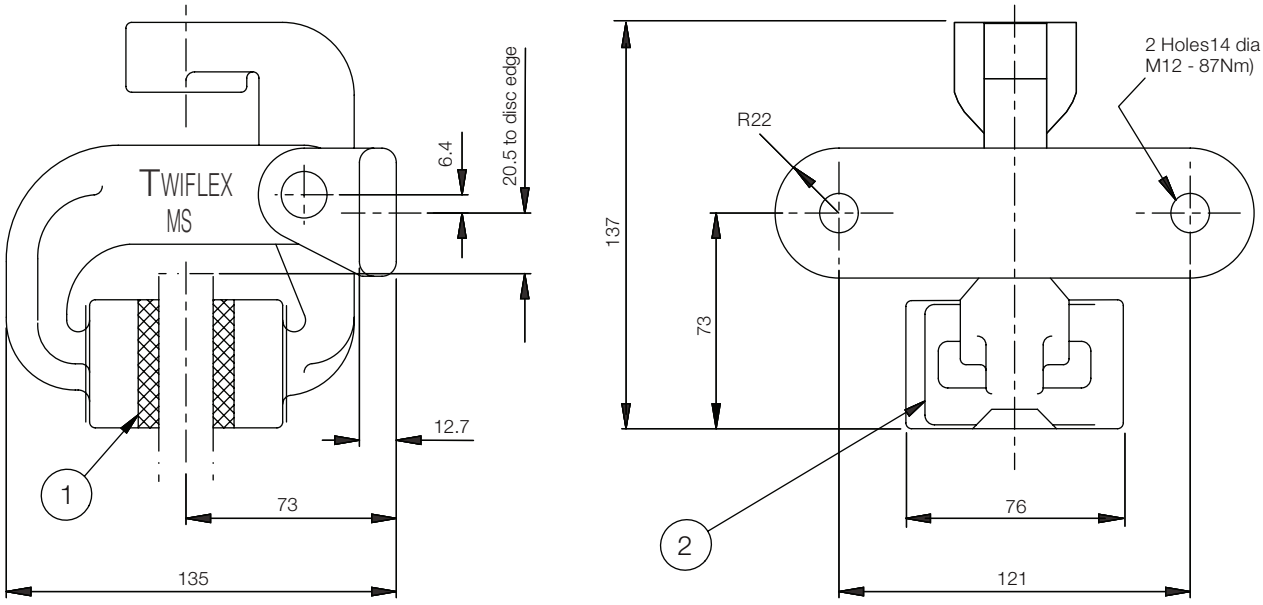
Twiflex Limited

DS1500

MS Disc Brake Caliper



Caliper Part Number. 6780277
Caliper Part Number. 6780842 for K and L Thrusters

Weight	- 1.5 kg.
Pad wear allowance	- 8mm
Total pad area	- 58cm (2 Pads)
Pad dimensions new	- 63.5 x 46 x 12.7 thk.
Pad material	- Asbestos-free high friction material

AVAILABLE SPARES		
Item	**Component**	**Part No.**
1	Pad Assembly	0780123
2	Spring Clip	7900024

Twiflex Disc Brakes must be used with Twiflex asbestos free brake pads.
The use of any other brake pads will invalidate the warranty.
Twiflex Limited reserves the right to modify or change the design without prior notice.

MS Disc Brake Caliper

General Description

The MS series of disc brake calipers are used with brake disc 12.7mm thick
Normally one or two units will be used per disc but the number may be increased, depending on disc size.
The brake units can be positioned at any angle around the periphery of the disc, but ideally they should be mounted horizontally (in 3 or 9 o'clock positions) in relation to the disc.

Brake	Description	Data Sheet	Maximum Braking Force - kN
MSA	Pneumatically applied - Spring released	1501	2.76
MSD	Pneumatically applied - Spring released	1502	1.44
MSE	Pneumatically applied - Spring released	1503	0.29
MSF	Mechanically applied - Lever operated	1504	1.88
MSG	Pneumatically applied - Spring released	1505	0.76
MSH	Mechanically applied - Hand operated	1506	1.01
MSK	Spring applied - Pneumatically Released	1507	0.87, 1.74 and 2.6
MSL	Spring applied - Hydraulicly Released	1508	0.87, 1.74 and 2.6

Discs:

A range of standard discs of 12.7mm thick are available from Twiflex see Data Sheet DS0501.
Minimum disc diameter for the MS caliper is 150mm

Controllers:

Standard Twiflex Controllers are available for single or multi-caliper installations for use with electric, pneumatic and hydraulic signalling systems.

Pad replacement:

To replace the pads, secure the installation to ensure safety. Ease out the pad springs and remove worn pads. Clean the disc and pad mounts with a suitable cleaning agent such as white spirit. Fit new pads. Replace pad springs.

For bedding-in and conditioning procedures see Publication M1060

Health and Safety data sheet refer to DS 0500

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An Altra Industrial Motion Company

www.twiflex.com
9 Briar Road, Twickenham
Middlesex TW2 6RB - England
+44 (0) 20 8894 1161
Fax: +44 (0) 20 8755 5601

