

# 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.

**TECNOSPIRO**  
MACHINE TOOL SL

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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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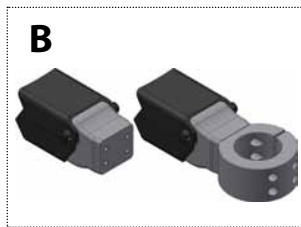
## 3arm Details

	SERIES 1	SERIES 2	SERIES 3	SERIES 4	SERIES 6 (Telescopic)
<b>Max. RADIUS mm/inches</b>	1120/44"	860/34"	1730/68"	1460/58"	2190/86"
<b>VERTICAL DISTANCE mm/inches</b>	1070/42"	530/22"	1070/42"	1375/54"	670/26"
<b>MAXIMUM WEIGHT Kg./lbs</b>	10 / 22	6 / 13	35 / 77	24 / 53	20 / 44
<b>LOCK ON BRAKES</b>	NO	NO	OPTIONAL	OPTIONAL	NO
<b>Top or BOTTOM Mounted</b>	YES	YES	YES	YES	YES

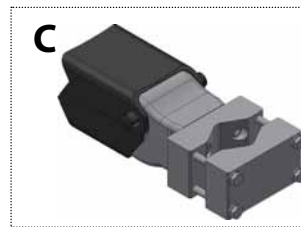
## Head members



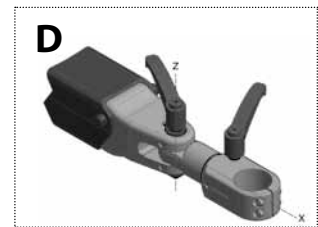
Tilting arm movement only



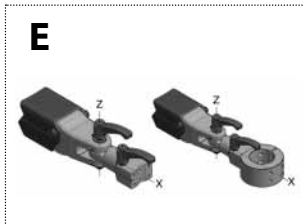
Tilting arm movement only



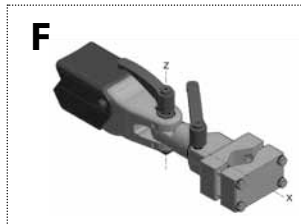
Tilting arm movement only



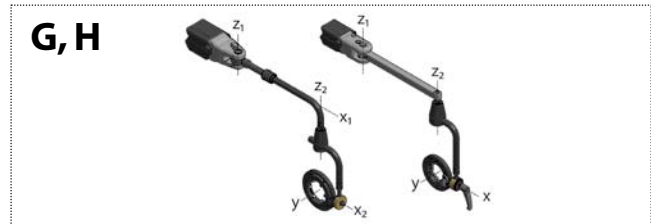
X:Turns 360°, Z:Turns 90° right & left. Lockable in any position



X:Turns 360°. Lockable in any position  
Z:Turns 90° right & left. Lockable in any position



X:Turns 360°. Lockable in any position  
Z:Turns 90° right & left. Lockable in any position

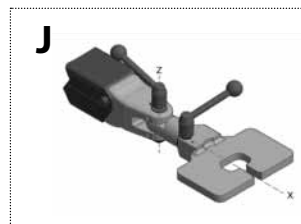


G: from 0 up to 15 kg/33 lbs with Quick Change  
X1:Turns 360°. Lockable each 45°  
X2:Turns 360°.  
Y:Turns 360°.  
Z1:Turns 90° right & left.  
Z2:Turns 360°. Non lockable

H: from 15 kg/33 lbs up to 30 kg/66 lbs. NO Quick Change  
X: turns 360°. Lockable in any position  
Y:Turns 360°. Lockable in any position  
Z1:Turns 90° right & left  
Z2:Turns 360°



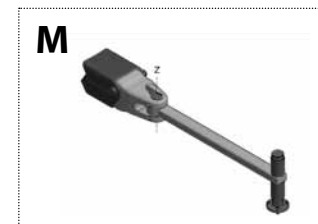
Z:Turns 90° right & left. Lockable in any position



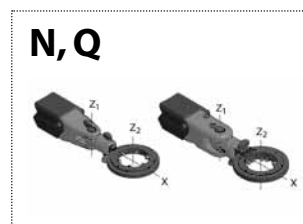
X:Turns 360°. Lockable in any position  
Z:Turns 90° right and left. Lockable in any position



X:Turns 90°. Lockable in any position  
Y:Turns 90° right & left.  
Z:Turns 360°. Lockable in any position. Height adjustable up to 175 mm.



