

Power Clamp Catalog

Pneumatically Operated, Heavy Duty Power Clamps

> Various Arm Orientations and Openings Available

> Simple Design Utilizing Toggle Linkage

> Light Weight and Durable

... and more.



PC2500S0



PC1500H



PC2500V



PC01500V

For All BTM Clamps Visit
<https://btmcomp.com/work-holding>

BTM[®]
COMPANY

btmcomp.com

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TABLE OF CONTENTS

PC 1500 SO Clamp.....3

PC 2500 SO Clamp.....3

PC 1500 V Clamp4

PC 1500 H Clamp7

PC 2500 V Clamp8

PC 2500 H Clamp9

Omni-Head Clamp Description.....10

PCO 1500 V Clamp.....11

PCO 1500 H Clamp12

Rotary-Linear Clamp Description13

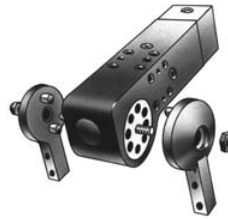
15-90 CWR / CCR.....14

Accessories.....15

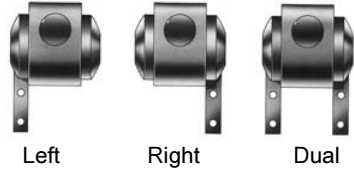


**Sealed Offset
Power Clamps**

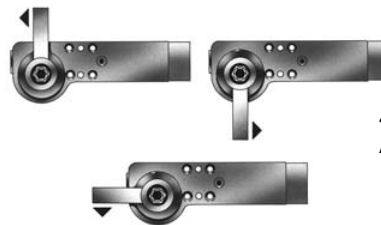
PC 1500 SO • PC 2500 SO



BTM Pin drive arms allow fast changeover without disassembly of the sealed internal mechanism.



Clamp arms can be mounted left, right or dual without modification.



45° Interchangeable Arm Positions

FEATURES

- One piece body ~ Integral cylinder with heavy wall.
- Sealed mechanism ~ Lubricated for life of clamp.
- Arm Driven by Toggle Linkage
- Hardcoated aircraft aluminum body.
- Pin arm drive for simplified arm change & positioning.
- Optional pre-fitted proximity switches.
- Light weight.

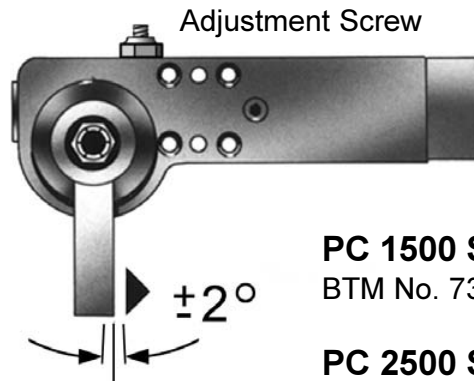
PC 1500 SO
BTM No. 700100A

PC 2500 SO
BTM No. 700200A

AAP Option

Adjustable Arm Positioning

- **This feature allows precise $\pm 2^\circ$ adjustment of the arm's closed position.**
- **The set position will repeat accurately.**
- **The arm can be mounted in any one of eight positions on either right or left side.**

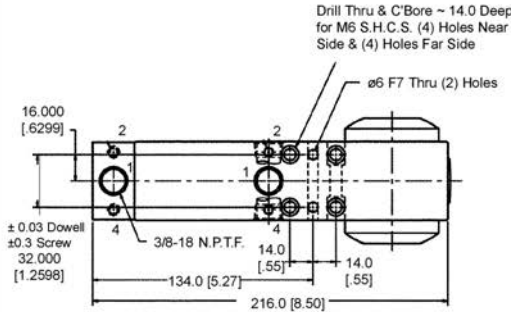
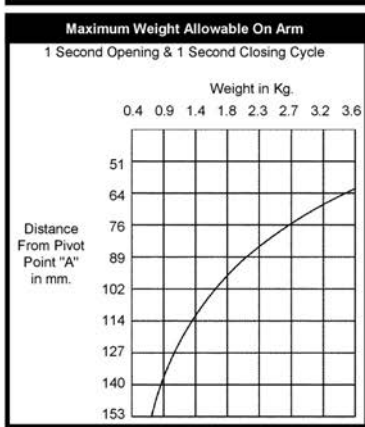


Repeatable Arm Position With Adjustment Of $\pm 2^\circ$.

