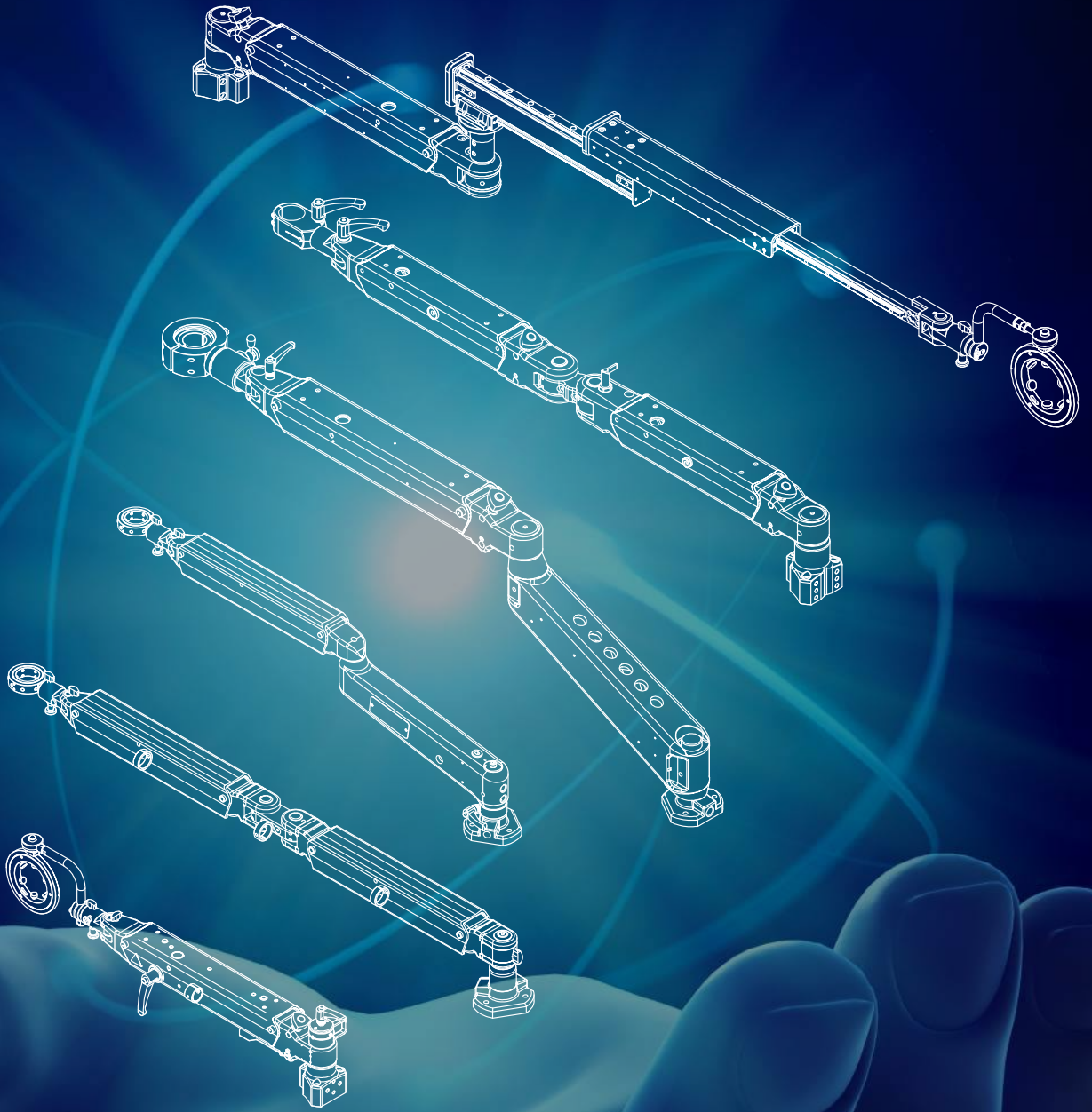


3arm®



ERGONOMIC
SOLUTIONS

February 2024



3arm®

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.

The company is family owned and has been in business since 1947. Utilizing 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.

TECNOSP^{RO}
MACHINE TOOL SLU

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.

