



Parallel Opening/Closing Type Gripper

XRAY[®] Series

2 Finger

450N, 1250N, 2500N



Compact gripper with double helix synchronization
High load carrying ceramic bearings
Ultra accurate centering
Long strokes for a wide range of parts
Auto switch ready

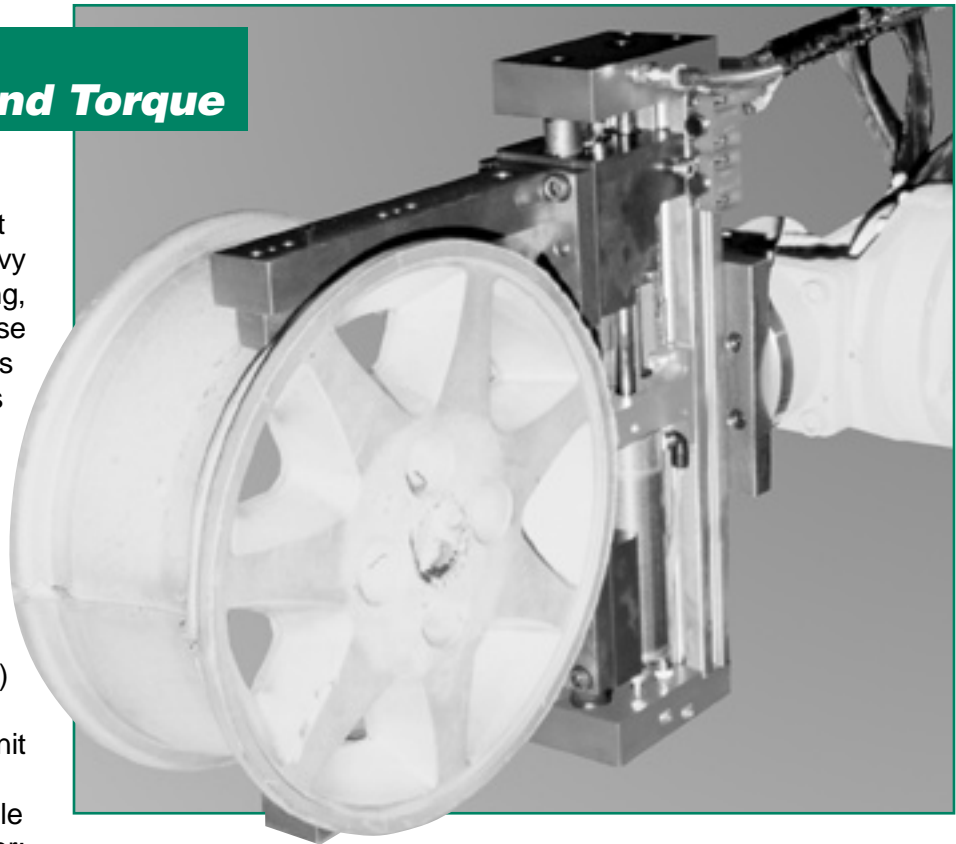
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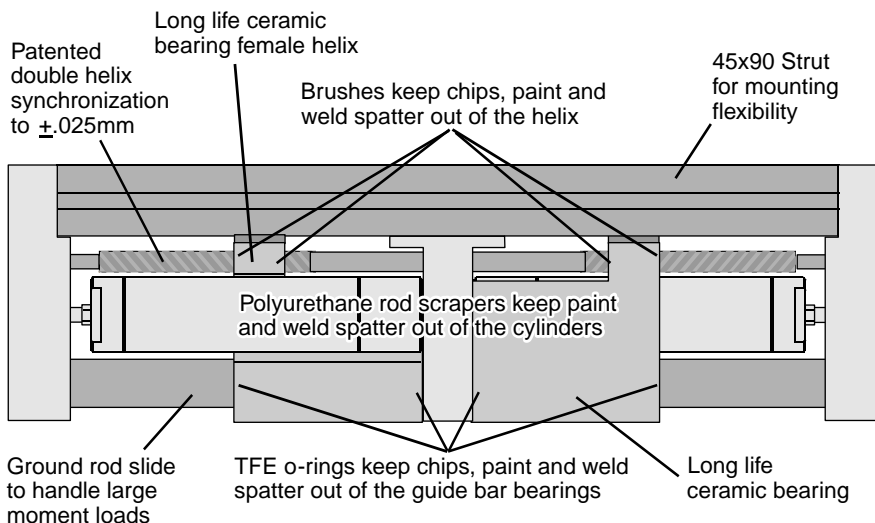
XRAY Grippers – Extreme Force and Torque

The XRAY 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. XRAY grippers use a ceramic bearing system to isolate the precision jaw positioning system from jaw torque and force. The ceramic bearing rail allows the grippers to be small and lightweight while delivering jaw force in excess of 2500N (560 pounds) and to tolerate jaw torque of 1200NM (880 ft-lb). Multiple unit arrays and special strokes are facilitated by the XRAY's flexible architecture. XRAYs truly deliver:



“Twice The Force... Half The Size”

Patented Synchronous Technology – Extended Life



The synchronous XRAY utilizes U.S. patent numbers 4,591,199 and 5,657,973. The force and synchronizing double helix are independent systems. The double helix works only to center the part to $.025\text{mm}$ (± 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.

