



**TECH RIM**



*A Division of Tech Rim Standards*

# EC SERIES POWER CLAMPS



**THE FIRST NAME & ORIGINAL  
POWER CLAMPS IN AUTOMATION TOOLING**

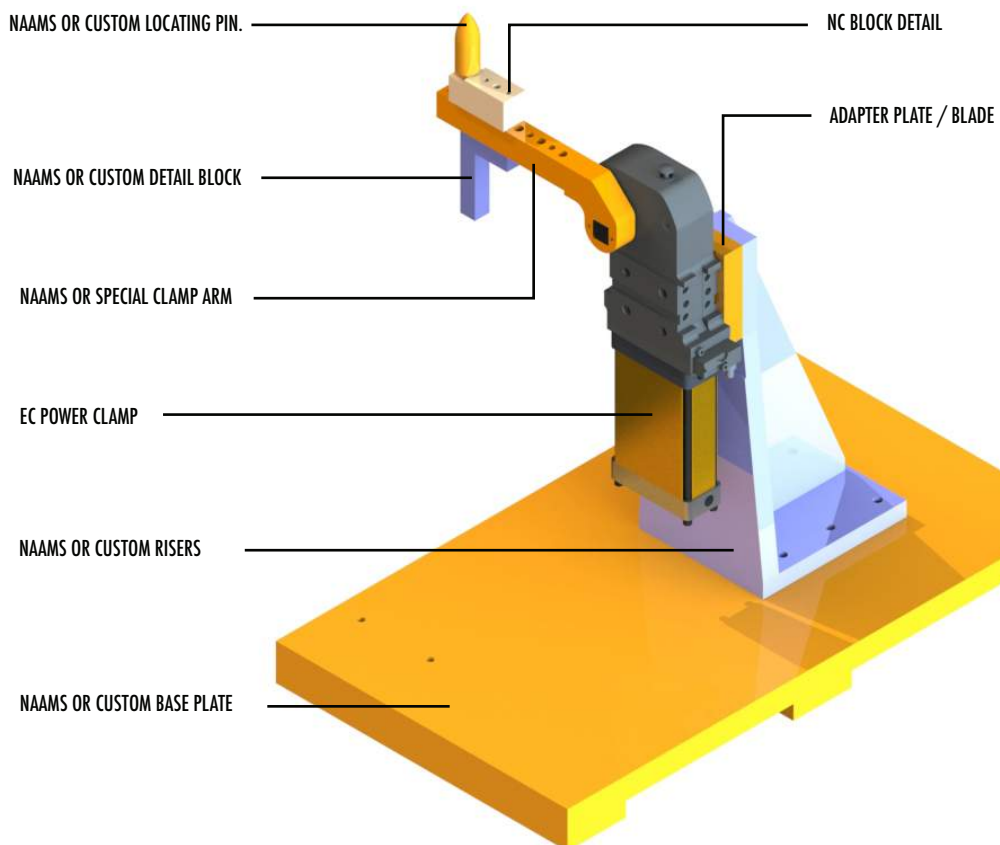
248.454.1977

[www.techrimstandards.com](http://www.techrimstandards.com)

# EC SERIES POWER CLAMPS • FEATURES AND BENEFITS

- THE INDUSTRY ORIGINAL – ENCLOSED ‘WORLD’ CLAMP DESIGN
- LIGHTWEIGHT BUILT– HEAVY DUTY PRODUCTION
- INTEGRATED SENSOR PACKAGE WITH MULTIPLE SWITCH OPTIONS
- G OR NPT PORTING AVAILABILITY
- NAAMS COMPATIBILITY FOR MULTIPLE MOUNTING AND ARM CONFIGURATIONS

AS A TRULY ‘ADDED VALUE’ TO OUR CUSTOMERS– TECHRIM STANDARDS’ MANY OTHER PRODUCT LINES HAVE DIRECT COST AND TIME SAVING ATTRIBUTES FOR PROJECT / JOB BUILDS.



The customer has the flexibility to construct their entire tool...from the base all the way to end of the tool. By being able to select from the vast inventory of **TECHRIM**'s standardized products, (as well as providing an array of custom details ) the options for our clients is almost limitless.



EC 40

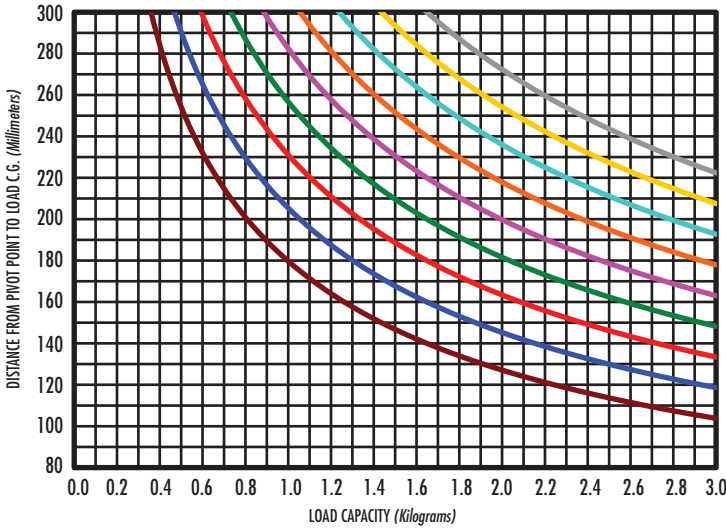
EC 50

EC 63

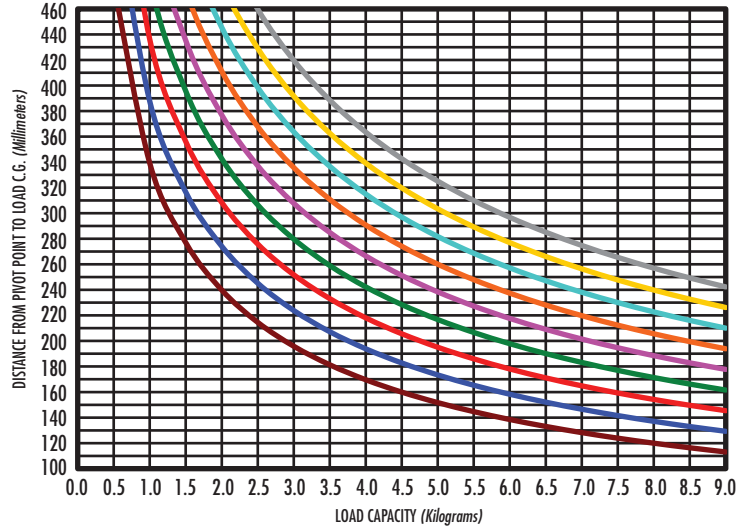
EC 90

# EC POWER CLAMPS – WEIGHT / TOOLING CHARTS

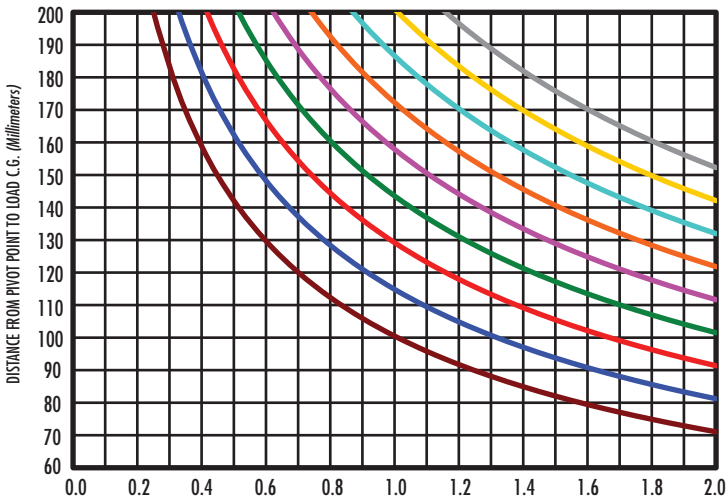
**EC63G CLAMP CAPACITY**  
LOAD CAPACITY VS. DISTANCE FROM PIVOT POINT  
MAXIMUM ARM VELOCITY = 90/0.6 SEC



