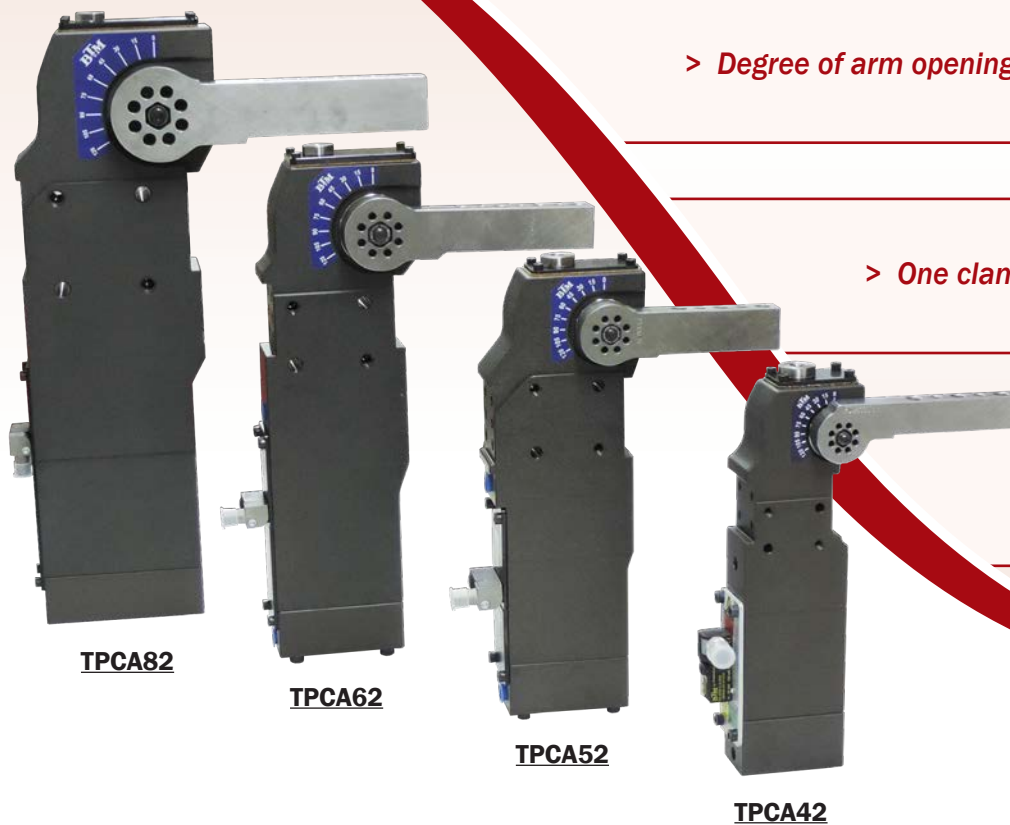


TPCA Power Clamps

Pneumatically Operated, Weld-Contamination Sealed, Heavy Duty Power Clamps



> Degree of arm opening can be adjusted from 0-120°

> One clamp for both dual or single arms

> Uses TRILOK mechanism

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

BTM[®]
COMPANY

btmcomp.com

+1.810.364.4567

**SAFETY NOTE**

It is the customer and/or user's responsibility to provide proper safety controls and/or guarding when a pinch point is present.

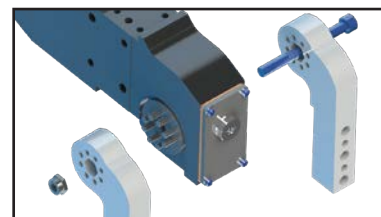
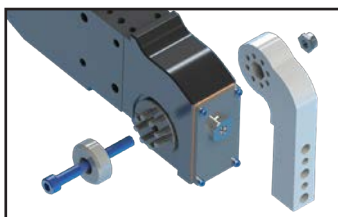
ONE CLAMP DOES IT ALL!

BTM TPCA series of adjustable clamps are NAAMS compliant pneumatically operated sealed precision power clamps available in four standard sizes: 42, 52, 62, 82mm. Each clamp is constructed using a one-piece body, and each has been designed to be rugged, yet economical, making them ideal for a range of industrial applications. These clamps utilize patented TRILOK technology - a three point locking mechanism designed to keep a locked clamp locked, even if air pressure is lost. This allows the TPCA to have the flexibility to be used as a toggle clamp, a precision back up, or as a part trap.

SAVE MONEY! BUY LESS CLAMPS!

One TPCA clamp can have single or dual arms!

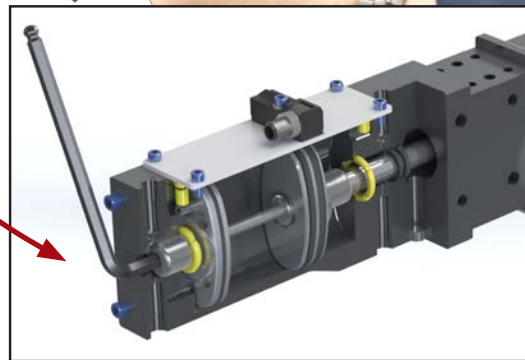
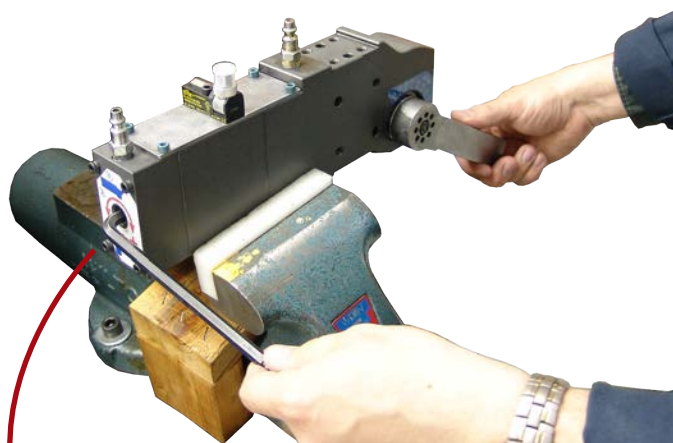
With BTM TPCA Clamps, you can reduce your spare inventory by keeping less clamps on the shelf.

**ADDITIONAL TPCA CLAMP FEATURES**

- One clamp model for single and dual arm clamps - No need to change internal parts.
- Pin Arm Drive for versatile arm positioning & simplified arm change.
- 5 - 120 degree of arm opening adjustability.
- Integrated proximity switch. No need to be adjusted for opening change.
- Top and Bottom porting.
- TPCA52, 62, and 82 complies to Global Standard Components NAAMS Spec.
- One Piece Body with Integrated Cylinder.
- Body is constructed of Aircraft Aluminum, Hardcoated to a Rockwell C-70 for Excellent Wear Characteristics.
- Sealed Mechanism - Lubricated for Life of Clamp.
- Self Pumping Slide Rod Lubrication.
- Cushions Standard on Both Advance and Retract Motions.
- Access to manually unlock clamp linkage.
- Patented Precision TriLok Mechanism.

CHANGING THE DEGREE OF ARM OPENING IS EASY!

A TPCA Clamp is Adjustable using a Hex Wrench!

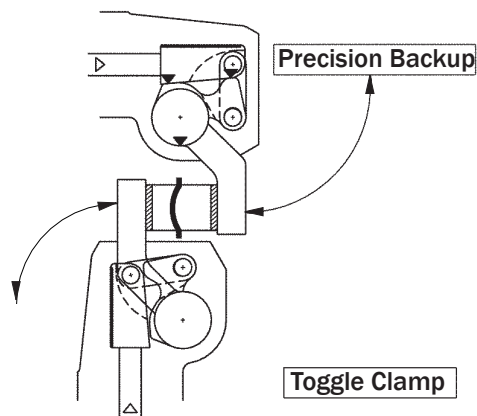
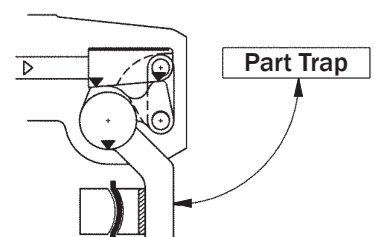
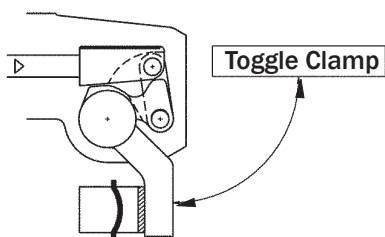
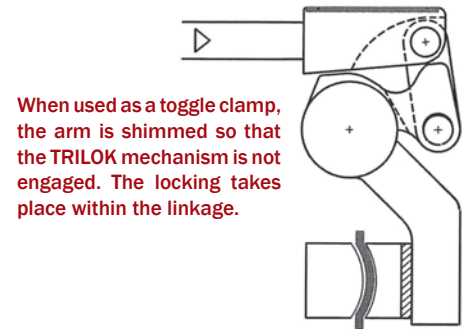
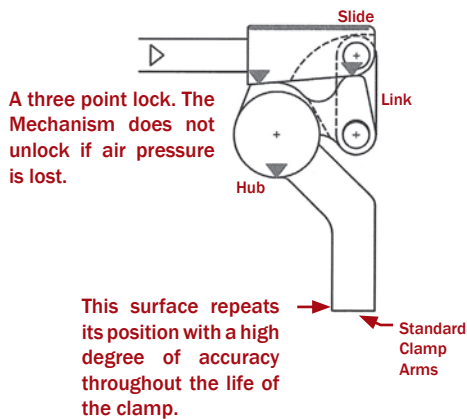
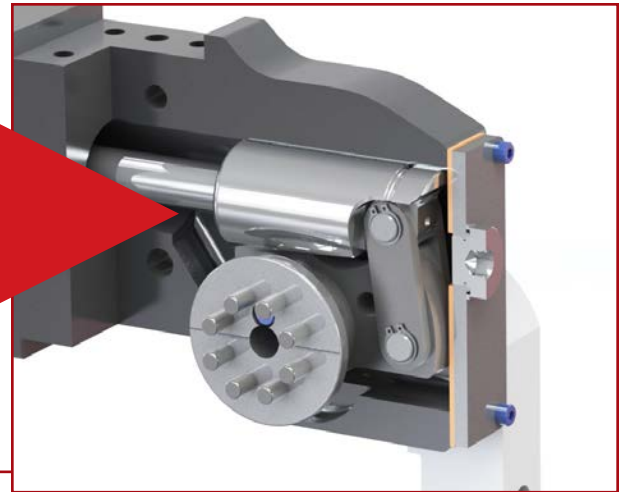


TPCA CLAMPS UTILIZE PATENTED

TRILOK

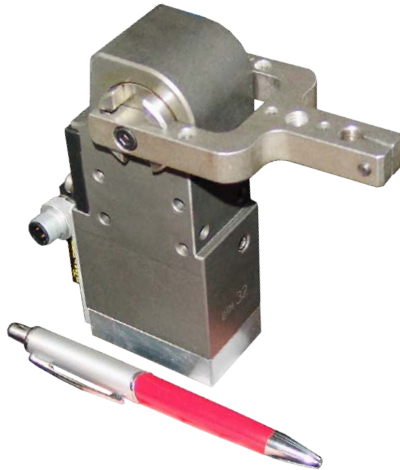
TECHNOLOGY

BTM patented TRILOK mechanism can be used as a clamp or as a precision back up and eliminates “over center” clamps.