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Rugged Construction – Low Cost of Ownership

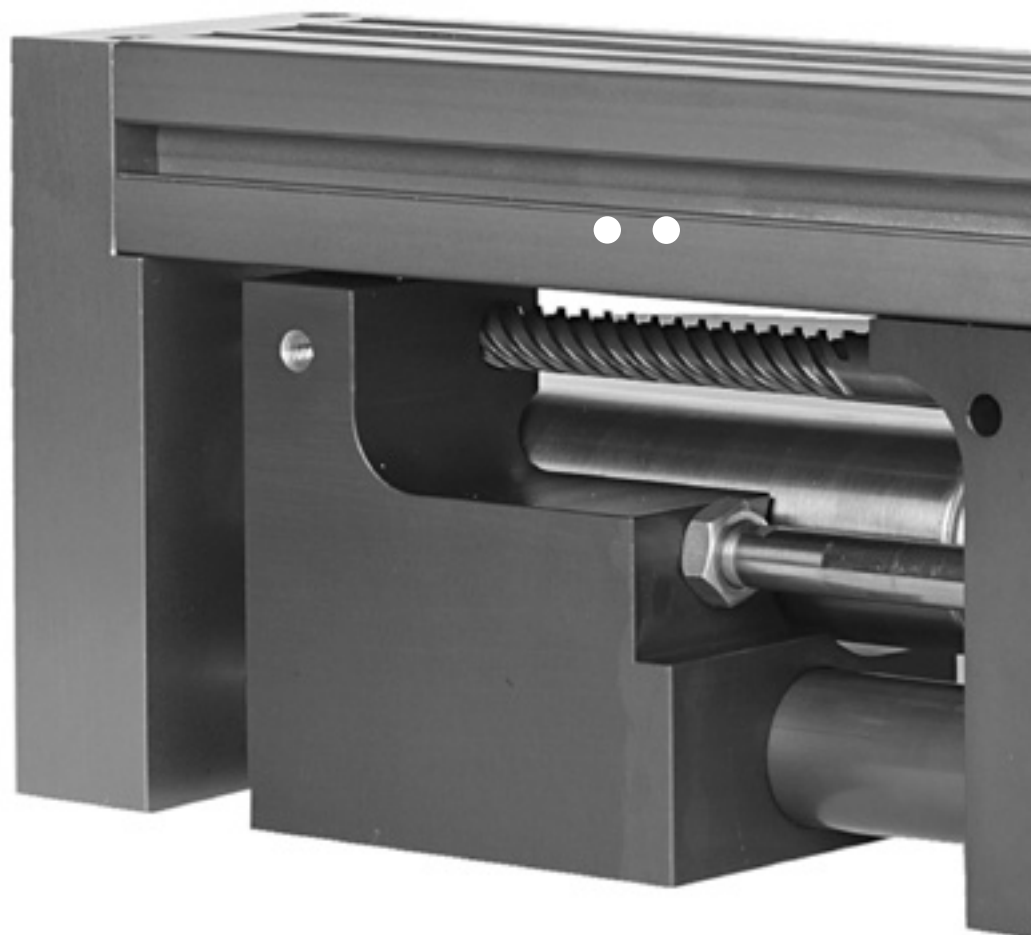
XRAY takes advantage of dynamic developments in both material science and automation technology to offer new horizons of toughness and cost efficiency. The cost of ownership of the XRAY is minimized by the use of off-the-shelf stainless steel cylinders. These cylinders include magnetic sensing rings for enhanced flexibility.

Harsh environments like casting, welding and machining are tolerated due to seals on the helix and guide bar. The standard seals on the cylinders are supplemented with polyurethane rod wipers in the ZAYTRAN designed nuts that mount the cylinders to the center section. By eliminating boots and covers ZAYTRAN has minimized the weight and allowed the dirt and grime to fall out of the gripper. For welding environments specially plated aluminum covers are available that will keep the weld spatter from attaching to the cylinder rods.

