

GMX Disc Brake Caliper Range

The Twiflex GMX series of disc brake calipers is similar to the MX range but offers greater pad area. The GMX25, GMX30 and GMX40 are suitable for use with discs of 25.4mm (1 in), 30mm (1.18 in) and 40mm (1.57 in) thick respectively. The SGMX caliper is only suitable for use with discs 25.4mm (0.61 in) thick. Minimum disc diameter is 610mm (24 in).

The GMX/SGMX calipers may be used with any of the Twiflex series of thrusters and feature a patented link mechanism to ensure uniform pad wear.

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

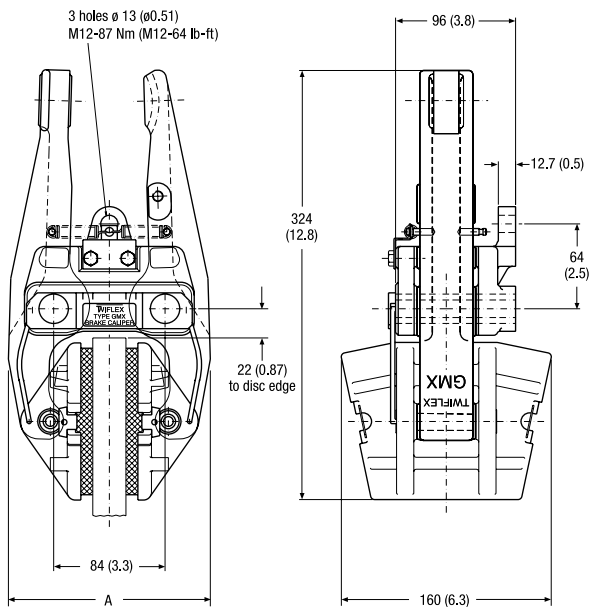
the 3 o'clock or 9 o'clock position). If the caliper mounting angle is greater than 10° from the horizontal, or on vertical shaft applications, it should be fitted with an inclined mounting kit or equalising link. A range of brake discs is available from Twiflex (see Disc and Hub Assemblies).

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.

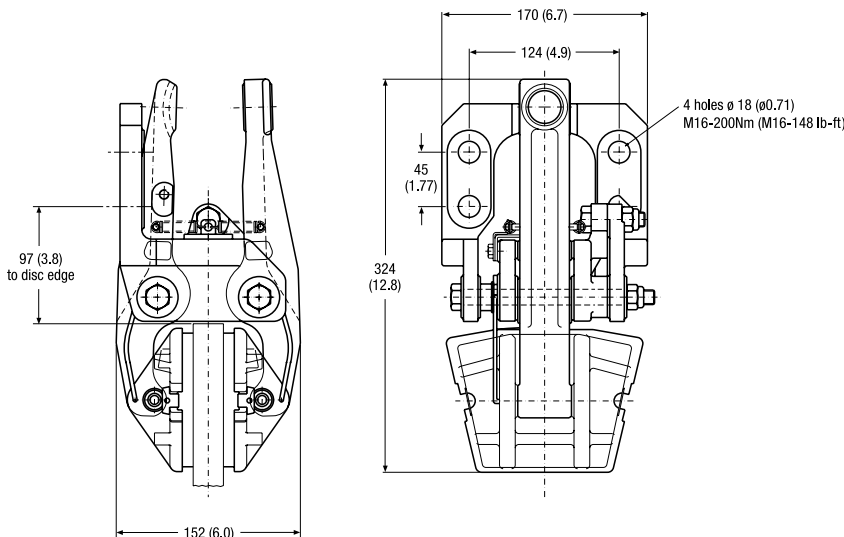
Effective disc radius = actual radius (m) – 0.06m
(Effective disc radius = actual radius (ft) – (0.19 ft))

