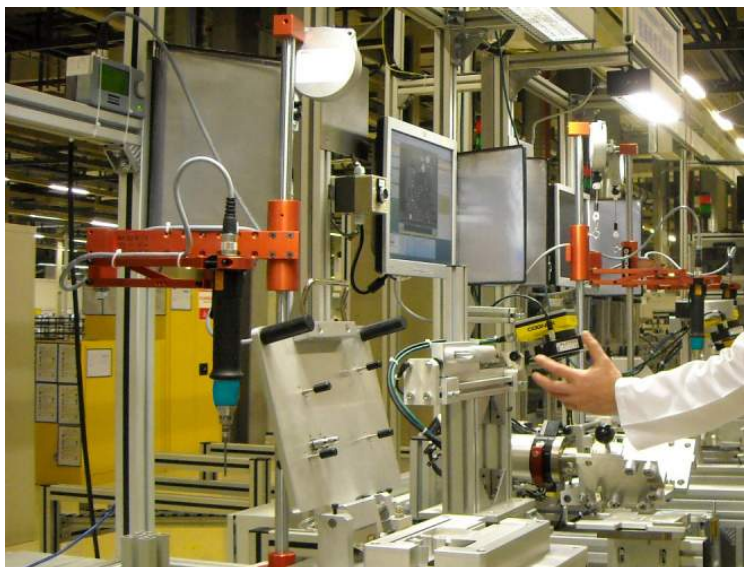




## ERGONOMICS AND WORKSTATIONS



# **Torque Reaction systems and Posi-Control systems**

**DISA**  
[www.disa.ch](http://www.disa.ch)



## The range



### TORQUE REACTION ARMS (p.4 to 33)

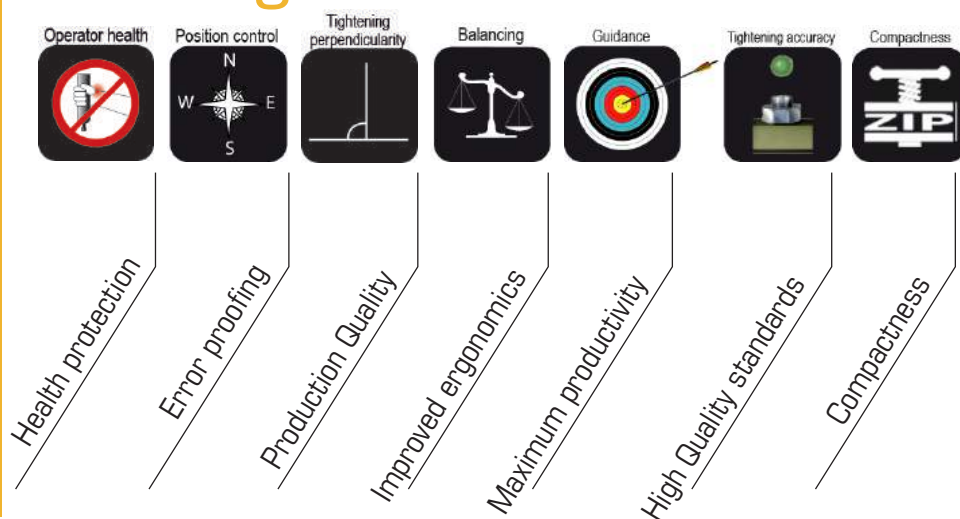
A comprehensive range of torque reaction systems to decrease employee injuries and boost your productivity.



### POSI CONTROL SYSTEM (p.34 to 47)

Error proofing and sequencing systems for zero fault assembly process. Automation devices management on your assembly line.

## Pictograms



# Torque Reaction systems

The widest range of reaction arms to meet your various demanding requirements.

- Page 4 to 9 • Linear reaction arms BA Series
- Page 10 to 11 • Travelling arms BA...C Series
- Page 12 to 19 • Articulated arms BA...R Series
- Page 20 to 21 • Articulated and air balanced pantograph arm BA...G Serie
- Page 22 to 28 • Telescoping arms DMF/DMFI Series
- Page 27 • Special solutions
- Page 28 to 33 • Suspended arms SLIDER Series

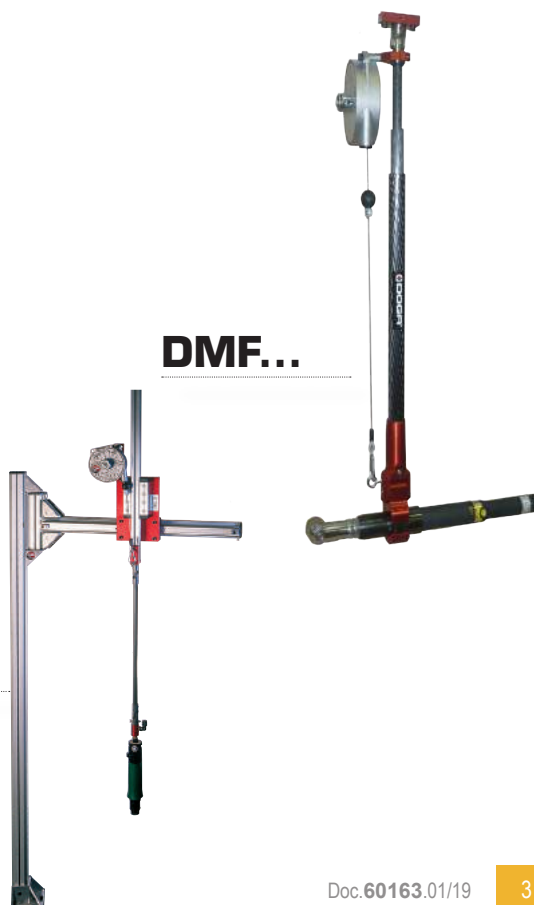
**BA...**



**BA...R**



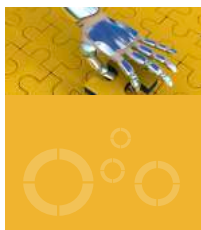
**DMF...**



**BA...C**

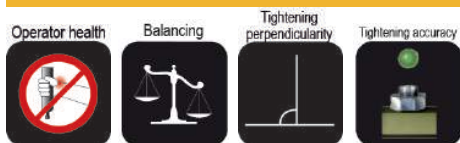


**SLIDER...**



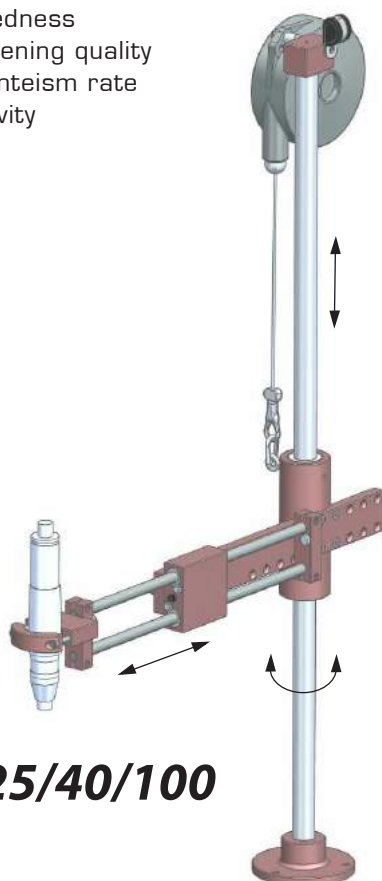
# Linear Arms

## BA Series

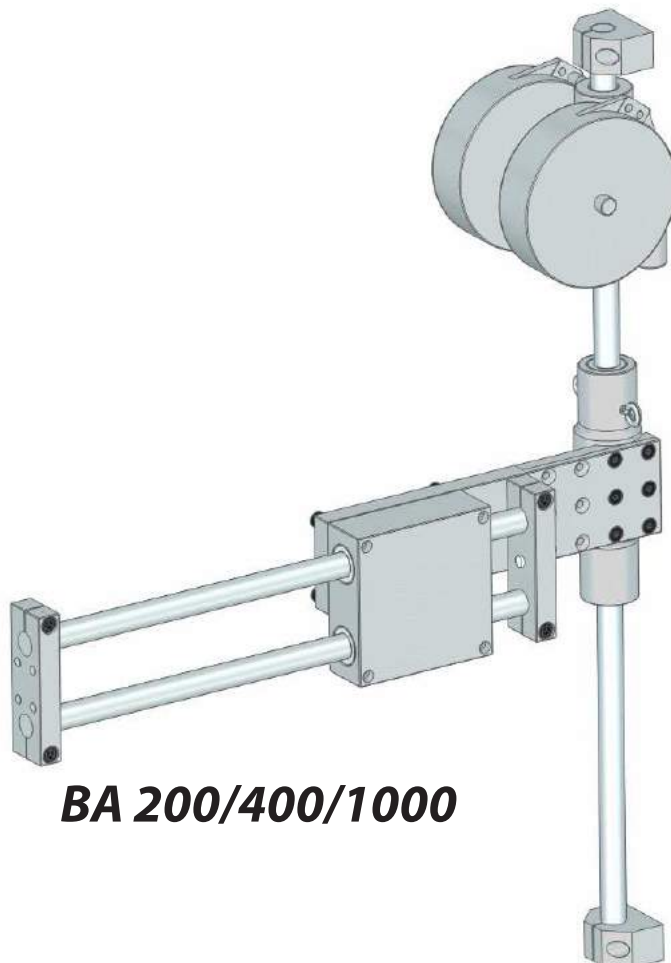


*BA Series : Smooth tightening operation and perfect perpendicularity until 100 Nm.*

- Erase torque reaction
- Ensure perfect perpendicularity
- Avoid illnesses
- Suppress the tiredness
- Improve the tightening quality
- Reduce the absenteeism rate
- Improve productivity



**BA 5/12/25/40/100**



**BA 200/400/1000**

| Model  | Torque max (Nm) | Tool Ø (mm) | Stroke | Load max (kg) | Code      |
|--------|-----------------|-------------|--------|---------------|-----------|
| BA 5   | 5               | 25 - 42     | 200    | 0,9           | 4-5200085 |
| BA 12  | 12              | 27 - 50     | 225    | 1,2           | 4-5201000 |
| BA 25  | 25              | 28 - 52     | 250    | 2,2           | 4-5200076 |
| BA 40  | 40              | 28 - 52     | 295    | 2,2/4*        | 4-5200067 |
| BA 100 | 100             | 28 - 52     | 330    | 3,5/6*        | 4-5200068 |

\* With additional balancer - **Code : 4-5200143** (see page 6)

| Model   | Torque max (Nm) | Stroke | Load max (kg) | Code      |
|---------|-----------------|--------|---------------|-----------|
| BA 200  | 200             | 345    | 8             | 4-5201092 |
| BA 400  | 400             | 400    | 12            | 4-5201093 |
| BA 1000 | 1000            | 400    | 16            | 4-5201094 |

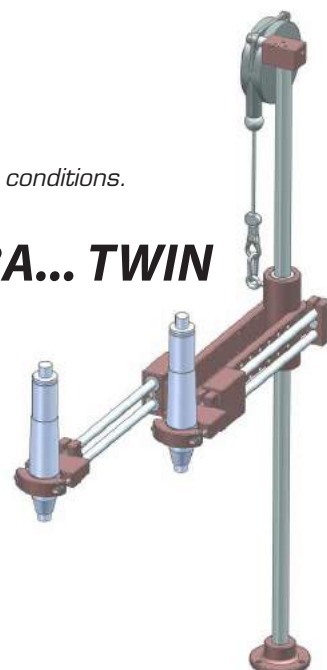
*BA 200/400/1000 are delivered without clamp, floor post and non anodized.*

# Linear Arms

## BA...TWIN Series

BA...TWIN model is an ideal solution when two screwdrivers are used in limited space conditions.