Unparalleled rigidity is achieved by combining a 32mm ground rod and ZAYTRAN's 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 XRAY.

The application flexibility of the XRAY is extended by the use of an extruded aluminum backbone that provides multiple options for mounting the gripper and mounting sensors to the gripper as well as reducing the weight of the gripper.



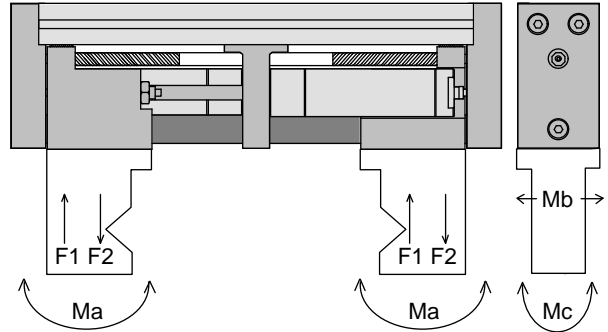
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Jaw Torque and Force

MODEL	Ma : Nm (ft.-lbs.)	Mb : Nm (ft.-lbs.)	Mc : Nm (ft.-lbs.)	F1 : kg (lbs.)	F2 : kg (lbs.)
XRAY-450	225 (165)	225 (165)	160 (117)	224 (492)	136 (305)
XRAY-1250	550 (405)	600 (440)	550 (405)	670 (1,500)	450 (1,000)
Tandem XRAY-1250	1,100 (810)	1,200 (880)	1,100 (810)	1,340 (3,000)	900 (2,000)

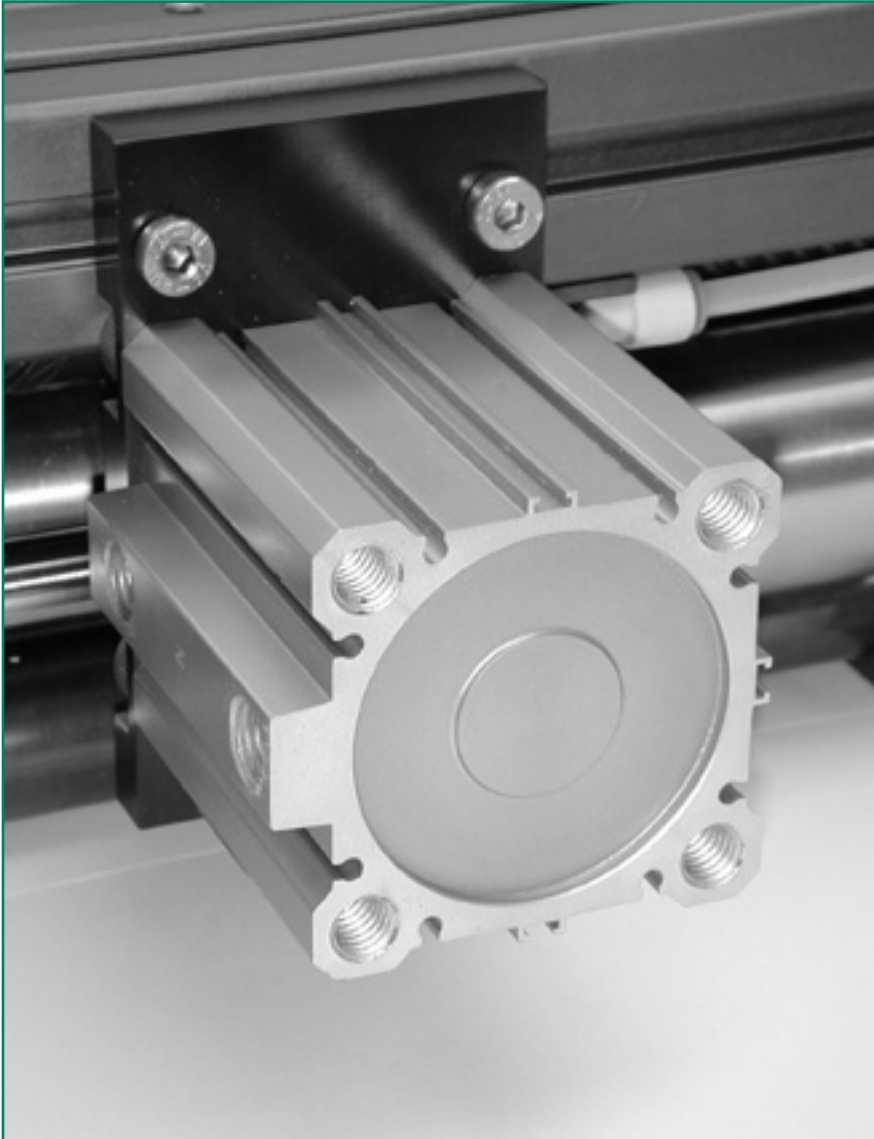


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Optional Power-Off Brake



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 may cause some jaw movement.