NEED A SMALLER CLAMP? CHECK OUT BTM TPC-32!

BTM TPC-32 is weld-contamination sealed, light weight, features a 32mm bore, and a three point locking mechanism.



Bore Size		31.8 [1.25] DIA. = 791.7mm ² [1.23in ²]					
Arm Rotation (Deg.)	35	50	65	80	95	110	120
Cylinder Stroke (mm)	11.5	14.1	16.6	19.2	21.8	24.4	24.6
Maximum Full Cycle Cylinder Volume		38.5 cm ³ [2.35in ³]					
Recommended Operating Pressure		2.75 to 7 BAR [40 to 100 PSI] (Lubricated or Non-Lubricated Compressed Air)					
Weight		1.0 kg [2.21 lbs] Without Arm					
Holding Torque		30 Nm [22 lbf]					
Clamping Torque		12.4 Nm @ 5.5 BAR [9.16 lbf-ft @ 80 PSI]					
Cycle Time (based on a 120° opening at 5.5 BAR [80PSI])		1.0 second closing cycle 1.25 second opening cycle					

BTM ALSO OFFERS OTHER CLAMP SOLUTIONS INCLUDING:

GENERAL CLAMPING

PC SERIES POWER CLAMPS

Rugged and reliable, the BTM PC series of clamps are designed to provide high clamping forces and long work life within a compact, lightweight unit. The one-piece body eliminates premature wear due to misalignment and binding.



LIGHT DUTY CLAMPING

100 SERIES CLAMPS

These cost-effective 25mm bore clamps are designed for high production. Most models feature a manually positionable rotating head which locks into place when mounting screws are tightened, eliminating the need for angled mounting surfaces.



SPECIALTY CLAMPING

ASK ABOUT OUR ROTARY-LINEAR CLAMPS!



TABLE OF CONTENTS

TPCA42 **6-9**

- **TPCA42 CLAMP** **6-7**
- **TPCA42 ARMS** **8-9**

Holding Torque	165 Nm [122 lbf]
Clamping Torque	43.4 Nm @ 5.5 BAR [32 lbf @ 80 PSI]



TPCA52 **10-13**

- **TPCA52 CLAMP** **10-11**
- **TPCA52 ARMS** **12-13**

Holding Torque	290 Nm [214 lbf]
Clamping Torque	89.5 Nm @ 5.5 BAR (66 lbf @ 80 PSI)



TPCA62 **14-17**

- **TPCA62 CLAMP** **14-15**
- **TPCA62 ARMS** **16-17**

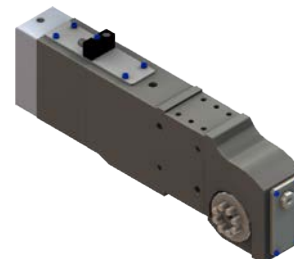
Holding Torque	450 Nm [330 lbf]
Clamping Torque	257.6 Nm @ 5.5 BAR (190 lbf @ 80 PSI)



TPCA82 **18-21**

- **TPCA82 CLAMP** **18-19**
- **TPCA82 ARMS** **20-21**

Holding Torque	745 Nm [550 lbf]
Clamping Torque	496.2 Nm @ 5.5 BAR (366 lbf @ 80 PSI)

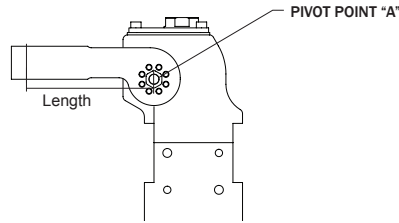


SWITCH INFORMATION **22**

WARRANTY INFORMATION **23**

TPCA42

CLAMPING FORCE	
BARS	7910 x Line Pressure (BAR) Length (mm) from POINT "A" to the center line of clamping contact area on clamp arm
PSI	4.8 x Line Pressure (PSI) Length (in) from POINT "A" to the center line of clamping contact area on clamp arm



For TPCA42 Arm Information See Pages 8-9.

HOW TO ORDER

CLAMP					LEFT ARM					RIGHT ARM					SWITCH		PRESET
TPCA	42	G	P	-	PD253304H	180	A	L	-	PD253304H	180	A	R	-	BDC	-	90
CLAMP SERIES	CLAMP SIZE	PORT OPTION	HUB CONNECTION TYPE		BTM ARM NUMBER	ARM POSITION	ARM ORIENTATION	ARM SIDE		BTM ARM NUMBER	ARM POSITION	ARM ORIENTATION	ARM SIDE		SWITCH STYLE		PRESET ARM OPENING (DEFAULT IS 90°)
					See p. 9					See p. 9					See p. 22		

PORT OPTION	
	BTM No.
N = 1/8 NPT	PD253300A
G = G1/8	PD253500A
HUB CONNECTION TYPE	
P = PIN HUB	

STANDARD ARM POSITION (WHEN CLOSED) - CONTACT BTM FOR SPECIALS

Clamp is shown in the closed position.

The maximum counter-clockwise arm opening value is noted in degrees for the specified arm positions to the right.

STANDARD ARM ORIENTATION (A)			
Arm Mounting Position Code	Offset Arm		
	Straight	15	45
0	N/A	120°	120°
45	120°	120°	120°
90	120°	120°	120°
135	120°	120°	90°
180	105°	90°	45°
225	60°	45°	N/A
270	N/A	N/A	N/A

INVERTED ARM ORIENTATION (B)			
Arm Mounting Position Code	Offset Arm		
	Straight	15	45
0	N/A	N/A	N/A
45	120°	N/A	N/A
90	120°	120°	120°
135	120°	120°	120°
180	120°	120°	120°
225	75°	90°	120°
270	30°	45°	75°

ARM ORIENTATION

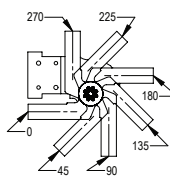
A = Standard
B = Inverted

ARM SIDE

Left Arm

Right Arm

Dual Arm

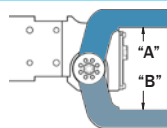


Clamp is shown in the closed position.

The maximum counter-clockwise arm opening value is noted in degrees for the specified arm positions to the right.

ARM ORIENTATION

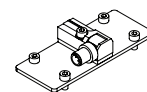
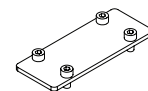
A = Standard
B = Inverted



ARM SIDE



SWITCH	PRESET
NS (No Switch)	30° 45° 60° 75° 90° 105° 120°
BDC (Turck DC)	

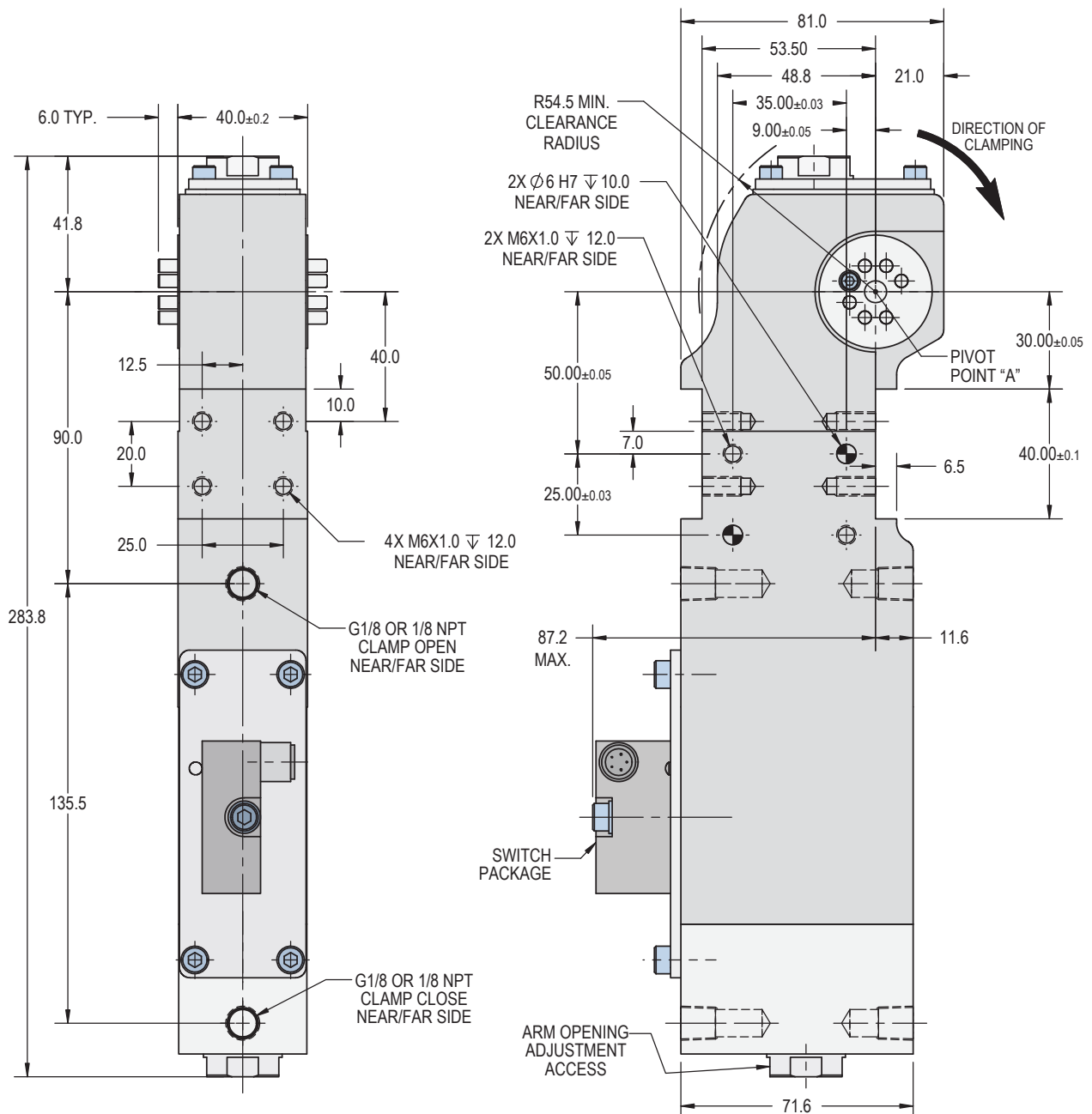


TPCA42

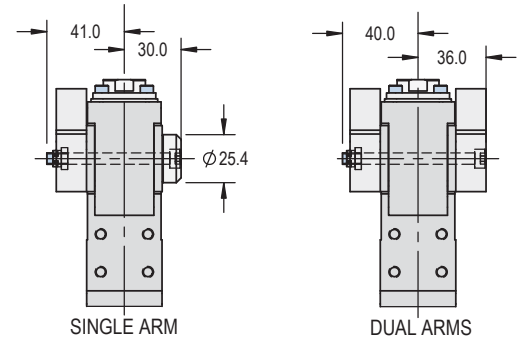
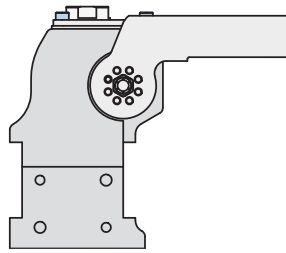
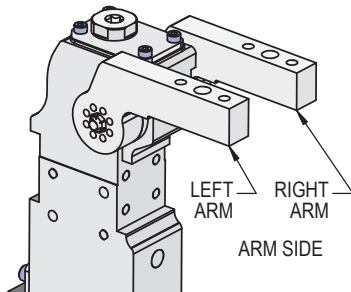
Equivalent Bore Size	42.0 [1.65"] DIA. = 1395mm ² [2.16in ²]						
Arm Rotation (Deg.)	30	45	60	75	90	105	120
Cylinder Stroke (mm)	19.7	25.1	30.4	35.9	41.8	47.6	52.9
Recommended Operating Pressure	2.75 to 7 BAR [40 to 100 PSI] (Lubricated or Non-Lubricated Compressed Air)						
Weight	2.0 kg [4.5 lbs] Without Arm						
Holding Torque	165 Nm [122 lbf-ft] (No Air & Maintaining Rated Repeatability)						

