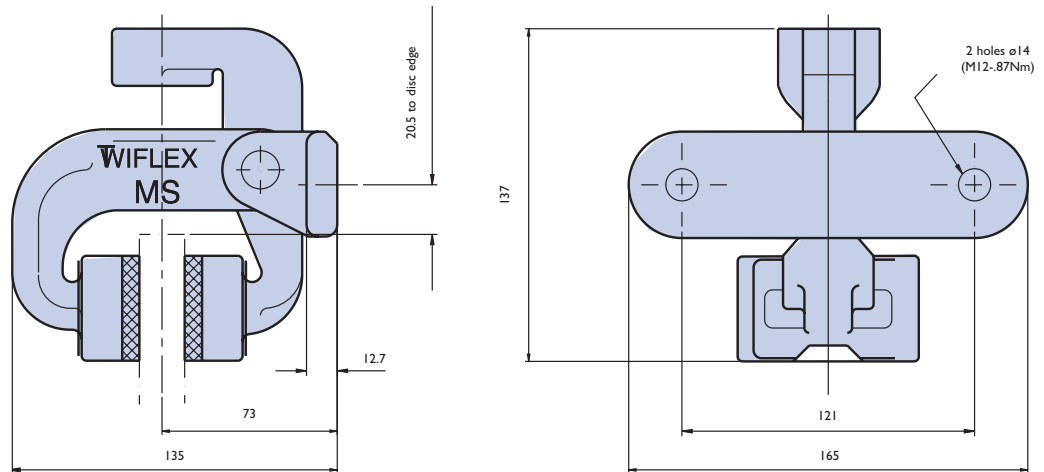


# 3

## Brake caliper range

### ▼ MS Disc brake caliper



The Twiflex MS disc brake calipers are used with brake discs 12.7mm thick. They may be used with the majority of Twiflex actuators.

The range of pneumatically operated brakes use 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.

Normally one or two brake calipers will be used per disc, mounted horizontally in the 3 and/or 9 o'clock positions, to prevent bias due to self weight and, hence, rubbing on one brake pad.

A range of standard discs is available from Twiflex, (see section 4).

Minimum disc diameter for the MS caliper is 250mm.

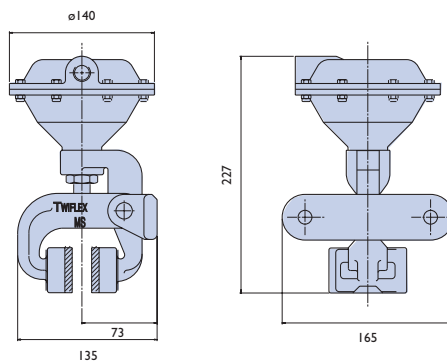
The ratings shown on the graphs are based on fully bedded and conditioned brake pads with nominal friction coefficient  $\mu = 0.4$ . Twiflex Disc Brakes must be used with Twiflex asbestos free brake pads.

Effective Disc Radius = Actual Disc Radius (m) - 0.03m

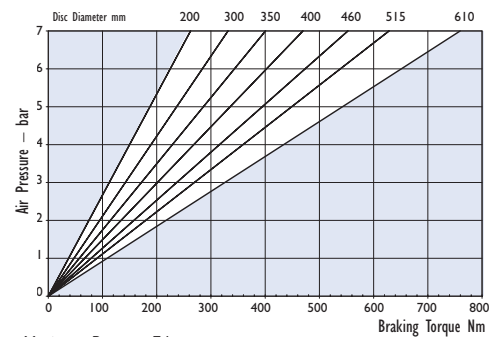
MS  
series



### ▼ MSA

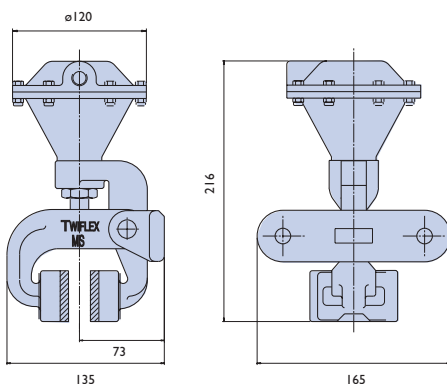


### Pneumatically applied – Spring released

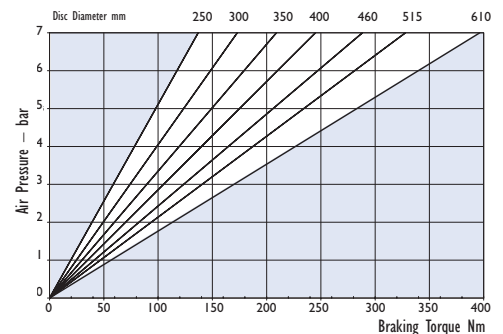


Maximum Pressure 7 bar  
 Maximum Braking Force = 2.76kN @ 7 bar  
 Weight of caliper and thruster - 3.8kg  
 Weight of thruster only - 2.1kg  
 Volume displacement of thruster at full stroke = 300ml