Accessory Weld Spatter Covers

These field installable covers protect the cylinder shafts from weld spatter. They are aluminum that has been plated so that weld spatter does not stick.

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Accessory Switch Kits

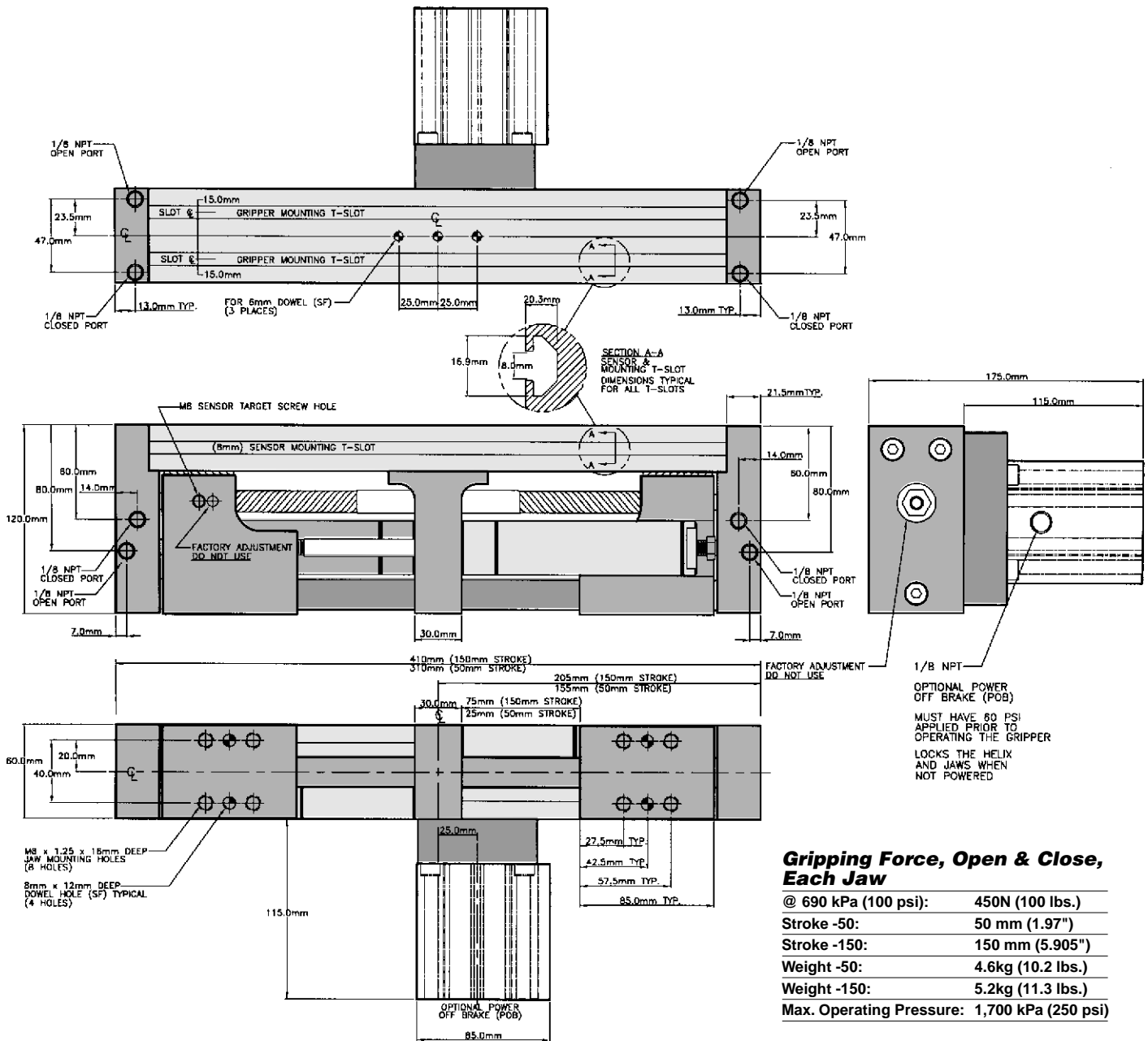


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XRAY-450-50/150

