanting ceilings.

## MSD 15 Technical Data



### MSD 15 Standard range (non-equipped)

Designation	Drilling units in position						Height (mm)	Protection Class	Colour	Order No.
	1	2	3	4	5	6				
<b>Water-proof version</b>	G	F	F	E	-	-	2700	IPX5	silver	<b>MSD 15-2700-GFFE00s5</b>
	H	H	-	N	-	-	2700	IPX5	silver	<b>MSD 15-2700-HH0N00s5</b>
	H	H	-	N	D	-	2700	IPX5	silver	<b>MSD 15-2700-HH0ND0s5</b>
<b>Drilling unit D</b>	Emergency-off button									<b>MS-Be-D</b>
<b>Drilling unit E</b>	1 Standard device									<b>MS-Be-E</b>
<b>Drilling unit F</b>	2 Standard devices									<b>MS-Be-F</b>
<b>Drilling unit G</b>	3 Standard devices									<b>MS-Be-G</b>
<b>Drilling unit H</b>	1 CEE surface-mounted socket, straight, 3x16 A, 5x16 A or 5x32A, 400 V									<b>MS-Be-H</b>
<b>Drilling unit N</b>	4 Shock-proof sockets with hinged lid									<b>MS-Be-N</b>
<b>Drilling unit P</b>	1 Distributing unit for max. 6 modules									<b>MS-Be-P</b>

### MSD 15 Accessories

Designation	Protection Class	Colour	Order No.
<b>Clamp attachment set</b> (for suspended ceilings)	IPX5	silver	<b>MSD 15-SpZ5s</b>
<b>Clamp attachment set</b> (for false ceilings)	IPX5	silver	<b>MSD 15-SpS5s</b>
<b>Separating rail</b> , 2700 mm long			<b>MSD 15-Ts2700</b>

Further equipment options on request

**MSDR 12 Ceiling connection column**  
**The round connection column**  
**for ceilings**



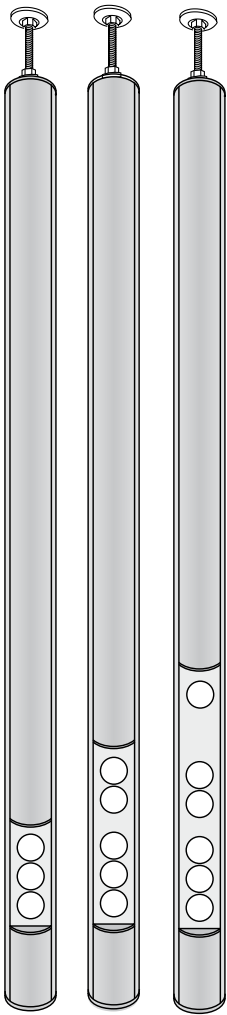
Moser connection columns for clean rooms are efficient solutions for maintaining sterile and ultraclean production environments.

Thanks to the closed aluminium profile with moulded cover, the Moser columns can be cleaned both easily and thoroughly.

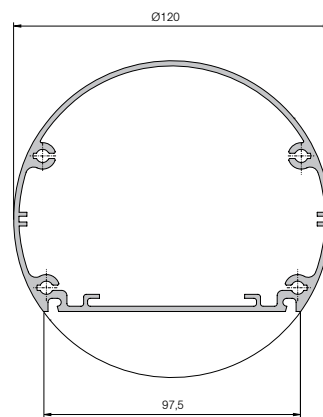
The sturdy connection column for clean rooms can be equipped according to customer requirements with different media at different heights thus providing an efficient and relaxed working environment.



## MSDR 12 Technical Data



Column profile



### MSDR 12 Standard range (non-equipped)

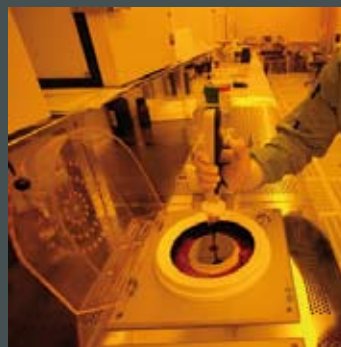
Designation	Drilling units in position						Height (mm)	Protection Class	Colour	Order No.
	1	2	3	4	5	6				
<b>Water-proof version</b>	G	-	-	-	-	-	2700	IPX5	silver	<b>MSDR 12-2700-G00000s5</b>
	G	F	-	-	-	-	2700	IPX5	silver	<b>MSDR 12-2700-GF0000s5</b>
	G	F	E	-	-	-	2700	IPX5	silver	<b>MSDR 12-2700-GFE000s5</b>
<b>Drilling unit E</b>	1 Standard device									<b>MS-Be-E</b>
<b>Drilling unit F</b>	2 Standard devices									<b>MS-Be-F</b>
<b>Drilling unit G</b>	3 Standard devices									<b>MS-Be-G</b>

