

# Omni Series Grippers



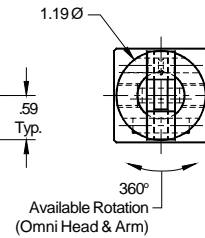
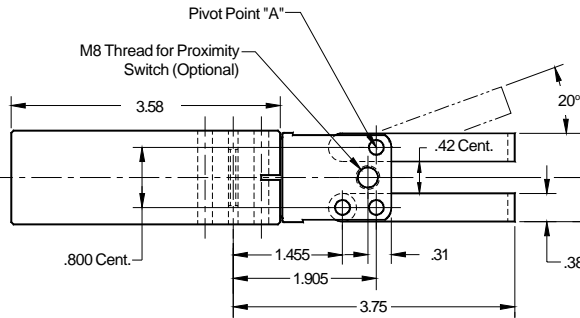
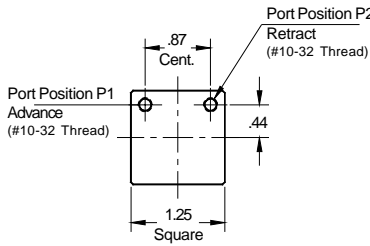
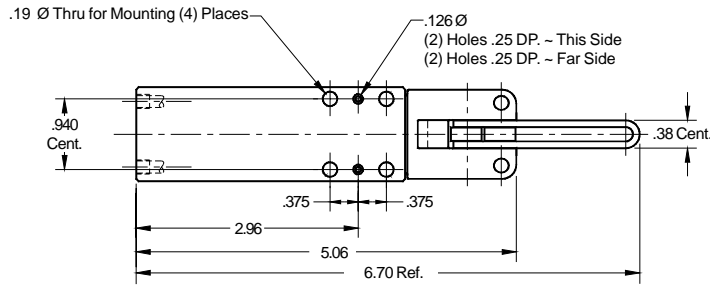
**STANDARD PADS**



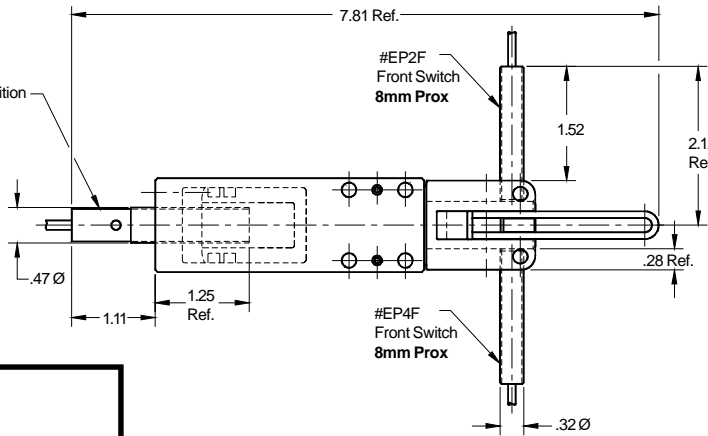
**CUSTOM PADS AVAILABLE**

**BTM**  
CORPORATION

CAD TEMPLATES AVAILABLE

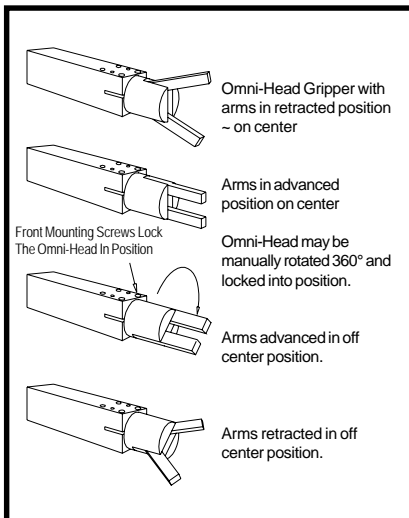


*The omni head locks into position when the clamp mounting screws are tightened.*



See pg. 65 For Proximity Switches

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



$$\text{CLAMP FORCE (lbs)} = \frac{.5 \times \text{LINE PRESSURE (P.S.I.)}}{\text{LENGTH FROM POINT "A" TO CENTER LINE OF GRIPPING CONTACT AREA ON GRIPPER ARM (INCHES)}}$$

### HOW TO ORDER

POWER GRIPPER OMNI (PGO)

100 SERIES: 1.00 Bore

ARM OPENING: S20 (SINGLE 20° OPENING)

FRONT ELECTRIC PROXIMITY POSITION: EP2F, EP4F\*

SWITCH TYPE: DC ONLY

REAR ELECTRICAL PROXIMITY POSITION: EP5R\*

SWITCH TYPE: AC OR DC

\*For prox. ready ports, use: PR2F, PR4F, PR5R

**PGO-100-S20 - EP2F-DC-EP5R-AC**

BTM No. 002858

OPTIONS

See pg. 65 for prox switch information

### SPECIFICATIONS

Bore ø: 1.00"

Stroke: .26"

Total Arm Opening: 20°

Recommended operating pressure:

80 - 100 PSI

Use Flow controls to reduce impact

Approx. Weight: 12 OZ.