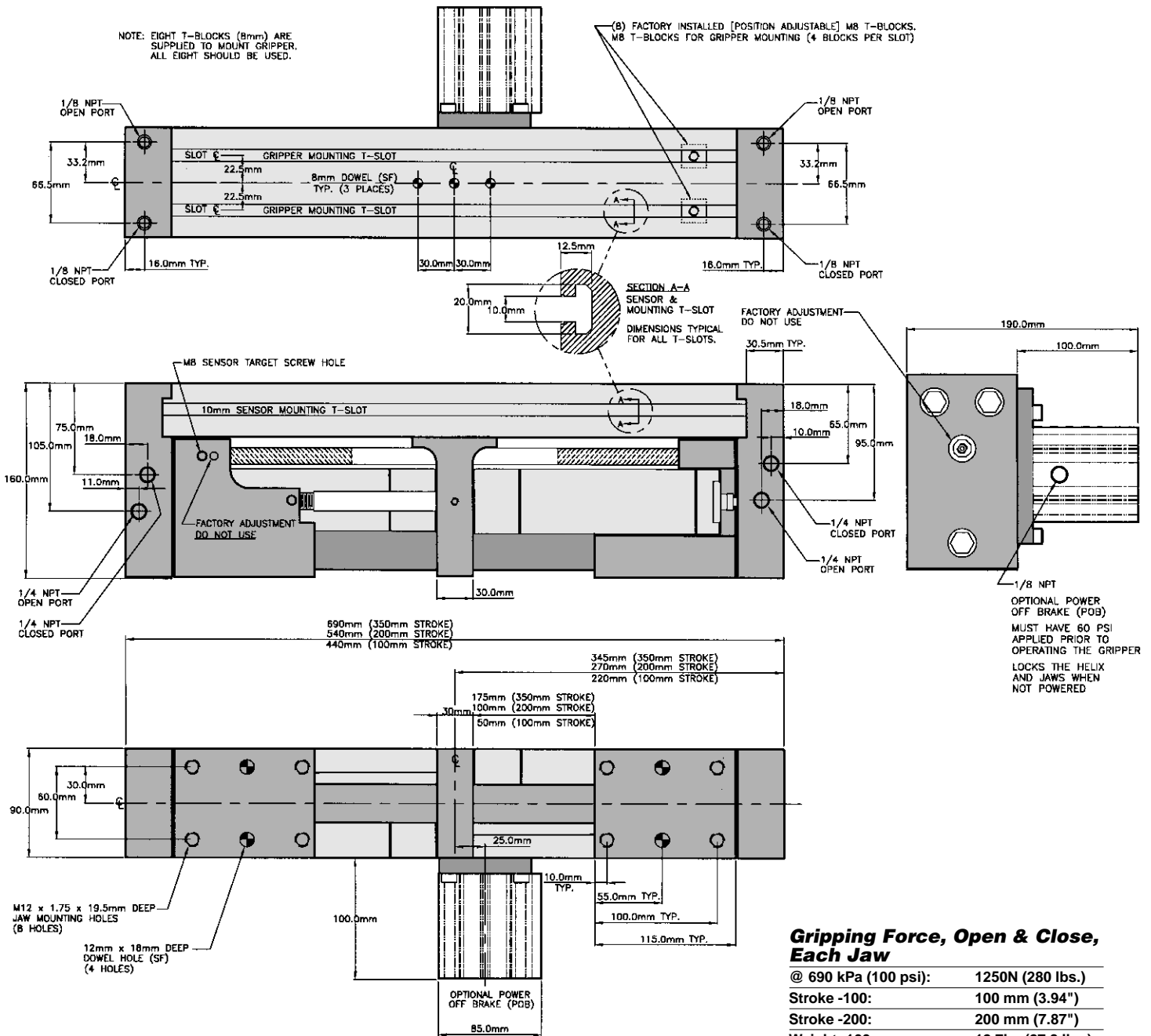


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XRAY-1250-100/200



Gripping Force, Open & Close, Each Jaw

@ 690 kPa (100 psi):	1250N (280 lbs.)
Stroke -100:	100 mm (3.94")
Stroke -200:	200 mm (7.87")
Weight -100:	12.7kg (27.8 lbs.)
Weight -200:	13.6kg (30 lbs.)
Max. Operating Pressure:	1,700 kPa (250 psi)

