

Meiller presents the innovative door drive concept of the future

UK

The new EN 81-20/50 lift standards are sure to be the subject on everybody's lips at this year's Interlift, to be held at the Augsburg Trade Fair Centre on 17-20 October.

Let us not forget, however, that at the last exhibition back in 2015, Meiller Aufzugtüren GmbH already demonstrated that all of its doors complied with the new regulations. In other words, by the time the standards had come into force, it had already long since completed the changeover process. All of its doors have long been available pursuant to the EN 81-20/50 requirements and many doors already sold comply with the new standards.

At this year's exhibition, the Munich-based manufacturer of lift doors for the premium class will be dedicating itself to another exciting and forward-looking theme – the lift in the digital future – with particular focus on the role that a mechanical component like a lift door can play in an interconnected environment.

A lift door's intelligence is essentially located in the car door controller, and so it is only logical that this forms the starting point for the design of Meiller's newly developed lift door drive, the MiDrive (Meiller intelligent Drive). It is available in two versions, which makes it suitable for controlling a wide range of motor types and constructions. It is fitted as standard with a CANopen interface, an option for optically coupling two controllers (in a master and slave configuration), and a servo mode that supports the manual opening of heavy doors in the event of an emergency release – just some of the features that the new drive already has to offer at its initial development level.

However, it is also able to save and analyse data that can provide information on the door's condition, which satisfies the basic requirements of preventive maintenance. The system also makes a valuable contribution to the environment, with its two energy-saving modes, ECO and ECO-Plus.

The new drive concept is set for its first public presentation at the interlift 2017, where it will form the central theme of Meiller's exhibition stand; samples of all motor variations and controllers will be on hand for closer inspection. Visitors will also be able to test the system's fast and simple commissioning, which uses a touch display or a phone app, as well as a software update, live at the exhibition.

At the previous fair, Meiller displayed a study of its new Compact door series. This product series has in the meantime achieved technical completion, and sales of the new range are set to commence following the interlift. The door concept is characterised by its extremely low transom height – only 218 mm for landing doors and 300 mm for car doors. This makes it the ideal solution when it comes to modernising old and outdated landing and car doors with low installation heights, which are now in line for gradual replacement.

Another product that Meiller first introduced to the public at the interlift 2015 was its four-panel Premiums® K4 vertical lifting gate. This is being joined this year by the Premiums® S4 landing door. This product opens up a completely new range of opportunities and possibilities, particularly in lift shafts that lack the space for fitting horizontal sliding doors. Both the car door and the landing door are fitted with the new Meiller door drive. Both controllers are optically coupled and communicate with each other by means of sensors. This ensures that both doors run absolutely synchronously.

A further feature of the new MiDrive concept can be seen on a sample of the Speed® door. This door version was developed especially for fast-running lifts, where high transport performance and maximum running smoothness are of particular importance. The car door will therefore also be available with the new door drive. It also has a TM 1-DV double skate system, which distributes the drive power symmetri-



cally onto both halves of the door. This, combined with extremely high-performance motors of the latest development generation, results in a dynamic door motion with fast opening and closing times, which significantly reduces passenger waiting times in front of the lift during busy periods. The double-skin door panels – which are usual for Meiller – have a mineral wool filling, which, together with the special rollers, result in the best possible noise insulation, with virtually no sound when the door opens and closes.

Also based on the new MiDrive concept is the Meiller HD (heavy duty) door, which is equipped with an 800 kg motor and TM 1-DV double skates. The four-panel door is fitted with reinforced door panels and other special components that make it ideal for use in heavy-duty environments where a robust and resilient construction is desired or required. This also includes the new Gravida® sill concept, to which a reinforced version for lifts with nominal loads of up to 10 tonnes has also been added.

For lifts that are required to satisfy even more stringent requirements in terms of robustness and availability, the Munich door manufacturer's product range also includes the ZENIT® – a six-panel, centre-opening door. One of the characteristic features of this door is that it is made of thicker metal sheeting and is supplied as standard with a solid heavy-duty sill. When the door opens, the door panels travel behind an impact guard, where they are

protected from damage while the car is being loaded.

