

Sectional Overhead Doors - Quality Engineered





Porto Sectional Overhead Doors are the ideal solution for all industrial and logistic needs. The design and different solutions offered ensure that the door is aesthetically pleasing and perfectly suited in any architectural environment - from modern and traditional industrial buildings to fine commercial buildings. These doors are built to ensure the highest ease and flexibility of use which, in turn, ensures a quick, hassle free and accurate replacement of old doors. Their compact size ensures more available space both inside and outside the premises. Depending on the structure of the building and the requirement a choice can be made from a standard lift, vertical lift, horizontal lift, low headroom or inclined lift.

Porto Sectional Doors come in a wide variety of designs with various features to suit your individual requirement, that guarantee

- Reliable and low-noise operation
- Extreme robustness
- Safe operation in compliance with safety requirements
- Design-oriented surfaces and optimum light solutions



Type of Sectional Doors



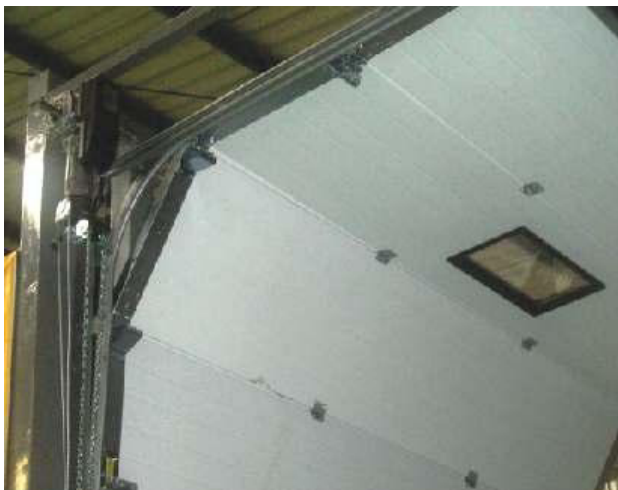


Manual Push-Pull Sectional Doors

This type of Sectional Doors are operated by pulling or pushing the doors manually. Counter balancing of the door weight is done using torsion springs within strong suspension shaft to reduce deflection. Due to manual exertion, these doors are ideal for very small size upto width 3000 mm x height 3000 mm.

Chain-Hoist Operated Sectional Doors

This type of Sectional Doors are operated manually by pulling an endless chain. They are relatively easy to operate as compared to Push-Pull type sectional doors as they roll up and down smoothly. Counter balancing of the door weight is done using torsion springs within strong suspension shaft to reduce deflection. The hoist is installed directly in the shaft to enable the manual lifting of the door. These doors are ideal for size upto width 8000 mm x height 6000 mm.



