

Robotic Accessories

PX Grippers

- ✓ Ultra Long Strokes
- ✓ Force and Torque for **BIG** Jobs
- ✓ Precise Positioning
- ✓ Cost Effective



The PX concept was developed for applications that impart high acceleration to heavy objects or require extremely long, precisely positioned jaws. These applications put extreme stress on the gripper. PX grippers use a ceramic bearing system to isolate the precision jaw positioning system from jaw torque and force. The ceramic bearing rail

allows the gripper to be small and light weight while delivering gripping force in excess of 2500N (560 pounds) and to tolerate jaw torque of 600NM (405 ft-lb).

PX grippers truly deliver:

TWICE THE FORCE...HALF THE SIZE

Patented Synchronous Technology—Extended Life

The synchronous PX utilizes US patent number 4,591,199 & 5,657,973. The force and synchronizing double helix are independent systems. The double helix works only to center the part to .025mm (± 0.001 inches).

All of the gripping force is provided by two pistons that are driven pneumatically. The independence of the force and synchronization systems provides precision over the typical 10,000,000+ cycle life of the unit.



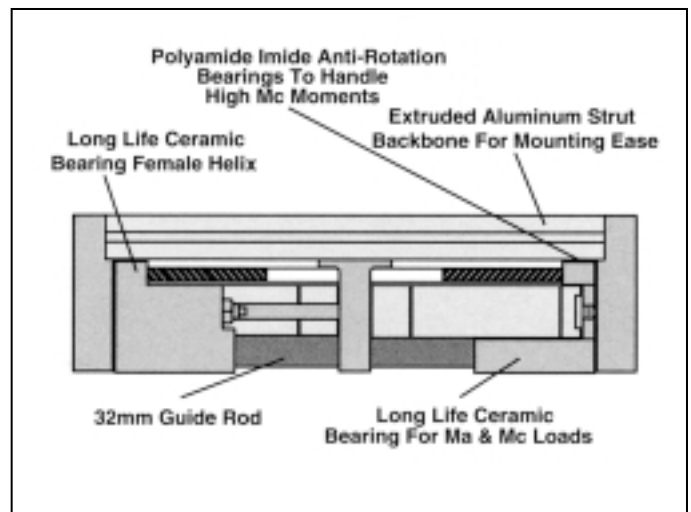
Rugged Construction—Low Cost of Ownership

PX takes advantage of dynamic developments in both material science and automation technology to offer new horizons of toughness and cost efficiency.

Unparalleled rigidity is achieved by combining a 32mm ground rod and ROBOTIC ACCESSORIES' proprietary ceramic bearing technology. Anti-rotation of the jaw mounting system is achieved with polyamide imide bearings running in guides that are precision machined in the extruded backbone of the system. All of these moving members are lubricated for the life of the gripper.

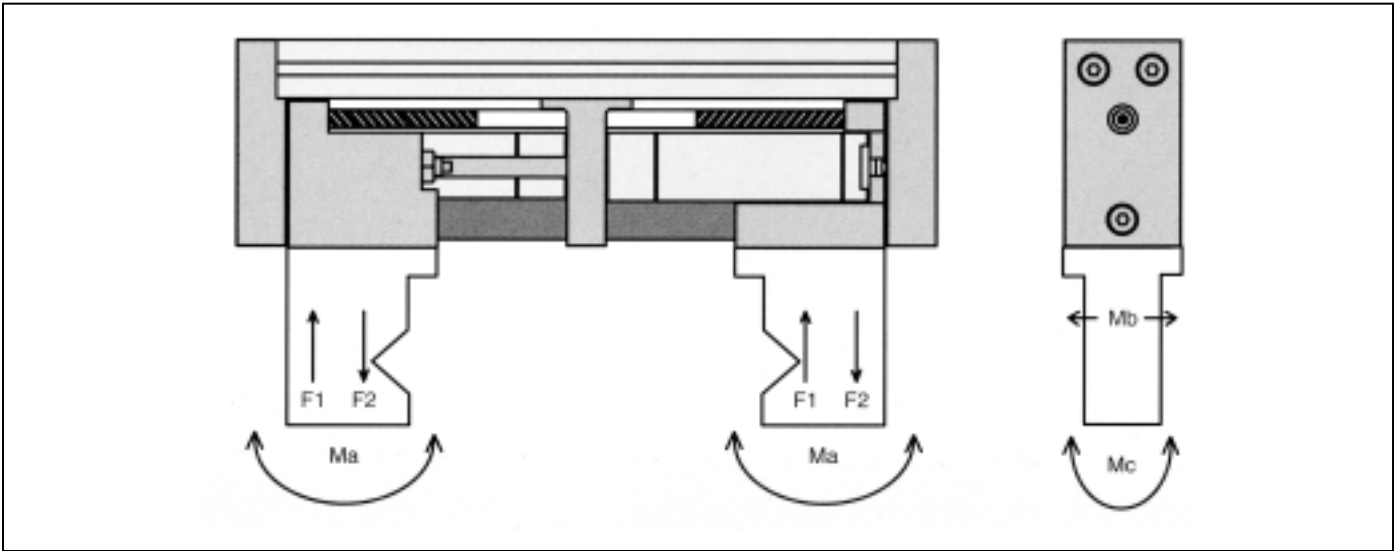
To achieve environmental stability, stainless steel, aluminum, and polymer are the only materials used in the construction of the gripper.

The application flexibility of the gripper is extended by the use of an extruded aluminum



backbone that provides multiple options for mounting the gripper and mounting sensors to the gripper. The cost of ownership of the PX is minimized by the use of off-the-shelf stainless steel cylinders. These cylinders include magnetic sensing rings for enhanced flexibility in sensing.

PX Jaw Torque and Force



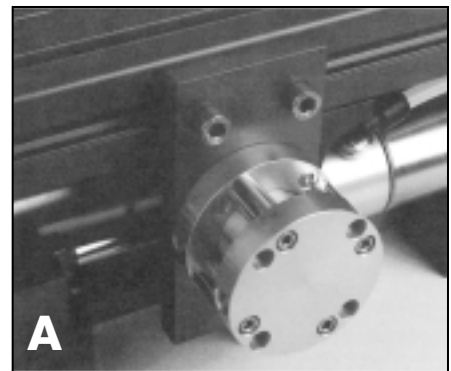
Model	Ma : Ft•Lbs (Nm)	Mb Ft•Lbs (Nm)	Mc Ft•Lbs (Nm)	F1 Lbs (kg)	F2 Lbs (kg)
PX-450	165 (225)	165 (225)	117 (160)	492 (224)	305 (136)
PX-1250	405 (550)	440 (600)	405 (550)	1500 (670)	450 (1,000)

PX Gripper Optional Accessories

Optional Power-Off Brake (Photo A)

In applications that require the part be held even when pneumatic power is lost, the Power-Off Brake option provides an excellent solution. When pneumatic pressure is removed from the option a spring is allowed to rotate a collar that engages a collet brake system on the helix. Thus, the jaws are braked in position.

Either an encompassing jaw system or jaws with compliance must be used with this option. Jarring can cause some jaw movement.



Optional Switch Kit (Photo B)

The switch mounting rail permits a broad range of switch configurations to be used. Kits are available to mount 6.5mm, 12mm, and 18mm standard, tubular proximity switches.

