3arm®

Ergonomic Solutions

3Arm 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.

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

Head members

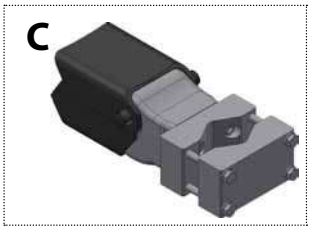
A

Tilting arm movement only

B

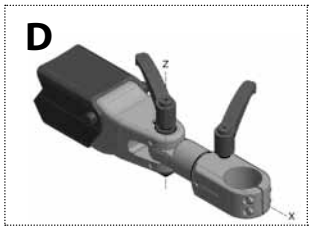
Tilting arm movement only

C



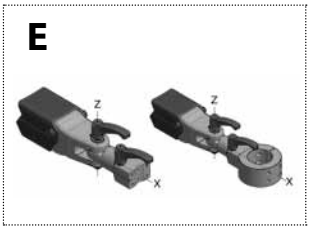
Tilting arm movement only

D



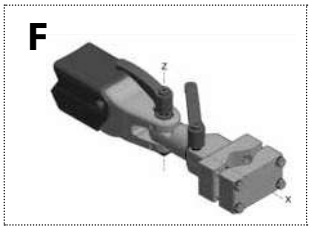
X:Turns 360º,
Z:Turns 90º right & left. Lockable in any position

E



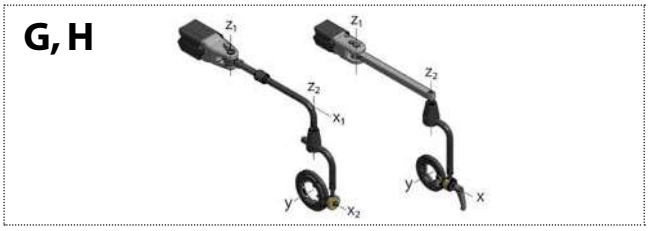
X: Turns 360º. Lockable in any position
Z: Turns 90º right & left. Lockable in any position

F



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

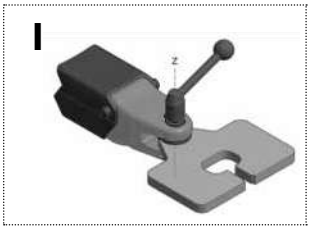
G, H



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

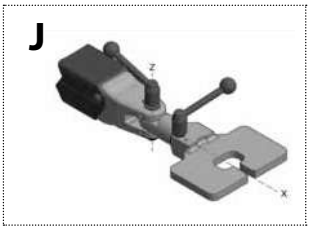
H: from 15 kg/33 lbs up to 30 kg/66 lbs. NO Quick Change
X: turns 360º. Lockable in any position
Y: Turns 360º. Lockable in any position
Z1: Turns 90º right & left
Z2: Turns 360º

I



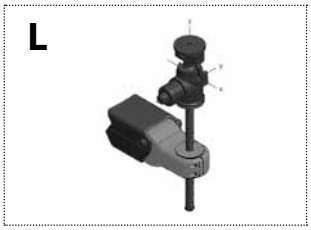
Z: Turns 90º right & left. Lockable in any position

J



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

L

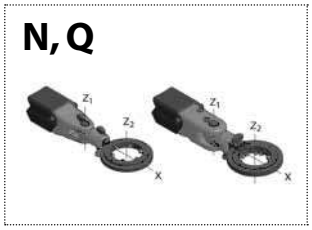


X: Turns 90º. Lockable in any position
Y: Turns 90º right & left.
Z: Turns 360º. Lockable in any position. Height adjustable up to 175 mm.

M

Z: Turns 90º right & left.

N, Q

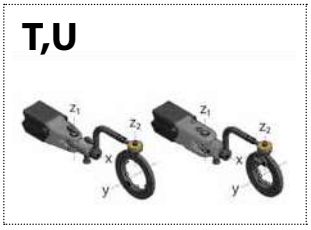


N: from 0 up to 15 kg with Quick change
X: Turns 360º. Lockable 4x90º.
Z1: Turns 90º right & left.
Z2: Turns 360º.
Q: from 15 up to 30 kg
X: Turns 360º. Lockable in any position
Z1: Turns 90º right & left
Z2: Turns 360º. Lockable in any position

R

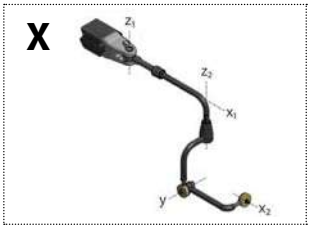
X: Turns 360º. 64 Lockable positions
Z1: Turns 90º left. 5 Lockable positions
Z2: Turns 360º. 8 Lockable positions

