

MS Series

MS Disc Brake Caliper Range

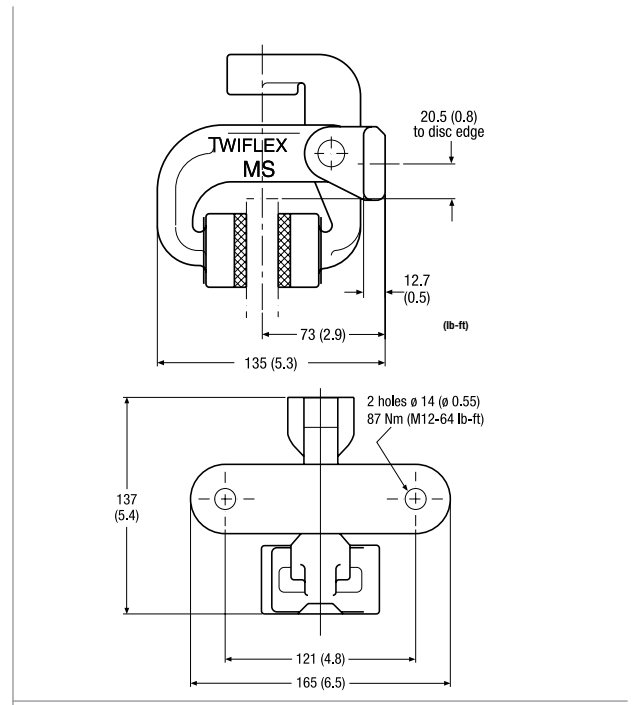
The Twiflex MS series of disc brake calipers is suitable for use with a disc thickness of 12.7mm (0.5 in). Minimum disc diameter is 250mm (10 in).

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).

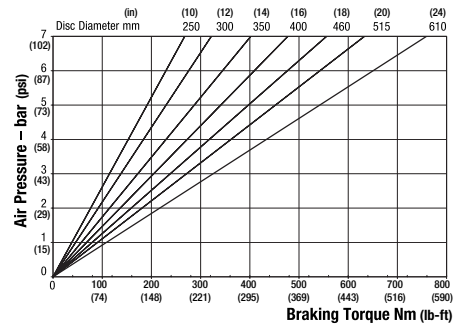
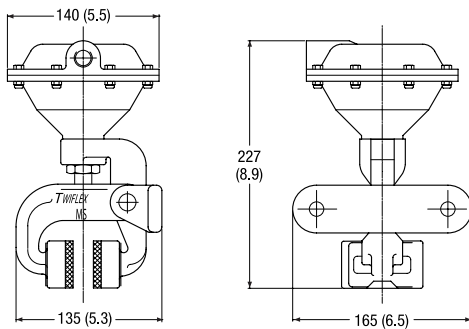
For pneumatic operation use dry, filtered and non-lubricated compressed air. Pneumatic brakes require a control valve, operated either manually or by pneumatic or electrical signal.

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
(Effective disc radius = actual radius (ft) - 0.09 ft)

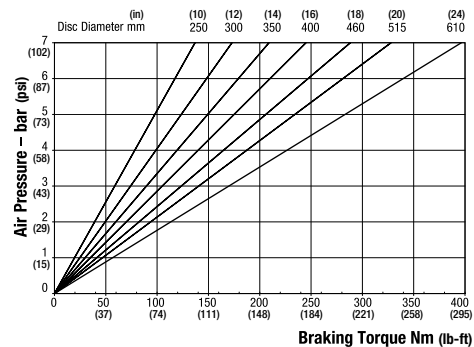
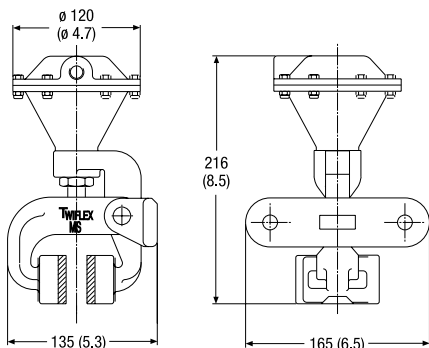


MSA Pneumatically Applied – Spring Released



Maximum Pressure 7 bar (102 psi)
Maximum Braking Force = 2.76kN @ 7 bar (620.47 lbf @ 102 psi)
Weight of caliper and thruster — 2.8kg (6.17 lb)
Weight of thruster only — 1.3kg (2.87 lb)
Volume displacement of thruster at full stroke = 300ml (10.14 fl oz)