Z:Turns 90° right & left.



N: from 0 up to 15 kg with Quick change  
X:Turns 360°. Lockable 4x90°.  
Z1:Turns 90° right & left.  
Z2:Turns 360°.  
Q: from 15 up to 30 kg  
X:Turns 360°. Lockable in any position  
Z1:Turns 90° right & left  
Z2:Turns 360°. Lockable in any position



X:Turns 360°. 64 Lockable positions  
Z1:Turns 90° left. 5 Lockable positions  
Z2:Turns 360°. 8 Lockable positions



T: from 0 up to 15 kg with Quick change  
X:Turns 360°. Lockable 4x90°  
Y:Turns 360°  
Z1:Turns 90° right & left  
Z2:Turns 360°  
U: from 15 up to 30 kg  
X:Turns 360°. Lockable 4x90°  
Y:Turns 360°. Lockable in any position  
Z1:Turns 90° right & left  
Z2:Turns 360°



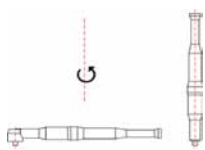
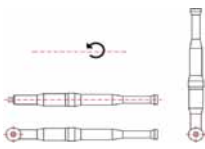
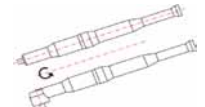
X1:Turns 360°. Lockable each 45°  
X2:Turns 360°  
Y:Turns 360°  
Z1:Turns 90° right & left.  
Z2:Turns 360°

<b>APPLICATION</b>	<b>TOOLS</b>	<b>3arm solution</b>
Deburring Sharpen Polish	Straight grinder Angular grinder Orbital Sander Pneumatic Electric	S1 - S2 - S3 - S4 Head G or X
Flat Polishing	Sander	S3 - S4 + Lock. Head M
Cut Rivet Stapling	Cutters & Spreaders Riveting Stapler	S1 - S2 - S3 - S4 Head G or X (+dynamic) Head N (- dynamic)
Welding	Stud Welding	S1 - S2 - S3 - S4 A / B / C / D / E / F / N
	Spot Welding	S1 - S2 - S3 - S4 Head N (- dynamic) Head G or X (+dynamic)

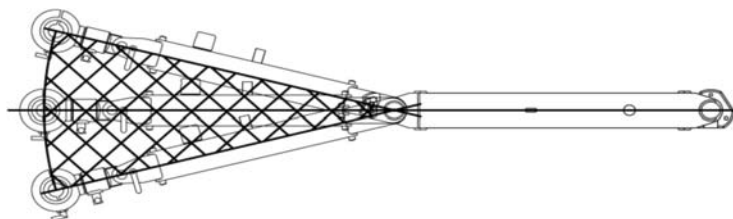
<b>APPLICATION</b>	<b>TOOLS</b>	<b>3arm solution</b>
Positioning	Camera Laser Scanner	S1 - S2 - S3 - S4 A / B / C / D / E / F / N
Positioning + attach	Roughness tester Gauge	S3 - S4 A / B / C / D / E / F + lock
Positioning + attach Accuracy	Specialized tools etc...	S3 - S4 A / B / C / D / E / F + lock + Ball head
Screwing without torque	Wrench Impact Impulse Bar reaction Hydraulic	S1 - S2 - S3 - S4 - S6 Head N (- dynamic) Head G or X (+ dynamic) Head H / Q / T (only S3)
Screwing with torque	Wrench Pneumatic Electronic Hydraulic Straight Angle	S2 - S3 - S4 Look "TORQUE" table data page 5

## TORQUE TABLE

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 - RECOMMENDED LOCKING, \*\*S4 - REQUIRED LOCKING



UNUSABLE AREA WITHOUT LOCKING

## Accessories

**BIG CLAMP**



**TROLLEY + COLUMN + PNEUMATIC LIFTER**



**TABLE**



**TOLLEY + LIFTER 2000**



**FLOOR RAIL + LIFTER 2000**



**BEAM + PILLARS**



# Applications



Engineered for your application  
Over 600 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 1 - up to 10 Kg / 22 lbs, 1120 mm / 44"
- 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 6 - up to 20 Kg / 44 lbs, 2190 mm / 86"