### BA... TWIN



| Model    | Torque max (Nm) | Tool Ø (mm) | Stroke | Load max (kg) | Code      |
|----------|-----------------|-------------|--------|---------------|-----------|
| BA 12 T  | 12              | 27 - 42     | 225    | 2             | 4-5200823 |
| BA 25 T  | 25              | 28 - 52     | 250    | 3             | 4-5200721 |
| BA 40 T  | 40              | 28 - 52     | 295    | 4             | 4-5200825 |
| BA 100 T | 100             | 28 - 52     | 330    | 6             | 4-5283105 |

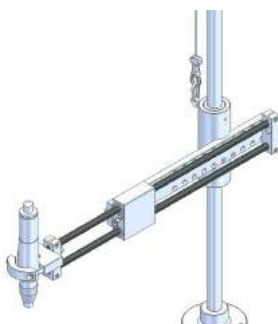
## BA Accessories

### Anti rotation clamp



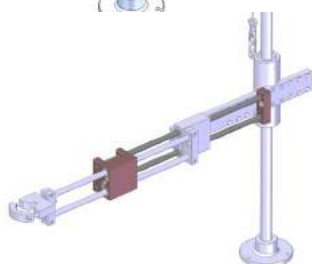
| For         | Code      |
|-------------|-----------|
| BA 5        | 4-5200348 |
| BA 12 & 25  | 4-5200116 |
| BA 40 & 100 | 4-5200117 |

### Extended slides

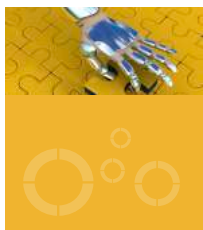


| For    | Stroke | Code      |
|--------|--------|-----------|
| BA 12  | + 130  | 4-5200120 |
| BA 25  | + 130  | 4-5200720 |
| BA 40  | + 170  | 4-5200122 |
| BA 100 | + 200  | 4-5200123 |

### Double slides



| For    | Stroke | Code      |
|--------|--------|-----------|
| BA 12  | + 230  | 4-5200124 |
| BA 25  | + 210  | 4-5200125 |
| BA 40  | + 295  | 4-5200126 |
| BA 100 | + 330  | 4-5200127 |



# Linear arms

## BA Accessories



### *Inverse mounting kit*

| For         | Code      |
|-------------|-----------|
| BA 5        | 4-5200385 |
| BA 12 & 25  | 4-5200128 |
| BA 40 & 100 | 4-5200129 |



### *Additional balancing kit*

| For    | Arm max load (Kg) | Code      |
|--------|-------------------|-----------|
| BA 40  | 4                 | 4-5200143 |
| BA 100 | 6                 | 4-5200143 |



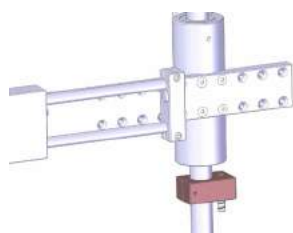
### *Auto rest position kit*

| For        | Code      |
|------------|-----------|
| BA 5 & 12  | 4-5200118 |
| BA 25 & 40 | 4-5200119 |



### *Quick change clamp*

| For   | Adapter code | Clamp code |
|-------|--------------|------------|
| BA 12 | 4-5201109    | 4-5201003  |
| BA 25 | 4-5201110    | 4-5200017  |
| BA 40 | 4-5201111    | 4-5200017  |



### *Height adjusting clamp*

| For         | Code      |
|-------------|-----------|
| BA 5        | 4-5200421 |
| BA 12 & 25  | 4-5200422 |
| BA 40 & 100 | 4-5200423 |



### *Pole upper clamp*

| For         | Code      |
|-------------|-----------|
| BA 12 & 25  | 4-5200130 |
| BA 40 & 100 | 4-5200131 |



### *Floor post*

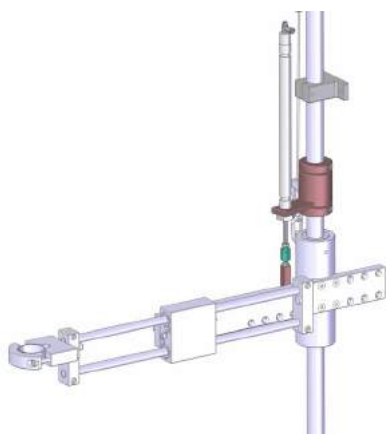
| For            | Code      |
|----------------|-----------|
| BA 100/200/400 | 4-5201096 |
| BA 1000        | 4-5201097 |

# Linear arms

## BA Accessories

### Downward Assistance Kits

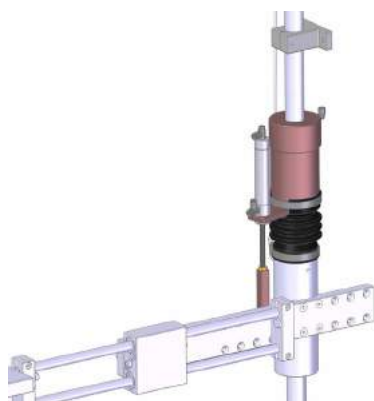
Downward Assistance Kits will provide you with Extreme Comfort and productivity increase. Ideal for self-tapping applications it requires no effort from the operator. BAPER system features a built-in collect chuck that allows the system to be used at any height. Easy Push system operates only at a preset height by using a mechanical stop that is set along.



#### EASY PUSH

| Model                                                | For         | Pushing force (Kg) | Stroke (mm) | Type      | Code      |
|------------------------------------------------------|-------------|--------------------|-------------|-----------|-----------|
| EASY PUSH                                            | BA 12       | 5                  | 125         | Pneumatic | 4-5200099 |
| EASY PUSH                                            | BA 25       | 9                  | 160         | -         | 4-5200102 |
| EASY PUSH                                            | BA 40 & 100 | 9                  | 200         | -         | 4-5200103 |
| EASY PUSH                                            | BA 40 & 100 | 15                 | 200         | -         | 4-5200144 |
| EASY PUSH                                            | BA 100      | 25                 | 200         | -         | 4-5200145 |
| EASY PUSH                                            | BA 12       | 5                  | 125         | Electric  | 4-5200838 |
| EASY PUSH                                            | BA 25       | 9                  | 160         | -         | 4-5200839 |
| EASY PUSH                                            | BA 40 & 100 | 9                  | 200         | -         | 4-5200840 |
| EASY PUSH                                            | BA 40 & 100 | 15                 | 200         | -         | 4-5200841 |
| EASY PUSH                                            | BA 100      | 25                 | 200         | -         | 4-5200842 |
| Easy Push Cable/GX                                   |             |                    |             |           | 4-5200843 |
| Easy Push Cable/DELVO                                |             |                    |             |           | 4-5200844 |
| Cable without connector (for 5/9 kg pushing force)   |             |                    |             |           | 4-5200845 |
| Cable without connector (for 15/25 kg pushing force) |             |                    |             |           | 4-5200846 |
| U3-D Interface for GX screwdrivers                   |             |                    |             |           | 6-1041888 |

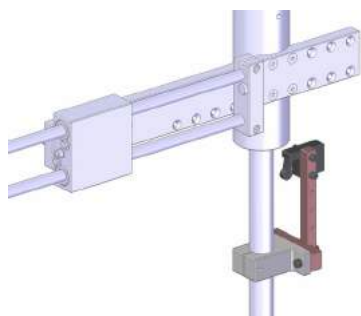
EASY PUSH kits are delivered without cable.



#### BAPER

| Model                              | For         | Pushing force (Kg) | Type      | Code      |
|------------------------------------|-------------|--------------------|-----------|-----------|
| BAPER                              | BA 12       | 5                  | Pneumatic | 4-5200095 |
| BAPER                              | BA 25       | 9                  | -         | 4-5200096 |
| BAPER                              | BA 40 & 100 | 9                  | -         | 4-5200097 |
| BAPER                              | BA 12       | 5                  | Electric  | 4-5200830 |
| BAPER                              | BA 25       | 9                  | -         | 4-5200831 |
| BAPER                              | BA 40 & 100 | 9                  | -         | 4-5200832 |
| BAPER Cable/GX                     |             |                    |           | 4-5200833 |
| BAPER Cable/DELVO                  |             |                    |           | 4-5200834 |
| Cable without connector            |             |                    |           | 4-5200835 |
| U3-D Interface for GX screwdrivers |             |                    |           | 6-1041888 |

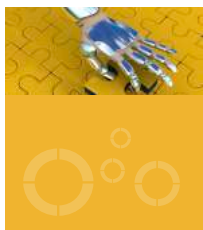
Electric BAPER kits are delivered without cable.