The biggest door hitherto supplied by Meiller had a clear door width of 6,500 mm and was supplied to a leading car manufacturer for use in a production lift. Certain applications, particularly industrial ones, often require even larger lift cars with wider and higher entrances. To satisfy these requirements, Meiller will next year be completely revising its Zenit® concept, and it is now presenting a design study of a landing door and car door at the interlift. Door panels weighing well over 1 tonne will require appropriately dimensioned door drives. This is yet another area in which the new MiDrive concept can not only demonstrate its strength but also generate ideas on how a system can operate without a mechanical connection (hook bolt and skate) between the landing and car doors. By employing an optical coupling between the landing and car doors, it might be possible to reduce or even fully prevent the kind of disturbances that arise from car motions caused by unsuitable loading.

Another area in which the Munich door specialists have a special interest are large-dimension swing doors, in particular for modernising ageing systems used for transporting goods and other heavy loads, where there is insufficient space in the shaft for side-opening sliding doors. For this purpose, Meiller will be presenting the two-panel DT 39/2 heavy-duty swing door with a door height of 3,500 mm. The door is natu-



rally also available in far larger dimensions.

There is also a great demand for robust swing doors in passenger lifts installed in socially problematic areas. For such situations, Meiller will be presenting its heavy-duty swing door at the Interlift 2017, now available for the first time as a single-panel version (DT 39/1). Its heavy construction, combined with externally placed hinges, enable this door to function reliably even under rough operating conditions, and is designed to withstand improper use and even vandalism.

Safety continues to be a matter of major concern to the long-established Munich company. It is well known that the new EN 81-20/50 standards place great attention on the hazard of children's hands becoming trapped in lift doors. This was the motivation behind the development of the innovative FingerGuard® safety system that Meiller now presents. It consists of a series of detectors concealed in the upper frame section that are able to detect a potential problem the moment a door opens and before a child's fingers have a chance to slide between the door panels or between the door and the frame. Used in conjunction with the new MiDrive concept, the door is halted immediately, thus safely avoiding any injury. Visitors to the Meiller stand will be able to convince themselves of the system's reliability and functional-

ty with a fully functioning, two-panel glass door.

For modernisation applications, Meiller will be presenting four examples of car doors fitted with special skates that are designed to operate together with landing doors made by other manufacturers. The industrial safety regulations from 2015 require modernisation activities carried out on lift systems to reflect the latest state of the art. This means that lift car doors must be fitted with a locking mechanism pursuant to EN 81-20/50. For this purpose, Meiller uses a special interlock, the function of which will be demonstrated by four different exhibits.

Meiller continues to be one of the leading specialists in glass lift doors, especially when the emphasis is on lift aesthetics, fire prevention, and protection against vandalism. A small selection of the many possibilities will be on display, including fire-tested glass door panels in special constructions with a vision panel, a variable glass cutout and an adjustable plinth height.

Finally, Meiller will once again be demonstrating its product range's versatility, presenting not only a selection of its wide variety of sill options, but also the new heavy duty construction derived from the Gravida® sill concept. Gravida® consists essentially of three modules: a base plate and cover plate together form the sill's body, while the

interior of the sill component is made up of roll-formed steel or stainless steel profiles, depending on the desired construction. This gives the sill a high load-bearing capacity, making it suitable for use in lifts with nominal loads of up to 10 tonnes. The special feature of Gravida® sills is that the running grooves for the door panel guides are laser cut only to the extent necessary for the travel path of the door panels. This not only reduces the risk of dirt penetrating the sill and blocking the door panels but also enhances its appearance, as no guide groove is visible when the door is closed.

Meiller offers lift operators door sills to match any application, whether aluminium profile sills for standard passenger lifts, aluminium solid-material sills, for example for bed or heavy-duty lifts, the Gravida®, made of normal steel or stainless steel for everything from glass lifts to heavy-duty industrial lifts, and a wide range of special constructions, such as hidden track sill.

As they walk around the trade fair centre, visitors to the exhibition are once again promised a varied range of interesting product innovations. But above all, if you wish to experience the future of lifts today, be sure to visit Meiller Aufzugtüren GmbH at stand number 5143 in Hall 5.

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