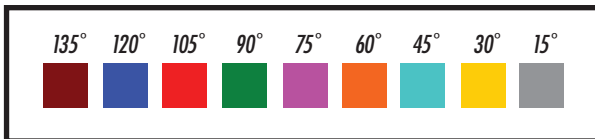
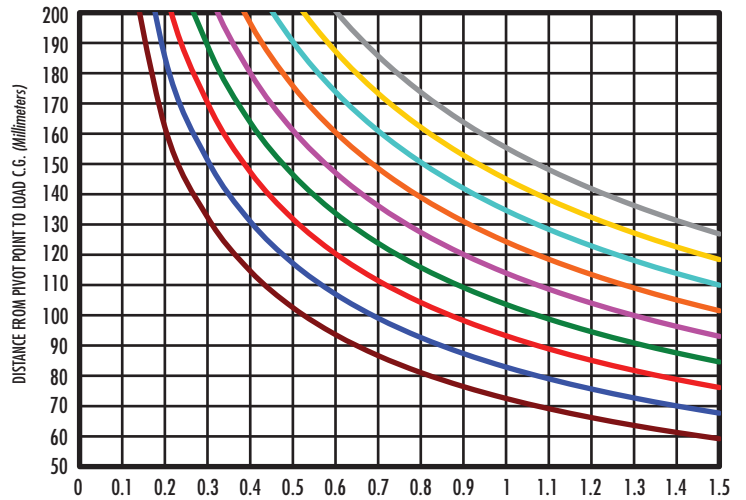
**EC90G CLAMP CAPACITY**  
LOAD CAPACITY VS. DISTANCE FROM PIVOT POINT  
MAXIMUM ARM VELOCITY = 90/0.6 SEC



**EC50G CLAMP CAPACITY**  
LOAD CAPACITY VS. DISTANCE FROM PIVOT POINT  
MAXIMUM ARM VELOCITY = 90/0.6 SEC



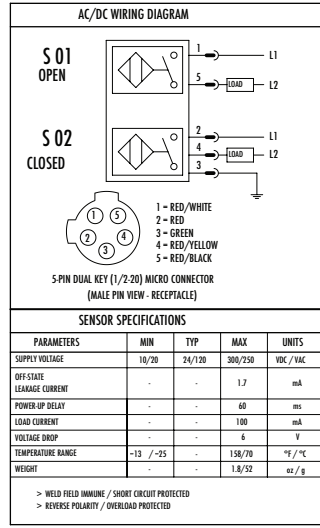
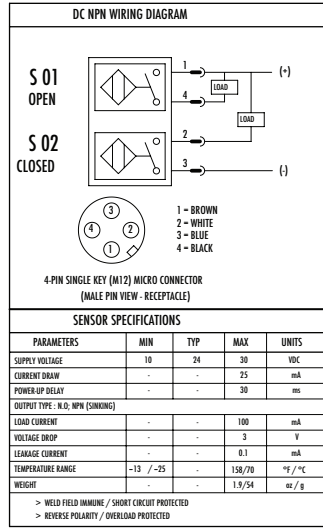
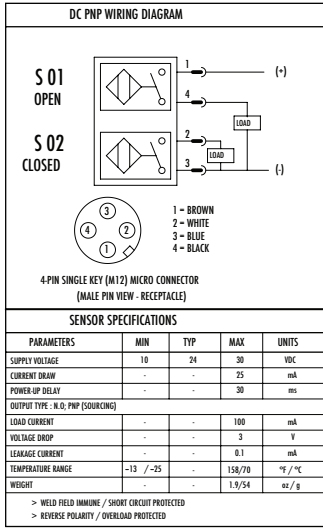
**EC40G CLAMP CAPACITY**  
LOAD CAPACITY VS. DISTANCE FROM PIVOT POINT  
MAXIMUM ARM VELOCITY = 90/0.6 SEC



SAFE OPERATING CONDITIONS ARE INDICATED BELOW THE CURVED LINES.

TECHRIM – ISI CLAMPS INCORPORATE ALL 'NAAMS' STYLE ARM CONFIGURATIONS. AS A BENEFIT TO OUR VALUED CUSTOMERS, ALL OF OUR CLAMPS COME PRE-MADE WITH 'DUAL' DRIVESHAFTS (ie – A Driveshaft Hub on both sides of the Clamp head). THIS ALLOWS THE CUSTOMER THE EASE AND FLEXIBILITY OF ATTACHING THE CLAMP ARM ON EITHER SIDE. TECHRIM- ISI MANUFACTURES 'SQUARE', 'OCTAGONAL', AND 'WISHBONE' SERIES ARM OPENINGS TO MATCH THE 3 STYLES OF DRIVESHAFTS CURRENTLY AVAILABLE ON OUR CLAMPS. AS THERE ARE HUNDREDS OF ARM OPTIONS AND OFFSETS AVAILABLE – PLEASE CONTACT TECHRIM STANDARDS ENGINEERING DEPT. –OR SEE OUR WEBSITE, FOR ALL SPECIFIC ARM CALLOUTS AND CONFIGURATIONS.





**CYLINDER INFORMATION**

OPENING ANGLE (DEGREES)	CYLINDER STROKE	AREA
15	19	1256 mm <sup>2</sup> (1.947 in <sup>2</sup> )
30	27.5	
45	35.0	
60	42.0	
75	49.5	
90	57.0	
105	65.0	
120	71.5	
135	76.5	

**MAXIMUM OPENING ANGLE (DEGREES)**

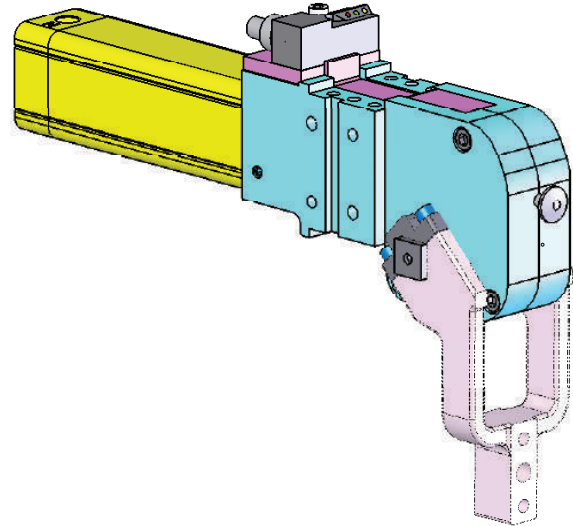
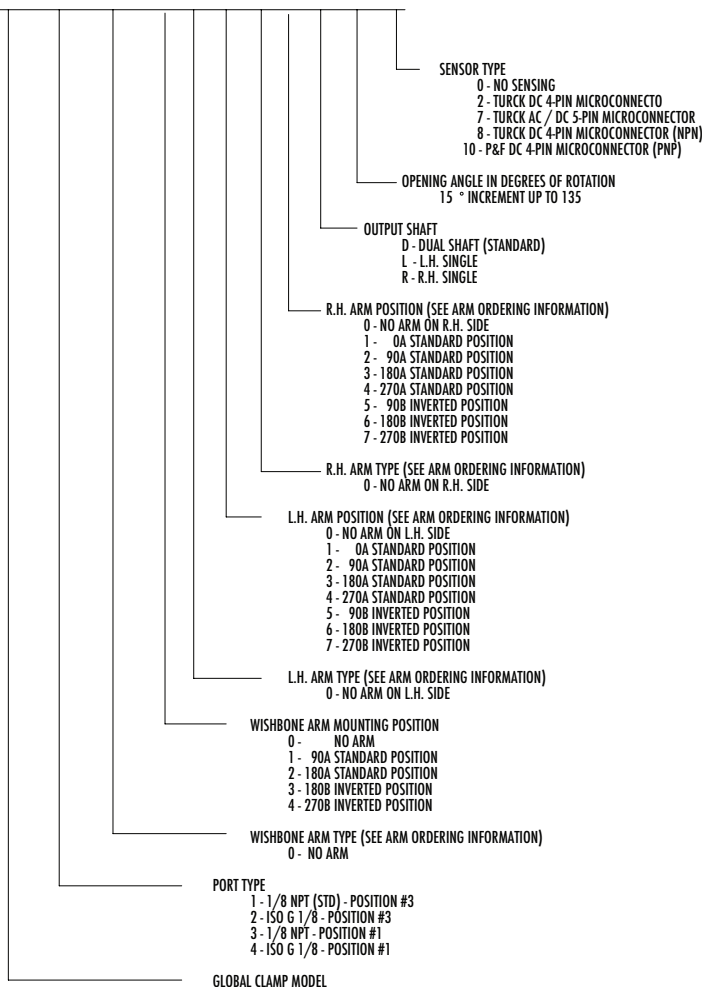
NORGREN ARM STYLE	MOUNTING POSITION	MOUNTING OPTION	
		A - STANDARD	B - INVERTED
WISHBONE ARM 15 MM OFFSET	90	135	-
	180	50	125
	270	-	35

NOTE:  
STANDARD CLAMPS ARE AVAILABLE IN 15 DEGREE INCREMENTS ONLY.  
OTHER STROKES AVAILABLE UPON REQUEST.

