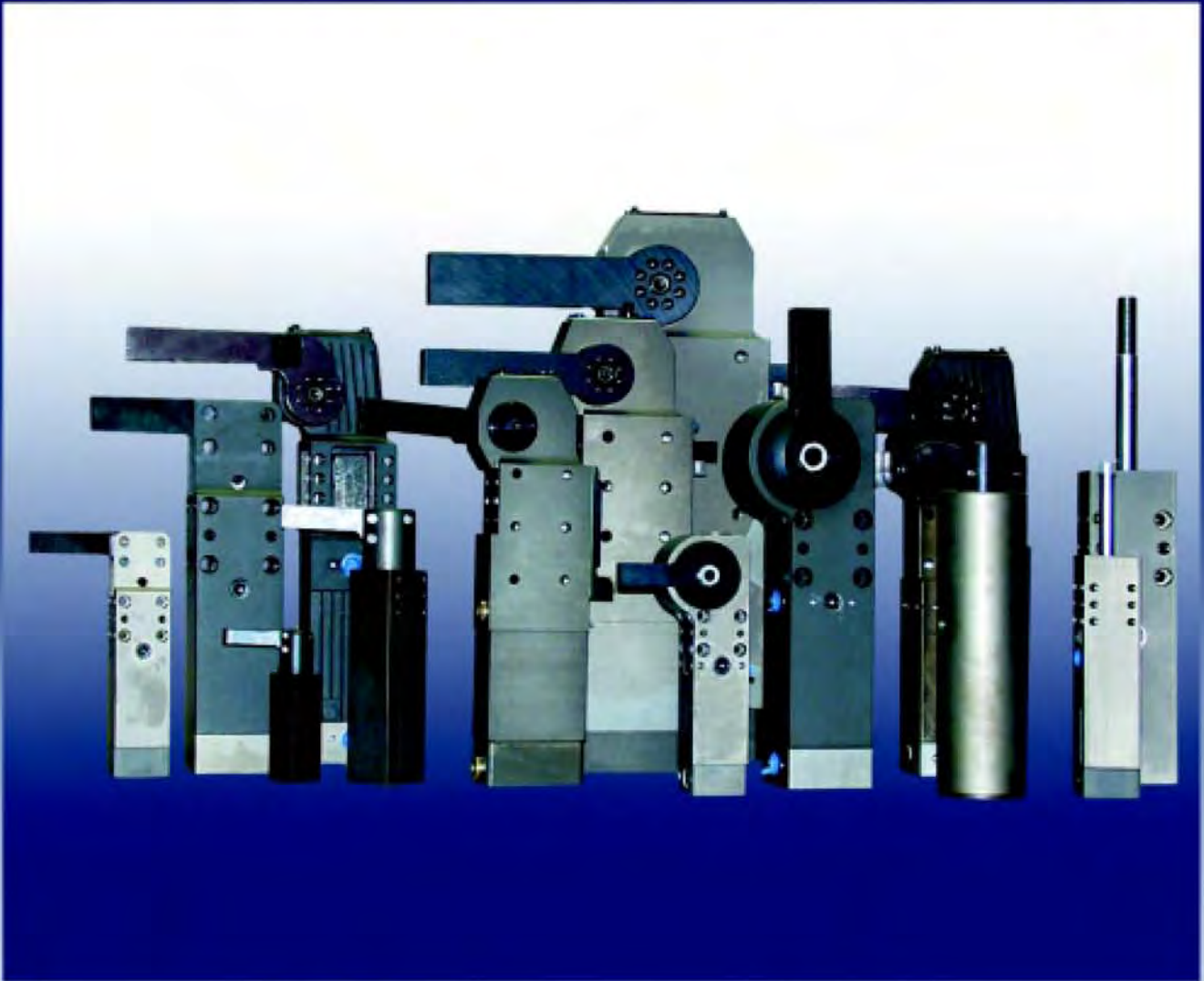


Pneumatic Power Clamps



BTM[®]

STANDARD PRODUCTS & AUTOMATION GROUP

CONTENTS

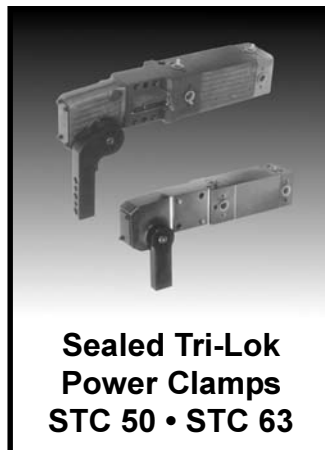
Features.....	Page 4
TRI-LOK description	5
STC 52 Clamp.....	6-7
STC 62 Clamp.....	8-9
STC 82 Clamp.....	10-11

PC 1500 SO Clamp.....	24-25
PC 2500 SO Clamp.....	26
PC 1500 V Clamp.....	27
PC 1500 H Clamp.....	28
PC 1500 PL Clamp.....	29
PC 1500 SL Clamp.....	30
PC 2500 V Clamp.....	31
PC 2500 H Clamp.....	32
PC 2500 PL Clamp.....	33
PC 2500 SL Clamp.....	34



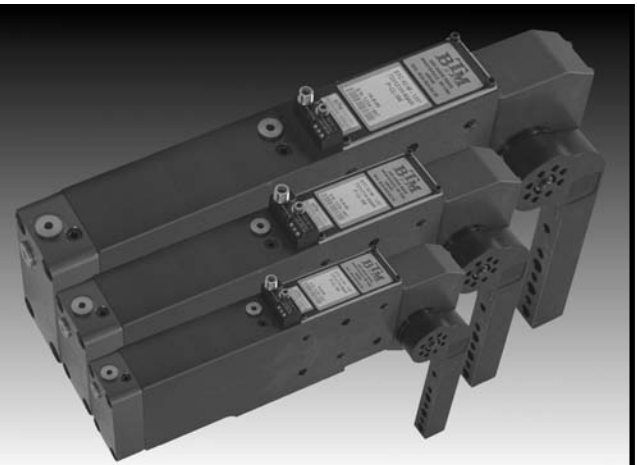
CONTENTS

Omni-Head Clamp description	35
OC 100 V Clamp.....	36
OC 100 H Clamp.....	37
OC 100 SL Clamp.....	38
RPC 1500 V Clamp.....	42,43
Rotary-Linear Clamp description	44
15-90 CWR / CCR	45
25-90 CWR / CCR	46
Accessories	47



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CORPORATION

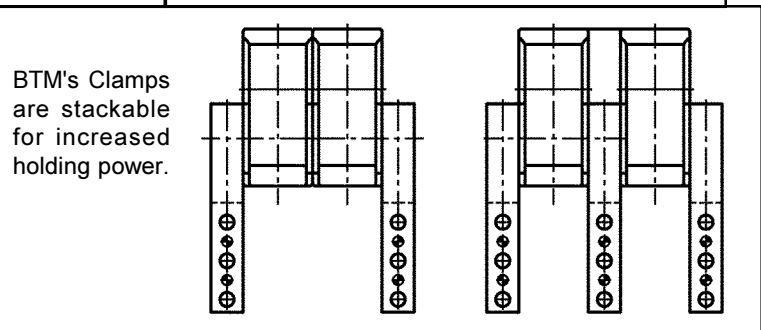
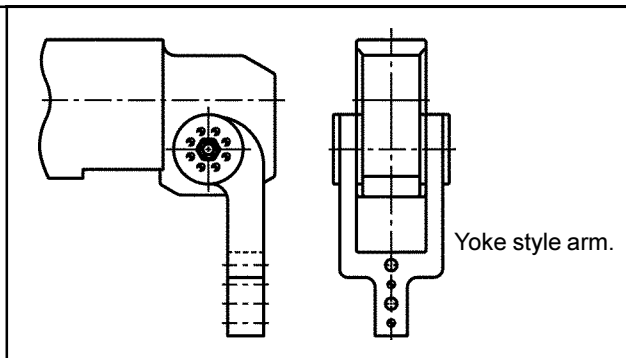
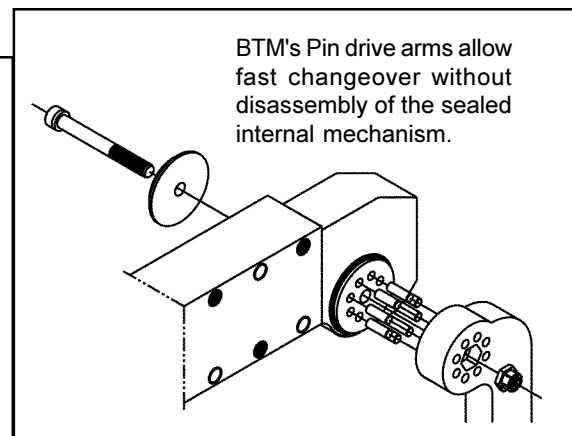
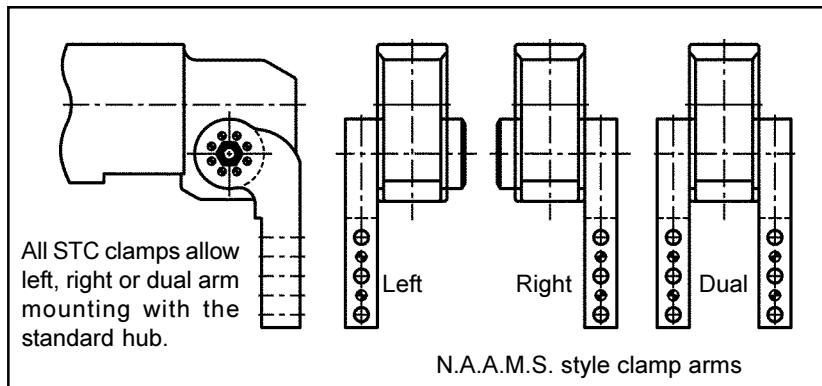




**Sealed Oval Cylinder Tri-Lok
Power Clamps**
STC 52 • STC 62 • STC 82

FEATURES

- Tri-Lok remains locked if air pressure is lost.
- Sealed mechanism ~ Lubricated for life of clamp.
- One piece body ~ Integral cylinder with heavy wall.
- Tri-Lok mechanism ~ Use as a clamp or a precision back-up.
- Hardcoated aircraft aluminum body for excellent wear characteristics.
- Pin arm drive for versatile arm positioning & simplified arm change.
- Integrated proximity switch package or standard proximity switches.
- Adjustable cushions standard on both advance and retract ends.
- Light weight.

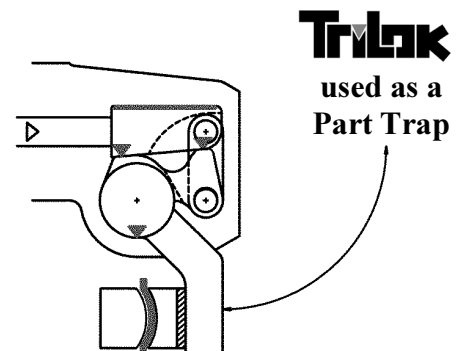
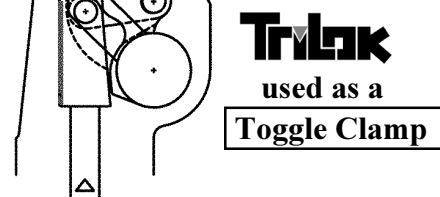
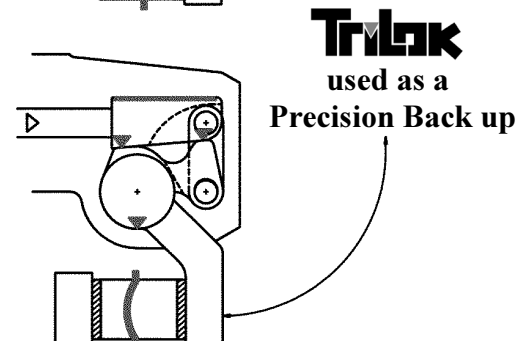
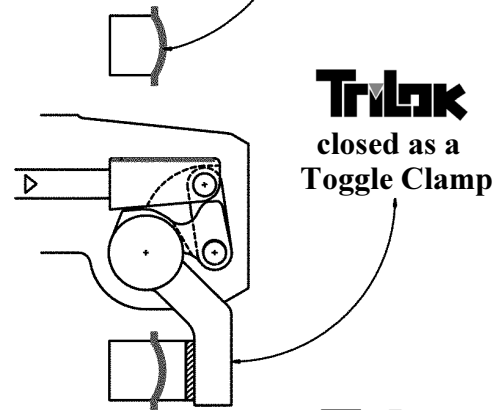
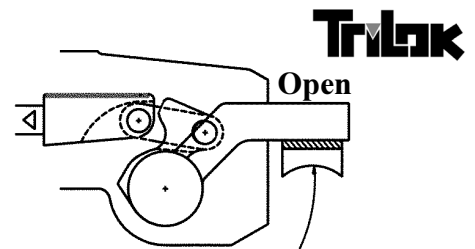
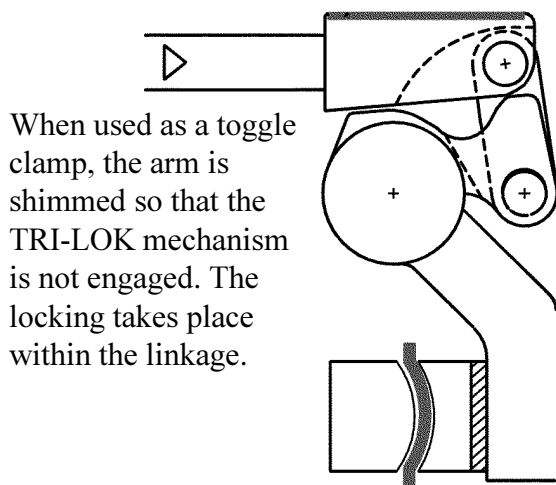
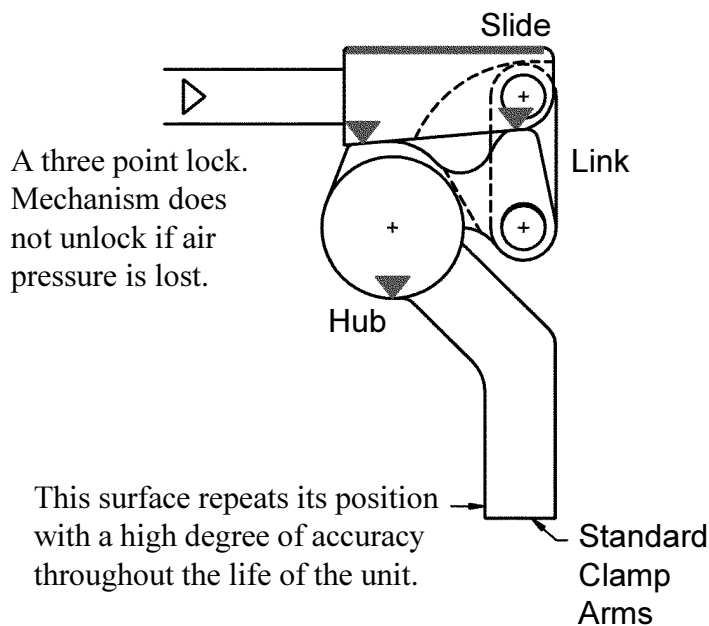


PATENTED & PATENTS APPLIED FOR



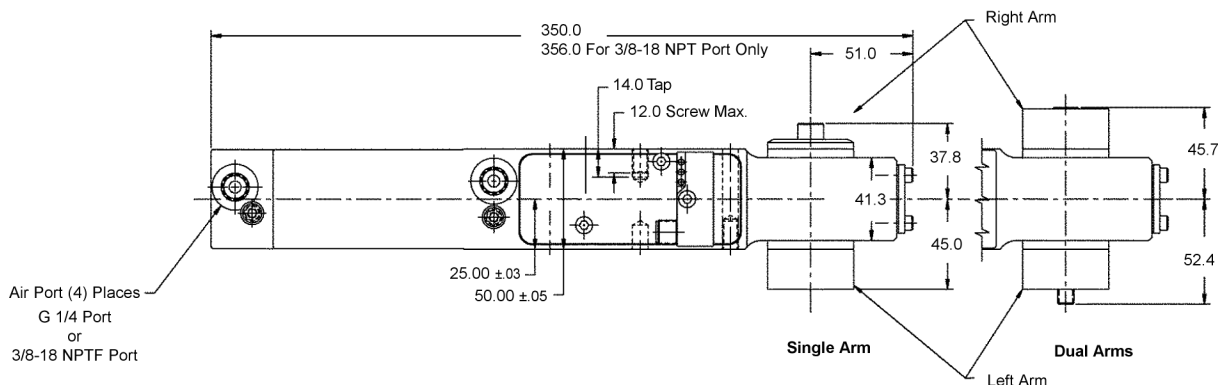
BTM's Tri-Lok mechanism can be used
as a clamp or a precision back up and
eliminates "over center" clamps

