



Q-Door electric folding door

Low U-Value Saves Energy and Money

Q-Door FX is constructed differently than other doors on the market.

Every detail is designed to make the door as durable, tight, and as insulating as possible, to save heating costs and the environment.

The door panel's shell is formed by rolling together a 0.6 mm thick corrosion-resistant SSAB sheet metal with an end profile made of metal, providing a durable and torsion-resistant structure.

Next, we inject polyurethane foam into the panel at 4,5 bars of pressure. The foam expands, filling all cavities and bonding chemically with the sheet metal and metal end profiles. Once the foam hardens, it becomes as hard as a hockey puck and provides insulation four times better than standard home insulation. Millions of microscopic gas-filled cells within the foam prevent heat and cold from passing through.

All seals are custom-made from durable EPDM rubber, which stays soft and seals well even in cold climates. Each door is millimeter-adjusted to the door opening during manufacturing.

The result is the market's most well-insulated, tight, and durable standard door. Available in Sweden's highest security standard SK3 SSF 1074 and with surface treatment packages for aggressive environments.

TECHNICAL INFORMATION

Maximum width	12 m
Maximum height	5 – 6 m
Door Panel	56 mm thick sandwich construction, corrosion class C5. U-value, best mean: 0,23 w/m ²
Window sizes (max 30% window area)	300 – 600 mm wide 300 – 1200 mm high
Colors	10 standard color, but can be painted in any color as an option.
U-value (Heat transmission EN 12428)	4-section door 5,0 m X 5,0 m: 0,90 w/m ²
T-value (Air Permeability EN 12426)	Manual Door: 1,5 (class 5) Electric Door: 0,9 (class 5)
Vindlast (EN 12424)	Designed for wind loads up to 1459 Pa = class 5
water Penetration (EN 12425)	Class 3

Door Panel Construction

The door panel is built and customized in our factory in Torsby, Sweden. The construction has been refined for over 60 years to withstand many years of abuse and to maximize energy efficiency, thereby saving as much heat energy and money as possible.

Corner reinforcements and hinge brackets are made of 4 mm hardened DOMEX steel - exceptionally strong and durable.

Torverk's door panel is based on a sandwich construction that is both strong and heat-insulating. Because the polyurethane foam chemically bonds with the metal, the door leaf becomes virtually homogeneous.