DATE	LET.	REVISION	ECH NO.	DR.	CK.
4/19/2006	1	PRE-PRODUCTION RELEASE	06N100	MY	MY
5/22/2006	2	Ordering Information - Wishbone Arm Type - Options 3 and 4 removed. "See Arm Ordering Information" added	06N117	MY	MY
3/15/07	3	VIEWS REVISED TO SHOW ROUND HEAD STROKE PLUS	06N074	RK	PM

**ORDERING INFORMATION**

EC40G - 1 - XXXX - 3 - 0 - 0 - 0 - 0 - D - 90 - 2



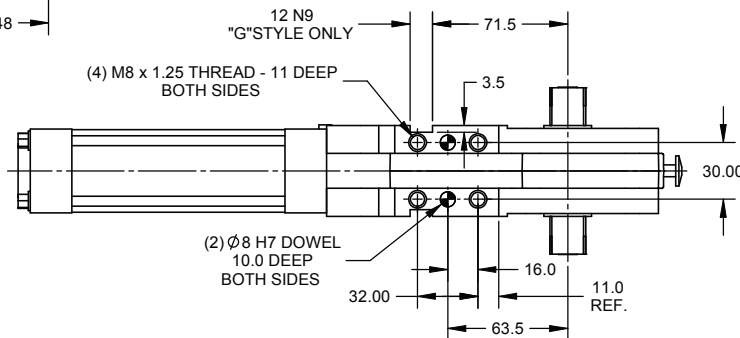
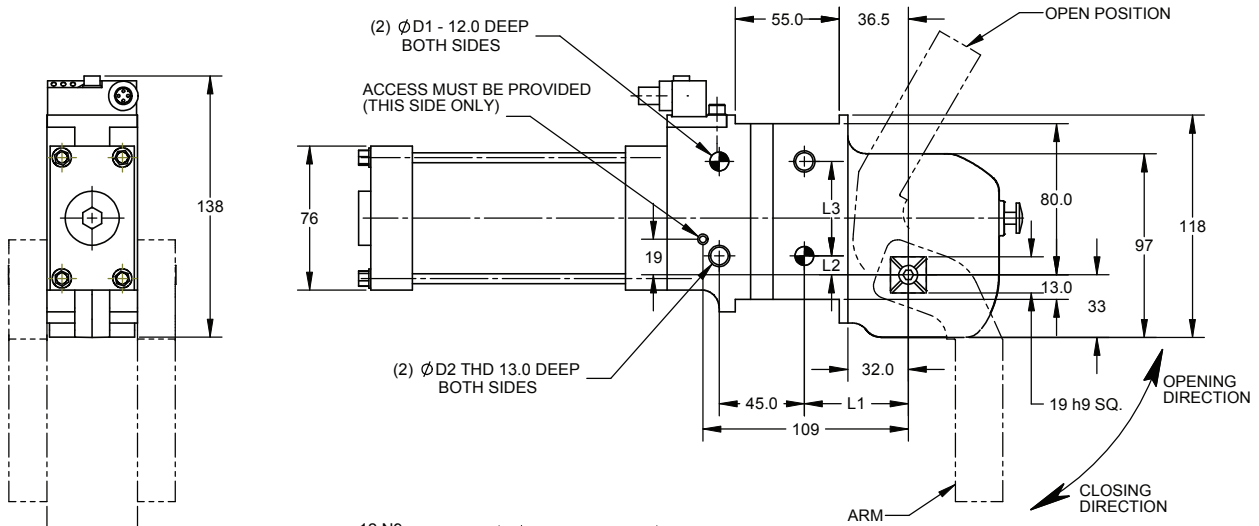
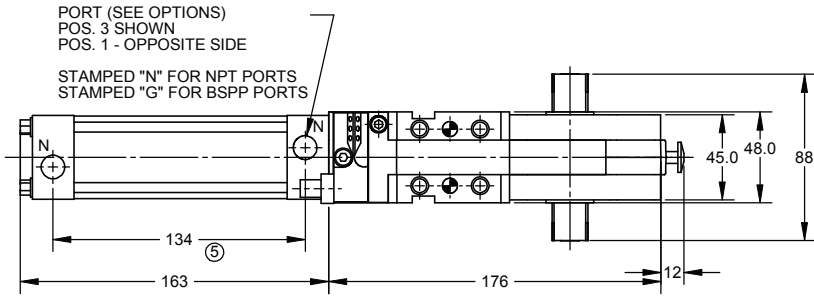
**EC40 ARM STYLES**

WN4-15-117M	WG4-15-117M
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Please see the entire NAAMS Clamp arm offering and drawings at [www.NAAMStandards.org](http://www.NAAMStandards.org)

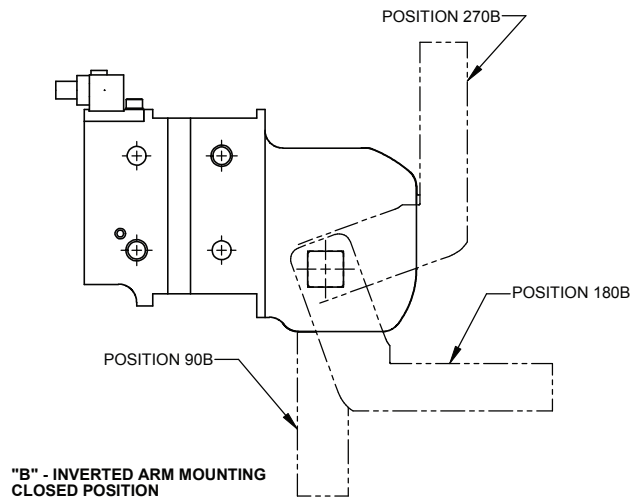
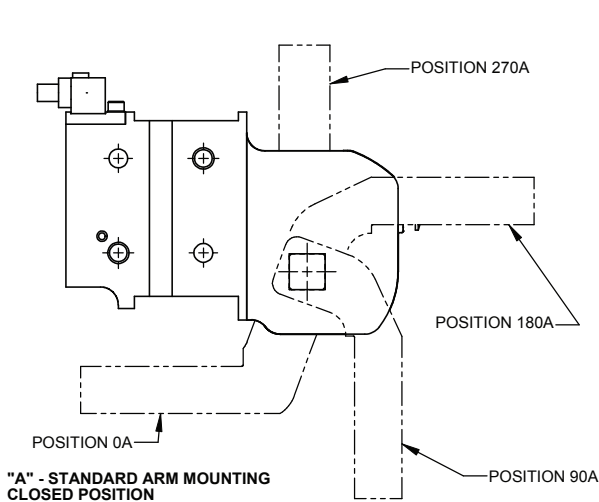
Techrin standards also makes 'special' or customer specific arms - as well as alternate material arms, such as stainless steel.

