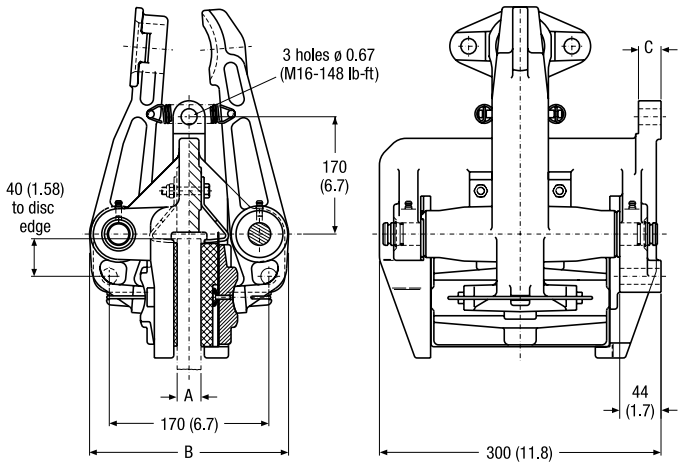
GMR Disc Brake Caliper



mm (in)

	A	B	C
GMR25	25 (1.00)	212 (8.35)	24 (0.94)
GMR40	40 (1.57)	223 (8.78)	29 (1.14)

The Twiflex GMR and GMR40 series of disc brake calipers are suitable for use with discs of 25.4mm (1 in), and 40mm (1.57 in)thick respectively. Minimum disc diameter is 610mm (24.02 in).

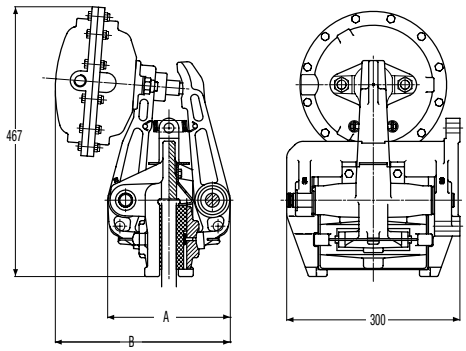
Normally one or two calipers are used per disc, but the number may be increased depending on disc size. The brakes may be positioned at any angle around the periphery of the disc, but should ideally be mounted horizontally (i.e. at the 3 o'clock or 9 o'clock position). If the caliper mounting angle is greater than 10° from the horizontal, or on vertical shaft applications, it should be fitted with an inclined mounting kit. 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.

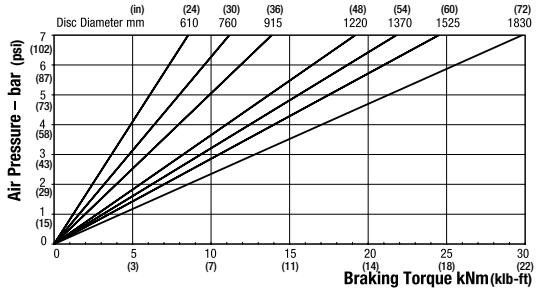
Effective disc radius = actual radius (m) – 0.06m
(Effective disc radius = actual radius (ft) – 0.19 ft)

GMRP Pneumatically Applied – Spring Released



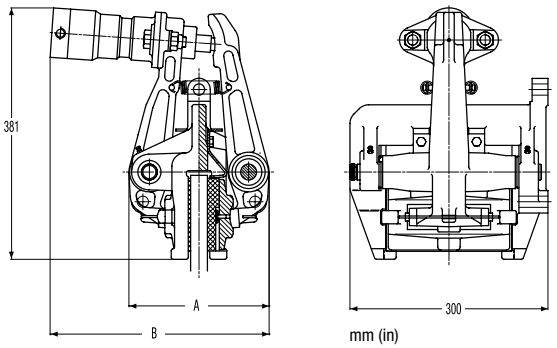
mm (in)

	A	B
GMRP	212 (8.35)	306 (12.05)
GMR40P	223 (8.78)	312 (12.28)



