Twiflex V-Series Disc Brakes for the Elevator Market



Elevator Applications

Modular Disc Brakes



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HYDRAULICALLY RELEASED CALIPER BRAKES FOR ELEVATORS

Hydraulically Released Brakes

The Twiflex V-Series range of caliper braking systems are design for applications within high-rise/high-speed elevator drives and long-travel/mass-transit duty escalators.

- For passenger elevators, they protect against ascending overspeed and unintended movement
- For escalators, they ensure smooth deceleration in the event of power failure or other emergency stop event
- Braking force for spring applied units extends from 17 kN to 119, and beyond
- The modular designs accommodate all disc size options; greater braking torques achievable with multiple units
- Floating versions of each design minimize space-claim and accept large axial disc movements
- Standard and custom hydraulic power supply units available
- 'Soft braking' controllers enhance passenger comfort, achieving consistent deceleration rates regardless of load variation

VCS MK3

| Caliper Type | Braking Force kN | Release Pressure bar | Minimum Pressure for Full Retraction bar | Air Gap in. (mm) |
|-----------------|------------------------|----------------------------|---|---------------------|
| VCS62 | 62 | 127 | 159 | .079 (2.0) |
| VCS50 | 50 | 101 | 135 | .079 (2.0) |
| VCS47 | 47 | 95 | 110 | .079 (2.0) |
| VCS41 | 41 | 84 | 99 | .079 (2.0) |
| VCS33 | 33 | 68 | 78 | .079 (2.0) |
| VCS30 | 30 | 62 | 76 | .079 (2.0) |
| VCS23 | 23 | 46 | 54 | .079 (2.0) |
| VCS17 | 17 | 35 | 43 | .079 (2.0) |



VCSD

| Caliper Type | Braking Force kN | Release Pressure bar | Minimum Pressure for Full Retraction bar | Air Gap in. (mm) |
|-----------------|------------------------|----------------------------|---|---------------------|
| VCSD60 | 61 | 124 | 138 | .079 (2.0) |
| VCSD50 | 46 | 94 | 100 | .079 (2.0) |
| VCSD40 | 39 | 80 | 88 | .079 (2.0) |
| VCSD30 | 29 | 59 | 65 | .079 (2.0) |
| VCSD25 | 25 | 52 | 56 | .079 (2.0) |
| VCSD20 | 21 | 44 | 49 | .079 (2.0) |
| VCSD15 | 16 | 32 | 35 | .079 (2.0) |
| VCSD10 | 11 | 22 | 24 | .079 (2.0) |

Hydraulically Released Brakes

Application

The V-Series (modular) disc brake range is designed for both static holding and dynamic (emergency) stopping duty. Braking force is applied by springs located in each module and released by hydraulic pressure. Depending on the individual brake model and rating selected a maximum braking force of 119kN can be achieved per brake unit. Should higher forces be needed, multiple calipers or larger units (VSD, VMS) may be used.

Description

Standard calipers comprising two spring modules are usually mounted each side of a supporting bracket. 'Floating' calipers comprising a single module and reactive half, may be introduced when the available space envelope is limited or to accommodate axial disc movement. Should high power dissipation be required, large-pad versions increase the units' heat capacity. While the VCS brake's unique compact design makes it more suited to static holding, both the VCSD and VKSD are specifically rated for high cyclic duty applications.

Special Features

- Modular construction for ease of installation and maintenance no special tools required
- Industry-proven compact and rugged designs for reliable service
- Easily integrated with Twiflex HPUs and 'soft braking' control systems
- Special finishes and custom designs on request
- Multiple status monitoring and wear sensor options

VKSD

| Caliper Type | Braking Force kN | Release Pressure bar | Minimum Pressure for Full Retraction bar | Air Gap in. (mm) |
|-----------------|------------------------|----------------------------|---|---------------------|
| VKSD119 | 119 | 124 | 138 | .079 (2.0) |
| VKSD112 | 112 | 116 | 131 | .079 (2.0) |
| VKSD104 | 104 | 108 | 124 | .079 (2.0) |
| VKSD96 | 96 | 100 | 116 | .079 (2.0) |
| VKSD88 | 88 | 92 | 108 | .079 (2.0) |
| VKSD80 | 80 | 83 | 100 | .079 (2.0) |
| VKSD71 | 71 | 75 | 92 | .079 (2.0) |
| VKSD62 | 62 | 65 | 83 | .079 (2.0) |



Warner Electric Facilities

North America

USA

31 Industrial Park Road New Hartford, CT 06057 - USA 860-379-1252 *Electromagnetic Clutches and Brakes*

449 Gardner Street South Beloit, IL 61080 - USA 815-389-3771

4578 East Park 30 Drive Columbia City, IN 46725 - USA 260-244-6183 Precision Electric Coils and Electromagnetic Clutches and Brakes

Customer Service 1-800-825-6544

Application Support 1-800-825-9050

Twiflex Facilities

Europe

United Kingdom 9 Briat Road, Twickenham Middlesex TW2 6RB - England +44 (0) 20 8894 1161 info@twiflex.com sales@twiflex.com Industrial Brake Systems

Ampthill Road Bedford, MK42 9RD - UK +44 (0)1234 350311 Industrial Brake Systems

Germany

Hatschekstraße 36 69126 Heidelberg - Germany +49 (0) 6221-304719 twiflex-sales@stieber.de Industrial Brake Systems



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> Elevator Brakes Warner Electric

1-815-389-3771

+33 (0) 2 41 21 24 24



Europe

France 7 rue de Champfleur - CS20095 49182 St Barthelemy d'Anjou - France +33 (0)2 41 21 24 24 Electromagnetic Clutches and Brakes

Customer Service +33 (0)2 41 21 24 76

Application Support +33 (0) 2 41 21 24 24

Asia Pacific

Australia +61 2 9894 0133 China +86 21 5169-9255

Hong Kong +852 2615 9313

Singapore +65 6487 4464

Taiwan +886 2 2577 8156 Thailand

+66 2322 5527

Industrial Brake Systems

North America

Asia Pacific

Australia +61 2 9894 0133 China +86 21 5169-9255 Hong Kong +852 2615 9313

Singapore +65 6487 4464

Taiwan +886 2 2577 8156 Thailand +66 2322 5527

> **Twiflex** 1-844-723-3483 +44 (0) 20 8894 1161