# EC50 - DRAWINGS , DATA AND ORDERING INFORMATION

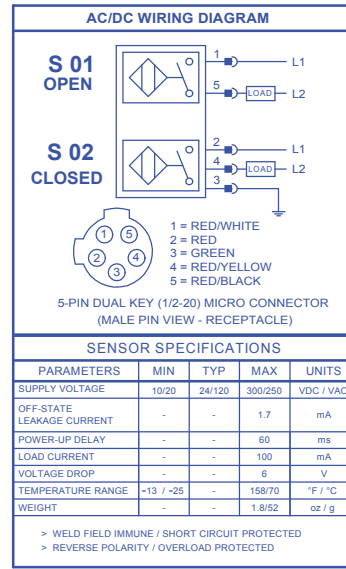
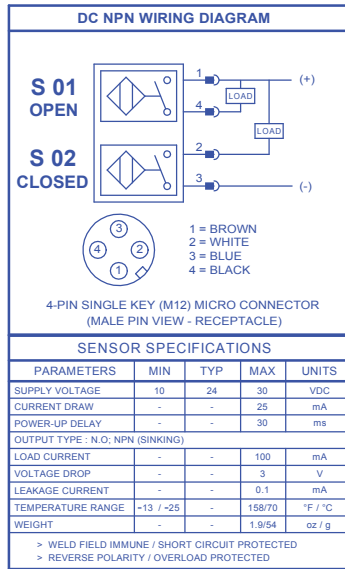
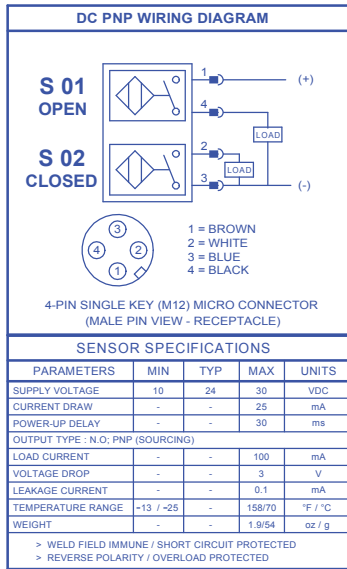


CYLINDER INFORMATION		
OPENING ANGLE (DEGREES)	CYLINDER STROKE	AREA
15	16.8	1960 mm <sup>2</sup> (3.040 in <sup>2</sup> )
30	25.7	
45	33.1	
60	40.2	
75	47.5	
90	55.2	
105	62.8	
120	69.6	
135	74.5	

MOUNTING STYLE	L1	L2	L3	D1	D2
G - GLOBAL	±0.13	±0.03	±0.03	10	M10x1.5
N - NAAMS	40	5	45	8	M8x1.25

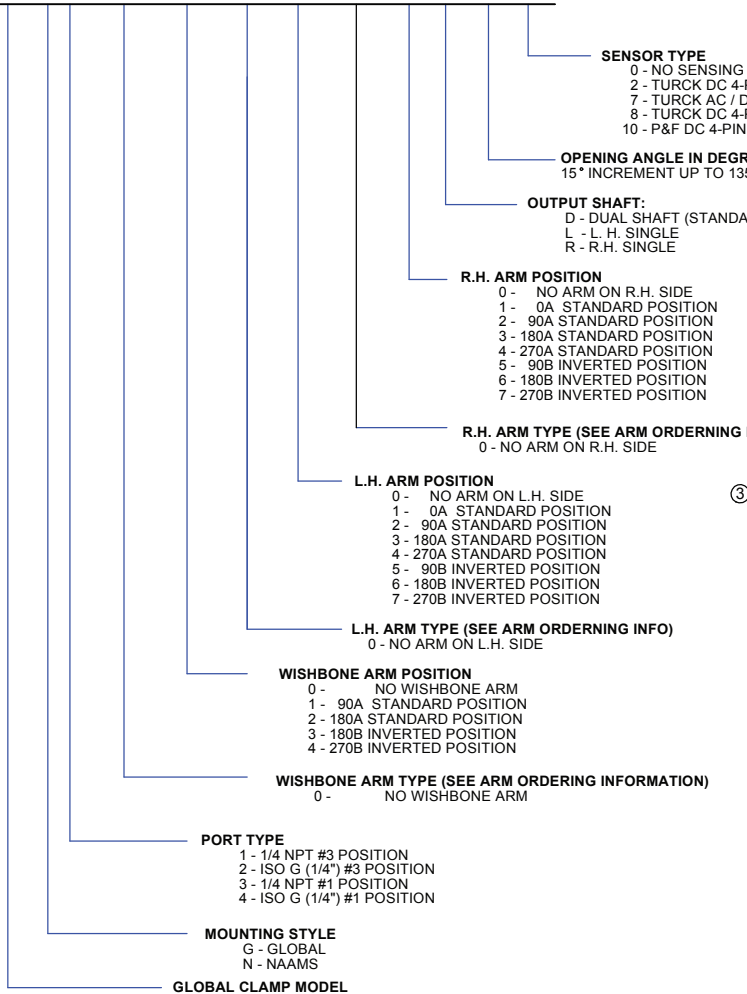




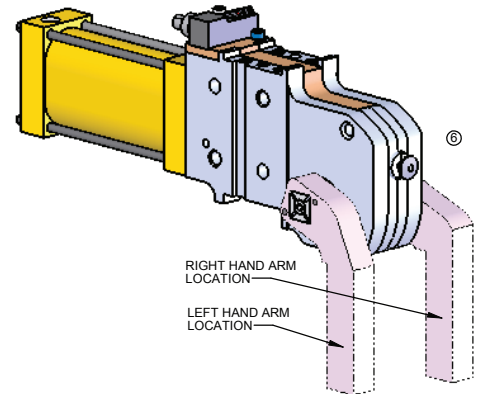


## ORDERING INFORMATION

EC50G N 1 - XXXX - XX - XXXX - 1 - XXXX - 1 - D - 120 - 2



DATE	LET.	REVISION	ECN NO.	DR.	CK.
4/19/2006	1	PRE-PRODUCTION RELEASE	06N100	MV	MV
5/22/2006	2	Ordering Information - Wishbone Arm Type: Options 3 and 4 removed	06N117	MV	MV
2/28/2007	3	Ordering Information - L.H. Arm Position: "No arm on R.H. side" changed to "...L.H. side"	07N054	MV	MV
3/15/07	4	VIEWS REVISED TO SHOW ROUND HEAD STROKE PLUG	07N050	RK	PM
12/3/2007	5	134mm (CENTER DISTANCE OF CYL. PORTS) WAS 132mm	07N188	RK	PM
11/25/2008	6	EJECTOR BUTTON OIL SEAL REMOVED	08N180	P.J.M.	



NAAMS CODE	SPEC.	CLAMP SERIES	OFFSET	HOLE PATTERNS	ARM WIDTH
007-012	U.S.	63MM CLAMP	STRAIGHT	8MM DOVEL 11MM CLEARAN	25MM
019-024	U.S.	63MM CLAMP	25MM	8MM DOVEL 11MM CLEARAN	25MM
031-038	U.S.	63MM CLAMP	70MM	8MM DOVEL 11MM CLEARAN	25MM
043-049	U.S.	63MM CLAMP	120MM	8MM DOVEL 11MM CLEARAN	25MM
507-512	E.U.S.	63MM CLAMP	STRAIGHT	8MM DOVEL 8MM CLEARAN	20MM
519-524	E.U.S.	63MM CLAMP	25MM	8MM DOVEL 8MM CLEARAN	20MM
531-536	E.U.S.	63MM CLAMP	70MM	8MM DOVEL 8MM CLEARAN	20MM
543-548	E.U.S.	63MM CLAMP	120MM	8MM DOVEL 8MM CLEARAN	20MM
510-518	GM	63MM CLAMP	STRAIGHT	8MM DOVEL 8MM CLEAR	20MM
525-530	GM	63MM CLAMP	25MM	8MM DOVEL 8MM CLEAR	20MM
537-542	GM	63MM CLAMP	70MM	8MM DOVEL 8MM CLEAR	20MM
543-554	GM	63MM CLAMP	120MM	8MM DOVEL 8MM CLEAR	20MM
206-209	US	50MM CLAMP	STRAIGHT	8MM DOVEL 11MM CLEARAN	20MM
216-218	US	50MM CLAMP	25MM	8MM DOVEL 11MM CLEARAN	20MM
226-228	U.S.	50MM CLAMP	50MM	8MM DOVEL 11MM CLEARAN	20MM
236-238	E.U.S.	50MM CLAMP	STRAIGHT	6MM DOVEL 8MM CLEARAN	20MM
246-248	E.U.S.	50MM CLAMP	25MM	6MM DOVEL 8MM CLEARAN	20MM
256-258	E.U.S.	50MM CLAMP	50MM	6MM DOVEL 8MM CLEARAN	20MM
401-403	GM	50MM	STRAIGHT	8MM DOVEL 8MM CLEARAN	20MM
411-413	GM	50MM	25MM	8MM DOVEL 8MM CLEARAN	20MM
421-423	GM	50MM	50MM	8MM DOVEL 8MM CLEARAN	20MM
110-118	US	80MM CLAMP	STRAIGHT	8MM DOVEL 11MM CLEARAN	32MM * (T)
130-138	U.S.	80MM CLAMP	25MM	8MM DOVEL 11MM CLEARAN	32MM * (T)
150-155	U.S.	80MM CLAMP	70MM	8MM DOVEL 11MM CLEARAN	32MM * (T)
170-175	U.S.	80MM CLAMP	120MM	8MM DOVEL 11MM CLEARAN	32MM * (T)
100-108	US	80MM CLAMP	STRAIGHT	NONE	32MM * (T)
120-128	U.S.	80MM CLAMP	20MM	NONE	32MM * (T)
140-148	U.S.	80MM CLAMP	65MM	NONE	32MM * (T)
160-168	U.S.	80MM CLAMP	115MM	NONE	32MM * (T)

