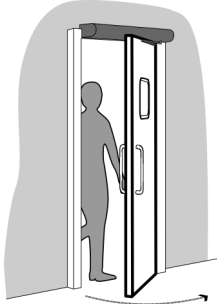
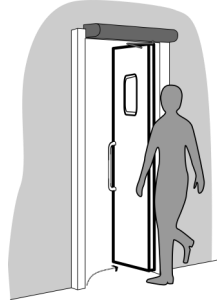


## Technical Data Sheet

**VECTOR OPERATOR****1 DESCRIPTION**

Single + Pull arm



Single + Push arm



Bi-parting + Pull arm



Bi-parting + Push arm

**i**

VECTOR is an advanced **electromechanical operator** used for the automation of any type of new or existing swing door.

It is a **highly-efficient high-performance** operator, especially designed for intensive use, as it can automate both light and very heavy doors.

**VECTOR** is available with pull or push arms, and with single and bi-parting door versions.

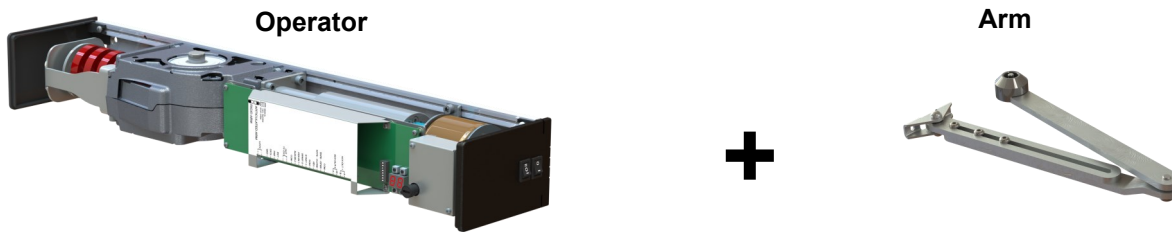
Thanks to its specific operating modes, **VECTOR** is recommended for **hermetic doors for clean rooms**, and for environments with **strong winds**.

Other main features:

- **Compact** design, with minimum aesthetic impact.
- Formal and attractive design with pleasant lines.
- Door closing by means of a **motor-assisted spring** in normal operation.
- Door closing by means of a **spring** in case of power supply failure.
- Available modes for **Low Energy** and **Push&Go** activation.
- **Easy installation** and monitoring thanks to its built-in double display.



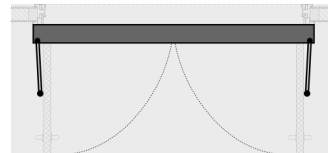
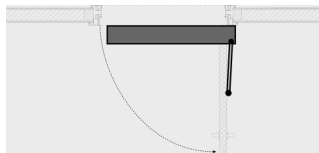
## 2 SYSTEM COMPONENTS



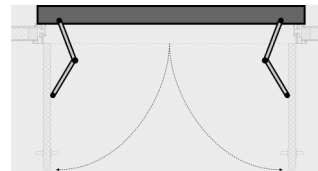
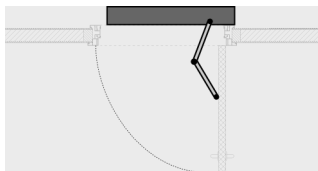
## 3 VERSIONS

It is available in the following transmission arm configurations, in single and bi-parting door versions:

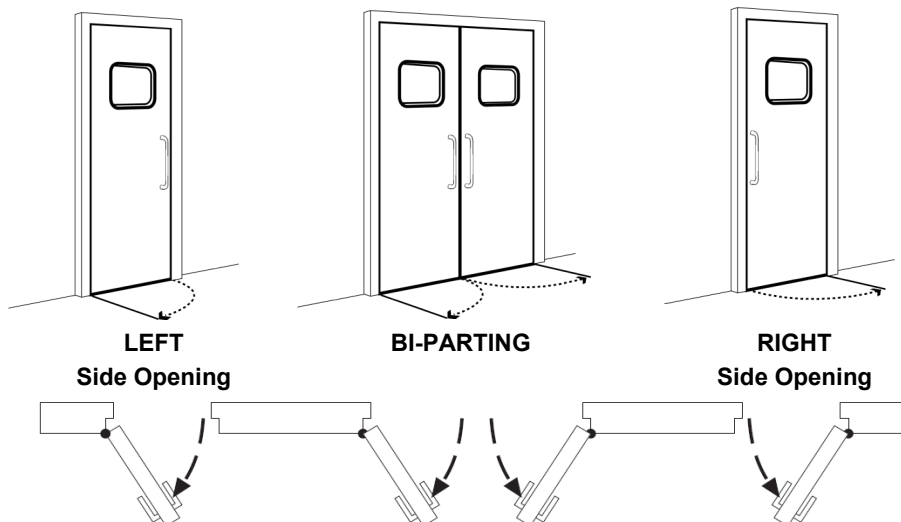
**Dragging arm:** attached to the wall on the same side as the hinges (see picture).