PATENTED & PATENTS APPLIED FOR

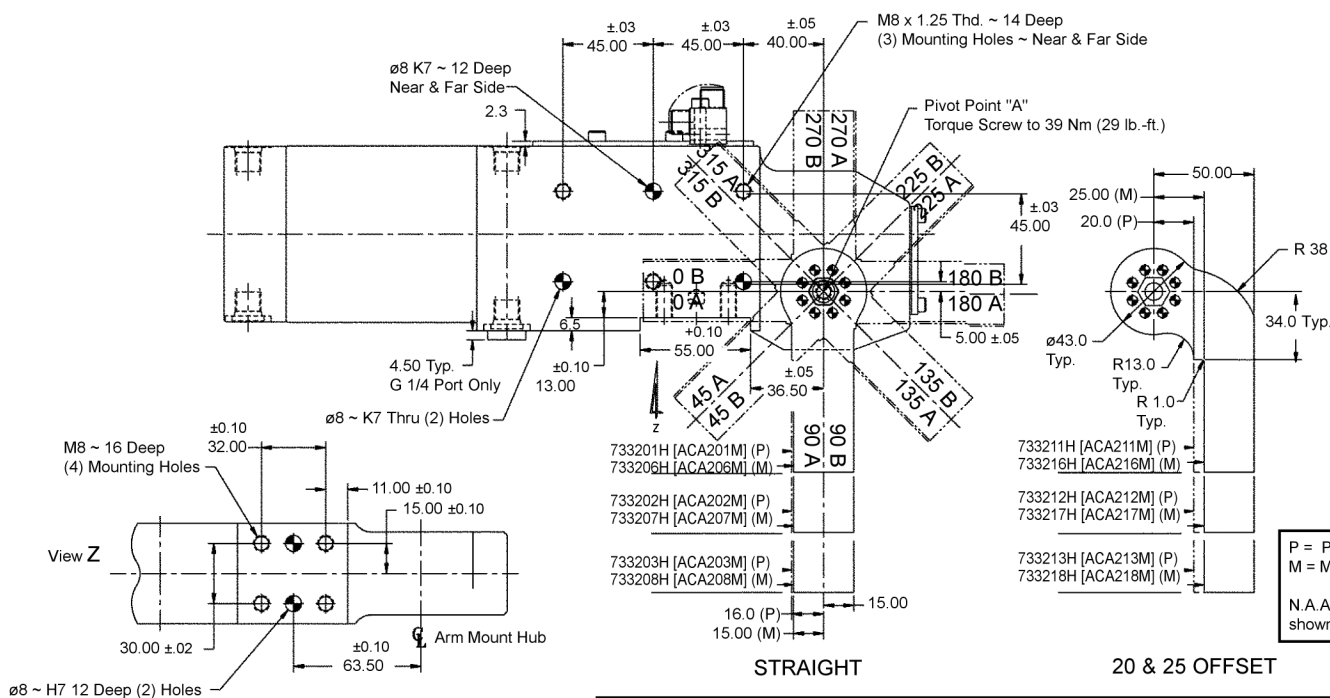


CAD TEMPLATES AVAILABLE

N.A.A.M.S. Preferred



Clamps have a Manual
Unlock provision for setup.



STRAIGHT

20 & 25 OFFSET

HOW TO ORDER

CLAMP ASSEMBLY NUMBER

ARM STYLE: 733201H THROUGH 733228H

ARM POSITION: 90A, 135A, 180A, 90B, 135B, 180B

ARM LOCATION: L= LEFT SIDE, R= RIGHT SIDE

ARM STYLE: 733201H THROUGH 733228H

ARM POSITION: 90A, 135A, 180A, 90B, 135B, 180B

ARM LOCATION: L= LEFT SIDE, R= RIGHT SIDE

PROX. SWITCH OPTIONS

733200J - 733201H - 90A L - 733201H - 90A R - SC1

LEFT ARM

RIGHT ARM

CLAMP ASSEMBLY NUMBERS

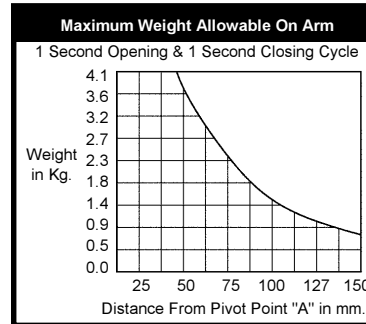
ARM OPENING	CYLINDER STROKE	G 1/4 Port		3/8-18 NPTF Port	
		SINGLE ARM	DUAL ARM	SINGLE ARM	DUAL ARM
30°	25.99	733500A	733500J	745000A	745000J
45°	33.17	733500B	733500K	745000B	745000K
60°	40.24	733500C	733500L	745000C	745000L
75°	47.63	733500D	733500M	745000D	745000M
90°	55.40	733500E	733500N	745000E	745000N
105°	63.20	733500F	733500P	745000F	745000P
120°	70.28	733500G	733500R	745000G	745000R

STC 52 Series Sealed Oval Toggle Clamp ~ Metric Mount

STC52



Standard Switch Package Turck Status Controller DC Ni2-Q6.5-AP6-0.20-FS4.4X3/S304 AC Ni2-Q6.5-ADZ32-0.16-FSB5.4X4/S304 	Switch Package Namco C2000 Sensor DC Type 92 EE280-92140 SC2NDC AC Type 92 EE270-92140 SC2NAC 	Switch Package Pepperl & Fuchs Status Controller DC NBN2-F581-160S6-E8-V1 AC NCN2-F58A1-160S6-U8-V125 	Cylindicator Switch Block SP Switches Not Included Not Available For 30° Opening	Cover Block No Switch NS For Use Without Switches
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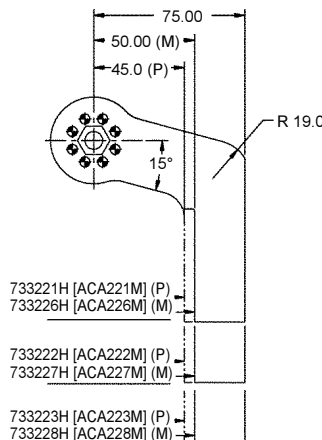
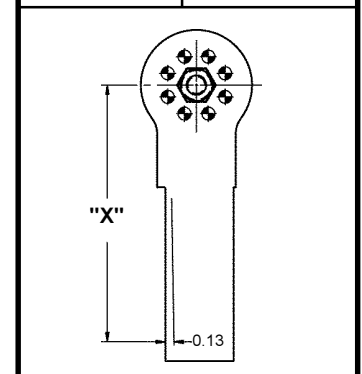
TRI-LOK

PATENTED AND PATENTS APPLIED FOR

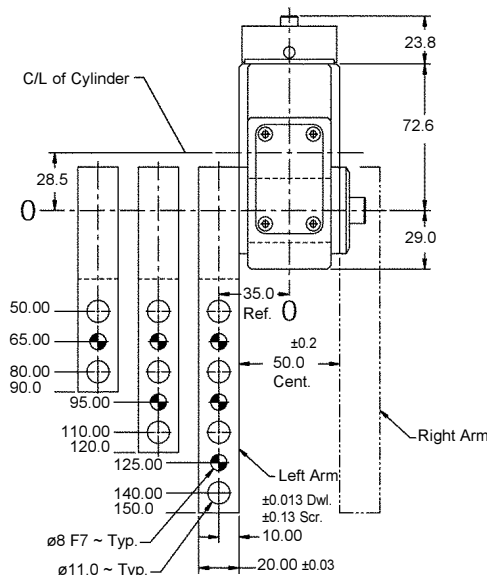
Arm Deflection Under Load

Force on arm at "X" distance from pivot resulting in 0.13mm Maximum deflection (Straight Arm Style)

"X" Dim. (mm)	Force (N)
125	113
100	165
75	291



45 & 50 OFFSET



Tolerance Between Arm Holes
 ± 0.03 Between Dowels
 ± 0.13 To Screw Holes

Recommended operating pressure:
5.5 - 7 bars (80 - 100 PSI)
Compressed air
Use flow controls to reduce impact

$$\text{CLAMPING FORCE (N)} = \frac{16 \times 500 \times \text{LINE PRESSURE (Bars)}}{\text{LENGTH FROM POINT "A" TO CENTER LINE OF CLAMPING CONTACT AREA ON CLAMP ARM (mm)}}$$

$$\text{CLAMPING FORCE (lbs.)} = \frac{10 \times \text{LINE PRESSURE (P.S.I.)}}{\text{LENGTH FROM POINT "A" TO CENTER LINE OF CLAMPING CONTACT AREA ON CLAMP ARM (INCHES)}}$$

FEATURES

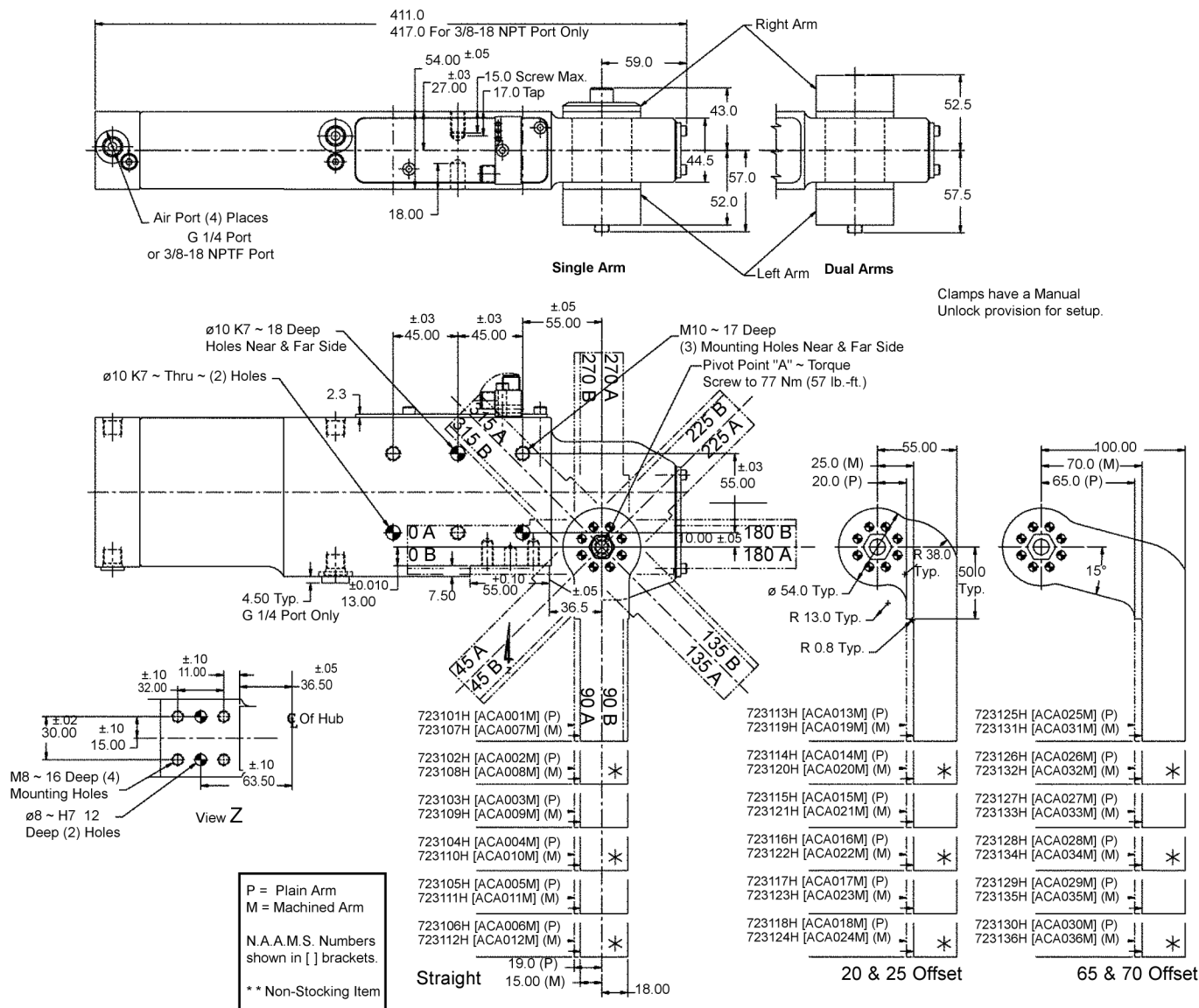
- One body style provides both NAAMS and European mounting patterns
- TRI-LOK mechanism ~ Use as a clamp or back-up
- Sealed mechanism ~ Lubricated for life of clamp
- Integral 52mm (2") oval bore cylinder with heavy wall
- Hardcoated aircraft aluminum body for excellent wear characteristics
- Light weight ~ Approximately 3.2 kg. (7 lbs)
- Pin arm drive for versatile arm positioning & Simplified arm change
- Integrated proximity switch package
- Adjustable cushions standard on both advance and retract ends
- Manual Unlock provision for setup



Manufactured by
BTM CORPORATION
Marysville, Michigan USA
PATENTED

CAD TEMPLATES AVAILABLE

N.A.A.M.S. Preferred



HOW TO ORDER

CLAMP ASSEMBLY NUMBER

- ARM STYLE: 723101H THROUGH 723128H

-ARM POSITION: 90A, 135A, 180A, 90B, 135B, 180B

-ARM LOCATION: L= LEFT SIDE, R= RIGHT SIDE

- ARM STYLE: 723101H THROUGH 723128H

ARM POSITION: 90A, 135A, 180A, 90B, 135B, 180B

ARM LOCATION: L= LEFT SIDE, R= RIGHT SIDE

PROX. SWITCH OPTIONS

733300J - 723101H - 90A L - 723101H - 90A R - SC1

LEFT ARM

RIGHT ARM

CLAMP ASSEMBLY NUMBERS

ARM OPENING	CYLINDER STROKE	G 1/4 Port		3/8-18 NPTF Port	
		SINGLE ARM	DUAL ARM	SINGLE ARM	DUAL ARM
30°	34.06	733600A	733600J	745100A	745100J
45°	43.67	733600B	733600K	745100B	745100K
60°	53.07	733600C	733600L	745100C	745100L
75°	62.87	733600D	733600M	745100D	745100M
90°	73.18	733600E	733600N	745100E	745100N
105°	80.14	733600F	733600P	745100F	745100P
120°	93.05	733600G	733600R	745100G	745100R

STC 62 Series Sealed Oval Toggle Clamp ~ Metric Mount

STC62



Standard Switch Package Turck Status Controller DC NI2-Q6.5-AP6-0.20-FS4.4X3/S304 AC NI2-Q6.5-ADZ32-0.16-FSB5.4X4/S304 	Switch Package Namco C2000 Sensor DC Type 92 EE280-92140 SC2NDC AC Type 92 EE270-92140 SC2NAC 	Switch Package Pepperl & Fuchs Status Controller DC NBN2-F581-160S6-E8-V1 AC NCN2-F58A1-160S6-U8-V125 	Cylindicator Switch Block SP Switches Not Included Not Available For 30° Opening	Cover Block No Switch NS For Use Without Switches
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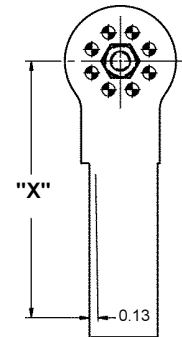


