

# 3arm®



## ERGONOMIC SOLUTIONS



**3** Arm is a division of the Tecnospiro Machine Tool Company located in Sant Joan de Vilatorrada a small village about 40 miles west of Barcelona. They are a small family owned company that has been in business since the 60's. They have a state of the art manufacturing facility and a dynamic engineering staff that has been very innovative in design and inventing new products. The 3Arm ergonomic arm is the strongest most dependable arm available in the world market place today. It can be used for assistance in assembly, deburring, off line machining, and all types of lifting operations. Where ever operator fatigue is concern for employee safety, productivity, or quality 3Arm has a solution.



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3ARM® [www.3arm.net](http://www.3arm.net)

**SAFETY WARNING** 3ARM products are engineered and manufactured with safety in mind. The heat treat specifications exceed or meet all standards. All of the products manufactured by 3ARM are designed to perform without any undue safety issues when caution, common sense and proper safety practices are followed. The use of cutting tools and toolholders is safe when proper application and protection guidelines are observed. Even when these proper precautions are taken, it is possible that fragments of a cutting tool, cutting material, or holding device may be thrown at a very high rate of speed and have potential to cause severe bodily harm. It is imperative that general safety precautions and safety glasses be used at all times.

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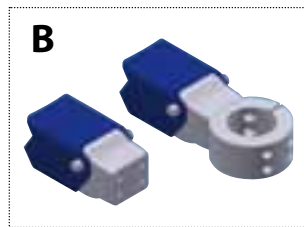
## 3arm Details

	SERIES 2	SERIES 3	SERIES 4	SERIES 5
<b>RADIUS mm.</b>	860	from 1075 to 1730	from 1220 to 1460	2130
<b>VERTICAL DISTANCE mm.</b>	565	from 705 to 1130	from 1075 to 1415	1150
<b>MAXIMUM WEIGHT Kg.</b>	6	up to 35	up to 24	12
<b>LOCK ON BRAKES</b>	NO	OPTIONAL	OPTIONAL	NO

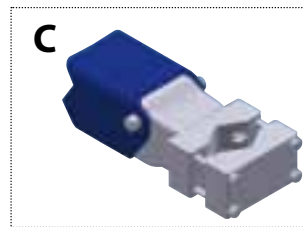
## Head members



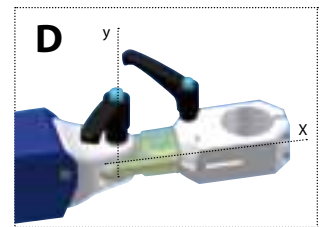
Tilting arm movement only



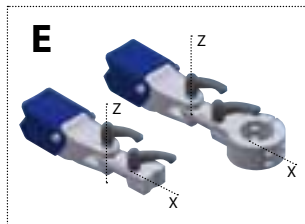
Tilting arm movement only



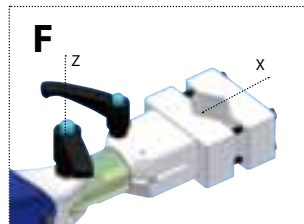
Tilting arm movement only



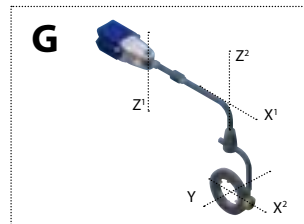
X: Turns 360°  
Z: Turns 90° right and left, lockable in any position.



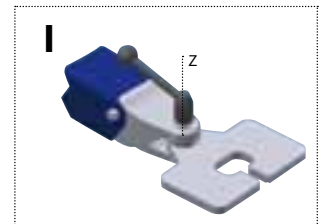
X: Turns 360°  
Z: Turns 90° right and left, lockable in any position.



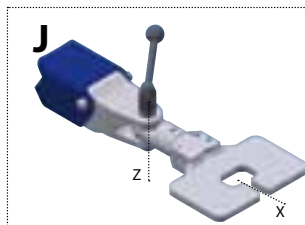
X: Turns 360°  
Z: Turns 90° right and left, lockable in any position.