T,U



T: from 0 up to 15 kg with Quick change
X: Turns 360º. Lockable 4x90º
Y: Turns 360º
Z1: Turns 90º right & left
Z2: Turns 360º
U: from 15 up to 30 kg
X: Turns 360º. Lockable 4x90º
Y: Turns 360º. Lockable in any position
Z1: Turns 90º right & left
Z2: Turns 360º

X



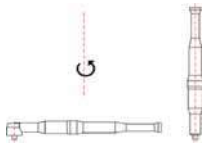
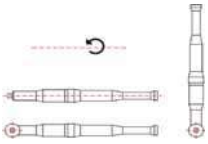
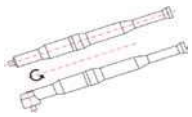
X1: Turns 360º. Lockable each 45º
X2: Turns 360º
Y: Turns 360º
Z1: Turns 90º right & left.
Z2: Turns 360º

APPLICATION	TOOLS	3arm solution
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)

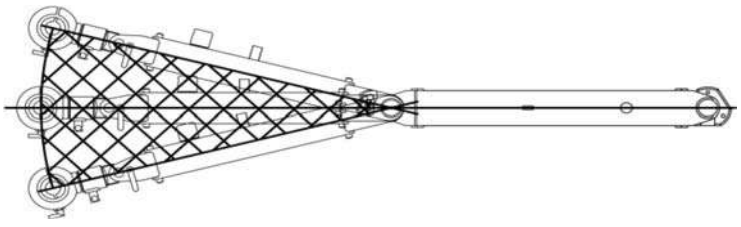
APPLICATION	TOOLS	3arm solution
Positioning	Camera Laser Scanner Roughness tester Gauge Specialized tools etc…	S1- S2 - S3 - S4 A / B / C / D / E / F / N
Positioning + attach		S3 - S4 A / B / C / D / E / F + lock
Positioning + attach Accuracy		S3 - S4 A / B / C / D / E / F + lock + Ball head
Screwing 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**
	**VERTICAL**			
	B: STATIONARY FLAT + RING	120	650	300
	E: ARTICULATED FLAT + RING	60	120	
	R: REVOLVING	-	300	
	**HORIZONTAL**			
	B: STATIONARY FLAT + RING	90	250	
	E: ARTICULATED FLAT + RING	60	120	
	R: REVOLVING	-	250	
	**ANY ANGLE**			
	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 you 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

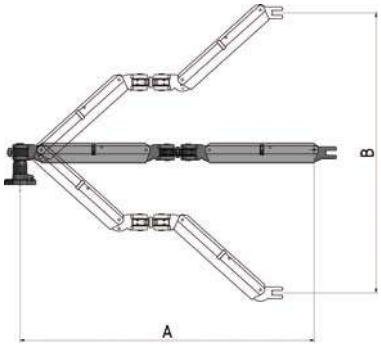
Maximum Reach
1120 mm / 44”

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

Damper Weight Range

	A1	B1
Head Type		
Load Range Kg	Min	Min
SERIES 1 TOP & BOTTOM Mount 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

C1

D1

E1

0,5 Kg

F1

T1

1 Kg

N1

1,5 Kg

G1/X1

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”

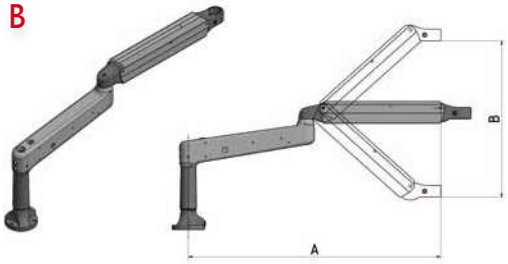
Vertical Distance
530 mm / 22”

Build an ergonomic solution

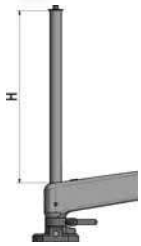
Pick your Radial Base Arm + **Pick your Head Member**

Radial Base Arm

B



BE



H = 447mm/17.6”

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

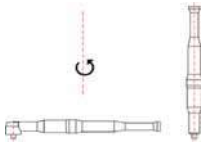
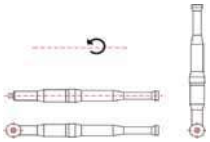
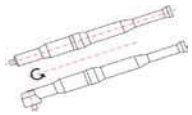
G2, X2 Quik change Gimbal