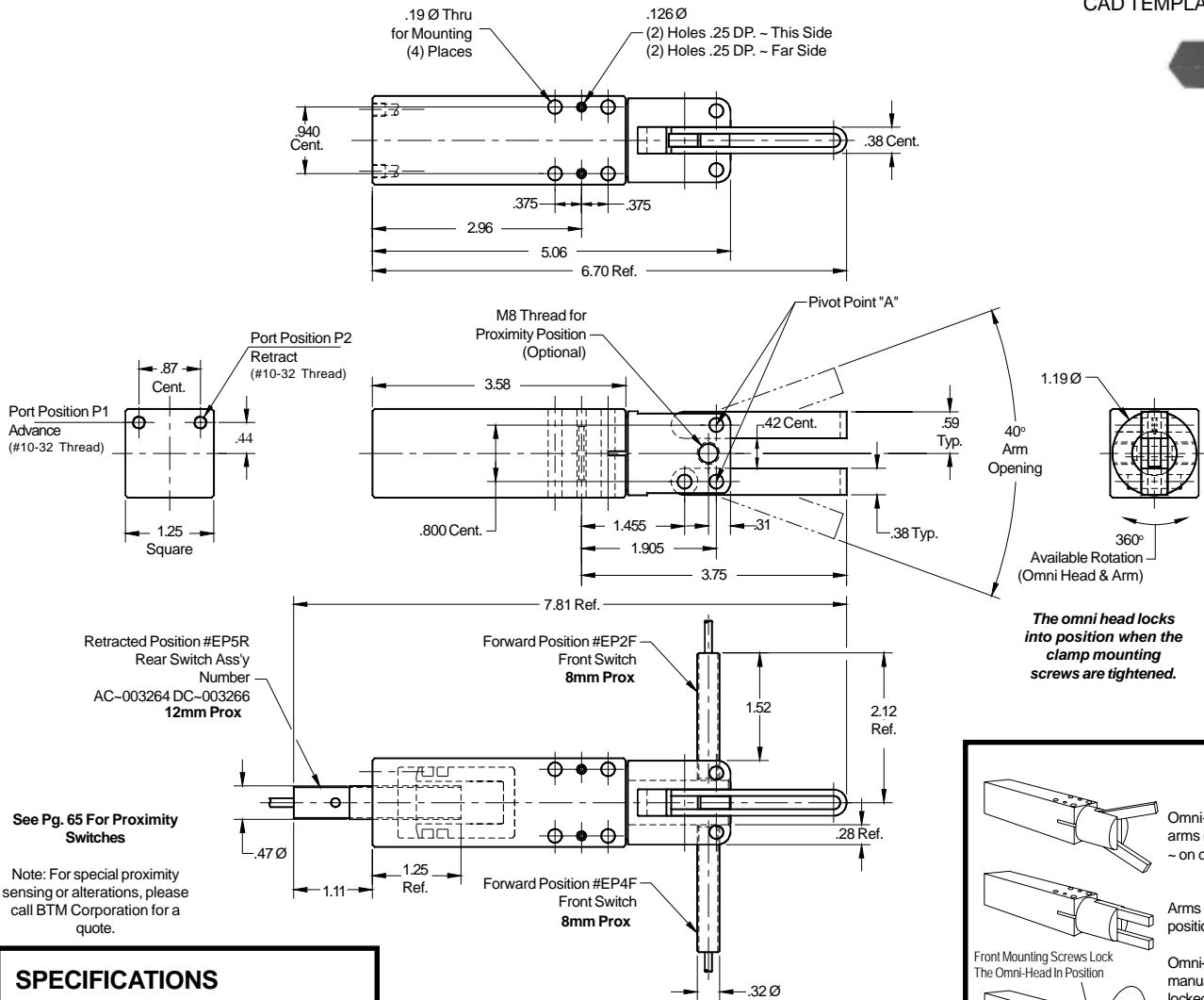


Manufactured by  
BTM CORPORATION  
Marysville, Michigan USA  
PATENTED

# 100 Series Omni Gripper PGO-100-D40



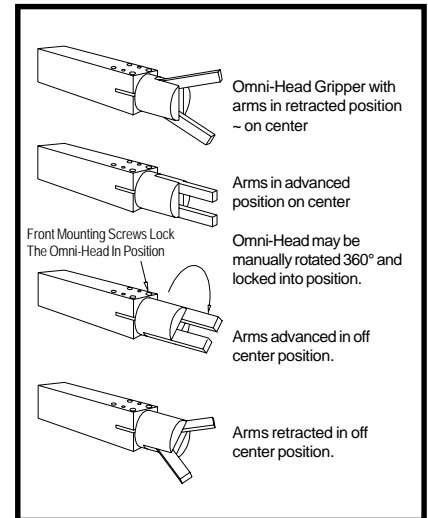
CAD TEMPLATES AVAILABLE



The omni head locks into position when the clamp mounting screws are tightened.