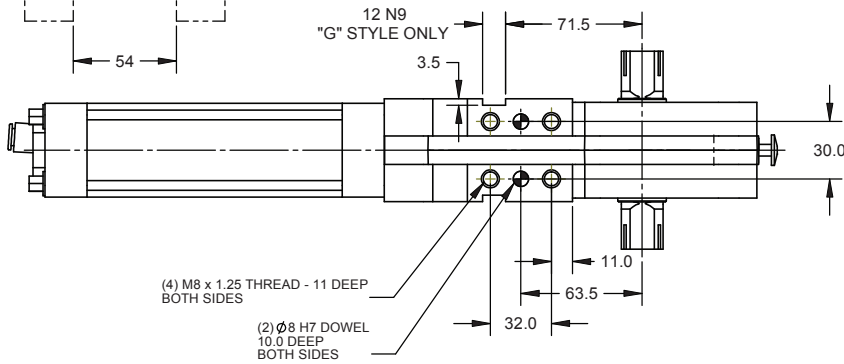
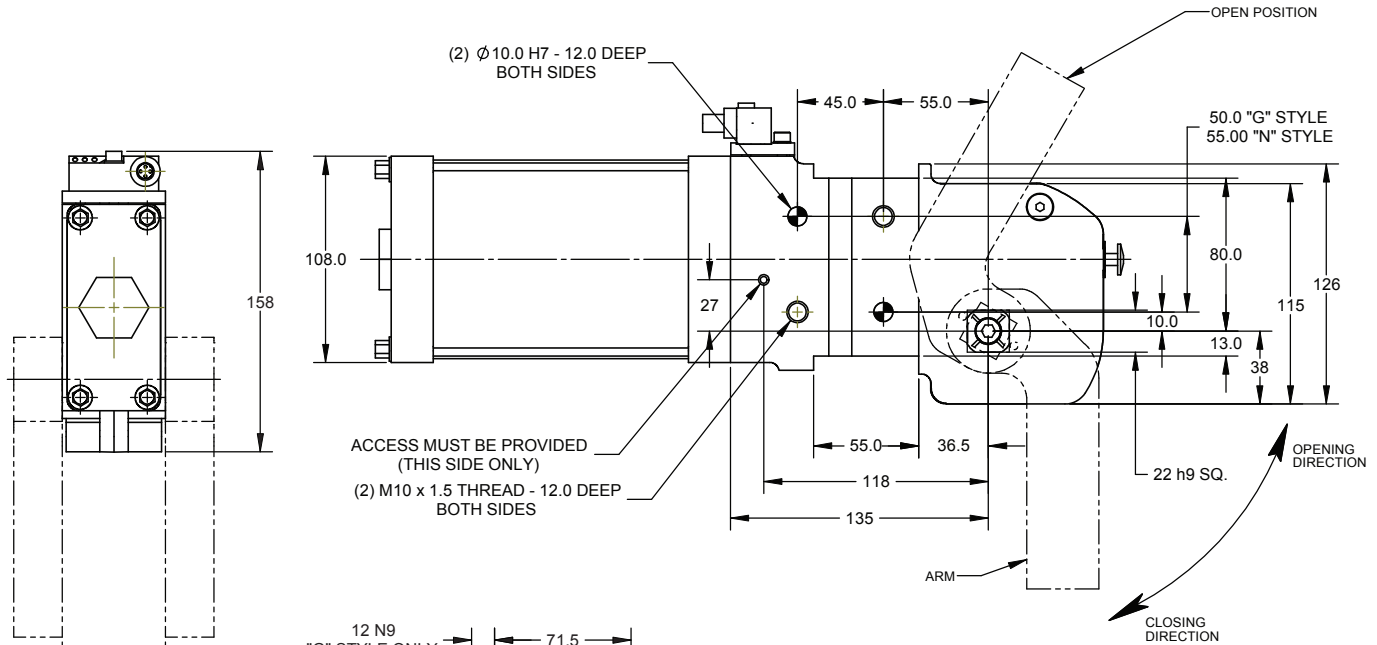
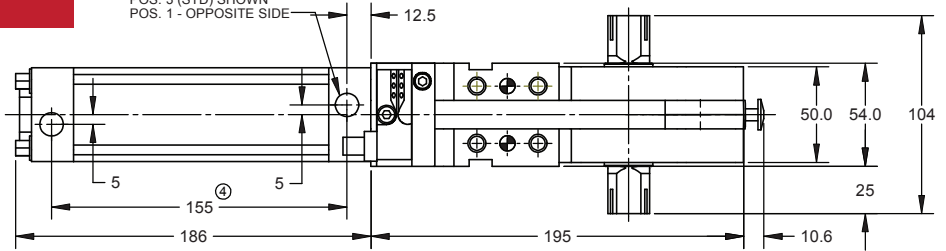
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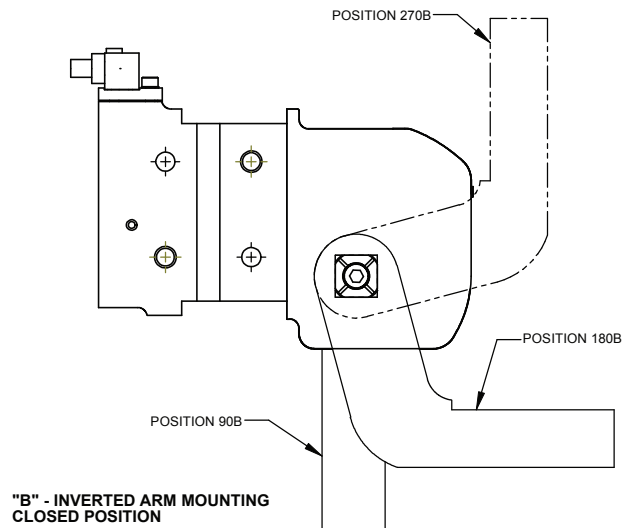
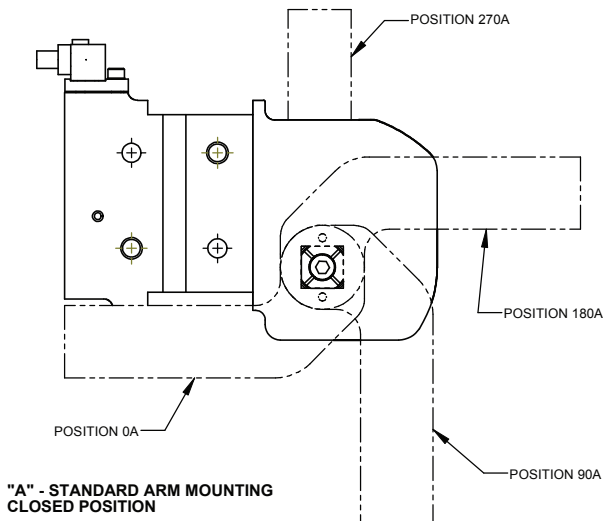
ORDERING EXAMPLES	
EC50GN1-0-0-ACA226M-1-ACA226M-1-D-120-10	DUAL ARM CLAMP
EC50GN1-0-0-0-0-ACA226M-1-D-120-10	R.H. ARM CLAMP
EC50GG2-1-1-0-0-0-0-D-120-10	WISHBONE ARM CLAMP