N2 Pistol Style tool holder

3arm Pictured
B+G2
Tool not included

Top & Bottom Mount

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

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

Damper Weight Range

	A2	B2
Head Type		
Load Range Kg	Min	Min
SERIES 2 TOP & BOTTOM Mount 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

C2

D2

E2

0,5 Kg

F2

1 Kg

N2

1,5 Kg

G2

2 Kg

* 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.
According Damper Weight Range

Maximum Reach
1730 mm / 68”

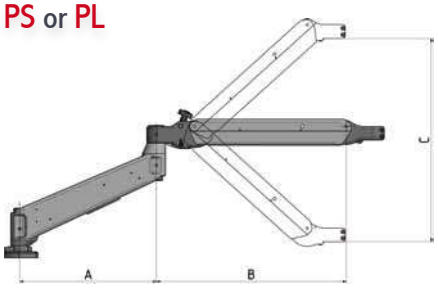
Vertical Distance
1070 mm / 42”

Build an ergonomic solution

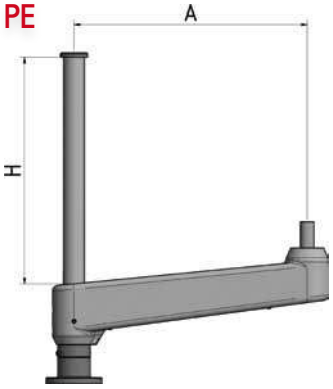
Pick your Base Arm + **Pick your Tilt Arm** +

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 BM	625/24” 925/36”	670/26” 1070/42	1075/42” 1375/54”
PL	808/31.8”	BS BM	610/24.0” 910/35.8”	707/27.8” 1130/44.5”	1430 / 56” 1730/67.6”
PE	500/19.7”	BS BM	610/24.0” 910/35.8”	707/27.8” 1130/44.5”	1125/44” 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

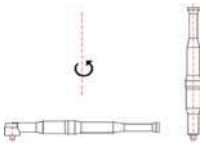
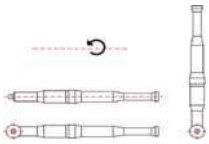
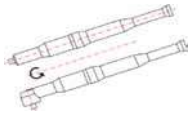
L11 Manual