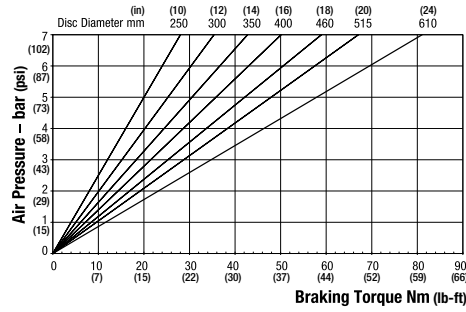
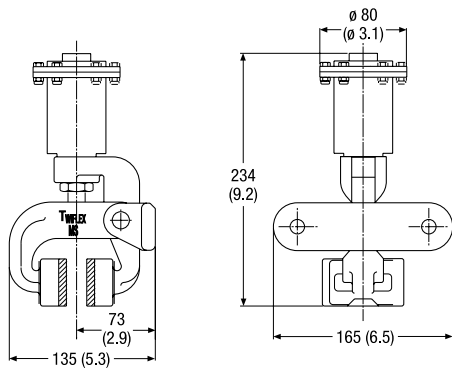
MSD Pneumatically Applied – Spring Released



Maximum Pressure 7 bar (102 psi)
Maximum Braking Force = 1.44kN @ 7 bar (323.72 @ 102 psi)
Weight of caliper and thruster — 2.5kg (5.51 lb)
Weight thruster only — 1.0kg (2.20 lb)
Volume displacement of thruster at full stroke = 150ml (5.07 fl oz)

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

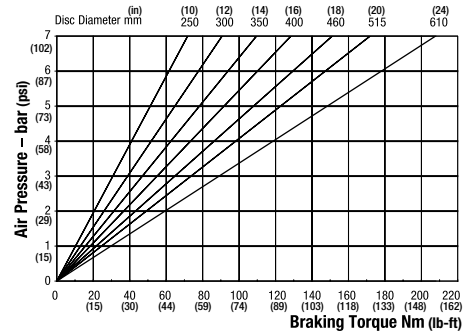
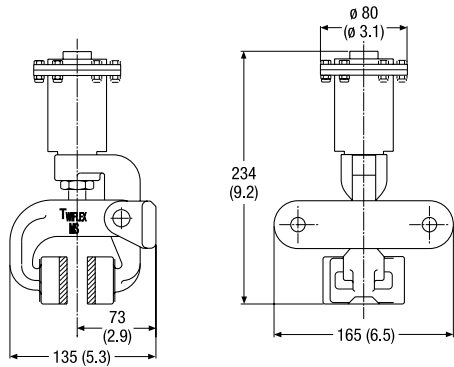
MSE Pneumatically Applied – Spring Released



Maximum Pressure 7 bar (102 psi)
 Maximum Braking Force = 0.29kN @ 7 bar
 (65.19 lbf @ 102 psi)
 Weight of caliper and thruster – 1.91kg (4.21 lb)

Weight of thruster only – 0.41kg (.90 lb)
 Volume displacement of thruster at full stroke = 8ml (0.27 fl oz)

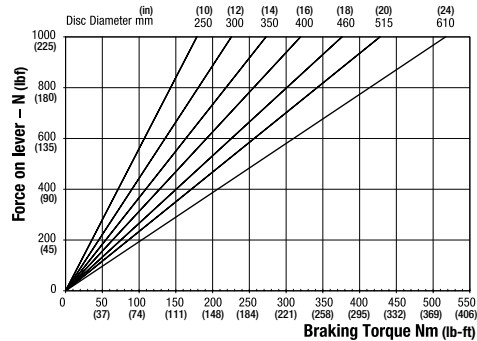
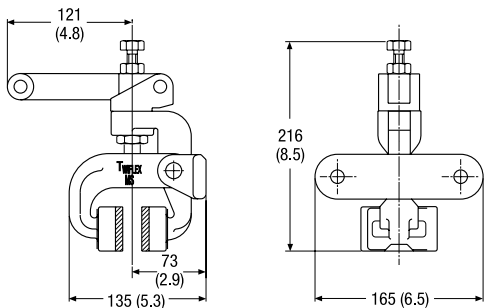
MSG Pneumatically Applied – Spring Released



Maximum Pressure 7 bar (102 psi)
 Maximum Braking Force = 0.76kN @ 7 bar
 (170.85 lbf @ 102 psi)
 Weight of caliper and thruster - 1.89kg (4.17 lb)