### MSDR 12 Accessories

Designation	Protection Class	Colour	Order No.
<b>Clamp attachment set</b> (for suspended ceilings)	IPX5	silver	<b>MSDR 12-SpZ5 s</b>
<b>Separating rail</b> , 2700 mm long			<b>MSDR 12-Ts2700</b>

Further equipment options on request

**MSDI 165+ Ceiling connection column**  
**The multimedia connection**  
**column for clean rooms**



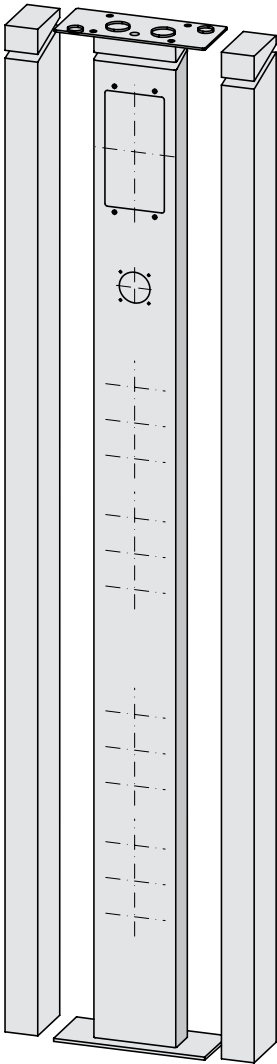
Moser connection columns for clean and ultraclean rooms are designed for various requirements and connection values as well as for numerous media.

The multimedia connection column for clean rooms is a compact solution for complex systems.

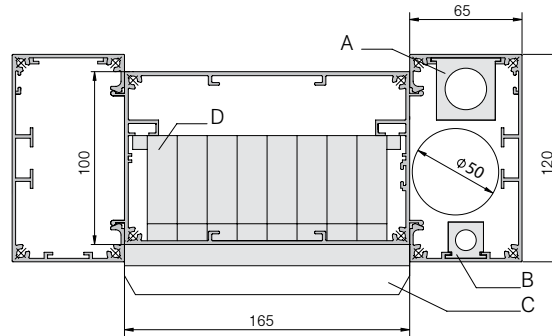
Connection columns have proved their worth above all in the production of microelectronics where not only electricity but also other media are required for large production areas and at individual workplaces. Simple wall ducts are not functional and a special solution to this problem is long overdue. To solve this problem MOSER SYSTEMELEKTRIK has designed a special media connection column MSDI 165+.

For use in clean rooms to ensure a varied and efficient production process.

## MSDI 165+ Technical Data



Column profile



- A = 3/4" compressed air profile
- B = 1/4" compressed air profile
- C = Distributor cover
- D = Automatic machines



### MSDI 165+ (basic elements non-equipped)

Designation	Height (mm)	Protection Class	Colour	Order No.
<b>Basic kit for columns</b>	3000	IPX5	silver	<b>MSDI 165+ 3000-s5-Gb</b>
<b>Side flap 1</b>	3000	IPX5	silver	<b>MSDI 165+ 3000-s5-S1</b>
<b>Side flap 2</b>	3000	IPX5	silver	<b>MSDI 165+ 3000-s5-S2</b>
<b>Compressed air unit</b> with 1 x 1/4" coupling socket				<b>MSDI 165+ Dle-T1</b>
<b>Compressed air unit</b> with 2 x 1/4" coupling sockets				<b>MSDI 165+ Dle-T2</b>

### MSDI 165+ Accessories

Designation	Protection Class	Colour	Order No.
<b>Clamp attachment set</b> (for suspended ceilings)	IPX5	silver	<b>MSDI 165+ SpZ5s</b>