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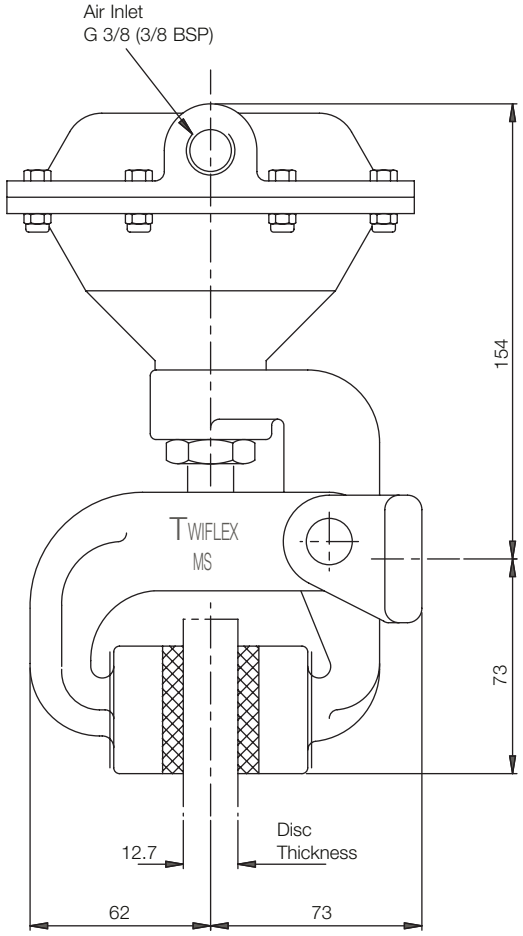
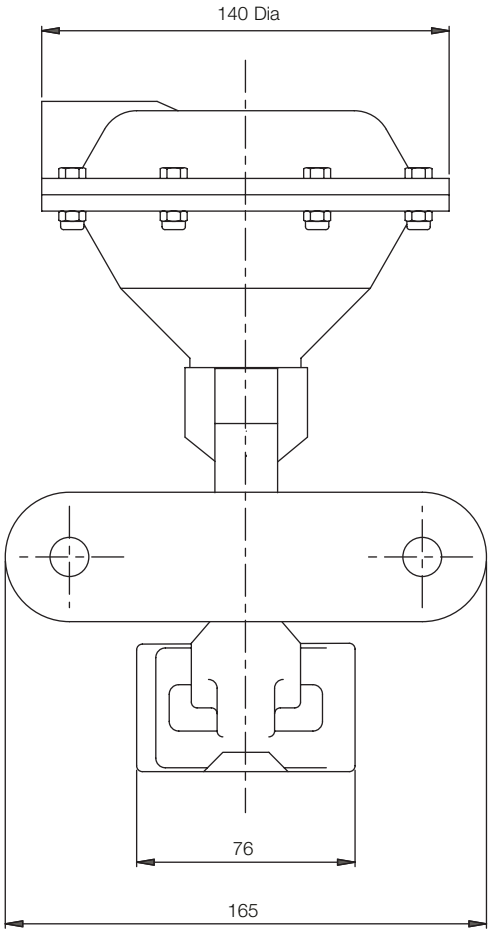
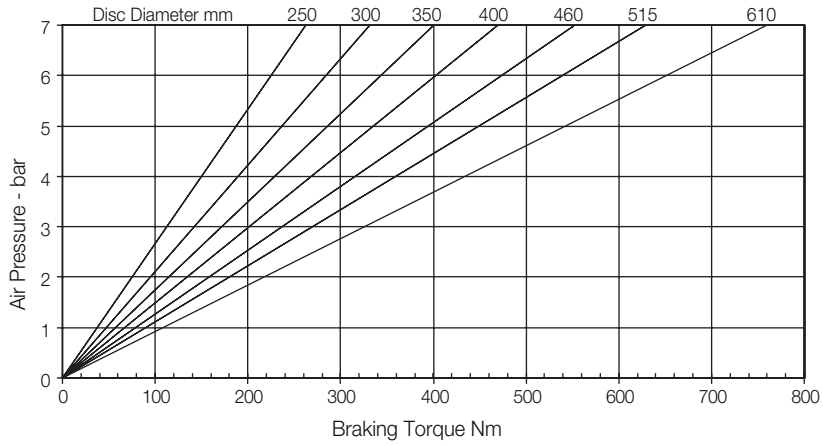
DS1501

MSA Disc Brake Caliper - Pneumatically Applied, Spring Released

Nominal dimensions given
For caliper dimensions see DS1500







Weight (caliper and thruster) - 2.8kg
(thruster only) - 1.3kg

Volume displacement of thruster at full stroke is 300ml.

Maximum Braking Force = 2.76kN @ 7 bar

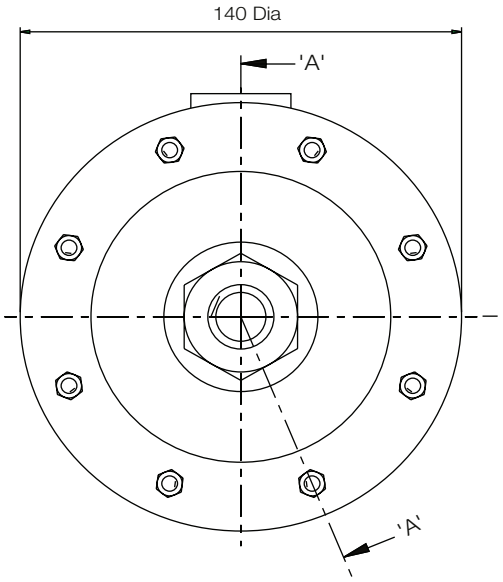
The ratings shown on the above graph are based on fully bedded and conditioned brake pads with nominal friction coefficient μ= 0.4.

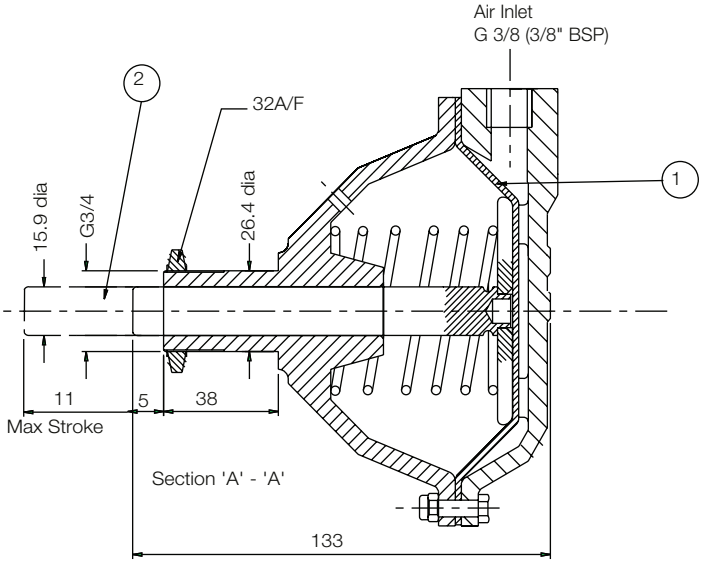
For bedding-in and conditioning procedures see Publication M1060.

Braking Force is defined as the Tangential Force acting on the brake disc at the Effective Disc Radius.
Braking Torque (Nm) = Braking Force (N) x Effective Disc Radius (m) where Effective Disc Radius = Actual Disc Radius - 0.03.

Twiflex Disc Brakes must be used with Twiflex asbestos free brake pads.The use of any other brake pads will invalidate the warranty.
Twiflex Limited reserves the right to modify or change the design without prior notice.

MSA Disc Brake Caliper - Pneumatically Applied, Spring Released





Thruster Part Number 7200276

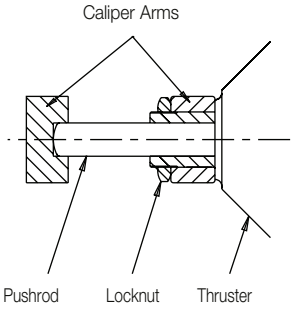
AVAILABLE SPARES		
Item	**Component**	**Part No.**
1	Diaphragm Kit	7902801
2	Piston Rod Assembly	7200494

This range of pneumatically operated brakes uses dry and filtered compressed air at pressures up to 7 bar. Pneumatic brakes require a control valve which may be operated either manually, or by pneumatic or electrical signal.

Should it become necessary to replace a diaphragm, ensure air supply is disconnected, remove the M5 bolts and the rear cap of the thruster. Remove the worn diaphragm; clean-up the contacting surfaces and re-assemble with the new diaphragm and bolts in position (Tightening Torque 5.7Nm).

Thruster Fitment

1. Offer thruster to caliper making sure that the lock nut is removed before placing push rod through caliper arm.
2. Fit lock nut over the push rod and locate it's end within the slot of the other arm.
3. Tighten the lock nut to 50-60 Nm.