#### Safety kit

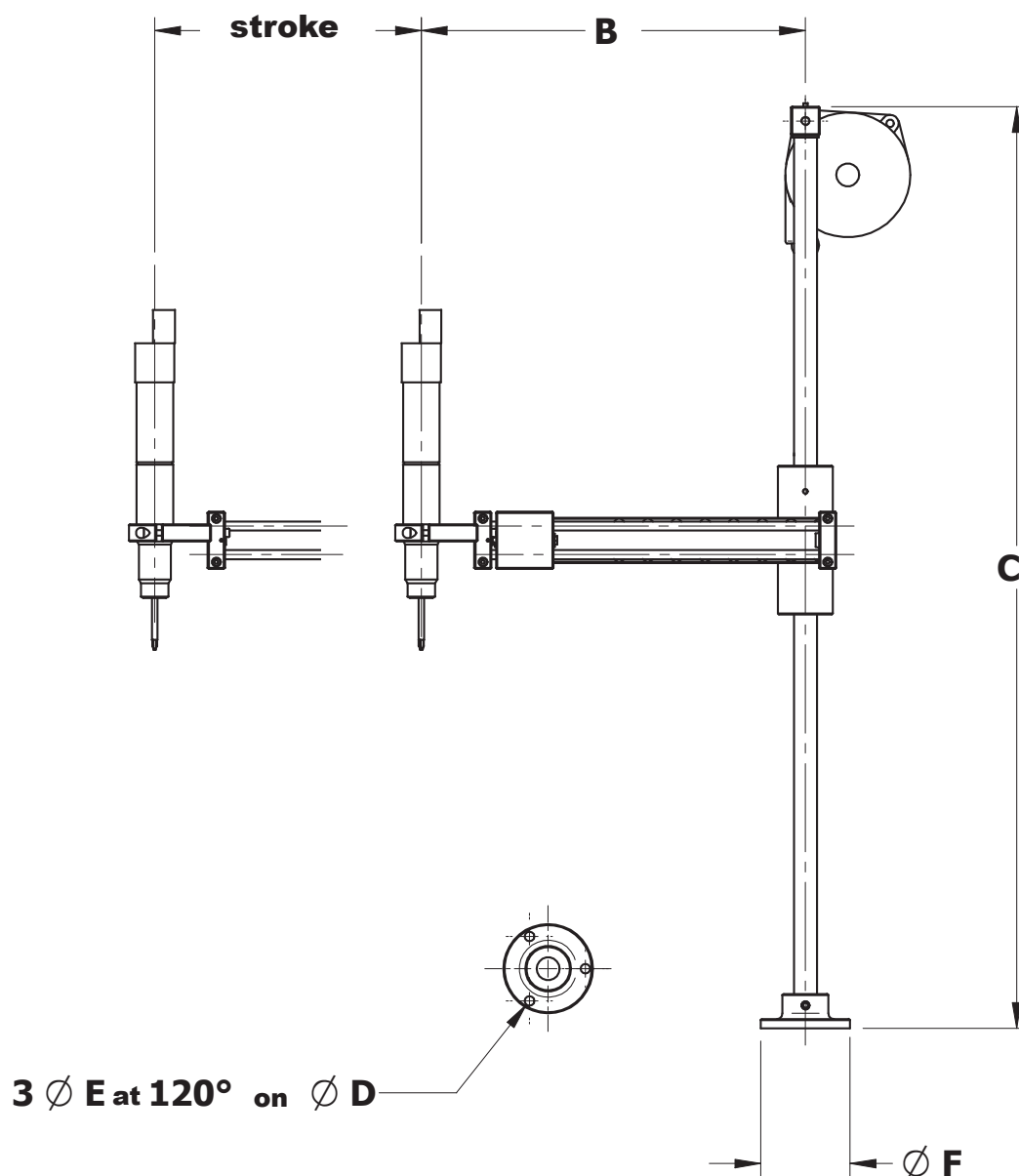
| For         | Code      |
|-------------|-----------|
| BA 12 & 25  | 4-5200134 |
| BA 40 & 100 | 4-5200135 |

The safety kit allows to avoid activation of downward assistance before powerbit gets in contact with the screw.



# Linear arms

## BA 5 to 100 Dimensions



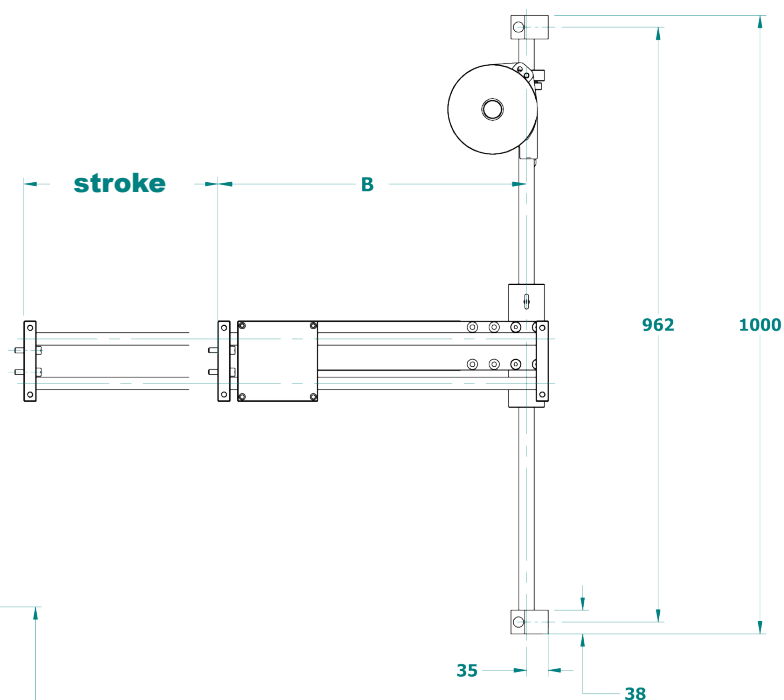
## BA Dimensions

| Model  | Stroke A | B   |     | C    | D   | E    | F   |
|--------|----------|-----|-----|------|-----|------|-----|
|        |          | Min | Max |      |     |      |     |
| BA 5   | 200      | 222 | 302 | 705  | 65  | 8,5  | 78  |
| BA 12  | 225      | 186 | 336 | 805  | 65  | 8,5  | 78  |
| BA 25  | 250      | 221 | 396 | 908  | 65  | 8,5  | 78  |
| BA 40  | 295      | 260 | 460 | 1008 | 100 | 8,5  | 118 |
| BA 100 | 330      | 315 | 515 | 1008 | 126 | 10,5 | 148 |

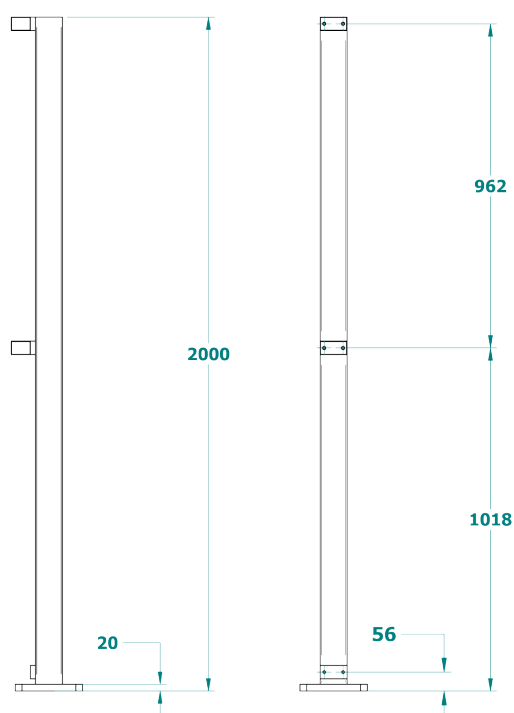


# Linear arms

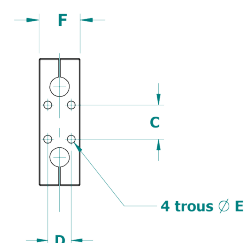
## BA 200 / 400 Dimensions



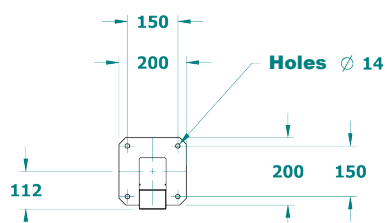
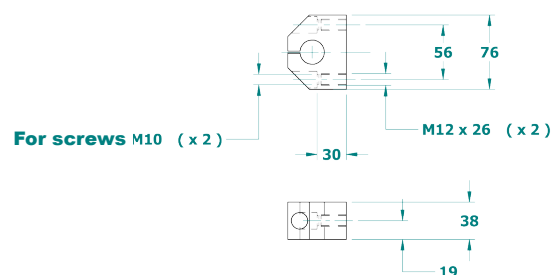
### Floor post



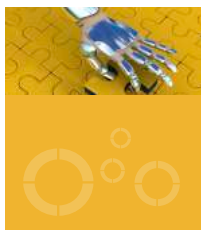
### Clamp Mounting Bracket



### Coupling flange

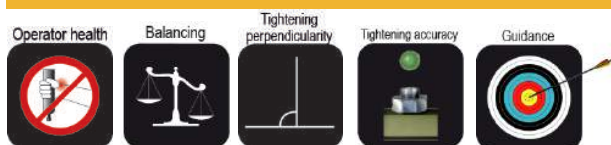


| Model  | Stroke A | B   |     | C  | D  | E    | F  |
|--------|----------|-----|-----|----|----|------|----|
|        |          | Min | Max |    |    |      |    |
| BA 200 | 349      | 430 | 500 | 35 | 24 | 8,2  | 42 |
| BA 400 | 390      | 326 | 406 | 40 | 28 | 12,2 | 52 |



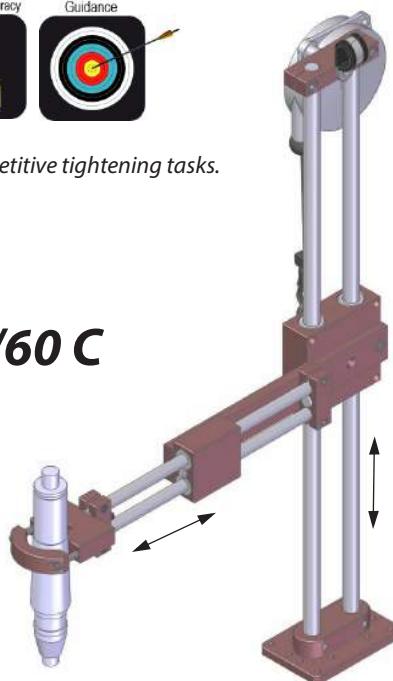
# Travelling arms

## BA...C Series



BA...C Series ideal for tightening operations on large surface or with repetitive tightening tasks.

