

## MS Disc Brake Caliper Range

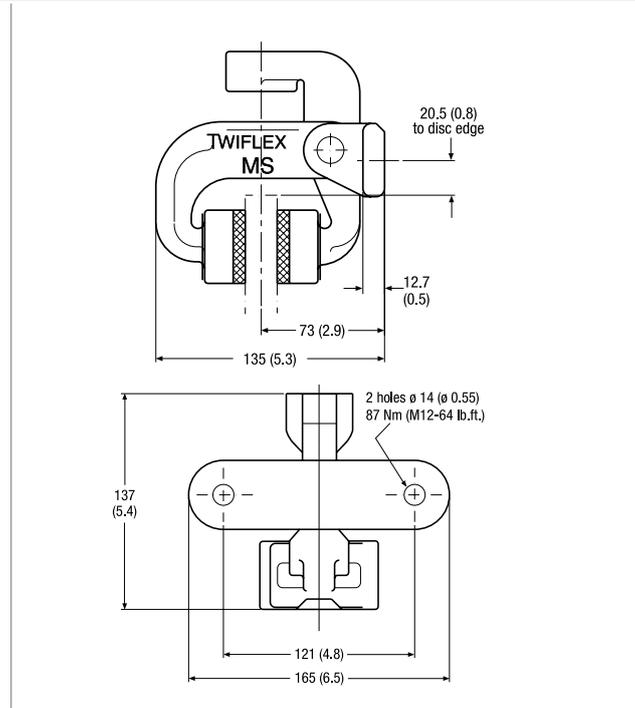
The Twiflex MS series of disc brake calipers is suitable for use with a disc thickness of 12.7mm. Minimum disc diameter is 250mm.

Normally one or two calipers are used per disc, mounted horizontally (i.e. at the 3 o'clock or 9 o'clock position) to prevent rubbing of one brake pad due to self-weight of the thruster. A range of brake discs is available from Twiflex (see Disc and Hub Assemblies).

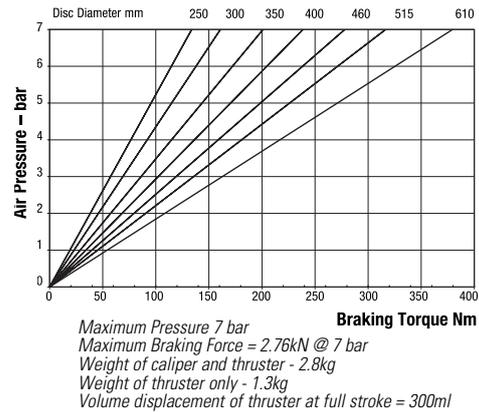
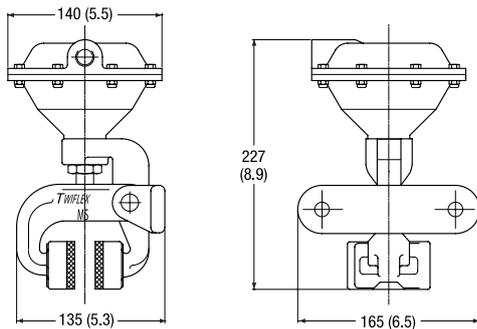
For pneumatic operation use dry, filtered and non-lubricated compressed air. Pneumatic brakes require a control valve, operated either manually or by pneumatic or electrical signal.

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

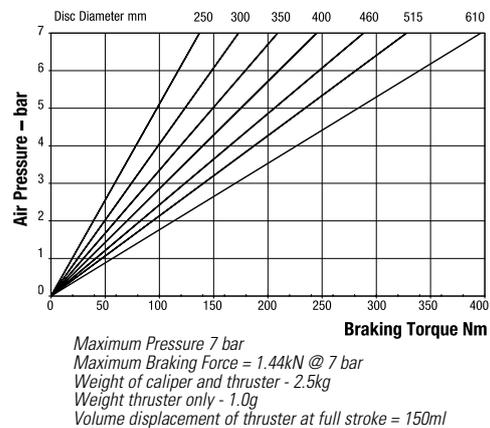
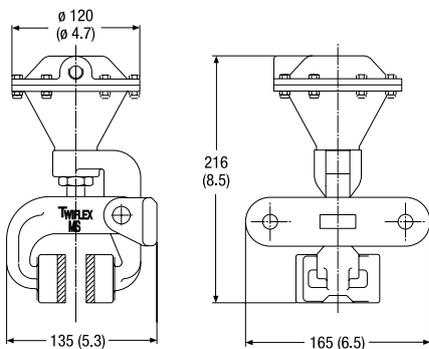
Effective disc radius = actual radius (m) - 0.03m.