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9 Briar Road, Twickenham
Middlesex TW2 6RB - England
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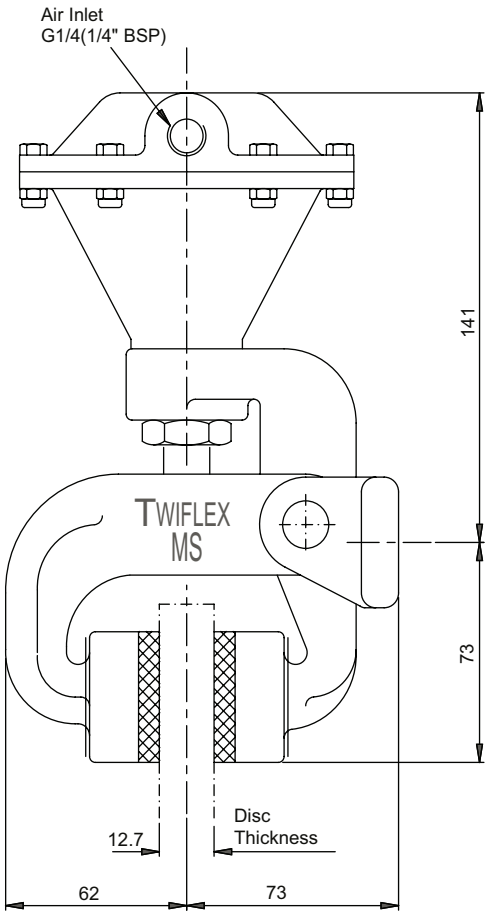
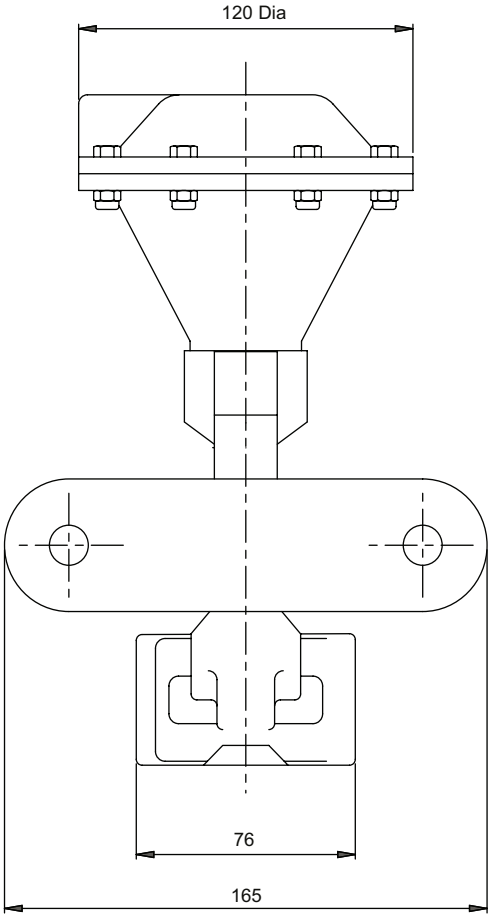
Twiflex Limited

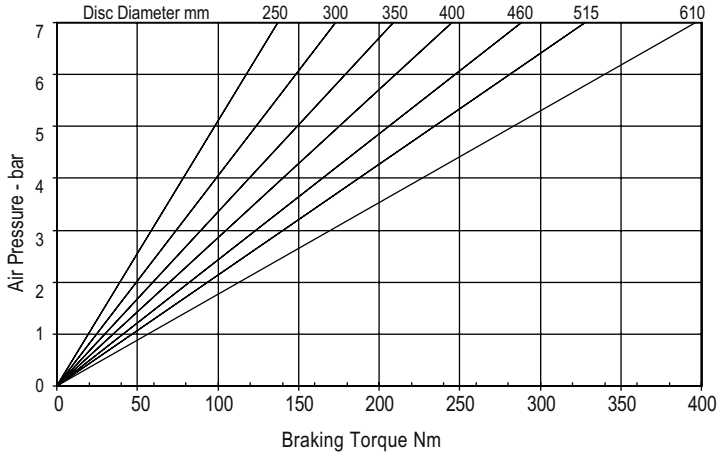
DS1502

MSD Disc Brake Caliper - Pneumatically Applied, Spring Released

Nominal dimensions given
For caliper dimensions see DS1500







Weight (caliper and thruster) - 2.5kg
(thruster only) - 1.0kg
Volume displacement of thruster at full stroke is 150ml.

Maximum pressure 7 bar

Maximum Braking Force = 1.44kN @ 7 bar

The ratings shown on the above graph are based on fully bedded and conditioned brake pads with nominal friction coefficient μ= 0.4.

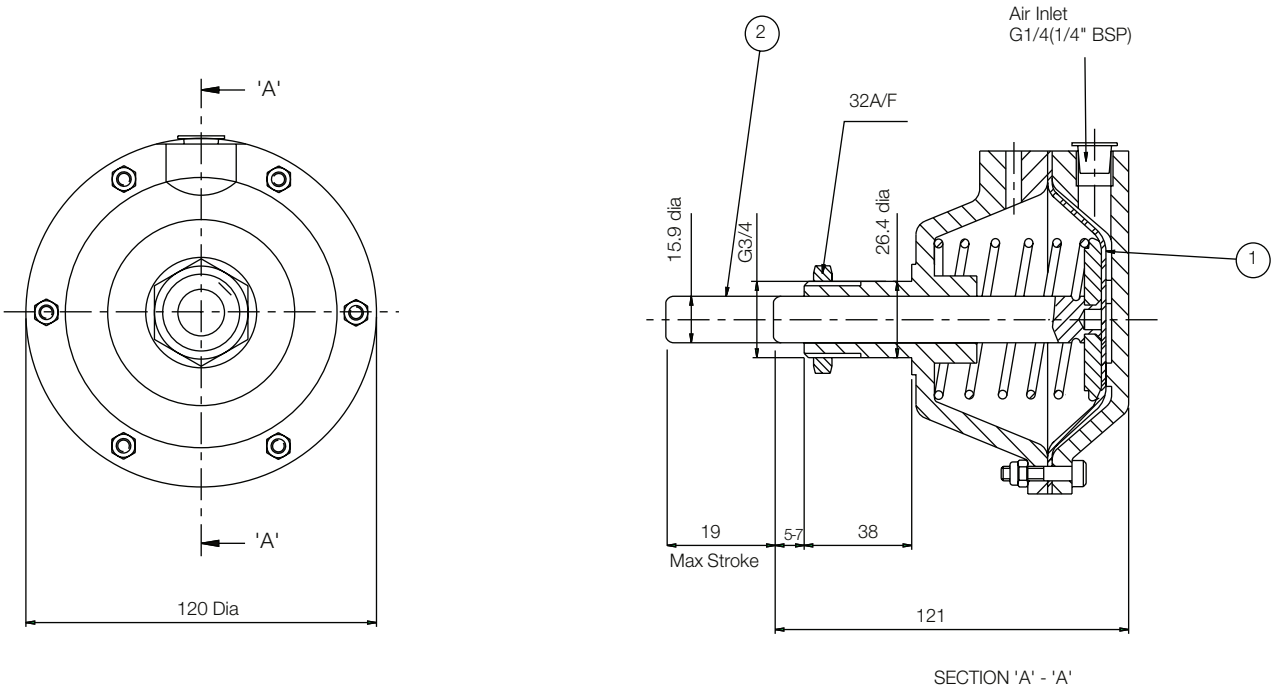
For bedding-in and conditioning procedures see Publication M1060.