INDEX

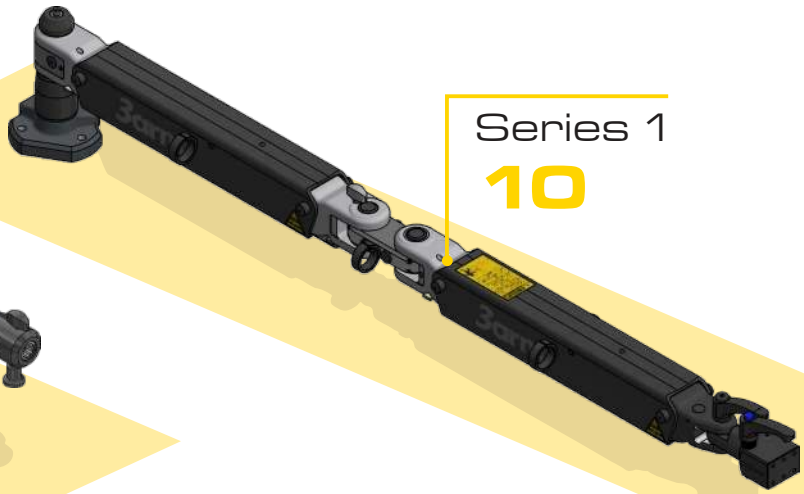
Markets and Applications **6**

The Versatile Ergonomic Solution **7**

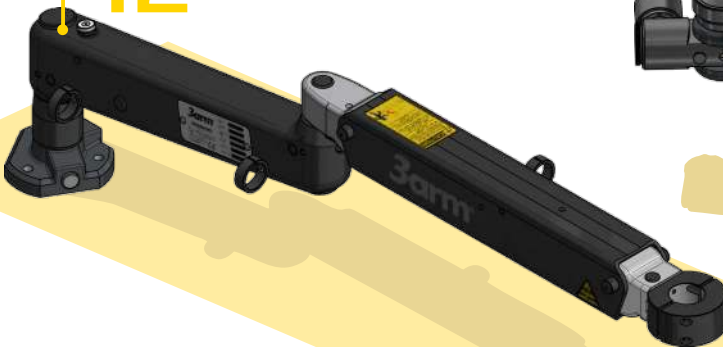
Series 0
8



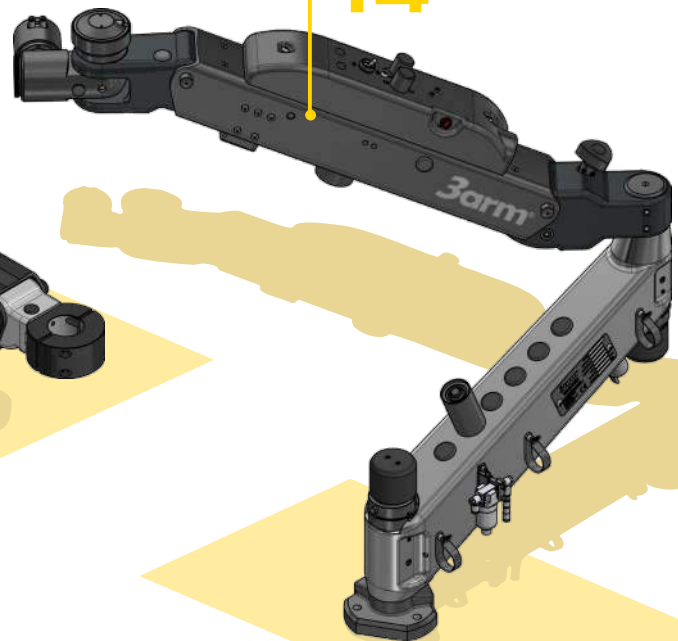
Series 1
10



Series 2
12

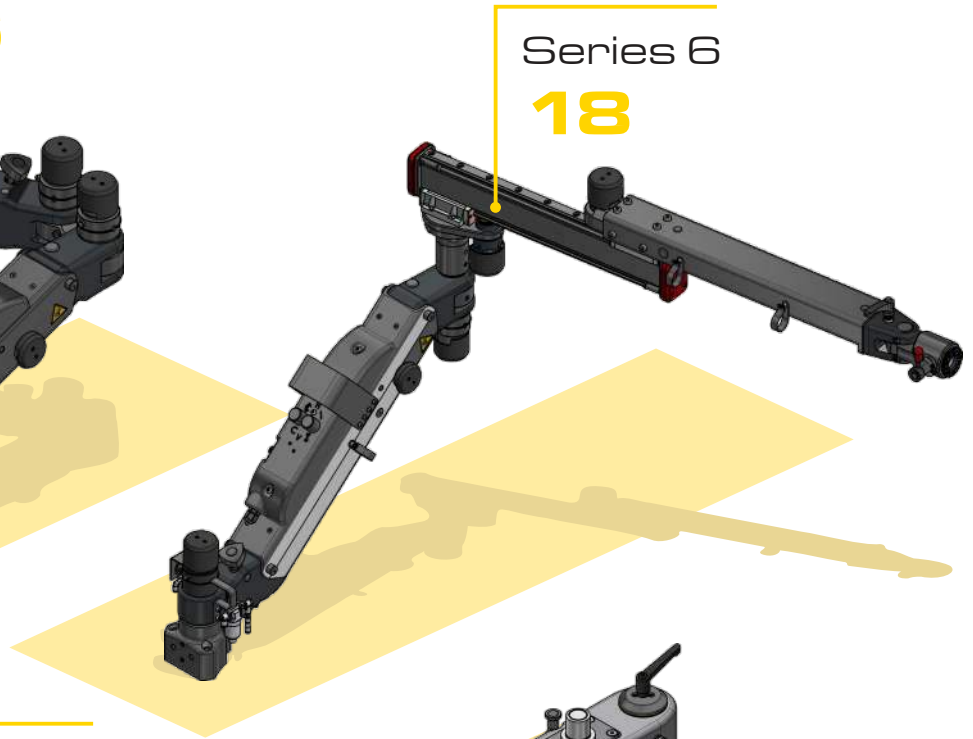


Series 3
14

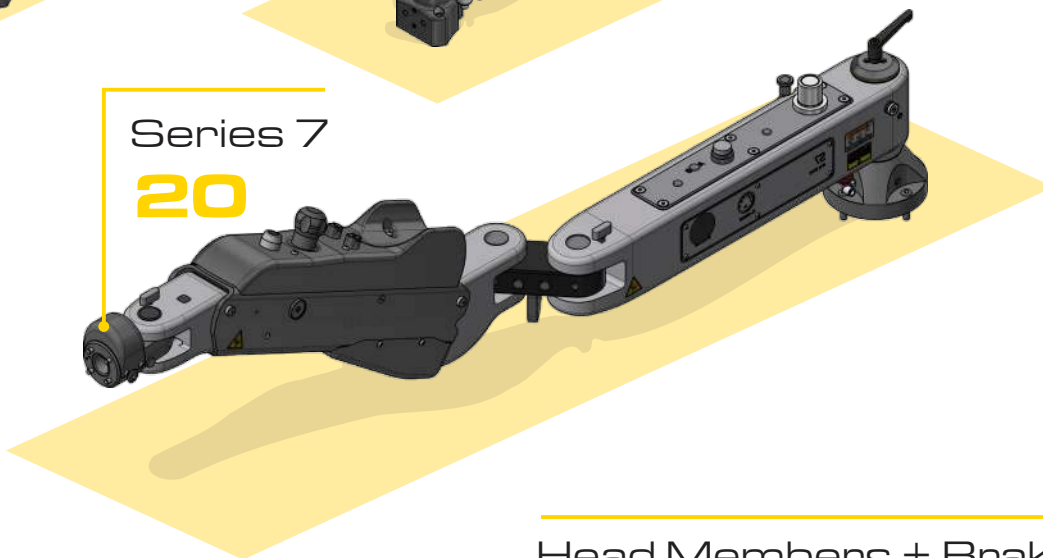




Series 4
16

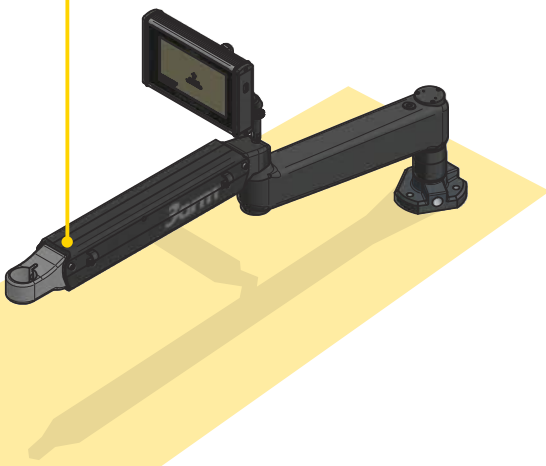


Series 6
18



Series 7
20

Smart Arm
22



Head Members + Brakes **24**

Mounting Solutions **26**

Worker Injury **28**

Prevent the Problem **29**

INDUSTRIES
SERVED



Automotive



Assembly



Mining



**Wind
Energy**



Construction



Aerospace

Versatility and Productivity

3arm® has been designed to keep weightless any tool and device up to 70kg (154 lbs), with different working areas, including more than 50 head systems and be fixed in any position according its accessories and having more than 1 million combinations available.

Ergonomic Safety

The weightlessness and the skill to absorb a considerable tool torque reaction depending on the headmember and the option to lock the arm in any position and movement helps to prevent the operator fatigue and injuries, giving them high work sensitivity and increasing productivity.

The 3arm® Solution

- Allows the full range of motion required to complete any task efficiently and safely.
- Permits use of heavy tools more accurately.
- Eliminates tool weight, providing not only an ergonomic benefit, but also increasing productivity.
- Reduces operator fatigue and the chance of injury due to strain.
- Holds any tool up to 70 Kg, keeping the tool weightless, while eliminating possible damage caused by dropping the tool.

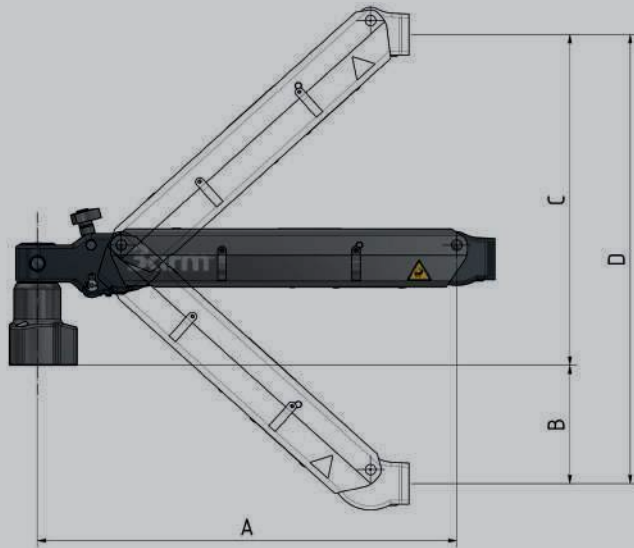


3arm® Solutions

A Series 0 arm with a balustrade support for lifters is a perfect solution for construction and electrical applications.

REACH		MAX. up to 35 kg	TORQUE up to 650 Nm
↑ VERT. 1070 mm 42 in	→ HORZ. 925 mm 36 in		

A single tilting arm for the most simple applications. Three different arm lengths, all the brake options and headmembers offers versatility for any kind of tool.



Balustrade Support



CONFIGURATION		DIMENSIONS				CAPACITY	
Bottom/Top Mounted	Tilting Arm	A (mm/in)	B (mm/in)	C (mm/in)	D (mm/in)	Kg	Lbs
SN/ST	DS	505 / 19.9"	96 / 3.8"	412 / 16.2"	509 / 20"	30	65
	BS	625 / 24.6"	176 / 6.9"	493 / 19.4"	669 / 26.3"	35	77
	BM	925 / 36.4"	377 / 14.8"	693 / 27.3"	1071 / 42.2"	19	41

COMPATIBLE HEAD MEMBERS

All

See Headmembers, pg 24

BRAKE OPTIONS

- L00** No brakes
- L11** Manual
- L22** Pneumatic
- L50** Manual Locking Base
- L92** Tool Trigger Activated

