MS Series

MS Disc Brake Caliper Range

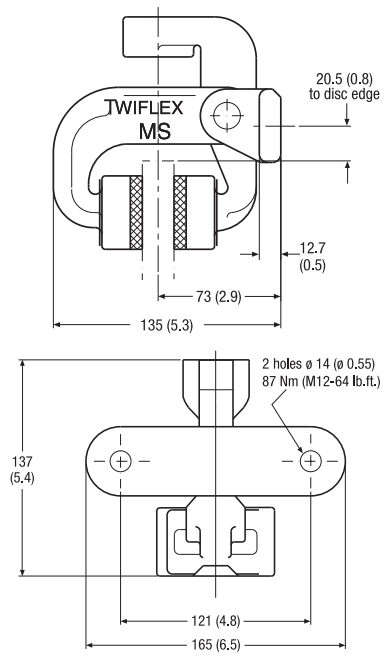
The Twiflex MS series of disc brake calipers is suitable for use with a disc thickness of 12.7mm. Minimum disc diameter is 250mm.

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).

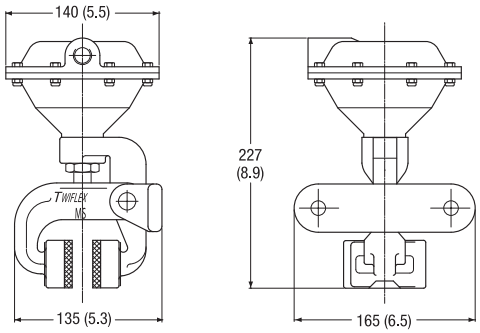
For pneumatic operation use dry, filtered and non-lubricated compressed air. Pneumatic brakes require a control valve, operated either manually or by pneumatic or electrical signal.

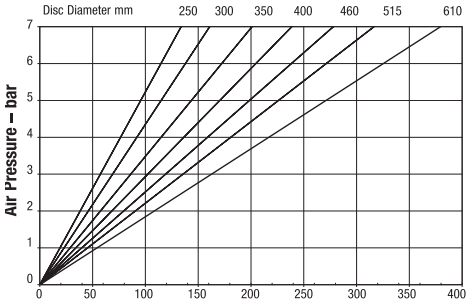
The ratings shown on the graphs are based on fully bedded in and conditioned brake pads with a nominal friction coefficient μ = 0.4. Twiflex disc brakes must be used with Twiflex asbestos free brake pads.

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



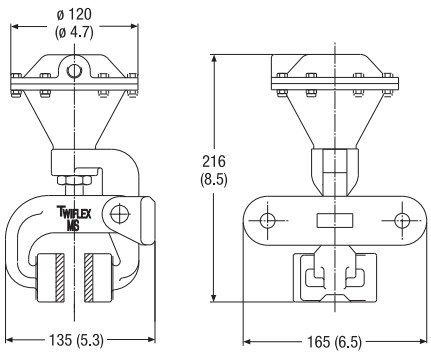
MSA Pneumatically Applied – Spring Released

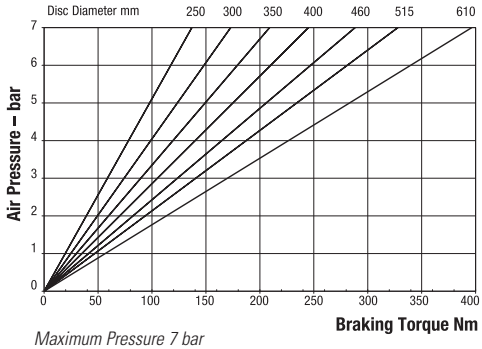




Maximum Pressure 7 bar
Maximum Braking Force = 2.76kN @ 7 bar
Weight of caliper and thruster - 2.8kg
Weight of thruster only - 1.3kg
Volume displacement of thruster at full stroke = 300ml

MSD Pneumatically Applied – Spring Released

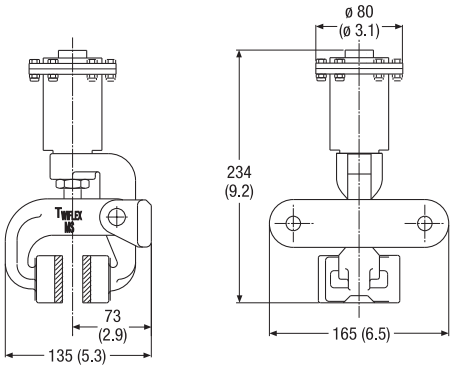


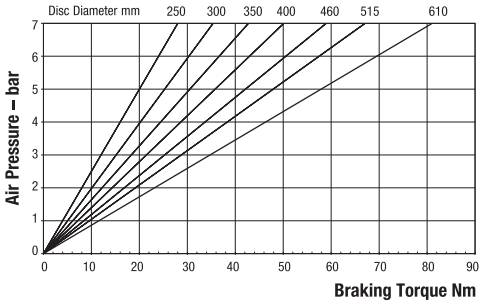


Maximum Pressure 7 bar
Maximum Braking Force = 1.44kN @ 7 bar
Weight of caliper and thruster - 2.5kg
Weight thruster only - 1.0g
Volume displacement of thruster at full stroke = 150ml