Clamping Torque	43.4 Nm @ 5.5 BAR [32 lbf-ft @ 80 PSI]
Arm to Mount Accuracy	± 0° 15' (Clamp to Clamp)
Repeatability	± 0° 3'
Cycle Time	1.0 second Clamp Closing Cycle 1.0 second Clamp Opening Cycle
Permissible Clamp Offset Distance	30.0mm [1.18"] (See p. 8)

USE FLOW CONTROLS TO REDUCE IMPACT

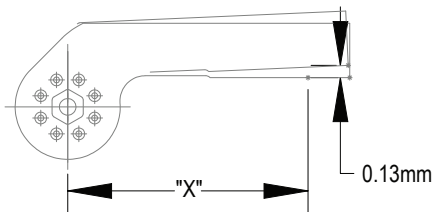


TPCA42 CLAMP ARM INFORMATION



ARM MOUNTING WITH HARDWARE

CLAMP ARM DEFLECTION UNDER LOAD

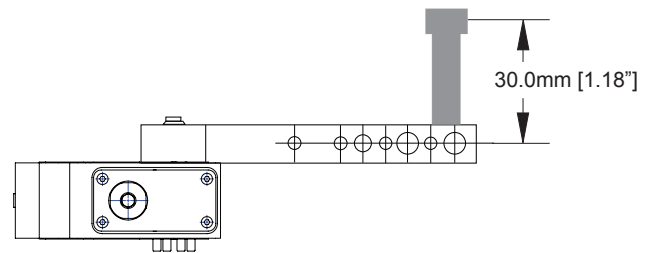


ARM DEFLECTION UNDER LOAD

Force on arm at "X" distance from pivot resulting in 0.13mm Maximum deflection.

"X" (mm)	Force (N)
125	88
100	144
75	200

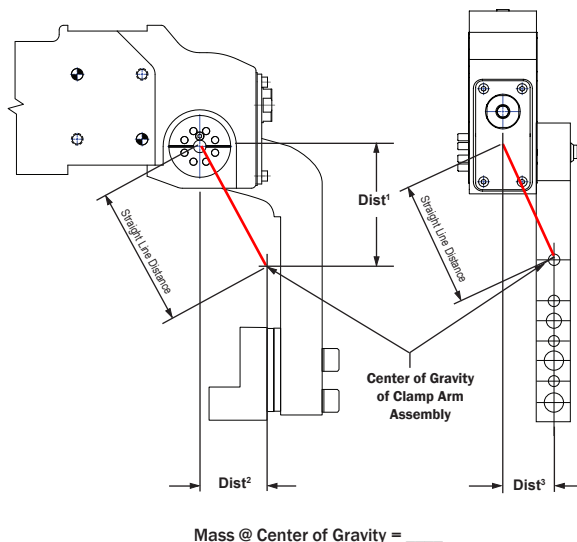
PERMISSIBLE CLAMP OFFSET DISTANCE



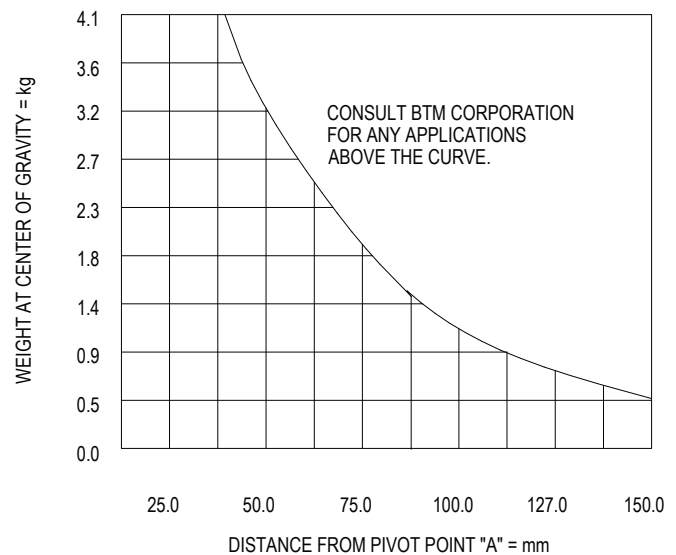
MAXIMUM ALLOWABLE WEIGHT ON CLAMP ARM ASSEMBLY

Refer to the charts below for model-specific information regarding the recommended allowable weight on the arm at given distances from the pivot. The distance from Pivot Point is the straight line distance from the centerline of the clamp at the pivot point to the center of gravity of the clamp arm assembly. The center of gravity is figured using the weight of the arm plus the total weight mounted on the arm. When using dual arms, add the weight of the second arm to the total weight.

CENTER OF GRAVITY OF CLAMP ARM ASSEMBLY

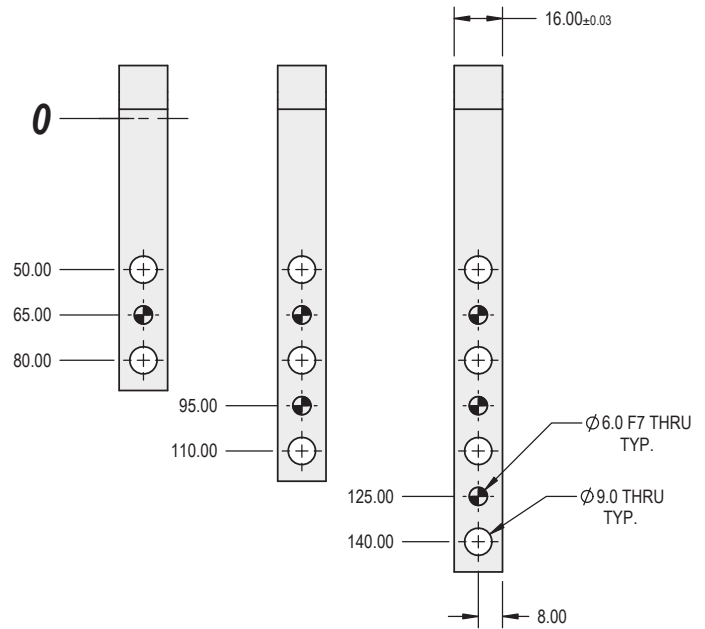
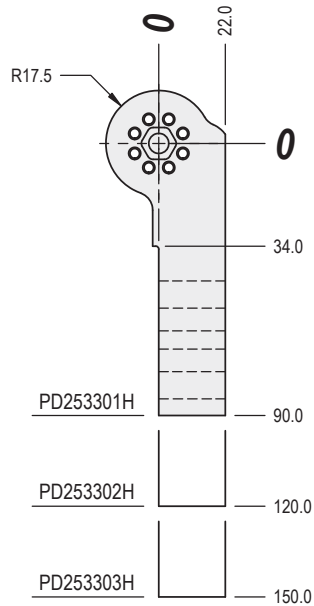


CLAMP ARM MAXIMUM WEIGHT

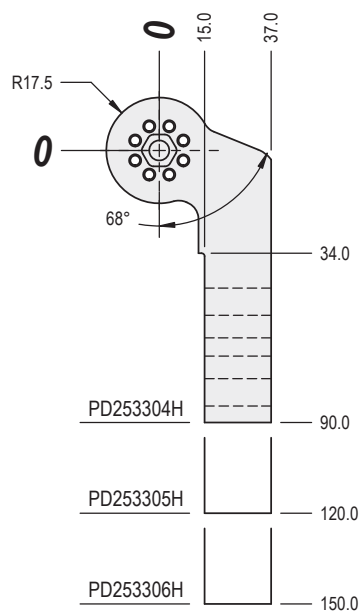


TPCA42 CLAMP ARMS

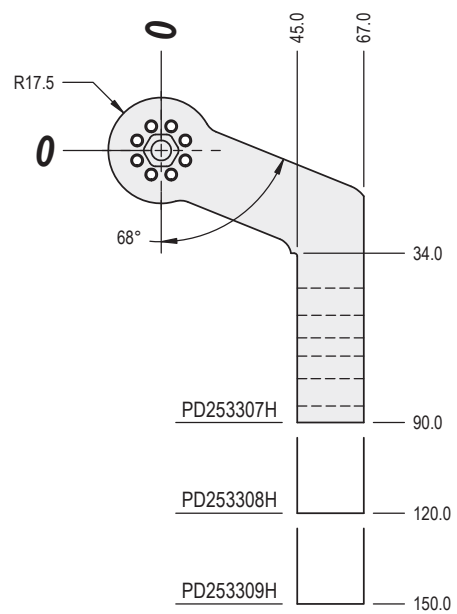
STRAIGHT ARM



15 OFFSET

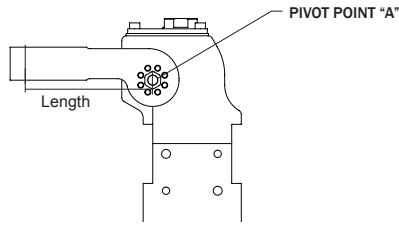


45 OFFSET



TPCA52

CLAMPING FORCE	
BARS	$16500 \times \text{Line Pressure (BAR)}$ Length (mm) from POINT "A" to the center line of clamping contact area on clamp arm
PSI	$10 \times \text{Line Pressure (PSI)}$ Length (in) from POINT "A" to the center line of clamping contact area on clamp arm



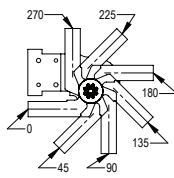
For TPCA52 Arm Information See Pages 12-13.