**Pure
Simplicity
for holding
tools**

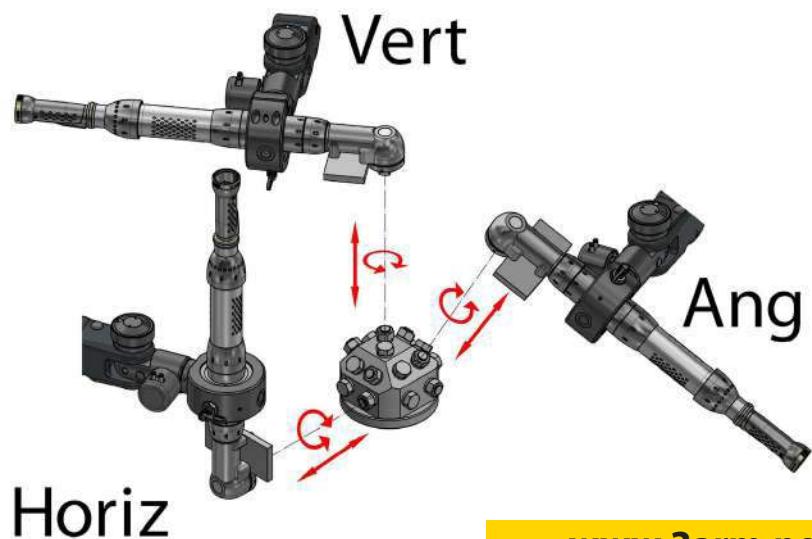
SINGLE FOR SIMPLE APPLICATIONS



Compact and precise with great maneuverability

TORQUE RECOMMENDATIONS

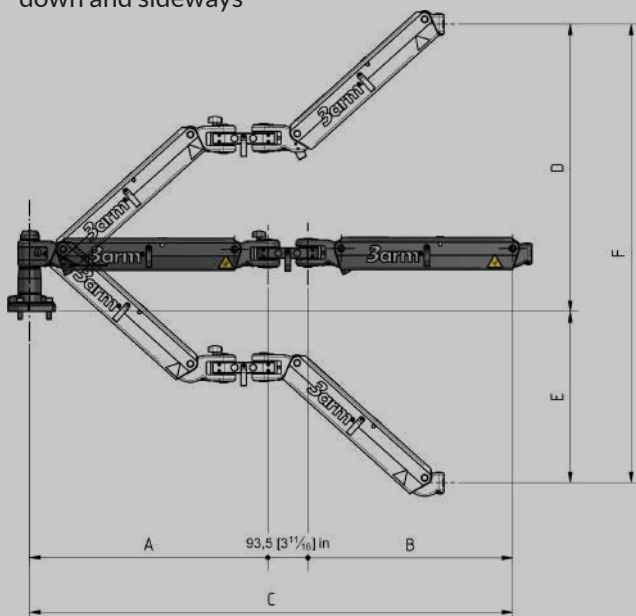
HEAD	MAXIMUM TORQUE (Nm)		
	VERTICAL (Vert)	HORIZONTAL (Horiz)	ANY ANGLE (Ang)
BA	650 (479 ft lb)	250 (184 ft lb)	X
D/EA/EC	120 (89 ft lb)	120 (89 ft lb)	120 (89 ft lb)
EE/PA	100 (74 ft lb)	100 (74 ft lb)	100 (74 ft lb)
R/RA/RB/SR	300 (221 ft lb)	250 (184 ft lb)	200 (148 ft lb)
RAS/RBS/RS	300 (221 ft lb)	250 (184 ft lb)	250 (184 ft lb)



SERIES 1

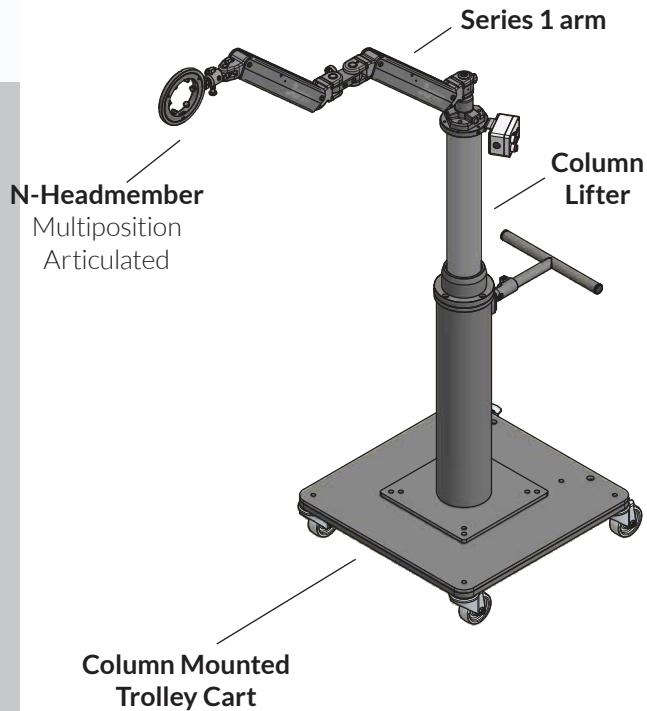
REACH		MAX. up to
↑ VERT.	→ HORZ.	
1070 mm	1123 mm	10 kg
44 in	43 in	22 lbs

Series 1 arms are capable of the most difficult operations and positions required. The innovative connections between the parts of the arm allow completely free movement of rolling up, down and sideways



3arm® Solutions

A Trolley Column with Lifter can add the mobility needed for your application and add even more vertical reach at the same time.



CONFIGURATION		DIMENSIONS					
Rear Arm	Front Arm	A	B	C	D	E	F
Bottom/Top Mounted		(mm/in)	(mm/in)	(mm/in)	(mm/in)	(mm/in)	(mm/in)
PL/AS	DS	555 / 21.9"	478 / 18.8"	1126 / 44.3"	671 / 26.4"	399 / 15.7"	1070 / 42.1"

COMPATIBLE HEAD MEMBERS

B, BA, C, E, EA, F, G, H, K, L, LB, N, Q, T, U, Z

See Headmembers, pg 24

BRAKE OPTIONS

L00 No brakes

L50 Manual locking base

**Dual
Tilting Arms Add
Extra Vertical
Reach**

COME AT IT ...
**FROM ANY
DIRECTION**



Light and nimble with great vertical reach

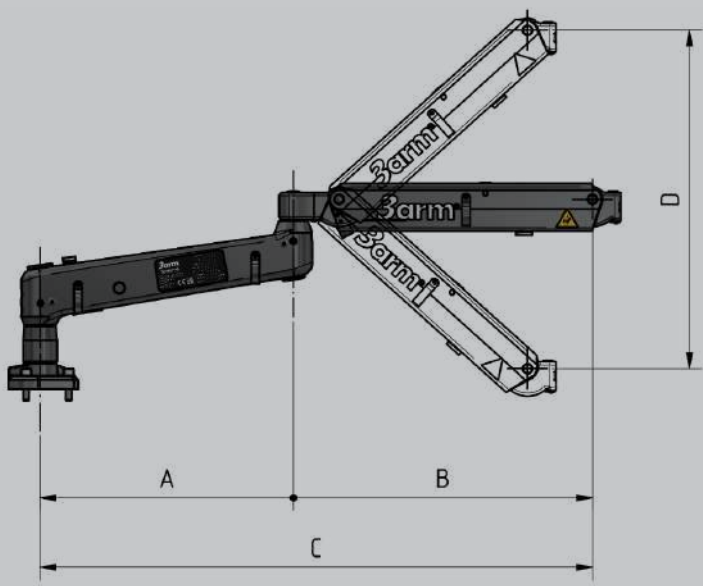


SERIES 2

THE PERFECT BALANCE IN YOUR WORK

REACH		MAX. up to 10 kg	TORQUE up to 120 Nm
↑ VERT. 530 mm 22 in	→ HORZ. 860 mm 34 in		

A combination radial arm and tilting arm, each capable of 360° rotation. Two arms of different length give you the ability to reach separate working areas. A range of headmembers options offer solutions for a wide variety of tools and devices.



CONFIGURATION		DIMENSIONS			
Radial Arm Bottom/Top Mounted	Tilting Arm	A (mm/in)	B (mm/in)	C (mm/in)	D (mm/in)
B/BS	-	400/15.7"	473/18.6"	873/34.4"	535/21.1"

COMPATIBLE HEAD MEMBERS

B, BA, C, E, EA, F, G, H, K, L, LB, N, Q, T, U, Z

See Headmembers, pg 24

BRAKE OPTIONS

L00 No brakes

L50 Manual locking base

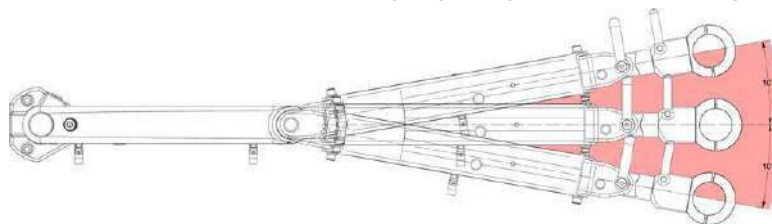
An Excellent
Assembly
Solution for
Small Work
Areas

RPERFECT
CE ...