Parallel Opening/Closing Type Gripper

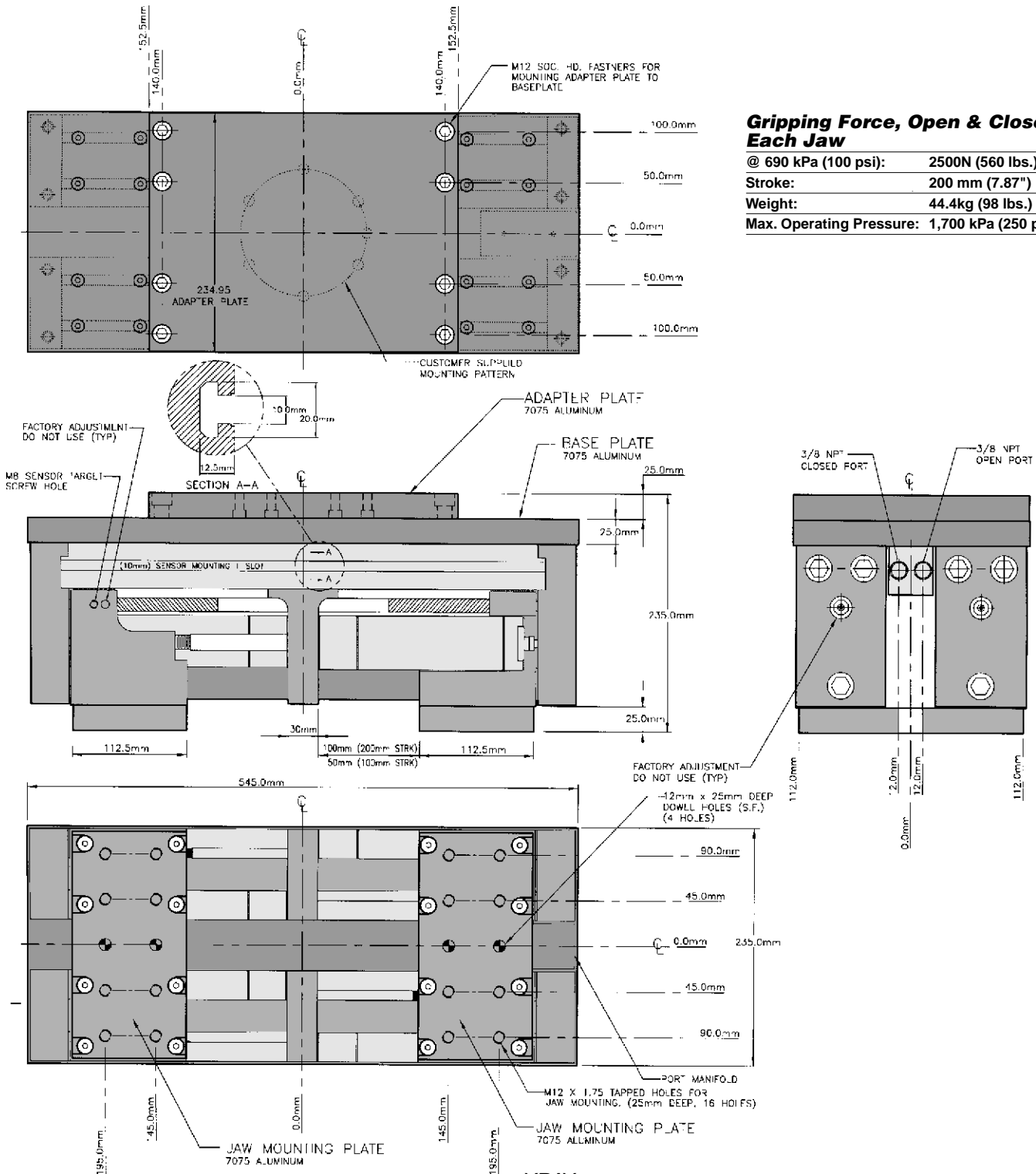
XRAY[®] Series

2 Finger 450N, 1250N, 2500N

XRAY-Tandem-1250-200

Gripping Force, Open & Close, Each Jaw

@ 690 kPa (100 psi):	2500N (560 lbs.)
Stroke:	200 mm (7.87")
Weight:	44.4kg (98 lbs.)
Max. Operating Pressure:	1,700 kPa (250 psi)



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Ordering Information XRAY-450-50/150

Gripper			
Order Number	Brake	Force, Each Jaw	Stroke
XRAY-450-50	No	450N (100lbs.)	50mm (1.97")
XRAY-450-50-POB	Yes	450N (100lbs.)	50mm (1.97")
XRAY-450-150	No	450N (100lbs.)	150mm (5.905")
XRAY-450-150-POB	Yes	450N (100lbs.)	150mm (5.905")

Accessories		
Order Number	Description	Applicable Models
X-COV-450-50	Field Installed, Weld Spatter Covers	XRAY-450-50
X-COV-450-150	Field Installed, Weld Spatter Covers	XRAY-450-150
X-COV-450-50-POB	Field Installed, Weld Spatter Covers	XRAY-450-50
X-COV-450-150-POB	Field Installed, Weld Spatter Covers	XRAY-450-150
X-KIT-450-6.5MM	Holder Only, To Mount 6.5mm Prox.	All Models
X-KIT-450-12MM	Holder Only, To Mount 12mm Prox.	All Models
X-KIT-450-18MM	Holder Only, To Mount 18mm Prox.	All Models