See Pg. 65 For Proximity Switches

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



## SPECIFICATIONS

Bore  $\varnothing$ : 1.00"  
Stroke: .26"  
Total Arm Opening: 40°  
Recommended operating pressure:  
80 - 100 PSI  
Use Flow controls to reduce impact  
Approx. Weight: 12 OZ.



Manufactured by  
BTM CORPORATION  
Marysville, Michigan USA  
PATENTED

$$\text{CLAMP FORCE (lbs)} = \frac{.5 \text{ X LINE PRESSURE (P.S.I.)}}{\text{LENGTH FROM POINT "A" TO CENTER LINE OF GRIPPING CONTACT AREA ON GRIPPER ARM (INCHES)}}$$

## HOW TO ORDER

POWER GRIPPER OMNI (PGO)

100 SERIES: 1.00 BORE

ARM OPENING: D40 (DOUBLE 40° OPENING)

FRONT ELECTRICAL PROXIMITY POSITION: EP2F, EP4F \*

SWITCH TYPE: DC ONLY

REAR ELECTRICAL PROXIMITY POSITION: EP5R \*

SWITCH TYPE: AC OR DC

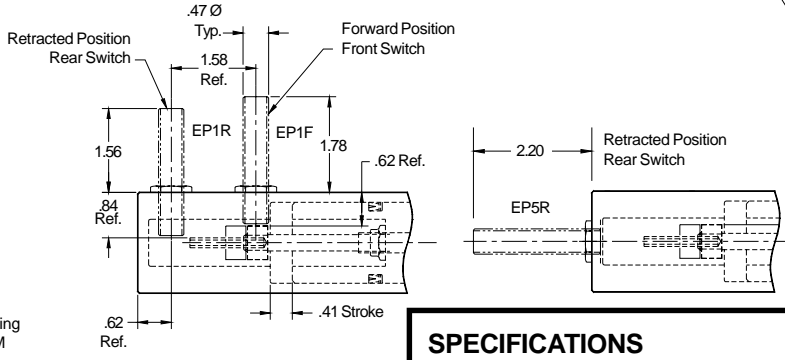
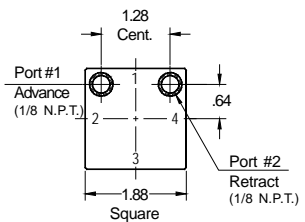
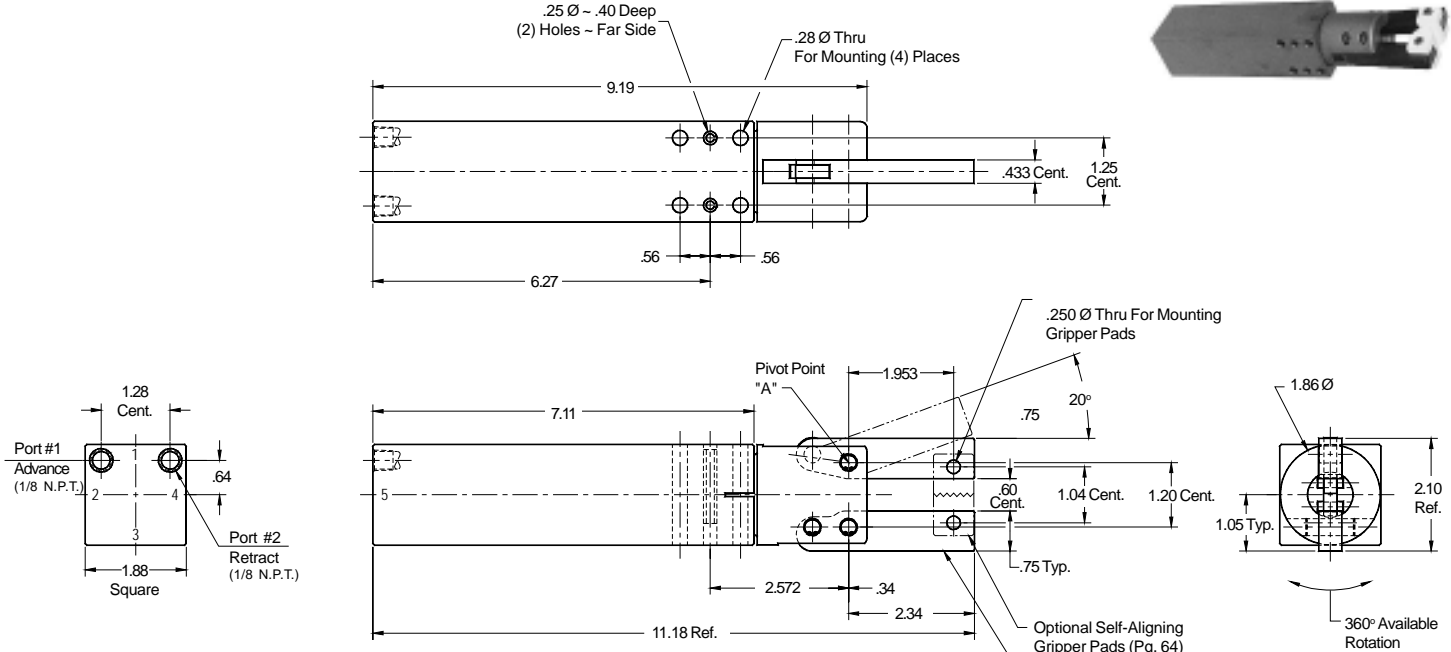
\* For prox. ready ports, use:  
PR2F, PR4F, PR5R