GMX Disc Brake Caliper



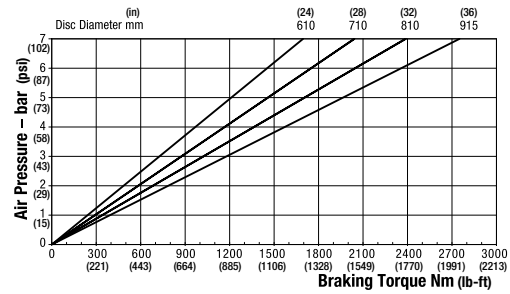
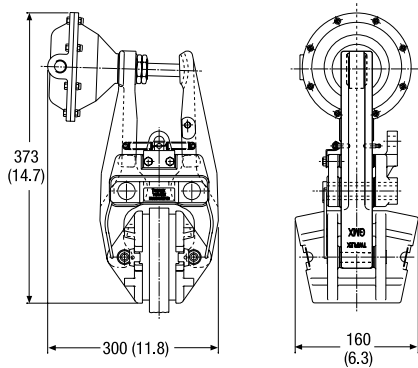
	Disc Thickness	
	mm	A
GMX25	25 (1.00)	152 (5.98)
GMX30	30 (1.18)	155 (6.10)
GMX40	40 (1.57)	162 (6.38)

SGMX Disc Brake Caliper



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

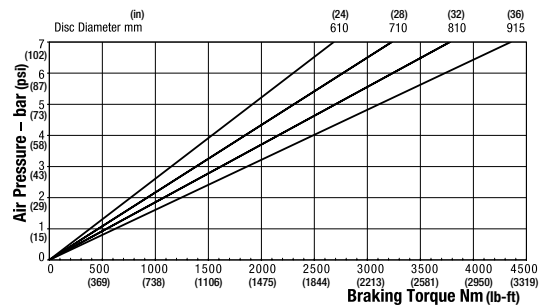
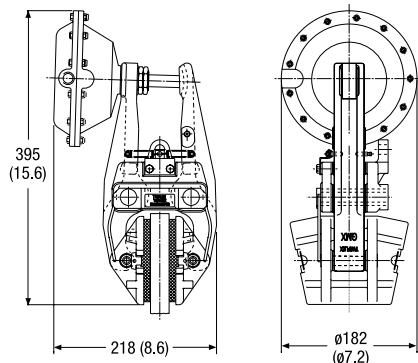
GMXA Pneumatically Applied – Spring Released



Maximum Pressure 7 bar (102 psi)
 Maximum Braking Force = 6.9kN @ 7 bar (1551.18 @ 102 psi)
 Weight of caliper and thruster - 10.54kg (23.24 lb)

Weight of thruster only - 1.32kg (2.91 lb)
 Volume displacement of thruster at full stroke = 300ml (10.14 fl oz)

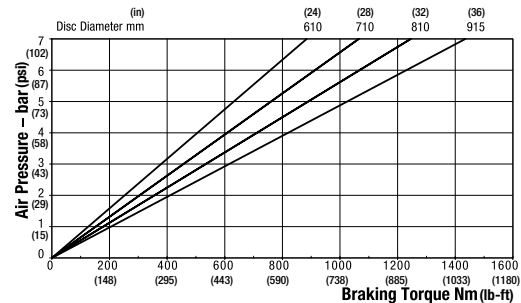
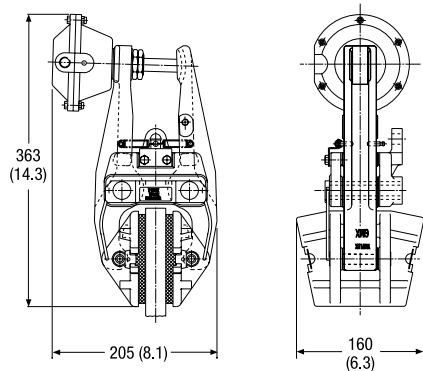
GMXB Pneumatically Applied – Spring Released



Maximum Pressure 7 bar (102 psi)
 Maximum Braking Force = 11kN @ 7 bar (2472.89 @ 102 psi)
 Weight of caliper and thruster - 11.28kg (24.87 lb)