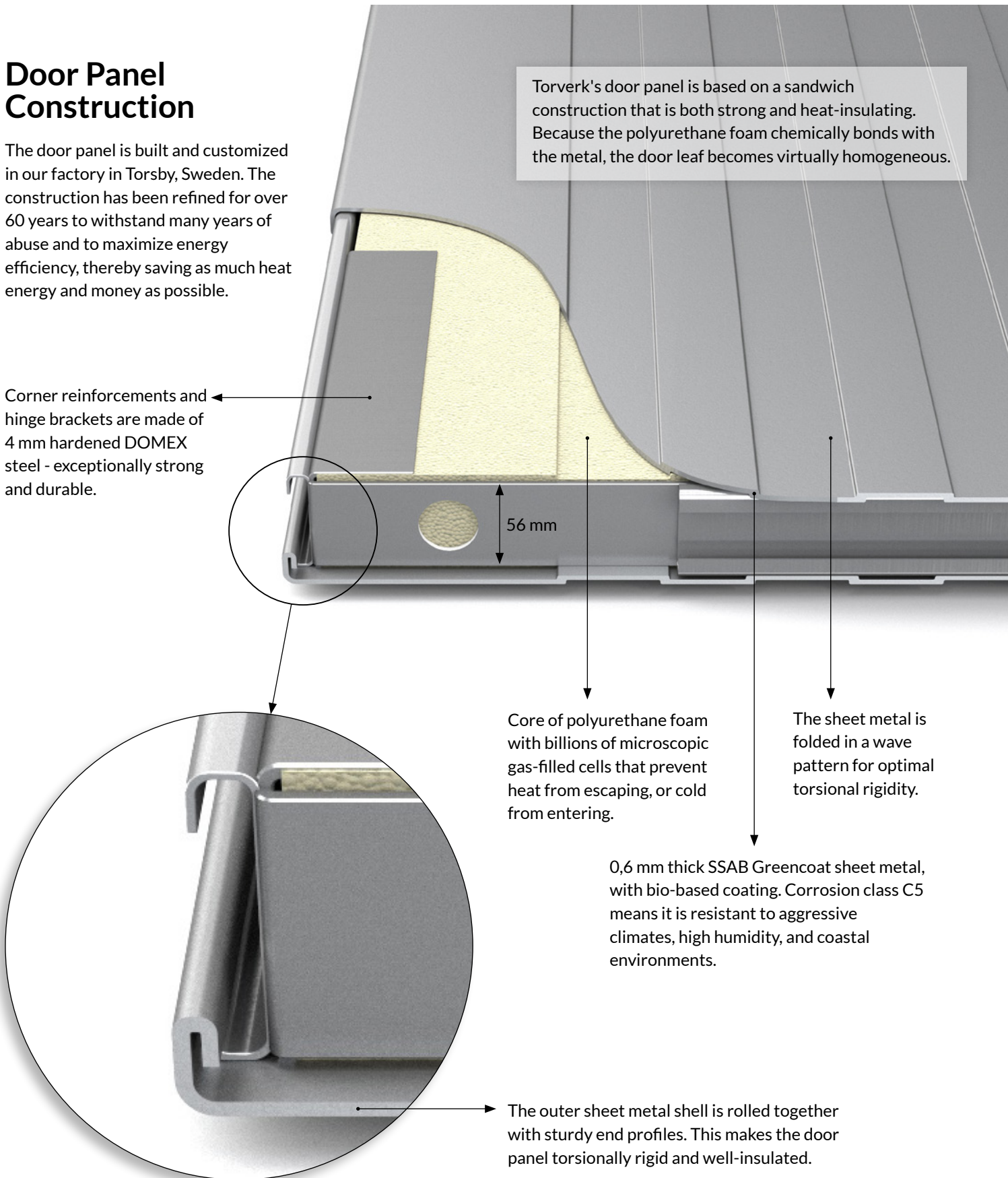
56 mm

Core of polyurethane foam with billions of microscopic gas-filled cells that prevent heat from escaping, or cold from entering.

The sheet metal is folded in a wave pattern for optimal torsional rigidity.

0,6 mm thick SSAB Greencoat sheet metal, with bio-based coating. Corrosion class C5 means it is resistant to aggressive climates, high humidity, and coastal environments.

The outer sheet metal shell is rolled together with sturdy end profiles. This makes the door panel torsionally rigid and well-insulated.



Locking Options

Electric Doors do not include an externally mounted padlockable espagnolette. Because the motor's link arms keep the door closed through their design, there's no need for an extra locking mechanism. However, if you desire added perimeter security, you can opt to install a padlockable or cylinder lockable espagnolette, with or without a switch that automatically cuts off power to the door's when locked.



Seals, Fittings & Hinges



To ensure that the seals are hurricane-resistant, we have designed custom profiles using extra-durable EPDM rubber. They remain pliable even in low temperatures and do not shrink over time.



The entire weight of the door is supported by robust fittings and hinges. The upper part of the hinges rests on a hardened steel ball, minimizing friction during opening and closing. As an option you can get hinges that are designed to lift the entire door upon opening, preventing the lower rubber seals from dragging on the ground and wearing out.

Surface Treatment Packages

Saltwater, moisture, and alkaline environments quickly degrade metals. A new door without surface treatment would not withstand many years in a car wash, where chemicals and water are constantly present. To extend the lifespan of your door (and to validate the warranty), we recommend choosing a package tailored to the environment in which the door will be installed.

Applications

STANDARD PACKAGE: Works well when your door is installed in a typical dry environment.

DESIGN PACKAGE: Door fittings and window trims are painted black. Otherwise, similar to a standard door.

CAR WASH PACKAGE: Intended for very humid environments.

STABLE PACKAGE: Adapted for alkaline environments, such as in animal stables.

RC5-PACKAGE: Resistant to aggressive environments, such as chemical industries, and also suitable for humid environments like tunnels.

RC5M-PACKAGE: Specially designed for a moist, salty environment, for example, near the sea.

