

**Track-guided, sound-insulating operable partition with fully automatic drive**  
**Type: DORMA Hüppe MOVEO ComfortDrive**

**Product description:**

Fully automatic operable partition designed for sound insulation, comprising individually electronically controlled powered elements mounted in an overhead track. Each element equipped with its own drive motor integrated in the track roller unit. Elements of closed composite construction with light and stable outer shell of sandwich design with surrounding frame assembly and acoustic core.

Travel speed to offer dynamic response up to 250 mm/s.

Overhead track to have a maximum width of 98 mm.

With ceiling connection profile and four-fold acoustic baffle, width not to exceed 154 mm.

Partition operator to be integrated in the track and encapsulated for dust protection.

Floor guide track to be of stainless steel with a maximum internal width of 8 mm. Floor guide pin to be flexibly mounted at the bottom edge of the element.

Individual elements to be max. 500 kg in weight and be suitable for clear heights of up to 9,000 mm.

In order to allow the load-bearing structural components of the recipient building to be dimensioned against flexion in an appropriate, cost-efficient manner, the specific weight per unit area of each element shall not exceed 40 kg/m<sup>2</sup> for a sound reduction index of  $R_w = 55$  dB, 30 kg/m<sup>2</sup> for  $R_w = 49/50$  dB, 22 kg/m<sup>2</sup> for 42/43 dB and 16 kg/m<sup>2</sup> for  $R_w = 38$  dB. Partition constructions exhibiting higher unit weights are therefore not permitted.

The element thickness shall be 100 mm. The extending double-chamber seals shall exhibit a black finish.

Partition to be equipped with an electronic self-monitoring capability for all the control functions in order to ensure high system reliability. Valid TÜV-GS test certificate to be provided covering the complete partition.

The sound insulation must satisfy requirements commensurate with the building usage profile.

**Electric drive unit and control system**

The entire partition opening and closing operation including extension and retraction of the sealing strips and parking the elements at the stacking track must be performed fully automatically by the electric drive system.

Elements are to be individually driven and electronically controlled. Power to be transmitted from a DC motor to the drive roller and track. Drive and control units integrated in the elements to be constantly supplied with power and command data via a three-pole busbar system with dual pick-up arrangement. Partition to be designed for a travel speed of up to 250 mm/s with dynamic response to ensure fast opening and closing of the partition.

Elements to approach end position at reduced speed. Entire partition to stop on contact with an obstruction, compliance with maximum closing forces to BGR 232 required.

One floating contact for connection of external equipment required.

**Operation**

Operation of the elements, of the actuators for extension and retraction of the sealing strips, and parking/stacking manoeuvres to be performed via a digital control panel. A configurable

microprocessor control system (BUS) is to be provided to monitor and control the motion sequences and also for monitoring the position of the elements. Open, Close and Stop pushbuttons to be provided allowing the partition to be opened, stopped or closed from any position. It must also be possible to implement partial-opening, personnel-access, gapped and alternative element arrangements.

In the event of a power failure, it must be possible to easily operate the partition by hand and slide the elements into any desired position. Emergency unlocking device to allow the closed and locked partition to be opened if required. Subsequent electrical restart to be possible from any partition position.

### **Extensible strip seals**

The elements must feature spring-loaded double-chamber seals top and bottom that are pressed under electronic control against the ceiling track profile and the floor, automatically compensating for floor unevenness through permanent spring load application. In order to ensure optimum vertical sealing between the extended sealing strips, and sealing strip end elements must be in the form of flush polyurethane mouldings. The material of the sealing strips shall be high-strength aluminium capable of meeting the highest requirements in terms of sound attenuation and stability. To enable compensation for any structural tolerances in the floor and ceiling, the extension stroke of the sealing strips top and bottom must in each case be at least 30 mm. Sliding-contact rubber seals are not permitted.