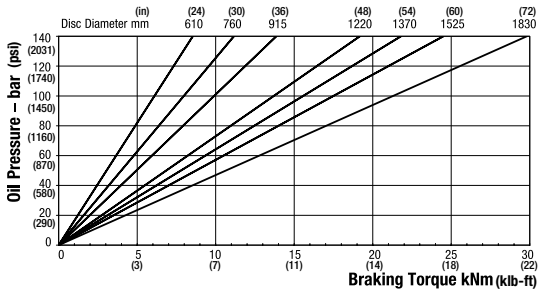
Maximum Pressure 7 bar (102 psi)
Maximum Braking Force = 36kN @ 7 bar (8093.12 lbf @102 psi)
Weight of caliper and thruster - 40.8kg (89.95 lb)
Weight of thruster only - 6.8kg (14.99 lb)
Volume displacement of thruster at full stroke = 1.8 ml (0.06 fl oz)

GMRH Hydraulically Applied – Spring Released



mm (in)

	A	B
GMRH	212 (8.35)	332 (13.07)
GMR40H	223 (8.78)	343 (13.50)

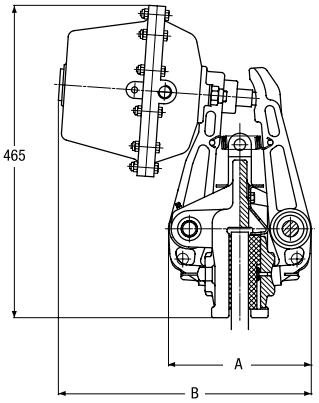


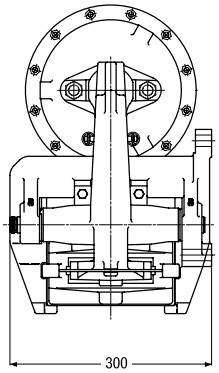
Maximum Pressure 140 bar (2030.53 psi)
Maximum Braking Force = 36kN @ 140 bar (8093.12 lbf @ 2031 psi)
Weight of caliper and thruster - 36.9kg (81.35 lb)
Weight of thruster only - 2.9kg (6.39 lb)
Volume displacement of thruster at full stroke = 40ml (1.35 fl oz)

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

GMR Series

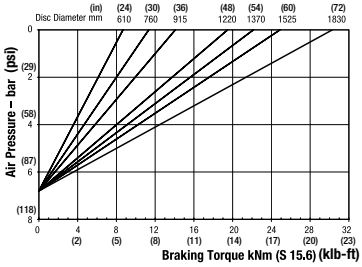
GMRS Spring Applied – Pneumatically Released



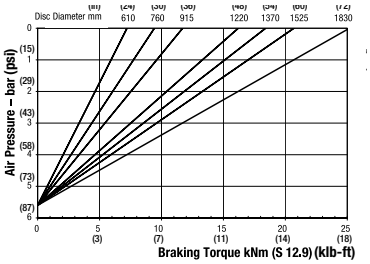


mm (in)

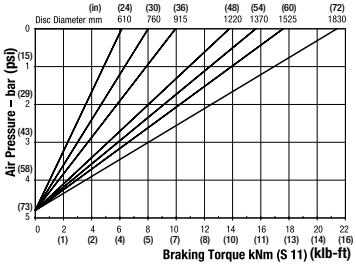
	A	B
GMRS	212 (8.35)	376 (14.80)
GMR40S	223 (8.78)	382 (15.04)



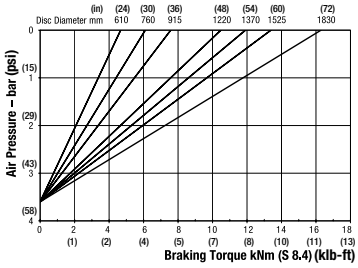
Maximum Braking Force S 15.6: 36kN (8093.12 lbf)
Minimum Pressure for full retraction: 8.4 bar (122 psi)
Weight of caliper and thruster - 49kg (108.03 lb)
Weight of thruster only - 15kg (33.07 lb)
Volume displacement of thruster at full retraction = 1.31ml (0.04 fl oz)