**Pushing arm:** attached to the wall on the opposite side to the hinges (see picture).



Both the **operator** and the **two arm versions** (pull and push) are **universal for any leaf typology: bi-parting, left and right opening.**



## 4 FINISHES

The cover is manufactured in aluminium, allowing all of the finishes available for this material:

**Anodised:** protective surface layer generated from an electrolytic process. The minimum anodised thickness is 15 microns.

**Lacquered:** protective coating of oven-polymerised plastic paint. The minimum lacquer thickness is 60 microns. The entire RAL range is available.

## 5 TECHNICAL SPECIFICATIONS

### MECHANICAL SPECIFICATIONS

Dimensions (Height x Width x Length)	89x130x675mm (1 leaf) 89x130x up to 2800mm (maximum 2 leaves)
Maximum leaf weight	250 kg (see table 1)
Opening time	3s (70°/s) ÷ 6s (20°/s)
Closing time	4s (40°/s) ÷ 15s (10°/s)
Closing force (second in 1154)	EN4 ÷ EN6 (See table 2)
Maximum opening angle	110°
Width of door leaf	700 ÷ 1400mm
Anti-crushing	Automatically limits force when obstacles are detected
Weight	Approx. 11kg.
Protection grade	IP40

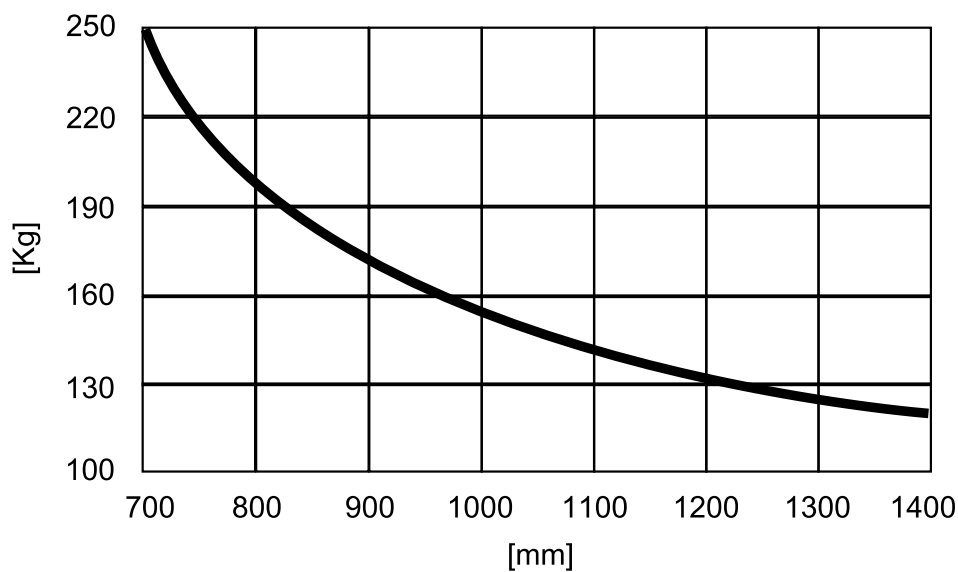
### ELECTRICAL SPECIFICATIONS

Power supply	230V ±10% CA 50/60 Hz
Nominal power	85W
Shaft output max. torque	45Nm
External devices power supply	15 VDC - 12W Max.
Operating temperature	De -10°C a 50°C
Service	Continual