Braking Force is defined as the Tangential Force acting on the brake disc at the Effective Disc Radius.
Braking Torque (Nm) = Braking Force (N) x Effective Disc Radius (m) where Effective Disc Radius = Actual Disc Radius - 0.03.

Twiflex Disc Brakes must be used with Twiflex asbestos free brake pads.The use of any other brake pads will invalidate the warranty.

Twiflex Limited reserves the right to modify or change the design without prior notice.

MSD Disc Brake Caliper - Pneumatically Applied, Spring Released



Thruster Part Number 7200865

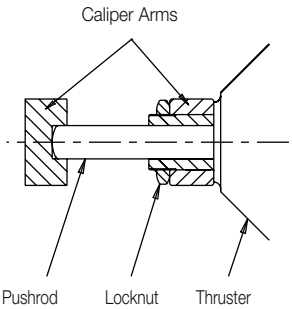
AVAILABLE SPARES		
Item	**Component**	**Part No.**
1	Diaphragm Kit	7902799
2	Piston Rod Assembly	7200867

This range of pneumatically operated brakes uses dry and filtered compressed air at pressures up to 7 bar. Pneumatic brakes require a control valve which may be operated either manually, or by pneumatic or electrical signal.

Should it become necessary to replace a diaphragm, ensure air supply is disconnected, remove the M5 bolts and the rear cap of the thruster. Remove the worn diaphragm; clean-up the contacting surfaces and re-assemble with the new diaphragm and bolts in position. (Tightening Torque 5.7Nm)

Thruster Fitment

1. Offer thruster to caliper making sure that the lock nut is removed before placing push rod through caliper arm.
2. Fit lock nut over the push rod and locate it's end within the slot of the other arm.
3. Tighten the lock nut to 50-60 Nm.



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9 Briar Road, Twickenham
Middlesex TW2 6RB - England
+44 (0) 20 8894 1161
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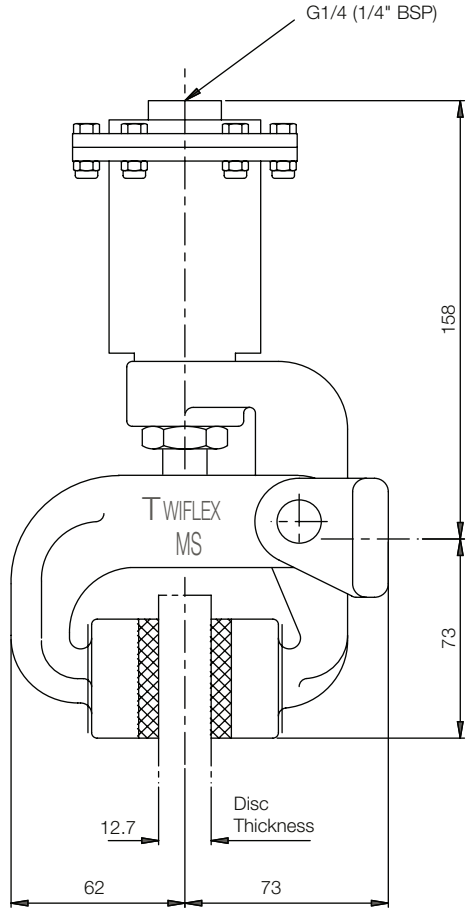
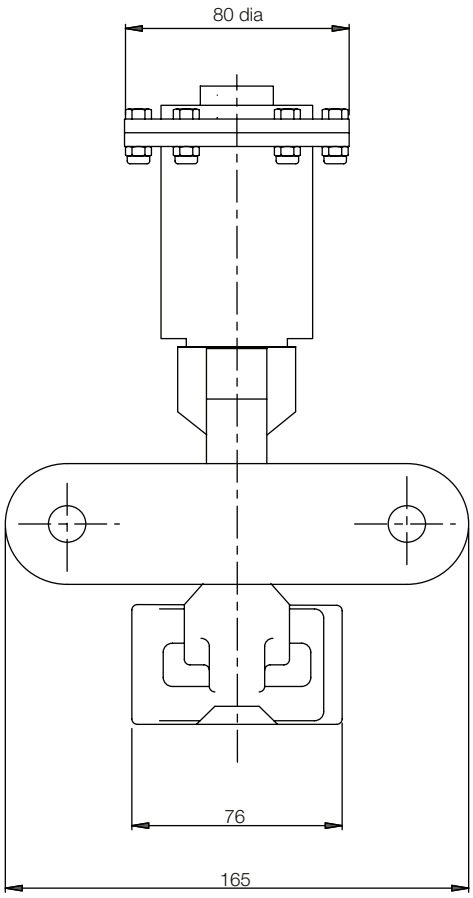
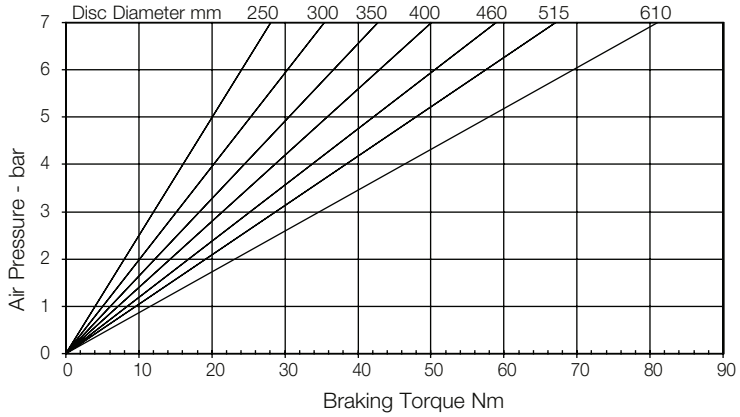
DS1503

MSE Disc Brake Caliper - Pneumatically Applied, Spring Released

Nominal dimensions given
For caliper dimensions see DS1500







Weight (caliper and thruster) - 1.91kg
(thruster only) - 0.41kg
Volume displacement of thruster at full stroke is 8ml.

Maximum pressure 7 bar

Maximum Braking Force = 0.29kN @ 7 bar

The ratings shown on the above graph are based on fully bedded and conditioned brake pads with nominal friction coefficient μ= 0.4.