Weight of thruster only - 2.06kg (4.54 lb)
 Volume displacement of thruster at full stroke = 426ml (14.40 fl oz)

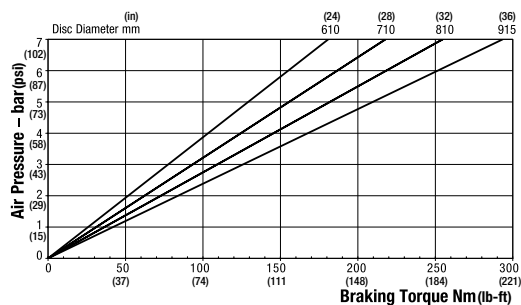
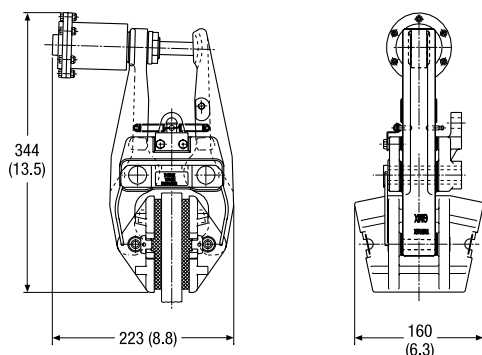
GMXD Pneumatically Applied – Spring Released



Maximum Pressure 7 bar (102 psi)
 Maximum Braking Force = 3.6kN @ 7 bar (809.31 @ 102 psi)
 Weight of caliper and thruster - 10.37kg (22.86 lb)

Weight of thruster only - 1.15kg (2.54 lb)
 Volume displacement of thruster at full stroke = 150ml (5.07 fl oz)

GMXE Pneumatically Applied – Spring Released



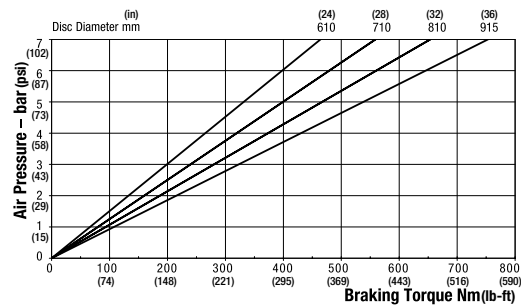
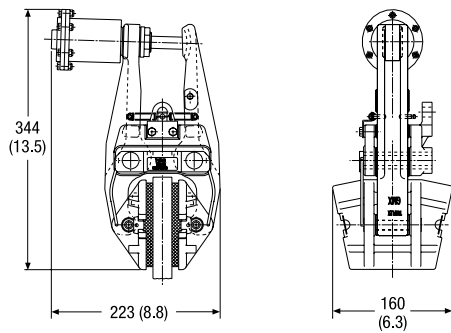
Maximum Pressure 7 bar (102 psi)
 Maximum Braking Force = 0.74kN @ 7 bar (166.35 @ 102 psi)
 Weight of caliper and thruster - 9.56kg (21.07 lb)

Weight of thruster only - 0.34kg (0.75 lb)
 Volume displacement of thruster at full stroke = 25ml (0.85 fl oz)

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

GMX Series

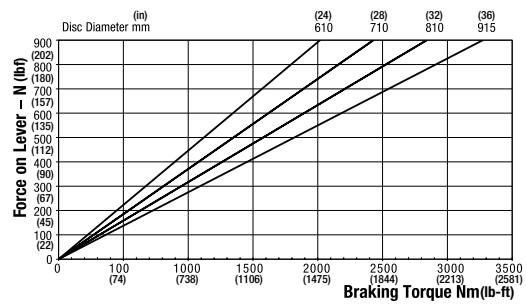
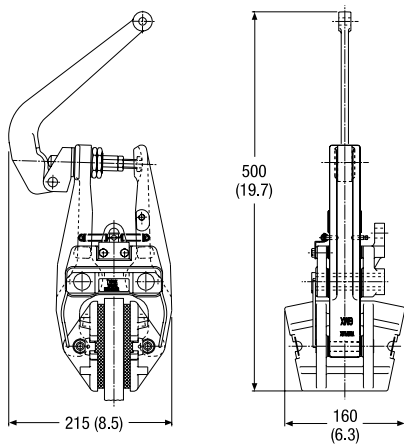
GMXG Pneumatically Applied – Spring Released



