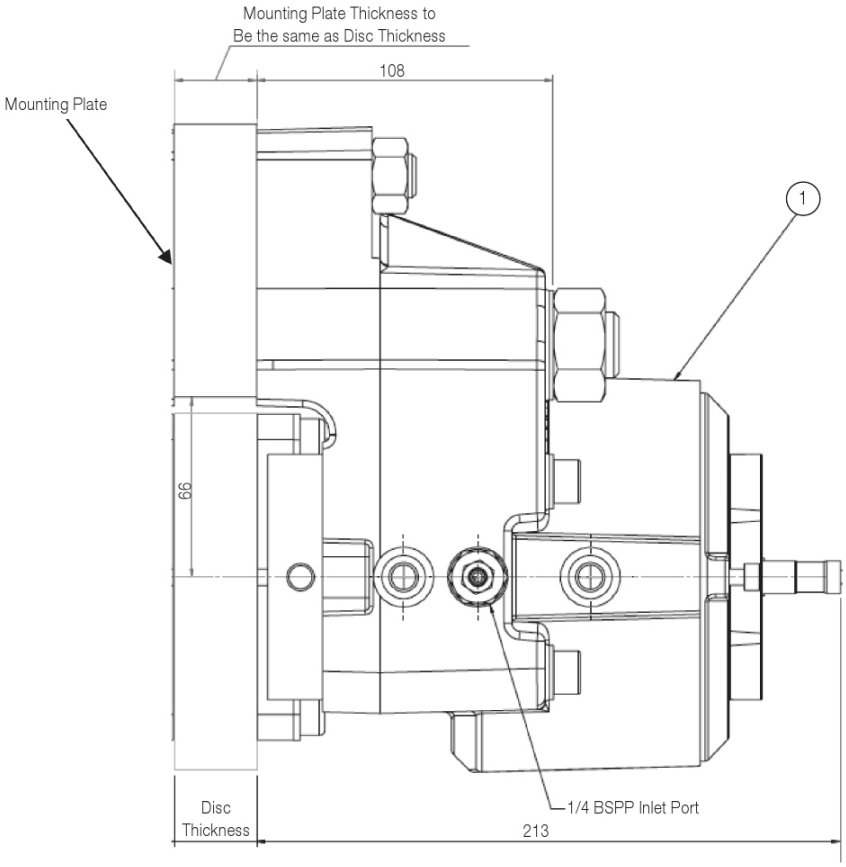
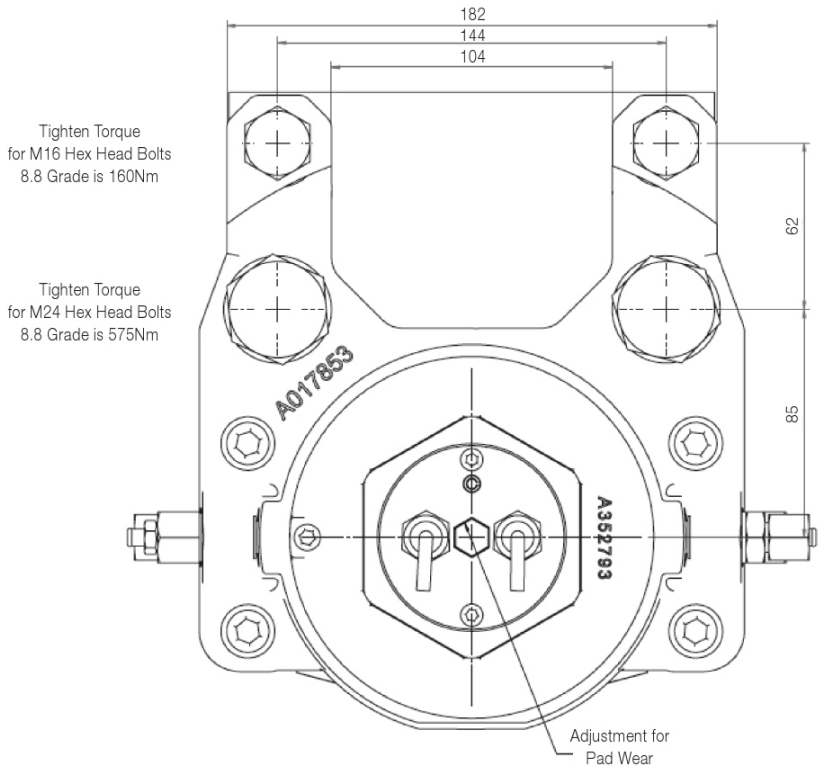
Twiflex Limited