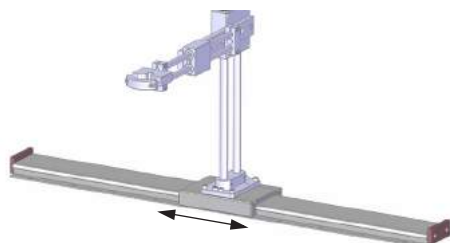
### BA 25/60 C



| Model   | Max torque (mm) | Tool Ø (mm) | Stroke (mm) | Load max (kg) | Code      |
|---------|-----------------|-------------|-------------|---------------|-----------|
| BA 25 C | 25              | 28-52       | 250         | 2,2           | 4-5200722 |
| BA 60 C | 60              | 28-52       | 350         | 3/5**         | 4-5200451 |

Delivered without horizontal rail.

Compatible accessories : extended slides, double slide, automatic rest position (ARP), quick change clamp (see page 5 and 6)



### Rails

| Model        | Length (mm) | Stroke (mm) | Code      |
|--------------|-------------|-------------|-----------|
| Guiding rail | 600         | 420         | 4-5200294 |
| Guiding rail | 1000        | 820         | 4-5200295 |
| Guiding rail | 1500        | 1320        | 4-5200296 |
| Guiding rail | 2000        | 1820        | 4-5200297 |

### Inverse mounting kit

| For     | Code      |
|---------|-----------|
| BA 25 C | 4-5200811 |
| BA 60 C | 4-5200812 |

### Downward assistance kit

| For     | Pushing force (kg) | Stroke (mm) | Type   | Code      |
|---------|--------------------|-------------|--------|-----------|
| EP 25 P | 9                  | 160         | Pneu.  | 4-5200452 |
| EP 25 E | 9                  | 160         | Elect. | 4-5200454 |
| EP 60 P | 9                  | 200         | Pneu.  | 4-5200453 |
| EP 60 E | 9                  | 200         | Elect. | 4-5200455 |

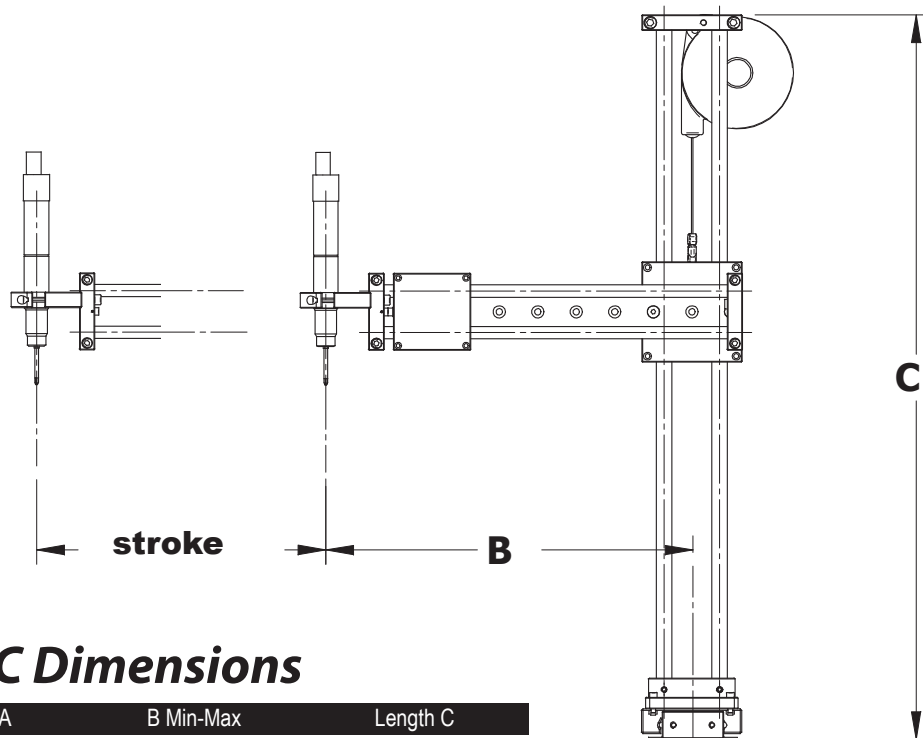
### Safety kit

| For     | Code      |
|---------|-----------|
| BA 25 C | 4-5200390 |
| BA 60 C | 4-5200391 |



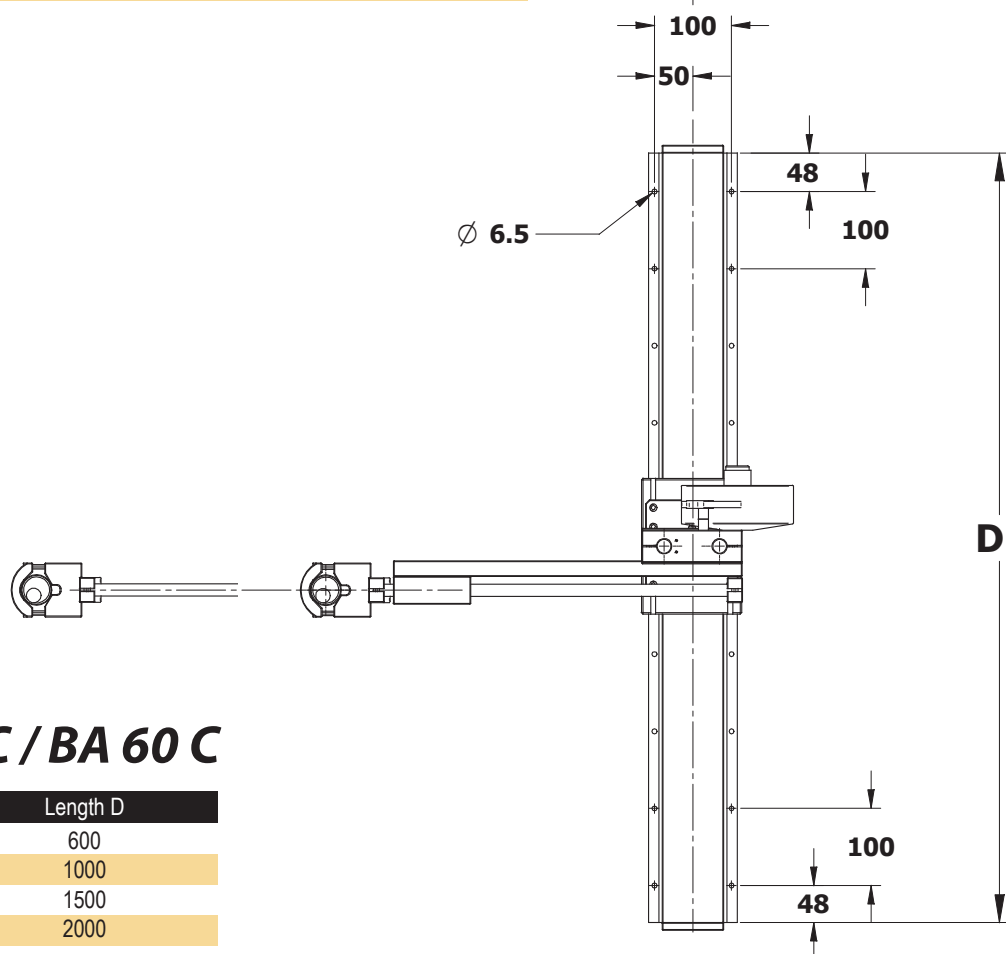
# Travelling arms

## BA...C Dimensions



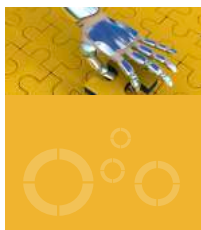
### BA 25 C / BA 60 C Dimensions

| Model   | Stroke A | B Min-Max | Length C |
|---------|----------|-----------|----------|
| BA 25 C | 205      | 207 - 327 | 737      |
| BA 60 C | 330      | 276 - 476 | 940      |



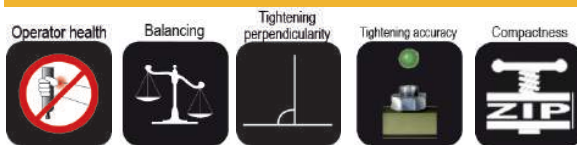
### Rails for BA 25 C / BA 60 C

| Stroke | Length D |
|--------|----------|
| 420    | 600      |
| 820    | 1000     |
| 1320   | 1500     |
| 1820   | 2000     |



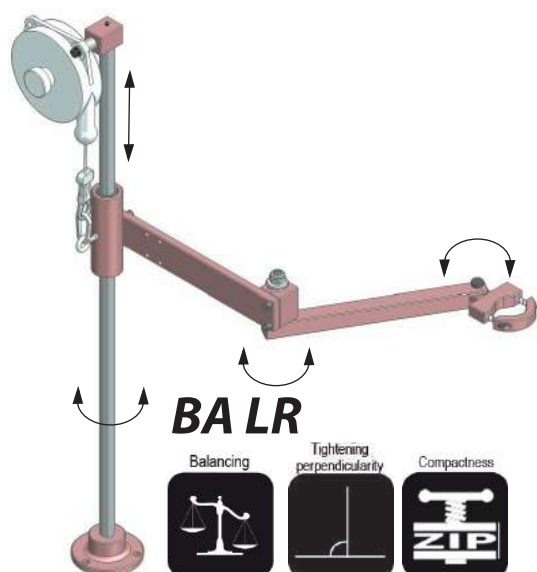
# Articulated reaction arms

## BA...R Series

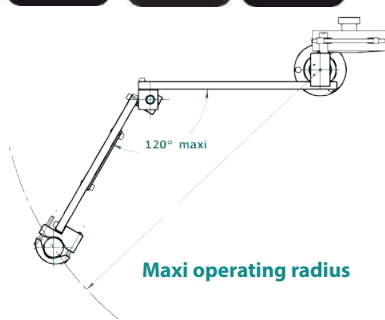
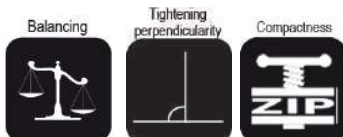


BA...R Series are equipped with a rotating articulation enabling a high working flexibility. Swivelling and folding up like a human arm, they are recommended for spaceless working places.