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 1

**Weight Range**  
0-10 Kg / 22 lbs.

*According Damper Weight Range*

**Maximum Reach**  
1120 mm / 44"

**Vertical Distance**  
1070mm / 42"

## Build an ergonomic solution

Pick your Radial Base Arm

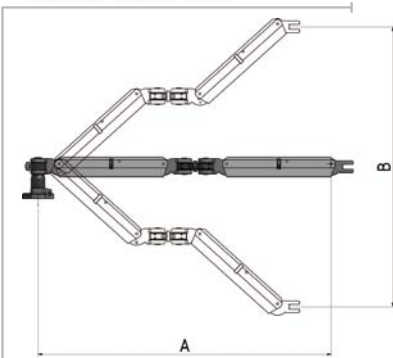


+

Pick your Head Member



### Radial Base Arm



### Arm Dimensions

Radial Base Arm	A (Maximum Reach)	B (Vertical Distance)
1SN+1DS	1120 mm / 44"	1070 / 42"

### Stationary

**A1** Vertical



**B1** Flat



**C1** Adjustable



### Articulating

**D1** Vertical



**E1** Flat



**F1** Adjustable



### Orbital Attachment

**G1, X1** Quik change Gimbal



**N1** Pistol-Style Tool Holder with Quick-Change Gimbal



**T1** Pistol-Style Tool Holder





**3arm Pictured**  
**1SN+1DS+X1**  
Tool not included



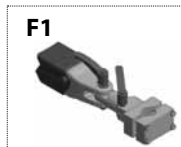
# Top & Bottom Mount

## Damper Weight Range

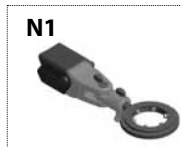
Head Type	A1	B1
		
Load Range Kg	Min	Min
<b>SERIES 1 TOP &amp; BOTTOM Mount</b> 1SN + 1 DS + Head type	0	0,9
	0,7	2,1
	1,4	3,2
	2,1	4,3
	2,8	5,5
	3,6	6,7
	4,3	7,7
	5	8,9
	5,7	10



0,5 Kg



1 Kg



1,5 Kg



2 Kg

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

\* Ex.:  
Head G1 ..... 2 Kg  
Tool ..... 3 Kg  
Total ..... 5 Kg

Right choices:  
3,6 - 6,7  
4,3 - 7,7

# Series 2

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

*According Damper Weight Range*

**Maximum Reach**  
860 mm / 34"

**Vertical Distance**  
530 mm / 22"

## Build an ergonomic solution

Pick your Radial Base Arm

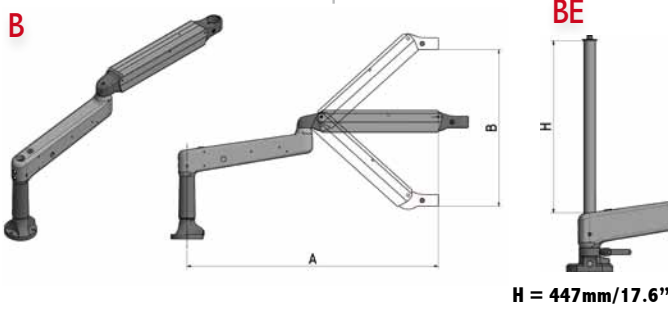


+

Pick your Head Member



### Radial Base Arm



### Arm Dimensions

Radial Base	A (Maximum Reach)	B (Vertical Distance)
B	860 / 33.9"	530 mm / 21"
BE	860 / 33.9"	530 mm / 21"

### Stationary

**A2** Vertical



**B2** Flat



**C2** Adjustable



### Articulating

**D2** Vertical



**E2** Flat



**F2** Adjustable



### Orbital Attachment

**G2, X2** Quik change Gimbal



**N2** Pistol Style tool holder



3arm Pictured

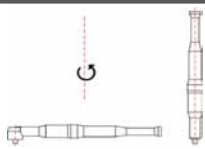
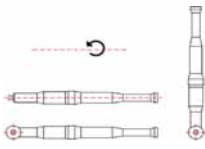
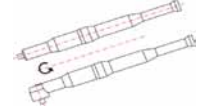
**B+G2**