**PGO-100-D40 - EP2F-DC-EP5R-AC**

BTM No. 002859

OPTIONS

See pg. 65 for prox switch information

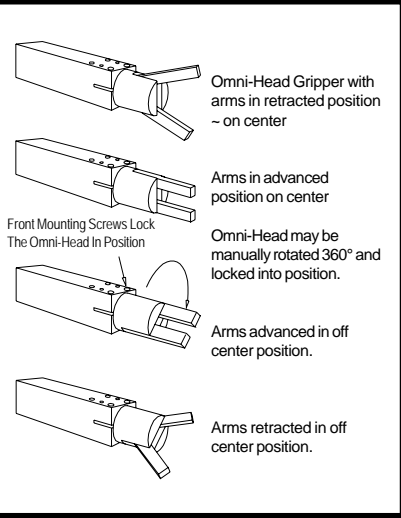


**The omni head locks into position when the clamp mounting screws are tightened.**

**SPECIFICATIONS**

Bore Ø: 1.50"  
 Stroke: .41"  
 Arm Opening: 20°  
 Recommended operating pressure: 80 - 100 PSI  
 Use Flow controls to reduce impact  
 Approx. Weight: 3 lbs.

Manufactured by BTM CORPORATION  
 Marysville, Michigan USA  
**PATENTED**



See Pg. 65 For Proximity Switches

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

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

**HOW TO ORDER**

- POWER GRIPPER OMNI (PGO)
- 1500 SERIES: 1.50 BORE
- ARM OPENING: S20 (SINGLE 20° OPENING)
- GRIPPER PADS: 5019, 5020, 5021, 5271, 5272, 5273, 17490, 12742-O, 12742-Y (Pg. 64)
- FRONT PROX. POSITION: EP1F, EP2F, EP3F, EP4F \*
- REAR PROX. POSITION: EP1R, EP2R, EP3R, EP4R, EP5R \*
- SWITCH TYPE: AC OR DC