TRI-LOK

PATENTED AND PATENTS APPLIED FOR

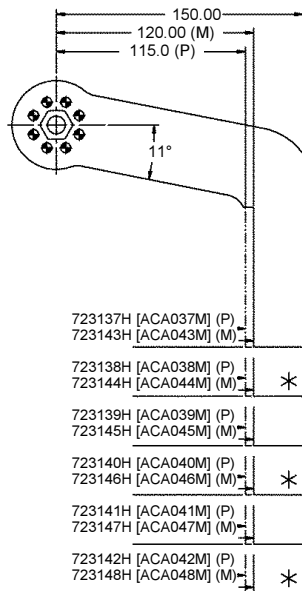
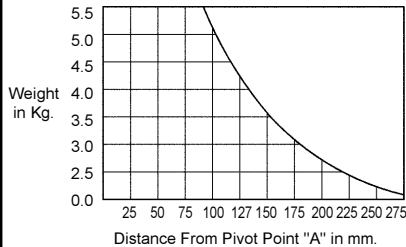
Arm Deflection Under Load
 Force on arm at "X" distance from pivot
 resulting in 0.13mm Maximum deflection
 (Straight Arm Style)

"X" Dim. (mm)	Force (N)
250	156
225	200
200	245
175	289
150	378
125	489
100	734



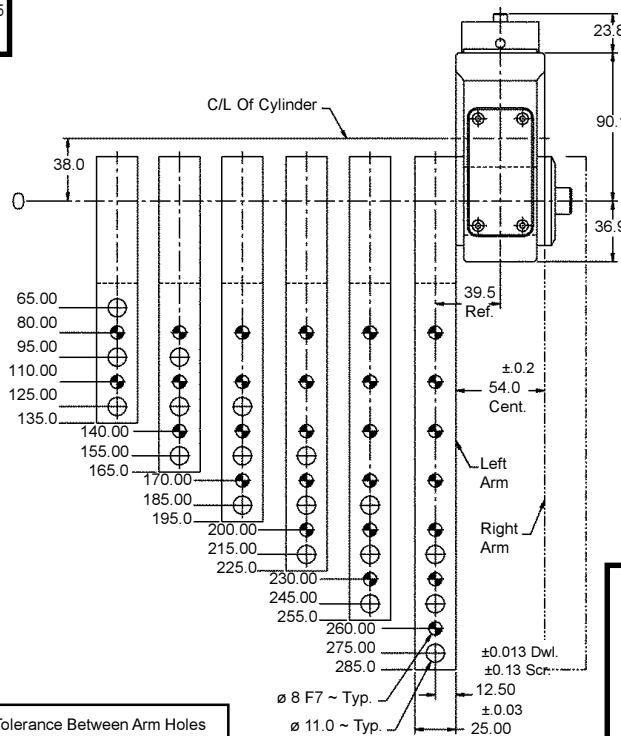
Maximum Weight Allowable On Arm

1 Second Opening & 1 Second Closing Cycle



723137H [ACA037M] (P)	
723143H [ACA043M] (M)	
723138H [ACA038M] (P)	*
723144H [ACA044M] (M)	
723139H [ACA039M] (P)	
723145H [ACA045M] (M)	
723140H [ACA040M] (P)	*
723146H [ACA046M] (M)	
723141H [ACA041M] (P)	
723147H [ACA047M] (M)	
723142H [ACA042M] (P)	*
723148H [ACA048M] (M)	

115 & 120 Offset



Tolerance Between Arm Holes
 ± 0.03 Between Dowels
 ± 0.13 To Screw Holes

FEATURES

- One body style provides both NAAMS and European mounting patterns
- TRI-LOK mechanism ~ Use as a clamp or back-up
- Sealed mechanism ~ Lubricated for life of clamp
- Integral 62mm (2.5") oval bore cylinder with heavy wall
- Hardcoated aircraft aluminum body for excellent wear characteristics
- Light weight ~ Approximately 5.5 kg. (12 lbs)
- Pin arm drive for versatile arm positioning & Simplified arm change
- Integrated proximity switch package or standard proximity switches
- Adjustable cushions standard on both advance and retract ends
- Manual Unlock provision for setup

Recommended operating pressure:
 5.5 - 7 bars (80 - 100 PSI)
 Compressed air
 Use Flow controls to reduce impact

$$\text{CLAMPING FORCE (N)} = \frac{46 \text{ 500 x LINE PRESSURE (Bars)}}{\text{LENGTH FROM POINT "A" TO CENTER LINE OF CLAMPING CONTACT AREA ON CLAMP ARM (mm)}}$$

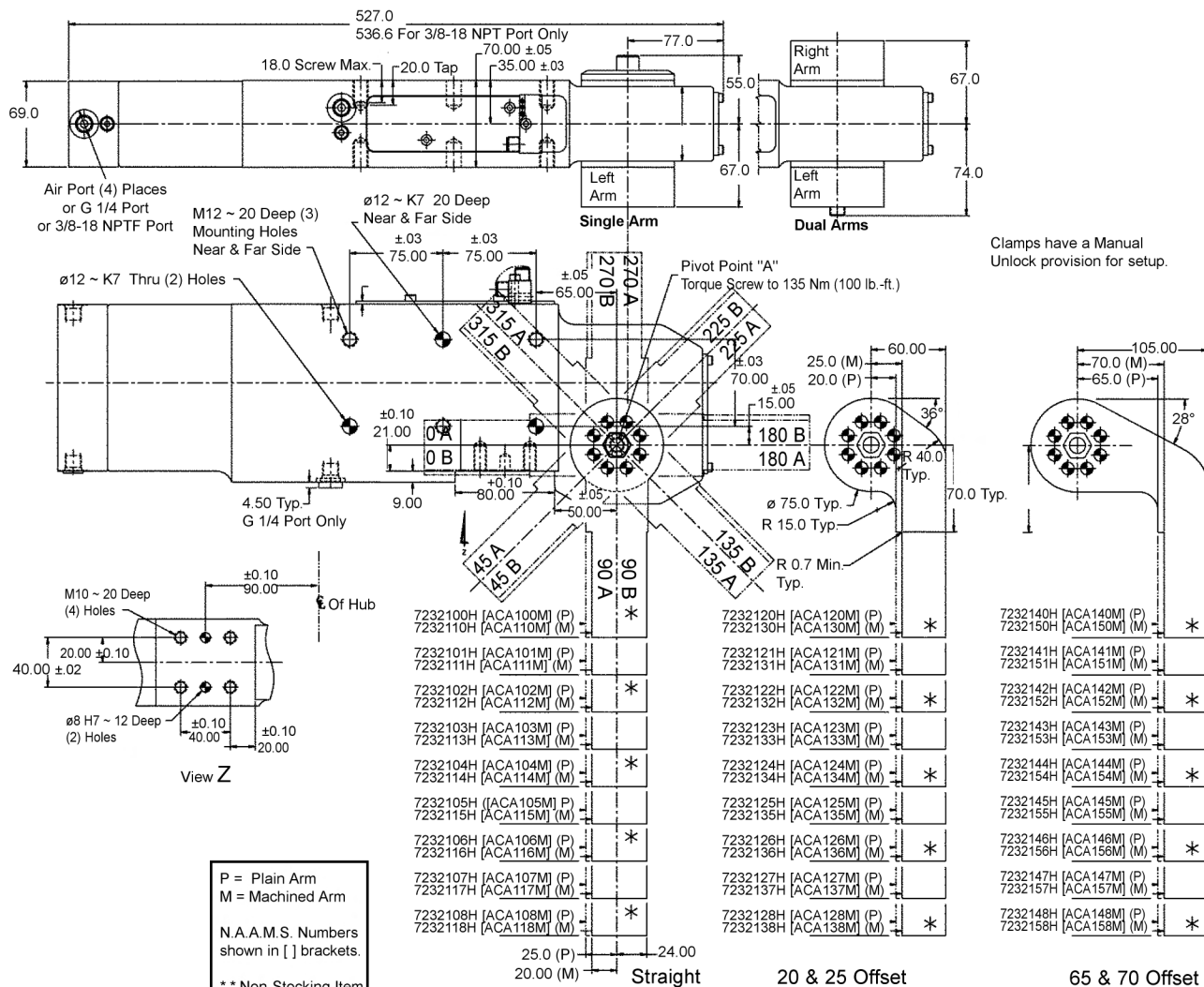
$$\text{CLAMPING FORCE (lbs.)} = \frac{28.5 \text{ x LINE PRESSURE (P.S.I.)}}{\text{LENGTH FROM POINT "A" TO CENTER LINE OF CLAMPING CONTACT AREA ON CLAMP ARM (INCHES)}}$$

BTM
 CORPORATION

Manufactured by
 BTM CORPORATION
 Marysville, Michigan USA
 PATENTED

CAD TEMPLATES AVAILABLE

N.A.A.M.S. Preferred



HOW TO ORDER

CLAMP ASSEMBLY NUMBER

- ARM STYLE: 7232100H THROUGH 7232178H

-ARM POSITION: 90A, 135A, 180A, 90B, 135B, 180B

-ARM LOCATION: L= LEFT SIDE, R= RIGHT SIDE

- ARM STYLE: 7232100H THROUGH 7232178H

ARM POSITION: 90A, 135A, 180A, 90B, 135B, 180B

ARM LOCATION: L= LEFT SIDE, R= RIGHT SIDE

PROX. SWITCH OPTIONS

733400J - 7232100H - 90A L - 7232100H - 90A R - SC1

LEFT ARM

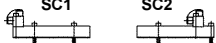
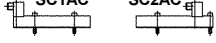
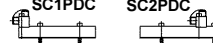
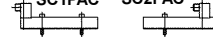
RIGHT ARM

CLAMP ASSEMBLY NUMBERS					
ARM OPENING	CYLINDER STROKE	G 1/4 Port		3/8-18 NPTF Port	
		SINGLE ARM	DUAL ARM	SINGLE ARM	DUAL ARM
30°	34.06	733700A	733700J	745200A	745200J
45°	43.67	733700B	733700K	745200B	745200K
60°	53.07	733700C	733700L	745200C	745200L
75°	62.87	733700D	733700M	745200D	745200M
90°	73.18	733700E	733700N	745200E	745200N
105°	80.14	733700F	733700P	745200F	745200P
120°	93.05	733700G	733700R	745200G	745200R

STC 82 Series Sealed Oval Toggle Clamp ~ Metric Mount

STC82

BTM
CORPORATION

Standard Switch Package Turck Status Controller DC NI2-Q6.5-AP6-0.20-FS4.4X3/S304  AC NI2-Q6.5-ADZ32-0.16-FSB5.4X4/S304 	Switch Package Namco C2000 Sensor DC Type 92 EE280-92140 SC2NDC  AC Type 92 EE270-92140 SC2NAC 	Switch Package Pepperl & Fuchs Status Controller DC NBN2-F581-160S6-E8-V1  AC NBN2-F58A1-160S6-U8-V125 	Cylindicator Switch Block SP Switches Not Included  Not Available For 30° Opening	Cover Block No Switch NS For Use Without Switches 
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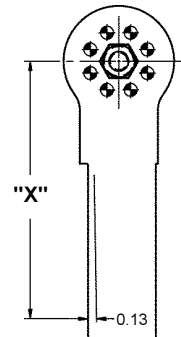


TRI-LOK

PATENTED AND PATENTS APPLIED FOR

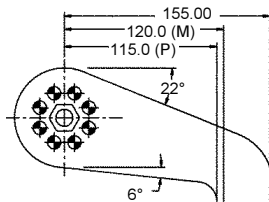
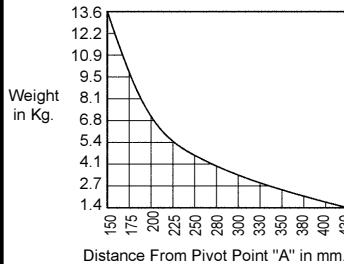
Arm Deflection Under Load
 Force on arm at "X" distance from pivot
 resulting in 0.13mm Maximum deflection
 (Straight Arm Style)

"X" Dim. (mm)	Force (N)
370	165
340	205
310	267
280	365
250	449
220	623
190	1005
160	1397
130	2073
100	3065

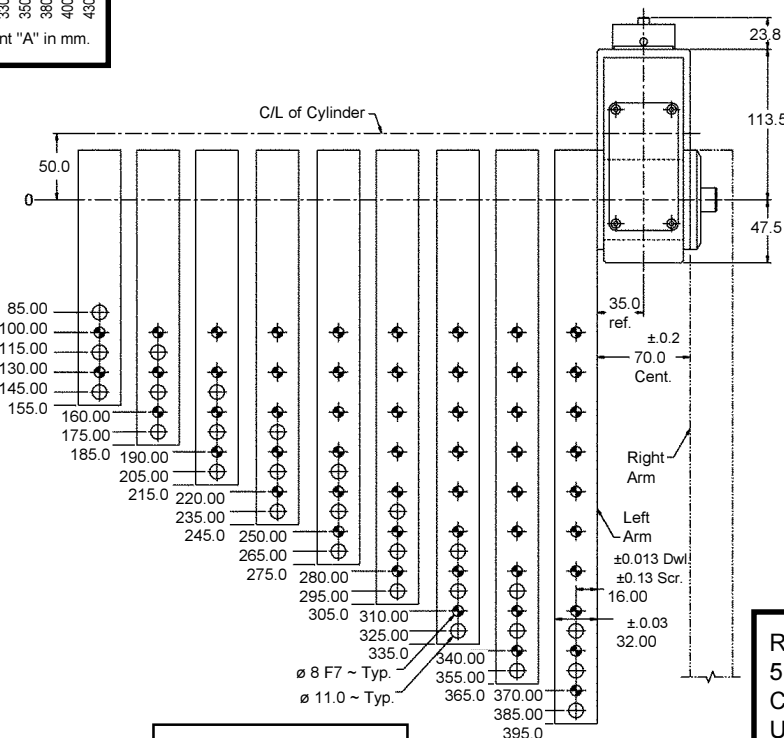


Maximum Weight Allowable On Arm

1 Second Opening & 1 Second Closing Cycle



7232160H [ACA160M] (P)	*
7232170H [ACA170M] (M)	*
7232161H [ACA161M] (P)	*
7232171H [ACA171M] (M)	*
7232162H [ACA162M] (P)	*
7232172H [ACA172M] (M)	*
7232163H [ACA163M] (P)	*
7232173H [ACA173M] (M)	*
7232164H [ACA164M] (P)	*
7232174H [ACA174M] (M)	*
7232165H [ACA165M] (P)	*
7232175H [ACA175M] (M)	*
7232166H [ACA166M] (P)	*
7232176H [ACA176M] (M)	*
7232167H [ACA167M] (P)	*
7232177H [ACA177M] (M)	*
7232168H [ACA168M] (P)	*
7232178H [ACA178M] (M)	*



115 & 120 Offset

FEATURES

- One body style provides both NAAMS and European mounting patterns
- TRI-LOK mechanism ~ Use as a clamp or back-up
- Sealed mechanism ~ Lubricated for life of clamp
- Integral 82mm (3.25") oval bore cylinder with heavy wall
- Hardcoated aircraft aluminum body for excellent wear characteristics
- Light weight ~ Approximately 13.6 kg. (30 lbs)
- Pin arm drive for versatile arm positioning & Simplified arm change
- Integrated proximity switch package or standard proximity switches
- Adjustable cushions standard on both advance and retract ends
- Manual Unlock provision for setup

Recommended operating pressure:
 5.5 - 7 bars (80 - 100 PSI)
 Compressed air
 Use Flow controls to reduce impact

CLAMPING FORCE (N) = $\frac{92,000 \times \text{LINE PRESSURE (Bars)}}{\text{LENGTH FROM POINT "A" TO CENTER LINE OF CLAMPING CONTACT AREA ON CLAMP ARM (mm)}}$

CLAMPING FORCE (lbs.) = $\frac{55 \times \text{LINE PRESSURE (P.S.I.)}}{\text{LENGTH FROM POINT "A" TO CENTER LINE OF CLAMPING CONTACT AREA ON CLAMP ARM (INCHES)}}$

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CORPORATION

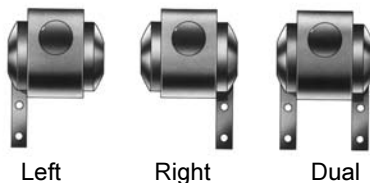
Manufactured by
 BTM CORPORATION
 Marysville, Michigan USA
 PATENTED