- Optimum ratio performance/dimensions (ideal for spaceless location)
- Economical and versatile : possibility to use on the same arm every kind of tools (straight, pistol, angle drivers) thanks to the large choice of clamps.
- Higher comfort for the operator thanks to the articulated arm (less movement inertia and better positioning accuracy).

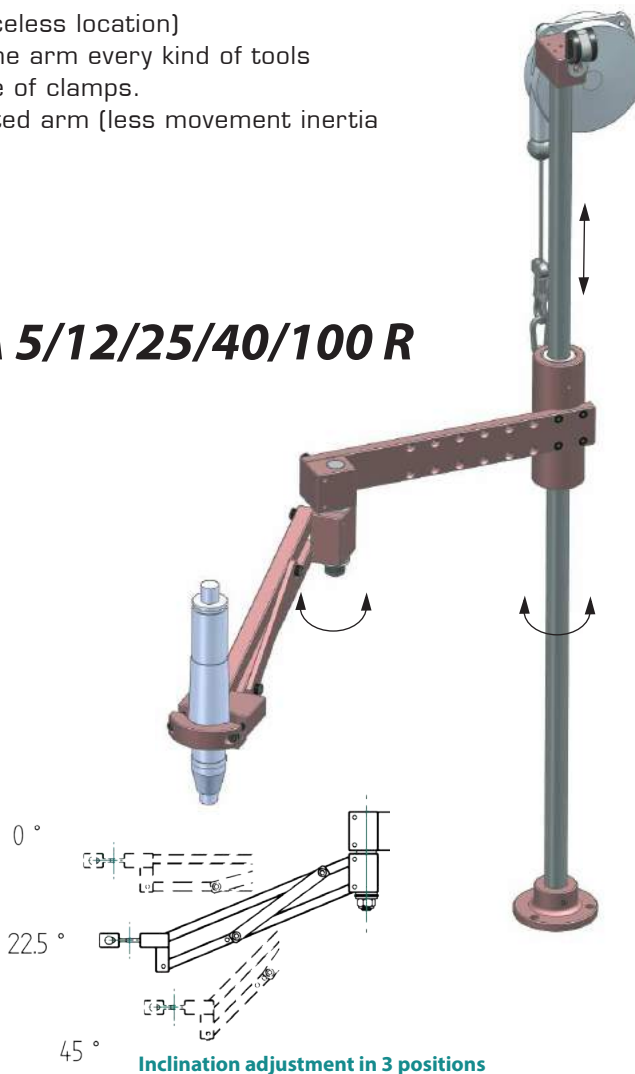


**BA LR**



Maxi operating radius

## BA 5/12/25/40/100 R



Inclination adjustment in 3 positions

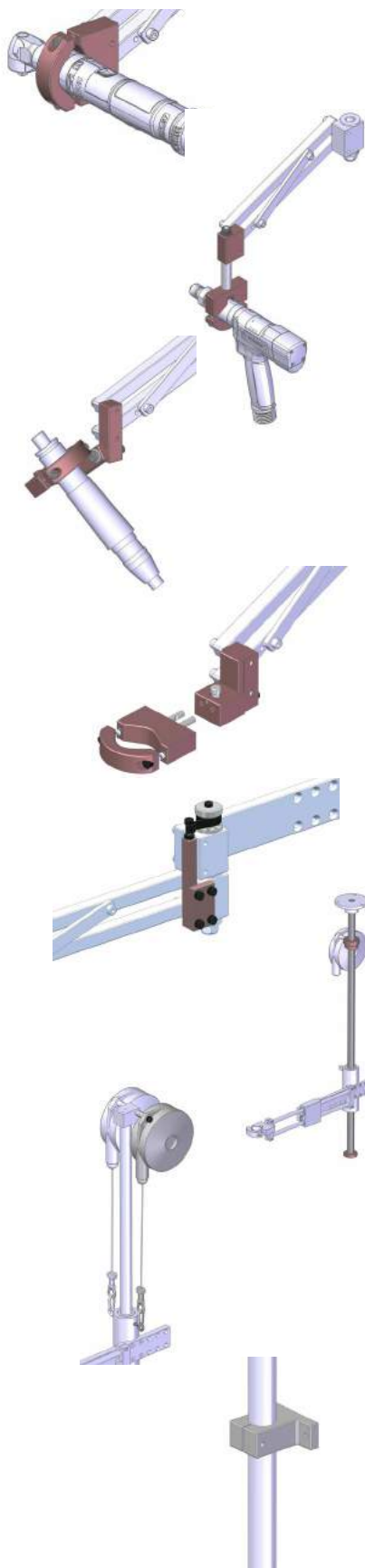
| Model    | Max torque (Nm) | Tool Ø (mm) | Max load (kg) | Max radius (mm) | Code      |
|----------|-----------------|-------------|---------------|-----------------|-----------|
| BALR     | -               | 25 - 42     | 0,9           | 450             | 4-5200826 |
| BA 5 R   | 5               | 25 - 42     | 0,9           | 420             | 4-5200098 |
| BA 12 R  | 12              | 27 - 50     | 1,2           | 450             | 4-5201001 |
| BA 12 R  | 12              | 27 - 50     | 1,2           | 600             | 4-5201002 |
| BA 25 R  | 25              | 28 - 52     | 2,2           | 445             | 4-5200070 |
| BA 25 R  | 25              | 28 - 52     | 2,2           | 600             | 4-5200274 |
| BA 25 R  | 25              | 28 - 52     | 2,2           | 800             | 4-5200275 |
| BA 40 R  | 40              | 28 - 52     | 2,2 - 4*      | 630             | 4-5200071 |
| BA 40 R  | 40              | 28 - 52     | 2,2 - 4*      | 800             | 4-5200276 |
| BA 40 R  | 40              | 28 - 52     | 2,2           | 1000            | 4-5200277 |
| BA 100 R | 100             | 28 - 52     | 3,5 - 6*      | 715             | 4-5200072 |
| BA 100 R | 100             | 28 - 52     | 3,5 - 6*      | 900             | 4-5200278 |
| BA 100 R | 100             | 28 - 52     | 3,5           | 1100            | 4-5200279 |

\* With additional balancer - **Code : 4-5200143.**

Delivered with standard clamp for straight tool.

# Articulated reaction arms

## BA...R Accessories



### Clamp for angle nutrunner

| For          | Tool Ø (mm) | Code      |
|--------------|-------------|-----------|
| BA 12 R      | 27 - 50     | 4-5200089 |
| BA 25 & 40 R | 28 - 52     | 4-5200090 |
| BA 100 R     | 28 - 52     | 4-5200091 |

### Clamp for pistol tool

| For          | Tool Ø (mm) | Code      |
|--------------|-------------|-----------|
| BA 12 R      | 27 - 50     | 4-5200087 |
| BA 25 & 40 R | 28 - 52     | 4-5200088 |

### 2 axis clamp

| For          | Tool Ø (mm) | Code      |
|--------------|-------------|-----------|
| BA 12 R      | 27 - 50     | 4-5200093 |
| BA 25 & 40 R | 28 - 52     | 4-5200094 |

### Quick change clamp

| For     | Adaptater code | Code      |
|---------|----------------|-----------|
| BA 12 R | 4-5200847      | 4-5201003 |
| BA 25 R | 4-5200848      | 4-5200017 |
| BA 40 R | 4-5200848      | 4-5200017 |

### Auto rest spring

| For       | Code      |
|-----------|-----------|
| BA 5/12 R | 4-5200849 |
| BA 25 R   | 4-5200850 |
| BA 40 R   | 4-5200851 |

### Inverse mounting kit

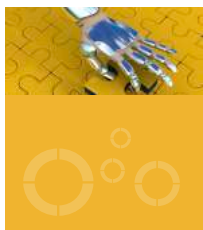
| For           | Code      |
|---------------|-----------|
| BA 5 R        | 4-5200385 |
| BA 12 & 25 R  | 4-5200128 |
| BA 40 & 100 R | 4-5200129 |

### Additional balancing kit

| For      | Arm max load (kg) | Code      |
|----------|-------------------|-----------|
| BA 40 R  | 4                 | 4-5200143 |
| BA 100 R | 6                 | 4-5200143 |

### Pole upper clamp

| For           | Interface (mm)                  | Code      |
|---------------|---------------------------------|-----------|
| BA 12 & 25 R  | 2 Ø 4,3 at 45 mm from pole axis | 4-5200130 |
| BA 40 & 100 R | 2 Ø 5,3 at 60 mm from pole axis | 4-5200131 |

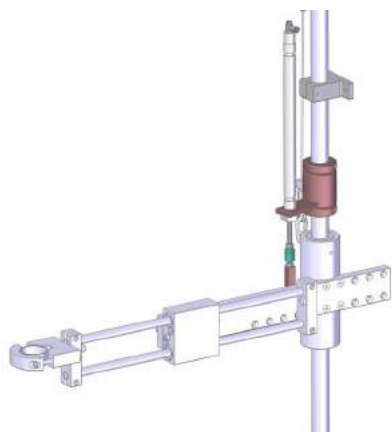


# Articulated reaction arms

## BA...R Accessories

### Downward assistance kits

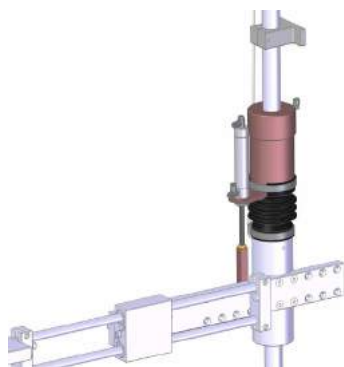
Downward assistance kits will provide you with extreme comfort and productivity increase. Ideal for self-tapping applications it requires no effort from the operator. BAPER system features a built-in collet check that allows the system to be used at any height. Easy push system operates only at a preset height by using a mechanical stop that is set along the pole.