### **Element suspension**

Each element must be hung at one or two points from a ceiling-mounted track of aluminium and operate on multi-roller carriers featuring track rollers mounted in ball bearings. Assemblies comprising ball-type carriers or sliding discs are not permissible. To allow for minor structural sag in the ceiling, the elements must be designed for easy height adjustment without the need to open up the ceiling.

### **Element interconnection**

Achieved by positive interlocking of aluminium profiles. Resistance-free interconnection of the profiles to be ensured by their convex/concave shape. Additional flexible seals to be provided in the element joint. Mechanical-action element connectors are not permitted.

### **Closure element**

**The partition end closure element in each case must be designed as telescope compensating element.**

### **Pass door elements**

**Pass door elements are to be equipped with an integral surrounding, self-supporting portal frame and constructed as stress- and constraint-free assemblies.** The lateral posts must be provided with a compression beam for reliable, positive engagement with the floor. Post stability shall be further enhanced by locking projections that engage in flush-recessed floor sockets. The door leaf must be provided with a frame and an automatically operable sealing strip. The sealing components that engage flexibly with the ceiling (sealing strip) and floor (sealing feet in the door posts) must be electrically operable. Requirements for additional means to ensure stable location/positional locking, or for electrical operation of the door, are not permissible.

**Glass element (optional) Elements of double-glazed construction, entire area of glass with minimal peripheral framing.** Glazed panels to be of toughened safety glass (TSG – aka fully prestressed safety glass, German designation “ESG”) and must be externally flush-

mounted. Use of partially prestressed safety glass (PPSG – German designation “TVG”) is not permitted. Offset or single-pane glazing systems, and simple window cut-outs are likewise not permitted. Frame widths shall not exceed 118 mm for horizontal members and 30 mm for vertical members. The element shall be 100 mm thick and must guarantee an integral and consistent appearance in combination with other fullwall elements and functional components, or offer acoustically efficient surfaces. The element shall be designed and constructed as a closed system without protruding edges or profiles. The stabilisation of the elements in their closed position shall be effected by means of electrically extensible sealing strips top and bottom.

Depending on the design, the sound reduction indices shall be  $R_w$  44 dB (34 kg/m<sup>2</sup>) or  $R_w$  50 dB (49 kg/m<sup>2</sup>).

Internal, electrically controlled horizontal louvers (blinds) to be optionally available.

### **Installation of electrical cabling**

Installation of the control cabling and also the wiring of the central control unit and operating panel are to be included in the scope of supply of the bidder. Installation of the central control unit power cable to be performed by client. The work indicated is to be executed on the basis of a circuit diagram provided by the bidder.

All components of the electrically operated partition must correspond to German VDE codes of practice or equivalent relevant local electrical regulations.

### **Track installation**

Track systems are to be secured by means of adjustable steel suspension assemblies to load-bearing structural components provided by others (e.g. steel substructures, concrete beams, etc.). The suspension assemblies are to be supplied by the bidder. Steel suspension assembly adjustability must be ensured to compensate for any subsequent slight ceiling sag. Rigid, non-adjustable suspension assemblies are not permitted.

The materials employed shall be provided with an anti-corrosion coating and the suspension assemblies shall comply with the definition of “simple steel structures” as per DIN 4100 (see also VOB [Construction Contract Procedures], Part C, DIN 18335). According to State Building Regulations, the bidder shall possess a certificate of welding competence (e.g. to DIN 18800-7 – Certificate of competence for the welding of simple steel structures subjected to predominantly static loading).

### **Sound baffle**

A double-skin sound baffle (attenuation up to  $R_w$  = 48 dB) or a quad-skin sound baffle (attenuation  $R_w$  = 49 dB to  $R_w$  = 55 dB) must be provided by the bidder to correspond to the specified sound reduction index of the partition elements. Flanking sound paths which arise due to ventilation ducts, transit openings etc. and pass through the barrier axis of the partition, must be provided by others with sound baffles in accordance with the specified sound reduction index of the partition.