Sealed Offset Power Clamps

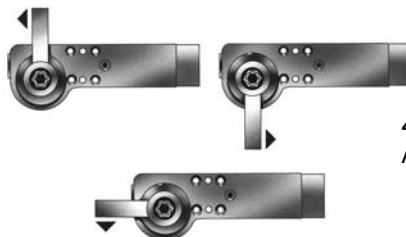
PC 1500 SO • PC 2500 SO



BTM's 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.
- Positive Locking Toggle Action
- 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

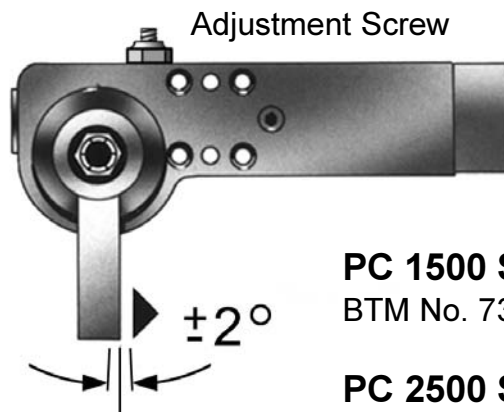
PC 2500 SO
BTM No. 700200A

BTM
CORPORATION

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.**



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

PC 1500 SO AAP
BTM No. 737900A

PC 2500 SO AAP
BTM No. 738000A

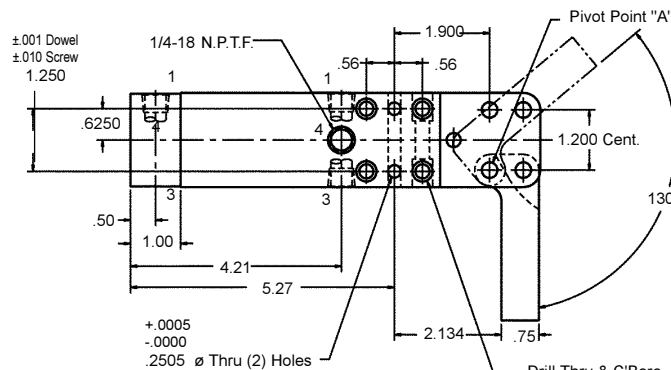
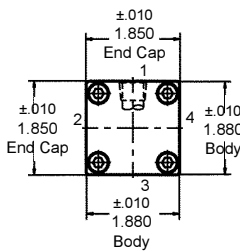
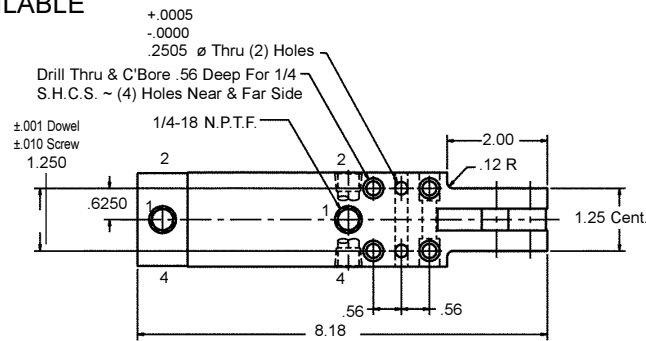
Pg. 25

1500 Series Power Toggle Clamp

PC 1500-V 130

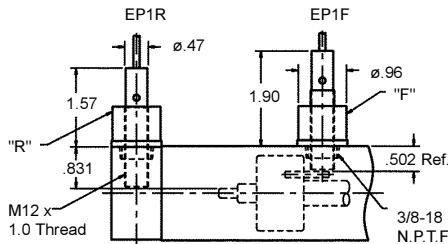
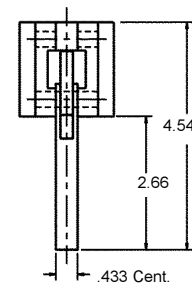
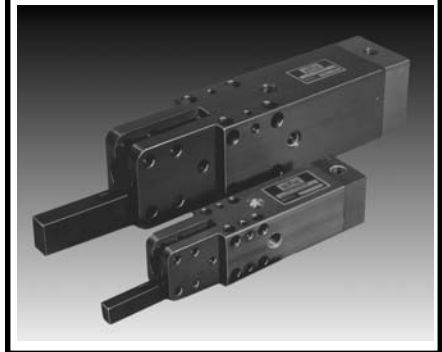


CAD TEMPLATES AVAILABLE



Power Toggle Clamps

PC 1500 & PC 2500 Series



Dimensions For Optional Electrical Proximity Switches

"R" = Rear Switch
AC: No. 003176
DC: No. 003241

"F" = Front Switch
AC: No. 003172
DC: No. 003237

OPTIONAL PROXIMITY SWITCHES (SEE PG. 47)

$$\text{CLAMP FORCE (lbs)} = \frac{4 \times \text{LINE PRESSURE (P.S.I.)} \times \text{LENGTH FROM POINT "A" TO CENTER LINE OF CLAMPING CONTACT AREA ON ARM (INCHES)}}{1}$$

FEATURES

- One piece body
- Integral cylinder
- Positive Locking Toggle
- Light weight.

SPECIFICATIONS

Bore ϕ : 1.5"
Stroke: 1.699"
Arm Opening: 130°
Recommended operating pressure: 80 - 100 PSI
Use Flow controls to reduce impact
Approx. Weight: 3 lbs.



Manufactured by
BTM CORPORATION
Marysville, Michigan USA
PATENTED

HOW TO ORDER

POWER CLAMP

1500 SERIES: 1.5" 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

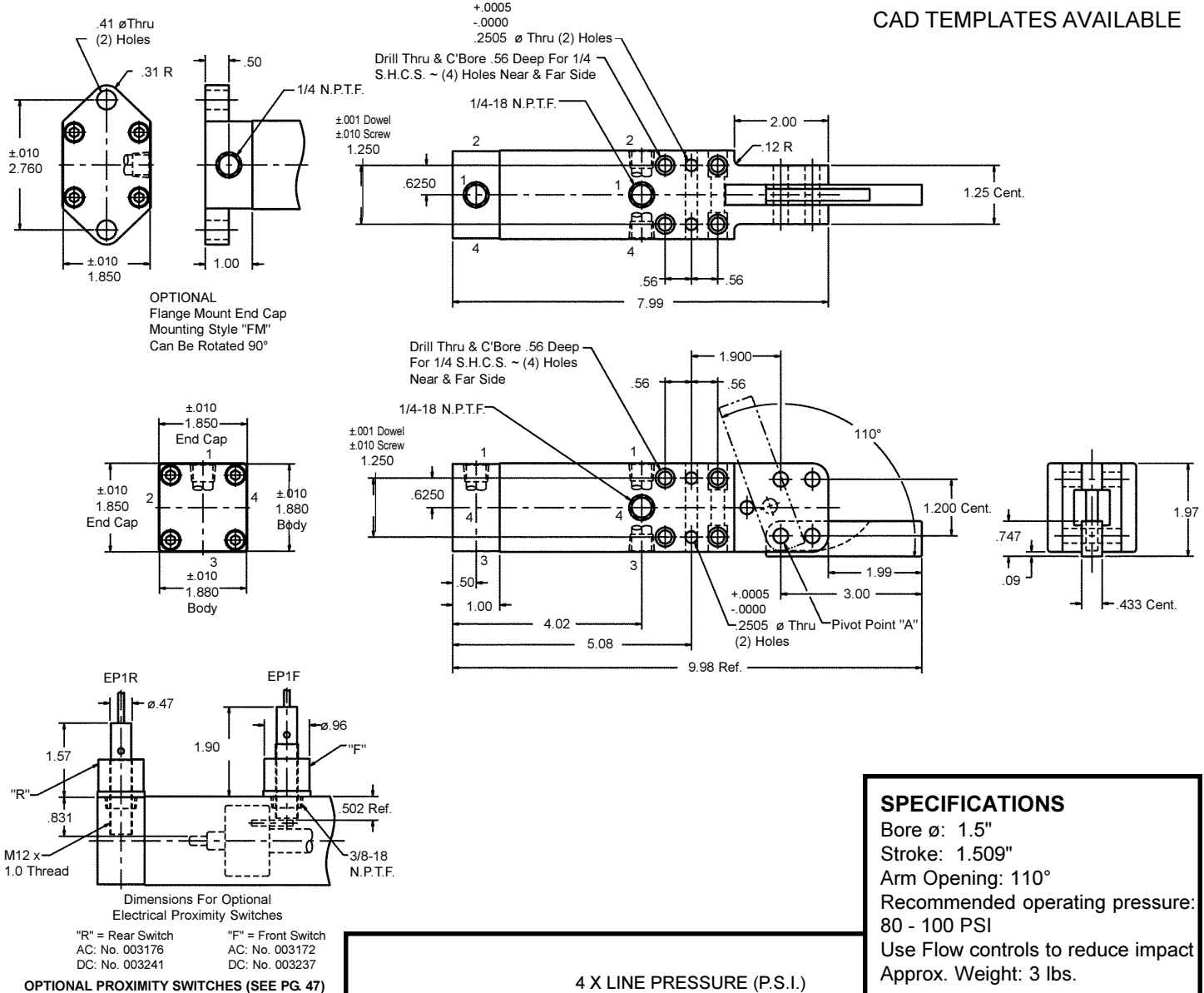
SWITCH TYPE: AC OR DC

BTM PC-1500-V130 - FM -FP4 -RP1 -EP2F -EP3R -AC

Body Mount No. 001635

Flange Mount No. 012503

OPTIONS



HOW TO ORDER

POWER CLAMP

1500 SERIES: 1.5" BORE

ARM OPENING: HORIZONTAL 110°

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-1500-H110 - FM -FP4 -RP1 -EP2F -EP3R -AC

Body Mount No. 001666

Flange Mount No. 012505

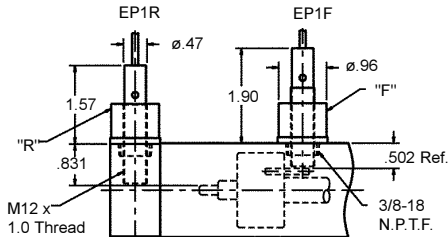
OPTIONS

1500 Series Power Toggle Clamp

PC 1500-PL .98

BTM
CORPORATION

CAD TEMPLATES AVAILABLE

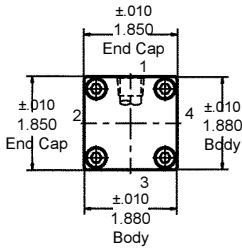


Dimensions For Optional
Electrical Proximity Switches

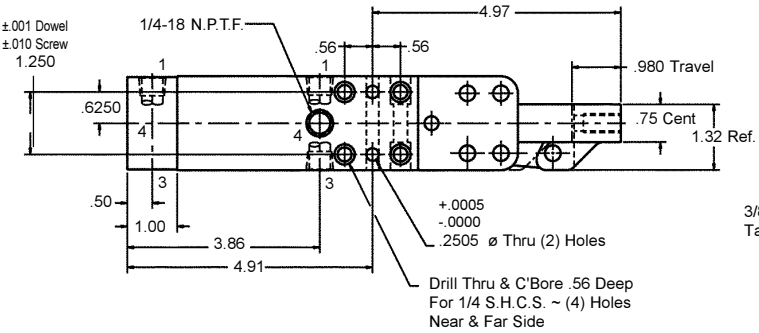
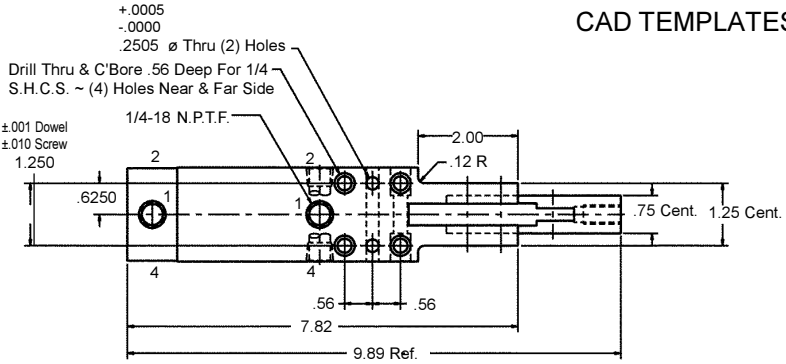
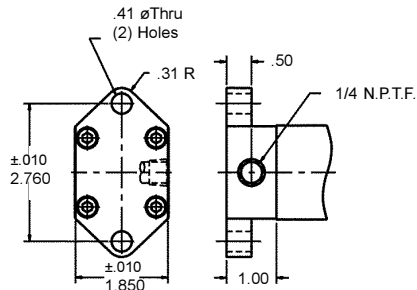
"R" = Rear Switch
AC: No. 003176
DC: No. 003241

"F" = Front Switch
AC: No. 003172
DC: No. 003237

OPTIONAL PROXIMITY SWITCHES (SEE PG. 47)

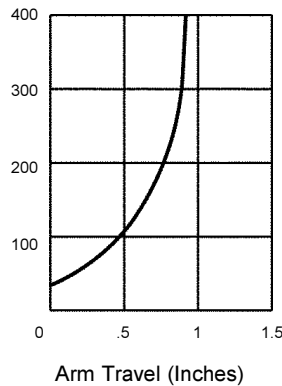


OPTIONAL
Flange Mount End Cap
Mounting Style "FM"
Can Be Rotated 90°



3/8-16 UNC-28
Tap ~ .75 Deep

Force In lbs.
@ 80 PSI



SPECIFICATIONS

Bore ϕ : 1.5"
Stroke: 1.344"
Arm Opening: .98"
Recommended operating pressure:
80 - 100 PSI
Use Flow controls to reduce impact
Approx. Weight: 3 lbs.

BTM
CORPORATION

Manufactured by
BTM CORPORATION
Marysville, Michigan USA
PATENTED

HOW TO ORDER

POWER CLAMP

1500 SERIES: 1.5" BORE

ARM OPENING: LINEAR .98"

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

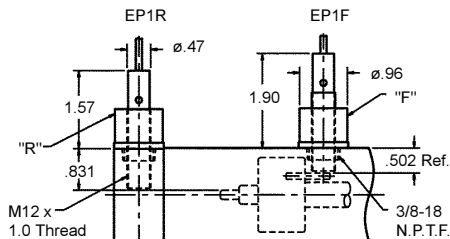
BTM PC-1500-PL .98 -FM -FP4 -RP1 -EP2F -EP3R -AC

Body Mount No. 012500

Flange Mount No. 012501

OPTIONS

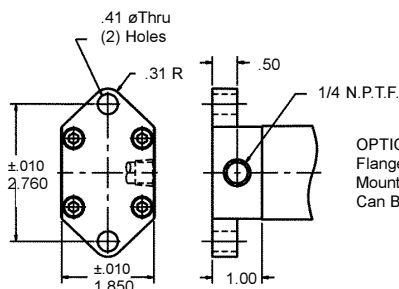
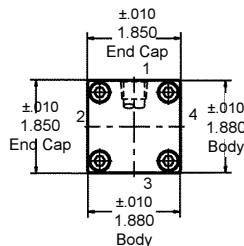
OPTIONAL PROXIMITY SWITCHES (SEE PG. 47)



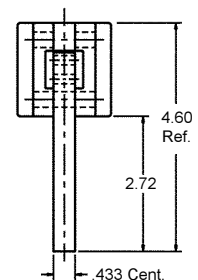
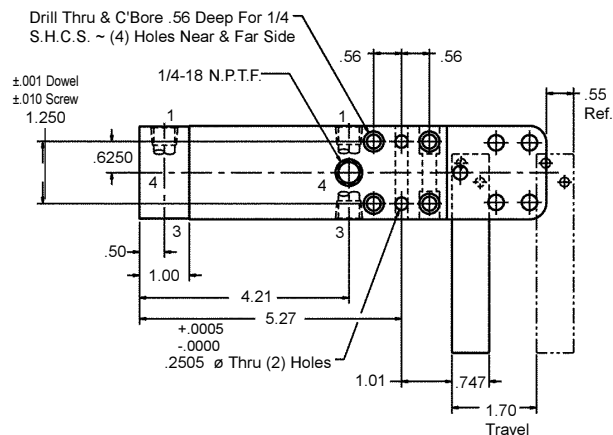
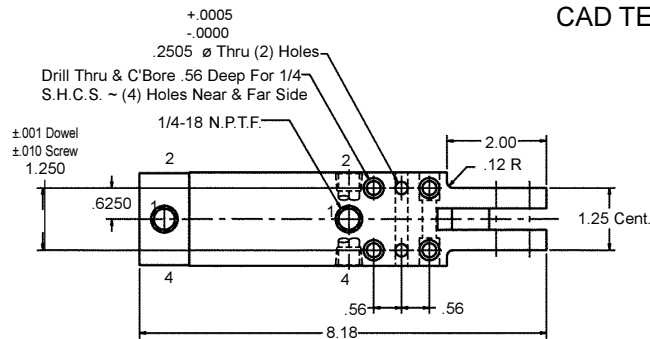
Dimensions For Optional Electrical Proximity Switches

"R" = Rear Switch AC: No. 003176 DC: No. 003241

"F" = Front Switch AC: No. 003172 DC: No. 003237



OPTIONAL Flange Mount End Cap Mounting Style "FM" Can Be Rotated 90°



SPECIFICATIONS

Bore 0: 1.5"
Stroke: 1.699"
Arm Opening: 1.70"
Slide Clamp = No Toggle Action
Recommended operating pressure: 80 - 100 PSI
Use Flow controls to reduce impact
Approx. Weight: 3 lbs.