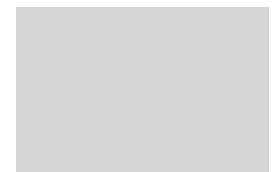
Standard Colors, Nearest RAL



Dark Red 758
RAL 3011



Bright Red 410
RAL 3013



Grey White 022
RAL 7044



Dark Gray 454
RAL 7016



Bright Blue 561
RAL 5019



Dark Blue 524
RAL 5001



Nordic Night Black 015
RAL 9004-GL



Antique white 001
RAL 9002



Silver Metallic 045
RAL 9006



Dark Silver 044
RAL 9007

NOTE!
Colors displayed on a computer screen
may differ from reality.

Window Options

Large windows allow for more light and contribute to a better working environment. However, keep in mind that the larger the window area in your door, the poorer the insulation, which can result in higher energy bills.

Fortunately, all our windows have a thermal break – a clever design that ensures the frames on each side of the window do not come into contact with each other, thus preventing the transfer of cold. So, if you insist on having a lot of windows, our frames are the solution that consumes the least energy.

Standard Sill Height

Sill height = measurement from the bottom of the door frame to the bottom of the window.

DD, ZD, LD: 1 650 mm

DZ, ZZ, LZ: 1 450 mm

DL, ZL, LL: 1 350 mm

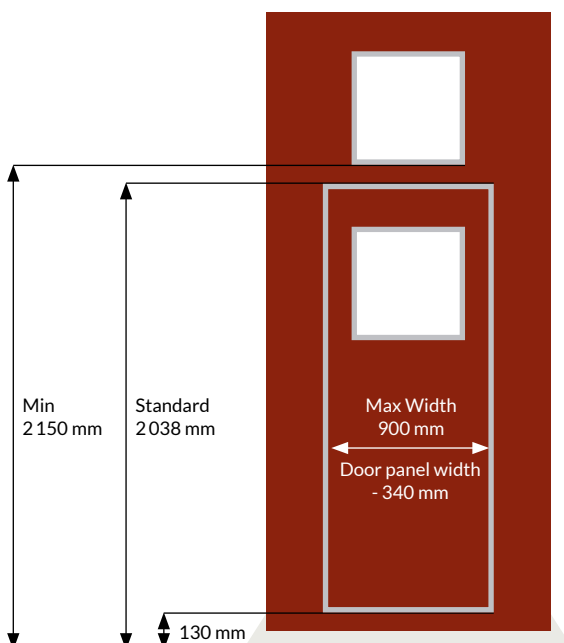
DX, ZX, LX: 750 mm



1	DD 300x300 mm
2	DD 300x300 mm
3	DZ 300x500 mm
4	DX 300x1200 mm

5	ZD 500x300 mm
6	ZZ 500x500 mm
7	ZL 500x600 mm
8	ZX 500x1200 mm
	ZM 500x850 mm

9	LD 600x300 mm
10	LZ 600x500 mm
11	LL 600x600 mm
12	LX 600x1200 mm

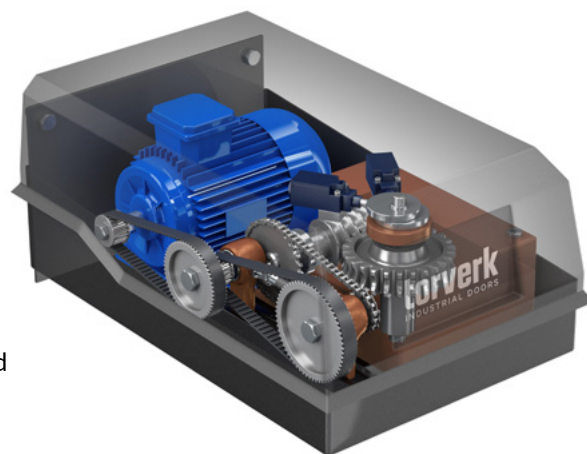


Pass Door

If you have pedestrian traffic through an industrial door, you save time and thermal energy with a pass door, since you don't have to open the entire door when a person needs to pass through.

The pass door is manufactured separately and integrated into the main door. The door can be equipped with various types of locks, door closers, panic bars, and emergency exit hardware.