**PGO-1500-S20 - 5019 - EP1F-EP1R-AC**

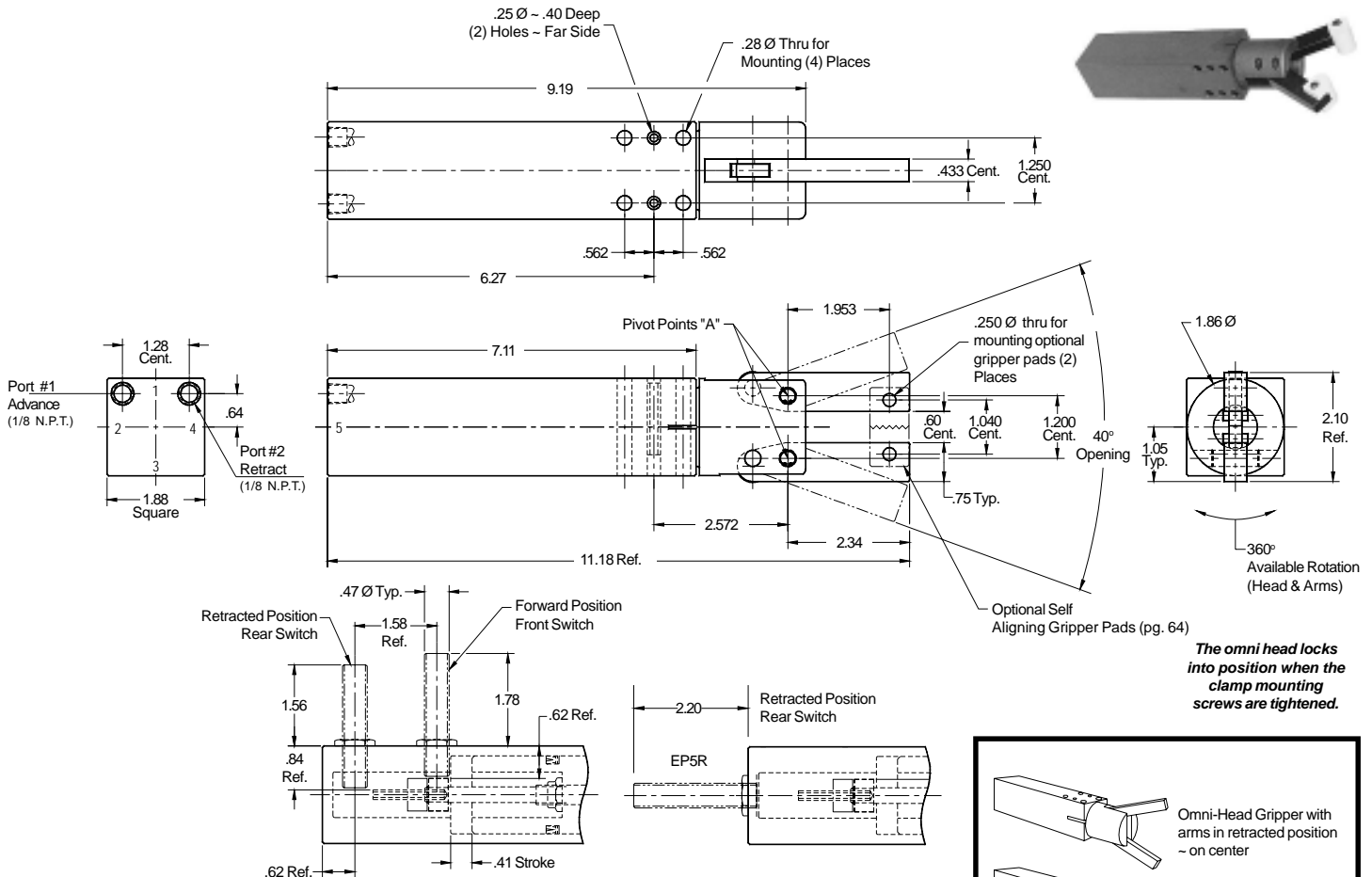
BTM No. 017550      OPTIONS

\*For prox. ready locations, use:  
 PR1F, PR2F, PR3F, PR4F  
 PR1R, PR2R, PR3R, PR4R, PR5R

# 1500 Series Omni Gripper PGO-1500-D40



CAD TEMPLATES AVAILABLE



*The omni head locks into position when the clamp mounting screws are tightened.*

## SPECIFICATIONS

Bore ø: 1.50"  
Stroke: .41"  
Arm Opening: 40°  
Recommended operating pressure:  
80 - 100 PSI  
Use Flow controls to reduce impact  
Approx. Weight: 3 lbs.



Manufactured by  
BTM CORPORATION  
Marysville, Michigan USA  
PATENTED

See pg. 65 For Proximity Switches

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

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

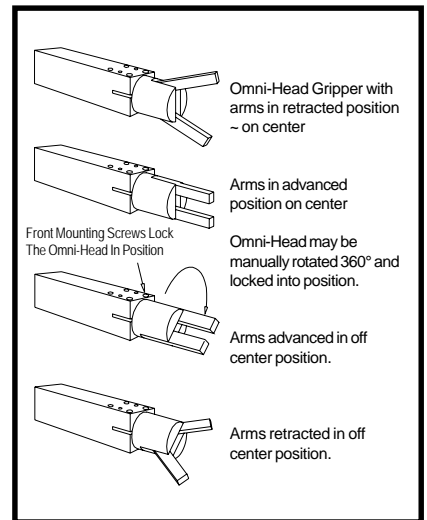
## HOW TO ORDER

POWER GRIPPER OMNI (PGO)  
1500 SERIES: 1.50 BORE  
ARM OPENING: D40 (DOUBLE 40° OPENING)  
GRIPPER PADS: 5019, 5020, 5021, 5271, 5272, 5273, 17490, 12742-O, 12742-Y (pg. 64)  
FRONT PROX. POSITION: EP1F, EP2F, EP3F, EP4F\*  
REAR PROX. POSITION: EP1R, EP2R, EP3R, EP4R, EP5R\*  
SWITCH TYPE: AC OR DC