Maximum Pressure 7 bar (102 psi)
 Maximum Braking Force = 1.9kN @ 7 bar
 (427.14 @ 102 psi)
 Weight of caliper and thruster - 9.52kg (20.99 lb)

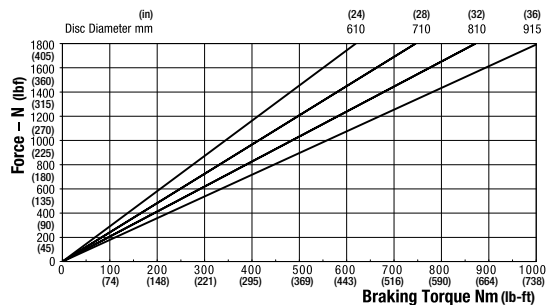
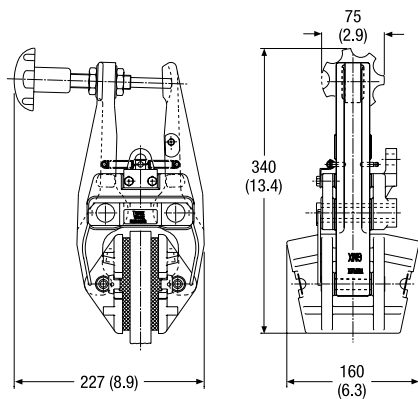
Weight of thruster only - 0.3kg (0.66 lb)
 Volume displacement of thruster at full stroke = 64ml
 (2.16 fl oz)

GMXH Mechanically Applied – Lever Operated



Weight of caliper and lever assembly - 10.62kg (23.41 lb)
 Weight of lever assembly only - 1.4kg (3.09 lb)
 Maximum Braking Force = 8.3kN @ 0.9kN (1865.91 @ 202.33 lbf) force on lever

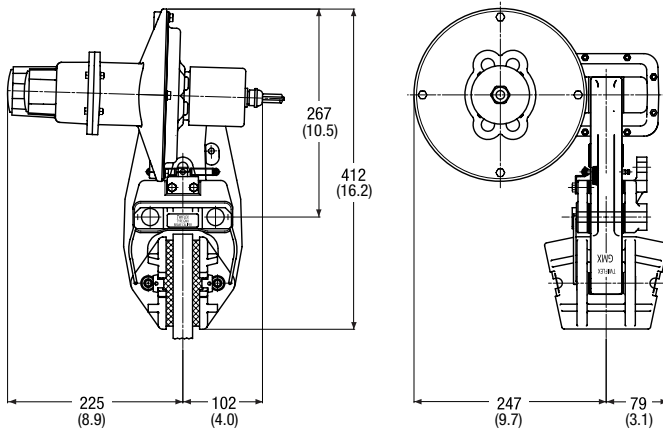
GMXW Mechanically Applied – Hand Operated



Weight of caliper and hand wheel assembly - 10.52kg (23.19 lb)
 Weight of hand wheel assembly only - 1.3kg (2.87 lb)
 Maximum Braking Force = 2.68kN (602.49 lbf)

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

GMXEA Spring Applied - Electrically Released, Self Adjusting



Maximum Braking Force = 6kN (1348.85 lbf)
Weight of caliper and actuator - 17.9kg (39.46 lb)

Weight actuator only - 8.7kg (19.18 lb)
Weight of controller - 5.5kg (12.13 lb)

The EA actuator is a spring applied, electrically released unit designed for use with the Twiflex GMX range of disc brake calipers. A 175W pancake motor drives a ball screw mechanism, retracting the brake.