Additionally, there are optional safety features. Windows for the pedestrian door are available in different sizes and sill heights, featuring a thermal break, just like all our windows. You can also choose to have a window above the pedestrian door.



Motor Operation

Torverk's doors are made to save energy. The door panel is well-insulated and tightly sealed, and the motor opens and closes quickly and safely to reduce heat loss. Our doors are powered by one or two motors, which move the door panels using link arms or chain drive. The motor is controlled by a control panel, which receives signals from photocells, remote controls, push buttons, load guards, or door seal sensors. Everything can be automated so that the door closes automatically after a vehicle has passed.

Motors

Torverk offers two types of motors that are built to last and work reliably. Our standard motor is robust and efficient, capable of handling millions of door openings without any problems. We also have a new linear drive designed for folding doors up to 14,5 meters wide, ensuring dependable operation for smaller doors too. Both motors come with weatherproof housing to shield them from dirt and moisture.

What motor to choose will depend on the size of your door and where it can be fitted in relation to the door itself. We'll assist you in selecting the best option based on your requirements and building structure.



Safety

A door should never cause harm. Therefore, Torverk's doors are equipped with safety features such as safety edges, finger guards, load guards, and photocells as standard. If something obstructs the door's path, a sensor in the rubber seal is activated, and the door's movement is stopped or reversed. Additionally, you can complement these features with radar, loop detectors, extra photocells, and signal lamps.



Open/Close Functions

A Torverk door can be fully automated for efficient logistics and reduced energy consumption. It can be controlled by radar, remote control, pull cord, push buttons, SMS mobile app, and many other triggers. You can also control access with keys, card readers, or access codes. The possibilities are almost endless.



Frame Setting for 4-section Door

Frame and threshold must be plumb, level and straight for the door to function properly. Neither frame or threshold is included in our delivery, but if you need the frame we can supply it.

Threshold steel consists of 100 x 10 mm hot-dip galvanized flat steel. The steel smooths out any unevenness in the floor and improves the sealing of the door. The threshold steel also forms an edge that makes it harder for rainwater to penetrate the door's floor seal.

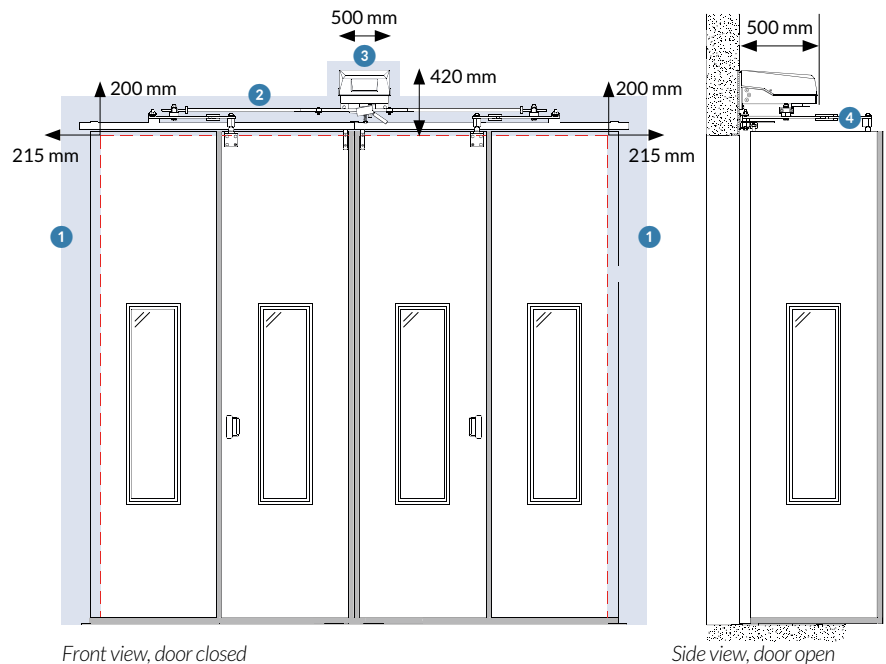
Door Opening

Torverk's doors are mounted with an overlap. This means they are installed outside or inside the opening, instead of within it. When the door opens, it folds inward or outward like an accordion, depending on what best suits your specific door opening. The amount of space required for the door sections when the door is open depends on the size of the door you need.

