Explosion-proof lift doors pursuant to ATEX 2016/34/EU

UK

Since 20 April 2016, a revised legal framework in the form of the ATEX Directive 2016/34/EU has been in place that provides for a new regulation of explosion protection in Europe. The previously applicable directive 94/9/EC has now been superseded by the new guideline.

As a consequence of this, all products that are subject to the ATEX Directive have been revised and subjected to new testing.

Accordingly, Meiller has revamped its programme and made appropriate amendments to its current product line. This has made technical solutions for ex zones 2/22 and 1/21 available. Depending on the construction, these doors are suitable for use in explosive atmospheres of group IIA-IIC and IIIA-IIIC, in temperature classes of between T4 and T6, or for operation in highly sensitive gas atmospheres such as carbon disulphide, carbon monoxide, and ethylene oxide.

Zone classification:
Zone 0 = Constant or long-term risk
Zone 1 = Occasional risk
Zone 2 = Risk occurs rarely or briefly
Meiller doors

Device group/Explosion group:
II B **<- Car doors**
II C = best value **<- Landing doors**

Temperature class:
T1 (450°C) = lowest class
T4 (135°C) = medium value, applies to motors **<- When using Kronenberg interlock**
T6 (85°C) = best value, applies to switches **<- Car and landing doors**

Device category/field of application:

Only above ground (chemicals)

1G Zone 0 / 1D Zone 20 / Category 1 = very high safety level
2G Zone 1 / **2D** Zone 21 / Category 2 = high safety level
3G Zone 2 / **3D** Zone 22 / Category 3 = normal safety level
Meiller Türen

In conjunction with the ATEX Directive 2016/34/EU and on the basis of EN 81-20 and EN 81-50, the door programme comprises the TG3 horizontal sliding door product family, TTS/K25 two-panel telescopic doors, STS/K26 two-panel, centre-opening doors, TTS/K28 four-panel, centre-opening doors, TTS/K31 three-panel telescopic doors, and TTS/K32 six-panel centre-opening doors. Landing doors can be used in both EvoS shaft wall installations and EvoN niche installations.

The size range extends to a door width of 4.200 mm and height of 4.500 mm with a maximum driven mass of 600 kg.

With a landing door transom height of 347 mm and a car door transom height of 470 mm, the ATEX concept builds on the tried and tested basic TG 3 concept. The new concept has succeeded in harmonising mechanical wearing parts, using all established skate systems of the TM1 series, and also activating swing doors. Dual-skate systems are used for four and six panel doors. This means that industrial-strength doors in HD construction are also possible pursuant to the ATEX Directive 2016/34/EU. Emergency releases in constructions with monostable monitoring switches are also possible, as are light curtain solutions.

Depending on the application, doors can be made either of zinc-magnesium sheet or completely from stainless steel. An additional surface treatment on the visible side is available for zinc-magnesium doors.

By employing established TG 3 technology, the handling and configuration of ATEX doors is virtually the same as with the hitherto common construction, apart from the additional earthing measures that are necessary. Most lift installers will be familiar with the uniform, identical installation and configuration principles of waterproof and explosion-proof doors from standard applications.

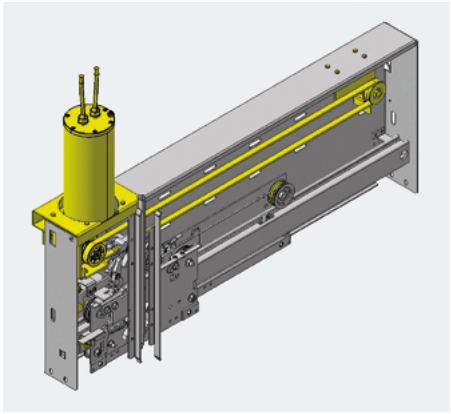
Doors based on the ATEX Directive 2016/34/EU employ the new M*i*Drive® (Meiller intelligent Drive) concept. The M*i*Drive® EX can be operated just as intuitively as the M*i*Drive® drives presented at the interlift 2017. Their commissioning is simple and is performed by scanning in QR codes.

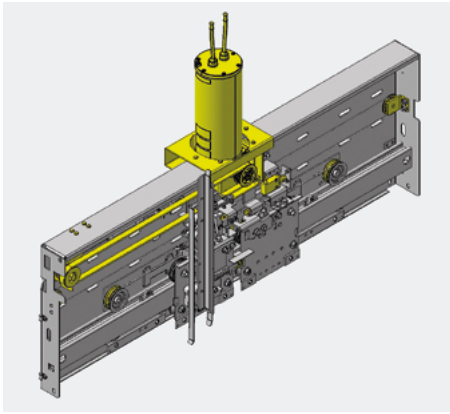
As a result, additional safety parameters relevant to EX applications are kept to a minimum in the interest of user-friendliness and to prevent marginal or incorrect settings (which might cause dangerous static discharges of the timing belt at excessively high belt speeds, for example). At increased temperatures, the travel profile is automatically

modified. There is then a controlled reduction in electricity consumption and heat generation is reduced to allow the drive to cool down. This increases the system's availability.

The drive regulator is integrated in the motor. The controller and transformer should be installed outside the EX area (for example in the machine room); cable lengths of up to 100 m to the EX motor can be used. Activation of the drive control by CANopen means that the new ATEX concept is extremely insusceptible to disturbances. In addition, the M*i*Drive EX supports compliance with ATEX-specific maintenance intervals with appropriate indications.

The new ATEX sliding door range has been available since late 2017; in mid-2019 it will be augmented by the Premius vertical door programme, to include the K4i car door and S4i landing door in this protection class. Repair kits for converting from the former MAT-EX to M*i*Drive®-EX are meanwhile also available.





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