

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, 30mm and 40mm thick respectively. The SGMX caliper is only suitable for use with discs 25.4mm thick. Minimum disc diameter is 610mm.

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

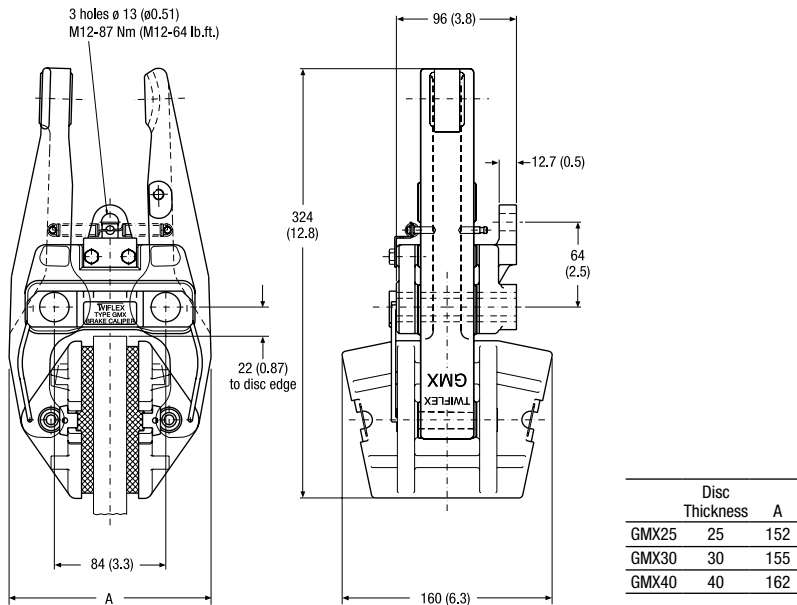
the 3 o'clock or 9 o'clock position). If the caliper mounting angle is greater than 10° from the horizontal, or on vertical shaft applications, it should be fitted with an inclined mounting kit or equalising link. A range of brake discs is available from Twiflex (see Disc and Hub Assemblies).

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.

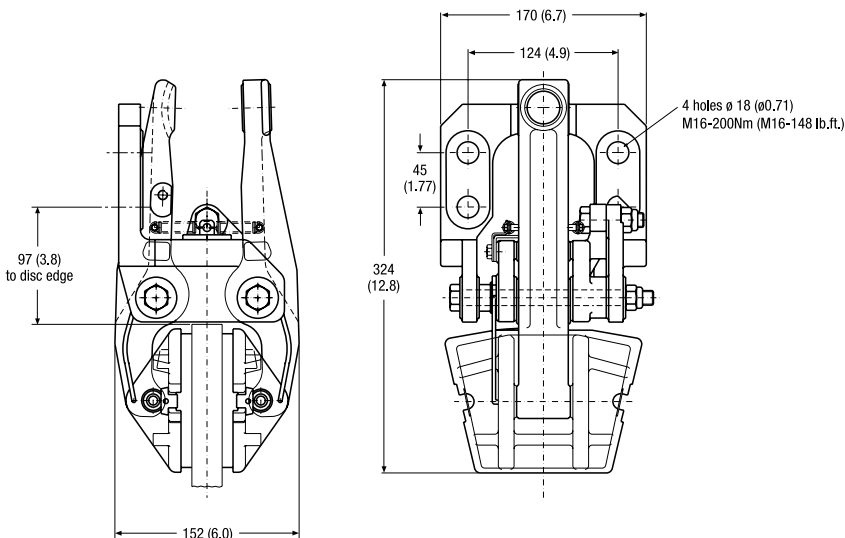
The ratings shown on the graphs are based on fully bedded in and conditioned brake pads with a nominal friction coefficient $\mu = 0.4$. Twiflex disc brakes must be used with Twiflex asbestos free brake pads.

Effective disc radius = actual radius (m) – 0.06m.