A clean, tight seal between the baffle and the overhead track and adjacent building parts (structural ceiling and wall) must be ensured. Adapting baffle constructions to transverse supply piping and conduits (e.g. cable shafts, heating, ventilation and air conditioning installations etc.) shall be charged by the hour and does not constitute part of the tender. The cavities between the skins of the baffles must be filled with non-settling mineral wool. The ceiling joints must be sealed with silicone mastic filler (permanently elastic type). The above substructures/assemblies, fills and baffle systems must be included in the unit prices.

A valid test certificate to EN 20 140-3: 1995 must be presented validating the sound insulation performance of the operable partition. The measurements shall be performed and certified to EN ISO 140-1: 1998. Calculation of the weighted sound attenuation value and of the spectrum adaptation terms/values to be compliant with EN ISO 717-1: 1997.

Compliance of the operable partition with the ball rebound test to DIN 18032 Part 3, 1997 edition, must likewise be verified by an appropriate certificate.

A valid test certificate to EN 1634-3 must be presented validating the smoke tightness of the operable partition.

The legal requirements governing powered windows, doors, shutters and gates - in Germany: BGR 232, UVV or equivalent accident prevention regulations, and VDE or equivalent electrical safety regulations must be satisfied in full by the product offered.

Valid proof per GPSG § 7 (1) shall be provided in respect of the equipment and product safety of the operable partition, in accordance with EN 60335-1 and DIN 60335-2-103, DIN 18650-1 and DIN 18650-2 or equivalent regulations. A valid TÜV GS test certificate is also required.

The manufacturer of the partition system must have introduced a quality management system to EN ISO 9001 and be registered to this standard. This must be verified by presentation of an appropriate certificate.

To be completed by bidder:

(information not provided may exclude bidder from tendering process)

Fully enclosed/encapsulated track offered?  
(please enclose detail)  yes  no

Floor guide slot inside dimension: max. width 8 mm.  yes  no

Travel speed: dynamic response up to 250 mm/s  yes  no

Individual drive TÜV certified?  
(include certificate)  yes  no

Item 1

Quantity:

Fully automatic operable partition system as described above = ..... units

Dimensions:

- Clear width = ..... mm
- Clear height = ..... mm
- Height of suspension = ..... mm
- Weight of partition/m<sup>2</sup> = ..... kg
- Element thickness = 100 mm

Cover panel design / Profile type and design:

- Type K (cover panel design with visible surface edging)
- Type U (cover panel design with protective all-round edging)
- Cover panels of B-s2-d0 rating (flame retardant) to EN 13501-1

Elements:

- Comprising: =... .....Nos. Total no. of individual elements, of which:
- Fullwall elements (VE) = .....Nos.
- Closure/abutment element:
  - Telescopic elements (TE) = ..... Nos.
  - Telescopic wall abutment (AWA) = ..... Nos.
- Double-glazed glass elements (GE) =... .....Nos.
  - With electrically controlled horizontal louver blind system per glass element
- Sliding pass door elements (DT) = .....Nos.
- Corner elements (EE) = .....Nos.
- Angled elements (WE) =... .....Nos.

Surface finish:

Design Collection:

Veneer: Wood type .....

Metallic decors:

Painted to RAL: Colour.....

Classic Collection:

Laminate: DORMA Hüppe Collection/Selection: .....

Functional Collection:

Projection surface, magnetic:.....

Magnetic/Writing surface: .....

Required sound reduction:

- 38 dB with test certificate (16 kg/m<sup>2</sup>)
- 42/43 dB with test certificate (20 kg/m<sup>2</sup>)
- 49/50 dB with test certificate (30 kg/m<sup>2</sup>)
- 55 dB with test certificate (40 kg/m<sup>2</sup>)

Glass element

- 44 dB with test certificate (34 kg/m<sup>2</sup>)
- 50 dB with test certificate (49 kg/m<sup>2</sup>)

Stacking track:

- Stacking/parking arrangement per attached drawing

Manufacturer: DORMA Hüppe

Type: DORMA MOVEO ComfortDrive or equivalent

Unit price includes delivery and  
installation ready for operation:

U.P.