PC 1500 SO AAP
BTM No. 737900A

PC 2500 SO AAP
BTM No. 738000A

1500 SERIES SEALED OFFSET POWER TOGGLE CLAMP PC 1500 SO & PC 1500 SO AAP

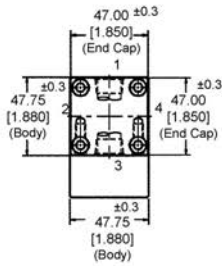


SPECIFICATIONS

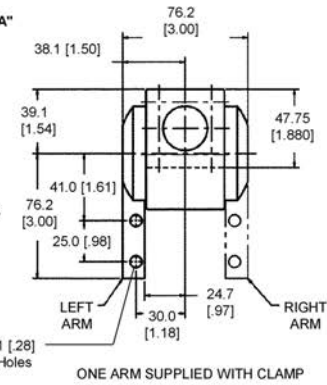
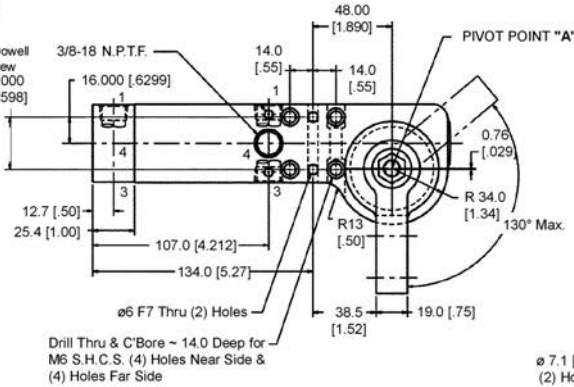
Bore ø: 38mm (1.5")
Stroke: 43mm (1.69") MAX.
Arm Opening: 130° MAX.
Recommended operating pressure:
5.5 - 7 bars (80 - 100 PSI)
Use Flow controls to reduce impact
Approx. Weight: 2Kg (4.5 lbs.)

Manufactured by
BTM COMPANY
Marysville, Michigan USA
PATENTED

OPTIONAL OVER-CENTER
LOCKING AVAILABLE

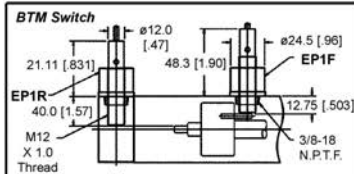


OPTIONAL PROXIMITY SWITCHES (See Pg. 15)

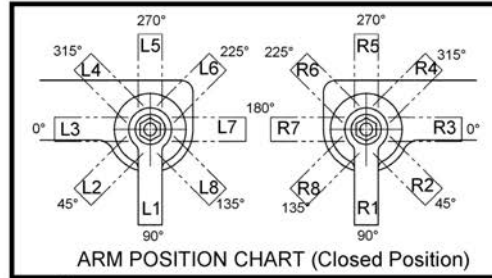


ONE ARM SUPPLIED WITH CLAMP

NOTE:
•Ports Will Be In Position 1 Unless Otherwise Specified.
•Rear Prox. Is 180° To Port Position.
•Rotate End Cap 90° for Rear Port Positions 2 & 4, 180° for Position 3



BTM PROXIMITY SWITCH W/ ADAPTER
BES1 = BTM NO 006266 (AC)
BES2 = BTM NO 006453 (AC)



CLAMP FORCE (lbs) = $\frac{4 \times \text{LINE PRESSURE (P.S.I.)}}{\text{LENGTH FROM POINT "A" TO CENTER LINE OF CLAMPING CONTACT AREA ON ARM (INCHES)}}$

HOW TO ORDER

POWER CLAMP
1500 SERIES: 1.5" BORE
CLAMP STYLE: SEALED OFFSET
ARM OPENING: 15, 30, 60, 90, 130
ARM LOCATION: L= LEFT SIDE, R= RIGHT SIDE, D= DUAL
LEFT ARM POSITION: L1, L2, L3, L4, L5, L6, L7, L8
RIGHT ARM POSITION: R1, R2, R3, R4, R5, R6, R7, R8
FRONT PORT POSITION: FP1, FP2, FP3, FP4
REAR PORT POSITION: RP1, RP2, RP3, RP4
FRONT PROX. POSITION: EP1F, EP2F, EP3F, EP4F
REAR PROX. POSITION: EP1R, EP2R, EP3R, EP4R
SWITCH TYPE: AC OR DC