VCS-MK4 Disc Brake Caliper - Spring Applied, Hydraulically Released

DS2750





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VCS-MK4 Disc Brake Caliper - Spring Applied, Hydraulically Released

Technical Specifications

Pad Area = 296.8 cm^2 (2 Pads)
Effective Disc Radius = Disc Radius – 0.064m
Minimum Disc Diameter = 500mm
Pad Wear Allowance: = 5mm

VCS MK4 Spring Module

Caliper Type	Braking Force (kN)	Air Gap (mm)	Release Pressure (bar)	Max Retraction Pressure (bar)	Max Allowable Pressure (bar)
VCS 70	60	1.7	135	160	250
VCS 60	50	2	115	150	250
VCS 50	40	2	95	135	250
VCS 40	30	2	75	115	250
VCS 30	20	2	55	95	250

VCS MK4 Floating Module

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Braking Force Assumes-

a) Coefficient of friction between brake pad and brake disc of 0.4*
b) A small loss due to spring pack friction
c) An air gap setting as stated in the table
Braking force is increased by reduction in air gap setting and vice versa.

* This is only achieved by fully bedded-in and conditioned brake pads and high standard of cleanliness and dryness at the friction surfaces.

Bedding in procedure is available in publication M1065.

Hydraulics

The Hydraulic Fluid is mineral based oil fluid. Correctly formulated water oil emulsion may also be used.

Adjustment

Retract the Brake by applying the Maximum Retraction Pressure from the table. Turn the adjusting bar clockwise to move the pad forward and adjust the air gap as per value given in the table. The thickness of the mounting plate will be the same as the brake disc thickness.

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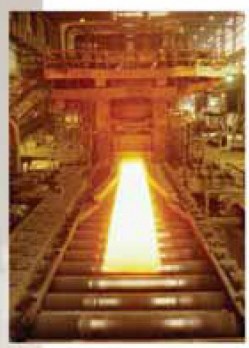
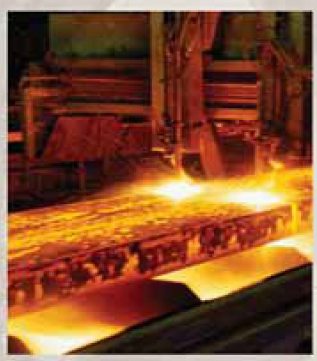
VCS Series Disc Brakes for Steel & Mining Applications





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An Altra Industrial Motion Company