GMX Disc Brake Caliper

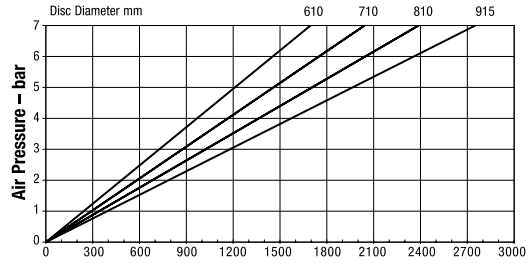
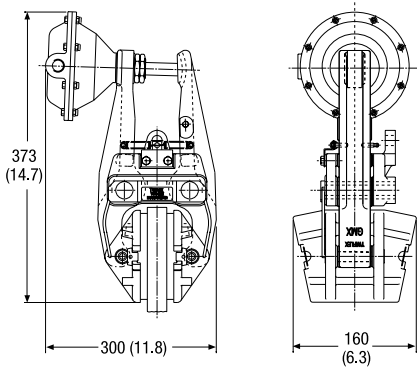


SGMX Disc Brake Caliper



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

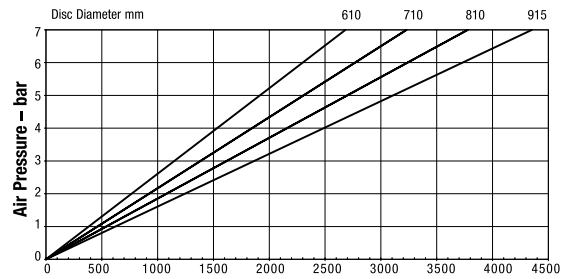
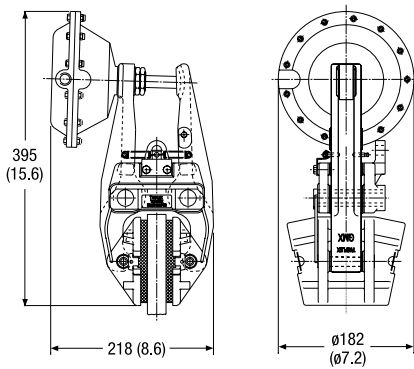
GMXA Pneumatically Applied – Spring Released



Maximum Pressure 7 bar
 Maximum Braking Force = 6.9kN @ 7 bar
 Weight of caliper and thruster - 10.54kg

Braking Torque Nm
 Weight of thruster only - 1.32kg
 Volume displacement of thruster at full stroke = 300ml

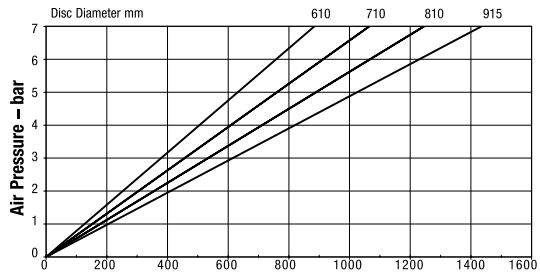
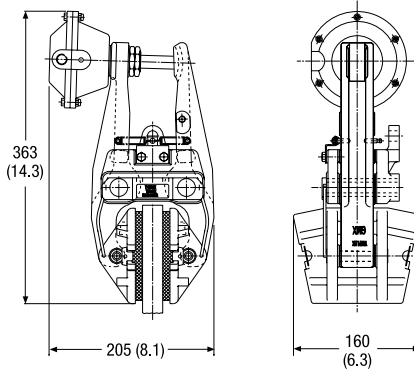
GMXB Pneumatically Applied – Spring Released



Maximum Pressure 7 bar
 Maximum Braking Force = 11kN @ 7 bar
 Weight of caliper and thruster - 11.26kg

Braking Torque Nm
 Weight of thruster only - 2.06kg
 Volume displacement of thruster at full stroke = 426ml

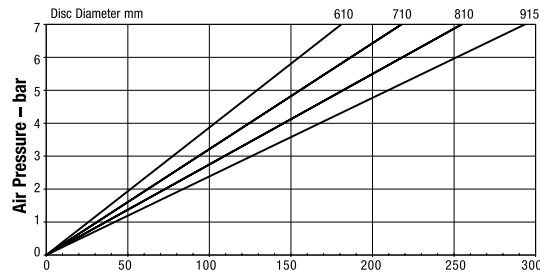
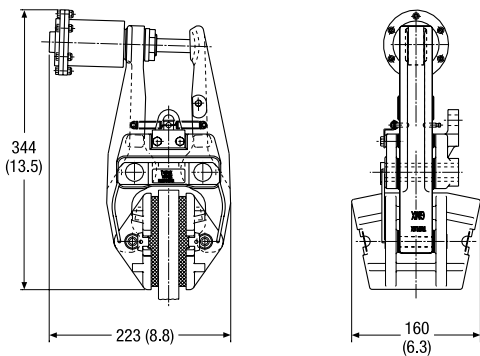
GMXD Pneumatically Applied – Spring Released