Maximum Braking Force S 12.9: 30kN (6744.27 lbf)
Minimum Pressure for full retraction: 7 bar (102 psi)
Weight of caliper and thruster - 48kg (105.82 lb)
Weight of thruster only - 14kg (30.86 lb)
Volume displacement of thruster at full retraction = 1.31ml (0.04 fl oz)

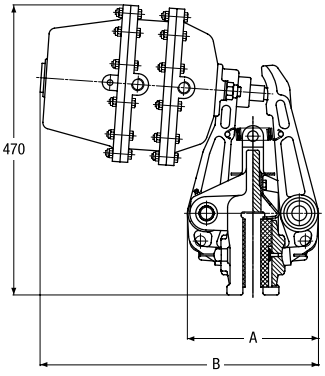


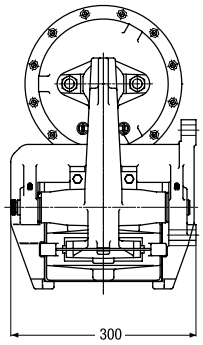
Maximum Braking Force S 11: 25kN (5620.22 ibf)
Minimum Pressure for full retraction: 6 bar (87 psi)
Weight of caliper and thruster - 47.2kg (104.06 lb)
Weight of thruster only - 13.2kg (29.10 lb)
Volume displacement of thruster at full retraction = 1.31ml (0.04 fl oz)



Maximum Braking Force S 8.4: 19.5kN (4383.77 lbf)
Minimum Pressure for full retraction: 4.8 bar (70 psi)
Weight of caliper and thruster - 46.2kg (101.85 lb)
Weight of thruster only - 12.2kg (26.89 lb)
Volume displacement of thruster at full retraction = 1.31ml (0.04 fl oz)

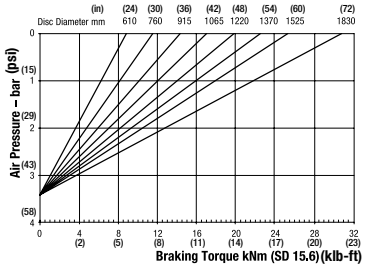
GMRSD Spring Applied – Pneumatically Released



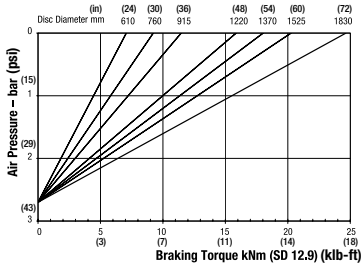


mm (in)

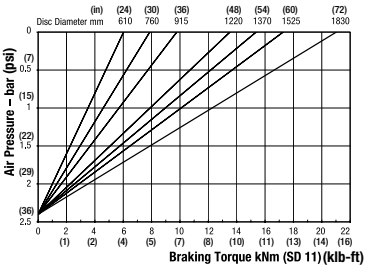
	A	B
GMRSD	212 (8.35)	451 (17.76)
GMR40SD	223 (8.78)	457 (17.99)



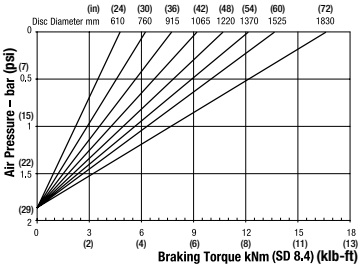
Maximum Braking Force SD 15.6: 36kN (8093.12 lbf)
Minimum Pressure for full retraction: 4.6 bar (67 psi)
Weight of caliper and thruster - 55kg (121.25 lb)
Weight of thruster only - 21kg (46.29 lb)
Volume displacement of thruster at full retraction = 2.51ml (0.08 fl oz)