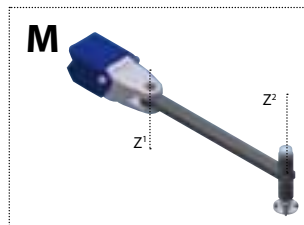
X<sup>1</sup>: Turns 360°, lockable each 45°  
X<sup>2</sup>: Turns 360°, non lockable  
Y: Turns 360°, non lockable  
Z<sup>1</sup>: Turns 90° right and left, non lockable  
Z<sup>2</sup>: Turns 360°, non lockable



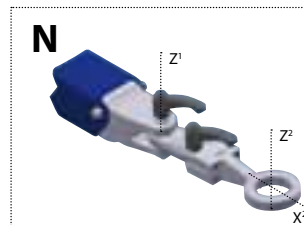
Z: Turns 90° right and left



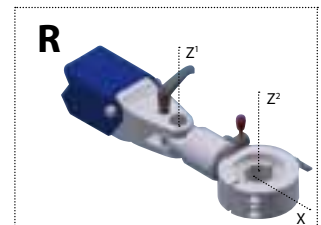
X: Turns 360°  
Z: Turns 90° right and left, lockable in any position.



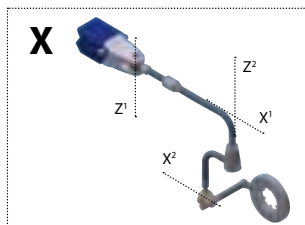
Z<sup>1</sup>: Turns 90° right and left.  
Z<sup>2</sup>: Tilting arm movement only



X: Turns 360°, lockable in any position.  
Z<sup>1</sup>: Turns 90° left, lockable in any position.  
Z<sup>2</sup>: Turns 360°, non Lockable



X: Turns 360°, 64 lockable position.  
Z<sup>1</sup>: Turns 90° left, 5 lockable position.  
Z<sup>2</sup>: Turns 360°, 8 lockable position.

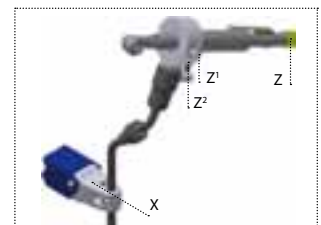


X<sup>1</sup>: Turns 360°, lockable each 45°.  
X<sup>2</sup>: Turns 360°, non lockable.  
Y: Turns 360°.  
Z<sup>1</sup>: Turns 90° right and left, non lockable.  
Z<sup>2</sup>: Turns 360°, non lockable.

**Others  
On Request**



Z<sup>1</sup>: Turns 90° right and left.  
Z<sup>2</sup>: Turns 360°, lockable.



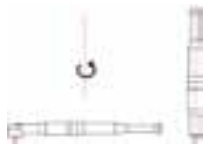
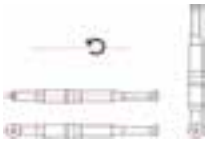

Z: Turns 360°, 8 positions each 45°.  
Z<sup>1</sup>: Turns 360°, 8 lockable position.  
Z<sup>2</sup>: 64 position each 5,6°.  
X: Turns 360° 8 positions each 45°.

<b>APPLICATION</b>	<b>TOOLS</b>	<b>3arm solution</b>
Deburring Sharpen Polish	Straight grinder Angular grinder Orbital Sander Pneumatic Electric	S2 - S3 - S4 - S5 Head G or X
Flat Polishing	Sander	S3 - S4 + Lock. Head M
Cut Rivet Stapling	Cutters & Spreaders Riveting Stapler	S2 - S3 - S4 - S5 Head G or X (+dynamic) Head N (- dynamic)
Welding	Stud Welding	S2 - S3 - S4 - S5 A / B / C / D / E / F / N
	Spot Welding	S2 - S3 - S4 - S5 Head N (- dynamic) Head G or X (+dynamic)

