

FAQ

ctrlX FLOW^{6D}



IS ctrlX FLOW^{6D} PATENT PROTECTED?

Yes, the permanent magnetic levitation as well as the associated functions are protected by patent law for the Bosch Group

IN WHICH SIZES ARE THE MOVERS AVAILABLE?

- Diameter of 220 mm and 160 mm
 - 220 mm mover: load capacity 6.0 kg
 - 160 mm mover: load capacity 3.0 kg

WHICH SPEEDS AND ACCELERATIONS CAN BE ACHIEVED?

- Maximum speed: 3 m/s
- Maximum acceleration: 30 m/s²

WHY ARE THE MOVERS ROUND?

- Round movers offer various advantages:
 - Can be rotated at the edge of a tile without the mover exceeding the tile boundary
 - Less space/area required to drive past each other
 - The same tilting angle can be realized in any spatial direction
- The shape of the mover can be adapted to the application by setting up a base plate of any shape

WHAT ARE THE DIMENSIONS OF THE TILES?

- Size (length x width x height): 239 x 239 x 216 mm
- Grid dimension: 240 x 240 mm

WHICH VOLTAGE CONNECTION DOES THE TILE NEED?

230V

CAN ADDITIONAL COMPONENTS BE ATTACHED TO THE MOVER?

There are four threaded and fitted pin holes on the surface of the mover for fastening components

IS THE MEASURING SYSTEM INCREMENTAL OR ABSOLUTE?

- The measuring system measures absolutely in 6 dimensions
- After switching on or restarting, the mover is immediately ready for operation

WHAT IS THE REPEATABILITY OF THE ctrlX FLOW^{6D} MEASURING SYSTEM?

+/- 5 µm at 3x standard deviation (3 sigma)

IS THE MOVER ID UNIQUE?

- The mover ID is unique
- The ID is retained even after the power supply has been interrupted

WHAT HAPPENS IF THE USER MANUALLY CHANGES THE POSITION OF THE MOVER AFTER SWITCHING OFF?

With the absolute measuring system and the unique mover ID, it is possible to see where which mover is standing each time it is switched on. A changed position is detected immediately and does not impede the function

HOW DOES THE PERMANENT MAGNETIC LEVITATION OF ctrlX FLOW^{6D} WORK?

- The planar system consists of two main components, a mover and a tile, both of which are equipped with permanent magnets
- The magnets in the tile generate a strong magnetic levitation field for the mover, which hovers silently about two centimeters above the tile
- The levitation field is controlled by changing the angular position of the tile magnets

WHICH SAFETY FUNCTIONALITIES DOES ctrlX FLOW^{6D} SUPPORT?

- ctrlX FLOW^{6D} provides the STO function (Safe Torque Off) as standard
- Additional design-related features for safe handling:
 - The magnetic forces are limited, therefore no crushing is possible
 - The operating temperature is low, burns are excluded
 - In the event of an emergency stop, the movers brake immediately thanks to the permanent magnets and stop safely

WHICH MATERIALS CAN BE USED TO COVER THE TILES?

- All non-metallic materials, e.g.: plastic, glass, ceramic