**PGO-1500-D20 - 5019 - EP1F-EP1R-AC**

BTM No. 017551

OPTIONS

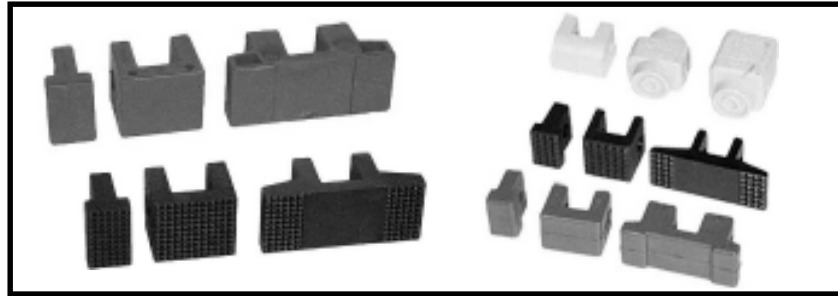
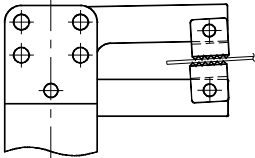


\*For prox. ready locations, use:

PR1F, PR2F, PR3F, PR4F

PR1R, PR2R, PR3R, PR4R, PR5R

Self-Aligning Gripper Pads  
 Positive Gripping Position  $\pm 3^\circ$  to  $4^\circ$  (Dependent on Material Thickness) Eliminates the guesswork of welded-on pads.



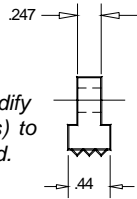
Available in Hardened Steel or Non-Marring Urethane.  
 (Sold individually - pins & retainers included.)

## 1500 Series Gripper Pads

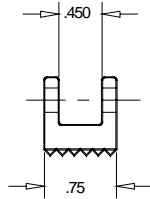
### Steel Pads

Special carbide pads are also available in these configurations. Contact BTM for details

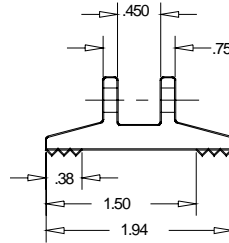
BTM will modify gripper arm(s) to fit Thin Pad.



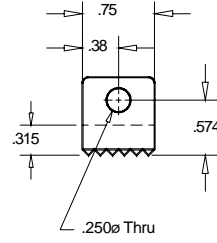
**THIN PAD**  
005019



**FULL PAD**  
005020



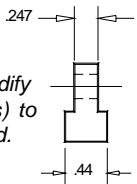
**DOUBLE PAD**  
005021



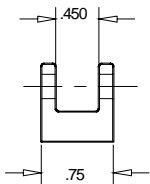
**END VIEW**  
TYPICAL

### Urethane Pads

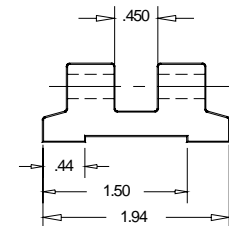
BTM will modify gripper arm(s) to fit Thin Pad.



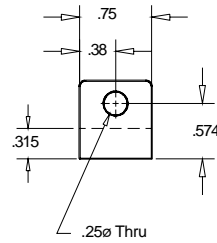
**THIN PAD**  
005273



**FULL PAD**  
005272



**DOUBLE PAD**  
005271

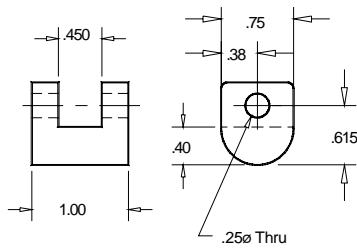


**END VIEW**  
TYPICAL

### Special Urethane Pads

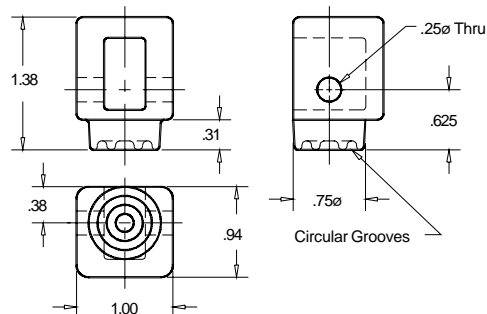
#### RADIUS PAD

012742-O  
 HARD URETHANE (Class 90A)  
 012742-Y  
 SOFT URETHANE (Class 60A)



#### ROUND SOFT PAD

SOFT URETHANE (Class 60A)  
 017490

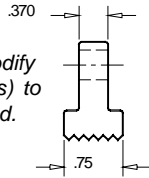


## 2500 Series Gripper Pads

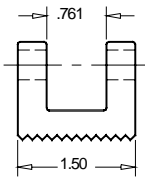
### Steel Pads

Special carbide pads are also available in these configurations. Contact BTM for details

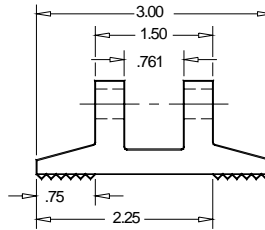
BTM will modify gripper arm(s) to fit Thin Pad.