### ▼ MSD



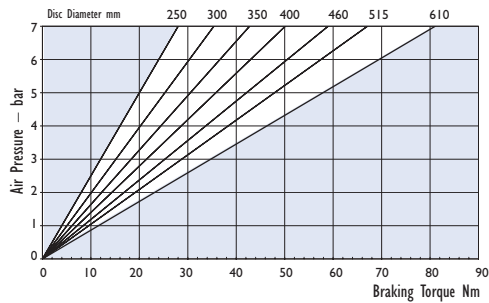
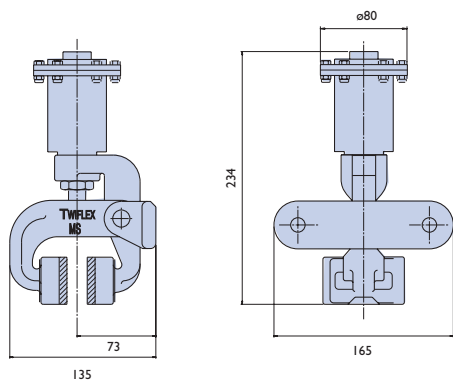
### Pneumatically applied – Spring released



Maximum Pressure 7 bar  
 Maximum Braking Force = 1.44kN @ 7 bar  
 Weight of caliper and thruster - 2.6kg  
 Weight thruster only - 0.9g  
 Volume displacement of thruster at full stroke = 150ml

▼ MSE

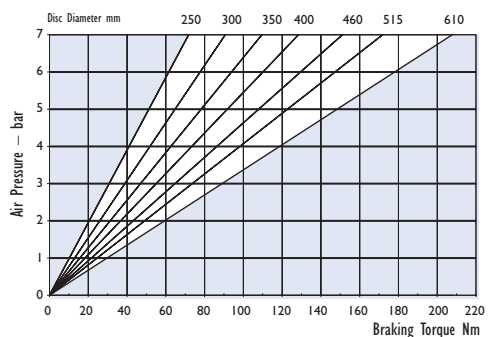
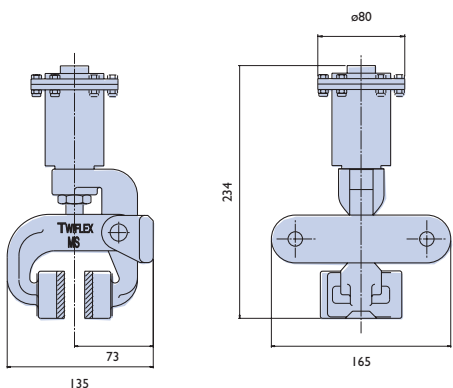
Pneumatically applied – Spring released



Maximum Pressure 7 bar  
 Maximum Braking Force = 0.29kN @ 7 bar  
 Weight of caliper and thruster - 2.08kg  
 Weight of thruster only - 0.41kg  
 Volume displacement of thruster at full stroke = 8ml

▼ MSG

Pneumatically applied – Spring released



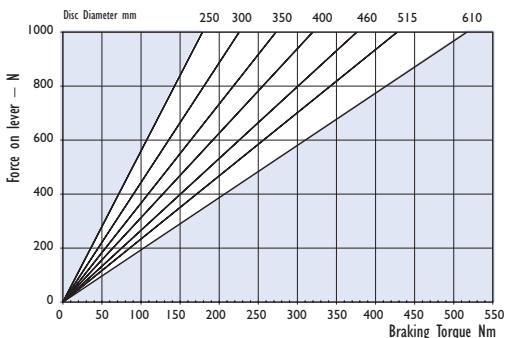
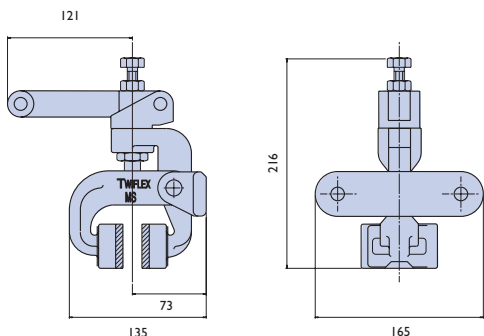
Maximum Pressure 7 bar  
 Maximum Braking Force = 0.76kN @ 7 bar  
 Weight of caliper and thruster - 2.06kg  
 Weight of thruster only - 0.39kg  
 Volume displacement of thruster at full stroke = 21ml