CLAMP FORCE (lbs) = 1.4 X LINE PRESSURE (P.S.I.)

HOW TO ORDER

POWER CLAMP

1500 SERIES: 1.5" BORE

ARM OPENING: LINEAR 1.7"

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-1500-SL 1.7 -FM -FP4 -RP1 -EP2F -EP3R -AC

Body Mount No. 001658
Flange Mount No. 012507

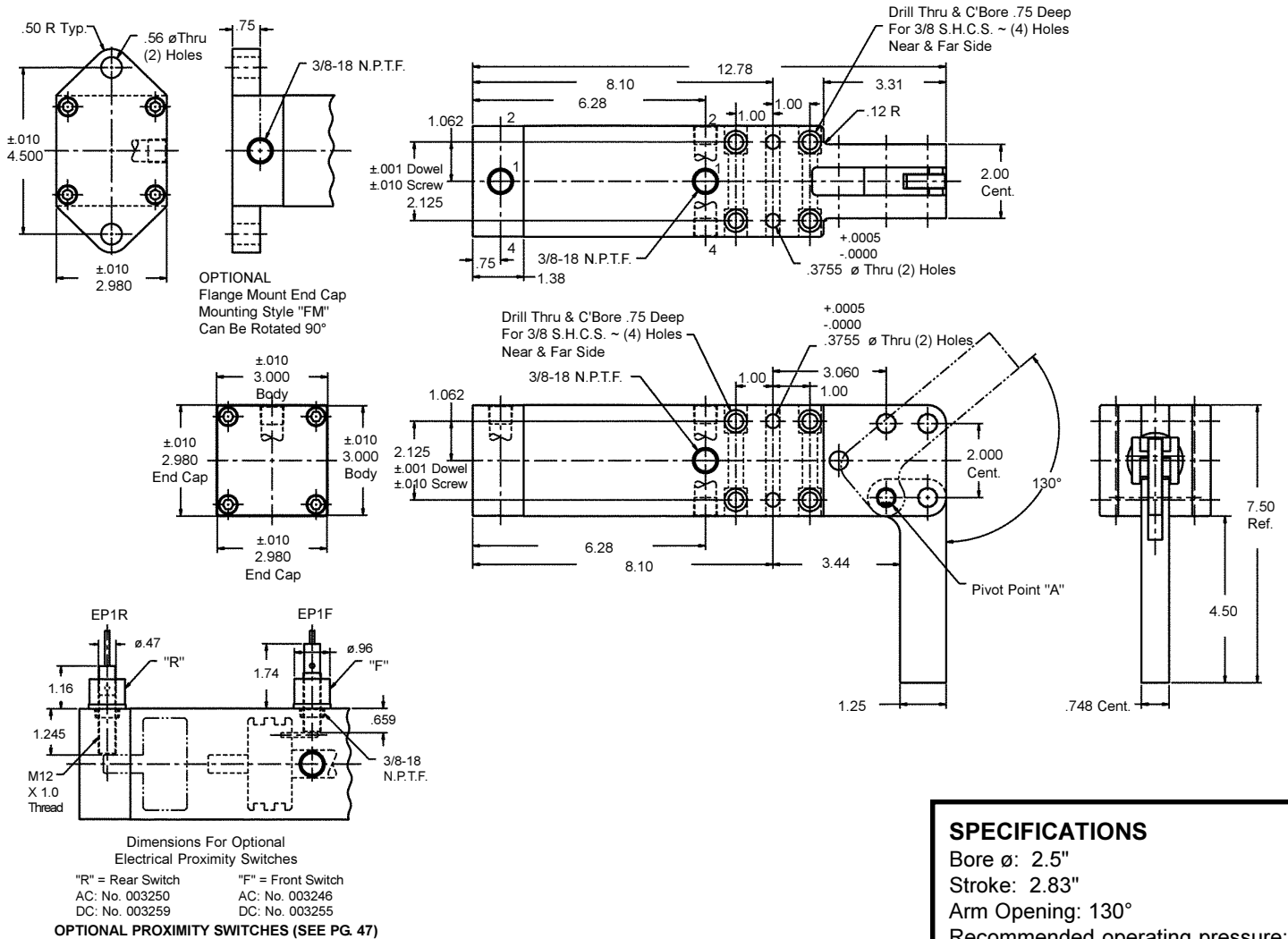
OPTIONS

2500 Series Power Toggle Clamp

PC 2500-V 130

BTM
CORPORATION

CAD TEMPLATES AVAILABLE



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

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

Flange Mount No. 012511

OPTIONS

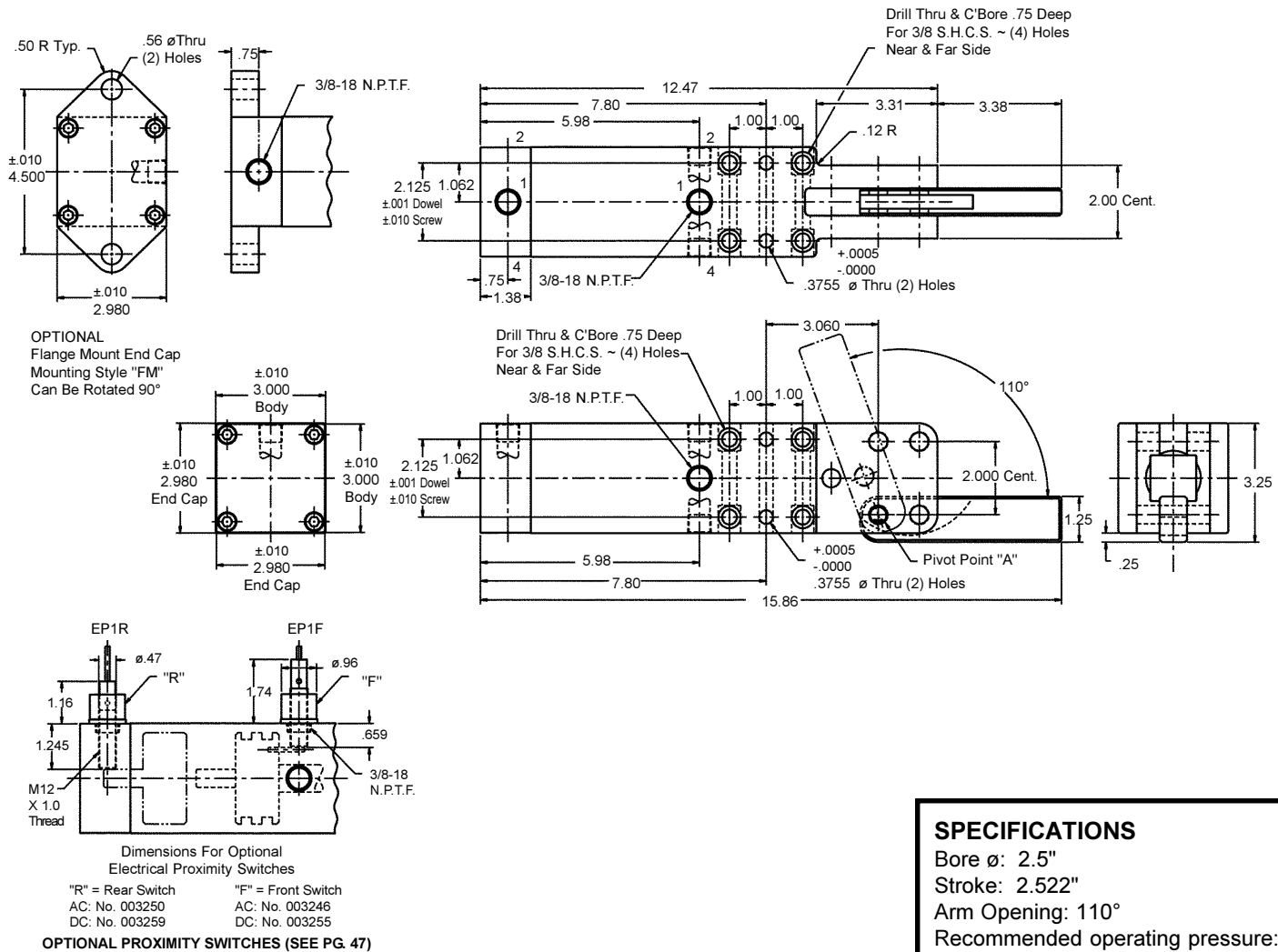
BTM
CORPORATION

Manufactured by
BTM CORPORATION
Marysville, Michigan USA
PATENTED

2500 Series Power Toggle Clamp

PC 2500-H 110

CAD TEMPLATES AVAILABLE



SPECIFICATIONS

Bore ø: 2.5"
Stroke: 2.522"
Arm Opening: 110°
Recommended operating pressure:
80 - 100 PSI
Use Flow controls to reduce impact
Approx. Weight: 11 lbs.



Manufactured by
BTM CORPORATION
Marysville, Michigan USA
PATENTED

HOW TO ORDER

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

POWER CLAMP

2500 SERIES: 2.5" BORE

ARM OPENING: HORIZONTAL 110°

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-H110 - FM -FP4 -RP1 -EP2F -EP3R -AC

Body Mount No. 001444
Flange Mount No. 012514

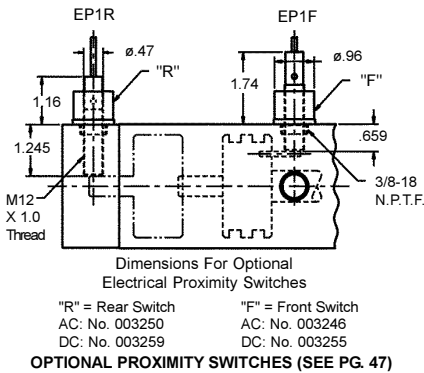
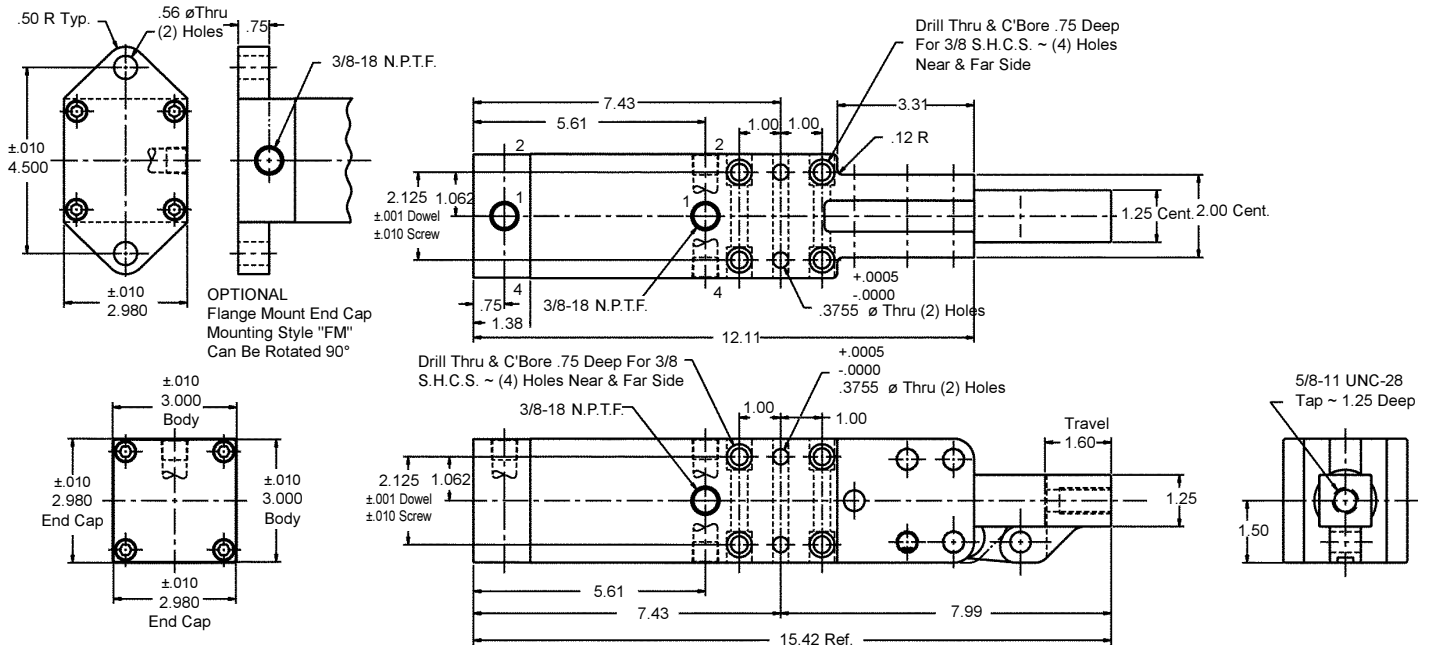
OPTIONS

2500 Series Power Toggle Clamp

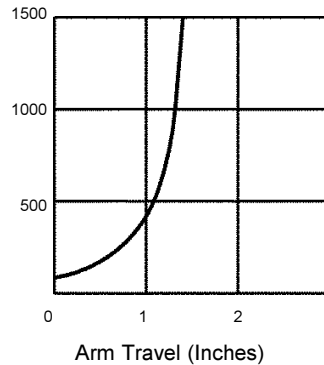
PC 2500-PL 1.6

BTM
CORPORATION

CAD TEMPLATES AVAILABLE



Force In lbs.
@ 80 PSI



SPECIFICATIONS

Bore ø: 2.5"
Stroke: 2.154"
Arm Opening: 1.6"
Recommended operating pressure:
80 - 100 PSI
Use Flow controls to reduce impact
Approx. Weight: 11 lbs.