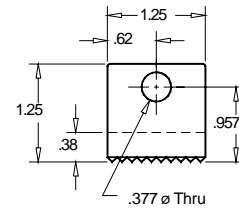
**THIN PAD**  
005284



**FULL PAD**  
005290



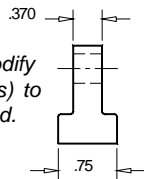
**DOUBLE PAD**  
005287



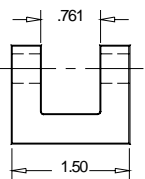
**END VIEW**  
TYPICAL

### Urethane Pads

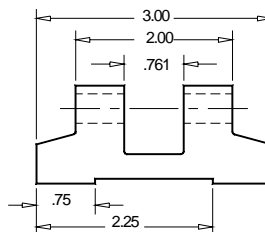
BTM will modify gripper arm(s) to fit Thin Pad.



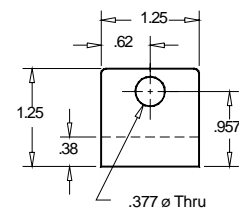
**THIN PAD**  
005285



**FULL PAD**  
005291



**DOUBLE PAD**  
005288

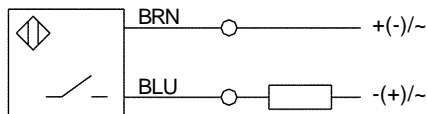


**END VIEW**  
TYPICAL

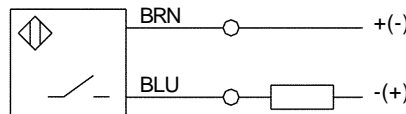
## Proximity Switches for 100, 1500 & 2500 Series Grippers



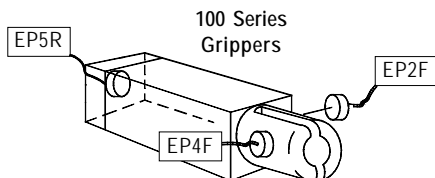
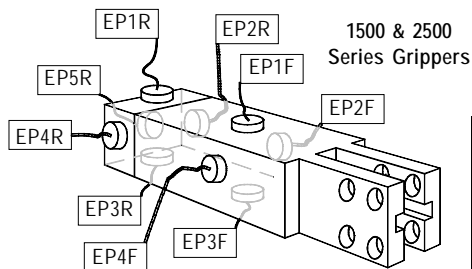
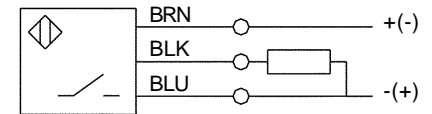
**AC ~ Normally Open (12mm)**  
Supply Voltage: 20-250 VAC  
Load Current Max.: 5-30mA  
Supplied w/ 3 meter - 2 wire cable.



**DC ~ Normally Open (12mm)**  
Sourcing or Sinking  
Supply Voltage: 10-55 VDC  
Load Current Max.: 5-200mA  
Supplied w/ 3 meter - 2 wire cable.



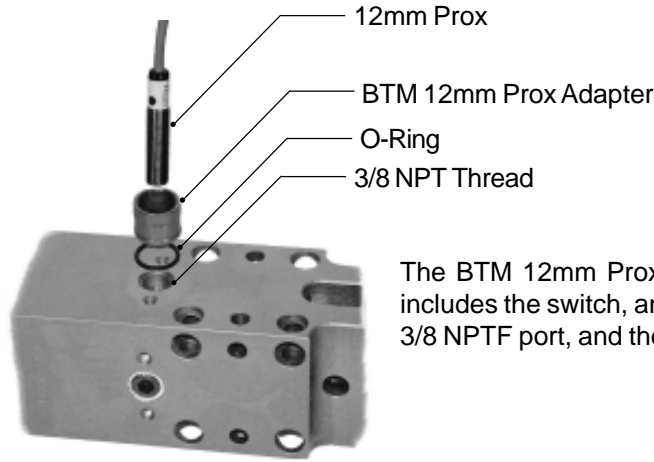
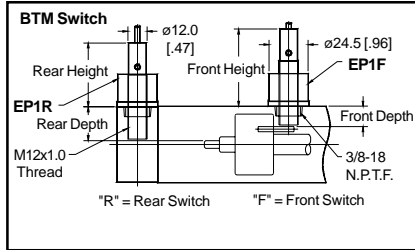
**DC ~ Normally Open (8mm)**  
Sourcing  
Supply Voltage: 10-30 VDC  
Load Current Max.: ≤200mA  
Supplied w/ 3 meter - 3 wire cable.