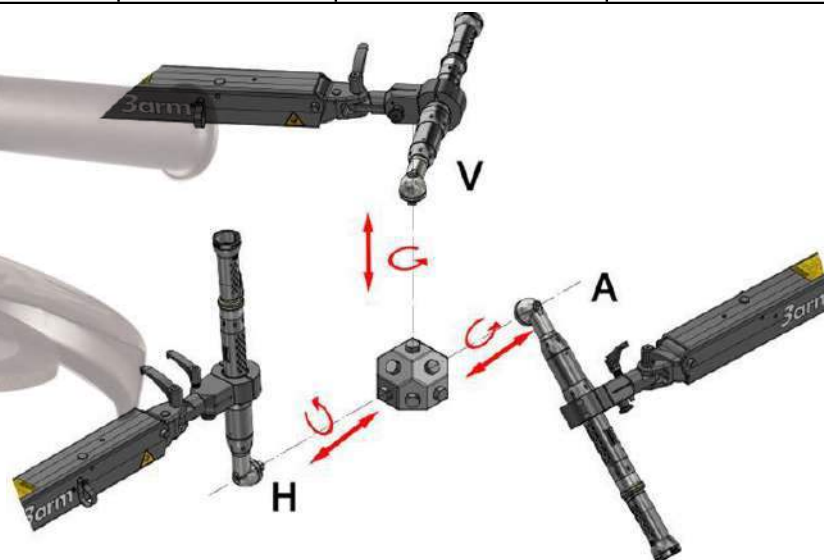
A compact multi-purpose arm for use when brakes are not required

DO NOT WORK IN THE RED ZONE



TORQUE RECOMMENDATIONS

HEAD	MAXIMUM TORQUE (Nm)		
	VERTICAL (Vert)	HORIZONTAL (Horiz)	ANY ANGLE (Ang)
B2, BA2	120 (88 ft lb)	90 (66 ft lb)	X
E2, EA2	60 (44 ft lb)	60 (44 ft lb)	60 (44 ft lb)

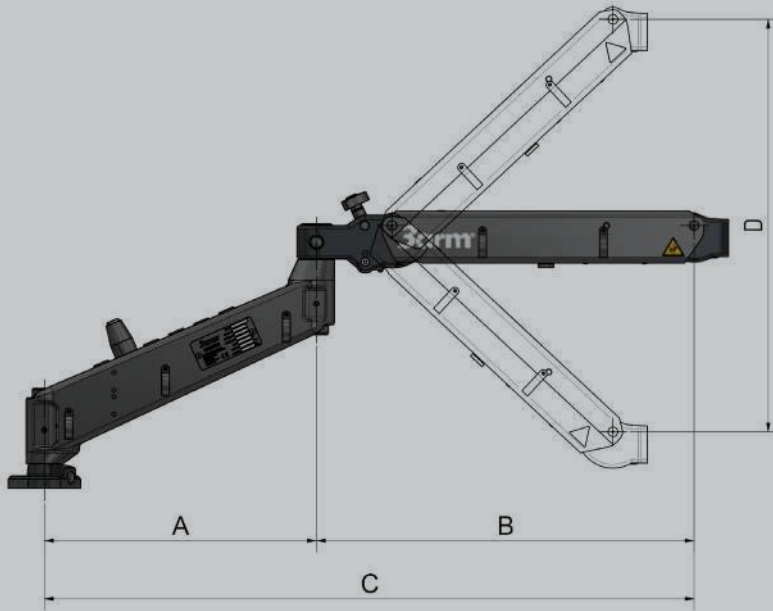


SERIES 3

The Workhorse of the 3arm® Series

REACH		MAX. up to 35 kg 77 lbs	TORQUE up to 650 Nm 479 ft-lb
↑ VERT. 1070 mm 42 in	→ HORZ. 1725 mm 68 in		

The most popular 3arm® due to versatility. Features “turning & tilting” brake locking systems (pneumatic or manual) allowing the operator to immobilize the arm, in a fixed position, on all axes simultaneously or separately.

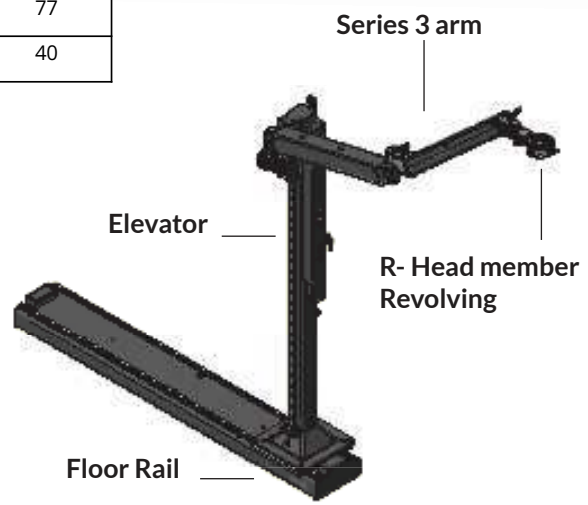


CONFIGURATION		DIMENSIONS				CAPACITY	
Radial Arm	Tilting Arm	A (mm/in)	B (mm/in)	C (mm/in)	D (mm/in)	Kg	Lbs
Bottom/Top Mounted	BS	450/17.7"	625/24.6"	1075/43.2"	670/26.3"	35	77
	BM		925/36.4"	1375/54.1"	1070/42.1"	19	40
PL/AL	BS	808/31.8"	625/24.6"	1433/56.4"	670/26.3"	35	77
	BM		925/36.4"	1733/68.2"	1070/42.1"	19	40

- BRAKE OPTIONS**
- L00** No brakes
 - L11** Manual
 - L22** Pneumatic
 - L50** Manual Locking Base
 - L92** Tool Trigger Activated

See Brakes, pg 24

- COMPATIBLE HEAD MEMBERS**
- ALL**
- See Headmembers, pg 24



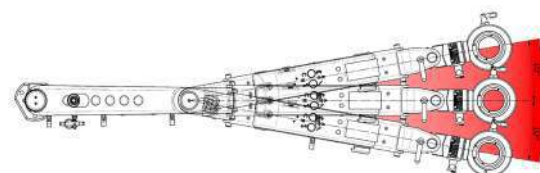
THE CAPABILITY TO ... CARRY THE WEIGHT



Long reach and the ability to carry the heaviest loads



DO NOT WORK IN THE RED ZONE WITHOUT BRAKES



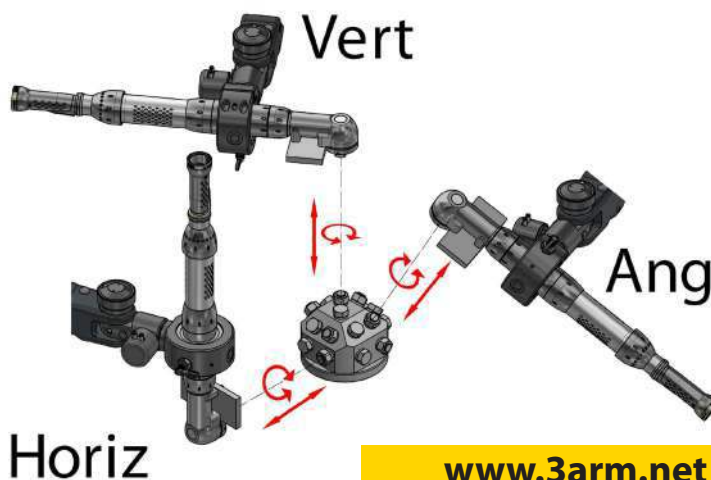
TORQUE RECOMMENDATIONS

HEAD	MAXIMUM TORQUE (Nm)		
	VERTICAL (Vert)	HORIZONTAL (Horiz)	ANY ANGLE (Ang)
BA	650 (479 ft lb)	250 (184 ft lb)	X
D/EA/EC	120 (89 ft lb)	120 (89 ft lb)	120 (89 ft lb)
EE/PA	100 (74 ft lb)	100 (74 ft lb)	100 (74 ft lb)
R/RA/RB/SR	300 (221 ft lb)	250 (184 ft lb)	200 (148 ft lb)
RAS/RBS/RS	300 (221 ft lb)	250 (184 ft lb)	250 (184 ft lb)

3arm Solutions

The Floor Rail plus the Elevator provides a big working area for your application.

See More Solutions, pg 26

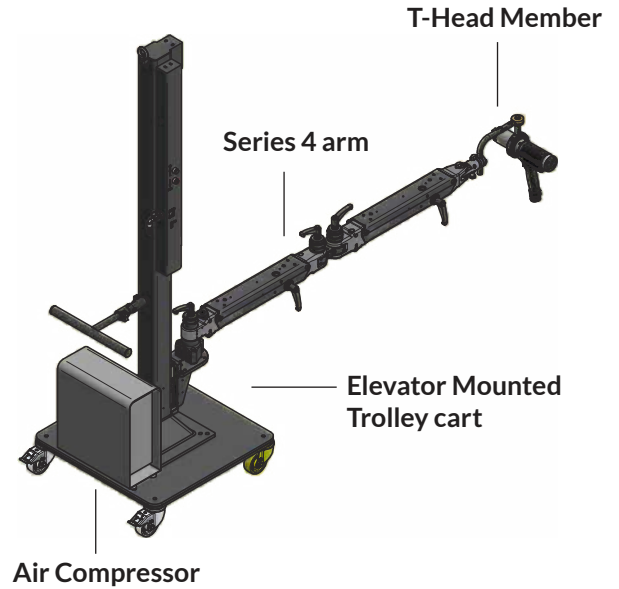


SERIES 4

3arm® Solutions

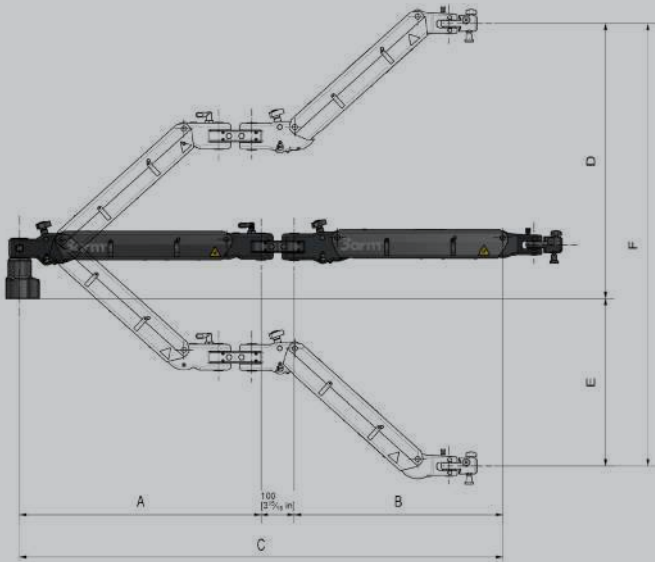
A Trolley Elevator plus the Compressor makes your application fully mobile.