Maximum Pressure 7 bar
 Maximum Braking Force = 3.6kN @ 7 bar
 Weight of caliper and thruster - 10.37kg

Braking Torque Nm
 Weight of thruster only - 1.15kg
 Volume displacement of thruster at full stroke = 150ml

GMXE Pneumatically Applied – Spring Released



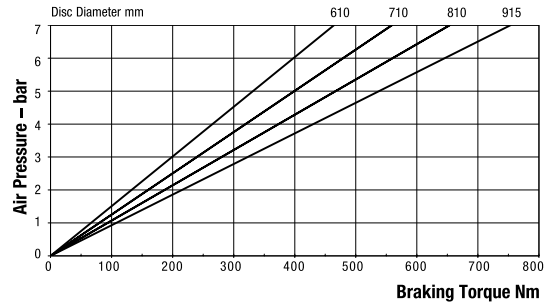
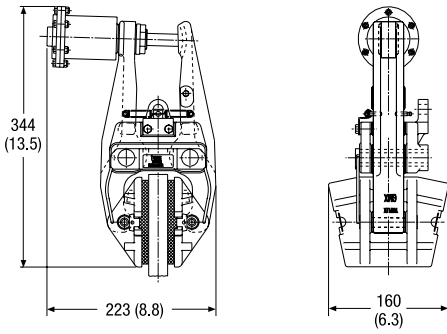
Maximum Pressure 7 bar
 Maximum Braking Force = 0.74kN @ 7 bar
 Weight of caliper and thruster - 9.56kg

Braking Torque Nm
 Weight of thruster only - 0.34kg
 Volume displacement of thruster at full stroke = 25ml

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

GMX Series

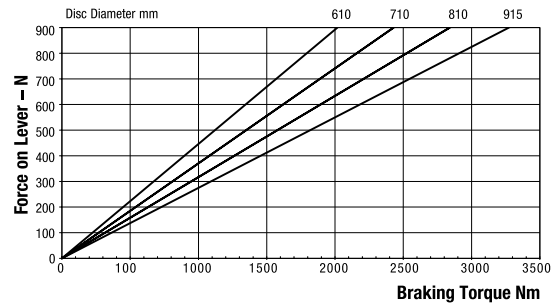
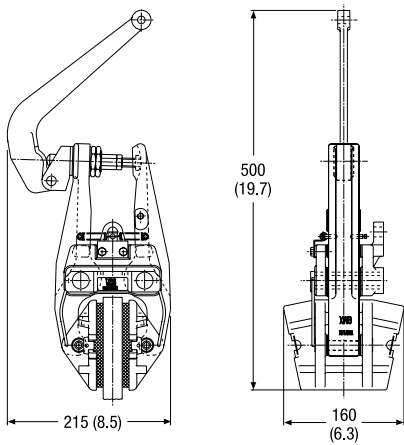
GMXG Pneumatically Applied – Spring Released



Maximum Pressure 7 bar
 Maximum Braking Force = 1.9kN @ 7 bar
 Weight of caliper and thruster - 9.52kg

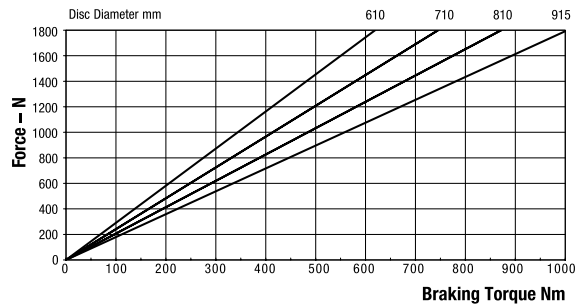
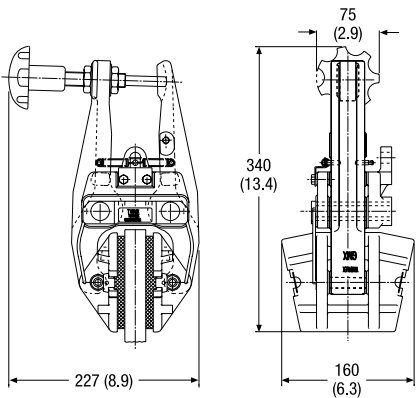
Weight of thruster only - 0.3kg
 Volume displacement of thruster at full stroke = 64ml