### APPLIED STANDARDS

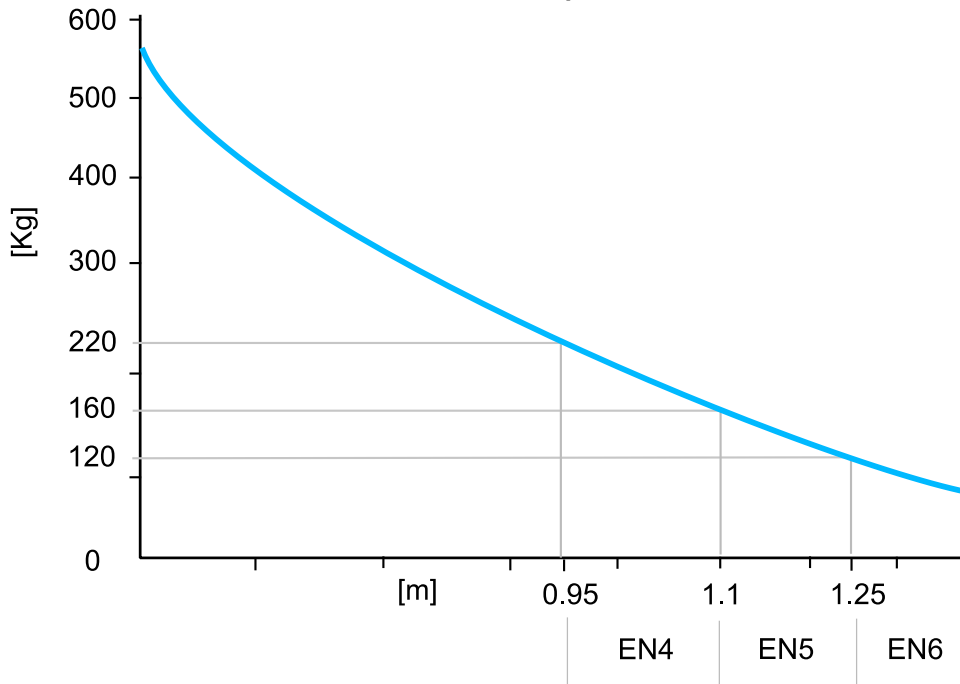
Low Voltage	35/2014/CE
Electromagnetic Compatibility	30/2014/CE
Construction Materials	305/2011/CE
Machine Safety	42/2006/CE
Automatic Door Use Safety	EN 16005