Electrically Operated Sectional Doors

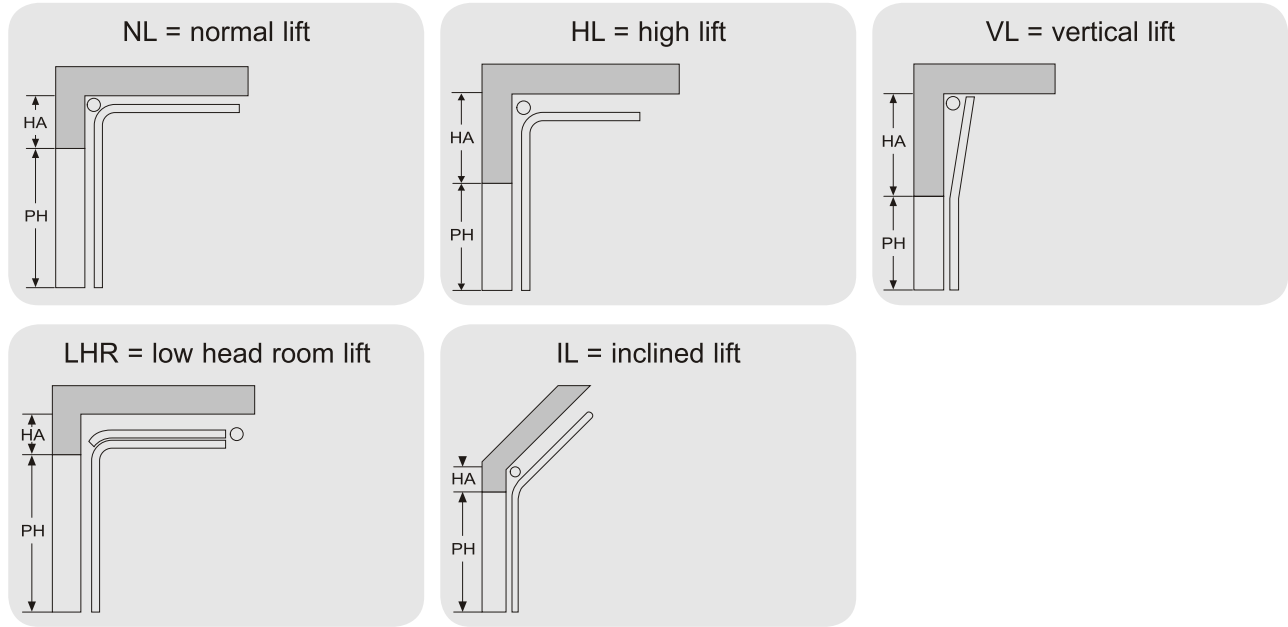
This type of Sectional Doors are operated by using a range of electrical actuators made up of self-braking worm gear with hollow shaft and integrated limit switches with overload protection. During downtime, the option for manual operation is also available.

Types of Installation



Sliding System Vertical Section Drawings: Types of Installation

Minimum lintel size - 200 mm



Elevation Details	PL (mm)		PH (mm)		HA (mm)	
	Min.	Max.	Min.	Max.	Min.	Max.
Normal (NL)	1800	8000	1780	5570	420	
				6500	510	
				8000	650	
High (HL)	1800	8000	1780	5500	960	4000
				8000		
Vertical (VL)	1800	6500	1780	5000	PH+300	
		8000		8000	PH+650	
Low Head Room (LHR)	1800	5000	1780	3500	200	
Inclined Lift (IL)	1800	6000	1780	5000	510	
		8000		8000		

Porto

Double-skinned Steel Sectional Doors

Panel

The Panels are sturdy and consist of double-walled steel with a polyurethane hard foam core which is foamed CFC-free. The standard thickness of the sections and therefore of the entire door leaf is 40 mm, which provides superb heat insulation and soundproofing.

The door panels are available in two heights 500 mm and 610 mm.

They are connected with each other by Galvanised Steel hinges. This guarantees safety and durability.

Technical Characteristics

- Density : $\pm 45 \text{ kg/m}^3$
- Adhesive strength : $\pm 0.10 \text{ MPa}$
- Compressive strength : $\pm 0.13 \text{ MPa}$
- Compressive Modulus of Elasticity : $\pm 2.68 \text{ MPa}$
- Thermal conductivity : $\pm 0.14 \text{ W/mK}$
- Heat transfer co-efficient:
 - Panel 610 mm with seal : $U= 0.76 \text{ W/m}^2\text{K}$
 - Panel 500 mm with seal : $U= 0.80 \text{ W/m}^2\text{K}$
 - Panel 610 / 500 mm without seal : $U= 0.53 \text{ W/m}^2\text{K}$
- All panels are lined internally and externally with a protective PVC film



Colours & Finishes Offered

Standard External Microrib				Standard Internal Stucco	
	WHITE similar to RAL 9010	GREY similar to RAL 9006	BLUE similar to RAL 5010		WHITE similar to RAL 9010
Optional External Microrib Internal Stucco	Any other RAL colour available on request, at surcharge to match the overall appearance of building				