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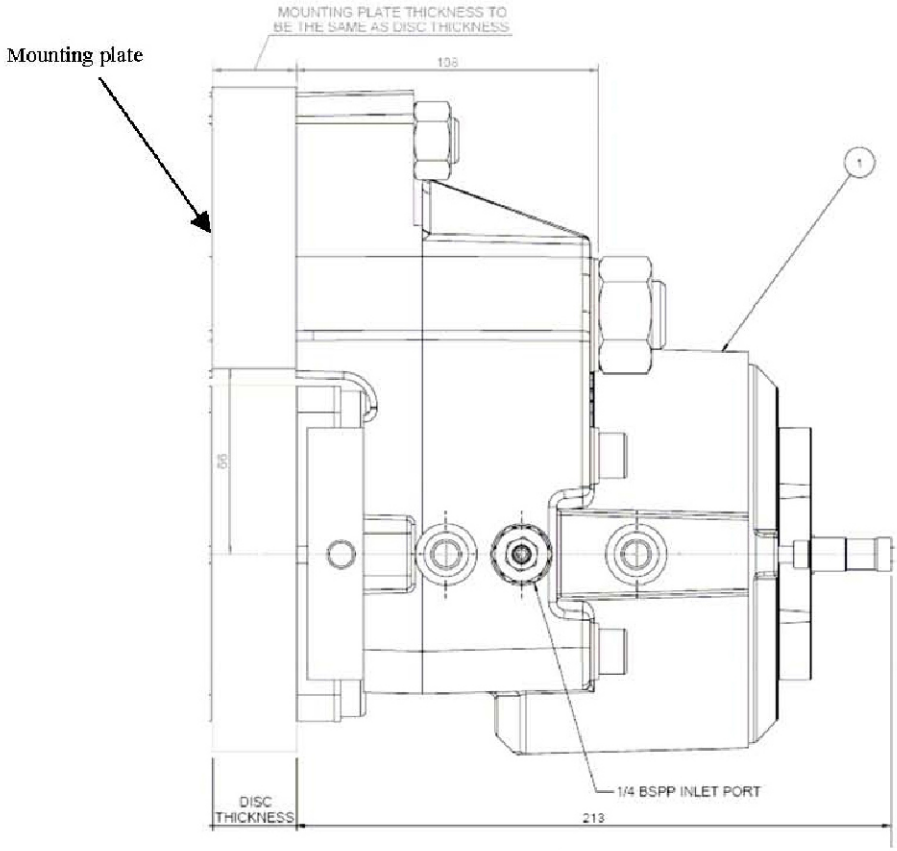
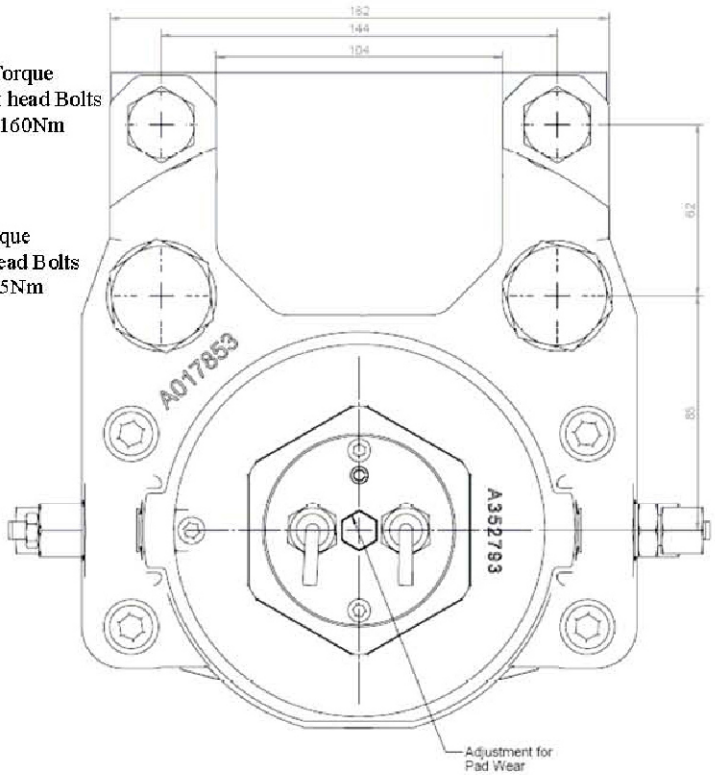
VCS-MK4 DISC BRAKE CALLIPER SPRING APPLIED HYDRAULICALLY RELEASED	DB 2750	
	Issue 1	Date: Sep 2009



Tightening Torque
for M16 Hex head Bolts
8.8 Grade is 160Nm

Tightening Torque
for M24 Hex head Bolts
8.8 Grade is 575Nm



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VCS Series Disc Brakes

Application

The VCS Series (modular) disc brake has been specifically designed for both static holding and dynamic (emergency) stopping duty. The braking force is applied by springs located in each module and released by hydraulic pressure. The rate of application and release can be controlled. Depending on the spring pack selected, a maximum braking force of 60kN can be achieved per brake unit. VCS brakes can be used on a wide variety of industrial and marine applications including conveyor drives, hoisting drums, rolling mills, winches, process lines, and cranes.