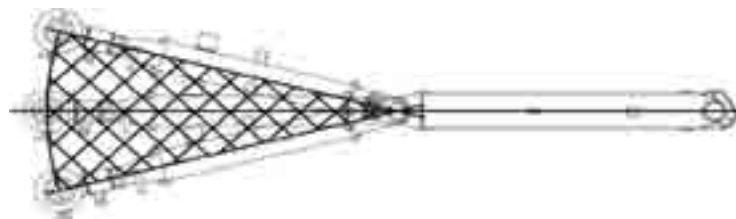
<b>APPLICATION</b>	<b>TOOLS</b>	<b>3arm solution</b>
Positioning	Camera Laser Scanner	S2 - S3 - S4 - S5 A / B / C / D / E / F / N
Positioning + attach	Roughness tester Gauge	S3 - S4 A / B / C / D / E / F + lock
Positioning + attach Accuracy	Specialized tools etc...	S3 - S4 A / B / C / D / E / F + lock + Ball head
Screwing without torque	Wrench Impact Impulse Bar reaction Hydraulic	S2 - S3 - S4 - S5 Head N (- dynamic) Head G or X (+ dynamic)
Screwing with torque	Wrench Pneumatic Electronic Hydraulic Straight Angle	S2 - S3 - S4 Look "TORQUE" table data

# Quick Guide

WORK TYPE	Max TORQUE. Nm		
	S2	S3*	S4**
VERTICAL	120	650	300
HORIZONTAL	60/90 straight/angular	250	250
ANY ANGLE	60	200	200

WORK	HEAD Member	S2	S3*	S4**
	<b>VERTICAL</b>			
	B: STATIONARY FLAT + RING	120	650	300
	E: ARTICULATED FLAT + RING	60	120	
	R: REVOLVING	-		300
	<b>HORIZONTAL</b>			
	B: STATIONARY FLAT + RING	90	250	
	E: ARTICULATED FLAT + RING	60	120	
	R: REVOLVING	-		250
	<b>ANY ANGLE</b>			
	E: ARTICULATED FLAT + RING	60	120	
	R: REVOLVING	-		200

\*S3 - REQUIRED LOCKING, \*\*S4 - REQUIRED LOCKING



UNUSABLE AREA WITHOUT LOCKING

## Accessories

**CLAMP**



**TROLLEY WITH COLUMN**



**TABLE**



**LIFTER 2000S**



**FLOOR RAIL**



**BEAM + PILLAR**



# Applications



## Engineered for your application

Over 450 standard combinations available

AS EASY AS KNOWING THE ANSWER TO 5 QUESTIONS

1

Choose the arm that will meet your weight and reach requirements

Series 2 - up to 6 Kg / 13 lbs, 860 mm / 34"

Series 3 - up to 35 Kg / 77 lbs, 1730 mm / 68"

Series 4 - up to 24 Kg / 53 lbs, 1460 mm / 58"

Series 5 - up to 12 Kg / 26 lbs, 2130 mm / 84"

3

Choose Your vertical lift arm

What overall reach & vertical distance do you need?

4

Choose your Head Member

Hold it with a vertical head?  
Hold it with a vertical or horizontal head? Or an orbital attachment?

5

Choose a Brake option

Do you need manual brakes?  
Pneumatic brakes?  
Or without brakes?

2

Choose your base

What type of mount do you need? Bottom, Top or Adjustable Height Base

OR YOU CAN CONTACT US AND WE WILL ENGINEER A SOLUTION FOR YOU!



# Series 2

## Build an ergonomic solution

Pick your Base Arm

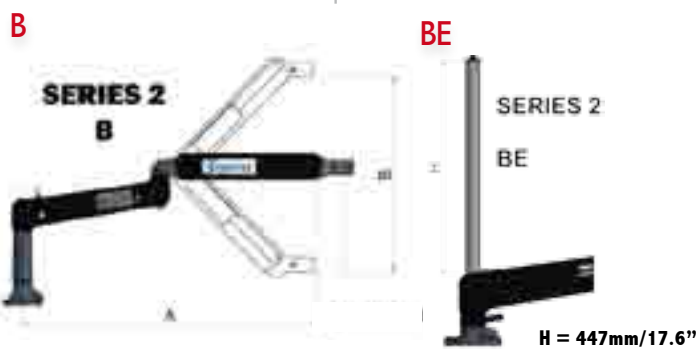


+

Pick your Head Member



### Bottom Radial Base Arm



### Arm Dimensions

Radial Base	A (Maximum Reach)	B (Vertical Distance)
B	860 / 33.9"	565 / 22.2"
BE	860 / 33.9"	565 / 22.2"