BTM PC-1500-SO -130 -D -L1 -R7 -FP4 -RP1 -EP2F -EP3R -AC
BTM No. 700100A OPTIONS

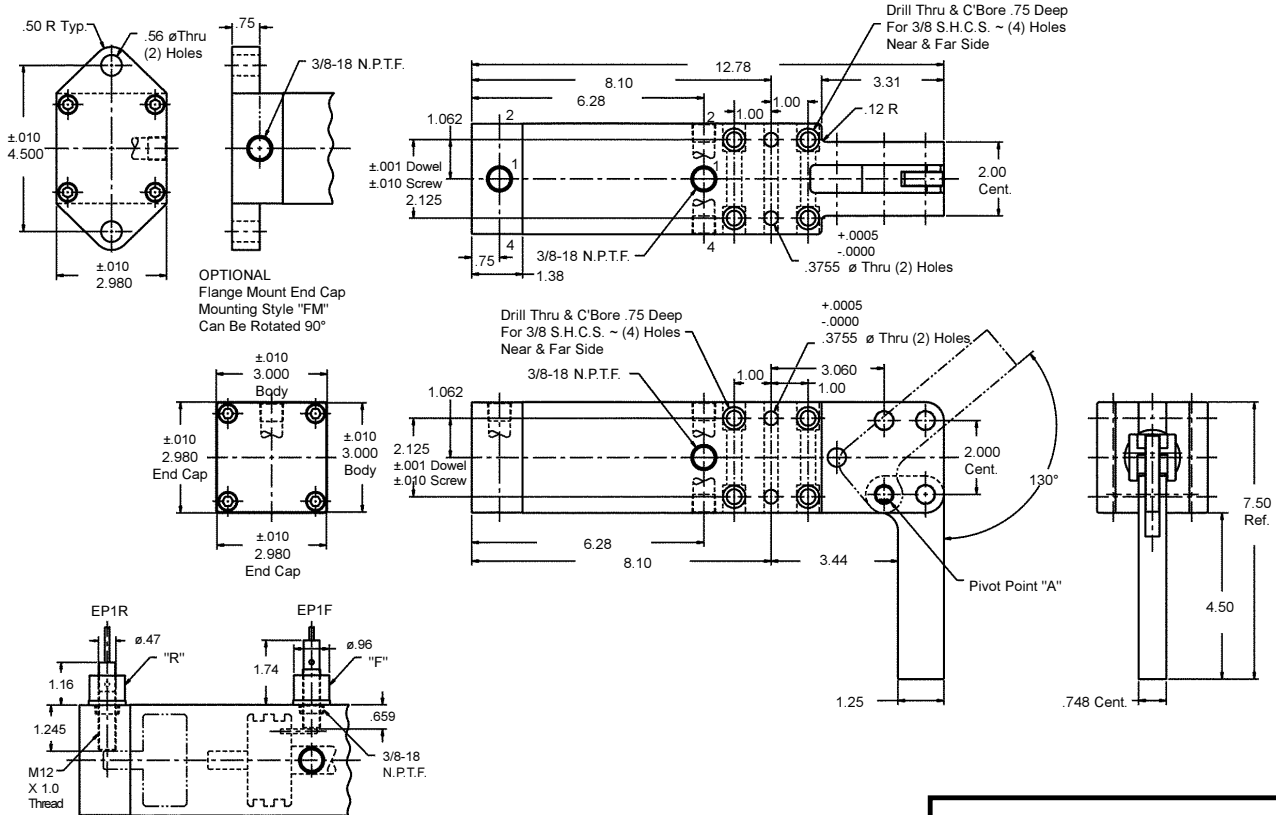
OPTIONAL OVER-CENTER
LOCKING AVAILABLE

PC 1500 SO
BTM No. 700100A

PC 1500 SO AAP
BTM No. 737900A

2500 SERIES POWER TOGGLE CLAMP PC 2500-V 130

CAD TEMPLATES AVAILABLE



Dimensions For Optional Electrical Proximity Switches
 "R" = Rear Switch "F" = Front Switch
 AC: No. 003250 AC: No. 003246
 DC: No. 003259 DC: No. 003255
OPTIONAL PROXIMITY SWITCHES (SEE PG. 15)

SPECIFICATIONS
 Bore ø: 2.5"
 Stroke: 2.83"
 Arm Opening: 130°
 Recommended operating pressure:
 80 - 100 PSI
 Use Flow controls to reduce impact
 Approx. Weight: 11 lbs.