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

MSE Pneumatically Applied – Spring Released

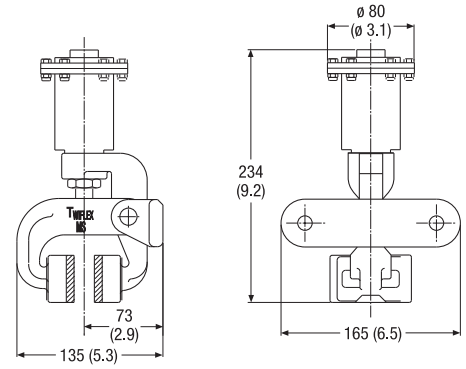


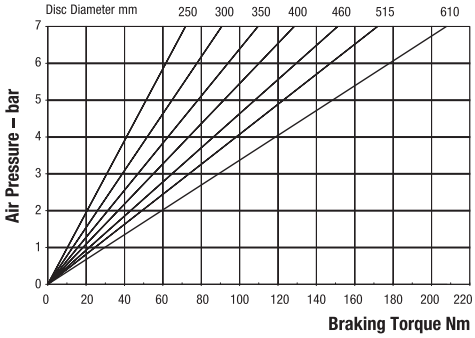


Maximum Pressure 7 bar
Maximum Braking Force = 0.29kN @ 7 bar
Weight of caliper and thruster - 1.91kg

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

MSG Pneumatically Applied – Spring Released

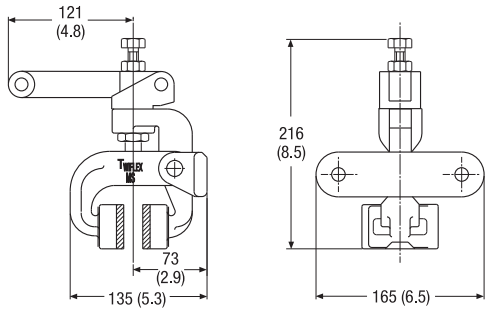


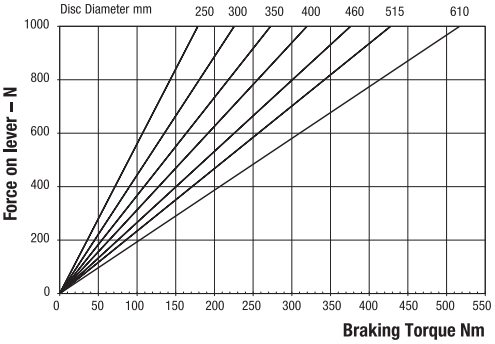


Maximum Pressure 7 bar
Maximum Braking Force = 0.76kN @ 7 bar
Weight of caliper and thruster - 1.89kg

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

MSF Mechanically Applied – Lever Operated

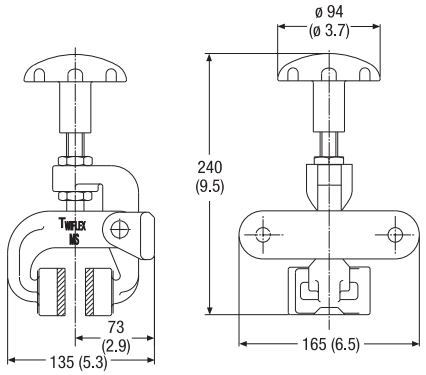


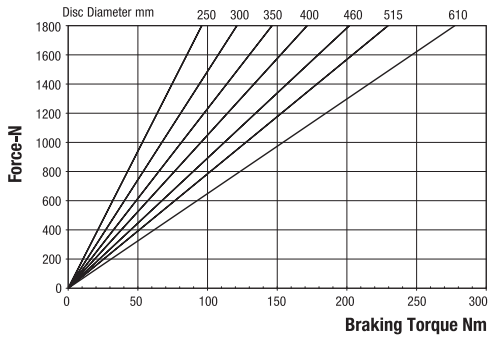


Maximum Braking Force =
1.88kN @ 0.8kN force on lever

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

MSH Mechanically Applied – Hand Operated





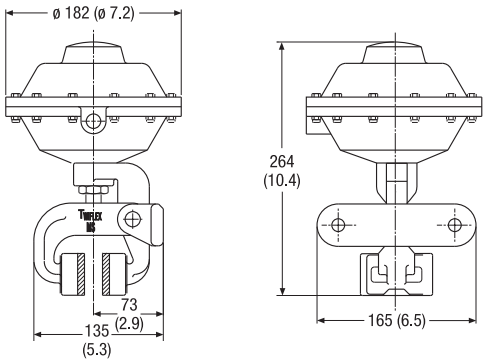
Maximum Braking Force = 1.01kN
Weight of caliper and hand wheel assembly - 2.53kg