### Stationary



### Articulating



### Orbital Attachment



3arm Pictured  
**B+G2**  
Tool not included






**Weight Range**  
**0-6 Kg / 13 lbs.**

*According Damper Weight Range*

**Maximum Reach**  
**860 mm / 34"**

**Vertical Distance**  
**565mm / 22"**

WORK TYPE	Max TORQUE. Nm
	<b>S2</b>
<b>VERTICAL</b>	120
<b>HORIZONTAL</b>	60/90 straight/angular
<b>ANY ANGLE</b>	60

WORK	HEAD Member	S2
	<b>VERTICAL</b>	
	B2: STATIONARY FLAT + RING	120
	E2: ARTICULATED FLAT + RING	60
	<b>HORIZONTAL</b>	
	B2: STATIONARY FLAT + RING	90
	E2: ARTICULATED FLAT + RING	60
	<b>ANY ANGLE</b>	
	E2: ARTICULATED FLAT + RING	60

### Damper Weight Range

Head Type	A2		B2		C2		D2		E2		F2		G2, X2		N2	
	Min	Max	Min	Max	Min	Max	Min	Max	Min	Max	Min	Max	Min	Max	Min	Max
<b>SERIES 2</b> B + Head type	0	0,6	0,2	0,8												
	0,3	1,1	0,5	1,3	0	0,7	0	0,5	0	0,6						
	0,6	1,5	0,8	1,7	0,2	1,1	0	0,9	0,1	1						
	0,8	2	1	2,2	0,4	1,6	0,2	1,4	0,3	1,5	0	0,9				
	1,1	2,4	1,3	2,6	0,7	2	0,5	1,8	0,6	1,9	0	1,3			0	1,2
	1,7	3,3	1,9	3,5	1,3	2,9	1,1	2,7	1,2	2,8	0,6	2,2	0	1,5	0,5	2,1
	2,3	4,2	2,5	4,4	1,9	3,8	1,7	3,6	1,8	3,7	1,2	3,1	0,5	2,4	1,1	3
	2,9	5,1	3,1	5,3	2,5	4,7	2,3	4,5	2,4	4,6	1,8	4	1,1	3,3	1,7	3,9
	3,5	6	3,7	6,2	3,1	5,6	2,9	5,4	3	5,5	2,4	4,9	1,7	4,2	2,3	4,8

# Series 3

**Weight Range**  
0-35 Kg / 77 lbs.

**Maximum Reach**  
1730 mm / 68"

**Vertical Distance**  
1130 mm / 45"

According Damper Weight Range

## Build an ergonomic solution

Pick your Base Arm



+

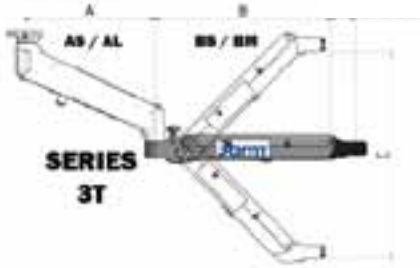
Pick your Tilt Arm



+

### Top Radial Base Arm

AS or AL



### Arm Dimensions

Radial Base	A (Length) mm./inches	Tilting Arm mm./inches	B (Length) mm./inches	C (Vertical Distance) mm./inches	Maximum Reach mm./inches
AS	450/17.7"	BS	610/24"	707/27.8"	1060/41.7"
		BM	910/35.8"	1130/44.5"	1360/53.5"
AL	808/31.8"	BS	610/24"	707/27.8"	1420/55.9"
		BM	910/35.8"	1130/44.5"	1730/67.6"