Manufactured by
 BTM COMPANY
 Marysville, Michigan USA
 PATENTED

$$\text{CLAMP FORCE (lbs)} = \frac{15 \times \text{LINE PRESSURE (P.S.I.)}}{\text{LENGTH FROM POINT "A" TO CENTER LINE OF CLAMPING CONTACT AREA ON ARM (INCHES)}}$$

HOW TO ORDER

POWER CLAMP
 2500 SERIES: 2.5" BORE
 ARM OPENING: VERTICAL 130°
 MOUNTING STYLE: FM FLANGE MOUNT
 FRONT PORT POSITION: FP1, FP2, FP3, FP4
 REAR PORT POSITION: RP1, RP2, RP3, RP4
 FRONT PROX. POSITION: EP1F, EP2F, EP3F, EP4F
 REAR PROX. POSITION: EP1R, EP2R, EP3R, EP4R
 SWITCH TYPE: AC OR DC

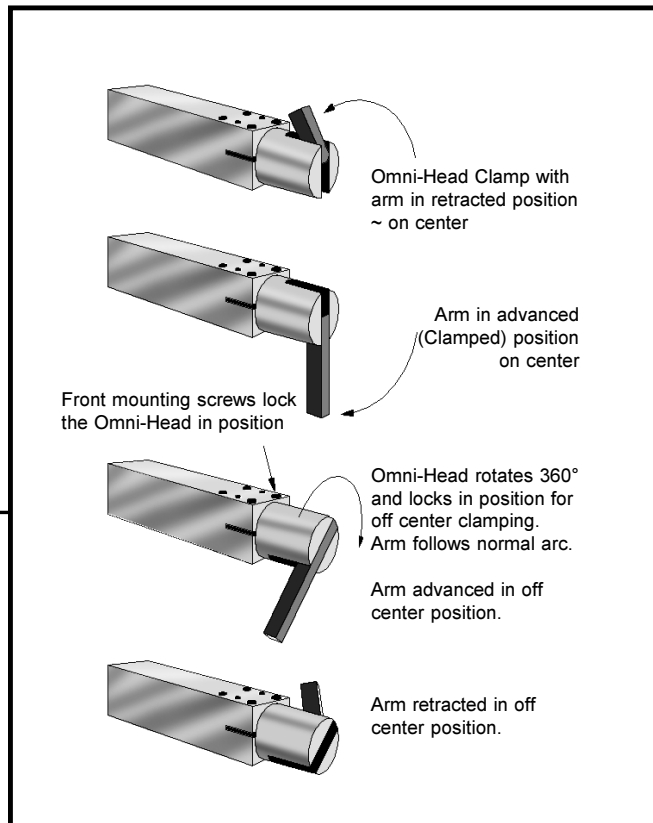
BTM PC-2500-V130 - FM -FP4 -RP1 -EP2F -EP3R -AC