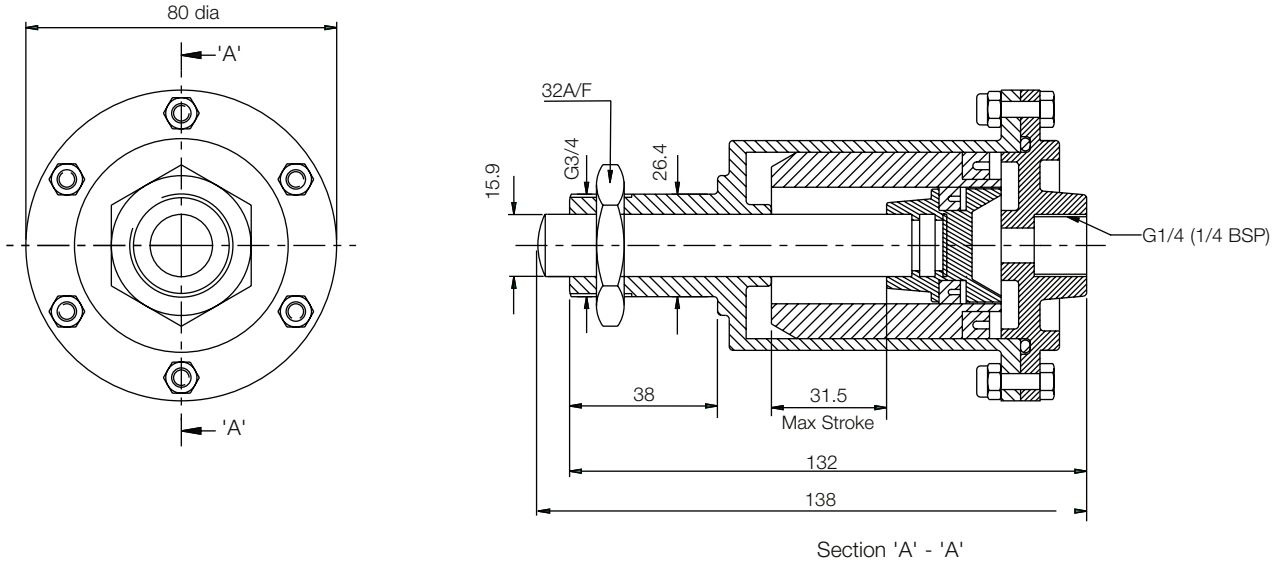
For bedding-in and conditioning procedures see Publication M1060.

Braking Force is defined as the Tangential Force acting on the brake disc at the Effective Disc Radius.
Braking Torque (Nm) = Braking Force (N) x Effective Disc Radius (m) where Effective Disc Radius = Actual Disc Radius - 0.03.

Twiflex Disc Brakes must be used with Twiflex asbestos free brake pads.The use of any other brake pads will invalidate the warranty.

Twiflex Limited reserves the right to modify or change the design without prior notice.

MSE Disc Brake Caliper - Pneumatically Applied, Spring Released



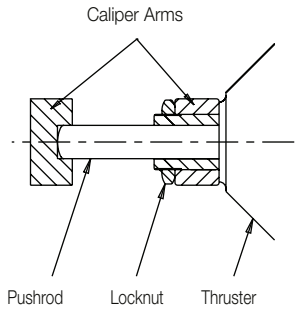
Section 'A' - 'A'

Thruster Part Number 7200479

This range of pneumatically operated brakes uses dry and filtered compressed air at pressures up to 7 bar. Pneumatic brakes require a control valve which may be operated either manually, or by pneumatic or electrical signal.

Thruster Fitment

1. Offer thruster to caliper making sure that the lock nut is removed before placing push rod through caliper arm.
2. Fit lock nut over the push rod and locate it's end within the slot of the other arm.
3. Tighten the lock nut to 50-60 Nm.



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9 Briar Road, Twickenham
Middlesex TW2 6RB - England
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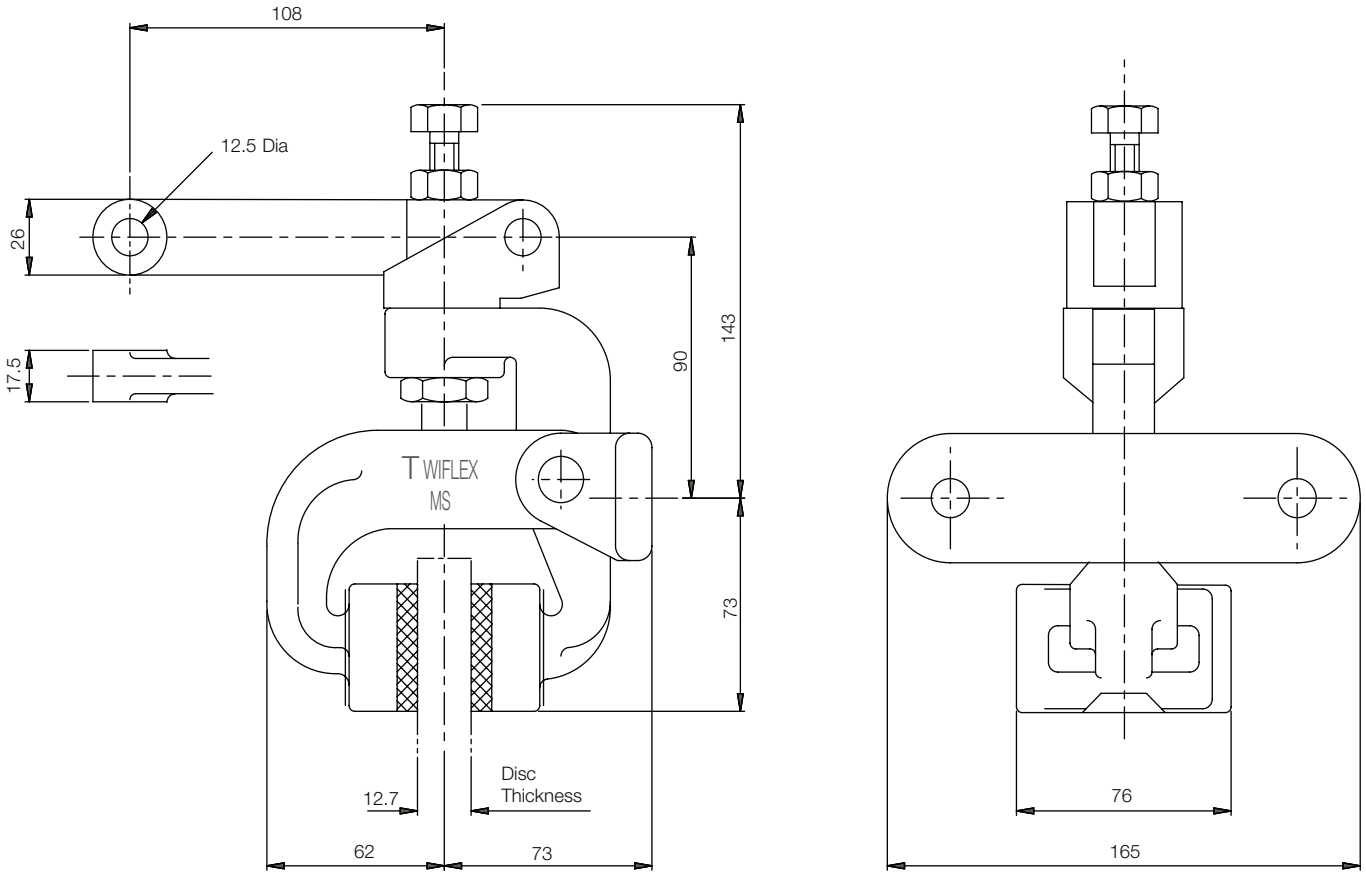
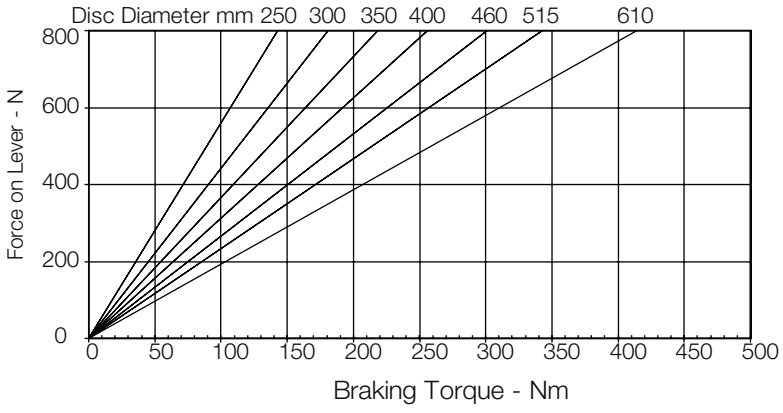
DS1504