Maximum Braking Force SD 12.9: 30kN (6744.27 lbf)
Minimum Pressure for full retraction: 3.8 bar (55 psi)
Weight of caliper and thruster - 54kg (119.05 lb)
Weight of thruster only - 20kg (44.09 lb)
Volume displacement of thruster at full retraction = 2.51ml (0.08 fl oz)



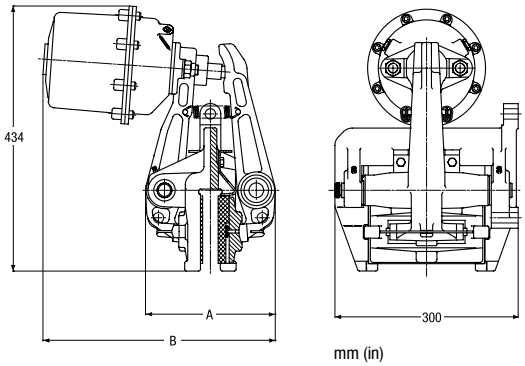
Maximum Braking Force SD 11: 25kN (5620.22 lbf)
Minimum Pressure for full retraction: 3.3 bar (48 psi)
Weight of caliper and thruster - 53.2kg (117.29 lb)
Weight of thruster only - 19.2kg (42.33 lb)
Volume displacement of thruster at full retraction = 2.51ml (0.08 fl oz)



Maximum Braking Force SD 8.4: 19.5kN (4383.77 lbf)
Minimum Pressure for full retraction: 2.4 bar (35 psi)
Weight of caliper and thruster - 52.2kg (115.08 lb)
Weight of thruster only - 18.2kg (40.12 lb)
Volume displacement of thruster at full retraction = 2.51ml (0.08 fl oz)

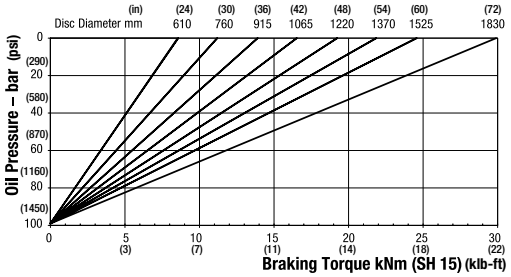
Retraction pressures where shown are calculated and may vary depending on spring tolerance.

GMRSH Spring Applied – Hydraulically Released

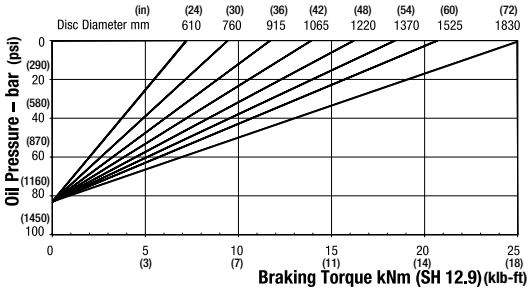


mm (in)

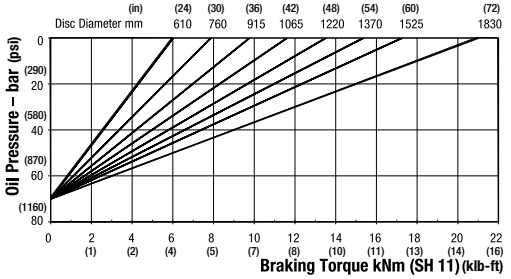
	A	B
GMRSH	212 (8.35)	380 (14.96)
GMR40SH	223 (8.78)	387 (15.24)



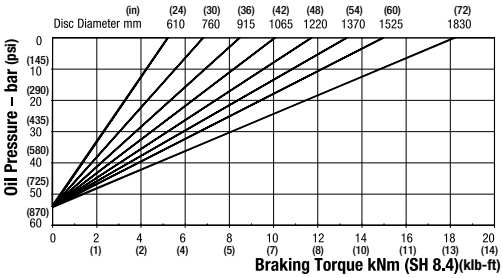
Maximum Braking Force SH 15: 35kN (868.31 lbf)
Minimum Pressure for full retraction: 120 bar (1740 psi)
Weight of caliper and thruster - 53kg (116.84 lb)
Weight of thruster only - 19kg (41.89 lb)
Volume displacement of thruster at full retraction = 56ml (1.89 fl oz)