Further equipment options on request

## Tender texts

MSD 10	MSD 15	MSDR 12	MSDI 165+
<b>Equipping possibilities</b> <p>1 side with all <b>standard</b> device ranges including high and low voltage devices as well as emergency-off button or CEE surface-mounted sockets up to 32A.</p> <p>The column is divided into 6 positions for equipping purposes. Each position can be equipped with the required drilling unit.</p> <p>A separating rail is necessary for separating various electric circuits inside the column.</p>	<b>Equipping possibilities</b> <p>1, 2 and 4 sides with all <b>standard</b> device ranges including high and low voltage devices as well as emergency-off button or CEE surface-mounted socket up to 63A and distribution fuse board up to max. 6 modules</p> <p>The column is divided into 6 positions for equipping purposes. Each position can be equipped with the required drilling unit. For columns that require equipping on 2 sides, please specify the required boreholes on the 2nd side separately.</p> <p>A separating rail is necessary for separating various electric circuits inside a column.</p>	<b>Equipping possibilities</b> <p>1 side with all <b>standard</b> device ranges including high and low voltage devices as well as emergency-off button or CEE surface-mounted socket up to 32A.</p> <p>The column is divided into 6 positions for equipping purposes. Each position can be equipped with the required drilling unit.</p>	<b>Equipping possibilities</b> <p>1, 2 and 4 sides with all <b>standard</b> device ranges including high and low voltage devices as well as emergency-off button or CEE surface-mounted sockets up to 63A and distribution fuse board up to max. 8 modules per distributor. Compressed air units, vacuum connections, suction lines, water and other media if technically possible.</p> <p>A separating rail is necessary for separating various electric circuits inside a column.</p>
<b>Protection class</b> IPX 5 (waterproof version)	<b>Protection class</b> IPX 5 (waterproof version)	<b>Protection class</b> IPX 5 (waterproof version)	<b>Protection class</b> IPX 5 (waterproof version) in conjunction with the appropriate built-in devices.
<b>Colour</b> anodised silver s (White on request)	<b>Colour</b> anodised silver s (White on request)	<b>Colour</b> anodised silver s (White on request)	<b>Colour</b> anodised silver s
<b>Dimensions</b> 100 x 50 x 2700 or 3000 mm	<b>Dimensions</b> 150 x 100 x 2700 or 3000 mm	<b>Dimensions</b> Ø 120 x 2700 or 3000 mm	<b>Dimensions of the overall system</b> 295 mm x 120 mm x H (W x D x H) MSDI 165+ ceiling connection column for clean rooms for vertical connection technology, for supplying energy from either the ceiling or the floor comprising:  1 x closed extruded aluminium profile. Dimensions: 165 mm x 100 mm x H (W x D x H) specially for the electrical connections.
			<b>2 x side flaps for:</b>  e.g. compressed air, vacuum connections, suction lines, water and other media if technically possible. Dimensions: 65 mm x 120 mm x H (W x D x H) Top cover and base plate

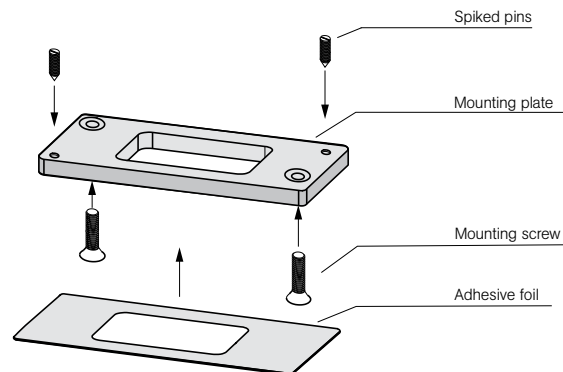
## Mounting

### Floor mounting

The **profile-flush floor mounting plate** can be mounted in 2 different ways, depending on the floor covering.

#### 1. Concrete and synthetic flooring

Screw the spiked pins into the plates until the ends disappear in the plate; Screw the plate to the floor, place the column on top and attach to the ceiling.

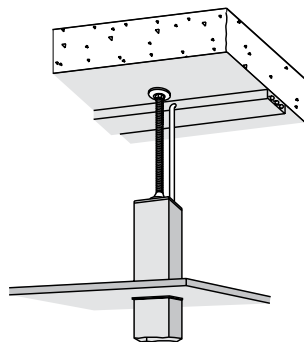


#### 2. Tiled floors

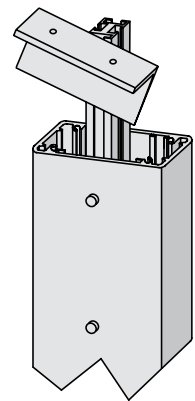
Screw the plate to the bottom end of the column; Attach the adhesive foil; Place the column on the floor and brace using the clamp fastening between the ceiling and the floor.

### Ceiling mounting

The clamp attachment set for false and suspended ceilings comprises a profile-flush mounting plate for mounting the column to the floor, a cover with a  $\varnothing 17$  mm borehole, threaded rod with adjustment leg and nut for clamping the column between the ceiling and the floor. For attaching to raw ceilings with suspended ceilings the opening in the suspended ceiling is fitted with the enclosed mask. The screw fastening has an adjustment range of 100 to 900 mm.



The set of screw fastenings with adjustment bracket for false and suspended ceilings comprises a base plate that protrudes beyond the base plate for mounting the column to the floor, a column cover with guide rail and an adjustment bracket. The bracket and guide are screwed against each other. This mounting method is suitable for slanting ceilings. For attaching to raw ceilings with suspended ceilings the opening in the suspended ceiling is fitted with the enclosed mask. The screw fastening has an adjustment range of 100 to 900 mm.



Moser Systemelektrik stands for innovative connection technology products for indoor and outdoor use. The main aspects prevailing during development are not only attractive design, functionality but also compliance with all national and international safety regulations. An economical, modern manufacturing, high-quality materials and uncompromising quality control ensure reliable and patented products in excellent quality.

Especially is our claim for quality ensured by competent, motivated and well trained staff, not least are the high satisfaction of our customers since many years and the continued growth of the company important evidence therefor.



Submitted by:

Connection columns for clean rooms- E - 04/2011  
Subject to technical alterations.  
Our conditions of delivery and payment are applicable.

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