MSF Disc Brake Caliper - Mechanically Applied, Lever Operated

Nominal dimensions given
For caliper dimensions see DS1500





Weight (caliper and thruster) - 2.13kg
(Lever assembly only) - 0.63kg

Maximum Braking Force = 1.88kN @ 0.8kN force on lever

The ratings shown on the above graph are based on fully bedded and conditioned brake pads with nominal friction coefficient μ= 0.4.

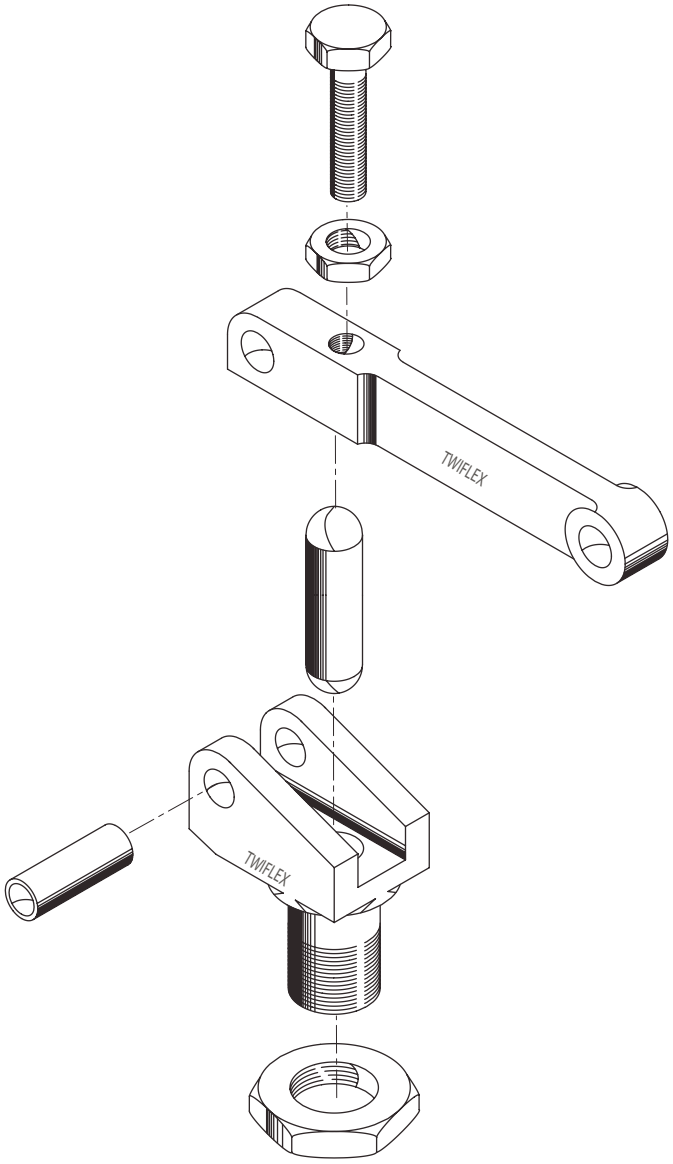
For bedding-in and conditioning procedures see Publication M1060.

Braking Force is defined as the Tangential Force acting on the brake disc at the Effective Disc Radius.
Braking Torque (Nm) = Braking Force (N) x Effective Disc Radius (m) where Effective Disc Radius = Actual Disc Radius -0.03.

Twiflex Disc Brakes must be used with Twiflex asbestos free brake pads. The use of any other brake pads will invalidate the warranty.

Twiflex Limited reserves the right to modify or change the design without prior notice.

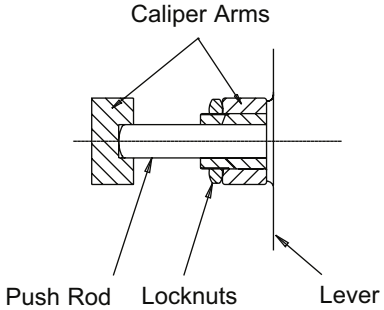
MSF Disc Brake Caliper - Mechanically Applied, Lever Operated



Lever Part Number 7800128

Lever fitment

1. Offer thruster to caliper making sure that the lock nut is removed before placing push rod through caliper arm.
2. Fit lock nut over the push rod and locate it's end within the slot of the arm.
3. Tighten the lock nut to 50-60 Nm.



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9 Briar Road, Twickenham
Middlesex TW2 6RB - England
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Issue 04 June 2009