HOW TO ORDER

CLAMP					LEFT ARM					RIGHT ARM					SWITCH		PRESET
TPCA	52	G	P	-	PD222216H	180	A	L	-	PD222216H	180	A	R	-	TDC	-	90
CLAMP SERIES	CLAMP SIZE	PORT OPTION	HUB CONNECTION TYPE		BTM ARM NUMBER	ARM POSITION	ARM ORIENTATION	ARM SIDE		BTM ARM NUMBER	ARM POSITION	ARM ORIENTATION	ARM SIDE		SWITCH STYLE		PRESET ARM OPENING (DEFAULT IS 90°)
					See p. 13					See p. 13					See p. 13		

PORT OPTION	
	BTM No.
N = 1/4 NPT	PD250500A
G = G1/4	PD251300A
HUB CONNECTION TYPE	
P = PIN HUB	

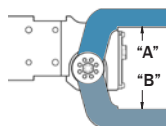
STANDARD ARM POSITION (WHEN CLOSED) - CONTACT BTM FOR SPECIALS									
Arm Mounting Position Code	STANDARD ARM ORIENTATION (A)			Arm Mounting Position Code	INVERTED ARM ORIENTATION (B)			Offset Arm	Offset Arm
	Straight	25	50		Straight	25	50		
0	N/A	120°	120°	0	N/A	N/A	N/A		
45	N/A	120°	120°	45	N/A	N/A	N/A		
90	120°	120°	120°	90	120°	N/A	N/A		
135	120°	90°	75°	135	120°	120°	120°		
180	90°	45°	30°	180	90°	120°	120°		
225	45°	N/A	N/A	225	45°	90°	105°		
270	N/A	N/A	N/A	270	N/A	45°	60°		



Clamp is shown in the closed position.
The maximum counter-clockwise arm opening value is noted in degrees for the specified arm positions to the right.

ARM ORIENTATION

A = Standard
B = Inverted



ARM SIDE



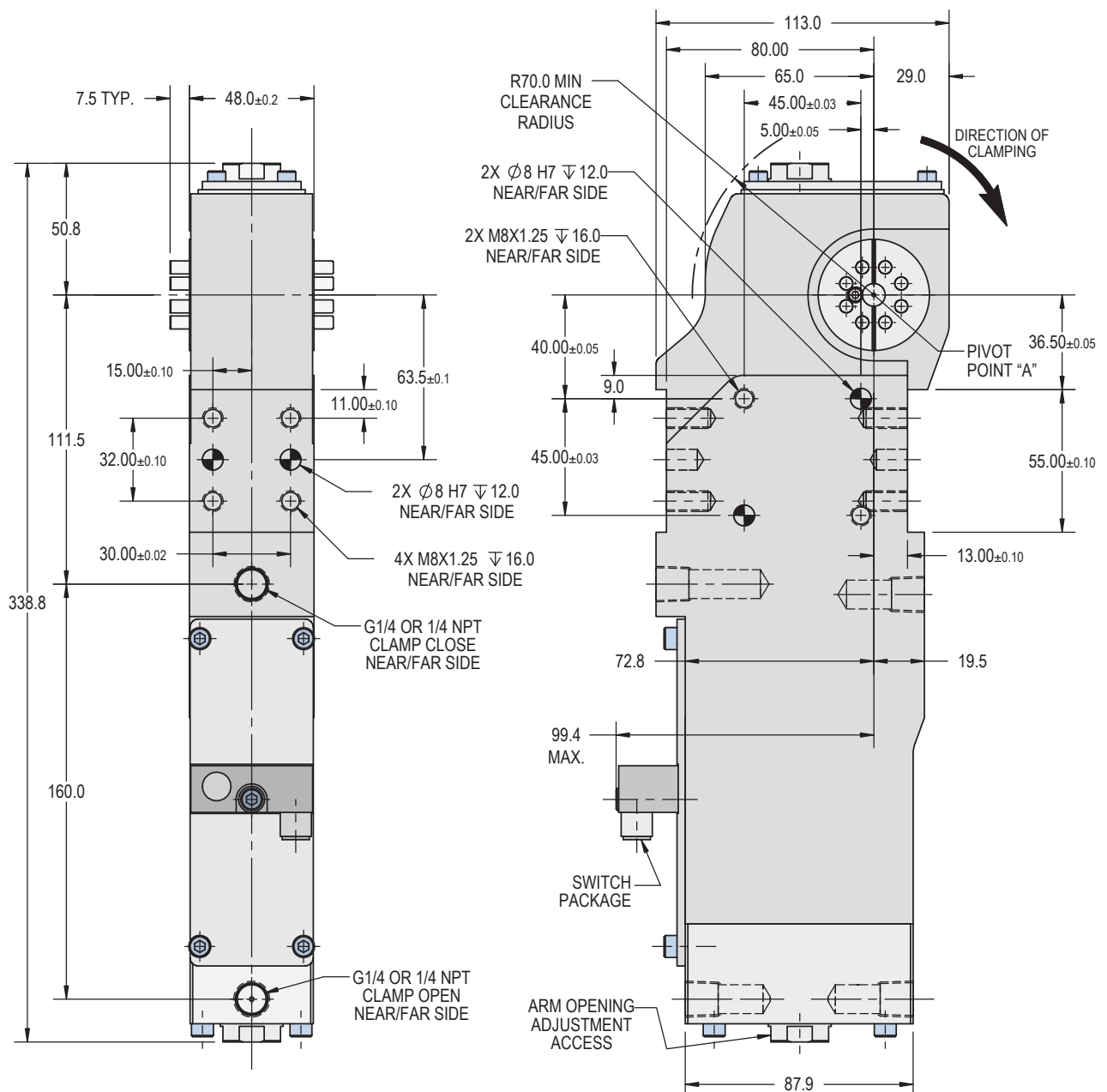
SWITCH	PRESET
 NS (No Switch)	30° 45° 60° 75° 90° 105° 120°
 TDC (Turck DC) [Standard]	
See p.22 for additional switch options.	

TPCA52

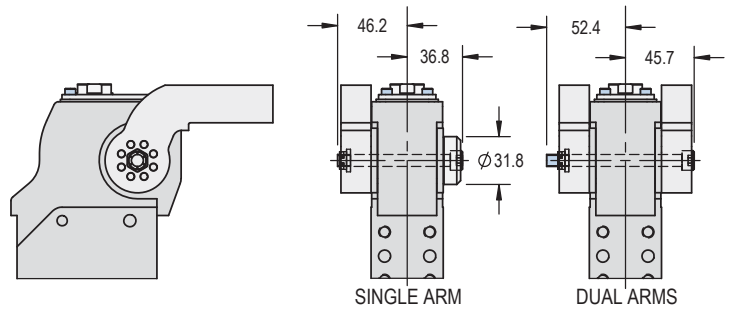
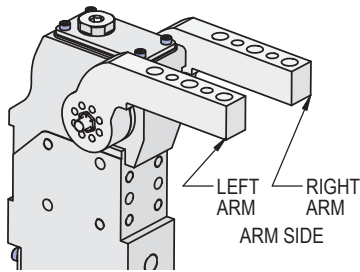
Equivalent Bore Size	52.0 [2.00] DIA. = 2026mm ² [3.14in ²]						
Arm Rotation (Deg.)	30	45	60	75	90	105	120
Cylinder Stroke (mm)	25.99	33.17	40.24	47.63	55.40	63.20	70.28
Recommended Operating Pressure	2.75 to 7 BAR [40 to 100 PSI] (Lubricated or Non-Lubricated Compressed Air)						
Weight	3.8 kg [8.4 lbs] Without Arm						
Holding Torque	290 Nm [214 lbf-ft] (No Air & Maintaining Rated Repeatability)						

Clamping Torque	89.5 Nm @ 5.5 BAR [66 lbf-ft @ 80 PSI]
Arm to Mount Accuracy	± 0° 15' (Clamp to Clamp)
Repeatability	± 0° 3'
Cycle Time	1.0 second Clamp Closing Cycle 1.0 second Clamp Opening Cycle
Permissible Clamp Offset Distance	37.5mm [1.48"] (See p. 12)

USE FLOW CONTROLS TO REDUCE IMPACT

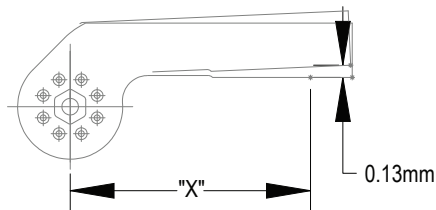


TPCA52 CLAMP ARM INFORMATION



ARM MOUNTING WITH HARDWARE

CLAMP ARM DEFLECTION UNDER LOAD

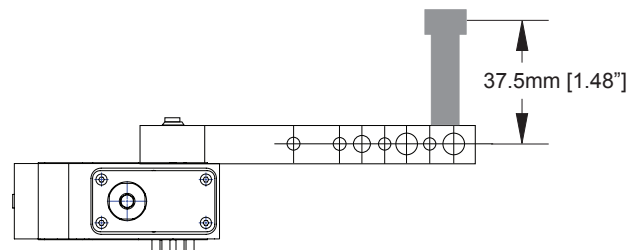


ARM DEFLECTION UNDER LOAD

Force on arm at "X" distance from pivot resulting in 0.13mm Maximum deflection.

"X" (mm)	Force (N)
125	113
100	165
75	290

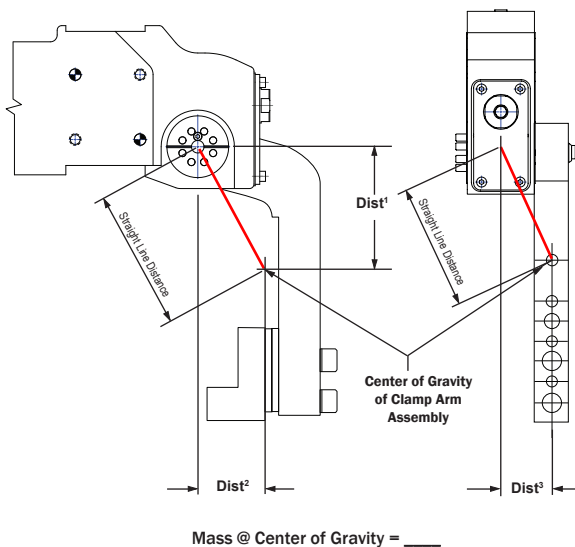
PERMISSIBLE CLAMP OFFSET DISTANCE



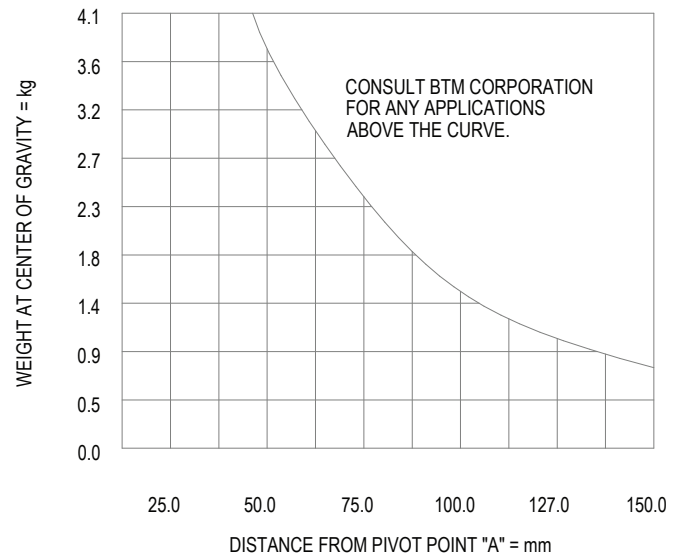
MAXIMUM ALLOWABLE WEIGHT ON CLAMP ARM ASSEMBLY

Refer to the charts below for model-specific information regarding the recommended allowable weight on the arm at given distances from the pivot. The distance from Pivot Point is the straight line distance from the centerline of the clamp at the pivot point to the center of gravity of the clamp arm assembly. The center of gravity is figured using the weight of the arm plus the total weight mounted on the arm. When using dual arms, add the weight of the second arm to the total weight.