Tool not included





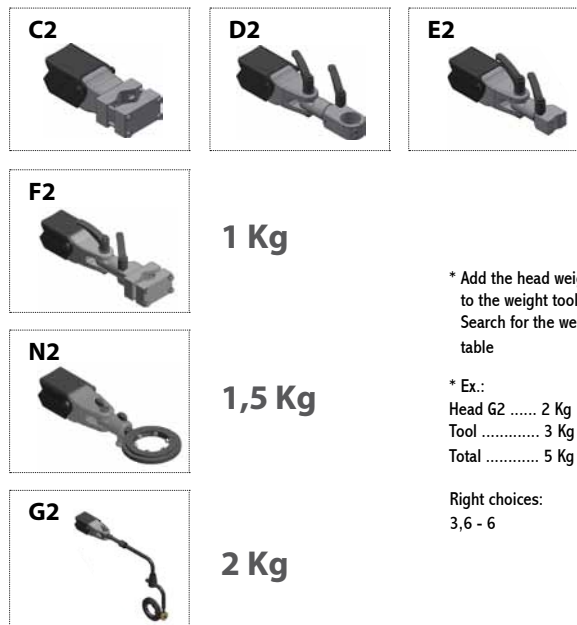
# Top & Bottom Mount

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
		
Load Range Kg	Min	Min
<b>SERIES 2 TOP &amp; BOTTOM Mount</b> B + Head Type	0	0,6
	0,3	1,1
	0,6	1,5
	0,8	2
	1,1	2,4
	1,7	3,3
	2,3	4,2
	2,9	5,1
	3,5	6



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

\* Ex.:  
Head G2 ..... 2 Kg  
Tool ..... 3 Kg  
Total ..... 5 Kg

Right choices:  
3,6 - 6

# Series 3

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

**Maximum Reach**  
1730 mm / 68"

**Vertical Distance**  
1070 mm / 42"

According Damper Weight Range

## Build an ergonomic solution

Pick your Base Arm

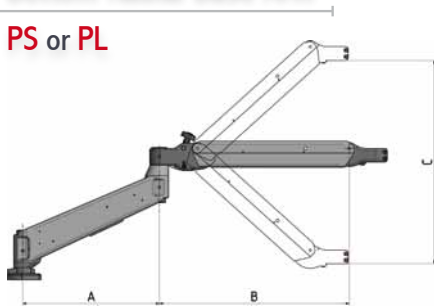


Pick your Tilt Arm

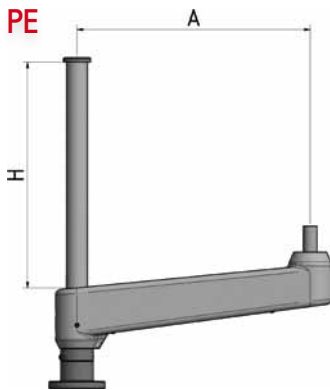


### Bottom Radial Base Arm

PS or PL



PE



H = 482mm./19"

### Vertical Tilt Arm

**BS** Small (Length 625 mm / 24", up to 35 Kg/77 lbs)

**BM** Medium (Length 925 mm / 36", 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	625/24"	670/26"	1075/42"
		BM	925/36"	1070/42"	1375/54"
PL	808/31.8"	BS	610/24.0"	707/27.8"	1430 / 56"
		BM	910/35.8"	1130/44.5"	1730/67.6"
PE	500/19.7"	BS	610/24.0"	707/27.8"	1125/44"
		BM	910/35.8"	1130/44.5"	1425/56"