See More Solutions, pg 24



REACH		MAX. up to 24 kg	TORQUE up to 300 Nm
↑ VERT.	→ HORZ.		
1340 mm	1555 mm	53 lbs	220 ft-lb
52 in	57 in		

The innovative connections between the parts of the arm allow completely free movement of rolling up, down and sideways. Capable of reaching the most difficult positions or work with weightless precision.



CONFIGURATION		DIMENSIONS						CAPACITY	
Rear Arm	Front Arm	A	B	C	D	E	F	Kg	Lbs
Bottom/Top Mounted		(mm/in)	(mm/in)	(mm/in)	(mm/in)	(mm/in)	(mm/in)		
SN/ST	DS	610 / 12.2"	510 / 20.1"	1220 / 48.0"	671 / 26.4"	347 / 13.7"	1017 / 40.0"	21	43
	DM	730 / 28.7"	630 / 24.8"	1460 / 57.5"	832 / 32.7"	506 / 19.9"	1338 / 52.7"	24	53

ALL

See Headmembers, pg 24

BRAKE OPTIONS

L00 No brakes

L11 Manual

L22 Pneumatic

L50 Manual Locking Base

L92 Tool Trigger Activated

See Brakes, pg 24

Dual Tilting Arms Expand the Range of Movement

THE RIGHT ANGLE ...

MAKES ALL THE DIFFERENCE

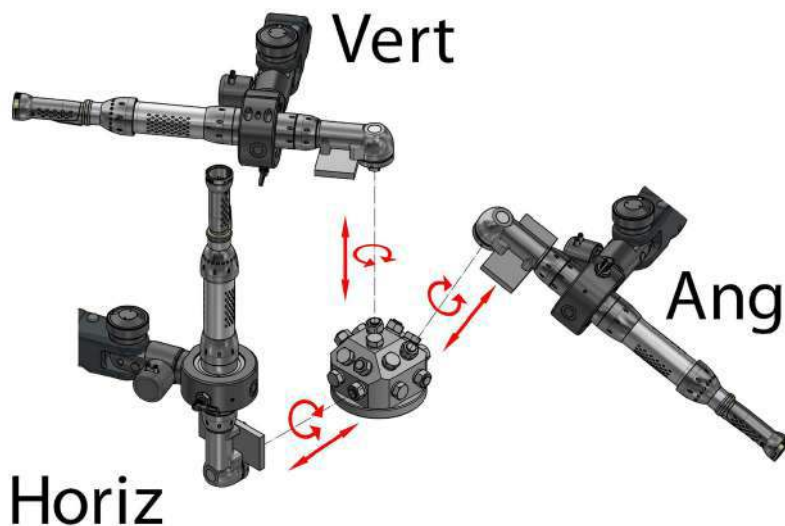


Extended vertical reach with uncompromised strength



TORQUE RECOMMENDATIONS

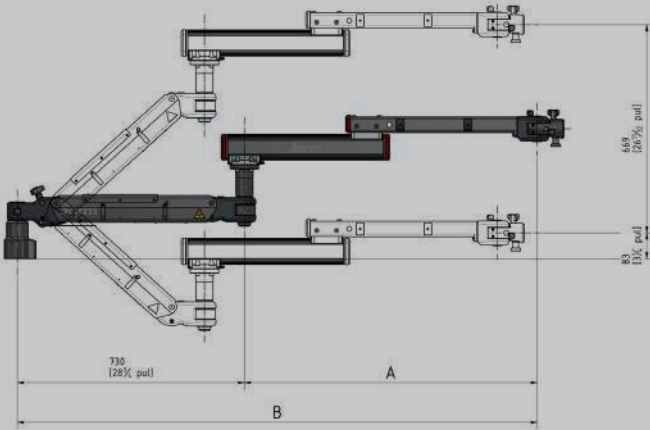
HEAD	MAXIMUM TORQUE (Nm)		
	VERTICAL (Vert)	HORIZONTAL (Horiz)	ANY ANGLE (Ang)
BA	300 (221 ft lb)	250 (184 ft lb)	X
D/EA/EC/EE	120 (89 ft lb)	120 (89 ft lb)	120 (89 ft lb)
R/RS/RA/RAS/RB/RBS/RC/SR	300 (221 ft lb)	250 (184 ft lb)	200 (148 ft lb)



SERIES 6

REACH		MAX. up to 18 kg 40 lbs	TORQUE up to 300 Nm 220 ft-lb
↑ VERT.	→ HORZ.		
669 mm 26 in	2095 mm 82 in		

An extendable arm with ball linear guideways attached to a pendulum base arm, both capable of 360° rotation. A compact arm that offers versatility for any type of tool. The telescopic top arm allows the user to work on hard to reach areas comfortably, quickly and safely. Built for a wide variety of applications.



CONFIGURATION		DIMENSIONS		CAPACITY	
Arm Bottom/Top Mounted	Telescopic	A (mm/in)	B (mm/in)	Kg	Lbs
RA/SB	SC	937 / 36.9"	1658 / 65.3"	18	40
	SM	1288 / 50.7"	2018 / 79.5"	10	22

COMPATIBLE HEAD MEMBERS

SC: ALL SM: N, T only

See Headmembers, pg 24

BRAKE OPTIONS

L00 No brakes

L50 Manual Locking Base

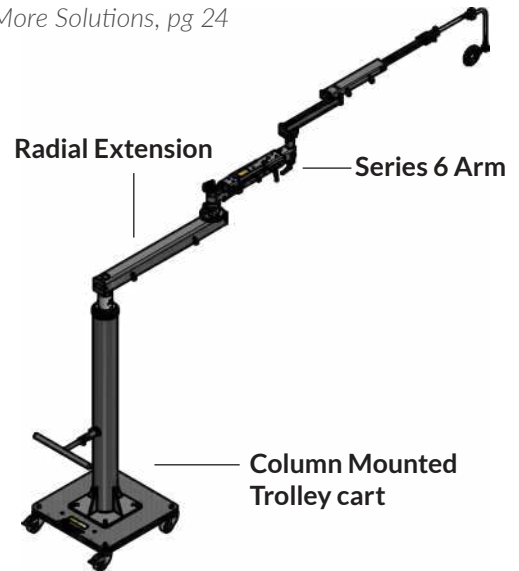
L22 Pneumatic

L92 Tool trigger Activated

3arm® Solutions

A Trolley and column plus a radial extension for maximum reach.

See More Solutions, pg 24



Get Your
Tool into
Tight Spaces
Safely

EVERYTHING ... WITHIN REACH

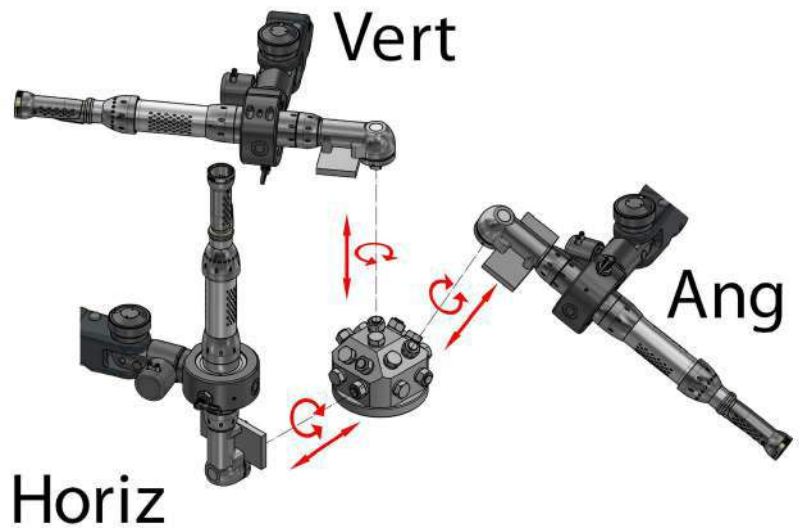


Extended horizontal reach spans more than 2M.