Table 1



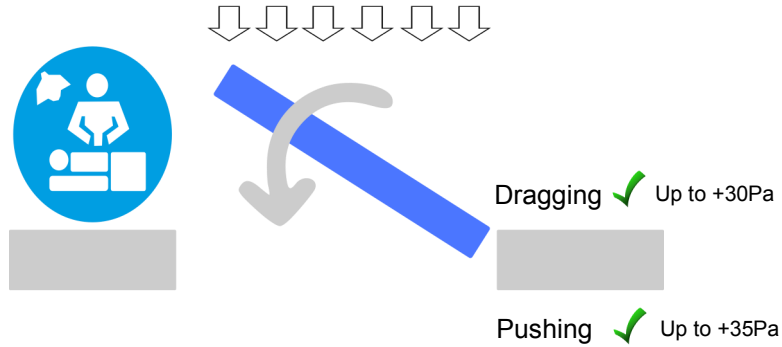
**6 TECHNICAL SPECIFICATIONS**

**Table 2**  
**Classification as per EN1154**

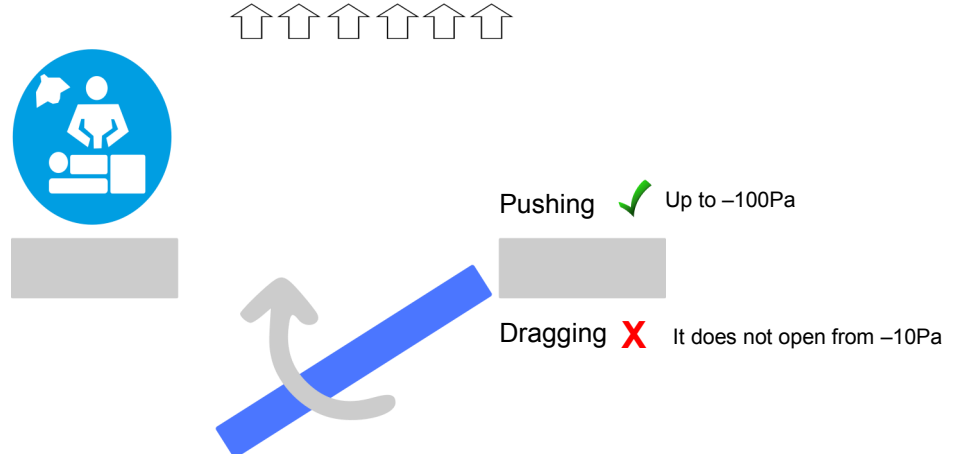


**WORKING PRESSURES**

**POSITIVE PRESSURE +**



**NEGATIVE PRESSURE -**



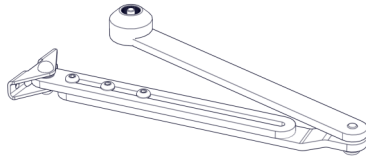
**7 ACCESSORIES**

Swing doors with VECTOR operators support a wide range of accessories:

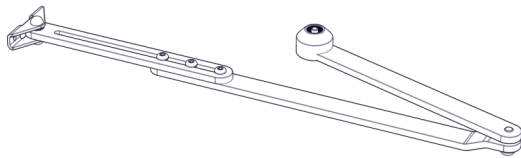
DETECTION	WIRED RANGE	WIRELESS RANGE	CONTROL / OTHER
<ul style="list-style-type: none"> <li>- Movement sensor</li> <li>- Reopening photocell</li> <li>- Standard presence sensor</li> <li>- Recessed presence sensor</li> <li>- Unsupervised movement and presence sensor</li> <li>- Supervised movement and presence sensor</li> <li>- Touchless switch</li> </ul>	<ul style="list-style-type: none"> <li>- Push button</li> <li>- Elbow push button</li> <li>- Key switch</li> <li>- Proximity reader</li> <li>- Keypad</li> <li>- Autonomous print reader</li> </ul>	<ul style="list-style-type: none"> <li>- Push button</li> <li>- Elbow push button</li> <li>- Key switch</li> <li>- Keypad</li> <li>- Remote control</li> <li>- Hands-free access identifier</li> </ul>	<ul style="list-style-type: none"> <li>- Emergency stop</li> <li>- Buzzer and/or warning light</li> </ul>

**ARMS**

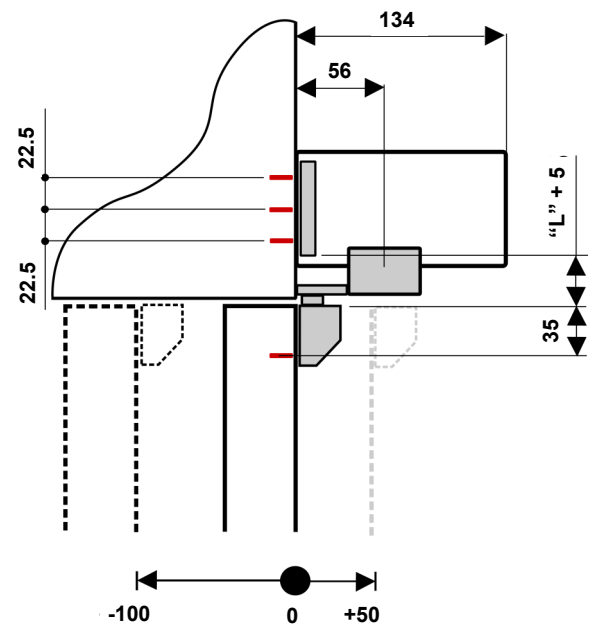
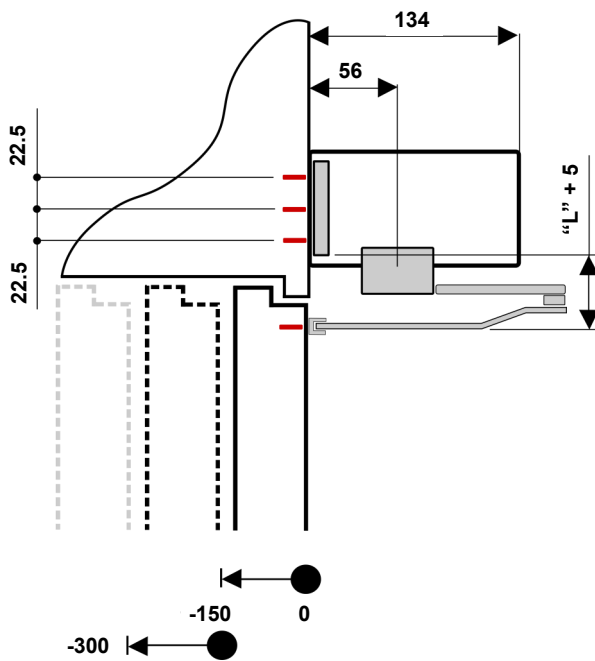
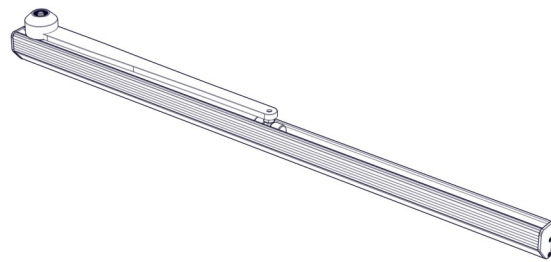
- Short pushn arm.  $0 \leq X \leq 150$