Body Mount No. 001411 OPTIONS
 Flange Mount No. 012511

**OMNI-HEAD POWER TOGGLE CLAMPS
PCO 1500 SERIES**



**Omni-Head
Power Toggle Clamps
PCO-1500 Series**



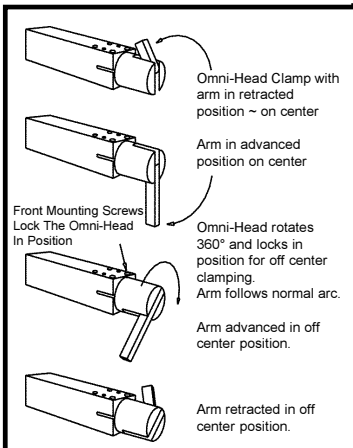
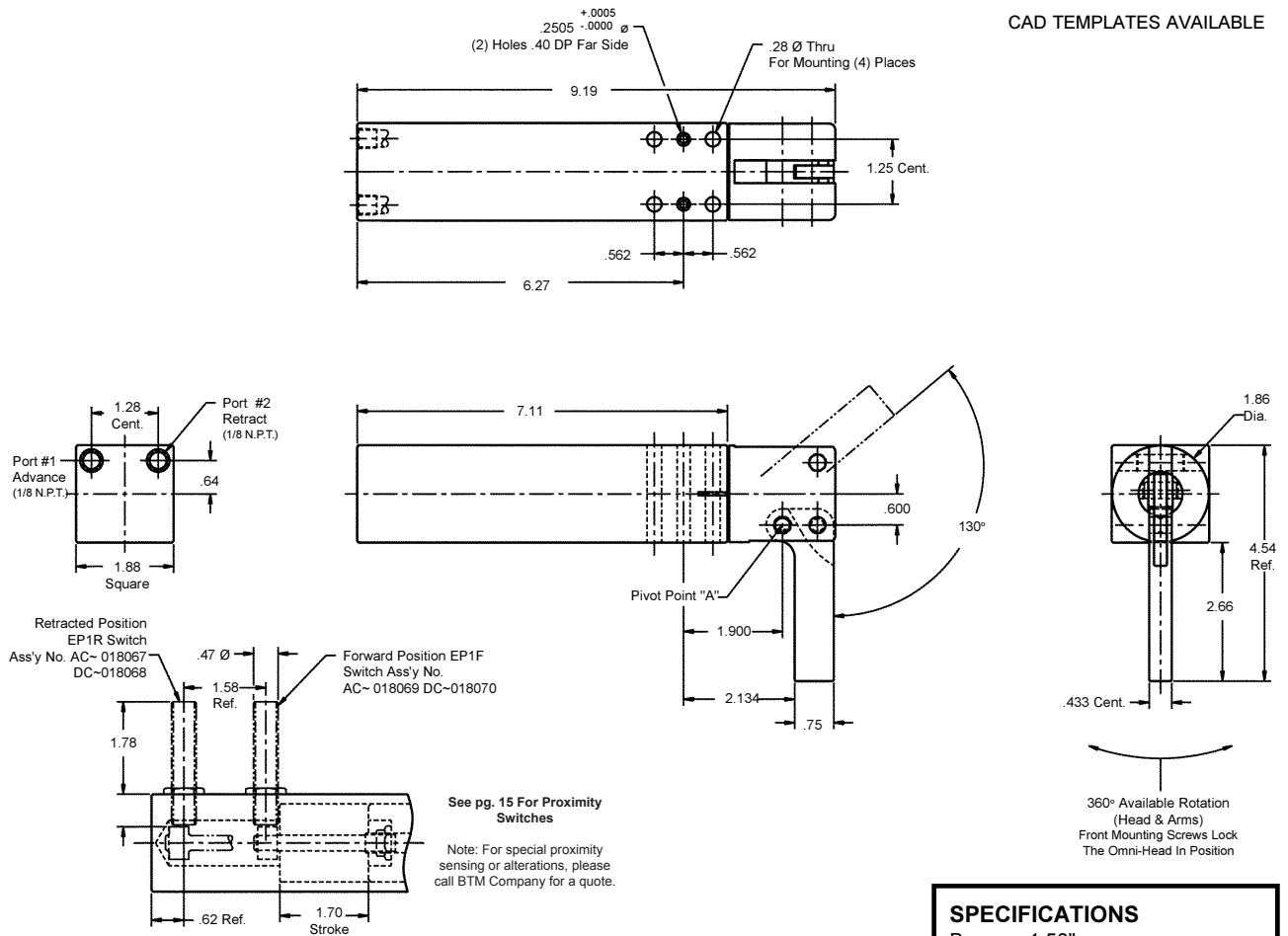
FEATURES

- Gripper head rotates 360° & locks in position for off center gripping.
- Hardcoated aircraft aluminum body.
- Optional pre-fitted proximity switches.
- Arm Driven by Toggle Linkage
- Light weight.

For PCO-100 Series Omni Clamps, see 100 Series Clamps & Grippers catalog.

1500 SERIES OMNI CLAMP PCO-1500-V 130

CAD TEMPLATES AVAILABLE



$$\text{CLAMP FORCE (lbs)} = \frac{4 \times \text{LINE PRESSURE (P.S.I.)}}{\text{LENGTH FROM POINT "A" TO CENTER LINE OF GRIPPING CONTACT AREA ON GRIPPER ARM (INCHES)}}$$

HOW TO ORDER

POWER CLAMP OMNI (PCO)
1500 SERIES: 1.50 BORE
ARM OPENING: VERTICAL 130°
FRONT ELECTRIC PROXIMITY POSITION: EP2F, EP4F
SWITCH TYPE: DC ONLY
REAR ELECTRICAL PROXIMITY POSITION: EP5R
SWITCH TYPE: AC OR DC