		AC SWITCH ASSEMBLIES				DC SWITCH ASSEMBLIES			
		1500	2500	100 OMNI	1500 OMNI	1500	2500	100 OMNI	1500 OMNI
Senses gripper in OPEN position	EP1R	003176	003250	n/a	018067	003241	003259	n/a	018068
	EP2R	003176	003250	n/a	018067	003241	003259	n/a	018068
	EP3R	003176	003250	n/a	018067	003241	003259	n/a	018068
	EP4R	003176	003250	n/a	018067	003241	003259	n/a	018068
	EP5R	003180	003254	003264	003270	003245	003263	003266	003273
Senses gripper in CLOSED position	EP1F	003172	003246	n/a	018069	003237	003255	n/a	018070
	EP2F	003172	003246	n/a	018069	003237	003255	003265	018070
	EP3F	003172	003246	n/a	018069	003237	003255	n/a	018070
	EP4F	003172	003246	n/a	018069	003237	003255	003265	018070

## BTM 12mm Prox Switch

EP1F, EP1R, EP2F, EP2R, EP3F, EP3R  
EP4F, EP4R, EP5R



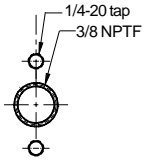
The BTM 12mm Prox Switch Assembly includes the switch, an adapter for the 3/8 NPTF port, and the o-ring seal.

To order the gripper prox ready only for a 12mm prox switch, you must also order the 12mm to 3/8 NPTF adapter for each prox position - BTM No. 006064 (includes o-ring)

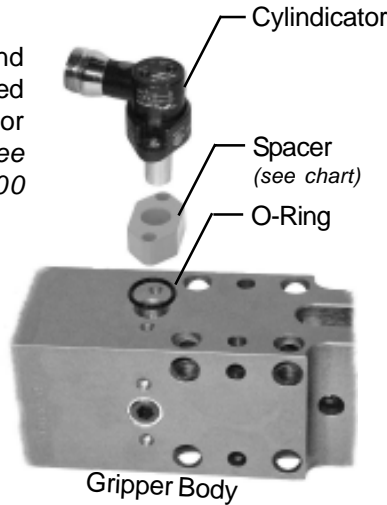
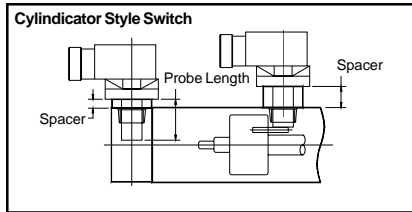
## Cylindicator Mounting

NOTE: BTM does not provide cylindicators.

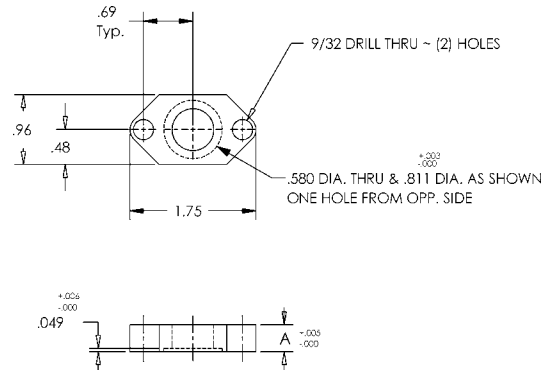
To order the gripper prox ready only for a Cylindicator Style switch, you may need to order a spacer which mounts between the cylindicator mounting face and the gripper body. Use the chart below to determine the appropriate spacer required based on the cylindicator probe length.



Each air port in the 1500 and 2500 Series grippers is flanked by (2) 1/4-20 tapped holes for cylindicator mounting. See exception below for 1500 Series cylinder end caps.

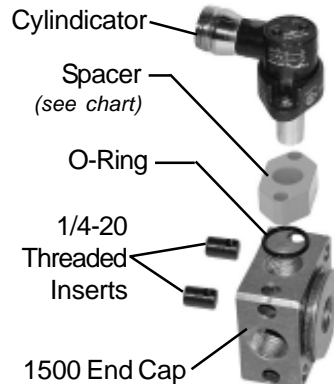


### Cylindicator Spacer



### For 1500 Series Grippers:

The cylinder end cap of the 1500 series gripper does not include 1/4-20 tapped holes on either side of the air ports. Instead, two 9/32 clearance holes are provided to mount the cylindicator. Two 1/4-20 threaded inserts (BTM No. 018669) are included with any 1500 prox ready gripper.



BTM No	Clamp Series	Position	"A" Dimension	Probe Length
013643	1500	FRONT	0.427	0.915
006013	1500	FRONT	0.470	0.950
015993	1500	FRONT	0.530	1.025
016261	1500	FRONT	0.762	1.250
013644	1500	REAR	0.094	0.915
006012	1500	REAR	0.135	0.950
015992	1500	REAR	0.205	1.025
016057	2500	FRONT	0.379	1.025
006595	2500	FRONT	0.590	1.225
019220	2500	FRONT	0.705	1.350
no spacer required	2500	REAR	no spacer required	1.225
719608A	2500	REAR	0.112	1.350
018469	2500	REAR	0.837	2.062

O-Ring is included with spacer