Additionally, an electric door requires space for the motor, linkage arms, and electronics both above and beside the door.

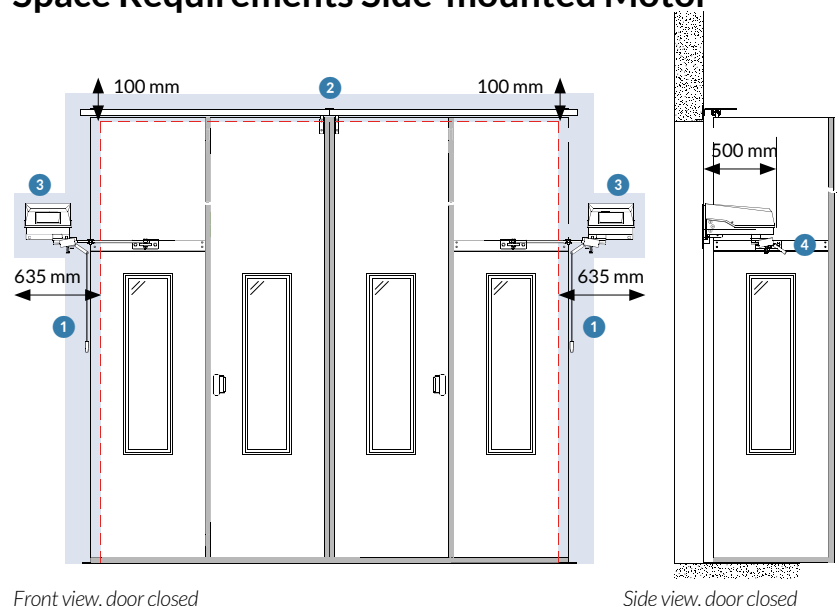
In the illustration you can observe the necessary clearance around the door opening for accommodating the motor positioned above or beside the door.

Space Requirements Overhead-mounted Motor



- Necessary clearance
- ① Side clearance 215 mm
- ② Overhead clearance 200 mm
- ③ Motor space width: 500 mm, depth: 500 mm, height: 420 mm
- ④ Space requirements for door panels in the open position: (door width / 4) + 20cm

Space Requirements Side-mounted Motor



- Necessary clearance
- ① Side clearance 215 mm
- ② Overhead clearance 100 mm
- ③ Motor space width: 635 mm, depth: 500 mm, height: 420 mm
- ④ Space requirements for door panels in the open position: (door width / 4) + 20cm

Burglary Protection to Keep Thieves and Cold Out

Do you have valuable assets on your property that you want to protect, or does your insurance require enhanced shell protection for the coverage to be valid?

Q-Door is available in two burglary protection classified versions, according to the Swedish standard SSF1074. The construction is tested and approved by the engineers at RISE (Research Institute of Sweden) and features the same effective insulation as our regular doors.

SSF 1074 SK2 classified version

Can be equipped with windows and a pass door.

SSF 1074 SK3 classified version

Must not have windows, but is certified for pass door. To conform with the SK3 standard it must be equipped with two padlockable espagnolettes and approved padlocks (padlocks not included).

Both protection classes are available as inward and outward opening doors.

Please note!

Unfortunately there is no international resistance class standard for industrial doors. EN1627, which is the test standard behind RC "resistance class", is only applicable to pedestrian doors. There is unfortunately no EN standard for industrial doors and therefore each country is required to have a national standard or use another country's standard. In Sweden the standard SSF1074 is used to test industrial doors in SK1, 2 and 3. Torverk has sold SSF1074 approved industrial doors to companies in Sweden, Norway, Finland and Denmark.

The **SSF1074 SK2** test uses the same tools and time limits as the international resistance class standard **EN1627 RC3**, with the addition of crowbar, hammer and mandrel set.

The **SSF 1045 SK3** standard uses the same tools and time limit as the **EN1627 RC4**. In addition to tools used in EN1627, SSF1074 uses axe, bolt shears, battery powered drill and a smaller sledge hammer.

It is Torverks opinion that SK2 and SK3 is comparable to RC3 and RC4.

Torverks resistance classed doors have been approved and sold in Norway, Finland and Denmark.