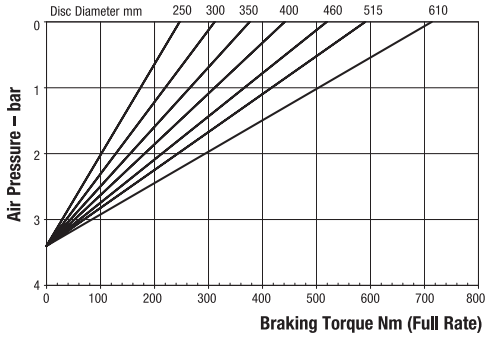
Weight of hand wheel assembly only - 1.03kg

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

MS Series

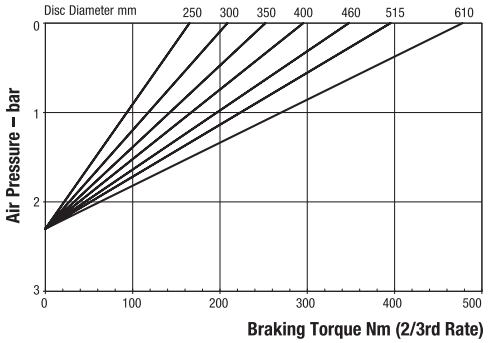
MSK Spring Applied – Pneumatically Released, Self Adjusting





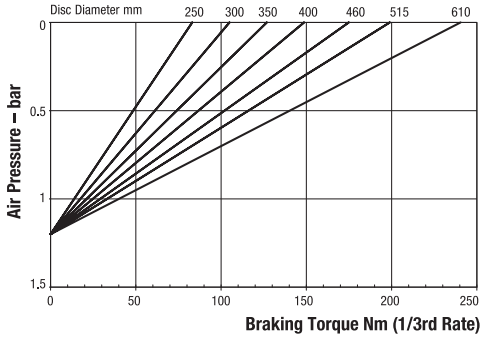
Maximum Braking Force full rate: 2.6kN
Minimum Pressure for full retraction: 5 bar
Weight of caliper and thruster - 4.9kg

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

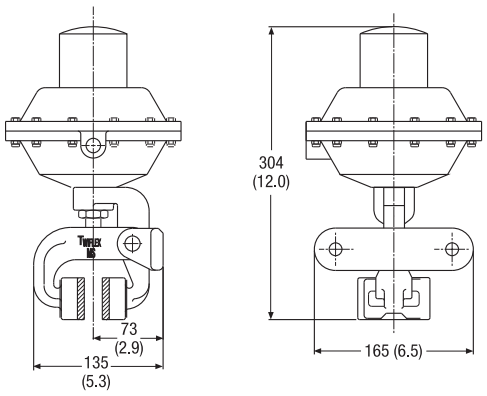
Weight of thruster only - 3.4kg
Volume displacement of thruster at full retraction = 950ml

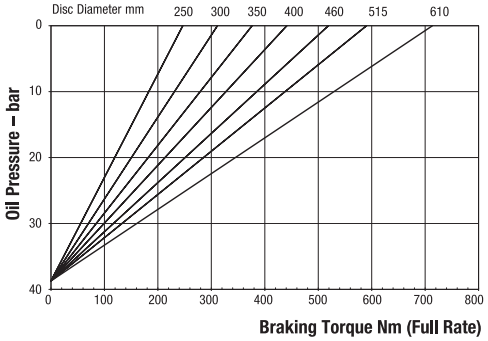


Maximum Braking Force 1/3rd rate: 0.87kN
Minimum Pressure for full retraction: 1.7 bar
Weight of caliper and thruster - 4.9kg

Weight of thruster only - 3.4kg
Volume displacement of thruster at full retraction = 950ml

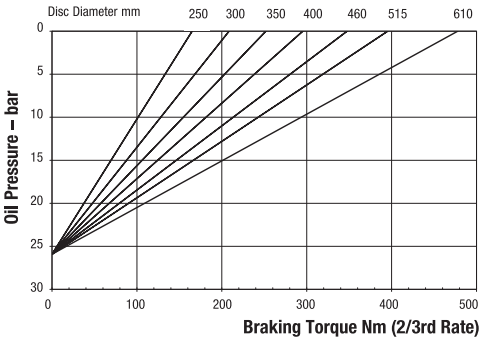
MSL Spring Applied – Hydraulically Released, Self Adjusting





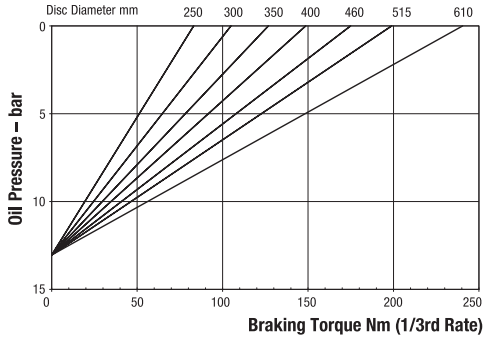
Maximum Braking Force full rate: 2.6kN
Minimum Pressure for full retraction: 50 bar
Weight of caliper and thruster - 5.5kg

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.