### Vertical Tilt Arm

**BS** Small (Length 610mm./24", up to 35 Kg/77 lbs)

**BM** Medium (Length 910mm./ 35.8", up to 18 Kg/40 lbs)



3arm Pictured  
**AS+BM+A3+L11**

# Top Mount

Pick your Head Member



Pick your Brakes



## Stationary

**A3** Vertical



**B3** Flat



**C3** Adjustable



## Articulating

**D3** Vertical



**E3** Flat



**F3** Adjustable



**R3** Nut Runner



## Orbital Attachment

**G3, X3** Quick-Change Gimbal



**I3** Flat Locatable Surface



**J3** Flat Vertical Surface



**N3** Pistol-Style Tool Holder



**M3** Constant-Pressure Tool Holder



## Brakes

**L00** None

**L11** Manual

**L22** Pneumatic

**L50** Manual Lock at Base

**L92** Brakes lock by tool trigger



# Series 3

**Weight Range**  
0-35 Kg / 77 lbs.

According Damper Weight Range

**Maximum Reach**  
1730 mm / 68"

**Vertical Distance**  
1130 mm / 45"

## Build an ergonomic solution

Pick your Base Arm

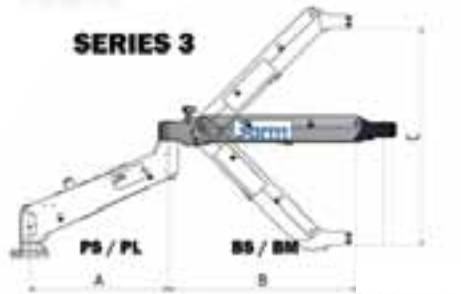


Pick your Tilt Arm

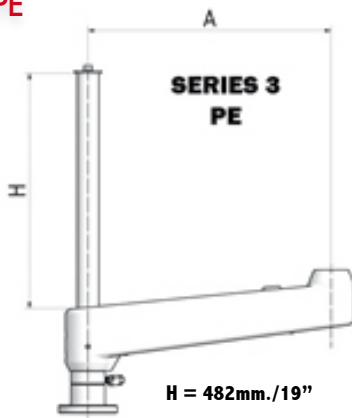


### Bottom Radial Base Arm

PS or PL



PE



H = 482mm./19"

### Vertical Tilt Arm

BS Small (Length 610mm./24", up to 35 Kg/77 lbs)

BM Medium (Length 910mm./35.8", up to 18 Kg /40 lbs)



### Arm Dimensions

Radial Base	A (Length) mm./inches	Tilting Arm mm./inches	B (Length) mm./inches	C (Vertical Distance) mm./inches	Maximum Reach mm./inches
PS	450/17.7"	BS	610/24"	707/27.8"	1060/41.7"
		BM	910/35.8"	1130/44.5"	1360/53.5"
PL	808/31.8"	BS	610/24.0"	707/27.8"	1420/55.9"
		BM	910/35.8"	1130/44.5"	1730/67.6"
PE	500/19.7"	BS	610/24.0"	707/27.8"	1110/43.7"
		BM	910/35.8"	1130/44.5"	1410/55.8"

3arm Pictured  
**AS+BM+D3+L11**

# Bottom Mount

Pick your Head Member



+

Pick your Brakes



## Stationary

**A3** Vertical



**B3** Flat



**C3** Adjustable



## Articulating

**D3** Vertical



**E3** Flat



**F3** Adjustable



**R3** Nut Runner



## Orbital Attachment

**G3, X3** Quick-Change Gimbal



**I3** Flat Locatable Surface



**J3** Flat Vertical Surface



**N3** Pistol-Style Tool Holder



**M3** Constant-Pressure Tool Holder



## Brakes

**L00** None

**L11** Manual

**L22** Pneumatic

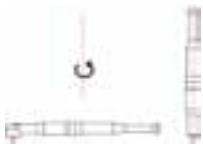
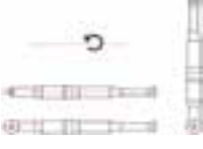

**L50** Manual Lock at Base

**L92** Brakes lock by tool trigger



# Series 3

WORK TYPE	Max TORQUE. Nm
	<b>S3*</b>
<b>VERTICAL</b>	650
<b>HORIZONTAL</b>	250
<b>ANY ANGLE</b>	200