Weight of thruster only - 0.39kg (0.86 lb)
 Volume displacement of thruster at full stroke = 21ml (0.71 fl oz)

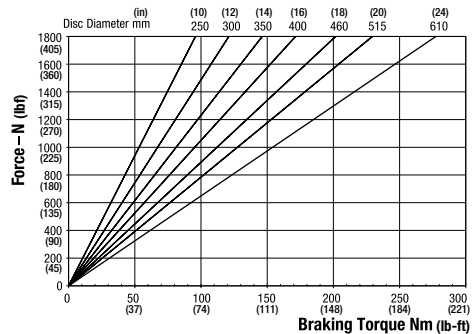
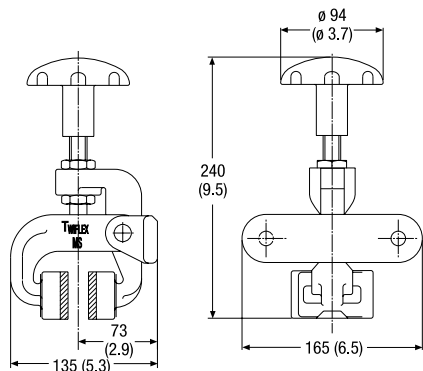
MSF Mechanically Applied – Lever Operated



Maximum Braking Force = 1.88kN @ 0.8kN force on lever
 (422.64 @ 179.84 lbf)

Weight of caliper and lever assembly - 2.13kg (4.69 lb)
 Weight of lever assembly only - 0.63kg (1.39 lb)

MSH Mechanically Applied – Hand Operated



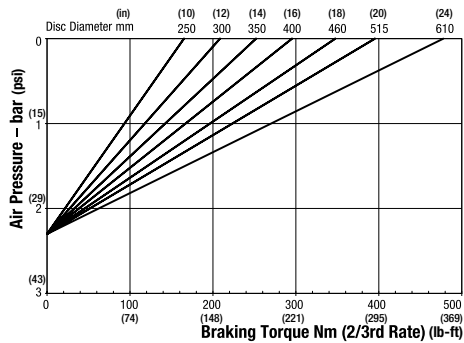
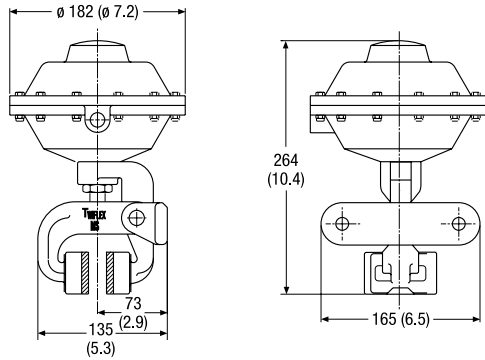
Maximum Braking Force = 1.01kN (227.06 lbf)
 Weight of caliper and hand wheel assembly - 2.53kg (5.58 lb)

Weight of hand wheel assembly only - 1.03kg (2.27 lb)

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

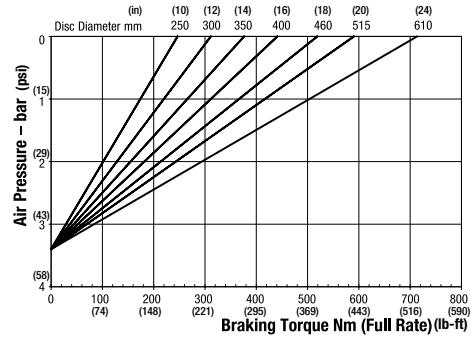
MS Series

MSK Spring Applied – Pneumatically Released, Self Adjusting



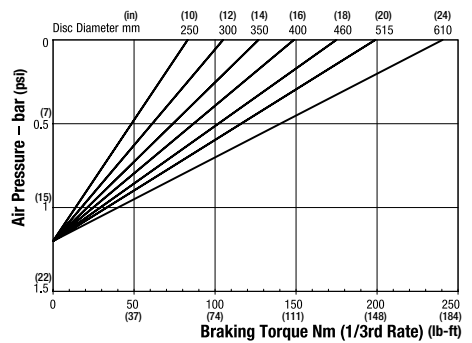
Maximum Braking Force 2/3rd rate: 1.74kN (391.17 lbf)
 Minimum Pressure for full retraction: 3.3 bar (48 psi)
 Weight of caliper and thruster - 4.9kg (10.80 lb)