GMXH Mechanically Applied – Lever Operated



Weight of caliper and lever assembly - 10.62kg
 Weight of lever assembly only - 1.4kg
 Maximum Braking Force = 8.3kN @ 0.9kN force on lever

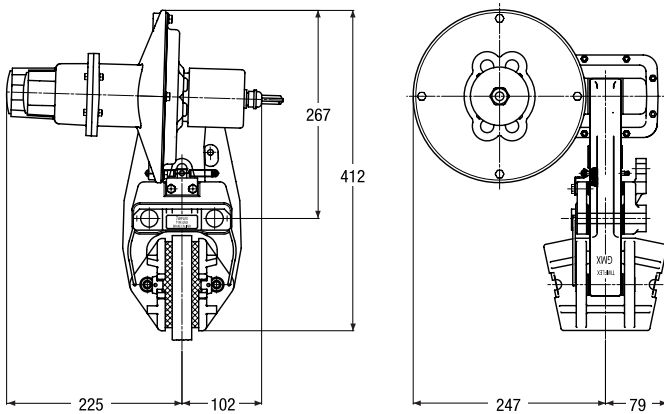
GMXW Mechanically Applied – Hand Operated



Weight of caliper and hand wheel assembly - 10.52kg
 Weight of hand wheel assembly only - 1.3kg
 Maximum Braking Force = 2.68kN

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

GMXEA Spring Applied - Electrically Released, Self Adjusting



Maximum Braking Force = 6kN
Weight of caliper and actuator - 17.9kg

Weight actuator only - 8.7kg
Weight of controller - 5.5kg

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.

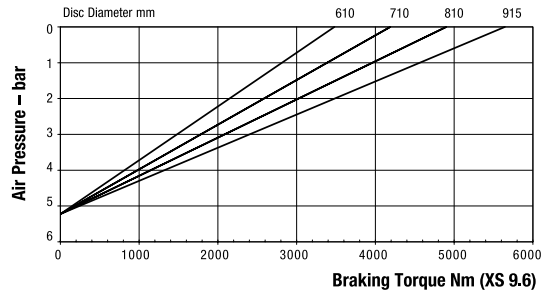
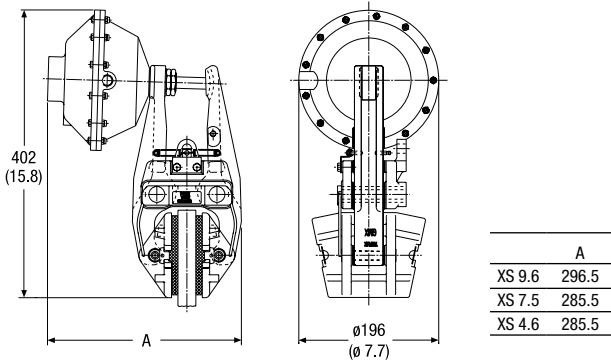
The controller is housed in a strong, steel, wall mounted enclosure (215mm x 215mm x 150mm deep), protected to IP44 as standard (higher rating on request).

Braking force adjustable to 50% of maximum.

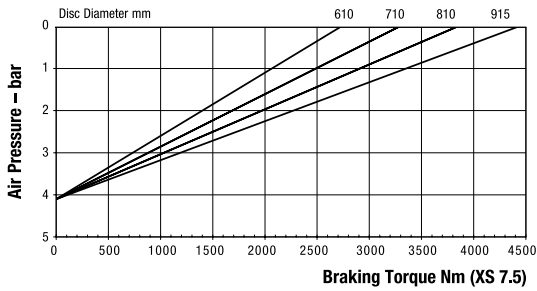
Retraction pressures where shown are calculated and may vary depending on spring tolerance.