# EC63 - DRAWINGS , DATA AND ORDERING INFORMATION

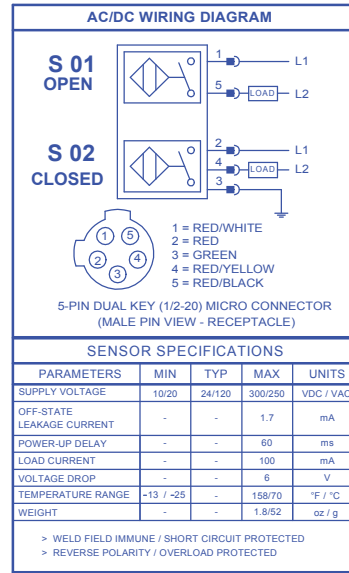
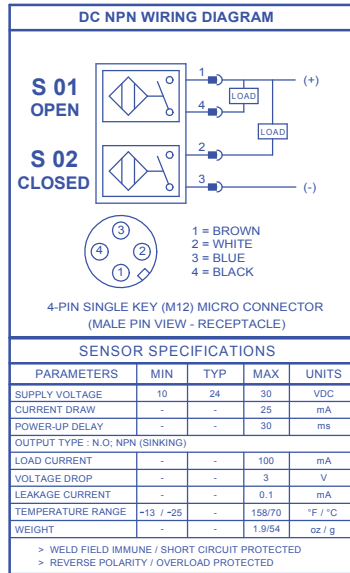
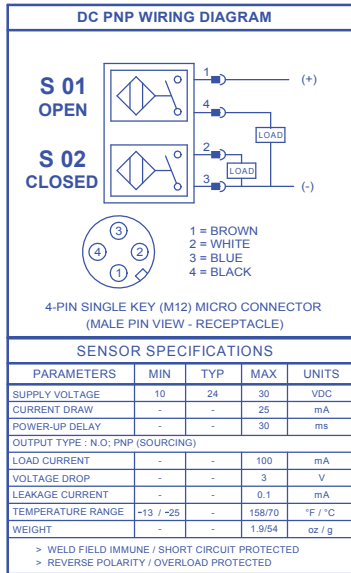
PORT (SEE OPTIONS)  
POS. 3 (STD) SHOWN  
POS. 1 - OPPOSITE SIDE



CYLINDER INFORMATION		
OPENING ANGLE (DEGREES)	CYLINDER STROKE	AREA
15	21.8	3110 mm <sup>2</sup> (4.820 in <sup>2</sup> )
30	32.8	
45	42.1	
60	51.3	
75	60.7	
90	70.3	
105	80.0	
120	88.9	
135	95.2	

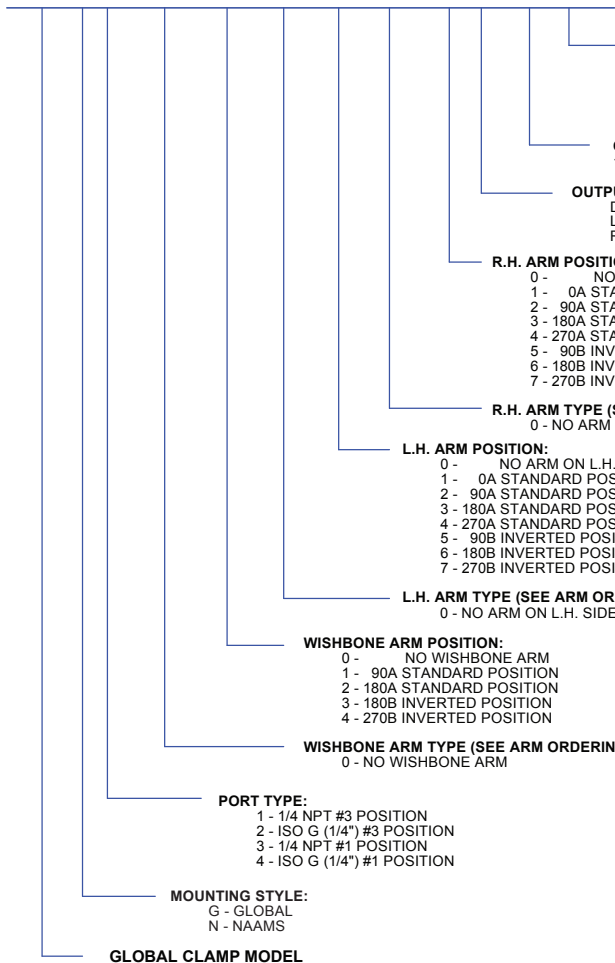






**ORDERING INFORMATION**

**EC63G N 1 - XXXX - XX - XXXX - 1 - XXXX - 1 - D - 120 - 2**



- SENSOR TYPE:**  
 0 - NO SENSING  
 2 - TURCK DC 4-PIN MICROCONNECTOR (PNP)  
 7 - TURCK AC / DC 5-PIN MICROCONNECTOR  
 8 - TURCK DC 4-PIN MICROCONNECTOR (NPN)  
 10 - P&F DC 4-PIN MICROCONNECTOR (PNP)

**OPENING ANGLE IN DEGREES OF ROTATION**  
 15° INCREMENT UP TO 135°

- OUTPUT SHAFT:**  
 D - DUAL SHAFT (STANDARD)  
 L - L.H. SINGLE  
 R - R.H. SINGLE

- R.H. ARM POSITION:**  
 0 - NO ARM ON R.H. SIDE  
 1 - 0A STANDARD POSITION  
 2 - 90A STANDARD POSITION  
 3 - 180A STANDARD POSITION  
 4 - 270A STANDARD POSITION  
 5 - 90B INVERTED POSITION  
 6 - 180B INVERTED POSITION  
 7 - 270B INVERTED POSITION

- R.H. ARM TYPE (SEE ARM ORDERING INFO)**  
 0 - NO ARM ON R.H. SIDE

- L.H. ARM POSITION:**  
 0 - NO ARM ON L.H. SIDE  
 1 - 0A STANDARD POSITION  
 2 - 90A STANDARD POSITION  
 3 - 180A STANDARD POSITION  
 4 - 270A STANDARD POSITION  
 5 - 90B INVERTED POSITION  
 6 - 180B INVERTED POSITION  
 7 - 270B INVERTED POSITION

- L.H. ARM TYPE (SEE ARM ORDERING INFO):**  
 0 - NO ARM ON L.H. SIDE

- WISHBONE ARM POSITION:**  
 0 - NO WISHBONE ARM  
 1 - 90A STANDARD POSITION  
 2 - 180A STANDARD POSITION  
 3 - 180B INVERTED POSITION  
 4 - 270B INVERTED POSITION

- WISHBONE ARM TYPE (SEE ARM ORDERING INFORMATION):**  
 0 - NO WISHBONE ARM

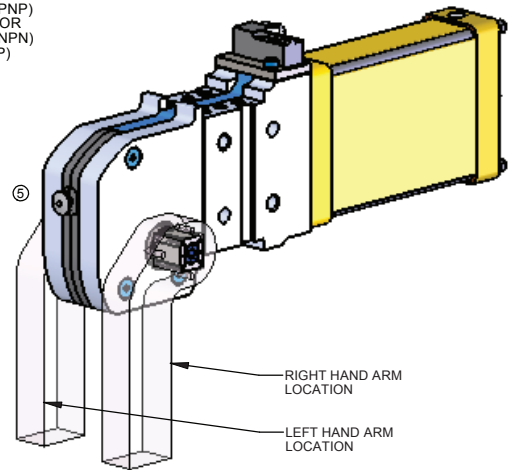
- PORT TYPE:**  
 1 - 1/4 NPT #3 POSITION  
 2 - ISO G (1/4") #3 POSITION  
 3 - 1/4 NPT #1 POSITION  
 4 - ISO G (1/4") #1 POSITION

- MOUNTING STYLE:**  
 G - GLOBAL  
 N - NAAMS

**GLOBAL CLAMP MODEL**

ORDERING EXAMPLES	
EC63GN1-0-0-ACA105M-1-ACA105M-1-D-120-10	DUAL ARM CLAMP
EC63GN1-0-0-0-0-ACA105M-1-D-120-10	R.H. ARM CLAMP
EC63GG2-1-1-0-0-0-0-D-120-10	WISHBONE ARM CLAMP

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12/3/2007	4	155mm (DISTANCE BETWEEN CYL. PORTS) WAS 153mm	07N188	R.K.	P.M.
11/25/2008	5	REMOVE EJECTOR BUTTON OIL SEAL	08N180	P.J.M.	