Ordering Information XRAY-1250-100/200

Gripper			
Order Number	Brake	Force, Each Jaw	Stroke
XRAY-1250-100	No	1250N (280lbs.)	100mm (3.94")
XRAY-1250-100-POB	Yes	1250N (280lbs.)	100mm (3.94")
XRAY-1250-200	No	1250N (280lbs.)	200mm (7.87")
XRAY-1250-200-POB	Yes	1250N (280lbs.)	200mm (7.87")
XRAY-1250-350	No	1250N (280lbs.)	350mm (13.78")
XRAY-1250-350-POB	Yes	1250N (280lbs.)	350mm (13.78")

Accessories		
Order Number	Description	Applicable Models
X-KIT-1250-100-COV	Weld Spatter Covers	XRAY-1250-100
X-KIT-1250-200-COV	Weld Spatter Covers	XRAY-1250-200
X-KIT-1250-350-COV	Weld Spatter Covers	XRAY-1250-350
X-KIT-1250-100-COV-POB	Weld Spatter Covers	XRAY-1250-100-POB
X-KIT-1250-200-COV-POB	Weld Spatter Covers	XRAY-1250-200-POB
X-KIT-1250-350-COV-POB	Weld Spatter Covers	XRAY-1250-350-POB
X-KIT-1250-6.5MM	Holder Only, To Mount 6.5mm Prox.	All Tandem & 1250 Models
X-KIT-1250-12MM	Holder Only, To Mount 12mm Prox.	All Tandem & 1250 Models
X-KIT-1250-18MM	Holder Only, To Mount 18mm Prox.	All Tandem & 1250 Models

Ordering Information XRAY-Tandem-1250-200

Gripper			
Order Number	Brake	Force, Each Jaw	Stroke
Tandem XRAY-1250-200	No	2500N (560lbs.)	200mm (7.87")

Accessories		
Order Number	Description	Applicable Models
X-KIT-1250-6.5MM	Holder Only, To Mount 6.5mm Prox.	All Tandem & 1250 Models
X-KIT-1250-12MM	Holder Only, To Mount 12mm Prox.	All Tandem & 1250 Models
X-KIT-1250-18MM	Holder Only, To Mount 18mm Prox.	All Tandem & 1250 Models

The right to change designs and specifications without notice is reserved. All data and dimensions in catalogs have been thoroughly checked for accuracy; however, responsibility for possible errors or omissions is not assumed. A one-year limited warranty is provided for this product by ZAYTRAN, Inc. Please view this limited warranty at: www.grippers.com/warranty.htm

Global Manufacturing, Distribution and Service

U.S. Branch Offices

SMC Pneumatics Inc. (Atlanta)
1440 Lakes Parkway, Suite 600
Lawrenceville, GA 30043
Tel: (770) 624-1940
FAX: (770) 624-1943

SMC Pneumatics Inc. (Austin)
2324-D Ridgepoint Drive
Austin, TX 78754
Tel: (512) 926-2646
FAX: (512) 926-7055

SMC Pneumatics Inc. (Boston)
Zero Centennial Drive
Peabody, MA 01960
Tel: (978) 326-3600
FAX: (978) 326-3700

SMC Pneumatics Inc. (Charlotte)
5029-B West W.T. Harris Blvd.
Charlotte, NC 28269
Tel: (704) 597-9292
FAX: (704) 596-9561

SMC Pneumatics Inc. (Chicago)
27725 Diehl Road
Warrenville, IL 60555
Tel: (630) 393-0080
FAX: (630) 393-0084

SMC Pneumatics Inc. (Cincinnati)
4598 Olympic Blvd.
Erlanger, KY 41018
Tel: (606) 647-5600
FAX: (606) 647-5609

SMC Pneumatics Inc. (Cleveland)
2305 East Aurora Road
Twinsburg, OH 44087
Tel: (330) 963-2727
FAX: (330) 963-2730

SMC Pneumatics Inc. (Columbus)
3687 Corporate Drive
Columbus, OH 43231
Tel: (614) 895-9765
FAX: (614) 895-9780

SMC Pneumatics Inc. (Dallas)
12801 N. Stemmons Frwy, Suite 815
Dallas, TX 75234
Tel: (972) 406-0082
FAX: (972) 406-9904

SMC Pneumatics Inc. (Detroit)
44345 Macomb Industrial Dr.
Clinton Township, MI 48036
Tel: (248) 299-0202
FAX: (248) 293-3333