TORQUE RECOMMENDATIONS

HEAD	MAXIMUM TORQUE (Nm)		
	VERTICAL (Vert)	HORIZONTAL (Horiz)	ANY ANGLE (Ang)
BA	300 (221 ft lb)	250 (184 ft lb)	X
D/EA/EC/EE	120 (89 ft lb)	120 (89 ft lb)	120 (89 ft lb)
R/RS/RA/RAS/ RB/RBS/RC/SR	300 (221 ft lb)	250 (184 ft lb)	200 (148 ft lb)

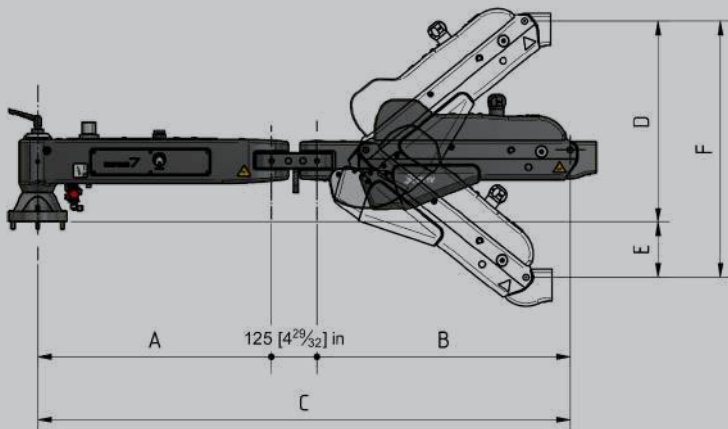


SERIES 7

REACH		MAX. up to 70 kg	TORQUE up to 1000 Nm
↑ VERT.	→ HORZ.		
700 mm	1670 mm	154 lbs	737 ft-lb
27 in	65 in		

For the applications with the most demanding tools

Ergonomic and optimized arm for the most heavy duty power tools in the market. Features brake locking system and a range of headmembers that offer solutions for a wide variety of applications.



CONFIGURATION		DIMENSIONS					
Radial Arm Bottom/Top Mounted	Tilting Arm	A (mm/in)	B (mm/in)	C (mm/in)	D (mm/in)	E (mm/in)	F (mm/in)
PS/AS	BS	640 / 25.2"	694 / 27.3"	1459 / 57.4"	549 / 21.6"	151 / 5.9"	700 / 27.6"

COMPATIBLE HEAD MEMBERS

B, BA, E, EA, J, L, LB, K, Q, U, Z, R, RA, RB, W

See Headmembers, pg 24

BRAKE OPTIONS

L50 Manual Locking base

L11 Manual

L22 Pneumatic

L92 Tool trigger Activated

Compact arm for big solutions

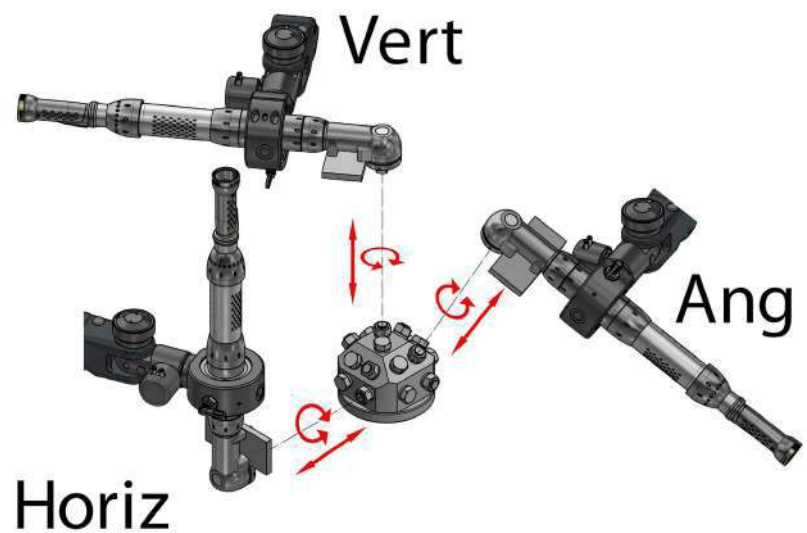


POWERFUL BALANCE

IN YOUR WORK



HEAD	MAXIMUM TORQUE (Nm)		
	VERTICAL (Vert)	HORIZONTAL (Horiz)	ANGLE (Ang)
BA	1000 (738 ft lb)	500 (369 ft lb)	X
R / RA / RB	600 (443 ft lb)	500 (369 ft lb)	400 (295 ft lb)
RS / RAS / RBS	600 (443 ft lb)	500 (369 ft lb)	500 (369 ft lb)



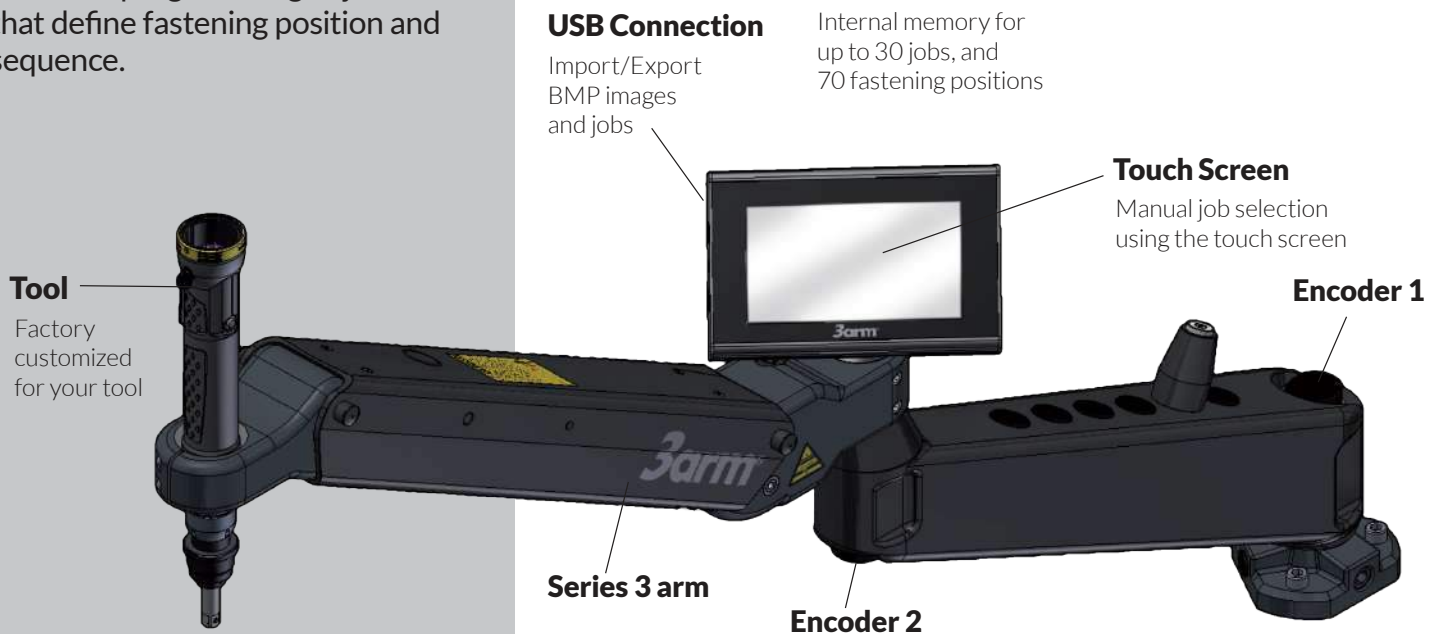
THE ENCODER

SmartControl

Encoder SmartControl system integration
available on Series 2 and 3 3arm®

REACH		MAX. up to 35 kg	TORQUE up to 650 Nm
↑ VERT.	→ HORZ.		
1070 mm	1725 mm	77 lbs	479 ft-lb
42 in	55 in		

Precision programming of jobs that define fastening position and sequence.