- Long push arm.  $150 \leq X \leq 300$

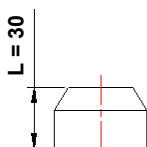


- Pull arm.

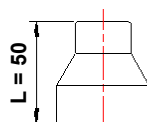


**AXIS EXTENSIONS**

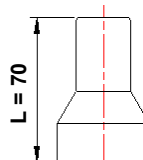
- 30mm axis extension.



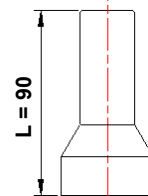
- 50mm axis extension.



- 70mm axis extension.



- 90mm axis extension.

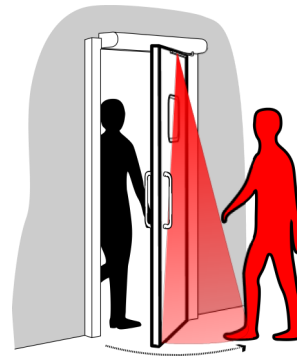
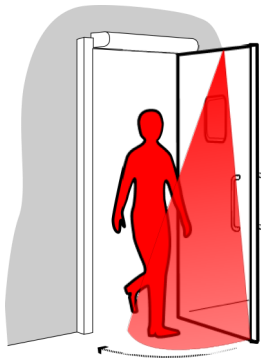


## 8 SAFETY FEATURES

All **manusa** VECTOR operators include the following safety features as standard:

- Closing force limitation:
  - The motor torque is monitored to ensure pedestrian safety.
- Detection of obstructions:
  - When closing, the door reopens.
  - When opening, the door stops.
- Manual opening:
  - In the event of power failure, the door may be activated manually, like a manual swing door.
- Fire alarm connection:
  - In the event of a fire and in order to allow evacuation, the door enters manual mode.

Optionally, the VECTOR operator may have protection sensors for the door's opening area. If the sensor detects the presence of a pedestrian in that area, the door will move safely.



Las características reflejadas en este documento se dan a título informativo, y no tienen carácter contractual. El fabricante se reserva el derecho a modificaciones sin previo aviso.

The characteristics indicated in this manual are purely informative and are in no way binding. The manufacturer reserves the right to make modifications without prior notice.

Les caractéristiques reflétées dans ce document sont données à titre indicatif, elles n'ont pas de caractère contractuel. Le fabricant se réserve un droit de modifications sans avis préalable.

As características exibidas neste manual se dão a título informativo, e não têm caráter contratual. O fabricante se reserva o direito a alterações sem aviso prévio.

**manusa** 

**OFICINAS CENTRALES**

Av. Vía Augusta, 85-87, 6<sup>a</sup>

08174 Sant Cugat del Vallés

Barcelona - España

Tel. +34 902 321 400