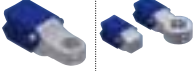
WORK	HEAD Member	S3*
<b>VERTICAL</b>		
	B3: STATIONARY FLAT + RING	650
	E3: ARTICULATED FLAT + RING	120
	R3: REVOLVING	300
<b>HORIZONTAL</b>		
	B3: STATIONARY FLAT + RING	250
	E3: ARTICULATED FLAT + RING	120
	R3: REVOLVING	250
<b>ANY ANGLE</b>		
	E3: ARTICULATED FLAT + RING	120
	R3: REVOLVING	200

\*S3 -RECOMMENDED LOCKING



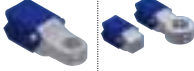
UNUSABLE AREA WITHOUT LOCKING

## Damper Weight Range

Head Type	A3	B3
		
Load Range Kg	Min	Max
	1	3
	1	3
	2	5
	3	6
	4	8
	5	9
	5	10
	6	12
	7	13
	7	13
	8	15
	9	16
	10	18
	11	19
	11	20
	12	21
	12	22
	13	23
	14	25
	15	26
	16	27
	17	29
	17	30
	18	31
	18	32
	19	33
	20	35

### SERIES 3 TOP & BOTTOM MOUNT

AS or PS + BS + Head type / AL or BL + BS + Head type

Head Type	A3	B3
		
Load Range Kg	Min	Max
	0	3
	1	4
	1	5
	2	5
	2	6
	2	7
	3	7
	3	8
	4	9
	4	10
	5	10
	5	11
	6	12
	6	13
	7	14
	7	14
	8	15
	8	16
	8	17
	9	17
	9	18
	10	19
	17	30
	18	31
	18	32
	19	33
	20	35

### SERIES 3 TOP & BOTTOM MOUNT

AS or PS + BM + Head type / AL or PL + BM + Head type

<b>C3</b> 	<b>D3</b> 	<b>E3</b> 	<b>I3</b> 	<b>M3</b> 	<b>1Kg</b>
<b>F3</b> 	<b>J3</b> 	<b>N3</b> 			
<b>G3</b> 	<b>X3</b> 				<b>3Kg</b>
<b>R3</b> 					

\* Add the head weight to the weight tool.  
Look for the weight range wished in the table

\* Ex.:  
Head F3..... 2 Kg  
Tool ..... 5 Kg  
Total: ..... 7 Kg

Right choice:  
5 - 9  
5 - 10

# Series 4

## Build an ergonomic solution

Pick your Base Arm

Pick your Head Member

Pick your Brakes



### Radial Base Arm

DS or DM

SERIES 4



### Arm Dimensions

Radial Base	A (Maximum Reach) mm./inches	B (Vertical Distance) mm./inches	Weight Range Kg./lbs
DS	1220/48"	1075/42.3"	21/46
DM	1460/57.5"	1415/55.5"	24/53