BTM
CORPORATION

Manufactured by
BTM CORPORATION
Marysville, Michigan USA
PATENTED

HOW TO ORDER

POWER CLAMP

2500 SERIES: 2.5" BORE

ARM OPENING: LINEAR 1.6"

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

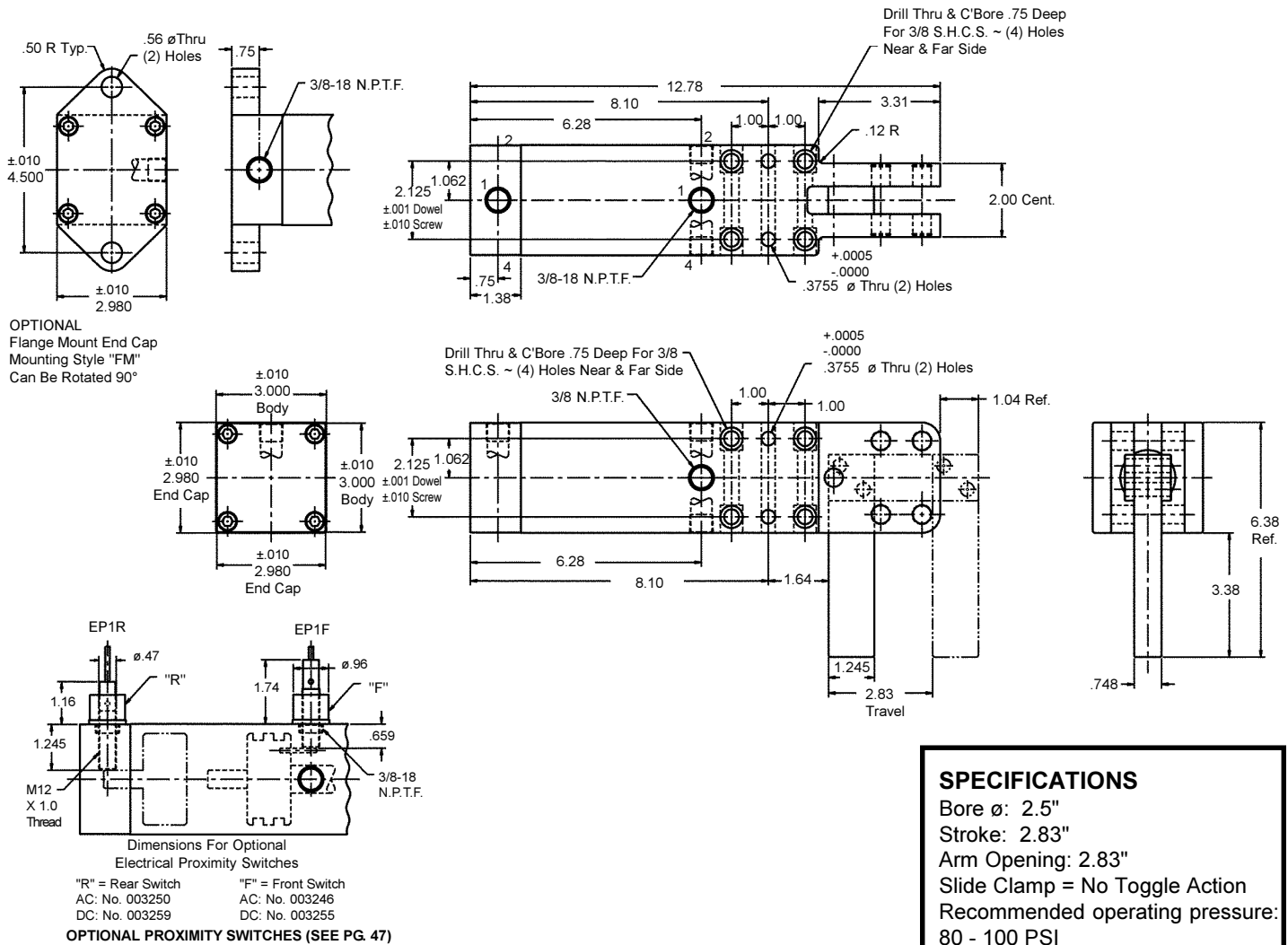
BTM PC-2500-PL 1.6 -FM -FP4 -RP1 -EP2F -EP3R -AC

Body Mount No. 012509

Flange Mount No. 012510

OPTIONS

CAD TEMPLATES AVAILABLE



SPECIFICATIONS

Bore ϕ : 2.5"
 Stroke: 2.83"
 Arm Opening: 2.83"
 Slide Clamp = No Toggle Action
 Recommended operating pressure:
 80 - 100 PSI
 Use Flow controls to reduce impact
 Approx. Weight: 11 lbs.

Manufactured by
 BTM CORPORATION
 Marysville, Michigan USA
 PATENTED

HOW TO ORDER

CLAMP FORCE (lbs) = 4 X LINE PRESSURE (P.S.I.)

POWER CLAMP

2500 SERIES: 2.5" BORE

ARM OPENING: LINEAR 2.8"

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-SL 2.8 -FM -FP4 -RP1 -EP2F -EP3R -AC

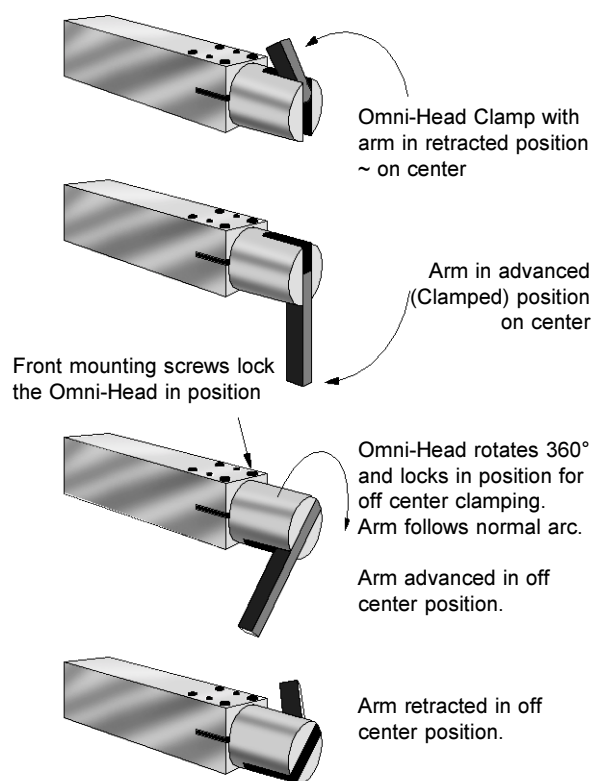
Body Mount No. 001437
 Flange Mount No. 012516

OPTIONS



Omni-Head Power Toggle Clamps

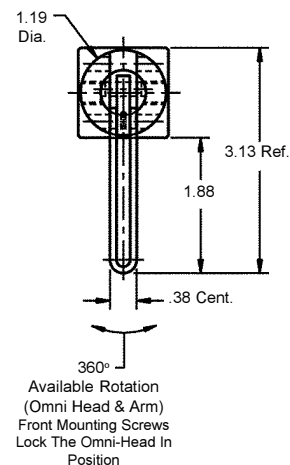
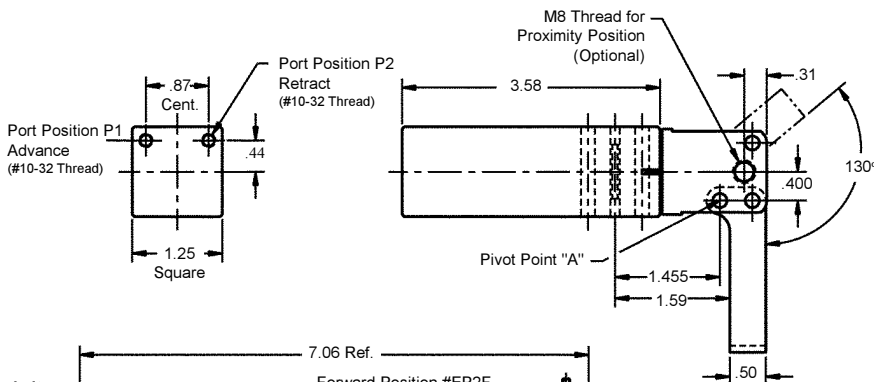
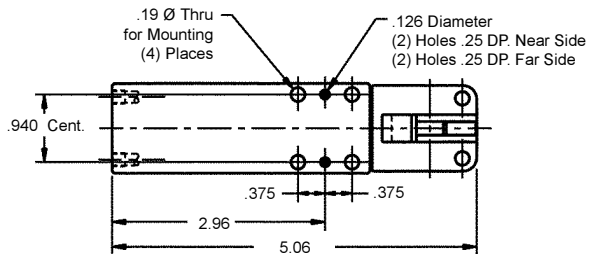
PCO 100 Series • PCO 1500 Series



FEATURES

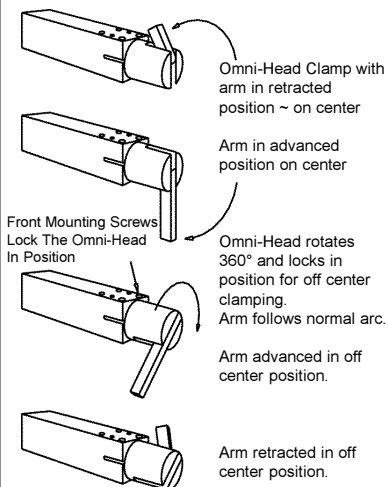
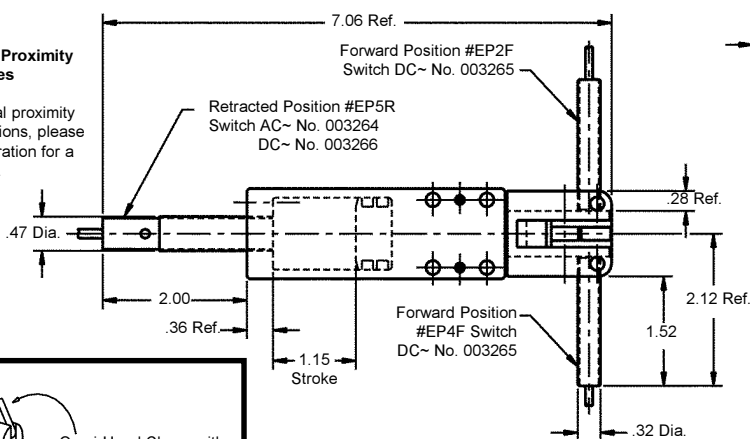
- Gripper head rotates 360° & locks in position for off center gripping.
- Hardcoated aircraft aluminum body.
- Optional pre-fitted proximity switches.
- Positive Locking Toggle Action
- Light weight.

CAD TEMPLATES AVAILABLE



See Pg. 47 For Proximity Switches

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



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

SPECIFICATIONS

Bore ø: 1.00"
Stroke: 1.15"
Arm Opening: 130°
Recommended operating pressure: 80 - 100 PSI
Use Flow controls to reduce impact
Approx. Weight: 12 OZ.

HOW TO ORDER

POWER CLAMP OMNI (PCO)
100 SERIES: 1.00 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-100-V130 - EP2F-DC-EP5R-AC

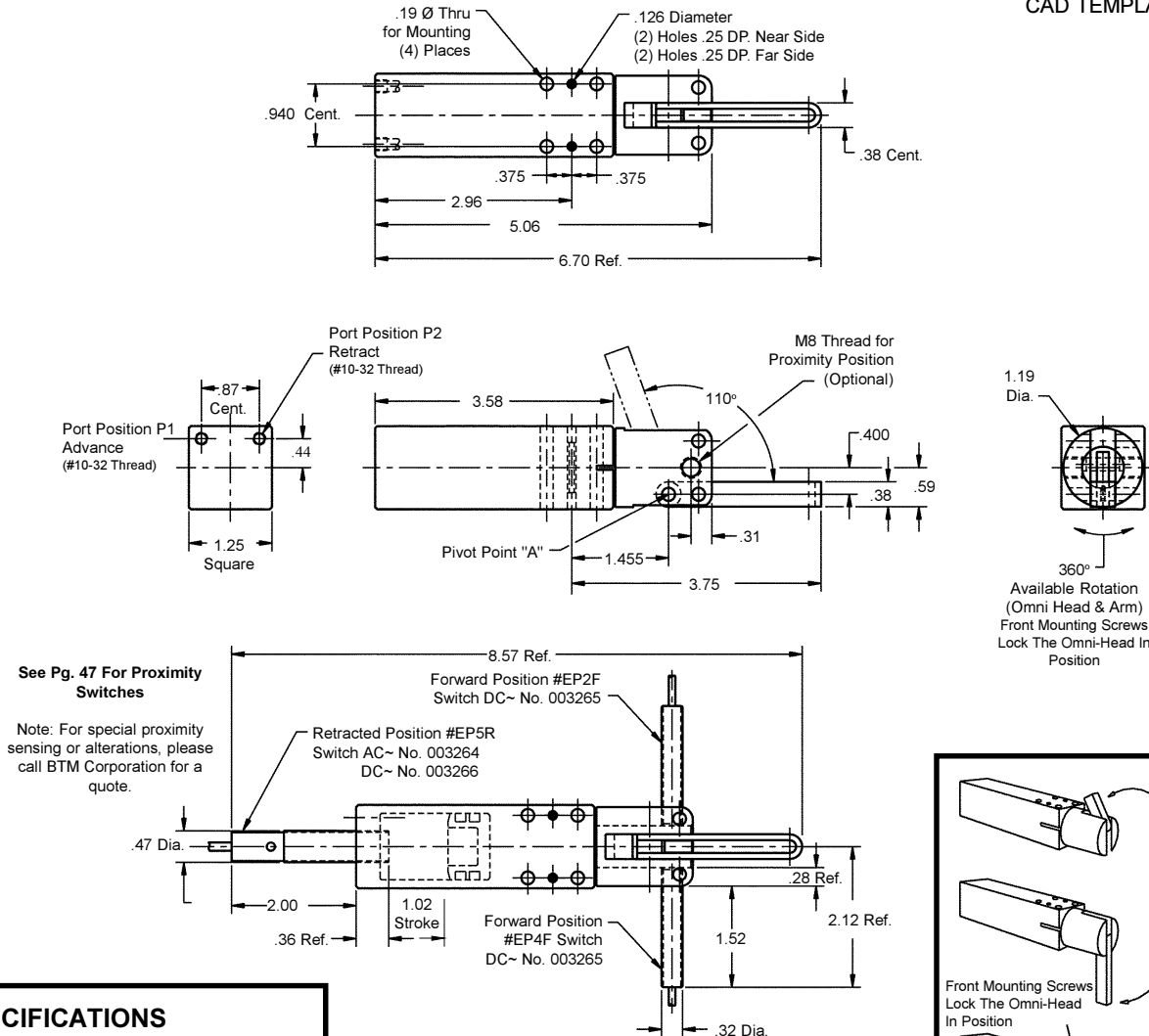
BTM No. 002767

OPTIONS

100 Series Omni Clamp PCO-100-H 110

BTM

CAD TEMPLATES AVAILABLE



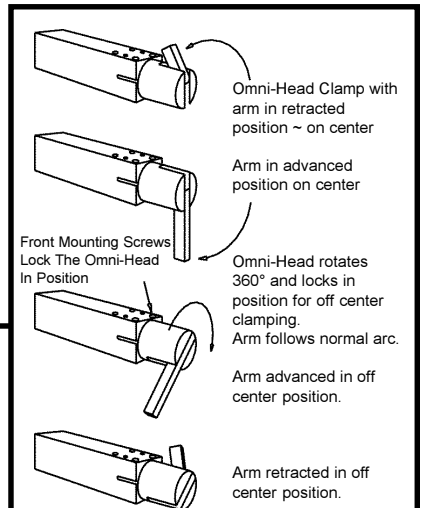
SPECIFICATIONS

Bore ø: 1.00"
Stroke: 1.02"
Arm Opening: 110°
Recommended operating pressure:
80 - 100 PSI
Use Flow controls to reduce impact
Approx. Weight: 12 OZ.