L22 Pneumatic

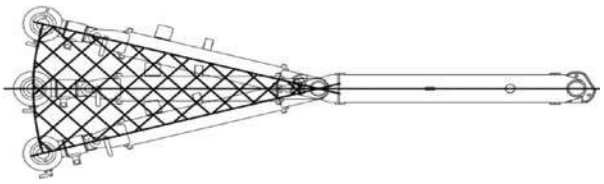
L50 Manual Lock at Base

L92 Brakes lock by tool trigger

WORK TYPE	Max TORQUE. Nm
	S3*
VERTICAL	650
HORIZONTAL	250
ANY ANGLE	200

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

**S3 -RECOMMENDED LOCKING*



UNUSABLE AREA WITHOUT LOCKING

Damper Weight Range

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

C3
D3
E3
L3
M3

1Kg

F3
I3
J3
N3, Q3

2Kg

G3, H3, X3
T3, U3

3Kg

R3

4Kg

* 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″

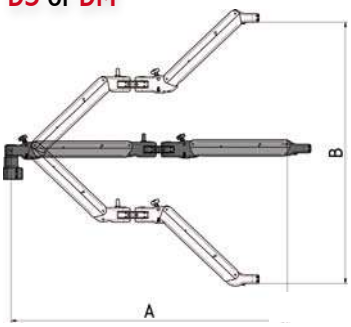
Vertical Distance
1375 mm / 54″

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

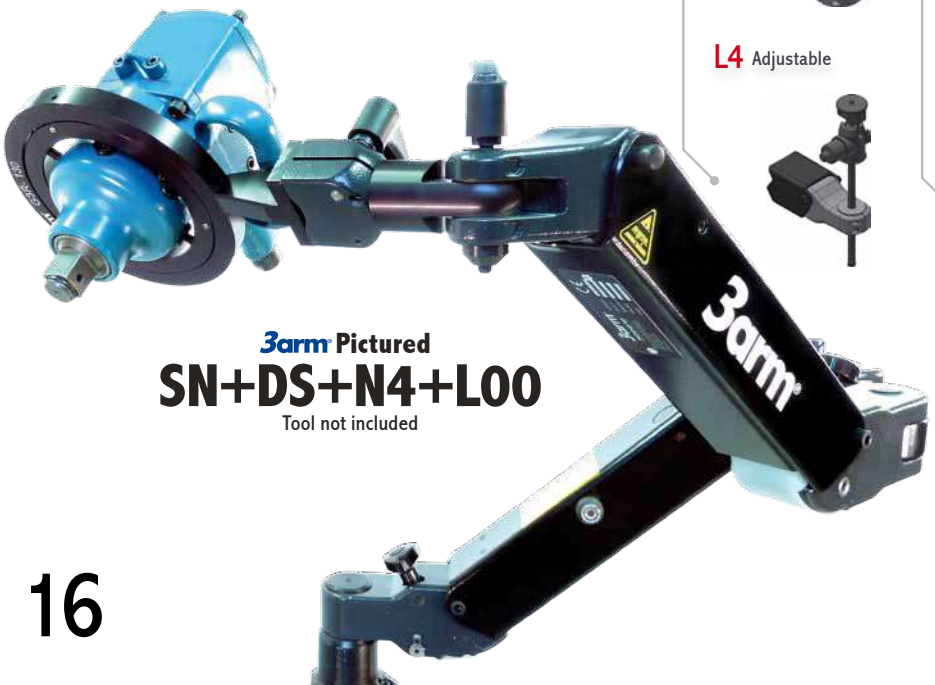
T4, U4 Pistol-Style Tool Holder

Brakes

L00 None

L22 Pneumatic

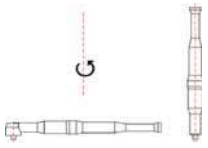
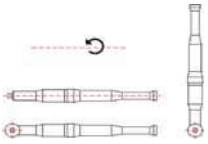
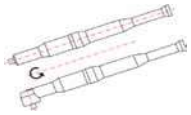
L92 Brakes lock by tool trigger



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

Top & Bottom Mount

WORK TYPE	Max TORQUE. Nm
	S4**
VERTICAL	300
HORIZONTAL	250
Any Angle	200

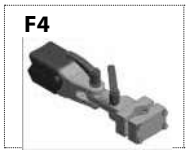
WORK	HEAD Member	S4**
	**VERTICAL**	
	B4: *STATIONARY FLAT+ RING*	300
	E4: *ARTICULATED FLAT + RING*	120
	R4: *REVOLVING*	300
	**HORIZONTAL**	
	B4: *STATIONARY FLAT + RING*	250
	E4: *ARTICULATED FLAT + RING*	120
	R4: *REVOLVING*	250
	**ANY ANGLE**	
	E: *ARTICULATED FLAT + RING*	120
	R4: *REVOLVING*	200

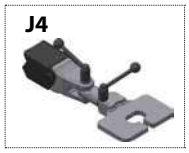
***S4 -REQUIRED LOCKING*

Damper Weight Range

	A4	B4
Head Type		
Load Range Kg	Min	Max
SERIES 4 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
SERIES 4 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

1Kg





2Kg

3Kg

4Kg

* 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 6

Weight Range
0-20 Kg / 44 lbs.
According Damper Weight Range

Maximum Reach
2190 mm / 86"

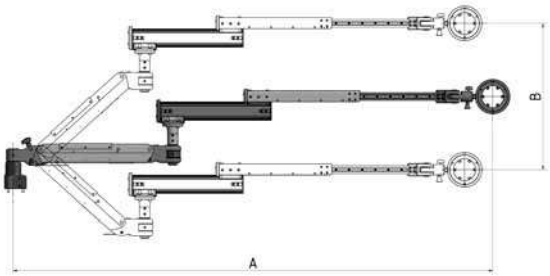
Vertical Distance
670 mm / 26"

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

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

N6

2Kg

T6

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"	o	o	Consult (according the load)		
TF000100	Medium table	850x850x850 mm. 33 7/16" x 33 7/16" x 33 7/16"	o	o	Consult (according the load)		
907B0000	Large table	1100x850x850 mm. 43 5/16" x 33 7/16" x 33 7/16"	o	o	Consult (according the load)		

Ref	Description	Dimensions	Series				
			1	2	3	4	6
BR000100	Clamp	127x63,5 mm. 5" x 2 1/2"	o	o			
BR100100	Big Clamp	127x127x65,5 mm. 5" x 5" x 2 1/2"	o	o	Consult (according the load)		