### Stationary

A4 Vertical



B4 Flat



C4 Adjustable



### Articulating

D4 Vertical



E4 Flat



F4 Adjustable



R4 Nut Runner



### Orbital Attachment

G4, X4 Quick-Change Gimbal



I4 Flat Locatable Surface



J4 Flat Vertical Surface



N4 Pistol-Style Tool Holder



M4 Constant-Pressure Tool Holder



### Brakes

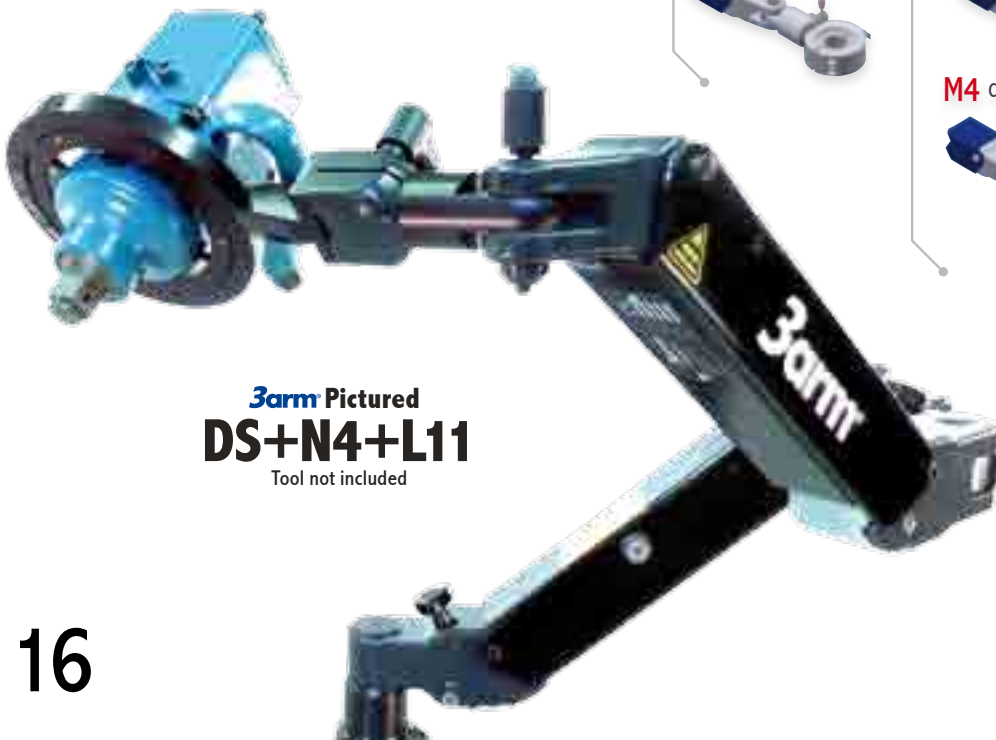
L00 None

L11 Manual

L22 Pneumatic

L50 Manual Lock at Base

L92 Brakes lock by tool trigger



3arm Pictured  
**DS+N4+L11**  
Tool not included

Can be engineered for  
**Top, Bottom or Wall** mount




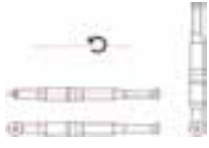

**Weight Range**  
**0-24 Kg / 53 lbs.**

*According Damper Weight Range*



**Maximum Reach**  
**1460 mm / 58"**

**Vertical Distance**  
**1410 mm / 56"**

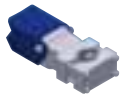










WORK TYPE	Max TORQUE. Nm
	<b>S4**</b>
<b>VERTICAL</b>	300
<b>HORIZONTAL</b>	250
<b>Any Angle</b>	200

WORK	HEAD Member	S4**
	<b>VERTICAL</b>	
	B4: STATIONARY FLAT+ RING	300
	E4: ARTICULATED FLAT + RING	120
	<b>HORIZONTAL</b>	
	B4: STATIONARY FLAT + RING	250
	E4: ARTICULATED FLAT + RING	120
	<b>ANY ANGLE</b>	
	E: ARTICULATED FLAT + RING	120
	R4: REVOLVING	200

### Damper Weight Range

Head Type	A4	B4
		
Load Range Kg	Min	Max
<b>SERIES 4</b> DM + Head type	1	3
	1	3
	2	5
	3	6
	4	8
	5	9
	5	10
	6	12
	7	13
	7	13
	8	15
	9	16
	10	18
	11	19
11	20	
12	21	
12	22	
13	23	
14	24	
<b>SERIES 4</b> DS + Head type	2	4
	3	6
	3	7
	4	9
	6	11
	7	13
	8	14
	9	16
	10	18
	11	20
	12	21

\*\*S4 -REQUIRED LOCKING

<b>C4</b> 	<b>D4</b> 	<b>E4</b> 	<b>M4</b> 	<b>1Kg</b>
<b>F4</b> 	<b>I4</b> 	<b>J4</b> 	<b>N4</b> 	
<b>G4</b> 	<b>X4</b> 			<b>3Kg</b>
<b>R4</b> 				

\* Add the head weight to the weight tool.  
Look for the weight range wished in the table