#### EASY PUSH

| Model                              | For           | Pushing force (kg) | Stroke (mm) | Type      | Code      |
|------------------------------------|---------------|--------------------|-------------|-----------|-----------|
| EASY PUSH                          | BA 12 R       | 5                  | 125         | Pneumatic | 4-5200099 |
| EASY PUSH                          | BA 25 R       | 9                  | 160         | -         | 4-5200102 |
| EASY PUSH                          | BA 40 & 100 R | 9                  | 200         | -         | 4-5200103 |
| EASY PUSH                          | BA 12 R       | 5                  | 125         | Electric  | 4-5200838 |
| EASY PUSH                          | BA 25 R       | 9                  | 160         | -         | 4-5200839 |
| EASY PUSH                          | BA 40 & 100 R | 9                  | 200         | -         | 4-5200840 |
| Easy Push Cable/GX                 |               |                    |             |           | 4-5200843 |
| Easy Push Cable/DELVO              |               |                    |             |           | 4-5200844 |
| Cable without connector            |               |                    |             |           | 4-5200845 |
| U3-D Interface for GX screwdrivers |               |                    |             |           | 6-1041888 |

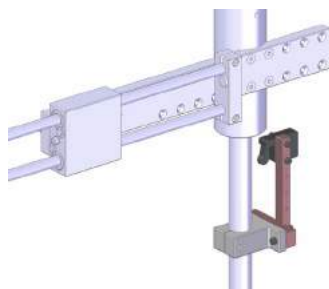
EASY PUSH kits are delivered without cable.



#### BAPER

| Model                              | For           | Pushing force (kg) | Type      | Code      |
|------------------------------------|---------------|--------------------|-----------|-----------|
| BAPER                              | BA 12 R       | 5                  | Pneumatic | 4-5200095 |
| BAPER                              | BA 25 R       | 8                  | -         | 4-5200096 |
| BAPER                              | BA 40 & 100 R | 8                  | -         | 4-5200097 |
| BAPER                              | BA 12 R       | 5                  | Electric  | 4-5200830 |
| BAPER                              | BA 25 R       | 8                  | -         | 4-5200831 |
| BAPER                              | BA 40 & 100 R | 8                  | -         | 4-5200832 |
| BAPER Cable/GX                     |               |                    |           | 4-5200833 |
| BAPER Cable/DELVO                  |               |                    |           | 4-5200834 |
| Cable without connector            |               |                    |           | 4-5200835 |
| U3-D Interface for GX screwdrivers |               |                    |           | 6-1041888 |

Electric BAPER kits are delivered without cable.



#### Safety kit

| Model      | For           | Code      |
|------------|---------------|-----------|
| Safety kit | BA 12 & 25 R  | 4-5200134 |
| Safety kit | BA 40 & 100 R | 4-5200135 |

The safety kit allows to avoid activation of downward assistance before powerbit gets in contact with the screw.

# Articulated reaction arms

## BA...R high torque



**BA 180 R**



**BA 200/500 R**



**BA 180 R**

| Model           | Max. torque (Nm) | Max load (kg) | Max radius (mm) | Code      |
|-----------------|------------------|---------------|-----------------|-----------|
| BA 180 R / 1200 | 180              | 6             | 1200            | 4-5201095 |
| BA 180 R / 1500 | 180              | 4             | 1500            | 4-5200827 |

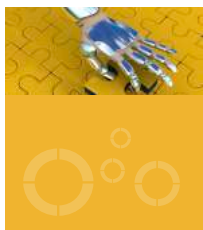
*Delivered without tool clamp, floor post and not anodized.*



**BA 200 R / 500 R**

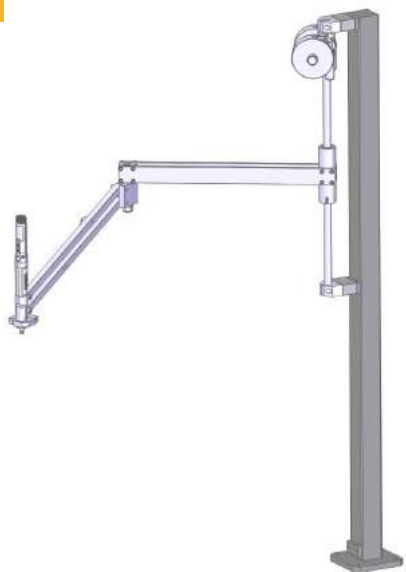
| Model         | Max. torque (Nm) | Max load (kg) | Max radius (mm) | Code      |
|---------------|------------------|---------------|-----------------|-----------|
| BA 200 R      | 200              | 20            | 2000            | 4-5200828 |
| BA 500 R      | 500              | 40            | 2000            | 4-5200829 |
| BA 500 R/2500 | 500              | 30            | 2500            | 4-5283106 |
| BA 500 R/3000 | 500              | 40            | 3000            | 4-5283107 |

*Delivered without tool clamp.  
Higher capacity on request.*



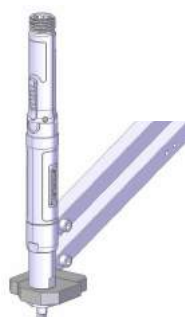
# Articulated reaction arms

## BA...R high torque accessories



### **BA 180 R equipped with floor post (optional)**

The BA 180 R can be mounted directly on your structure or on an optional post to split on the floor.



### **Arm/power tools interface for straight tools and for angular tool with BA180R**

**Code : 4-5201108.**

Note : please precise the screwdriver type.



### **BA100/200/400 and 100/180R Floor Post**

**Code : 4-5201096.**

### **Pneumatic break with rotating clamp (option)**



### **BA 200R/500R**

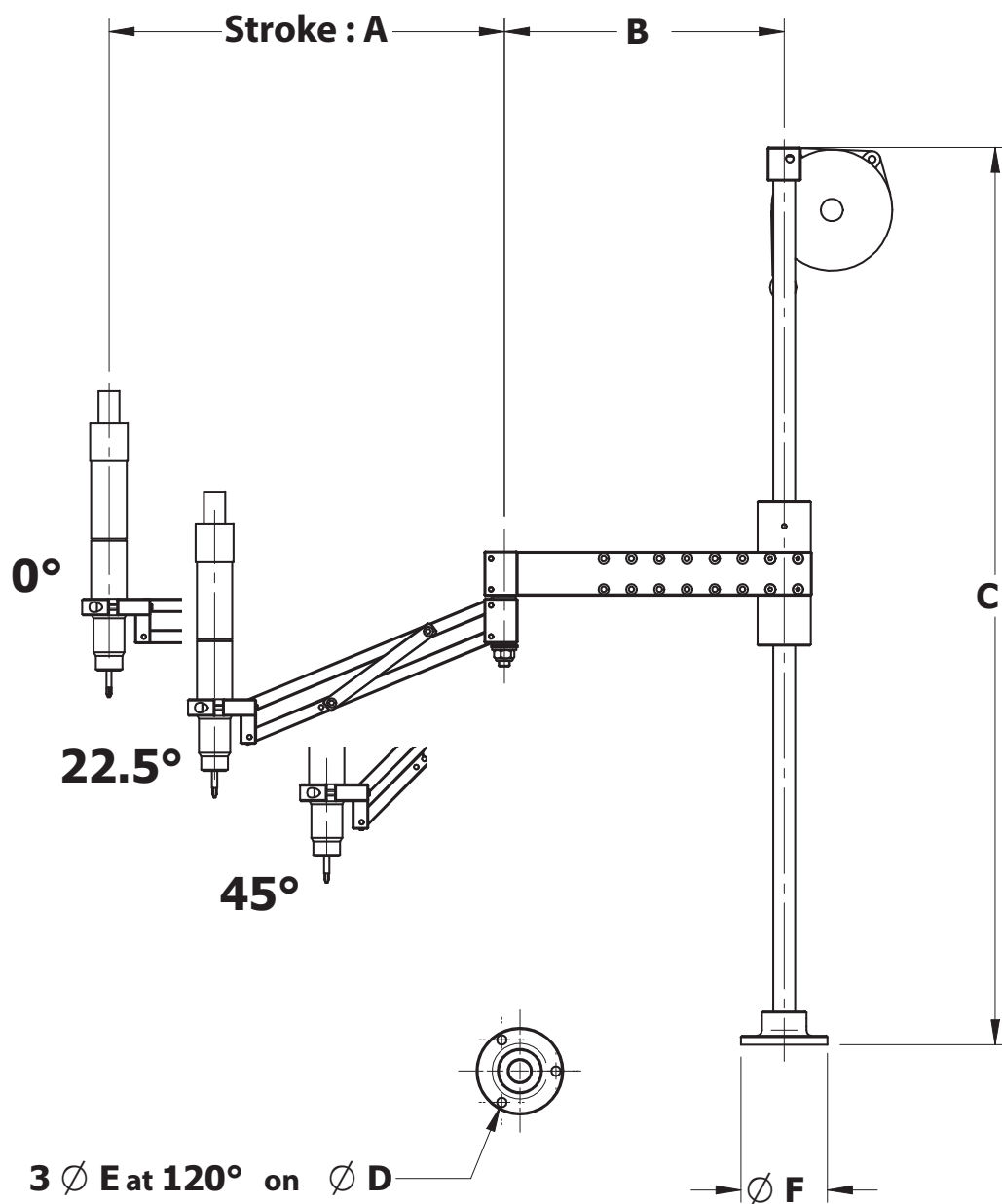
Numerous options are available to meet your process requirement :