CENTER OF GRAVITY OF CLAMP ARM ASSEMBLY

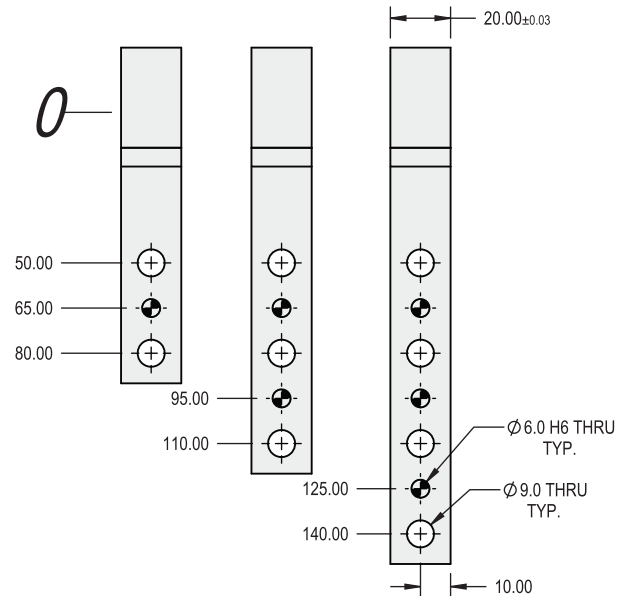
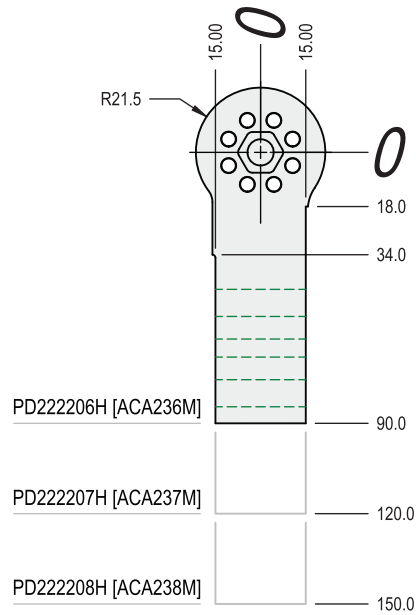


CLAMP ARM MAXIMUM WEIGHT

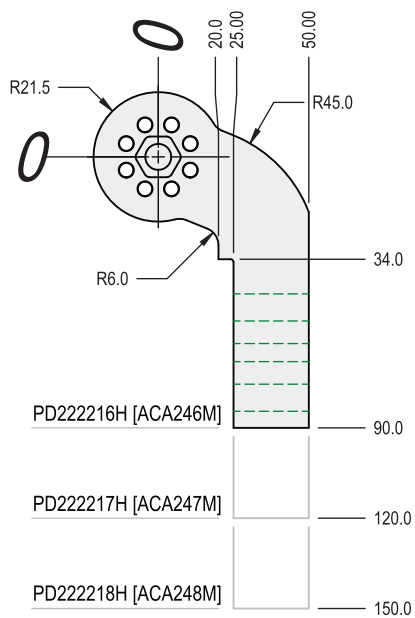


TPCA52 CLAMP ARMS

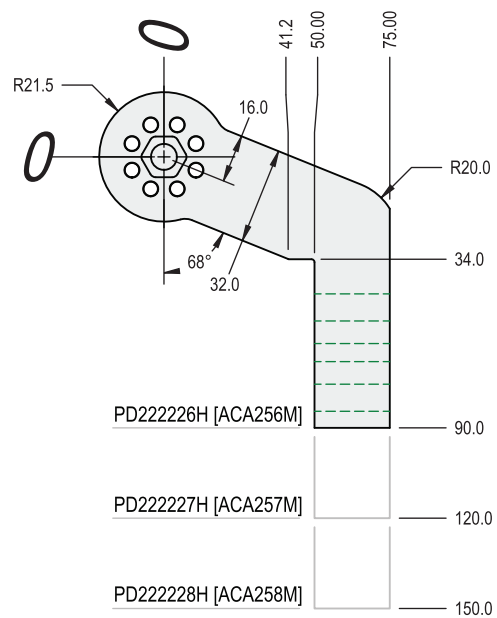
STRAIGHT ARM



15 OFFSET

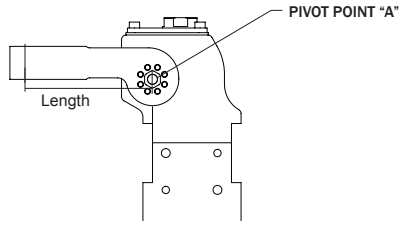


45 OFFSET



TPCA62

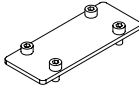
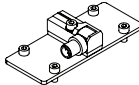
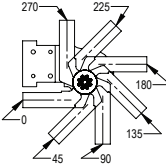
CLAMPING FORCE	
BARS	$46500 \times \text{Line Pressure (BAR)}$ Length (mm) from POINT "A" to the center line of clamping contact area on clamp arm
PSI	$28.5 \times \text{Line Pressure (PSI)}$ Length (in) from POINT "A" to the center line of clamping contact area on clamp arm



For TPCA62 Arm Information See Pages 16-17.

HOW TO ORDER

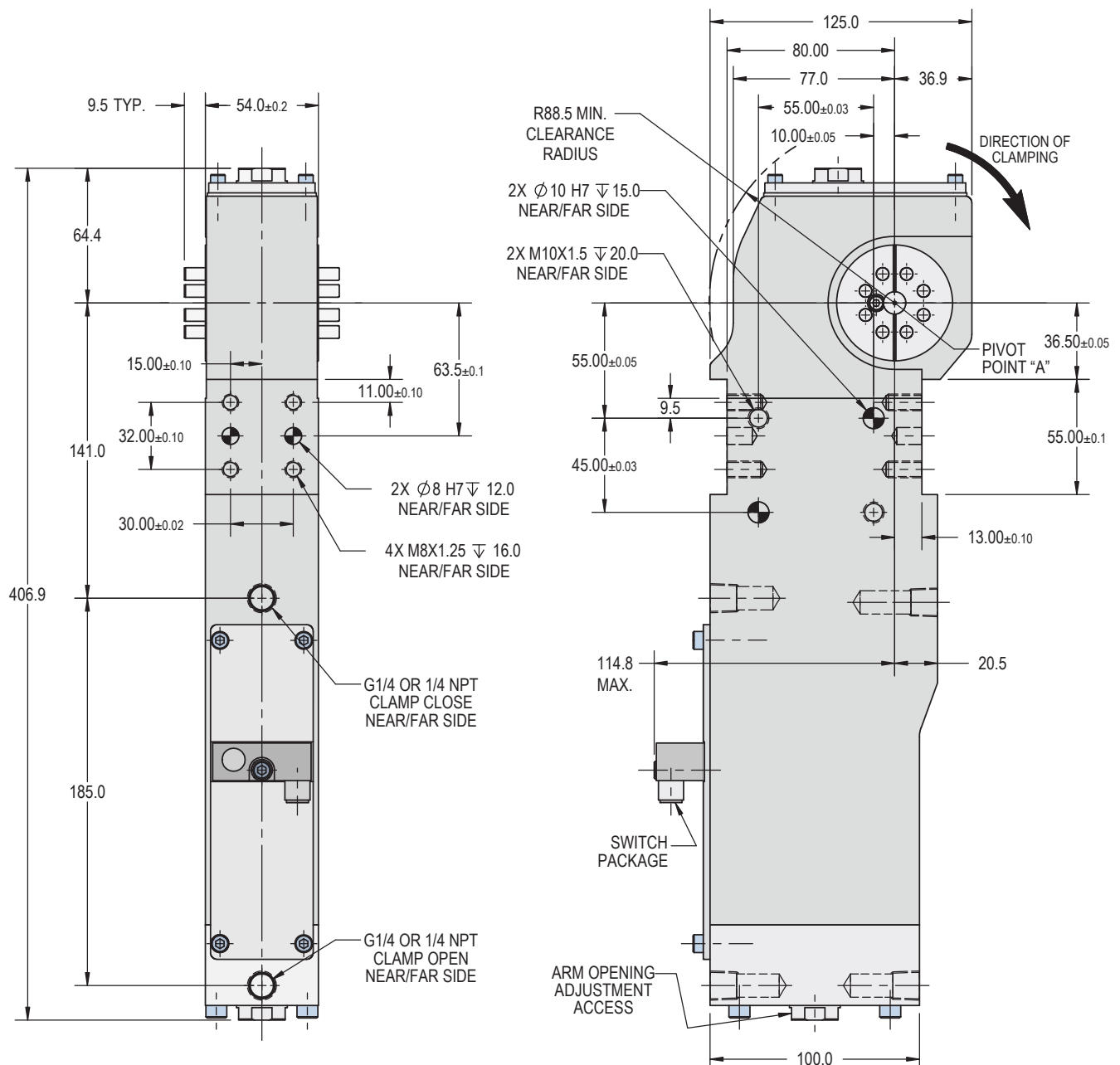
CLAMP				LEFT ARM				RIGHT ARM				SWITCH	PRESET
TPCA	62	G	P	7231519H	180	A	L	7231519H	180	A	R	TDC	90
CLAMP SERIES	CLAMP SIZE	PORT OPTION	HUB CONNECTION TYPE	BTM ARM NUMBER	ARM POSITION	ARM ORIENTATION	ARM SIDE	BTM ARM NUMBER	ARM POSITION	ARM ORIENTATION	ARM SIDE	SWITCH STYLE	PRESET ARM OPENING (DEFAULT IS 90°)
See p. 17				See p. 17				See p. 22					

PORT OPTION		STANDARD ARM POSITION (WHEN CLOSED) - CONTACT BTM FOR SPECIALS										SWITCH	PRESET
	BTM No.												30°
N = 1/4 NPT	PD234400A												45°
G = G1/4	PD234900A												60°
HUB CONNECTION TYPE												75°	
P = PIN HUB		Clamp is shown in the closed position.										90°	
		The maximum counter-clockwise arm opening value is noted in degrees for the specified arm positions to the right.										105°	
													120°

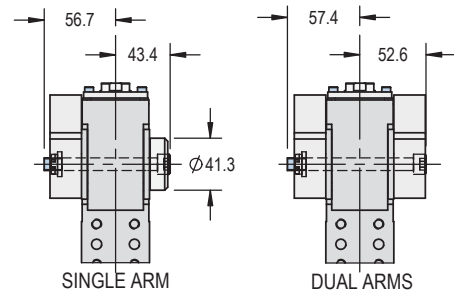
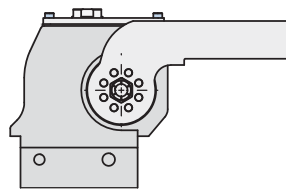
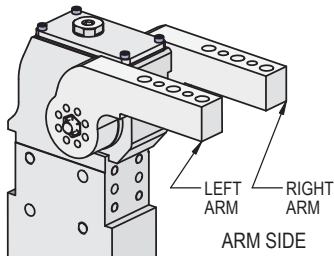
TPCA62