SMC Pneumatics Inc. (Houston)
9001 Jameel, Suite 180
Houston, TX 77040
Tel: (713) 460-0762
FAX: (713) 460-1510

SMC Pneumatics Inc. (Indianapolis)
3011 N. Franklin Rd.
Indianapolis, IN 46226
Tel: (317) 899-4743
FAX: (317) 898-4808

SMC Pneumatics Inc. (Los Angeles)
14191 Myford Road
Tustin, CA 92780
Tel: (714) 669-1701
FAX: (714) 669-1715

SMC Pneumatics Inc. (Milwaukee)
16850 W. Victor Road
New Berlin, WI 53151
Tel: (414) 827-0080
FAX: (414) 827-0092

SMC Pneumatics Inc. (Minneapolis)
990 Lone Oak Road, Suite 162
Eagan, MN 55121
Tel: (651) 688-3490
FAX: (612) 688-9013

SMC Pneumatics Inc. (Nashville)
5000 Linbar Drive, Suite 297
Nashville, TN 37211
Tel: (615) 331-0020
FAX: (615) 331-9950

SMC Pneumatics Inc. (Newark)
3434 US Hwy. 22 West, Suite 110
Somerville, NJ 08876
Tel: (908) 253-3241
FAX: (908) 253-3452

SMC Pneumatics Inc. (Phoenix)
2001 W. Melinda Lane
Phoenix, AZ 85027
Tel: (623) 492-0908
FAX: (623) 492-9493

SMC Pneumatics Inc. (Portland)
14107 N.E. Airport Way
Portland, OR 97230
Tel: (503) 252-9299
FAX: (503) 252-9253

SMC Pneumatics Inc. (Richmond)
5377 Glen Alden Drive
Richmond, VA 23231
Tel: (804) 222-2762
FAX: (804) 222-5221

SMC Pneumatics Inc. (Rochester)
245 Summit Point Drive
Henrietta, NY 14467
Tel: (716) 321-1300
FAX: (716) 321-1865

SMC Pneumatics Inc. (San Francisco)
85 Nicholson Lane
San Jose, CA 95134
Tel: (408) 943-9600
FAX: (408) 943-9111

SMC Pneumatics Inc. (St. Louis)
4130 Rider Trail North
Earth City, MO 63045
Tel: (314) 209-0080
FAX: (314) 209-0085

SMC Pneumatics Inc. (Tampa)
8507-H Benjamin Road
Tampa, FL 33634
Tel: (813) 243-8350
FAX: (813) 243-8621

SMC Pneumatics Inc. (Tulsa)
10203 A East 61st Street
Tulsa, OK 74146
Tel: (918) 252-7820
FAX: (918) 252-9511

Worldwide Authorized XRAY Subsidiaries

Australia
SMC Pneumatics (Australia) Pty. Ltd.
18 Hudson Avenue, P.O. Box 581,
Castle Hill, N.S.W. Australia 2154
Tel: (02) 354 8222
FAX: (02) 634 7764

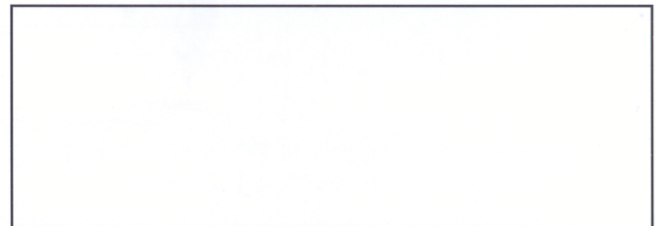
Canada
SMC Pneumatics (Canada) Ltd.
6768 Financial Drive
Mississauga, Ontario
L5N 7J6
Tel: (905) 812-0400
FAX: (905) 812-8686

New Zealand
SMC Pneumatics (New Zealand) Ltd.
8c Sylvia Road, P.O. Box 62226
Mount Wellington, Auckland, New Zealand
Tel: (02) 573 0900
FAX: (09) 573 0905

United Kingdom
SMC Pneumatics (UK) Ltd
Vincent Avenue, Crownhill
Milton Keynes MK8 0AN
Tel: 01908 563888
FAX: 01908 5611825

For a direct connection to your local SMC sales office call:
1(800) SMC-SMC1 1(800) 762-7621

For Repair and Technical Support call ZAYTRAN:
Tel: (440) 324-2814 FAX: (440) 324-3552



 **SMC Pneumatics Inc.**
U.S. Headquarters
3011 N. Franklin Rd.
Indianapolis, IN 46226
Tel: 317.899.4440
FAX: 317.899.3102
<http://www.smcusa.com>