See Measurements:

- Series 2 pag. 12
- Series 3 pag. 14

Versatile

- Additional programs previously created to add or modify fastening positions and modify the precision parameters and programming of torque (the fastening sequence cannot be edited)
- Possibility of working with up to 7 different fastening programs in the same job
- Communication with the tool controller to select the different fastening programs (I/O)
- Communication with the tool controller to enable or block the functioning of the tool (I/O)
- Communication with the tool controller to receive the correct/incorrect fastening signal (I/O)
- Counting of parts remaining to complete the current job and parts completed
- Configuration in 3 languages (Spanish, English and French)
- Possibility of password protection for the system
- Possibility of inlaying a representative BMP image into the jobs
- Identifier (overprinted message) of jobs finished correctly

COMPATIBLE HEADMEMBERS

B, BA, C, E, EA

See Headmembers, pg 22

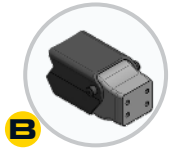
Quickly and easily
create new sequences

Increase productivity
and safety

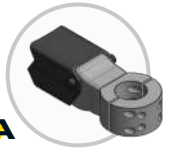
Adaptable headmember
for a wide variety of tools



HEAD MEMBERS

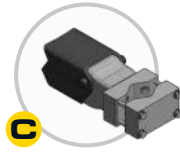


B
Vertical
Flat

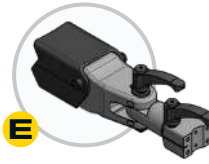


BA
Vertical with Ring

TORQUE ✓



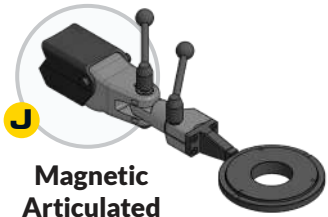
C
Vertical
Adjustable



E
Flat
Articulated



ED
Pneumatic Flat
Articulated



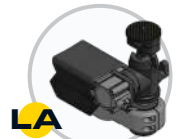
J
Magnetic
Articulated
Drill



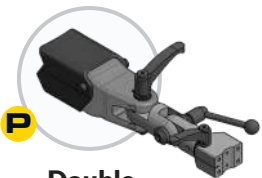
K
Universal
Strap



L
Adjustable
Ball and
Socket



LA
Vertical
Pneumatic
Ball and
Socket



P
Double
Articulated
Flat

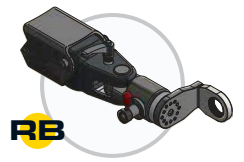


Q
Heavy-Duty
Multiposition
Articulated



RA
Swing
Revolver

TORQUE ✓



RB
Revolver
Pistol

TORQUE ✓



SN
Giraffe
Multiposition



SR
Giraffe
Revolver

TORQUE ✓



T
Multiposition
Articulated
Pistol

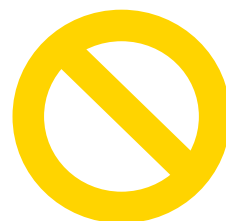


U
Heavy-Duty
Multiposition
Articulated
Pistol

BRAKES

L00

No Brakes



L50

Manual
Locking
Base



EA



Articulated with Ring

TORQUE ✓

F



Articulated Adjustable

GA



Quick Change

HA



Heavy-Duty Applications

LB



Horizontal Adjustable Ball and Socket

LC



Horizontal Pneumatic Ball and Socket

M



Constant Pressure Support

N



Multiposition Articulated

RC



Vertical & Horizontal

R



Revolver

TORQUE ✓

RS



Revolver Auto

TORQUE ✓

RBS



Revolver Pistol Auto

TORQUE ✓

RAS



Swing Revolver Auto

TORQUE ✓

W



Vertical Bar

WC



Vertical Bar with Brake


WA



Vertical Bar with Pneumatic Brake

TORQUE ✓

Z



Fork

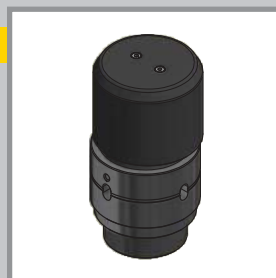


Custom
Ask us about a custom toolholding solution.

L11
Manual Brakes



L22
Pneumatic Brakes



L92
Pneumatic, brakes activated from the tool trigger



MOUNTING SOLUTIONS

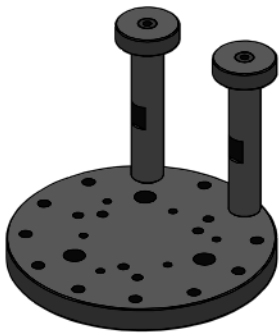


« Add reach to your build with a Swing Beam

Extension Arm 1000
1000 mm
1500 mm



Balustrade Support



Base Rotation Limiter

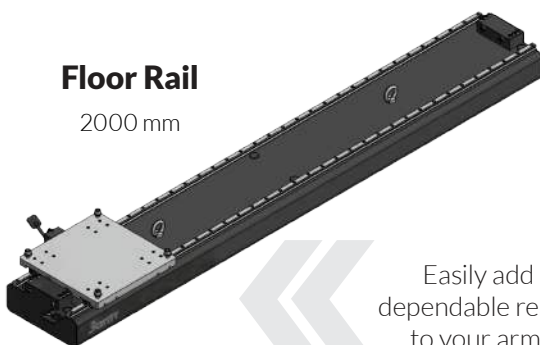


Extension Arm 500
500 mm
600 mm
1000 mm

We will engineer the perfect solution for your application

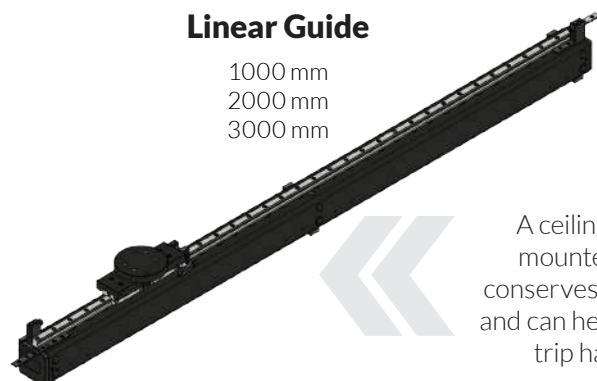
Our experts will ensure your 3arm® build is properly balanced with your accessory.

More Reach



Floor Rail
2000 mm

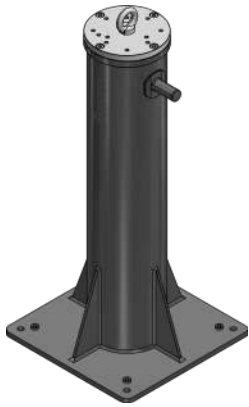
« Easily add dependable reach to your arm.



Linear Guide
1000 mm
2000 mm
3000 mm

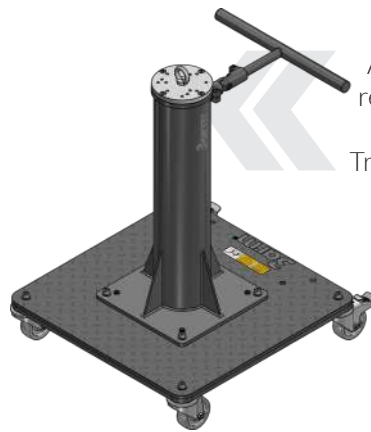
« A ceiling or wall mounted beam conserves floorspace and can help eliminate trip hazards.

Custom sizes available



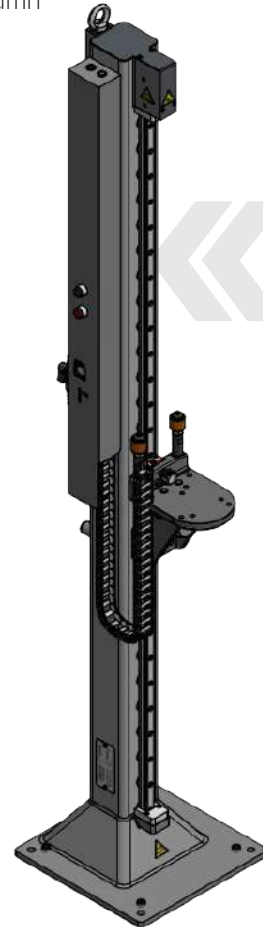
Fixed Column

From 200 to 2000 mm



Add mobility and reach by mounting your 3arm® on a Trolley with Column

Trolley with Column



Achieve extreme vertical reach with an Elevator

Elevator

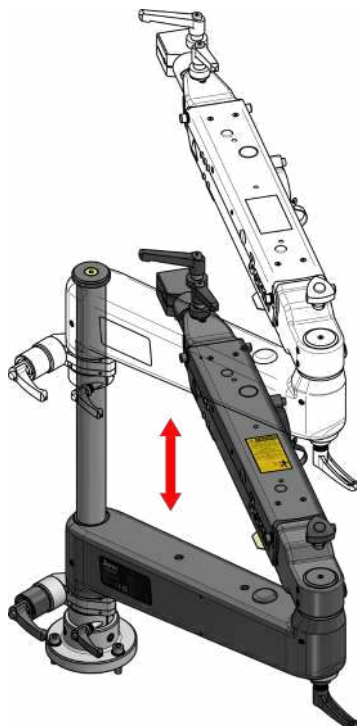
1500 mm
2000 mm
2500 mm



Lifter

300 / 500 / 750 mm

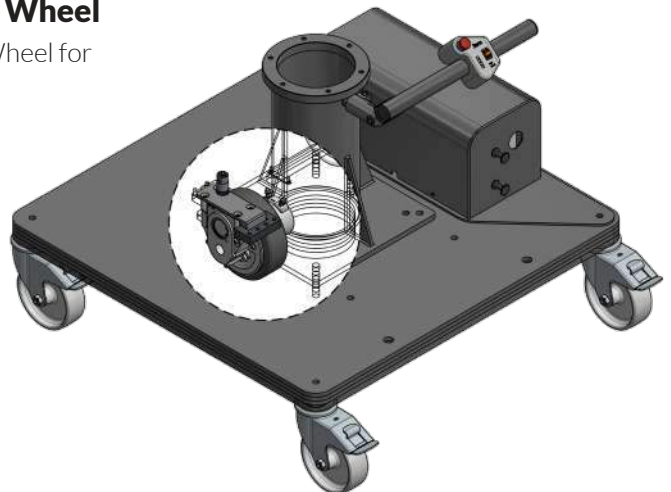
Add even more vertical reach to your Column