- pneumatic break
- rotating clamp
- controller base plate
- remote start handle



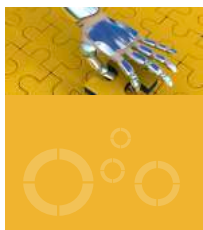
# Articulated reaction arms

## BA...R 5 to 100 Dimensions



### BA...R dimensions

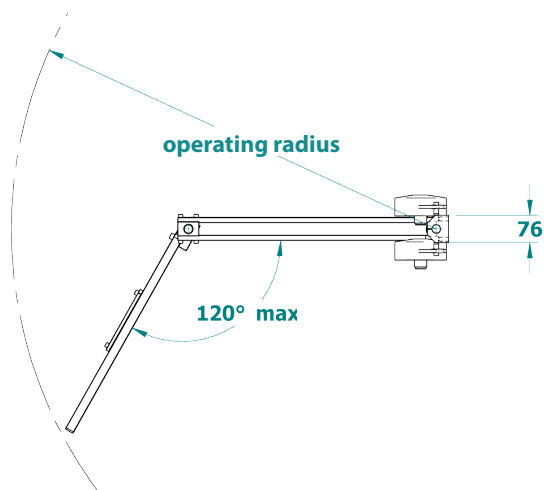
| Model           | A 0°<br>(mm) | A 22,5°<br>(mm) | A 45°<br>(mm) | Min | B<br>Max (mm) | C<br>(mm) | Operating radius<br>at 22,5° (mm) |
|-----------------|--------------|-----------------|---------------|-----|---------------|-----------|-----------------------------------|
| BA 5 R          | 259          | 243             | 192           | 132 | 212           | 705       | 420                               |
| BA 12 R         | 279          | 261             | 209           | 102 | 252           | 808       | 450                               |
| BA 12 R / 600   | 332          | 310             | 247           | 332 | 357           | 808       | 600                               |
| BA 25 R         | 296          | 278             | 227           | 95  | 245           | 908       | 460                               |
| BA 25 R / 600   | 358          | 336             | 271           | 305 | 330           | 908       | 600                               |
| BA 25 R / 800   | 483          | 452             | 360           | 417 | 442           | 908       | 800                               |
| BA 40 R         | 414          | 387,5           | 310,5         | 150 | 350           | 1008      | 650                               |
| BA 40 R / 800   | 503          | 470             | 374           | 415 | 415           | 1008      | 800                               |
| BA 40 R / 1000  | 640          | 597             | 471           | 520 | 520           | 1008      | 1000                              |
| BA 100 R        | 462          | 433             | 351           | 205 | 405           | 1008      | 730                               |
| BA 100 R / 900  | 564          | 528             | 425           | 470 | 520           | 1008      | 900                               |
| BA 100 R / 1100 | 694          | 648             | 517           | 585 | 635           | 1008      | 1100                              |



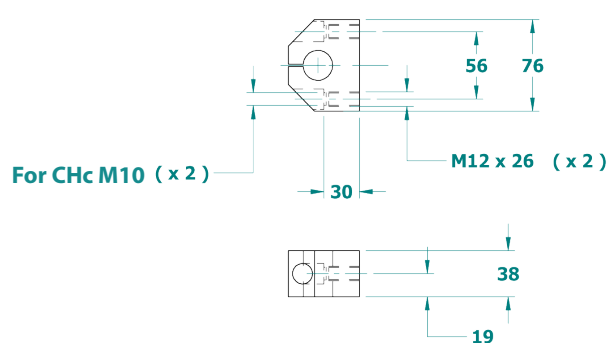
# Articulated reaction arms

## BA 180 R Dimensions

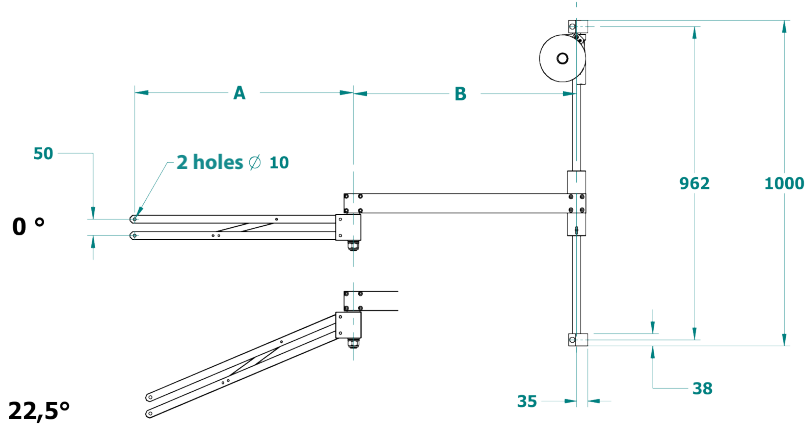
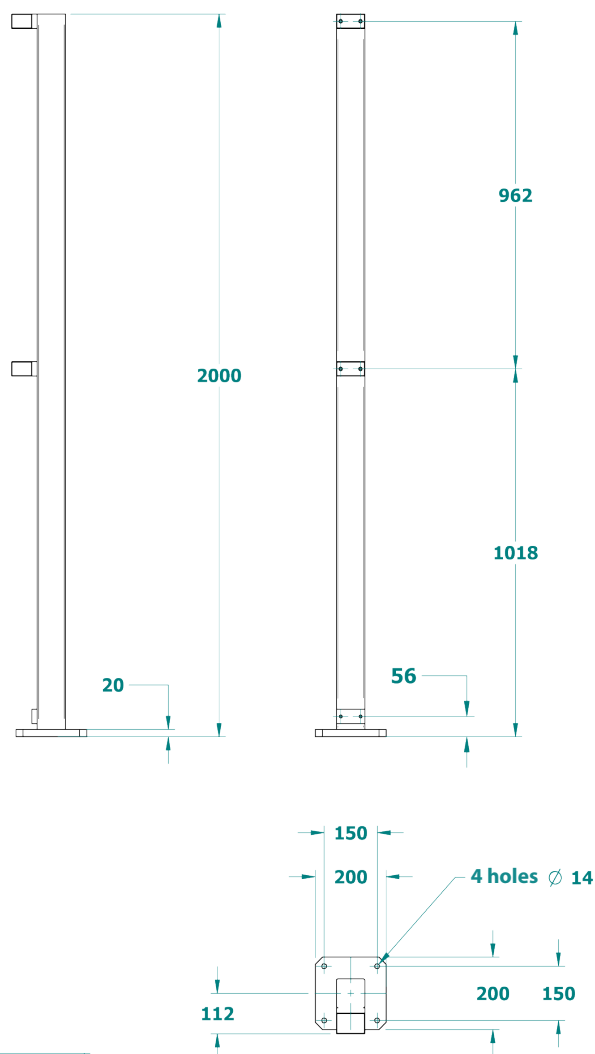
### BA 180 R



### Coupling flange



### Floor post

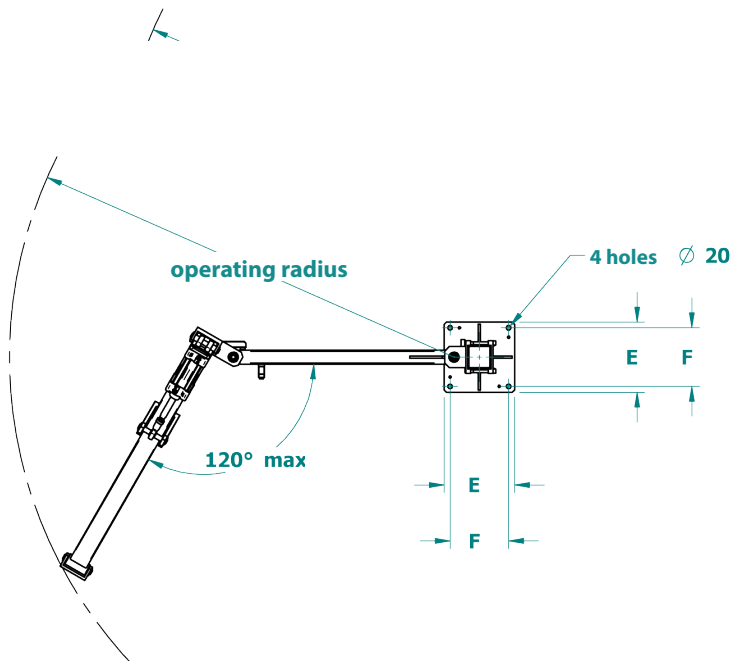
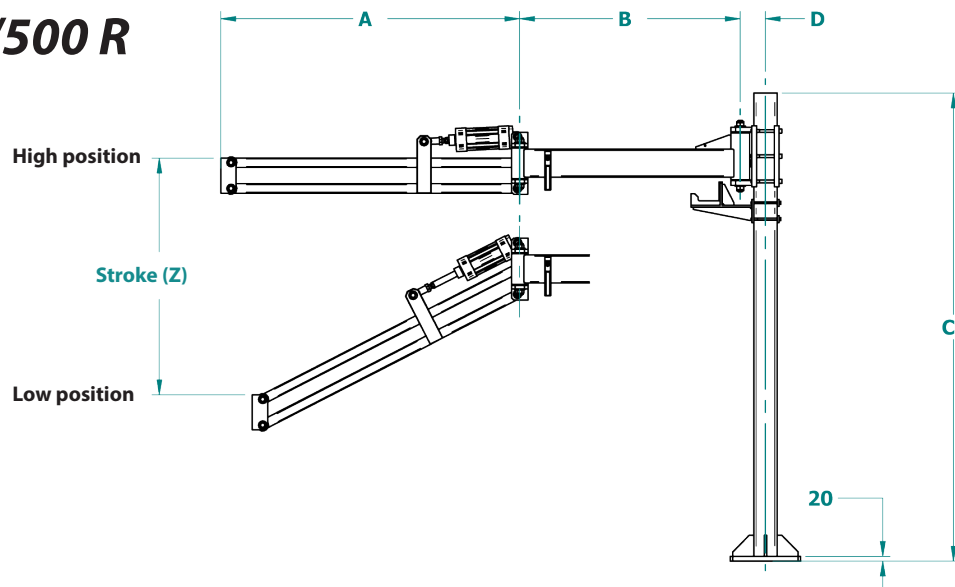


| Type          | A (0°) | A (22,5°) | B   | C    | Operating radius |
|---------------|--------|-----------|-----|------|------------------|
| BA 180 R/1200 | 686    | 637       | 700 | 2000 | 1200             |
| BA 180 R/1500 | 820    | 760       | 855 | 2000 | 1500             |