### MSA Pneumatically Applied – Spring Released

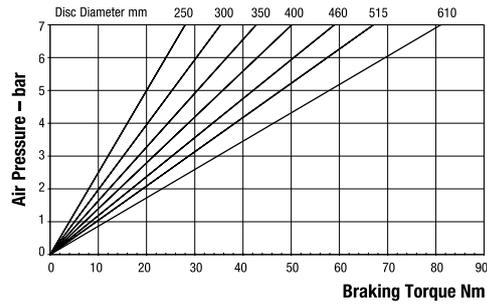
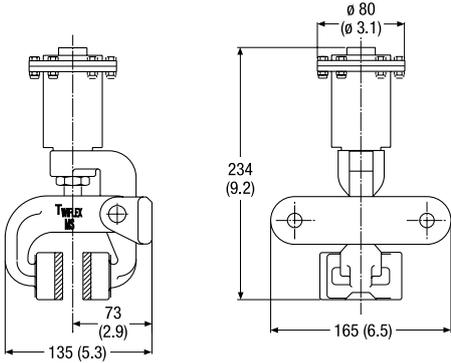


### MSD Pneumatically Applied – Spring Released



Retraction pressures where shown are calculated and may vary depending on spring tolerance.

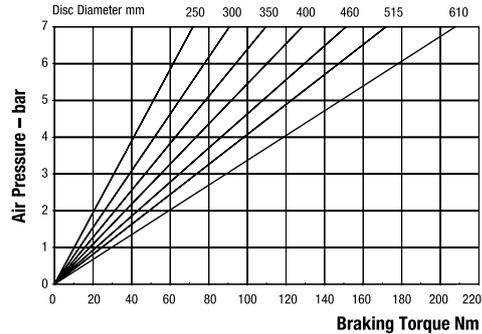
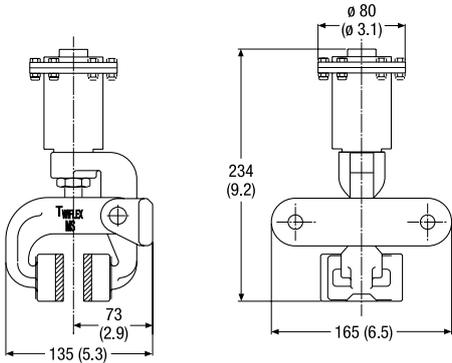
## MSE Pneumatically Applied – Spring Released



Maximum Pressure 7 bar  
 Maximum Braking Force = 0.29kN @ 7 bar  
 Weight of caliper and thruster - 1.91kg

Weight of thruster only - 0.41kg  
 Volume displacement of thruster at full stroke = 8ml

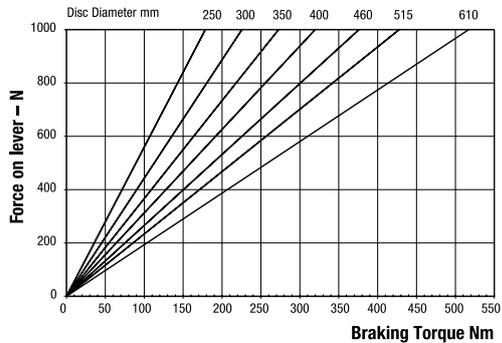
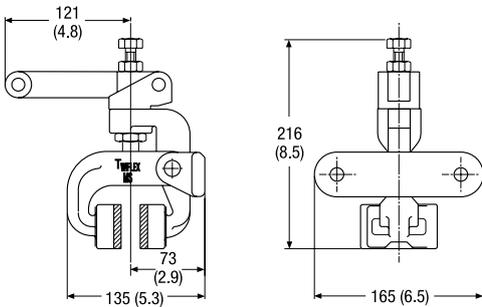
## MSG Pneumatically Applied – Spring Released