Elevating Base

Electric Wheel

Electric Wheel for trolleys



Manufacturing Industry Worker INJURY

SOURCE: U.S. BUREAU OF LABOR STATISTICS

MOST COMMON Type of Injury



Sprains and Strains



Cuts and Lacerations



Fractures

MOST COMMON Cause of Injury



Overexertion

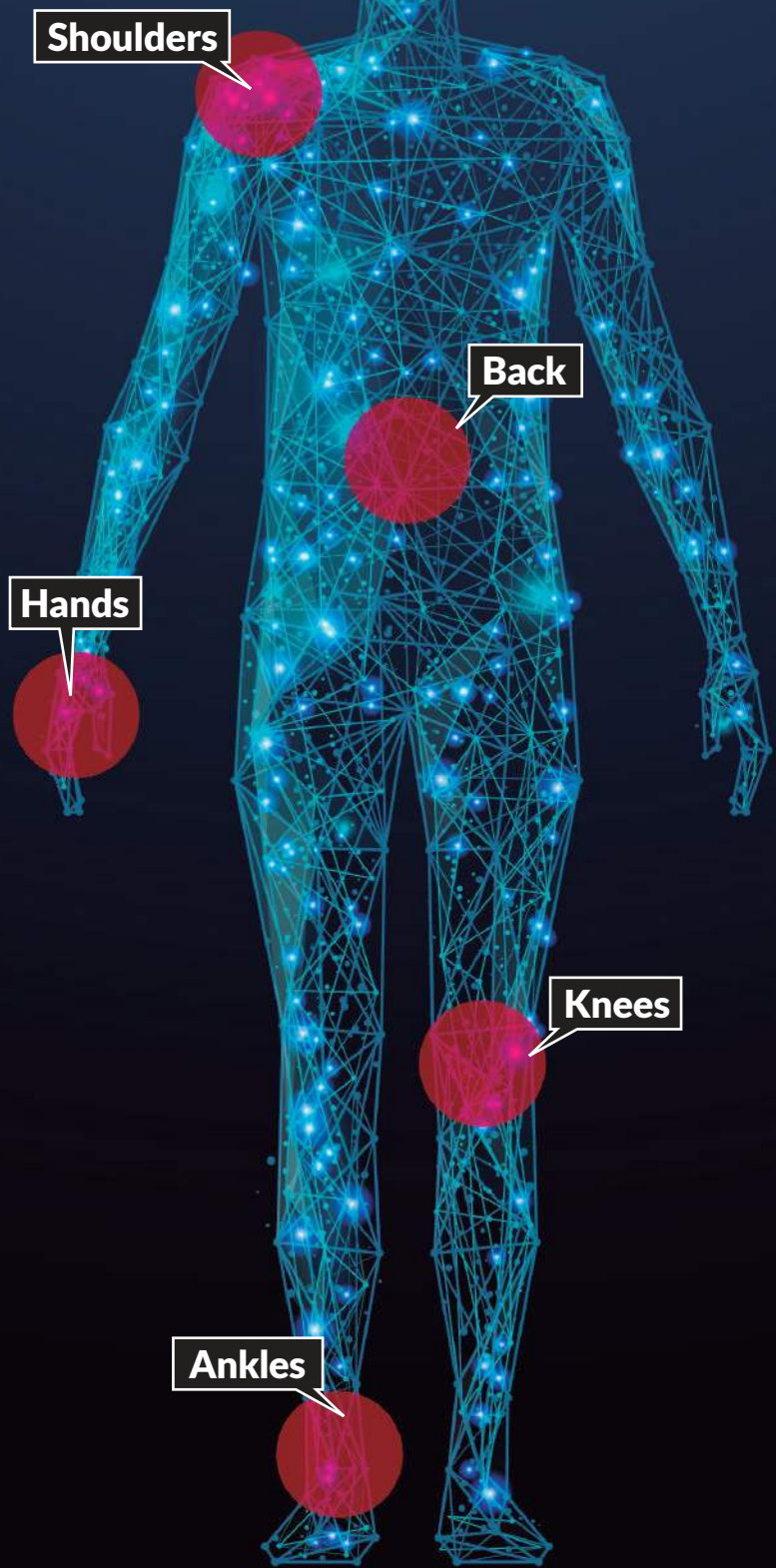


Repetitive Motions



Struck, Cut or Caught by Equipment

MOST COMMON Bodily Injuries



IF INJURY NECESSITATES

Missed Work

25% MISS

31
DAYS
OR MORE

MEDIAN
MISSED

7
DAYS

ONLY

16%
MISSED
1 DAY
OR FEWER

THE COST

of Worker Injury

EMPLOYERS SPEND

MORE THAN
\$2000
ANNUALLY
PER EMPLOYEE

MORE THAN

60%
OF WORKER INJURY
IS POTENTIALLY
PREVENTABLE

PREVENT THE PROBLEM WITH

APPLYING

Ergonomics



Weightload is Taken Off
of the Worker



Worker Can Be More
Productive with Less Strain



Eliminate the Most Common
Causes of Worker Injury

WORKER

Safety



Worker's Limbs are Kept at a
Safe Distance from Hazards



Get the Tool into Tight Spaces,
While Keeping Workers Safe.



Eliminate the High Costs of
Worker Injury

Integrating a **3arm**[®] solution

QUESTIONS:

WHAT TOOL DO YOU WANT TO HOLD?

TYPE:
MAKE:
MODEL:
ORIENTATION:
WEIGHT:
TOOL DRAWING (3D STP):

Head Member Design

Determine the tools you need to use with your 3arm[®]. This will also help you select a head member based on the type of application and necessary orientations. To ensure proper fit a 3D STP file of the tool is required.

Balanced Design

Tool weight is key to determining which arm will suit your application. All of our arms are precision calibrated at the factory to balance the weight of the tool.

Great Reach

A 3arm[®] can be base-mounted, ceiling-mounted or wall-mounted. You can easily add precision reach by applying a rail, make it mobile with a trolley or add vertical reach with a mounting column. Check out our solutions system on page 24.

Each 3arm® is customized for your tool and application at the factory to optimize the arm for your process and achieve out-of-the-box performance.

WHAT ARE YOUR APPLICATION REQUIREMENTS?

HORIZONTAL REACH:
VERTICAL REACH:
MOUNTING ORIENTATION: <input type="checkbox"/> FLOOR <input type="checkbox"/> WALL <input type="checkbox"/> CEILING
MOUNTING SOLUTIONS: <input type="checkbox"/> MOBILE <input type="checkbox"/> BEAM <input type="checkbox"/> RAIL <input type="checkbox"/> ELEVATOR <input type="checkbox"/> COLUMN <input type="checkbox"/> MAGNET
BRAKES: <input type="checkbox"/> NOT REQUIRED <input type="checkbox"/> PNEUMATIC <input type="checkbox"/> TOOLTRIGGER ACTIVATED <input type="checkbox"/> MANUAL <input type="checkbox"/> MANUAL LOCKING BASE
TORQUE:

Integrated Braking

Tool trigger braking of the arm is available. Effortlessly position your tool, stop it in place, release trigger and float it to the next job. (Brakes are necessary for certain applications)

Handling Force

The durable closed-case design of 3arm® is able to absorb considerable force. Knowing your requirements for torque can help us determine the best 3arm® configuration.

WARRANTY

3arm® arms carry a full one year warranty of the arm against manufacturer defects. The warranty does not cover any damage caused by overloads, improper use and handling, and using the arm for anything other than its intended use. Our warranty covers labor and parts during the one year period.

WE SERVICE WHAT WE MANUFACTURE

www.3arm.net



Tecnospiro Machine Tool, S.L.

Tel. +34 93 8764359
P.I. Pla dels Vinyats 1, S/N, Nau 1.
St. Joan de Vilatorrada 08250
(Barcelona) Spain

3ARM@ www.3arm.net
3arm@3arm.net

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.