BTM PCO-1500-V130 - EP2F-DC-EP5R-AC

BTM No. 003404

OPTIONS

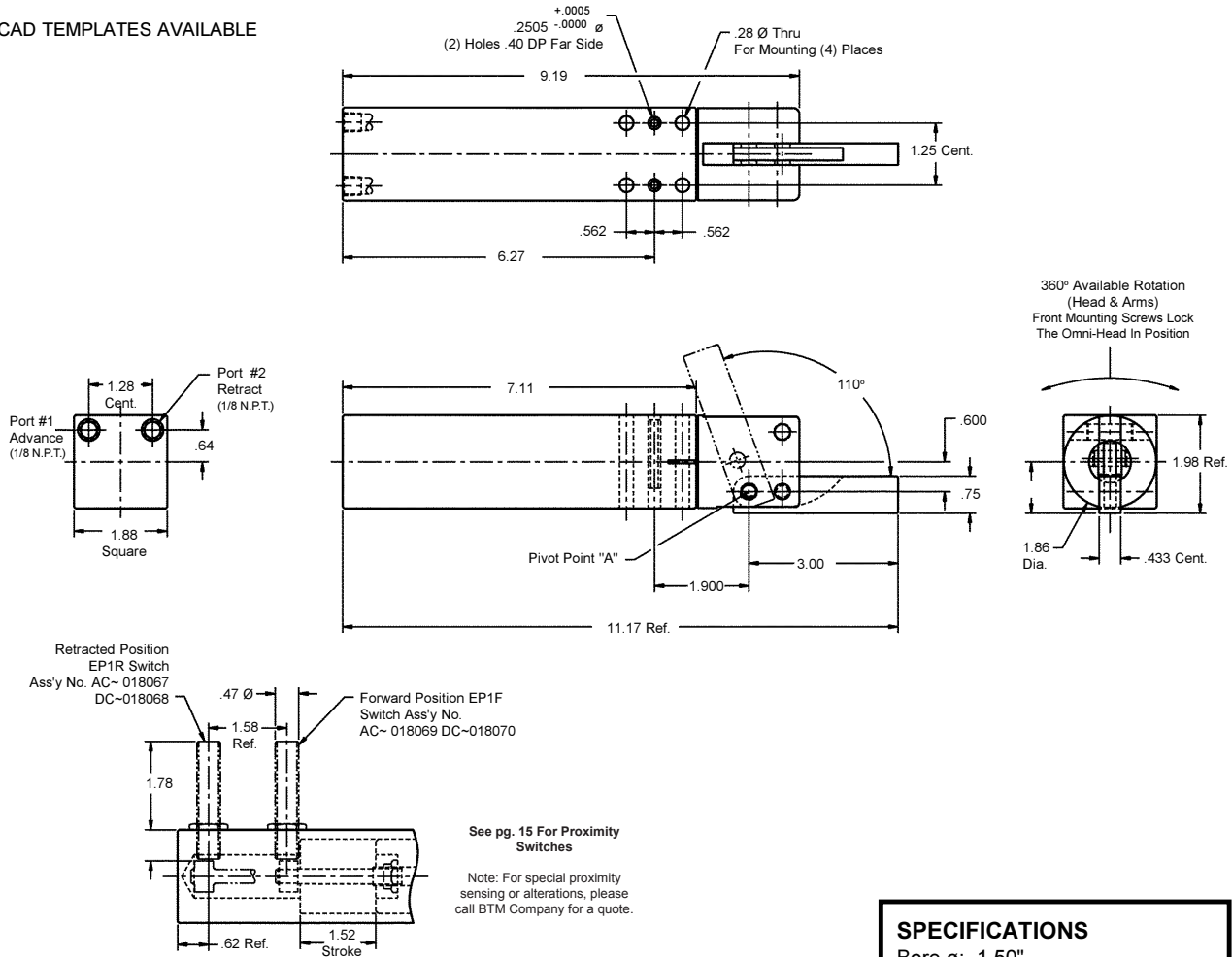
SPECIFICATIONS

Bore ø: 1.50"
Stroke: 1.70"
Arm Opening: 130°
Recommended operating pressure: 80 - 100 PSI
Use Flow controls to reduce impact
Approx. Weight: 3 lbs.

Manufactured by
BTM COMPANY
Marysville, Michigan USA
PATENTED

1500 SERIES OMNI CLAMP PCO-1500-H 110

CAD TEMPLATES AVAILABLE



See pg. 15 For Proximity Switches

Note: For special proximity sensing or alterations, please call BTM Company for a quote.

SPECIFICATIONS

Bore \varnothing : 1.50"
 Stroke: 1.52"
 Arm Opening: 110°
 Recommended operating pressure:
 80 - 100 PSI
 Use Flow controls to reduce impact
 Approx. Weight: 3 lbs.