MS  
series



▼ MSF

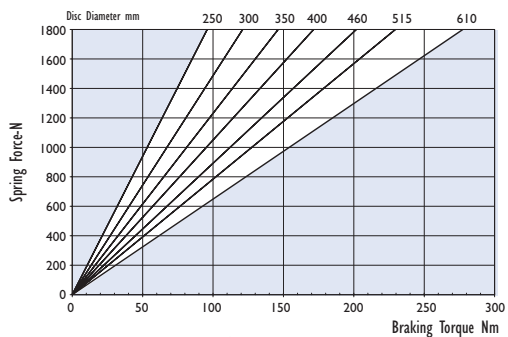
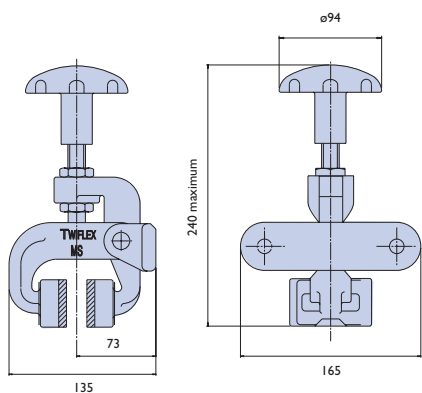
Mechanically applied – Lever operated



Maximum Braking Force = 1.88kN @ 0.8kN force on lever  
 Weight of caliper and lever assembly - 2.3kg  
 Weight of lever assembly only - 0.63kg

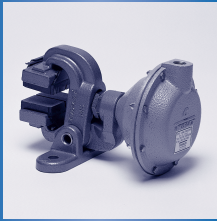
▼ MSH

Mechanically applied – Hand operated

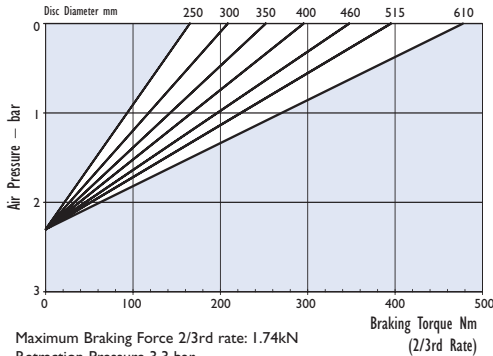
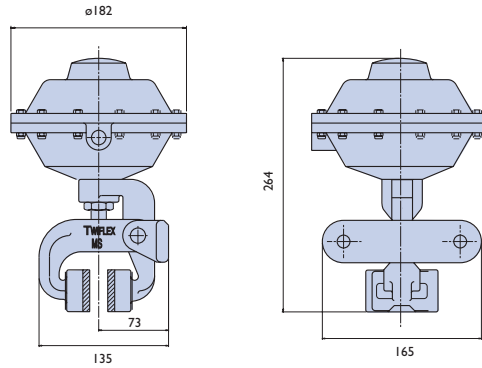


Maximum Braking Force = 1.01kN  
 Weight of caliper and handwheel assembly - 2.7kg  
 Weight of handwheel assembly only - 1.03kg

MS  
series

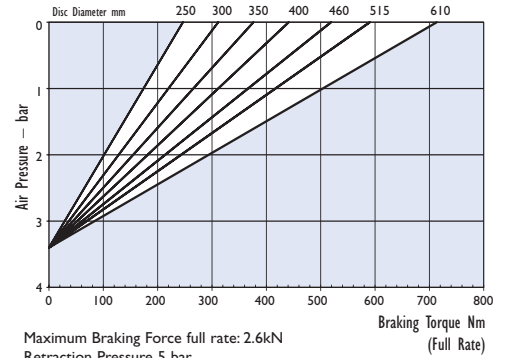


### ▼ MSK - Self Adjusting

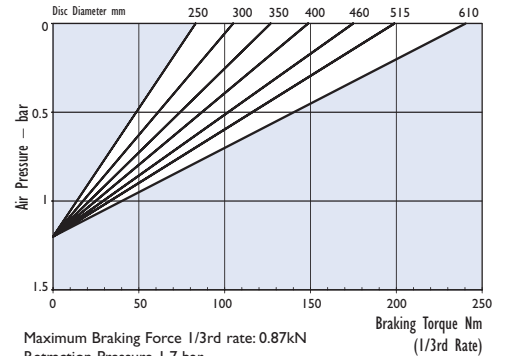


Maximum Braking Force 2/3rd rate: 1.74kN  
Retraction Pressure 3.3 bar  
Weight of caliper and thruster - 5.17kg  
Weight of thruster only - 3.5kg  
Volume displacement of thruster at full retraction = 950ml