# Top & Bottom Mount

Pick your Head Member



+

Pick your Brakes



## Stationary

**A3** Vertical



**B3** Vertical



**C3** Adjustable



## Articulating

**D3** Vertical



**E3** Flat



**F3** Adjustable



**R3** Adjustable



**L3** Adjustable



## Orbital Attachment

**G3, H3, X3** Quick-Change Gimbal



**I3** Flat Locatable Surface



**J3** Flat Vertical Surface



**N3, Q3** Pistol-Style Tool



**M3** Constant-Pressure Tool Holder



**T3, U3** Pistol-Style Tool Holder



## Brakes

**L00** None

**L11** Manual

**L22** Pneumatic

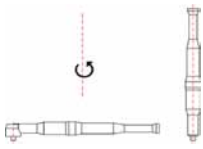
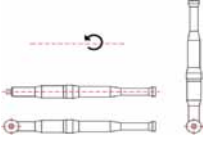
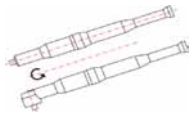
**L50** Manual Lock at Base

**L92** Brakes lock by tool trigger

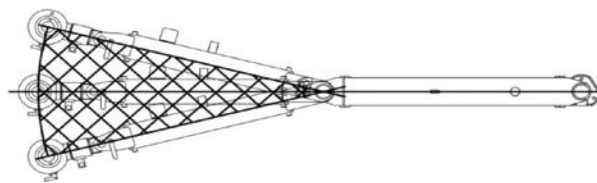


# Series 3

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

### 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>L3</b> 	<b>M3</b> 	<b>1Kg</b>
<b>F3</b> 	<b>I3</b> 	<b>J3</b> 	<b>N3, Q3</b> 	<b>2Kg</b>	
<b>G3, H3, X3</b> 	<b>T3, U3</b> 	<b>3Kg</b>			
<b>R3</b> 	<b>4Kg</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

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

**Maximum Reach**  
1460 mm / 58"

**Vertical Distance**  
1375 mm / 54"

## Build an ergonomic solution

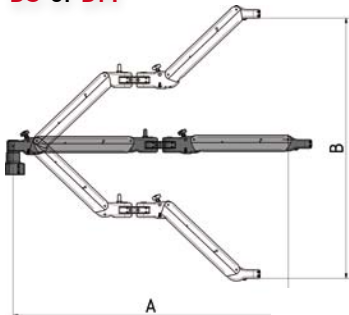
Pick your Base Arm

Pick your Head Member

Pick your Brakes

### Radial Base Arm

DS or DM



### Arm Dimensions

Radial Base	A (Maximum Reach) mm./inches	B (Vertical Distance) mm./inches	Weight Range Kg./lbs
DS	1220/48"	1020/40"	21/46
DM	1460/57.5"	1375/54"	24/53