Maximum Pressure 7 bar  
 Maximum Braking Force = 0.76kN @ 7 bar  
 Weight of caliper and thruster - 1.89kg

Weight of thruster only - 0.39kg  
 Volume displacement of thruster at full stroke = 21ml

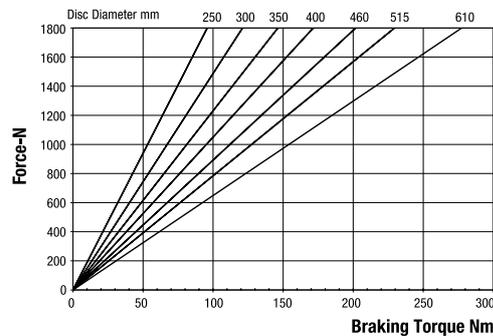
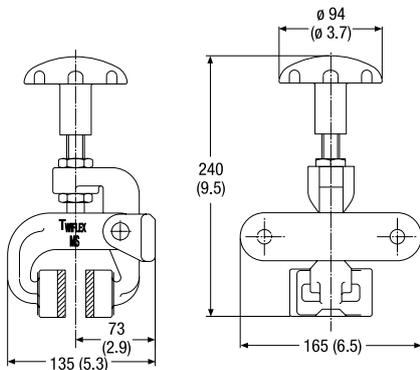
## MSF Mechanically Applied – Lever Operated



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

Weight of caliper and lever assembly - 2.13kg  
 Weight of lever assembly only - 0.63kg

## MSH Mechanically Applied – Hand Operated



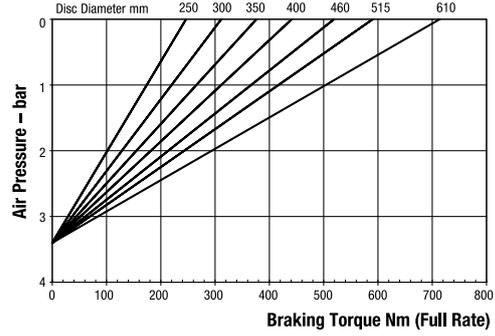
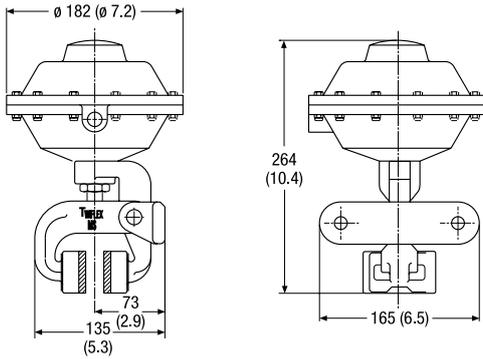
Maximum Braking Force = 1.01kN  
 Weight of caliper and hand wheel assembly - 2.53kg

Weight of hand wheel assembly only - 1.03kg

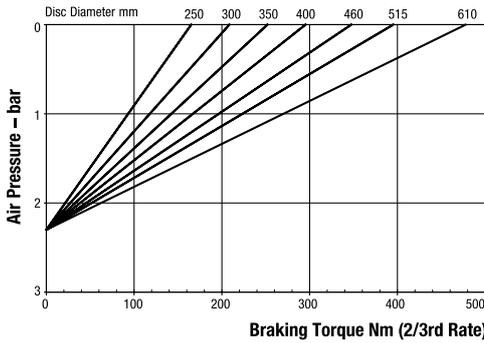
Retraction pressures where shown are calculated and may vary depending on spring tolerance.

# MS Series

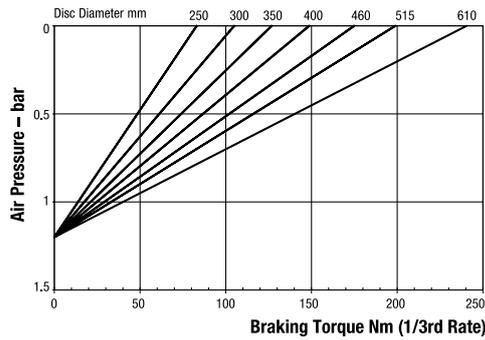
## MSK Spring Applied – Pneumatically Released, Self Adjusting