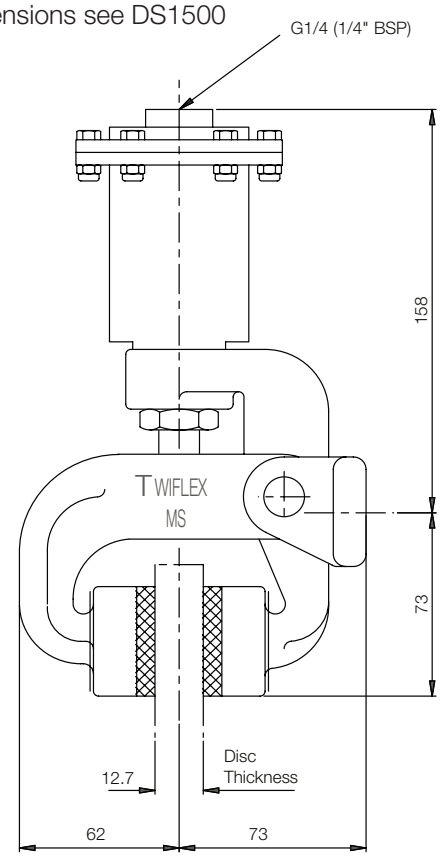
Twiflex® Limited

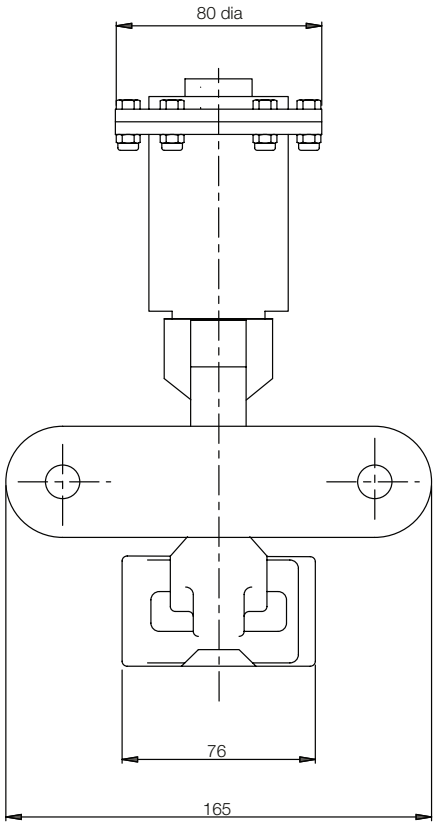
DS1505

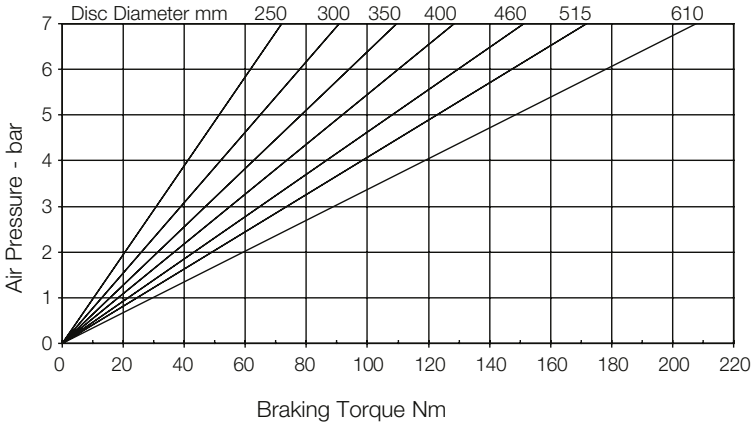
MSG Disc Brake Caliper - Pneumatically Applied, Spring Released

Nominal Dimensions given

For caliper dimensions see DS1500







Weight (caliper and thruster) - 1.89kg

(thruster only) - 0.39kg

Volume displacement of thruster at full stroke is 21ml.

Maximum pressure 7 bar

Maximum Braking Force - 0.76kN @ 7bar

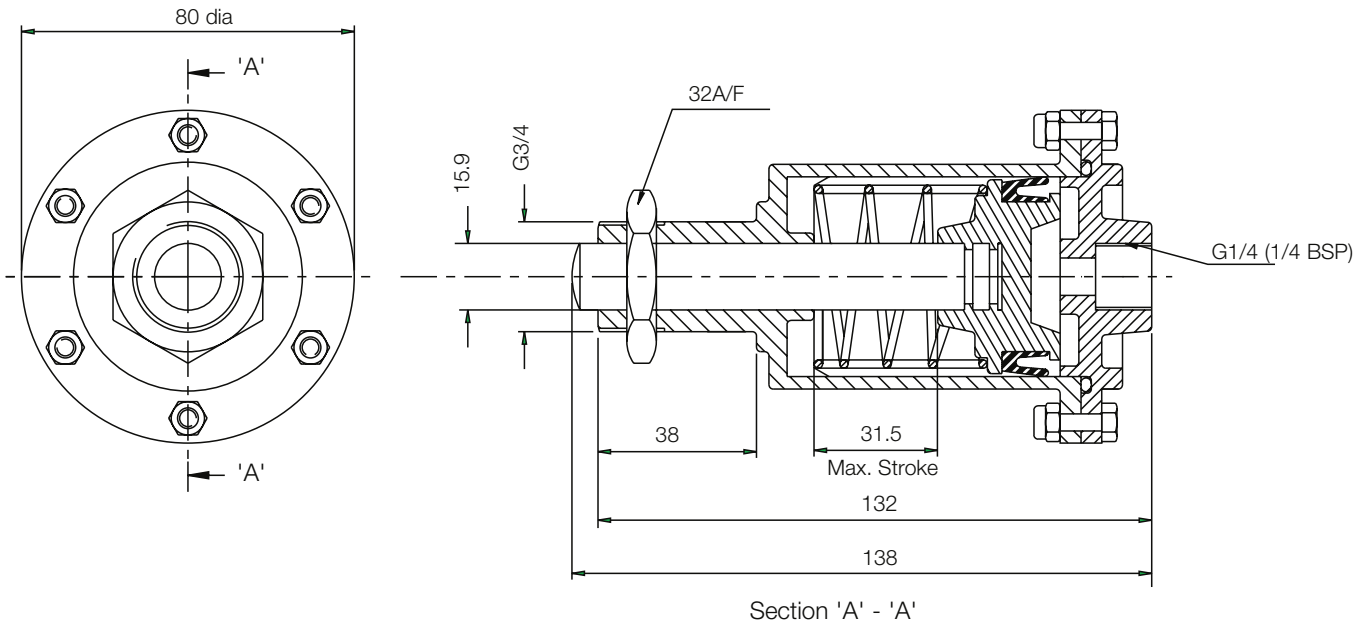
The ratings shown on the above graph are based on fully bedded and conditioned brake pads with nominal friction coefficient μ=0.4.

For bedding-in and conditioning procedures see Publication M1060.

Braking Force is defined as the Tangential Force acting on the brake disc at the Effective Disc Radius.
Braking Torque (Nm) = Braking Force (N) x Effective Disc Radius (m) where Effective Disc Radius = Actual Disc Radius - 0.03.

Twiflex Disc Brakes must be used with Twiflex asbestos free brake pads. The use of any other brake pads will invalidate the warranty. Twiflex Limted reserves the right to modify or change the design without prior notice.

MSG Disc Brake Caliper - Pneumatically Applied, Spring Released



Section 'A' - 'A'

Thruster Part Number 7200482

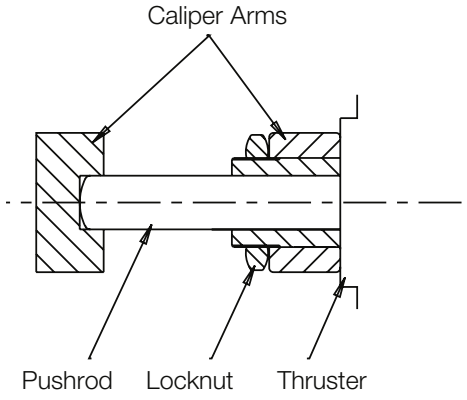
This range of pneumatically operated brakes uses dry and filtered compressed air at pressures up to 7 bar. Pneumatic brakes require a control valve which may be operated either manually, or by pneumatic or electrical signal.