Manufactured by
 BTM COMPANY
 Marysville, Michigan USA
 PATENTED

$$\text{CLAMP FORCE (lbs)} = \frac{4 \times \text{LINE PRESSURE (P.S.I.)}}{\text{LENGTH FROM POINT "A" TO CENTER LINE OF GRIPPING CONTACT AREA ON GRIPPER ARM (INCHES)}}$$

HOW TO ORDER

POWER CLAMP OMNI (PCO)

1500 SERIES: 1.50 BORE

ARM OPENING: HORIZONTAL 110°

FRONT ELECTRICAL PROXIMITY POSITION: EP2F, EP4F

SWITCH TYPE: DC ONLY

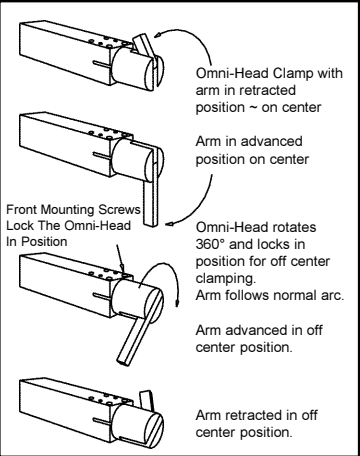
REAR ELECTRICAL PROXIMITY POSITION: EP5R

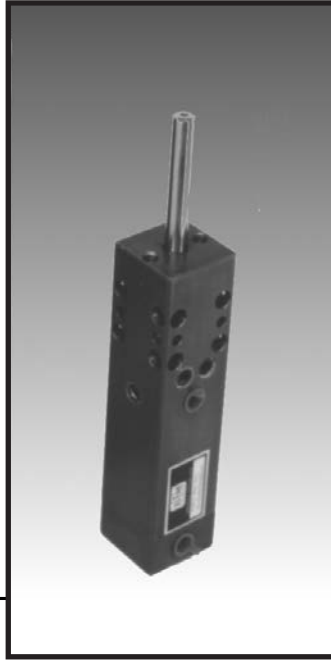
SWITCH TYPE: AC OR DC

BTM PCO-1500-H110 - EP2F-DC-EP5R-AC

BTM No. 017548

OPTIONS



**ROTARY - LINEAR POWER CLAMP
RC 1500 SERIES**

90° Rotation
with linear
travel at both
ends of the
stroke. May
be used in
push or pull
direction.

FEATURES

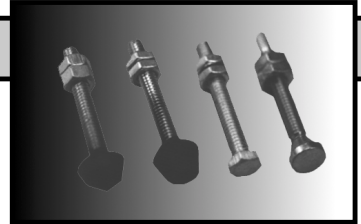
- 90° Clockwise or counterclockwise rotation.
- Linear travel at both ends of stroke.
- Harmonic motion.
- Sealed mechanism.
- Hardcoated aircraft aluminum body.
- Optional pre-fitted proximity switches.
- Light weight.

PROXIMITY SWITCHES



Proximity Switches for 1500 & 2500 Series Clamps										
SERIES	EP1R	EP2R	EP3R	EP4R	EP5R	EP1F	EP2F	EP3F	EP4F	SPECIFICATIONS
50	006266	006266	006266	006266	006266*	006266	006266	006266	006266	AC ~ Normally Open (12mm) Supply Voltage: 20-250 VAC Load Current Max.: 5-30mA Supplied w/ 3 meter - 2 wire cable.
63	006266	006266	006266	006266	006266	006266	006266	006266	006266	
1500	003176	003176	003176	003176	003176	003176	003176	003176	003176	
2500	003250	003250	003250	003250	003250	003250	003250	003250	003250	
1500 Omni	018067	N/A	N/A	N/A	018067	018067	N/A	N/A	N/A	
15-90	003176	003176	003176	003176	003176	003176	003176	003176	003176	DC ~ Normally Open (12mm) Sourcing or Sinking Supply Voltage: 10-55 VDC Load Current Max.: 5-200mA Supplied w/ 3 meter - 2 wire cable.
25-90	003250	003250	003250	003250	003250	003250	003250	003250	003250	
PPL	006266	006266	006266	006266	006266	006266	006266	006266	006266	
50	006463	006463	006463	006463	006463*	006463	006463	006463	006463	
63	006463	006463	006463	006463	006463	006463	006463	006463	006463	
1500	003241	003241	003241	003241	003241	003237	003237	003237	003237	
2500	003259	003259	003259	003259	003259	003255	003255	003255	003255	
1500 Omni	018068	NA	NA	NA	NA	018069	N/A	N/A	N/A	
15-90	003241	003241	003241	003241	003241	003237	003237	003237	003237	
25-90	003259	003259	003259	003259	003259	003255	003255	003255	003255	
PPL	006463	006463	006463	006463	006463	006363	006363	006363	006363	