Maximum Braking Force full rate: 2.6kN  
 Minimum Pressure for full retraction: 5 bar  
 Weight of caliper and thruster - 4.9kg  
 Weight of thruster only - 3.4kg  
 Volume displacement of thruster at full retraction = 950ml

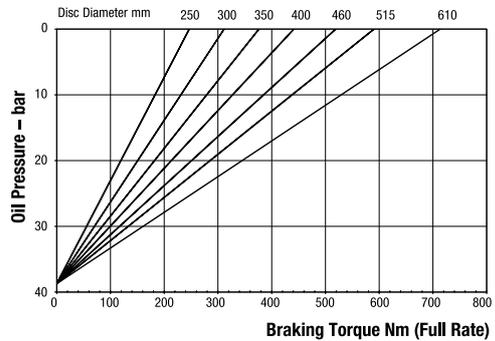
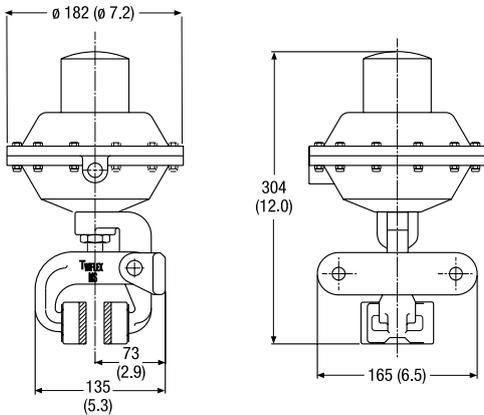


Maximum Braking Force 2/3rd rate: 1.74kN  
 Minimum Pressure for full retraction: 3.3 bar  
 Weight of caliper and thruster - 4.9kg  
 Weight of thruster only - 3.4kg  
 Volume displacement of thruster at full retraction = 950ml

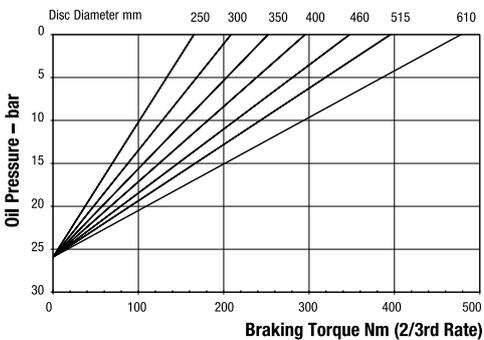


Maximum Braking Force 1/3rd rate: 0.87kN  
 Minimum Pressure for full retraction: 1.7 bar  
 Weight of caliper and thruster - 4.9kg  
 Weight of thruster only - 3.4kg  
 Volume displacement of thruster at full retraction = 950ml

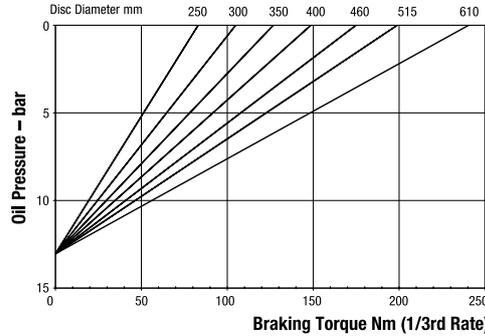
## MSL Spring Applied – Hydraulically Released, Self Adjusting



Maximum Braking Force full rate: 2.6kN  
 Minimum Pressure for full retraction: 50 bar  
 Weight of caliper and thruster - 5.5kg  
 Weight of thruster only - 4kg  
 Volume displacement of thruster at 4mm retraction = 5ml



Maximum Braking Force 2/3rd rate: 1.74kN  
 Minimum Pressure for full retraction: 33 bar  
 Weight of caliper and thruster - 5.5kg  
 Weight of thruster only - 4kg  
 Volume displacement of thruster at 4mm retraction = 5ml



Maximum Braking Force 1/3rd rate: 0.87kN  
 Minimum Pressure for full retraction: 17 bar  
 Weight of caliper and thruster - 5.5kg  
 Weight of thruster only - 4kg  
 Volume displacement of thruster at 4mm retraction = 5ml

Retraction pressures where shown are calculated and may vary depending on spring tolerance.