Equivalent Bore Size		62.0 [2.50"] DIA. = 3161mm ² [4.91in ²]					
Arm Rotation (Deg.)	30	45	60	75	90	105	120
Cylinder Stroke (mm)	34.06	43.67	53.07	62.87	73.18	80.14	93.05
Recommended Operating Pressure		2.75 to 7 BAR [40 to 100 PSI] (Lubricated or Non-Lubricated Compressed Air)					
Weight		5.8 kg [12.6 lbs] Without Arm					
Holding Torque		450 Nm [330 lbf-ft] (No Air & Maintaining Rated Repeatability)					
Clamping Torque		257.6 Nm @ 5.5 BAR [190 lbf-ft @ 80 PSI]					
Arm to Mount Accuracy		± 0° 15' (Clamp to Clamp)					
Repeatability		± 0° 3'					
Cycle Time		1.0 second Clamp Closing Cycle 1.0 second Clamp Opening Cycle					
Permissible Clamp Offset Distance		75mm [2.95"] (see p.16)					

USE FLOW CONTROLS TO REDUCE IMPACT

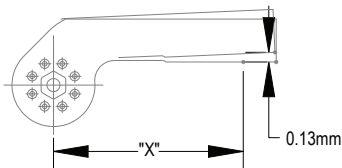


TPCA62 CLAMP ARM INFORMATION



ARM MOUNTING WITH HARDWARE

CLAMP ARM DEFLECTION UNDER LOAD

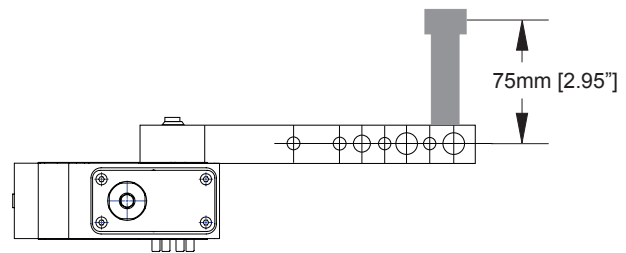


Arm Deflection Under Load

Force on arm at "X" distance from pivot resulting in 0.13mm Maximum deflection.

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

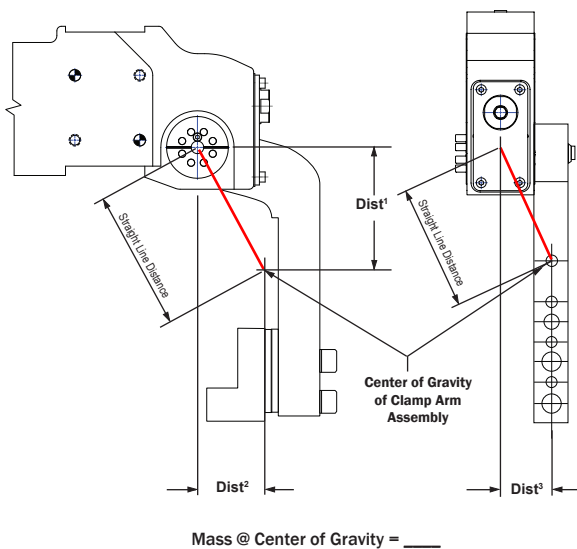
PERMISSIBLE CLAMP OFFSET DISTANCE



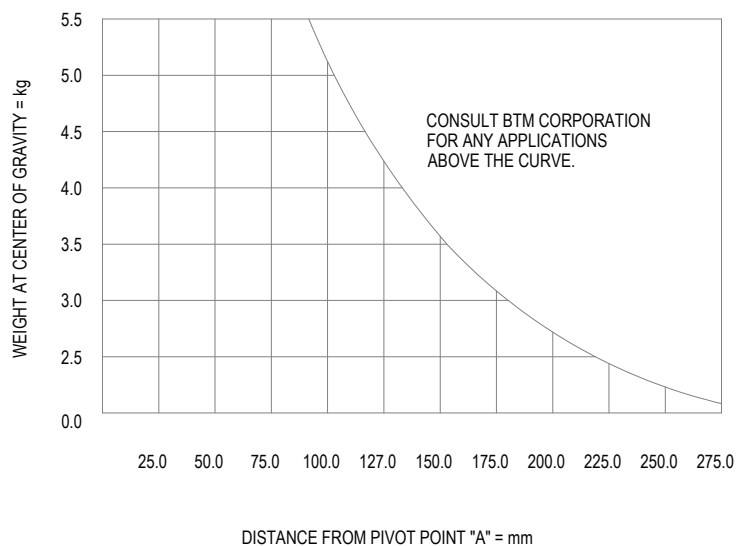
MAXIMUM ALLOWABLE WEIGHT ON CLAMP ARM ASSEMBLY

Refer to the charts below for model-specific information regarding the recommended allowable weight on the arm at given distances from the pivot. The distance from Pivot Point is the straight line distance from the centerline of the clamp at the pivot point to the center of gravity of the clamp arm assembly. The center of gravity is figured using the weight of the arm plus the total weight mounted on the arm. When using dual arms, add the weight of the second arm to the total weight.

CENTER OF GRAVITY OF CLAMP ARM ASSEMBLY

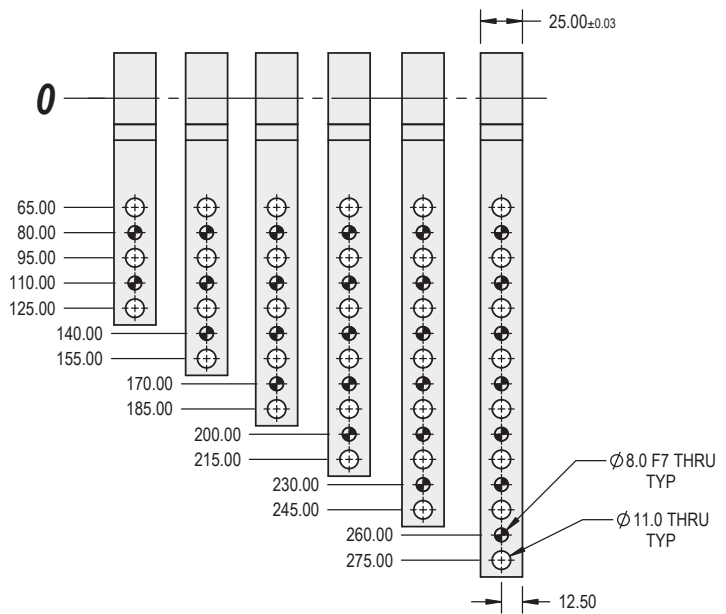
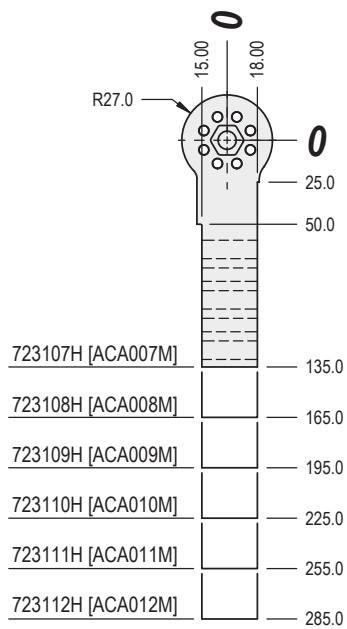


CLAMP ARM MAXIMUM WEIGHT

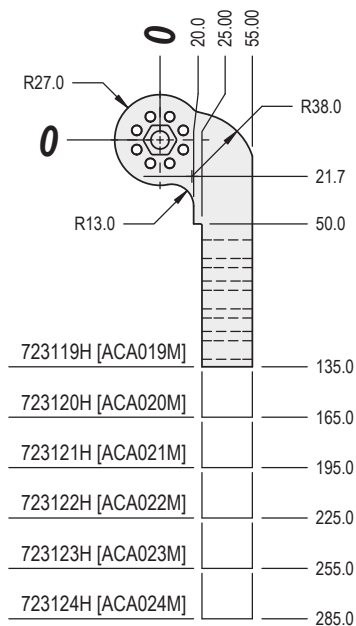


TPCA62 CLAMP ARMS

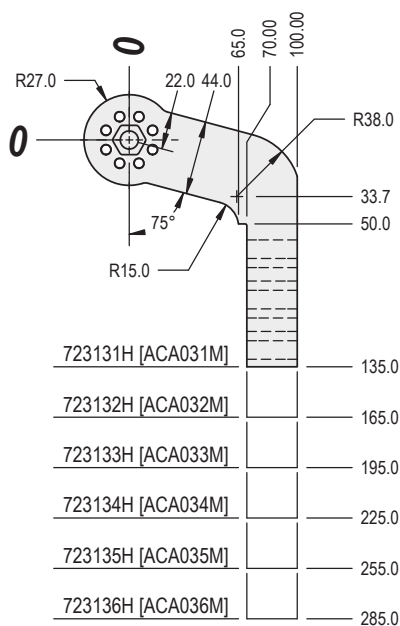
STRAIGHT ARM



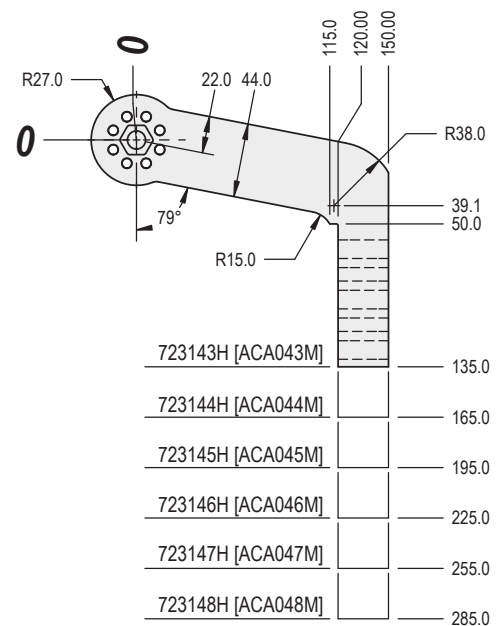
25 OFFSET



70 OFFSET

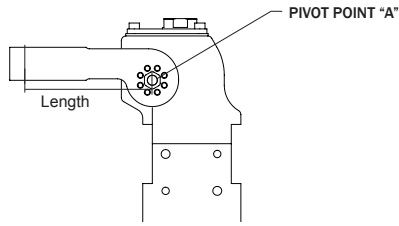


120 OFFSET



TPCA82

CLAMPING FORCE	
BARS	92000 x Line Pressure (BAR) Length (mm) from POINT "A" to the center line of clamping contact area on clamp arm
PSI	55 x Line Pressure (PSI) Length (in) from POINT "A" to the center line of clamping contact area on clamp arm



For TPCA82 Arm Information See Pages 20-21.