Weight of thruster only - 3.4kg (7.49 lb)
 Volume displacement of thruster at full retraction = 950ml (32.12 fl oz)



Maximum Braking Force full rate: 2.6kN (584.50 lbf)
 Minimum Pressure for full retraction: 5 bar (73 psi)
 Weight of caliper and thruster - 4.9kg (10.80 lb)

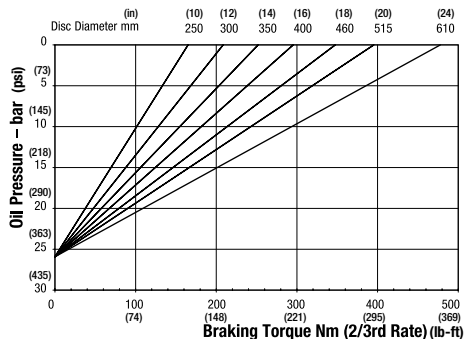
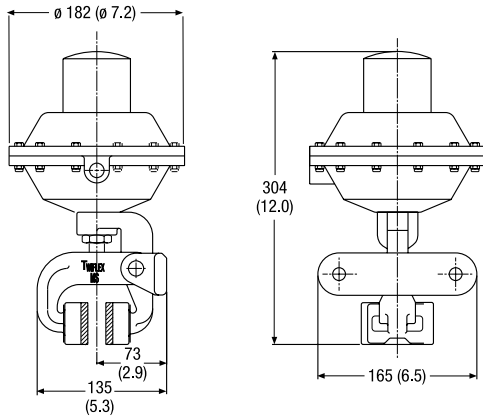
Weight of thruster only - 3.4kg (7.49 lb)
 Volume displacement of thruster at full retraction = 950ml (32.12 fl oz)



Maximum Braking Force 1/3rd rate: 0.87kN (195.58 lbf)
 Minimum Pressure for full retraction: 1.7 bar (25 psi)
 Weight of caliper and thruster - 4.9kg (10.80 lb)

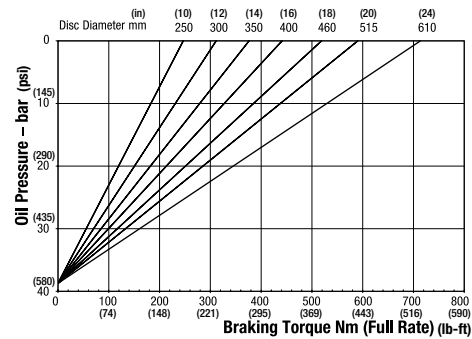
Weight of thruster only - 3.4kg (7.49 lb)
 Volume displacement of thruster at full retraction = 950ml (32.12 fl oz)

MSL Spring Applied – Hydraulically Released, Self Adjusting



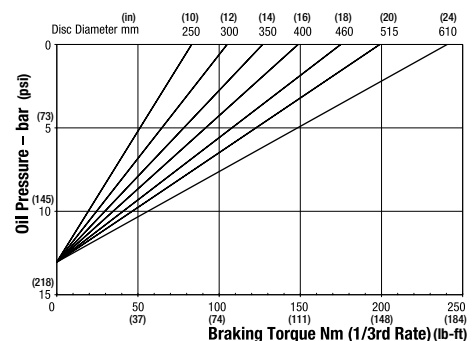
Maximum Braking Force 2/3rd rate: 1.74kN (391.17 lbf)
 Minimum Pressure for full retraction: 33 bar (479 psi)
 Weight of caliper and thruster - 5.5kg (12.13 lb)

Weight of thruster only - 4kg (8.82 lb)
 Volume displacement of thruster at 4mm (0.16 in) retraction = 5ml (0.17 fl oz)



Maximum Braking Force full rate: 2.6kN (584.50 lbf)
 Minimum Pressure for full retraction: 50 bar (725 psi)
 Weight of caliper and thruster - 5.5kg (12.13 lb)

Weight of thruster only - 4kg (8.82 lb)
 Volume displacement of thruster at 4mm (0.16 in) retraction = 5ml (0.17 fl oz)



Maximum Braking Force 1/3rd rate: 0.87kN (195.58 lbf)
 Minimum Pressure for full retraction: 17 bar (247 psi)
 Weight of caliper and thruster - 5.5kg (12.13 lb)

Weight of thruster only - 4kg (8.82 lb)
 Volume displacement of thruster at 4mm (0.16 in) retraction = 5ml (0.17 fl oz)

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