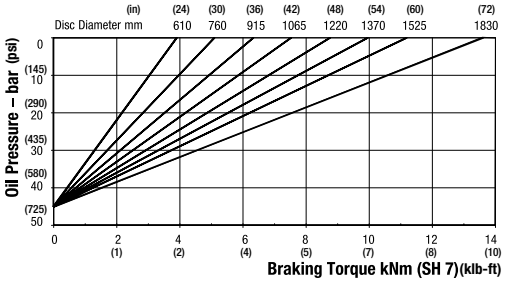
Maximum Braking Force SH 12.9: 30kN (6744.27 lbf)
Minimum Pressure for full retraction: 100 bar (1450 psi)
Weight of caliper and thruster - 52kg (114.64 lb)
Weight of thruster only - 18kg (39.68 lb)
Volume displacement of thruster at full retraction = 56ml (1.89 fl oz)



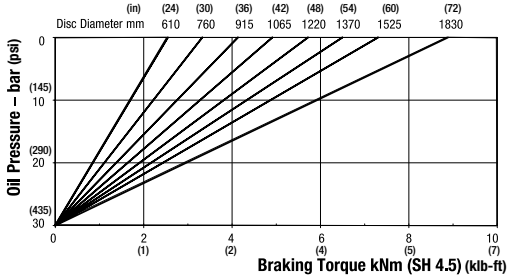
Maximum Braking Force SH 11: 25kN (5620.22 lbf)
Minimum Pressure for full retraction: 92 bar (1334 psi)
Weight of caliper and thruster - 51.2kg (112.88 lb)
Weight of thruster only - 17.2kg (37.92 lb)
Volume displacement of thruster at full retraction = 56ml (1.89 fl oz)



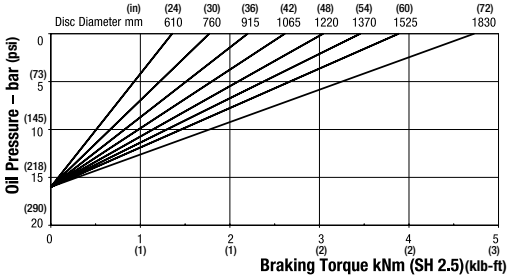
Maximum Braking Force SH 8.4: 19.5kN (4383.77 lbf)
Minimum Pressure for full retraction: 65 bar (943 psi)
Weight of caliper and thruster - 50.2kg (110.67 lb)
Weight of thruster only - 16.2kg (35.71 lb)
Volume displacement of thruster at full retraction = 56ml (1.89 fl oz)



Maximum Braking Force SH 7: 16.5kN (3709.35 lbf)
Minimum Pressure for full retraction: 59 bar (856 psi)
Weight of caliper and thruster - 49.7kg (109.57 lb)
Weight of thruster only - 15.7kg (34.61 lb)
Volume displacement of thruster at full retraction = 56ml (1.89 fl oz)



Maximum Braking Force SH 4.5: 10.5kN (2360.49 lbf)
Minimum Pressure for full retraction: 38 bar (551 psi)
Weight of caliper and thruster - 48.7kg (107.37 lb)
Weight of thruster only - 14.7kg (32.41 lb)
Volume displacement of thruster at full retraction = 56ml (1.89 fl oz)



Maximum Braking Force SH 2.5: 6kN (1348.85 lbf)
Minimum Pressure for full retraction: 21 bar (305 psi)
Weight of caliper and thruster - 47.9kg (105.60 lb)
Weight of thruster only - 13.9kg (30.64 lb)
Volume displacement of thruster at full retraction = 56ml (1.89 fl oz)

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