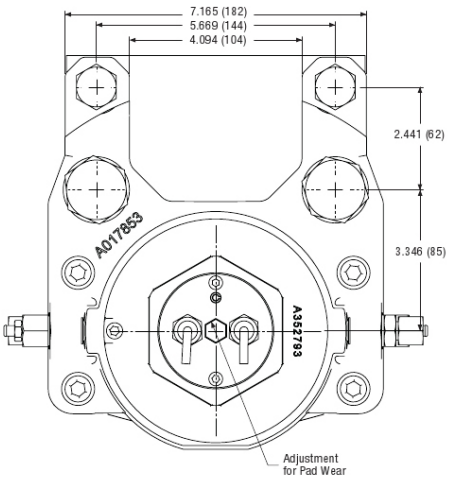
Description

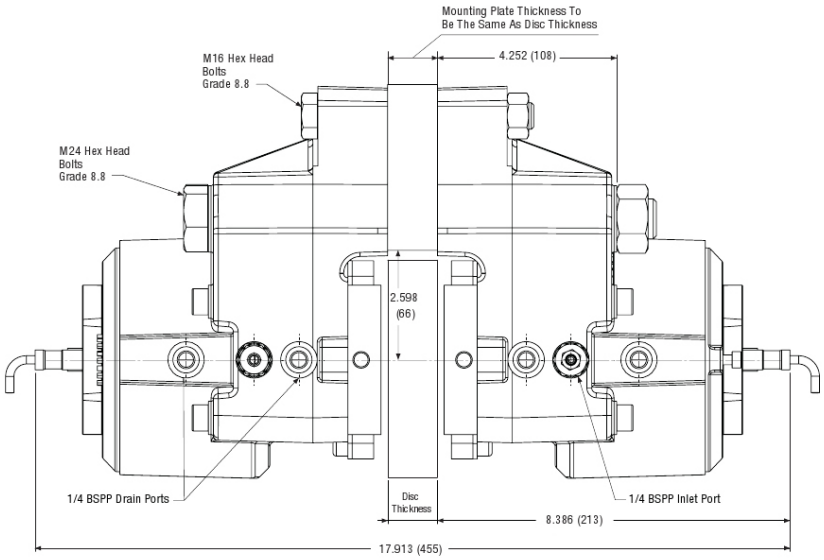
The VCS Caliper is comprised of two modules located on either side of a mounting plate which could be made to accommodate brake discs of 20mm and over. Each module consists of a spring pack to provide the clamping/braking force. The minimum disc diameter is 500 mm. A flange mounted version of the caliper is available for special applications.

Special Features

- Modular construction for easy maintenance and assembly
- Rugged design and corrosion protection for reliable service in challenging operational environments
- Low Pad Pressures
  Pad Area = 296.8 cm^2 (2 Pads)
- Designed for dynamic use with infinite fatigue and exceeding mining standards on stressed parts
- Easy setup and adjustment to precisely tailor to wide ranging operational requirements
- Suitable for "soft braking"
- Wide choice of designs based on standard components
- Backed by a global network of dealers
- Air gap adjustment from rear
- Monitoring sensors for brake on/off and pad adjustment are available

Dimensions inch (mm)





VCS MK4 Spring/Floating Module

Caliper Type	Braking Force kN	Release Pressure bar	Max Retraction Pressure bar	Air Gap in. (mm)
VCS70	60	131	160	.067 (1.7)
VCS60	50	113	148	.079 (2)
VCS50	40	94	131	.079 (2)
VCS40	30	75	113	.079 (2)
VCS30	20	54	94	.079 (2)

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