Thruster Fitment

1. Offer thruster to caliper making sure that the lock nut is removed before placing push rod through caliper arm.

2. Fit lock nut over the push rod and locate it's end within the slot of the other arm.

3. Tighten the lock nut to 50-60 Nm.



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9 Briar Road, Twickenham
Middlesex TW2 6RB - England
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Issue 04 June 2009

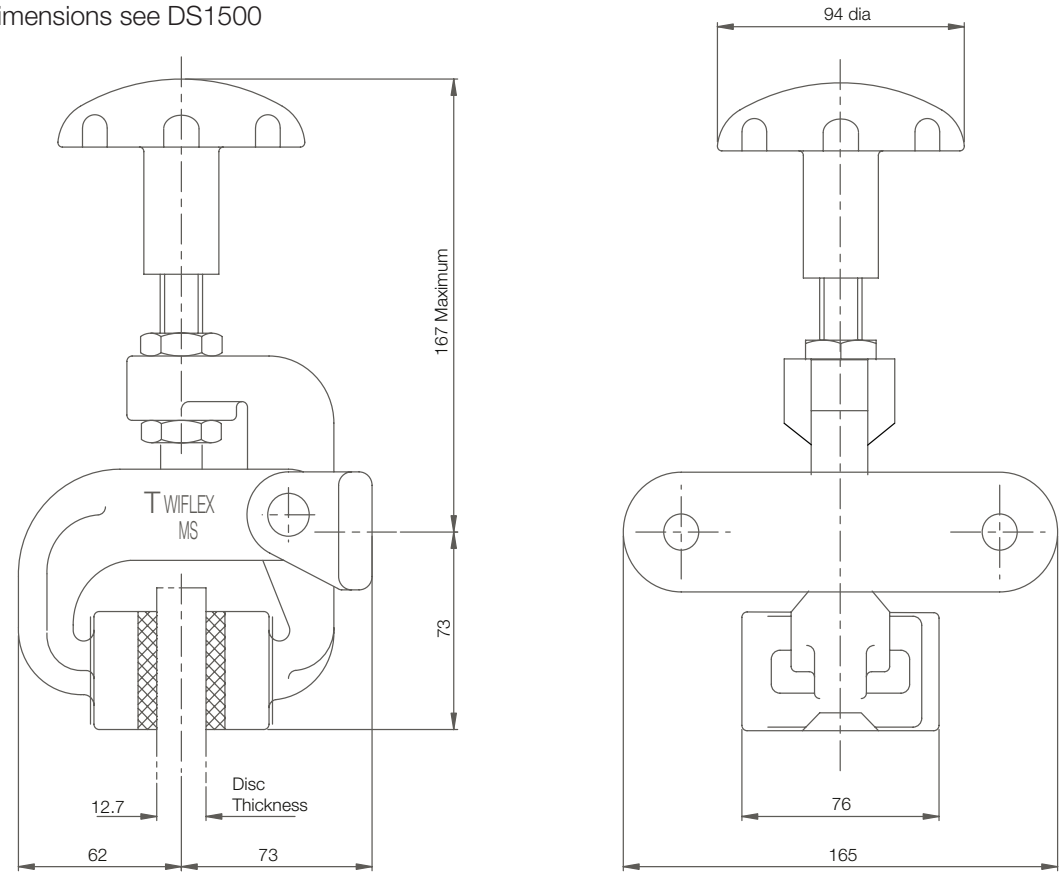
Twiflex® Limited

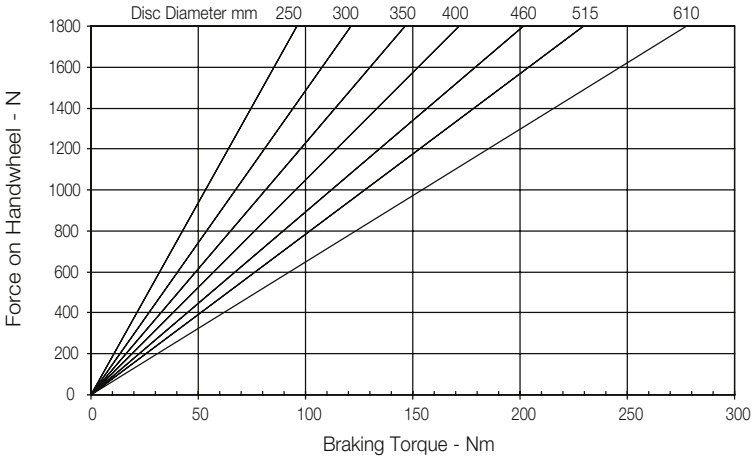
DS1506

MSH Disc Brake Caliper - Mechanically Applied, Hand Operated

Nominal Dimensions given

For caliper dimensions see DS1500





Weight (caliper and hand knob) - 2.53kg
(hand knob only) - 1.03kg

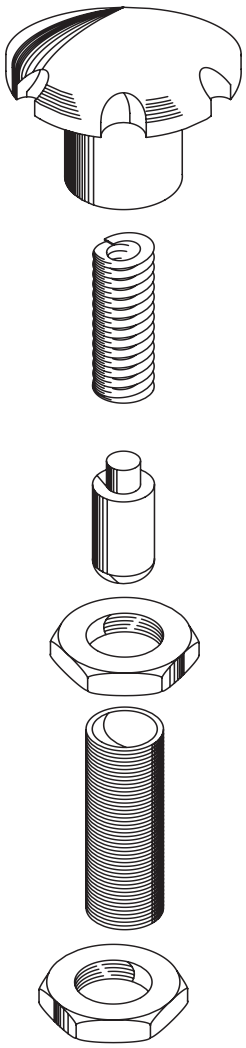
1 Turn of Hand Knob = 90N braking force
Maximum Braking Force - 1.01kN

The ratings shown on the above graph are based on fully bedded and conditioned brake pads with nominal friction coefficient μ=0.4.

For bedding-in and conditioning procedures see Publication M1060.

Braking Force is defined as the Tangential Force acting on the brake disc at the Effective Disc Radius.
Braking Torque (Nm) = Braking Force (N) x Effective Disc Radius (m) where Effective Disc Radius = Actual Disc Radius - 0.03.

Twiflex Disc Brakes must be used with Twiflex asbestos free brake pads. The use of any other brake pads will invalidate the warranty. Twiflex Limted reserves the right to modify or change the design without prior notice.



Hand Knob Assembly Part Number 7800127

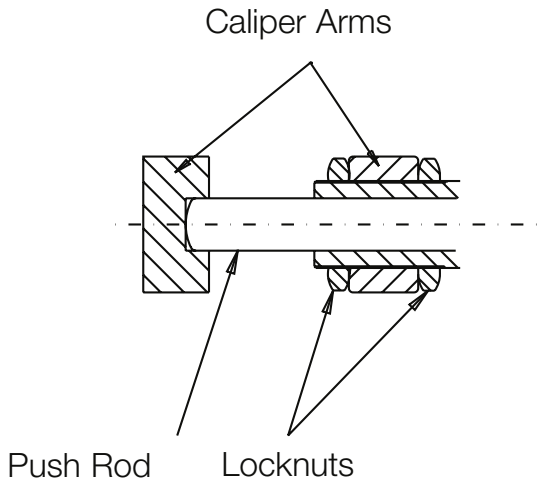
Hand Knob Assembly Fitment

1. Offer hand knob assembly to caliper making sure that one lock nut is removed before placing push rod through caliper arm.

2. Fit a lock nut over the push rod, locate the push rod within the slot of the other arm.

3. Adjust the lock nuts until the push rod contacts the opposite arm.

4. Tighten the lock nut to 50-60 Nm.



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