1500 & 2500 Series Clamp Arm Spindles																																							
FLAT or CONE CUSHION SPINDLE ASSEMBLY	HEX HEAD SPINDLE ASSEMBLY	SWIVEL FOOT SPINDLE ASSEMBLY																																					
1500 SERIES Flat ~ 012607 / Cone ~ 012608 <table border="1"> <tr><th>A</th><th>B</th><th>C</th><th>D</th></tr> <tr><td>2.44"</td><td>.38"</td><td>.06"</td><td>1/4-20</td></tr> <tr><td>62.0mm</td><td>9.6mm</td><td>1.5mm</td><td></td></tr> </table>	A	B	C	D	2.44"	.38"	.06"	1/4-20	62.0mm	9.6mm	1.5mm		1500 SERIES 012612 <table border="1"> <tr><th>A</th><th>B</th><th>C</th><th>D</th></tr> <tr><td>2.12"</td><td>.50"</td><td>.16"</td><td>1/4-20</td></tr> <tr><td>53.8mm</td><td>12.7mm</td><td>4.1mm</td><td></td></tr> </table>	A	B	C	D	2.12"	.50"	.16"	1/4-20	53.8mm	12.7mm	4.1mm		1500 SERIES 012615 <table border="1"> <tr><th>A</th><th>B</th><th>C</th><th>D</th></tr> <tr><td>2.25"</td><td>.50"</td><td>.36"</td><td>1/4-20</td></tr> <tr><td>57.2mm</td><td>12.7mm</td><td>9.6mm</td><td></td></tr> </table>	A	B	C	D	2.25"	.50"	.36"	1/4-20	57.2mm	12.7mm	9.6mm		
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2500 SERIES Flat ~ 012609 / Cone ~ 012610 <table border="1"> <tr><th>A</th><th>B</th><th>C</th><th>D</th></tr> <tr><td>3.50"</td><td>.56"</td><td>.06"</td><td>3/8-16</td></tr> <tr><td>88.9mm</td><td>14.2mm</td><td>1.5mm</td><td></td></tr> </table>	A	B	C	D	3.50"	.56"	.06"	3/8-16	88.9mm	14.2mm	1.5mm		2500 SERIES 012613 <table border="1"> <tr><th>A</th><th>B</th><th>C</th><th>D</th></tr> <tr><td>3.75"</td><td>.62"</td><td>.25"</td><td>3/8-16</td></tr> <tr><td>95.2mm</td><td>15.7mm</td><td>6.4mm</td><td></td></tr> </table>	A	B	C	D	3.75"	.62"	.25"	3/8-16	95.2mm	15.7mm	6.4mm		2500 SERIES 012616 <table border="1"> <tr><th>A</th><th>B</th><th>C</th><th>D</th></tr> <tr><td>3.50"</td><td>.62"</td><td>.50"</td><td>3/8-16</td></tr> <tr><td>88.9mm</td><td>15.7mm</td><td>12.7mm</td><td></td></tr> </table>	A	B	C	D	3.50"	.62"	.50"	3/8-16	88.9mm	15.7mm	12.7mm		
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FIELD MOUNTING DIMENSIONS for 1500 & 2500 SPINDLE ASS'YS.

	A	B
1500 SERIES	.22" 5.6mm	.28" 7.1mm
2500 SERIES	.38" 9.6mm	.41" 10.4mm



OTHER PRODUCTS FOR AUTOMATION

Clamps



From heavy duty precision sealed locking power clamps to simple light duty OMNI models, BTM manufactures clamps in a range of styles and sizes for a wide variety of applications.

Grippers



BTM manufactures a high quality line of grippers ranging from heavy duty models to light duty models in a variety of styles and sizes.

OTHER QUALITY BTM PRODUCTS TO CONSIDER

Pin Locator Clamps



BTM Locator Clamps are ideal for locating & holding production material and are used in a variety of manufacturing areas including automotive & refrigeration.

Pin Sizes range from as small as 6mm (PLC-25 Light Duty Clamp) to as large as 40mm (PLC-63 & LPLC-38 locking clamp).

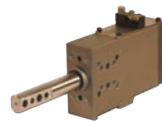
Single Finger Hook Models (without the locating pin) are also available in both locking and non-locking configurations.

Rod-Locking Pin Locator Clamps



These clamps employ a rod locking feature which allows the clamp to retain the part when air pressure is removed/lost.

Precision Shot Pin Cylinders



BTM Precision Shot Pin Cylinders are ideal for locating production material through precisely pierced holes - including clamping and fixturing.

For more information, or to view our other products, please visit:

BTMCOMP.COM