\* Ex.:  
Head F4..... 2 Kg  
Tool ..... 5 Kg  
Total: ..... 7 Kg

Right choice:  
5 - 9  
5 - 10

# Series 5

## Build an ergonomic solution

Pick your Base Arm



+

Pick your Head Member



+

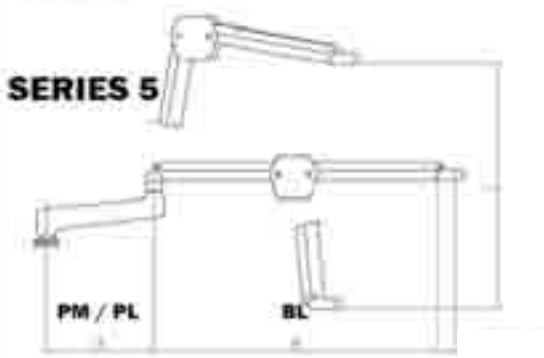
Pick your Brakes



**L50**

### Radial Base Arm

PM or PL



### Arm Dimensions

Radial Base	A (Length) mm./inches	Tilting Arm mm./inches	B (Length) mm./inches	C (Vertical Distance) mm./inches	Maximum Reach mm./inches
PM	1500/9.7"	BL	610/52"	1150/45.2"	1818/71.6"
PL	808/31.8"		610/52"	1150/45.2"	2130/83.8"

### Stationary

A5 Vertical



B5 Flat



C5 Adjustable



### Articulating

D5 Vertical



E5 Flat



F5 Adjustable



### Orbital Attachment

G4, X5 Quick-Change Gimbal



### Brakes

L50 Manual lock at base



3arm Pictured  
**PM+BL+A5+L50**










**Weight Range**  
**0-12 Kg / 26 lbs.**

*According Damper Weight Range*

**Maximum Reach**  
**2130 mm / 84"**

**Vertical Distance**  
**1150 mm / 45"**

### Damper Weight Range

	A5	B5	C5	D5	E5	F5	N5	G5	X5
Head Type									
Load Range Kg	Min	Max	Min	Max	Min	Max	Min	Max	Max
<b>SERIES 5</b> PM + BL + Head type PL + BL + Head type	2	6	1	5					
	2	7	1	6	0	5	0	4	
	5	12	4	11	3	10	2	9	
	7	14	6	13	5	12	4	11	

\* Chose the weigh range according your tool weight and the head selected.



# Accessories

Ref	Description	Dimensions	Series			
			2	3	4	5
TP000100	Small table	500x500x900 mm. 19 11/16" x 19 11/16" x 35 7/16"	○	Consult (according the load)		
TF000100	Medium table	850x850x850 mm. 33 7/16" x 33 7/16" x 33 7/16"	○	Consult (according the load)		
907B0000	Large table	1100x850x850 mm. 43 5/16" x 33 7/16" x 33 7/16"	○	Consult (according the load)		

Ref	Description	Dimensions	Series			
			2	3	4	5
BR000100	Clamp	127x63,5 mm. 5" x 2 1/2"	○			
BR100100	Big Clamp	127x127x65,5 mm. 5" x 5" x 2 1/2"	○	Consult (according the load)		

EDP	Description	Dimensions	Series			
			2	3	4	5
IC000100	Magnetic Suport	250 mm. 9 13/16"	○	Consult (according the load)		
KA011X04	Trolley	700 x 700 mm. 27,55" x 27,55"	○	Consult (according the load)		
CL000100	Column	940mm. 37"	○	○	○	○
EA0001A0	Pneumatic lifter	550 mm. 21 5/8"	○	○	Consult (according the load)	
CL013300	Column lifter	1450 mm. 57,1"	○	○	○	○
CL020000	Beam	2000 mm. 78,7"	○	○	○	○
CL021504	Pillar	764 mm. 30"	○	○	○	○
CL040000	Floor Rail	2000 mm. 78,7"	○	○	○	○

## FLOOR RAILS & BEAMS

AVAILABLE UPON REQUEST

**CALL FOR AN ENGINEERED SOLUTION**



Small



Medium



Large



Small Clamp



Big Clamp



Magnetic Support



Lifter



Column



Trolley + Column



2000S  
Column Rifter



Floor Rail +  
Column Lifter



Beam + Pillar





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*To offer innovative high quality solutions at a competitive price.*

*To be receptive & proactive in identifying solutions for our customers needs & requirements.*



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