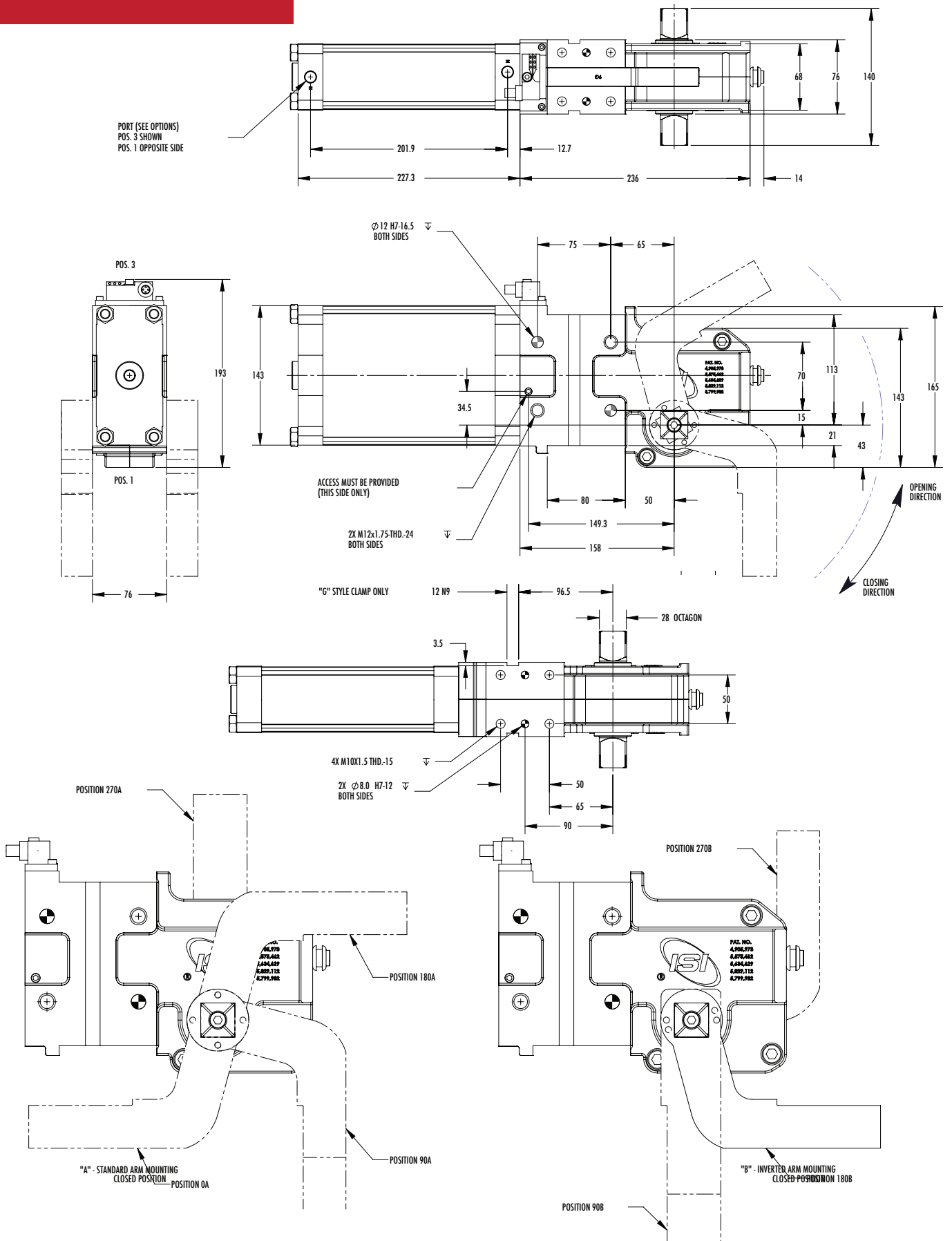


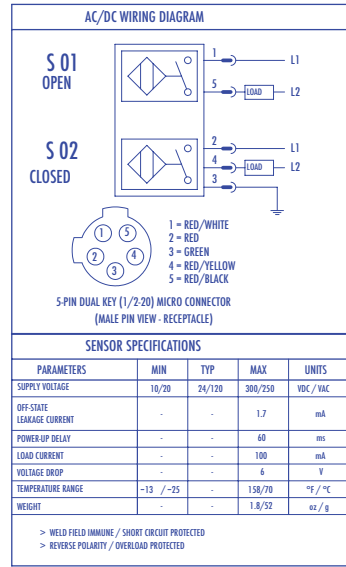
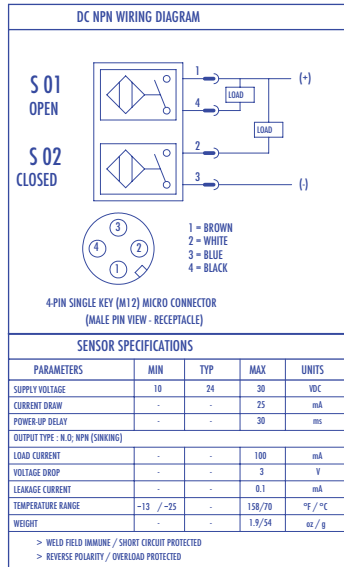
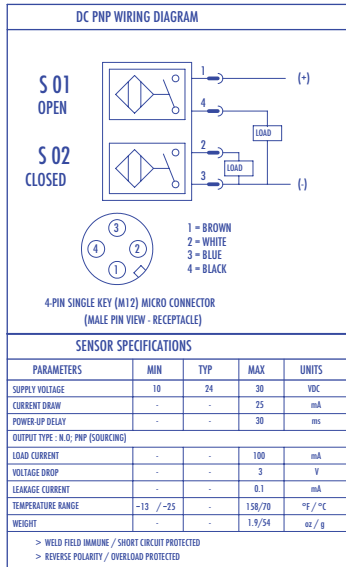
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031-036	U.S.	63MM CLAMP	70MM	8MM DOVEL 11MM CLEARAN	25MM
043-049	U.S.	63MM CLAMP	120MM	8MM DOVEL 11MM CLEARAN	25MM
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543-549	E.U.S.	63MM CLAMP	120MM	8MM DOVEL 8MM CLEARAN	20MM
513-518	GM	63MM CLAMP	STRAIGHT	8MM DOVEL 8MM CLEAR	20MM
525-530	GM	63MM CLAMP	25MM	8MM DOVEL 8MM CLEAR	20MM
537-542	GM	63MM CLAMP	70MM	8MM DOVEL 8MM CLEAR	20MM
549-554	GM	63MM CLAMP	120MM	8MM DOVEL 8MM CLEAR	20MM
206-209	US	50MM CLAMP	STRAIGHT	8MM DOVEL 11MM CLEARAN	20MM
216-218	US	50MM CLAMP	25MM	8MM DOVEL 11MM CLEARAN	20MM
226-228	U.S.	50MM CLAMP	50MM	8MM DOVEL 11MM CLEARAN	20MM
236-238	E.U.S.	50MM CLAMP	STRAIGHT	8MM DOVEL 8MM CLEARAN	20MM
246-248	E.U.S.	50MM CLAMP	25MM	8MM DOVEL 8MM CLEARAN	20MM
256-258	E.U.S.	50MM CLAMP	50MM	8MM DOVEL 8MM CLEARAN	20MM
401-403	GM	50MM	STRAIGHT	8MM DOVEL 8MM CLEARAN	20MM
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421-423	GM	50MM	50MM	8MM DOVEL 8MM CLEARAN	20MM
110-118	US	80MM CLAMP	STRAIGHT	8MM DOVEL 11MM CLEARAN	32MM * (T)
130-138	U.S.	80MM CLAMP	25MM	8MM DOVEL 11MM CLEARAN	32MM * (T)
150-155	U.S.	80MM CLAMP	70MM	8MM DOVEL 11MM CLEARAN	32MM * (T)
170-175	U.S.	80MM CLAMP	120MM	8MM DOVEL 11MM CLEARAN	32MM * (T)
100-108	US	80MM CLAMP	STRAIGHT	NONE	32MM * (T)
120-128	U.S.	80MM CLAMP	20MM	NONE	32MM * (T)
140-148	U.S.	80MM CLAMP	65MM	NONE	32MM * (T)
160-168	U.S.	80MM CLAMP	155MM	NONE	32MM * (T)

