

**Track-guided, sound-insulating operable partition, type:
DORMA MOVEO – ComforTronic**

Product description:

Operable partition designed for sound insulation and smoke control, comprising individual elements allowing independent manual operation. Elements of closed composite construction with light and stable outer shell in sandwich technology with surrounding frame assembly and acoustic core.

In order to ensure efficient sound absorption and stable sealing of the elements at the floor and ceiling track, all horizontal element seals must be actuated and controlled by the ComforTronic system, i.e. extend and retract in positional sequence under automatic (electrically powered) control.

A self-supporting, torsionally stiff construction shall be provided and verified to ensure the durable functional efficiency of the partition (element interconnection and sound insulation). In order to ensure minimal transmission of structure-borne sound, the frame profiles shall exhibit all-round flexible secondary profiles for acoustic isolation.

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/m² for a sound insulation value of $R_w = 55$ dB, 30 kg/m² for $R_w = 49/50$ dB, 22 kg/m² for 42/43 dB and 16 kg/m² 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.

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

Functional description:

Automatic element locking system

To facilitate speedy opening and closing of the partition, the horizontal seals (sealing strips) of the individual elements and the telescopic element must be extended and retracted automatically under control of the ComforTronic system. The closing time of the individual elements (sealing strips) must not exceed 7 seconds per element. The power supply shall be conducted from element to element via end-face contacts. The electrical power supply to the actuating and control system shall be provided via a plug-in power supply unit. The seal retracting mechanism shall be controlled by a central switch. In order to ensure functional efficiency, even in the event of a malfunction or fault, a mechanical emergency unlocking device shall be provided for all elements.

All the functions of the partition to be confirmed by a TÜV type test approval (TÜV-GS "geprüfte Sicherheit" / "Tested for Safety") and monitored by a microprocessor.

The elements must feature spring-loaded double-chamber seals top and bottom that are pressed against the ceiling track profile and the floor, compensating for floor unevenness through permanent spring load application. In order to ensure optimum vertical sealing between the extended sealing strips, flush-aligned sealing strip end elements must be provided in the form of 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 interconnection

Achieved by the combined positive and non-positive interlocking of aluminium profiles. Resistance-free interconnection of the profiles is ensured by their convex/concave shape. Additional flexible seals are 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 or double pass door elements are to be equipped with a 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 the stable location/positional locking or for electrical operation of the door are not permissible.

In the case of double pass doors, one leaf should be equipped to function as the active leaf and one as the inactive leaf with emergency unlocking function.

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 is 100 mm thick and must guarantee an integral and consistent appearance in combination with other fullwall elements and functional components, and 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 the ComforTronic actuator operating electrically extensible sealing strips top and bottom.

Depending on the design, the sound insulation values shall be R_w 44 dB (34 kg/m²) or R_w 50 dB (49 kg/m²). Internal, electrically controlled horizontal louvers to optionally available.

Element suspension, track system, stacking (parking) arrangement

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. The carriers must be secured to the element by means of horizontal ball bearings engaging with the shock-absorbing (damped) roller pin on the element. Owing to their elevated wear values, assemblies comprising ball-mounted 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 either the ceiling or the element.

An aluminium track profile shall be installed to ensure easy, low-noise operation of the elements. Additional track cladding must not be necessary. It shall be possible to implement all right-angled and positive-guidance stacking track assemblies with this track design.

In order to ensure that the partition functions with maximum efficiency, the following criteria must be satisfied: It must be possible to compensate for subsequent, more serious structural ceiling sag through easy partition height adjustability. The track assemblies up to the load-bearing structure shall be fixed by means of adjustable steel suspension assemblies. These shall be provided by the bidder and attached to appropriate load-bearing structural components (e.g. steel substructures, concrete beams etc.). Rigid, non-adjustable suspension assemblies are not permitted.

The materials employed must be non-corroding or corrosion-protected. The partition systems offered shall exclusively feature track constructions and suspension assemblies in the form of "simple steel structures" as per DIN 18000-7 (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 18000-7 – Certificate of competence for the welding of simple steel structures subjected to predominantly static loading). Compliance is required with equivalent local regulations outside Germany.

A double-skin sound baffle (attenuation up to $R_w = 47$ dB) or a quad-skin sound baffle ($R_w = 48$ to $R_w = 55$ dB) must be installed above the track assemblies by the bidder to correspond to the specified sound reduction value 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 attenuation value of the partition. This work shall not constitute part of the tender. A clean, tight baffle seal against the track and adjacent building parts (structural ceiling and walls) 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 gaps between the baffle skins must be filled with non-settling mineral wool. The ceiling joints must be sealed with silicone mastic filler (permanently elastic type). The above assemblies/subassemblies, 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 shall be compliant with EN ISO 717-1: 1997.

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

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

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 18032-3. A valid TÜV GS test certificate is also required.

For the operable wall an Environmental Product Declaration (EPD) according to ISO 14025 has to be assigned. The life cycle analysis (LCA) must be performed in accordance with ISO 14040, the methodological framework is the ecological balance.

General: ISO Quality Management Certificate

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.

Item 1

Quantity:

- Operable partition system as described above =..... Nos.

Dimensions:

- Clear width =mm
- Clear passage height =mm
- Height of suspension =mm
- Weight of partition/m² =..... kg
- Element thickness =..... 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 B1 rating (flame retardant) to DIN 4102-B1

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.
 - Fixed full height passdoor, single-action (FT)
- Double-glazed glass elements (GE) =... ..Nos.
 - With electrically controlled horizontal louver system per glass element
 - Sliding pass door elements (DT) =..... Nos.
 - Sliding double pass door elements (DTZ) =..... Nos.
- Corner elements (EE) =..... Nos.

Surface finish:

Design Collection:

Veneer: Wood type

Metallic decors:

- Aluminium
- Stainless steel

Painted to RAL: Colour

Classic Collection:

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

Functional Collection:

- Projection surface:.....
- Projection surface, magnetic:.....
- Magnetic/Writing surface:

Required sound reduction:

- 38 dB with test certificate (16 kg/m²)
- 42/43 db with test certificate (22 kg/m²)
- 49/50 dB with test certificate (30 kg/m²)
- 55 dB with test certificate (40 kg/m²)

Glass element:

- 44 dB with test certificate (34 kg/m²)
- 50 dB with test certificate (49 kg/m²)

Stacking track:

- Layout as per enclosed drawing

Element suspension:

Single-point suspension, only possible with 90° stacking track and subject to weight / height restrictions

Two-point suspension

Track system:

R-type track profile of aluminium, right-angled junctions with L, T and X- pieces – up to 500 kg

K-type track profile of aluminium, coded, positive track guidance system with curves and switch-type junctions – up to 250 kg

Make: DORMA Hüppe

Type: DORMA MOVEO or equivalent

Unit price includes delivery and installation ready for operation.

U.P.