### Stationary

A4 Vertical



B4 Vertical



C4 Adjustable



### Articulating

D4 Vertical



E4 Flat



F4 Adjustable



R4 Adjustable



L4 Adjustable



### Orbital Attachment

G4, H4, X4 Quick-Change Gimbal



I4 Flat Locatable Surface



J4 Flat Vertical Surface



N4 Pistol-Style Tool



T4, U4 Pistol-Style Tool Holder

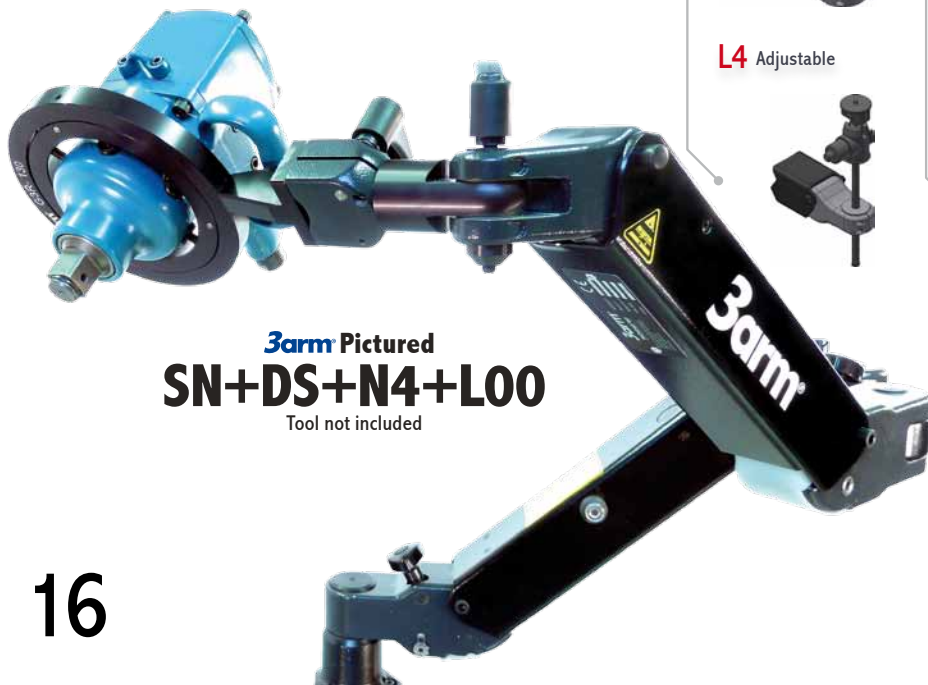


### Brakes

L00 None

L22 Pneumatic

L92 Brakes lock by tool trigger

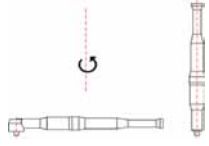
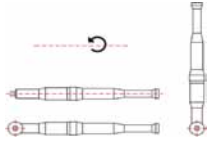
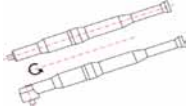


**3arm** Pictured  
**SN+DS+N4+L00**  
Tool not included




# Top & Bottom Mount

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>L4</b> 	<b>M4</b> 	<b>1Kg</b>
<b>F4</b> 	<b>I4</b> 	<b>J4</b> 	<b>N4</b> 	<b>2Kg</b>	
<b>G4, H4, X4</b> 	<b>T4, U4</b> 	<b>3Kg</b>			<p>* Add the head weight to the weight tool. Look for the weight range wished in the table</p> <p>* Ex.: Head F4..... 2 Kg Tool ..... 5 Kg Total: ..... 7 Kg</p> <p>Right choice: 5 - 9 5 - 10</p>
<b>R4</b> 	<b>4Kg</b>				

# Series 6

**Weight Range**  
0-20 Kg / 44 lbs.

**Maximum Reach**  
2190 mm / 86"

**Vertical Distance**  
670 mm / 26"

According Damper Weight Range

## Build an ergonomic solution

Pick your Radial Base Arm

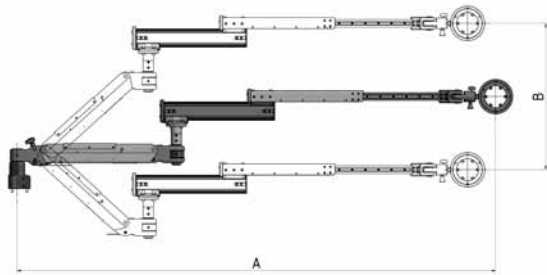


Pick your Head Member



### Radial Base Arm

**BP + RA + BM**



### Arm Dimensions

Radial Base Arm	A (Maximum Reach) mm./inches	B (Vertical Distance) mm./inches
BP+RA+BM	2190/86.2"	670/26.4"
DM	1460/57.5"	1415/55.5"

### Orbital Attachment

**N6** Pistol Style tool holder



**T6** Pistol Style tool holder



**3arm** Pictured  
**BP+RA+BM+N6**  
Tool not included



# Top & Bottom Mount

## Damper Weight Range

Head Type	N6	T6
		
Load Range Kg	Min	Min
<b>SERIES 6 TELESCOPIC BOTTOM &amp; TOP Mounted</b>	0	11
	2	13
	3	15
	4	18
	6	20



2Kg



3Kg

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

\* Ex.:  
Head N6 ..... 2 Kg  
Tool ..... 14 Kg  
Total ..... 16 Kg

Right choices:  
6 - 20



# Accessories

Ref	Description	Dimensions	Series				
			1	2	3	4	6
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				
			1	2	3	4	6
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				
			1	2	3	4	6
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	Linear Guide	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



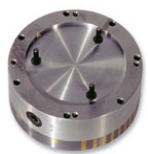
Large



Small Clamp



Big Clamp



Magnetic Support



Lifter



Column



Trolley + Column



2000S  
Column Lifter



Floor Rail +  
Column Lifter



Linear Guide + Pillar





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### *Customer Commitment*

To work hard everyday to be regarded in the metal working marketplace as a supplier that is friendly, helpful and easy to do business with - EVERYDAY, EVERYTIME.

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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