GMX Series

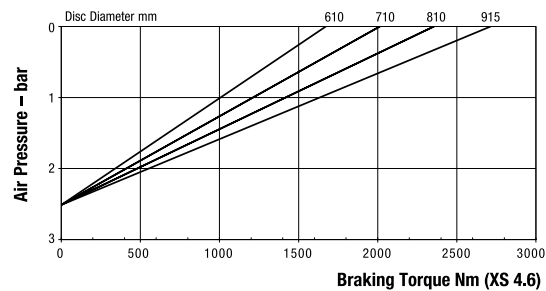
GMXS Spring Applied – Pneumatically Released, Self Adjusting



Maximum Braking Force XS 9.6: 14.3kN
 Minimum Pressure for full retraction: 6.5 bar
 Weight of caliper and thruster - 14.32kg
 Weight of thruster only - 5.1kg
 Volume displacement of thruster at full retraction = 1.19 l

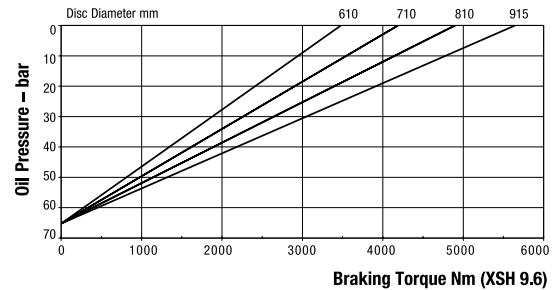
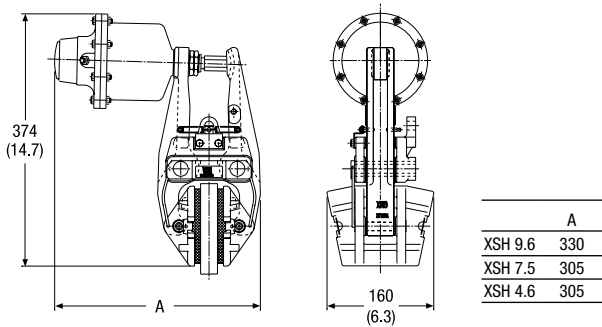


Maximum Braking Force XS 7.5: 11.2kN
 Minimum Pressure for full retraction: 5 bar
 Weight of caliper and thruster - 14.12kg
 Weight of thruster only - 4.9kg
 Volume displacement of thruster at full retraction = 1.19 l

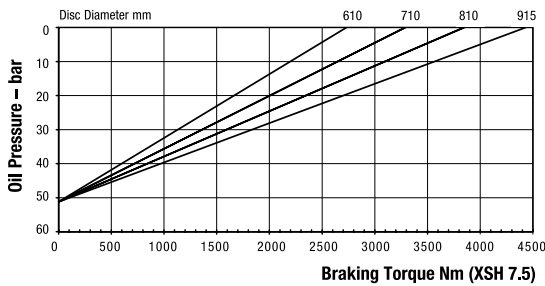


Maximum Braking Force XS 4.6: 6.8kN
 Minimum Pressure for full retraction: 3 bar
 Weight of caliper and thruster - 13.72kg
 Weight of thruster only - 4.5kg
 Volume displacement of thruster at full retraction = 1.19 l

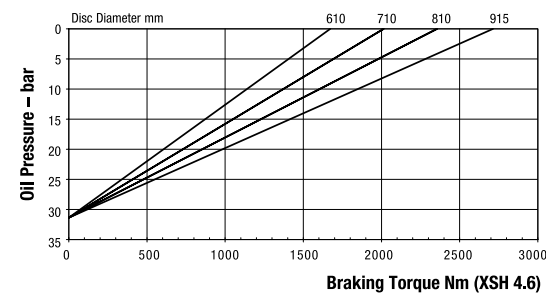
GMXSH Spring Applied – Hydraulically Released, Self Adjusting



Maximum Braking Force XSH 9.6: 14.3kN
 Minimum Pressure for full retraction: 82 bar
 Weight of caliper and thruster - 13.82kg
 Weight of thruster only - 4.6kg
 Volume displacement of thruster at 6mm retraction = 9.1ml



Maximum Braking Force XSH 7.5: 11.2kN
 Minimum Pressure for full retraction: 63 bar
 Weight of caliper and thruster - 13.62kg
 Weight of thruster only - 4.4kg
 Volume displacement of thruster at 6mm retraction = 9.1ml



Maximum Braking Force XSH 4.6: 6.8kN
 Minimum Pressure for full retraction: 40 bar
 Weight of caliper and thruster - 13.22kg
 Weight of thruster only - 4kg
 Volume displacement of thruster at 6mm retraction = 9.1ml

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