BTM

Manufactured by
BTM CORPORATION
Marysville, Michigan USA
PATENTED

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



HOW TO ORDER

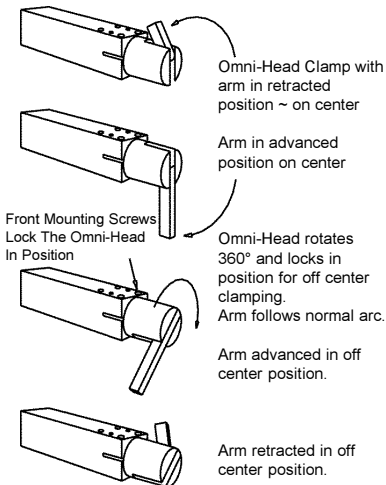
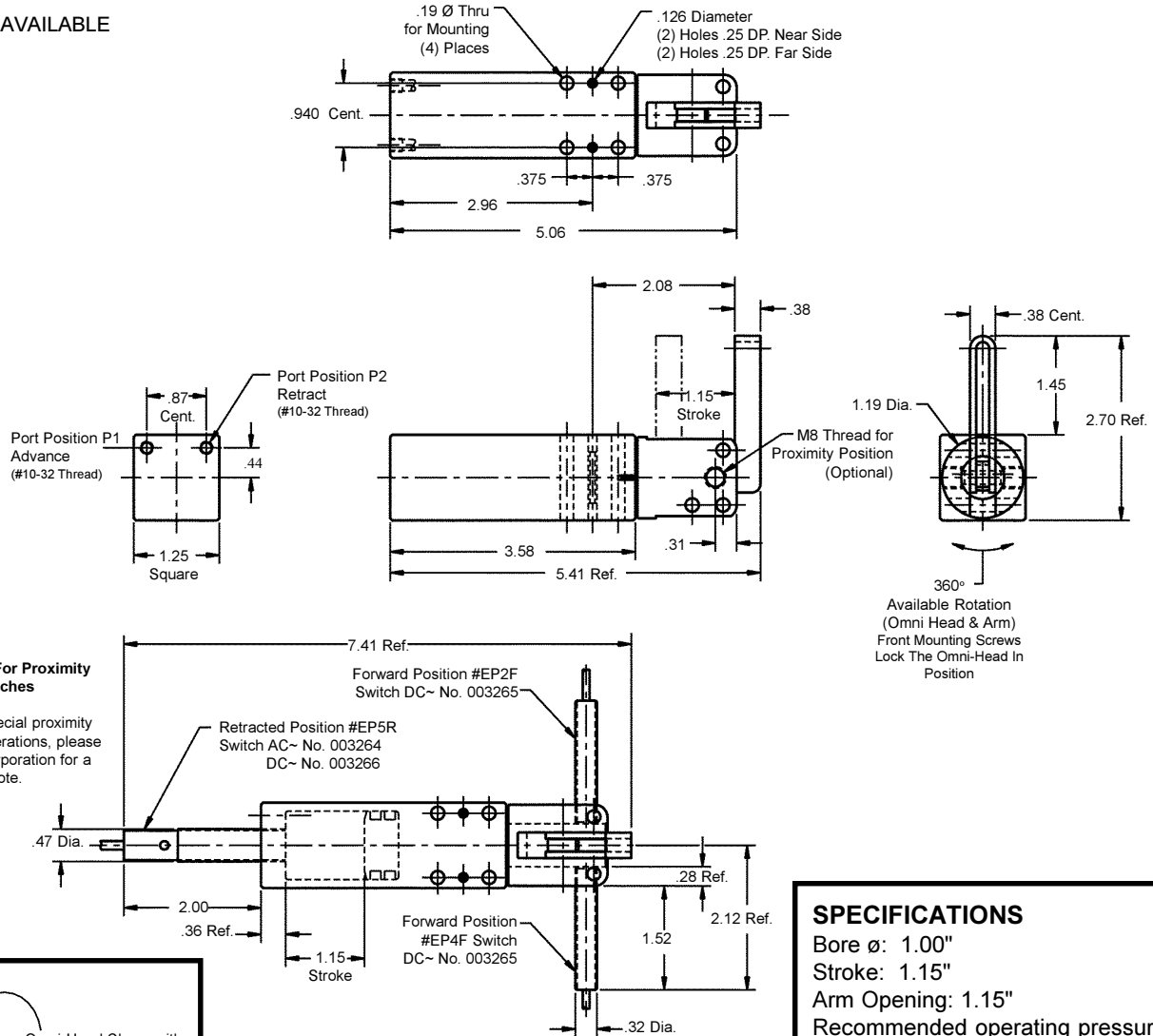
POWER CLAMP OMNI (PCO)
100 SERIES: 1.00 BORE
ARM OPENING: HORIZONTAL 110°
FRONT ELECTRICAL PROXIMITY POSITION: EP2F, EP4F
SWITCH TYPE: DC ONLY
REAR ELECTRICAL PROXIMITY POSITION: EP5R
SWITCH TYPE: AC OR DC

BTM PCO-100-H110 - EP2F-DC-EP5R-AC

BTM No. 002857

OPTIONS

CAD TEMPLATES AVAILABLE



$$\text{CLAMP FORCE (lbs)} = \frac{.67 \times \text{LINE PRESSURE (P.S.I.)}}{\text{LENGTH FROM POINT "A" TO CENTER LINE OF GRIPPING CONTACT AREA ON GRIPPER ARM (INCHES)}}$$

SPECIFICATIONS

Bore ø: 1.00"
Stroke: 1.15"
Arm Opening: 1.15"
Recommended operating pressure: 80 - 100 PSI
Use Flow controls to reduce impact
Approx. Weight: 12 OZ.

HOW TO ORDER

POWER CLAMP OMNI (PCO)
100 SERIES: 1.00 Bore
ARM OPENING: LINEAR 1.15"
FRONT ELECTRIC PROXIMITY POSITION: EP2F, EP4F
SWITCH TYPE: DC ONLY
REAR ELECTRICAL PROXIMITY POSITION: EP5R
SWITCH TYPE: AC OR DC

BTM PCO-100-SL1.2 - EP2F-DC-EP5R-AC

BTM No. 002860

OPTIONS



1500 Series Retracting Power Clamp RPC-1500-V

RPC 1500V ~ BTM No. 738700A

Patents Applied For

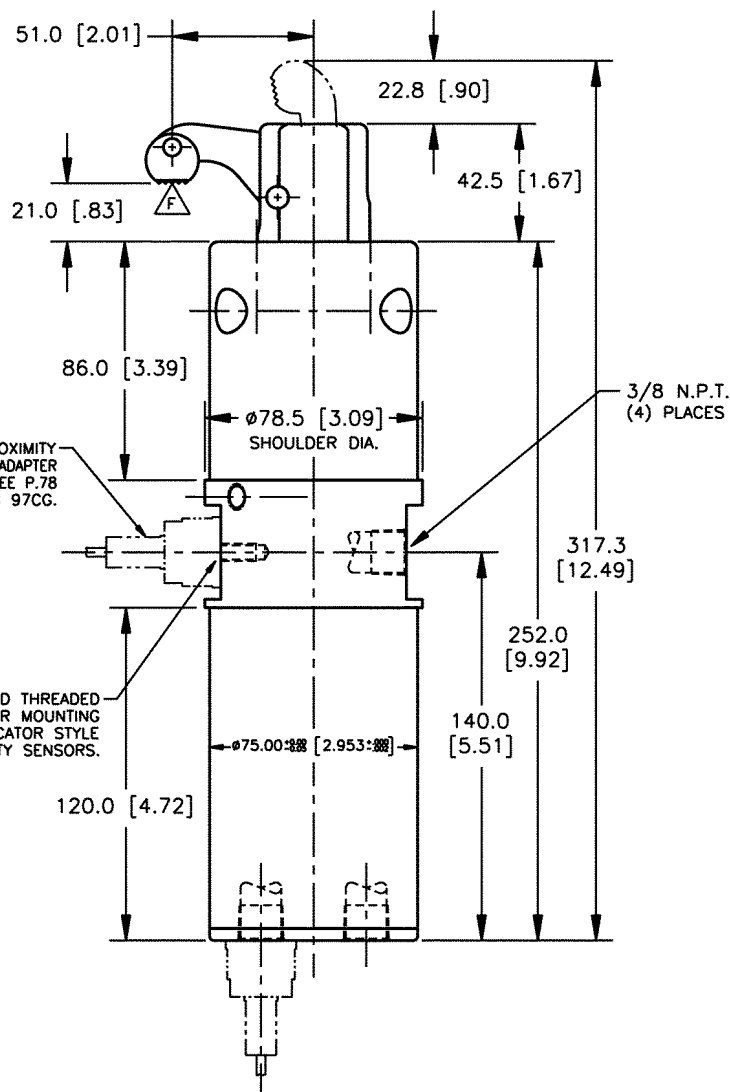
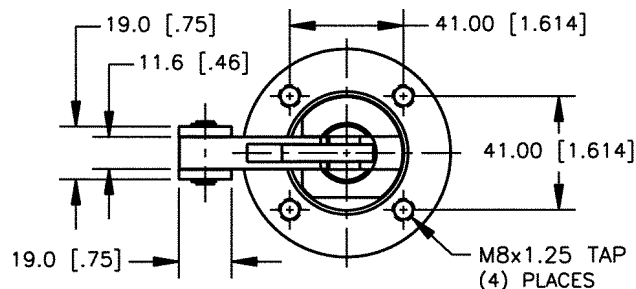
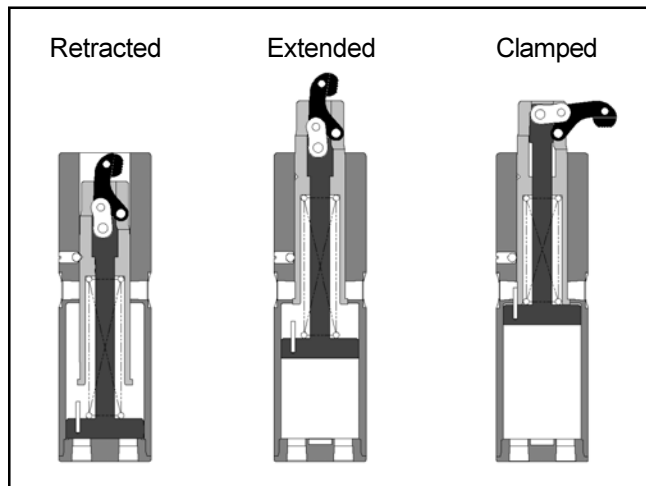


Allows simplified part transfer, or to clamp in through hole applications. The clamp head retracts into the body for clearance when open. Features rotatable mounting to simplify installation.

BORE: 1.5" [38mm]

CLAMPING FORCE
210 lbs. [934 N] @ 80 psi [5.5 bars]

Weight 8.5 lbs. [3.9 Kg.]



OPTIONAL PROXIMITY SWITCHES (See Pg. 47)

NAMCO LPR CYLINDRATOR:

LPR1 = EE230-10420 (MINI CONNECTOR)

LPR2 = EE230-10422 (MICRO CONNECTOR)

TURCK CRS CYLINDER POSITION INDICATOR:

CRS1 = Bi2-CRS-260-ADZ30X2-B1131/S34 (MINI CONNECTOR)

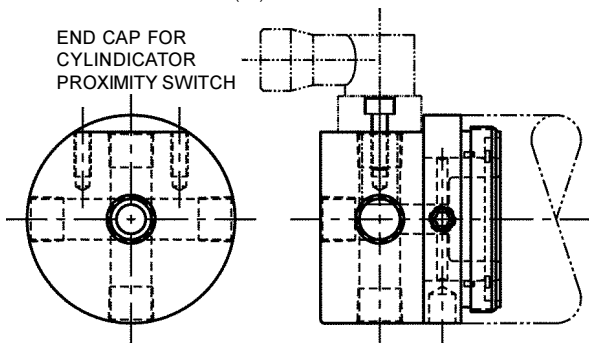
CRS2 = Bi2-CRS-260-ADZ30X2-B3131/S34 (MICRO CONNECTOR)

BTM PROXIMITY SWITCH W/ ADAPTER:

BES1 = BTM NO. 006266 (AC)

BES2 = BTM NO. 006463 (DC)

END CAP FOR
CYLINDRATOR
PROXIMITY SWITCH



HOW TO ORDER

10 - RPC 1500V - 1 - 1 B - 2 BES1

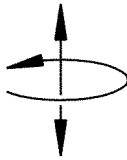
Quantity	Model	Pad no.	Quantity Mount	Quantity Prox. Switch

1500 Series Retracting Power Clamp RPC-1500-V

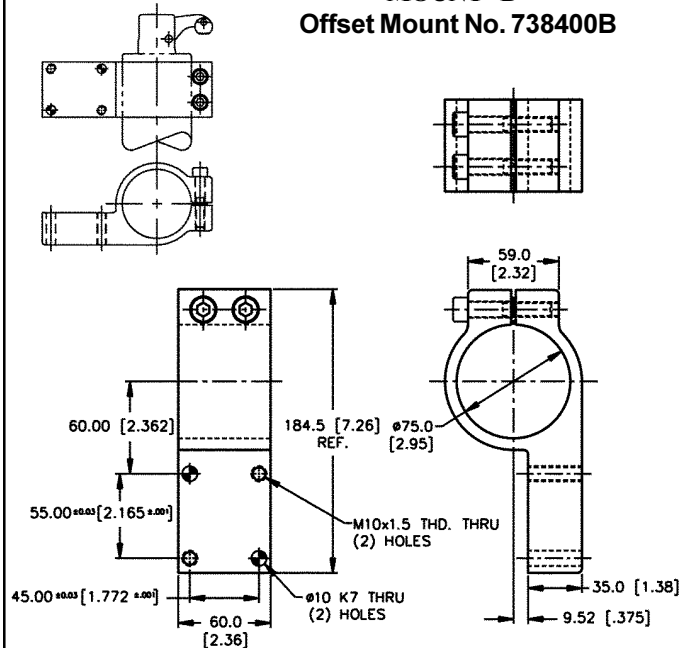
BTM

Adjustable Mounts

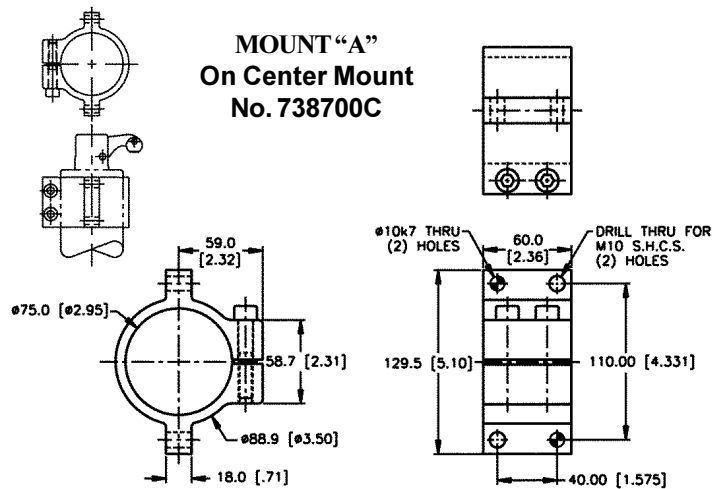
Provide linear and rotational adjustment to simplify clamp mounting.