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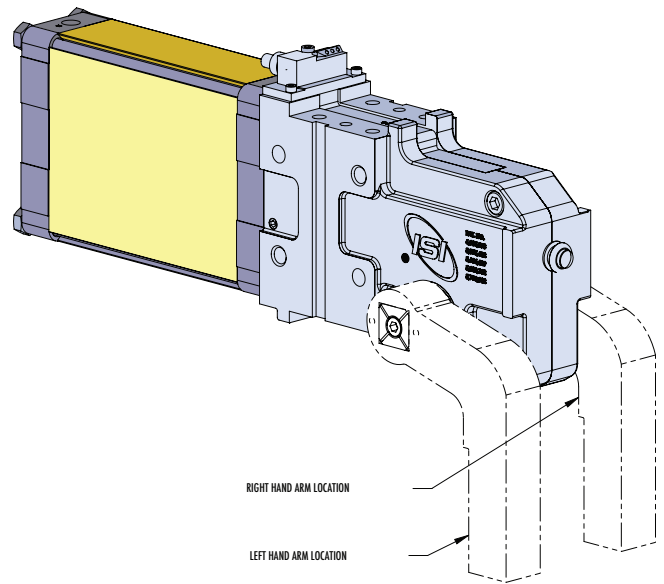
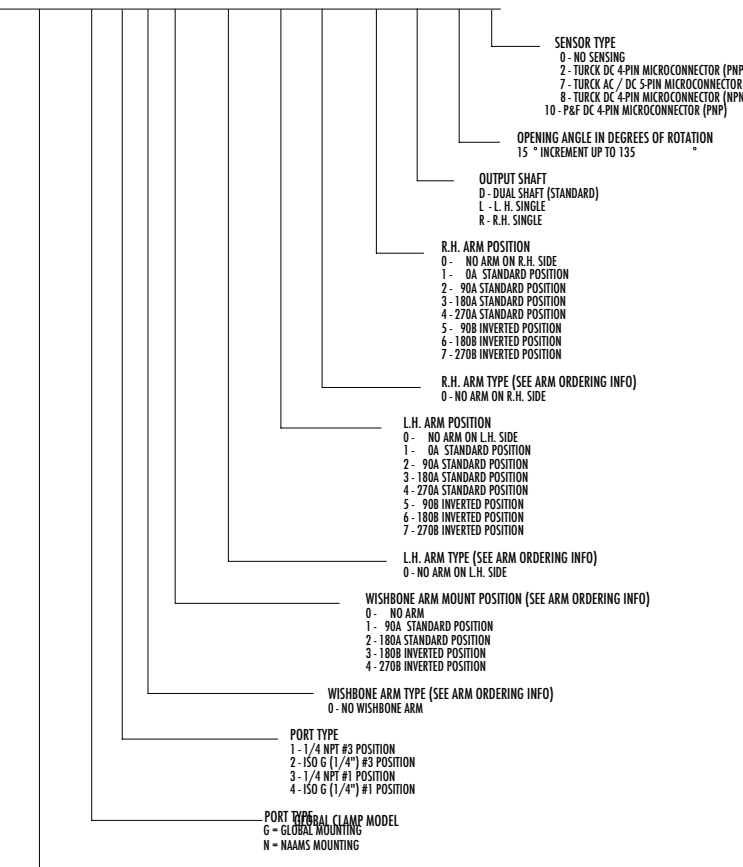
# EC90 - DRAWINGS, DATA AND ORDERING INFORMATION





**ORDERING INFORMATION**

EC90G - N - 1 - 0 - 0 - XG41M - 2 - XXX - XXX - D - 120 - 2



NAAMS CODE	SPEC.	CLAMP SERIES	OFFSET	HOLE PATTERNS	ARM WIDTH
007-012	U.S.	63MM CLAMP	STRAIGHT	8MM DOVEL 11MM CLEARAN	25MM
019-024	U.S.	63MM CLAMP	25MM	8MM DOVEL 11MM CLEARAN	25MM
031-036	U.S.	63MM CLAMP	70MM	8MM DOVEL 11MM CLEARAN	25MM
043-048	U.S.	63MM CLAMP	120MM	8MM DOVEL 11MM CLEARAN	25MM
507-512	E.U.S.	63MM CLAMP	STRAIGHT	8MM DOVEL 8MM CLEARAN	20MM
519-524	E.U.S.	63MM CLAMP	25MM	8MM DOVEL 8MM CLEARAN	20MM
531-536	E.U.S.	63MM CLAMP	70MM	8MM DOVEL 8MM CLEARAN	20MM
543-548	E.U.S.	63MM CLAMP	120MM	8MM DOVEL 8MM CLEARAN	20MM
510-516	GM	63MM CLAMP	STRAIGHT	8MM DOVEL 8MM CLEAR	20MM
525-530	GM	63MM CLAMP	25MM	8MM DOVEL 8MM CLEAR	20MM
537-542	GM	63MM CLAMP	70MM	8MM DOVEL 8MM CLEAR	20MM
549-554	GM	63MM CLAMP	120MM	8MM DOVEL 8MM CLEAR	20MM
206-209	US	50MM CLAMP	STRAIGHT	8MM DOVEL 11MM CLEARAN	20MM
216-218	US	50MM CLAMP	25MM	8MM DOVEL 11MM CLEARAN	20MM
226-228	U.S.	50MM CLAMP	50MM	8MM DOVEL 11MM CLEARAN	20MM
236-238	E.U.S.	50MM CLAMP	STRAIGHT	6MM DOVEL 8MM CLEARAN	20MM
246-248	E.U.S.	50MM CLAMP	25MM	6MM DOVEL 8MM CLEARAN	20MM
256-258	E.U.S.	50MM CLAMP	50MM	6MM DOVEL 8MM CLEARAN	20MM
401-403	GM	60MM	STRAIGHT	8MM DOVEL 8MM CLEARAN	20MM
411-413	GM	50MM	25MM	8MM DOVEL 8MM CLEARAN	20MM
421-423	GM	60MM	50MM	8MM DOVEL 8MM CLEARAN	20MM
110-118	US	80MM CLAMP	STRAIGHT	8MM DOVEL 11MM CLEARAN	32MM * (T)
130-138	U.S.	80MM CLAMP	25MM	8MM DOVEL 11MM CLEARAN	32MM * (T)
150-158	U.S.	80MM CLAMP	70MM	8MM DOVEL 11MM CLEARAN	32MM * (T)
170-178	U.S.	80MM CLAMP	120MM	8MM DOVEL 11MM CLEARAN	32MM * (T)
100-108	US	80MM CLAMP	STRAIGHT	NONE	32MM * (T)
120-128	U.S.	80MM CLAMP	20MM	NONE	32MM * (T)
140-148	U.S.	80MM CLAMP	65MM	NONE	32MM * (T)
160-168	U.S.	80MM CLAMP	115MM	NONE	32MM * (T)

Please see the entire NAAMS Clamp arm offering and drawings at [www.NAAMSstandards.org](http://www.NAAMSstandards.org)

Techrim standards also makes 'special' or customer specific arms - as well as alternate material arms, such as stainless steel.

ORDERING EXAMPLES	
EC91G-N-3-ACA206M-1-ACA206M-1-D-90-10	DUAL ARM CLAMP
EC91G-N-3-0-0-ACA206M-1-D-90-10	R.H. ARM CLAMP



## NAAMS

- Worlds largest inventory of NAAMS Standard components
- Standardized parts for many diverse industries / markets
- Euro Standards
- A true 'Value Added' commodity source!

## CLAMPS AND GRIPPERS

- EC series Clamps have a 'before center' locking mechanism
- EC Clamps have hundreds of options available for factory automation solutions
- Strong - yet compact, GL/GH Grippers have 5 cylinder options
- Our Grippers have over 50 head combinations

## PIVOT UNITS

- Very popular 'Off the Shelf' pneumatic units
- Industry leading - Fully adjustable!
- Multiple cylinder and mounting options
- Unique and compact design

## NC / DETAIL COMPONENTS

- We Design and construct thousands of custom components annually
- High quality - Low cost!
- Hundreds of material capabilities
- Small batch to high production

## AUTOMATION / TRANSFER

- Shuttles, Slides and Lift units
- Conveyor Rollers - in 3 industrial options
- 'Universal' mounted Robot Spacers
- Open architecture Clamping systems

