Door Solutions for

DATA CENTRES

TECKENTRUP
DOOR SOLUTIONS

maxiflex®

info@maxiflex.co.za | **www.maxiflex.co.za**

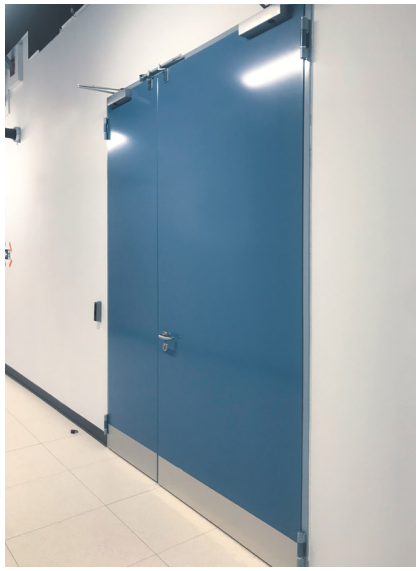
Maximum protection with functional and aesthetic design

TECKENTRUP DOOR SOLUTIONS

A data centre is a building used to house computer systems and associated components, such as telecommunications and storage systems. This data needs to be stored safely and needs high levels of security and fire protection. The fire protection doors from Teckentrup are the preferred doors to offer the client peace of mind for this protection.

Unique Selling Points:

- Resistance class RC 2 or RC 3 in accordance with EN 1627
- Wide range of products (multipurpose, fire, security sound insulation, pressure doors, or even a combination)
- 2 hour fire-rated certification for doors up to 3x3m
- 4-sided frames
- Fire resistance class for up to 90 minutes in raised mounting positions
- 1 and 2 door leaf design
- Supplied complete with frame and specified hardware
- Access control and security neatly integrated within the door leaf and frame



Design Considerations of a Data Facility

How exactly the requirements of a data centre differ from those of any other construction project is best understood by looking at the design and associated needs of a data facility. Potential hazards range from water ingress, cooling failure, unauthorised access, and contamination due to extinguishing foams or dust. Protection against fire is a very basic requirement. Relevant here, are walls, floors and ceilings. These must be designed at least to fire resistance class F90, i.e. „fire-proof". This is not so much about fires occurring in the data centre itself. Early fire detection systems (EFD) generally suffocate the source of the fire quickly. Fire sources in neighbouring rooms or buildings are usually problematic. Doors must therefore also meet special requirements for sealing and have special fire protection. Doors must be planned at least as fire-resistant or highly fire-resistant so that they can withstand fire for 60 minutes. Teckentrup has European certificates for these doors and national approvals are also available for many countries.

Protection against flue gas, splash water and pressure loads is also essential for doors in various areas of the building. For example, the danger of smoke is often underestimated.

Flue gases are often corrosive and can attack materials of IT systems in a very short time. Even remote sources of fire can threaten IT components in this way, as gases can travel long distances and be drawn in through the central air conditioning system. A higher level of safety can be achieved if the smoke gas sealing is tested according to EN 18095 and at least a protection level IP56, i.e. protection against dust and strong jets of water, is proven.

Increased Safety Requirements

Doors with resistance class RC 2 or RC 3 (in accordance with EN 1627) are absolutely essential in order to provide maximum protection for vulnerable areas in the buildings. For the door manufacturer, this means that in some areas, several characteristics in one door must be combined: security, fire, pressure, panic, etc. come together here. The construction of the individual server rooms (cages) represents a major technical challenge. Fire protection in elevated installation positions (so-called raised floors) in combination with lightweight construction stud walls must be provided.

Main requirements for data centres

- Special fire protection (safety, pressure, sound) at raised installation positions in connection with light-weight stud wall constructions
- Comprehensive requirements for access technology
- Increased safety requirements
- Protection against flue gas, splash water and pressure loads during the continuation of computer operation
- Exclusively use tested and approved solutions

Fire Resistance Class

As set in SANS1253:2016, a fire door assembly shall have a fire resistance of Class A, B, C, D, E, or F

SABS Standard vs Teckentrup Equivalent				
Minimum resistance period in minutes				
CLASS	**STABILITY**	**INTEGRITY**	**INSULATION**	**TECKENTRUP DOOR MODEL**
A	60	30	30	Teckentrup 62 - T30 / E12 30
B	120	60	60	Teckentrup 62 - T60 / E12 60
C	120	120	n/a	Teckentrup 62 - E12 60 / E 120
D	120	120	120	Teckentrup 72 - E12 120
E	120	30	30	Teckentrup 62 - T30 / E12 30
F	120	30	n/a	Teckentrup 62 - E 30

Stability: The ability for it to fulfil its design function, of keeping an opening closed, in the face of fire so that no fissure or opening wider than 25mm develops.

Integrity: Enables a door to resist fire, without the development of perpendicular, through openings wider than 6mm and longer in total, than the largest dimensions of the door.

Insulation: The ability to prevent the transmission of enough heat to raise the unexposed, face temperature, by more than 140°C above the initial temperature.

Impact Test: Enables the door to resist two successive impacts of a sandbag 250mm in diameter and a mass of 27 kg without the formation of any opening wider than 25mm.

Maxiflex Johannesburg
Tel: 011 392 1709
Maxiflex Cape Town
Tel: 021 982 0570
Maxiflex Durban
Tel: 031 705 4044
Maxiflex Port Elizabeth
Tel:041 5850690
info@maxiflex.co.za

www.maxiflex.co.za