HOW TO ORDER

CLAMP				LEFT ARM				RIGHT ARM				SWITCH	PRESET
TPCA	82	G	P	7232130H	180	A	L	7232130H	180	A	R	TDC	90
CLAMP SERIES	CLAMP SIZE	PORT OPTION	HUB CONNECTION TYPE	BTM ARM NUMBER	ARM POSITION	ARM ORIENTATION	ARM SIDE	BTM ARM NUMBER	ARM POSITION	ARM ORIENTATION	ARM SIDE	SWITCH STYLE	PRESET ARM OPENING (DEFAULT IS 90°)
See p. 21	See p. 21	See p. 21	See p. 21	See p. 21	See p. 21	See p. 21	See p. 21	See p. 21	See p. 21	See p. 21	See p. 21	See p. 22	See p. 22

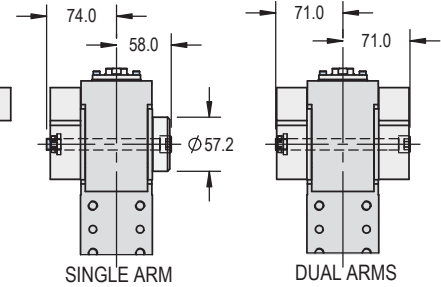
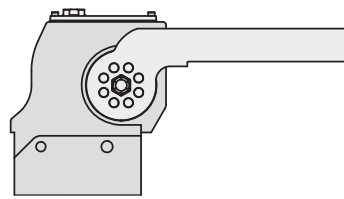
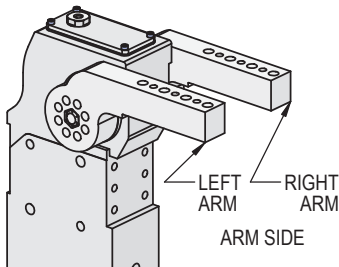
PORT OPTION		STANDARD ARM POSITION (WHEN CLOSED) - CONTACT BTM FOR SPECIALS										SWITCH		PRESET																																																																																														
		BTM No.		Clamp is shown in the closed position. The maximum counter-clockwise arm opening value is noted in degrees for the specified arm positions to the right. <table><thead><tr><th colspan="2">STANDARD ARM ORIENTATION (A)</th><th colspan="2">INVERTED ARM ORIENTATION (B)</th></tr><tr><th rowspan="2">Arm Mounting Position Code</th><th colspan="4">Offset Arm</th><th rowspan="2">Arm Mounting Position Code</th><th colspan="4">Offset Arm</th></tr><tr><th>Straight</th><th>25</th><th>70</th><th>120</th><th>Straight</th><th>25</th><th>70</th><th>120</th></tr></thead><tbody><tr><td>0</td><td>N/A</td><td>N/A</td><td>120°</td><td>120°</td><td>0</td><td>N/A</td><td>N/A</td><td>N/A</td><td>N/A</td></tr><tr><td>45</td><td>120°</td><td>120°</td><td>120°</td><td>120°</td><td>45</td><td>120°</td><td>N/A</td><td>N/A</td><td>N/A</td></tr><tr><td>90</td><td>120°</td><td>120°</td><td>120°</td><td>120°</td><td>90</td><td>120°</td><td>N/A</td><td>N/A</td><td>N/A</td></tr><tr><td>135</td><td>120°</td><td>105°</td><td>75°</td><td>75°</td><td>135</td><td>120°</td><td>120°</td><td>120°</td><td>120°</td></tr><tr><td>180</td><td>90°</td><td>60°</td><td>30°</td><td>30°</td><td>180</td><td>90°</td><td>120°</td><td>120°</td><td>120°</td></tr><tr><td>225</td><td>60°</td><td>N/A</td><td>N/A</td><td>N/A</td><td>225</td><td>60°</td><td>75°</td><td>105°</td><td>120°</td></tr><tr><td>270</td><td>N/A</td><td>N/A</td><td>N/A</td><td>N/A</td><td>270</td><td>N/A</td><td>30°</td><td>60°</td><td>75°</td></tr></tbody></table> A = Standard B = Inverted ARM ORIENTATION ARM SIDE Left Arm Right Arm Dual Arm										STANDARD ARM ORIENTATION (A)		INVERTED ARM ORIENTATION (B)		Arm Mounting Position Code	Offset Arm				Arm Mounting Position Code	Offset Arm				Straight	25	70	120	Straight	25	70	120	0	N/A	N/A	120°	120°	0	N/A	N/A	N/A	N/A	45	120°	120°	120°	120°	45	120°	N/A	N/A	N/A	90	120°	120°	120°	120°	90	120°	N/A	N/A	N/A	135	120°	105°	75°	75°	135	120°	120°	120°	120°	180	90°	60°	30°	30°	180	90°	120°	120°	120°	225	60°	N/A	N/A	N/A	225	60°	75°	105°	120°	270	N/A	N/A	N/A	N/A	270	N/A	30°	60°	75°	NS (No Switch) TDC (Turck DC) [Standard] See p.22 for additional switch options.		30° 45° 60° 75° 90° 105° 120°
STANDARD ARM ORIENTATION (A)		INVERTED ARM ORIENTATION (B)																																																																																																										
Arm Mounting Position Code	Offset Arm				Arm Mounting Position Code	Offset Arm																																																																																																						
	Straight	25	70	120		Straight	25	70	120																																																																																																			
0	N/A	N/A	120°	120°	0	N/A	N/A	N/A	N/A																																																																																																			
45	120°	120°	120°	120°	45	120°	N/A	N/A	N/A																																																																																																			
90	120°	120°	120°	120°	90	120°	N/A	N/A	N/A																																																																																																			
135	120°	105°	75°	75°	135	120°	120°	120°	120°																																																																																																			
180	90°	60°	30°	30°	180	90°	120°	120°	120°																																																																																																			
225	60°	N/A	N/A	N/A	225	60°	75°	105°	120°																																																																																																			
270	N/A	N/A	N/A	N/A	270	N/A	30°	60°	75°																																																																																																			
N = 1/4 NPT	PD254100A																																																																																																											
G = G1/4	PD254300A																																																																																																											
HUB CONNECTION TYPE																																																																																																												
P = PIN HUB																																																																																																												

Equivalent Bore Size		82.0 [3.25"] DIA. = 5352mm² [8.29in²]					
Arm Rotation (Deg.)	30	45	60	75	90	105	120
Cylinder Stroke (mm)	44.29	56.70	68.79	81.27	94.24	107.15	118.79
Recommended Operating Pressure		2.75 to 7 BAR [40 to 100 PSI] (Lubricated or Non-Lubricated Compressed Air)					
Weight		14.3 kg [31.5 lbs] Without Arm					
Holding Torque		745 Nm [550 lbf-ft] (No Air & Maintaining Rated Repeatability)					

Clamping Torque	496.2 Nm @ 5.5 BAR [366 lbf-ft @ 80 PSI]
Arm to Mount Accuracy	± 0° 15' (Clamp to Clamp)
Repeatability	± 0° 3'
Cycle Time	1.0 second Clamp Closing Cycle 1.0 second Clamp Opening Cycle
Permissible Clamp Offset Distance	150mm [5.91"] (see p.20)

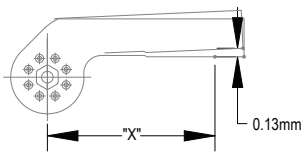
USE FLOW CONTROLS TO REDUCE IMPACT

TPCA82 CLAMP ARM INFORMATION



ARM MOUNTING WITH HARDWARE

CLAMP ARM DEFLECTION UNDER LOAD

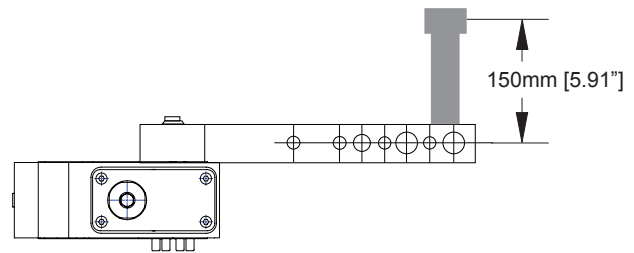


Arm Deflection Under Load

Force on arm at "X" distance from pivot resulting in 0.13mm Maximum deflection.

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

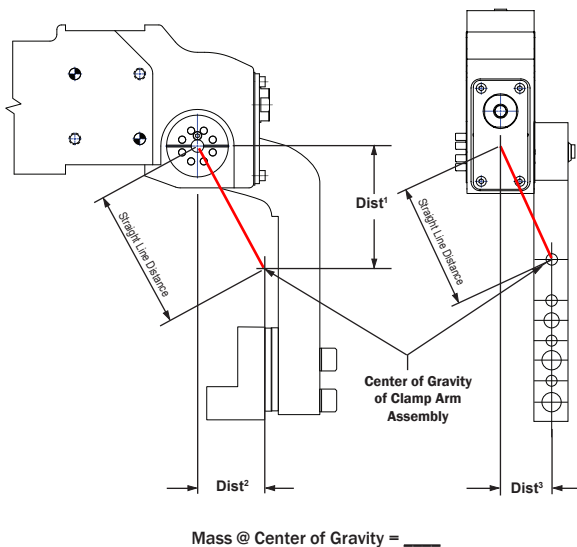
PERMISSIBLE CLAMP OFFSET DISTANCE



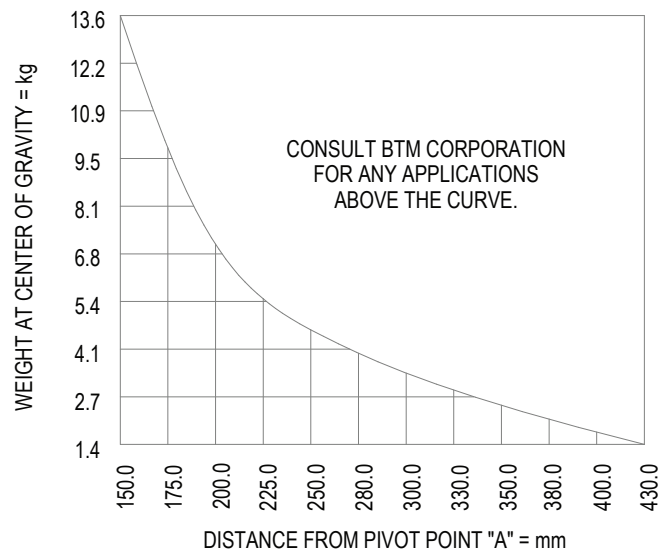
MAXIMUM ALLOWABLE WEIGHT ON CLAMP ARM ASSEMBLY

Refer to the charts below for model-specific information regarding the recommended allowable weight on the arm at given distances from the pivot. The distance from Pivot Point is the straight line distance from the centerline of the clamp at the pivot point to the center of gravity of the clamp arm assembly. The center of gravity is figured using the weight of the arm plus the total weight mounted on the arm. When using dual arms, add the weight of the second arm to the total weight.