EDP	Description	Dimensions	Series				
			1	2	3	4	6
IC000100	Magnetic Suport	250 mm. 9 13/16"	o	o	Consult (according the load)		
KA011X04	Trolley	700 x 700 mm. 27,55" x 27,55"	o	o	Consult (according the load)		
CL000100	Column	940mm. 37"	o	o	o	o	o
EA0001A0	Pneumatic lifter	550 mm. 21 5/8"	o	o	o	Consult (according the load)	
CL013300	Column lifter	1450 mm. 57,1"	o	o	o	o	o
CL020000	Linear Guide	2000 mm. 78,7"	o	o	o	o	o
CL021504	Pillar	764 mm. 30"	o	o	o	o	o
CL040000	Floor Rail	2000 mm. 78,7"	o	o	o	o	o

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

SIDIO XR
3arm

3arm Notes

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DESIGN QUALITY
3arm
Made in Barcelona

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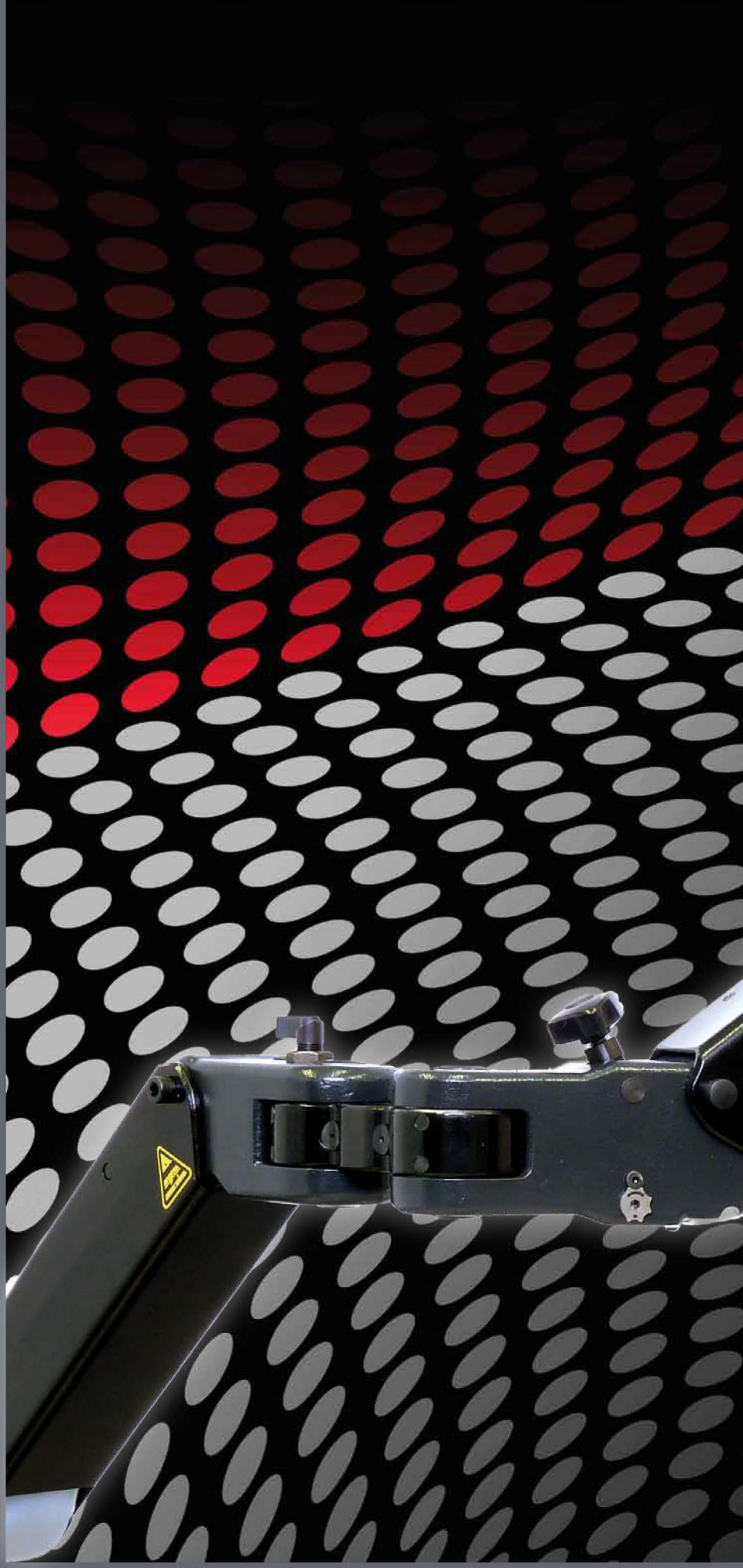

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