### Spring applied – Pneumatically released

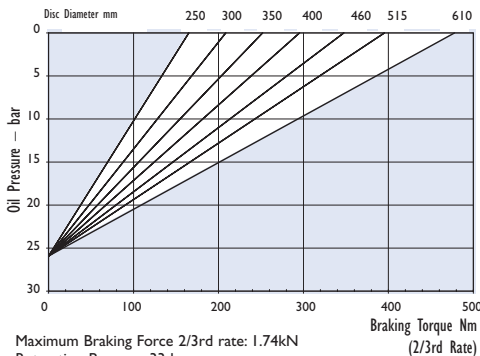
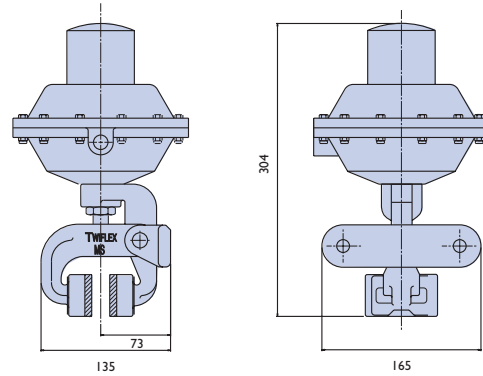


Maximum Braking Force full rate: 2.6kN  
Retraction Pressure 5 bar  
Weight of caliper and thruster - 5.17kg  
Weight of thruster only - 3.5kg  
Volume displacement of thruster at full retraction = 950ml



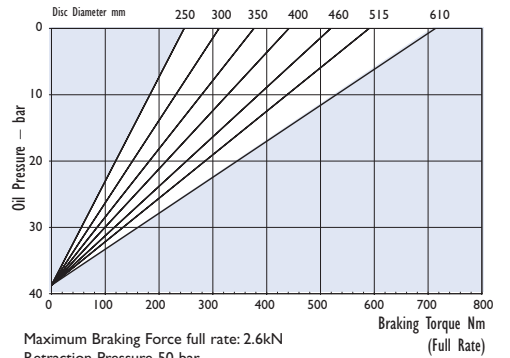
Maximum Braking Force 1/3rd rate: 0.87kN  
Retraction Pressure 1.7 bar  
Weight of caliper and thruster - 5.17kg  
Weight of thruster only - 3.5kg  
Volume displacement of thruster at full retraction = 950ml

### ▼ MSL - Self Adjusting

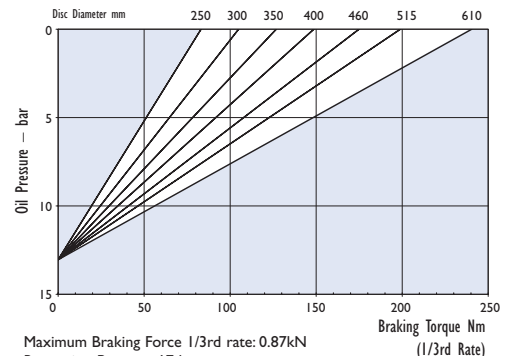


Maximum Braking Force 2/3rd rate: 1.74kN  
Retraction Pressure 33 bar  
Weight of caliper and thruster - 5.67kg  
Weight of thruster only - 4kg  
Volume displacement of thruster at 4mm retraction = 5ml

### Spring applied – Hydraulically released



Maximum Braking Force full rate: 2.6kN  
Retraction Pressure 50 bar  
Weight of caliper and thruster - 5.67kg  
Weight of thruster only - 4kg  
Volume displacement of thruster at 4mm retraction = 5ml



Maximum Braking Force 1/3rd rate: 0.87kN  
Retraction Pressure 17 bar  
Weight of caliper and thruster - 5.67kg  
Weight of thruster only - 4kg  
Volume displacement of thruster at 4mm retraction = 5ml