A feature of the unit is a patented self-adjusting mechanism which maintains a constant air gap (and consequently braking force) between pad and disc as the pads wear.

The assembly is contained in a rugged, cast aluminum housing, designed for service in the harshest environments, which mounts directly to one arm of the GMX caliper.

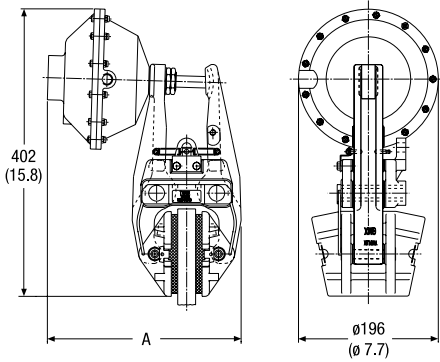
The GMXEA is supplied complete with a solid state controller, suitable for all AC supply voltages, which converts the supply to the required DC output for the pancake motor. A 24VDC unit is also available. The brake is released when power to the controller is switched on, and applied when power is disconnected. Controlled application of the brake occurs, electrically damped by using the motor back E.M.F. and a damping resistor.

The controller is housed in a strong, steel, wall mounted enclosure (215mm x 215mm x 150mm deep) (8.46 in x 8.46 in x 5.90 in), protected to IP44 as standard (higher rating on request).

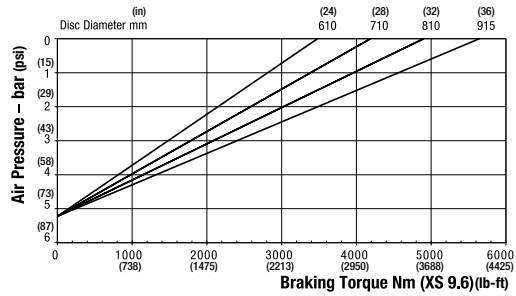
Braking force adjustable to 50% of maximum.

GMX Series

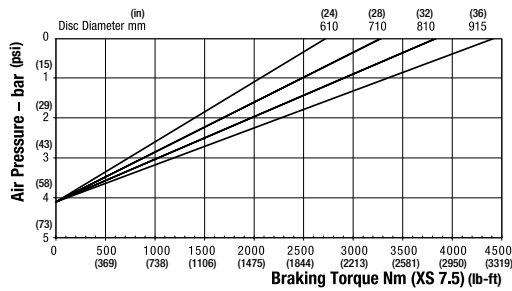
GMXS Spring Applied – Pneumatically Released, Self Adjusting



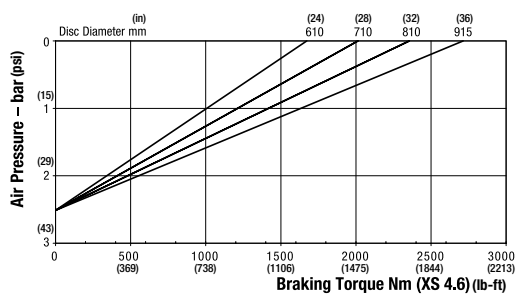
mm (in)	
A	
XS 9.6	296.5 (11.67)
XS 7.5	285.5 (11.24)
XS 4.6	285.5 (11.24)



Maximum Braking Force XS 9.6: 14.3kN (3214.77 lbf) Weight of thruster only - 5.1kg (11.24 lb)
 Minimum Pressure for full retraction: 6.5 bar (94 psi) Volume displacement of thruster at full retraction = 1.19ml (0.06 fl oz)
 Weight of caliper and thruster - 14.32kg (31.57 lb)