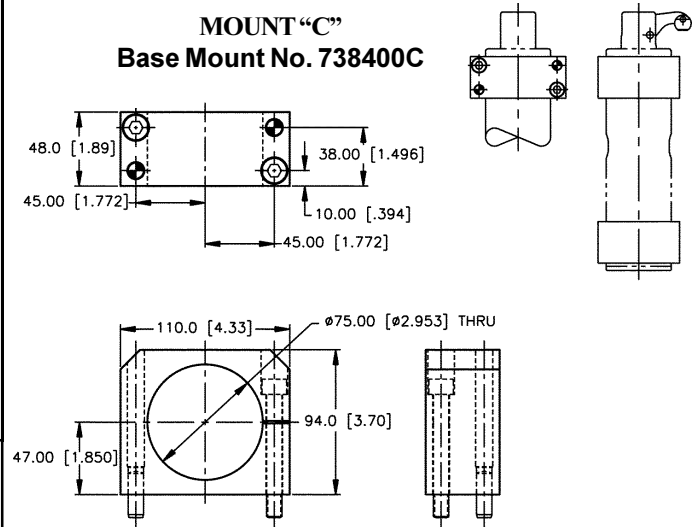
MOUNT "B"
Offset Mount No. 738400B



MOUNT "A"
On Center Mount
No. 738700C



MOUNT "C"
Base Mount No. 738400C



Interchangeable Clamp Pads



Steel Plain - #11



Steel Teeth - #1

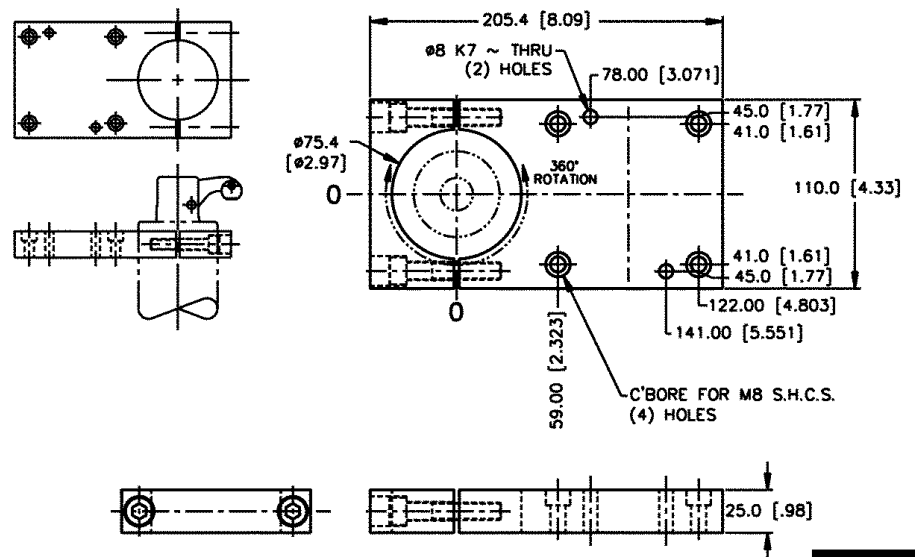


Steel Cone Point - #5



Urethane
Soft #9/60
Hard #9/90

MOUNT "D"
90° Mount No. 738900B



Rotary - Linear Power Clamps

RC 1500 Series • RC 2500 Series



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

FEATURES

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

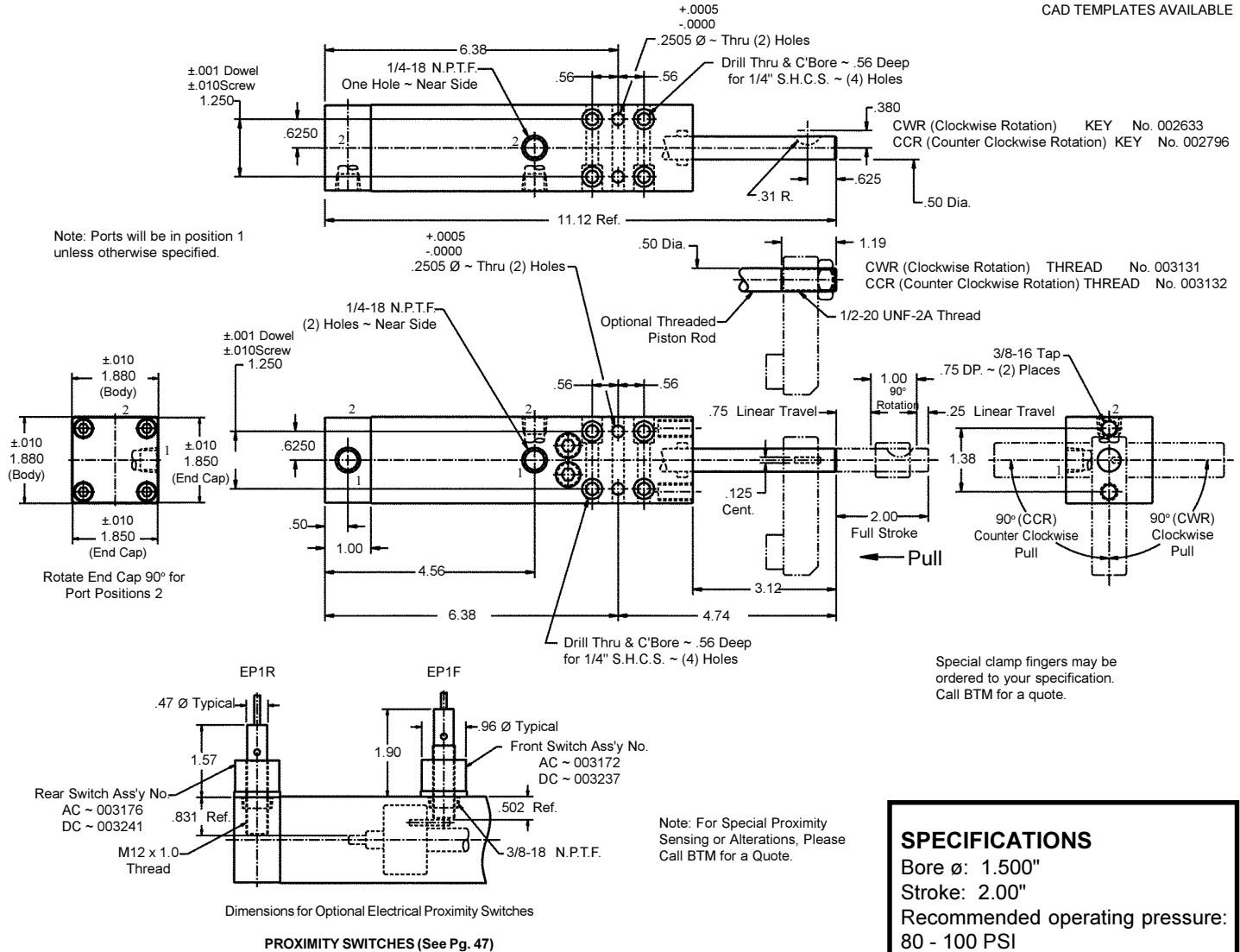


1500 Series Rotary Linear Clamp

15-90 CWR / 15-90 CCR

BTM

CAD TEMPLATES AVAILABLE



SPECIFICATIONS

Bore ø: 1.500"
 Stroke: 2.00"
 Recommended operating pressure:
 80 - 100 PSI
 Use Flow controls to reduce impact
 Approx. Weight: 3 lbs.

BTM

Manufactured by
 BTM CORPORATION
 Marysville, Michigan USA
 PATENTED

HOW TO ORDER

CLAMP FORCE (lbs) = 1.4 x Line Pressure (P.S.I.)

ROTARY CLAMP

1500 SERIES

ARM ROTATION 90°

ROTATION (CWR KEY, CWR THREAD, CCR KEY, CCR THREAD)

FRONT PORT : FP1, FP2

REAR PORT : RP1, RP2

FRONT ELEC. PROX. POSITION : EP1F, EP2F

REAR ELEC. PROX. POSITION : EP1R, EP2R

SWITCH TYPE : AC OR DC

BTM RC-1500-90-CWR KEY

BTM No. 002633

FP2-RP2-EP2F-EP2R-AC

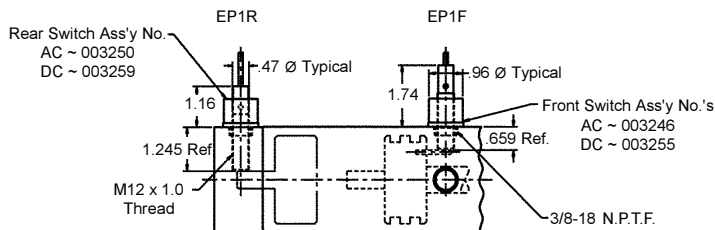
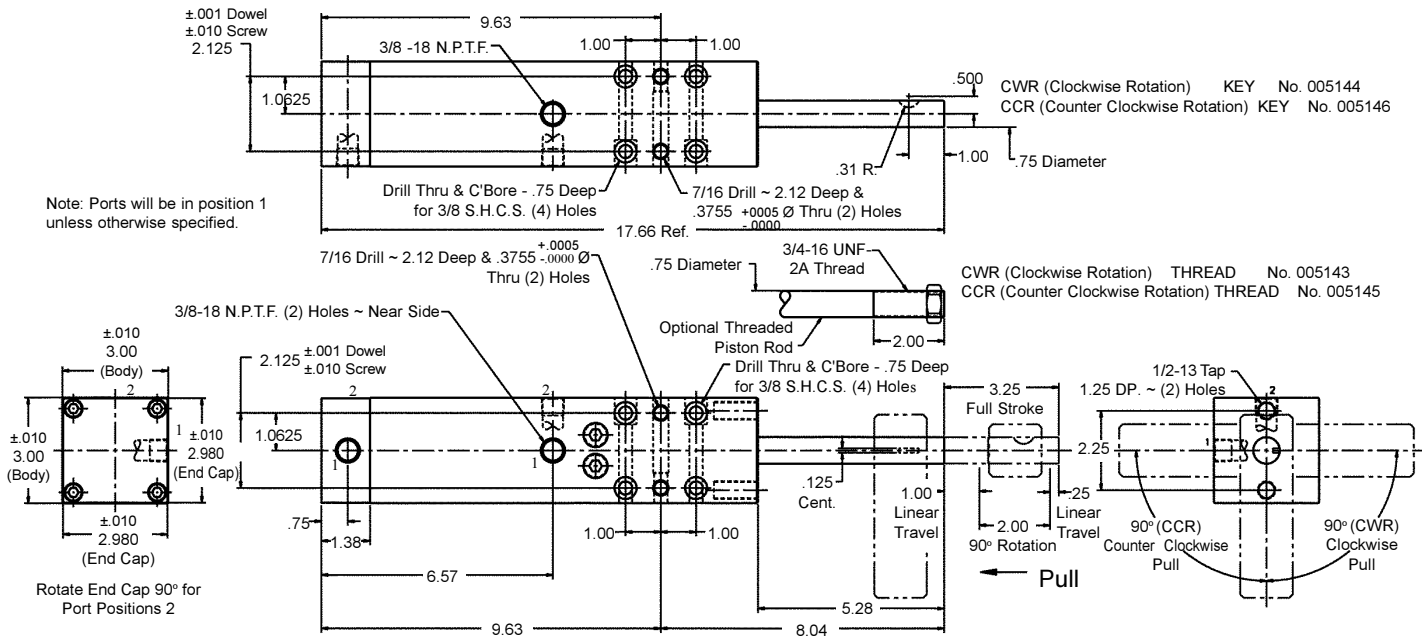
OPTIONS



2500 Series Rotary Linear Clamp

25-90 CWR / 25-90 CCR

CAD TEMPLATES AVAILABLE



Dimensions for Optional Electrical Proximity Switches

PROXIMITY SWITCHES (See Pg. 47)

Special clamp fingers may be ordered to your specification. Call BTM for a quote.

SPECIFICATIONS

Bore ø: 2.500"

Stroke: 3.25"

Recommended operating pressure:
80 - 100 PSI

Use Flow controls to reduce impact
Approx. Weight: 11 lbs.



Manufactured by
BTM CORPORATION
Marysville, Michigan USA
PATENTED

CLAMP FORCE (lbs) = 4 x Line Pressure (P.S.I.)

HOW TO ORDER

ROTARY CLAMP

1500 SERIES

ARM ROTATION 90°

ROTATION (CWR KEY, CWR THREAD, CCR KEY, CCR THREAD)

FRONT PORT : FP1, FP2

REAR PORT : RP1, RP2

FRONT ELEC. PROX. POSITION : EP1F, EP2F

REAR ELEC. PROX. POSITION : EP1R, EP2R

SWITCH TYPE : AC OR DC

BTM RC-2500-90-CWR KEY

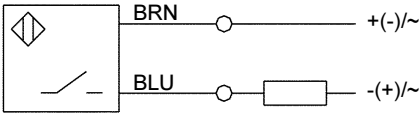
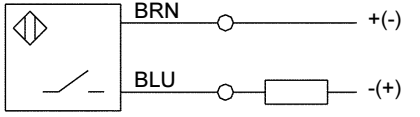
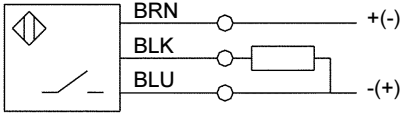
BTM No. 005144

FP2-RP2-EP2F-EP2R-AC

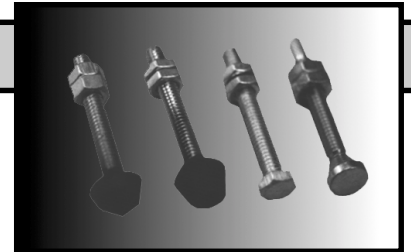
OPTIONS

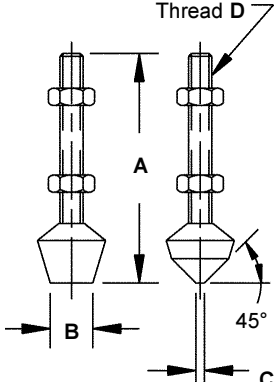
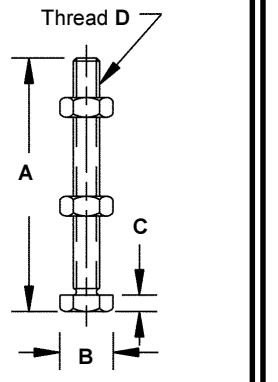
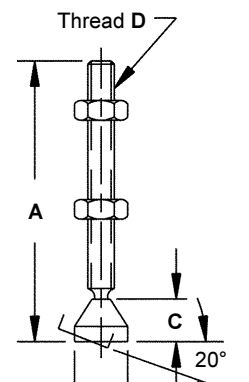
Proximity Switches for 100, 1500 & 2500 Series Clamps



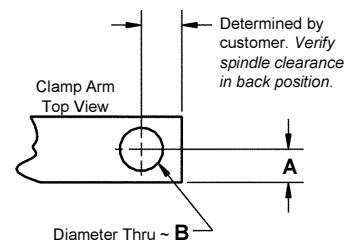
SERIES	EP1R	EP2R	EP3R	EP4R	EP5R	EP1F	EP2F	EP3F	EP4F	SPECIFICATIONS
50	006266	006266	006266	006266	006266*	006266	006266	006266	006266	AC ~ Normally Open (12mm) Supply Voltage: 20-250 VAC Load Current Max.: 5-30mA Supplied w/ 3 meter - 2 wire cable. 
63	006266	006266	006266	006266	006266	006266	006266	006266	006266	
1500	003176	003176	003176	003176	003176	003176	003176	003176	003176	
2500	003250	003250	003250	003250	003250	003250	003250	003250	003250	
100 Omni	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	
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	
100 Omni	N/A	N/A	N/A	N/A	003266	N/A	N/A	N/A	N/A	
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	DC ~ Normally Open (8mm) Sourcing Supply Voltage: 10-30 VDC Load Current Max.: ≤200mA Supplied w/ 3 meter - 3 wire cable. 
25-90	003259	003259	003259	003259	003259	003255	003255	003255	003255	
PPL	006463	006463	006463	006463	006463	006363	006363	006363	006363	
100 Omni	N/A	N/A	N/A	N/A	N/A	N/A	003265	N/A	003265	

100, 1500 & 2500 Series Clamp Arm Spindles



FLAT or CONE CUSHION SPINDLE ASSEMBLY	HEX HEAD SPINDLE ASSEMBLY	SWIVEL FOOT SPINDLE ASSEMBLY																																				
																																						
100 SERIES <i>Flat ~ 012605 / Cone ~ 012606</i>	100 SERIES 012611																																					
<table><tr><th>A</th><th>B</th><th>C</th><th>D</th></tr><tr><td>1.38"</td><td>.44"</td><td>.16"</td><td>#10-32</td></tr><tr><td>35.0mm</td><td>11.2mm</td><td>4.1mm</td><td></td></tr></table>	A	B	C	D	1.38"	.44"	.16"	#10-32	35.0mm	11.2mm	4.1mm		<table><tr><th>A</th><th>B</th><th>C</th><th>D</th></tr><tr><td>1.38"</td><td>.31"</td><td>.12"</td><td>#10-32</td></tr><tr><td>35.0mm</td><td>7.9mm</td><td>3.0mm</td><td></td></tr></table>	A	B	C	D	1.38"	.31"	.12"	#10-32	35.0mm	7.9mm	3.0mm														
A	B	C	D																																			
1.38"	.44"	.16"	#10-32																																			
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1500 SERIES <i>Flat ~ 012607 / Cone ~ 012608</i>	1500 SERIES 012612	1500 SERIES 012615																																				
<table><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		<table><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		<table><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	
A	B	C	D																																			
2.44"	.38"	.06"	1/4-20																																			
62.0mm	9.6mm	1.5mm																																				
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2500 SERIES <i>Flat ~ 012609 / Cone ~ 012610</i>	2500 SERIES 012613	2500 SERIES 012616																																				
<table><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		<table><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		<table><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	
A	B	C	D																																			
3.50"	.56"	.06"	3/8-16																																			
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A	B	C	D																																			
3.75"	.62"	.25"	3/8-16																																			
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3.50"	.62"	.50"	3/8-16																																			
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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

FLANGED WASHER for 100 SERIES CLAMPS 012617