CENTER OF GRAVITY OF CLAMP ARM ASSEMBLY

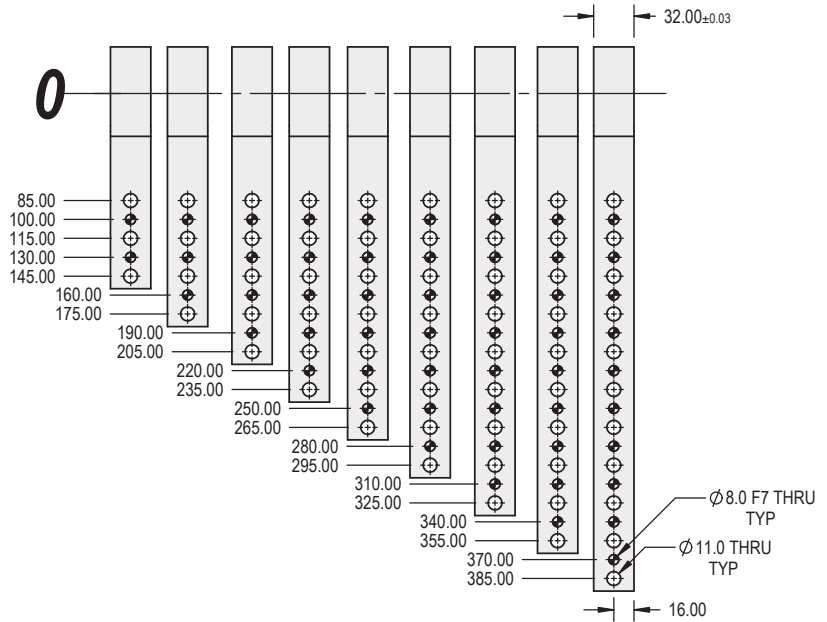
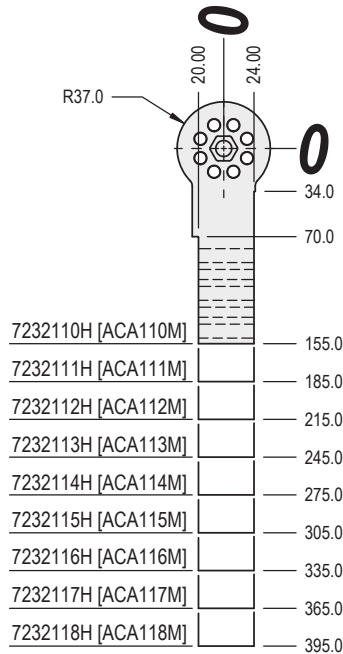


CLAMP ARM MAXIMUM WEIGHT

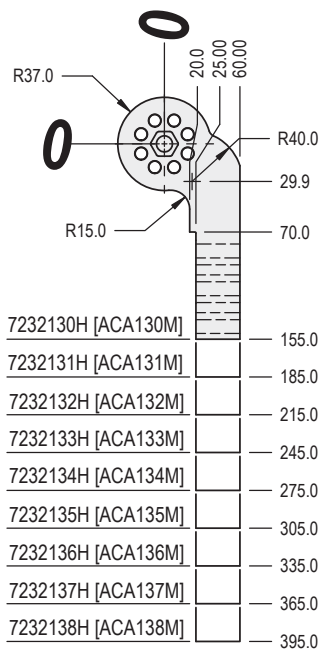


TPCA82 CLAMP ARMS

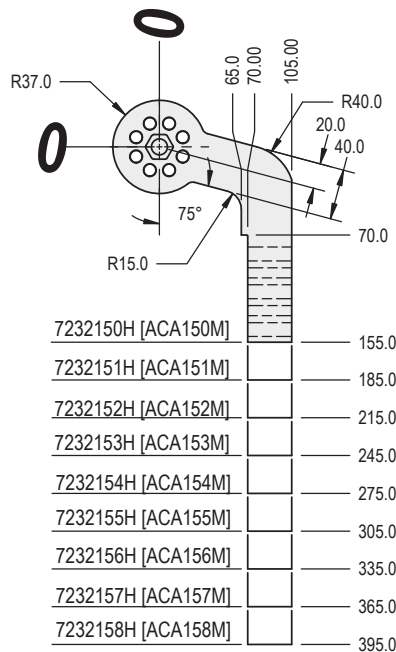
STRAIGHT ARM



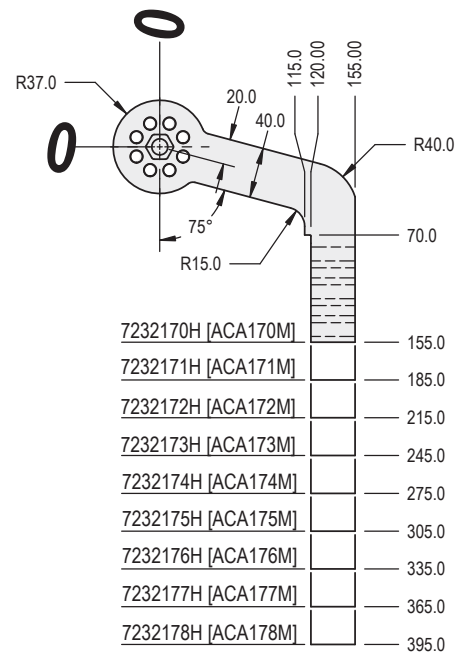
25 OFFSET



70 OFFSET



120 OFFSET



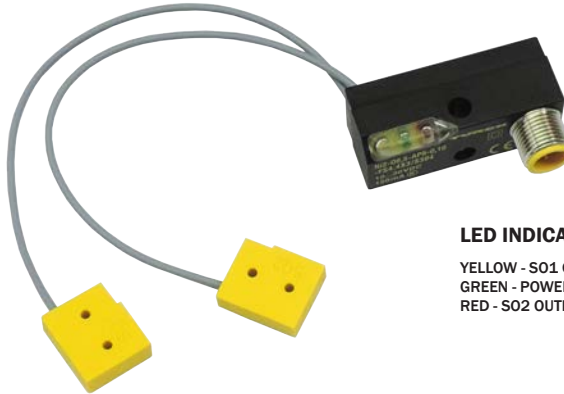
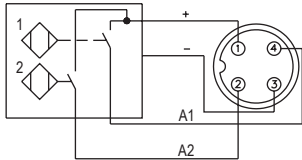
STANDARD SWITCH - TPCA52, 62, & 82

Turck DC [TDC]

Ni2Q6.5AP6-0.16-FS4.4X3/S304

S02 reads the closed position of the clamp.

If S02 is required for the open position (transposed), order: TTDC



LED INDICATORS

YELLOW - S01 OUTPUT ENERGIZED
GREEN - POWER ON
RED - S02 OUTPUT ENERGIZED

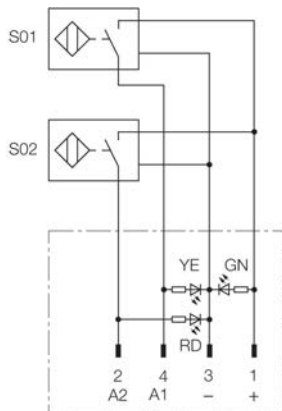
STANDARD SWITCH - TPCA42

Turck DC [BDC]

Ni2-BTM-0,16-BDS-2AP6X3-H1141/S34

S02 reads the closed position of the clamp.

If S02 is required for the open position (transposed), order: TBDC



LED INDICATORS

YELLOW - S01 OUTPUT ENERGIZED
GREEN - POWER ON
RED - S02 OUTPUT ENERGIZED

Optional switches may be available upon request (including Turck AC [TAC for TPCA52, 62, & 82] or [BAC for TPCA42]). Contact BTM for price and delivery information.

WARRANTY INFORMATION

BTM Company, LLC. warrants its TPCA Power Clamps against defects in material and workmanship for a period of one (1) year after ship date from BTM.

This warranty is limited to replacing or repairing at the option of BTM, F.O.B. BTM factory, any part found by BTM to be defective in materials and/or workmanship. Any application of a BTM product outside the intended use of the product shall not be warranted by BTM Company, LLC. Furthermore, BTM will not be liable for any expenses incurred for repairs or replacement made outside BTM facilities without written consent (or damages arising out of such replacements or repairs). Under no circumstances will BTM be held responsible for any consequential damages.

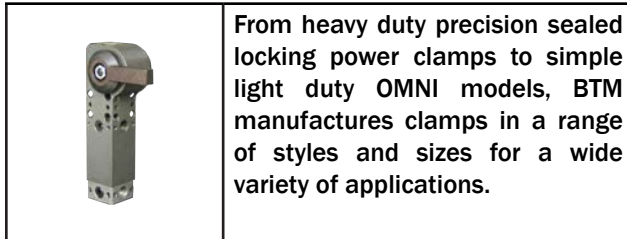
The warranty is limited to the repair or replacement of the defective part(s) and does not include installation.

This warranty is the only warranty extended by the seller in connection with any sale made hereunder and is in lieu of all other warranties, express, implied or statutory including warranties of merchantability and fitness for purpose.

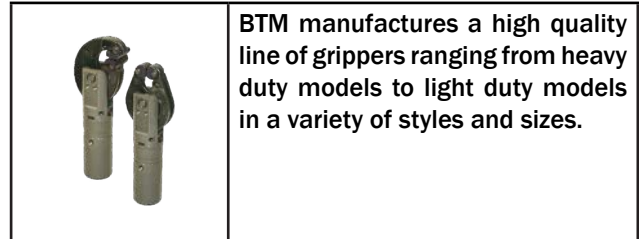


BTM WORK HOLDING QUALITY PRODUCTS

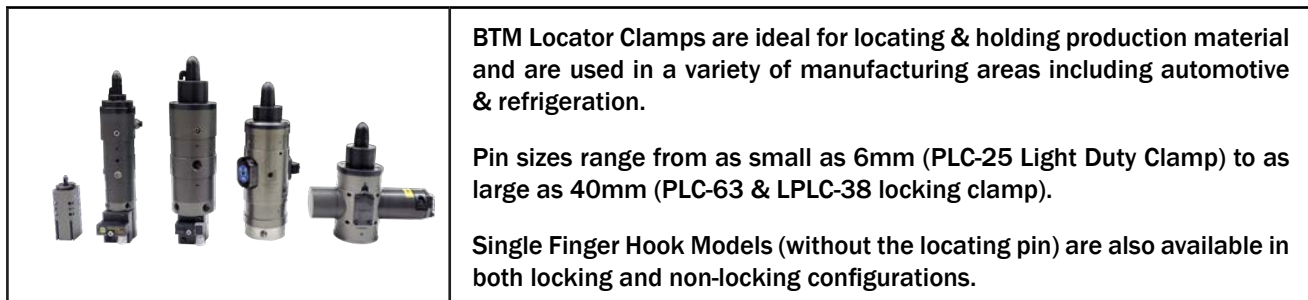
Clamps



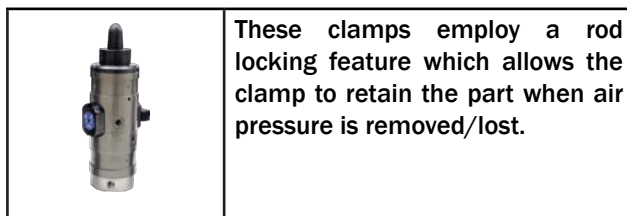
Grippers



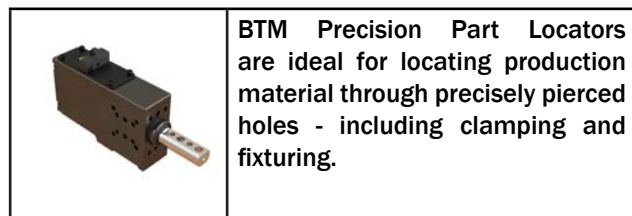
Pin Locator Clamps



Rod-Locking Pin Locator Clamps



Precision Part Locators



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

BTMCOMP.COM