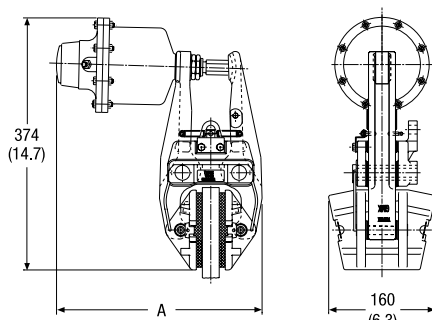


Maximum Braking Force XS 7.5: 11.2kN (2517.86 lbf) Weight of thruster only - 4.9kg (10.80 lb)
 Minimum Pressure for full retraction: 5 bar (73 psi) Volume displacement of thruster at full retraction = 1.19ml (0.06 fl oz)
 Weight of caliper and thruster - 14.12kg (31.13 lb)

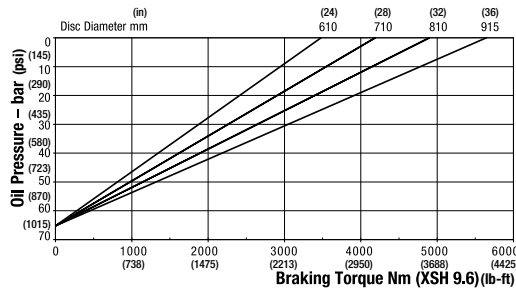


Maximum Braking Force XS 4.6: 6.8kN (1528.70 lbf) Weight of thruster only - 4.5kg (9.92 lb)
 Minimum Pressure for full retraction: 3 bar (44 psi) Volume displacement of thruster at full retraction = 1.19ml (0.06 fl oz)
 Weight of caliper and thruster - 13.72kg (30.25 lb)

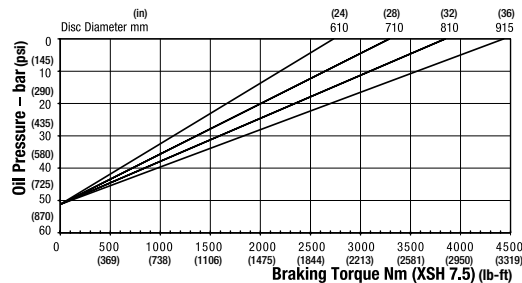
GMXSH Spring Applied – Hydraulically Released, Self Adjusting



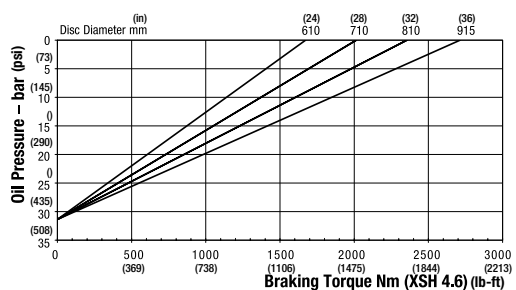
mm (in)	
A	
XS 9.6	330 (12.99)
XS 7.5	305 (12.01)
XS 4.6	305 (12.01)



Maximum Braking Force XSH 9.6: 14.3kN (3214.77 lbf) Weight of thruster only - 4.6kg (10.14 lb)
 Minimum Pressure for full retraction: 82 bar (1189 psi) Volume displacement of thruster at 6mm (0.24 in) retraction = 9.1ml (0.30 fl oz)
 Weight of caliper and thruster - 13.82kg (30.47 lb)



Maximum Braking Force XSH 7.5: 11.2kN (2517.86 lbf) Weight of thruster only - 4.4kg (9.70 lb)
 Minimum Pressure for full retraction: 63 bar (914 psi) Volume displacement of thruster at 6mm (0.24 in) retraction = 9.1ml (0.30 fl oz)
 Weight of caliper and thruster - 13.62kg (30.03 lb)



Maximum Braking Force XSH 4.6: 6.8kN (1528.70 lbf) Weight of thruster only - 4kg (8.82 lb)
 Minimum Pressure for full retraction: 40 bar (580 psi) Volume displacement of thruster at 6mm (0.24 in) retraction = 9.1ml (0.30 fl oz)
 Weight of caliper and thruster - 13.22kg (29.15 lb)

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