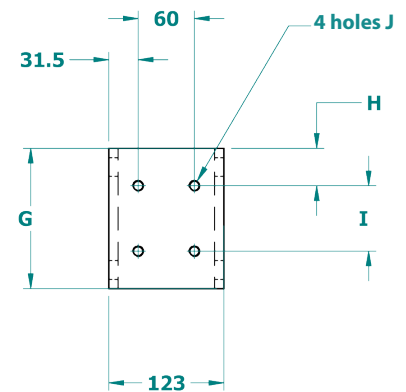
# Articulated reaction arms

## BA 200 & 500 R Dimensions

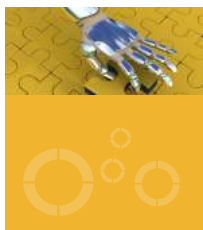
### BA 200/500 R



### Tool clamp mounting bracket



| Model         | A (high position) | Z (Stroke) | B    | C    | D   | E   | F   | G   | H  | I   | J   | K   | Operating radius |
|---------------|-------------------|------------|------|------|-----|-----|-----|-----|----|-----|-----|-----|------------------|
| BA 200 R      | 1278              | 559        | 943  | 2000 | 108 | 300 | 250 | 150 | 40 | 70  | M12 | 108 | 1900             |
| BA 500 R      | 1278              | 559        | 943  | 2000 | 118 | 400 | 350 | 170 | 45 | 80  | M16 | 118 | 1900             |
| BA 500 R/2500 | 1478              | 650        | 1293 | 2000 | 118 | 400 | 350 | 170 | 45 | 80  | M16 | 118 | 2400             |
| BA 500 R/3000 | 1978              | 1100       | 1560 | 2000 | 118 | 500 | 450 | 170 | 45 | 100 | M16 | 118 | 2900             |



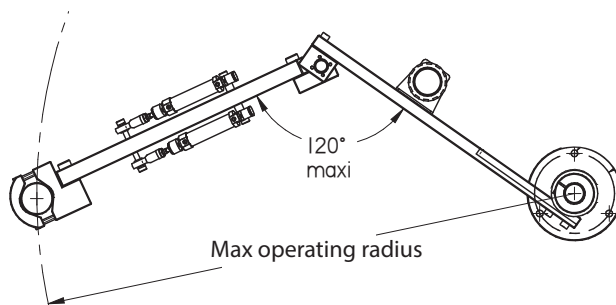
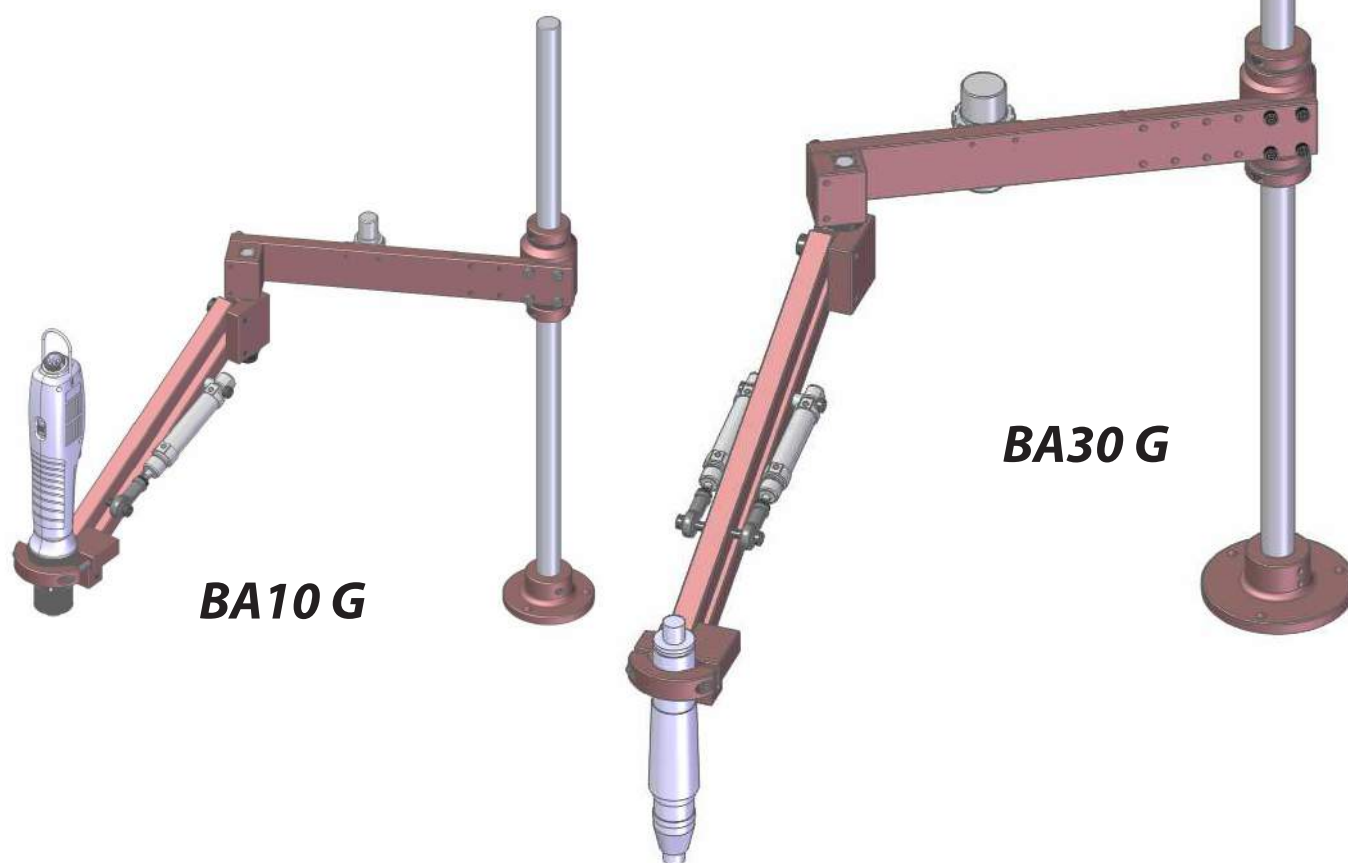
# Articulated and air balanced pantograph

## BA...G Series



Inspired from the BA...R Series, the BA...G Series provides you even more flexibility and confort thanks to the air balanced design.

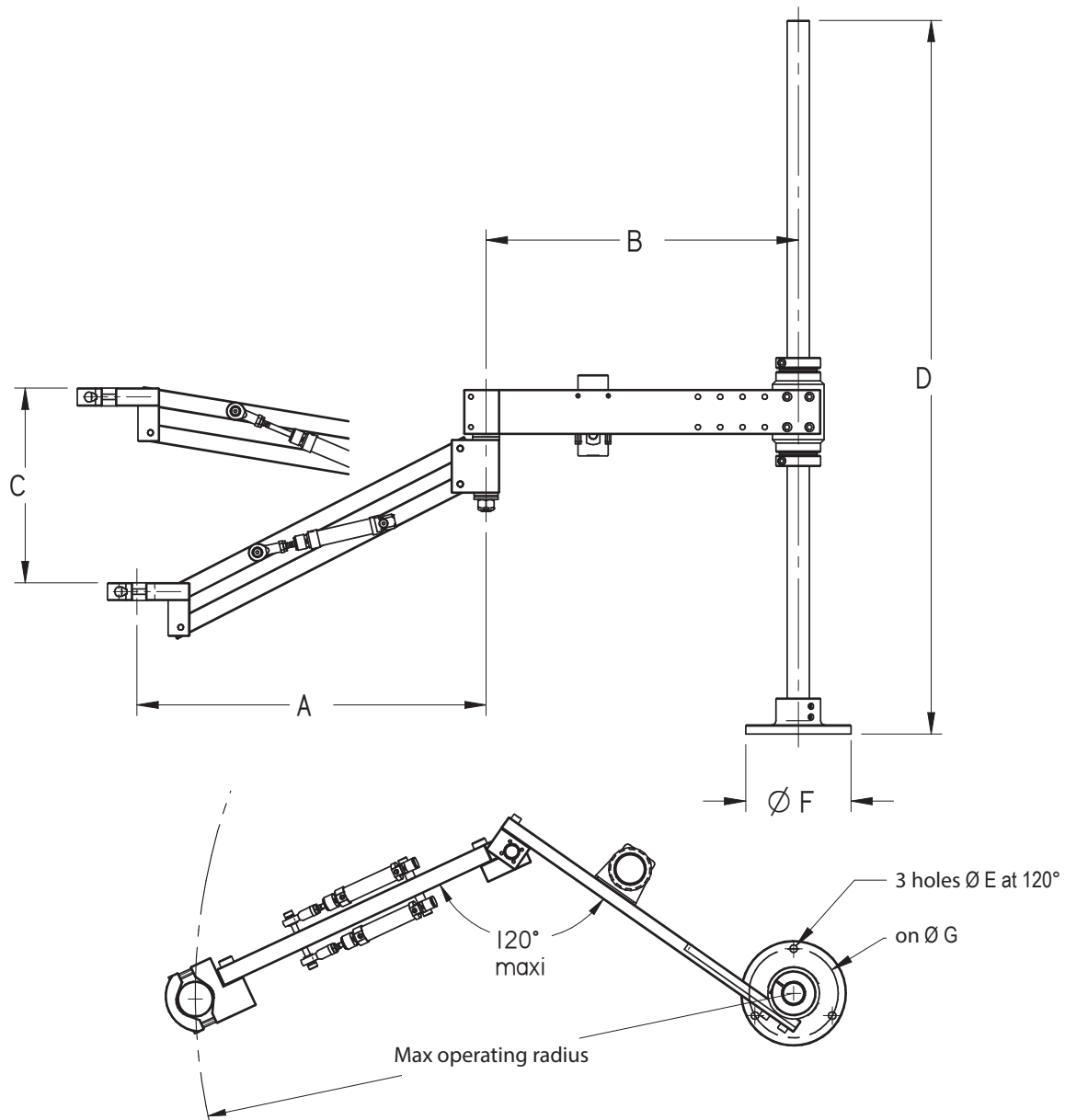
- Softly air balanced !
- Quick and quiet !



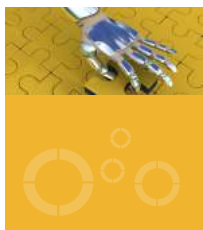
| Model      | Torque Max (Nm) | Tool Ø (mm) | Vertical Stroke (mm) | Maxi load (Kg) | Max radius (mm) | Code      |
|------------|-----------------|-------------|----------------------|----------------|-----------------|-----------|
| BA10 G     | 10              | 27 - 50     | 170                  | 1              | 470             | 4-5201013 |
| BA10 G/600 | 10              | 27 - 50     | 170                  | 1              | 600             | 4-5201014 |
| BA30 G     | 30              | 28 - 52     | 220                  | 2              | 670             | 4-5201015 |
| BA30 G/800 | 30              | 28 - 52     | 220                  | 2              | 800             | 4-5201016 |

# Articulated and air balanced pantograph

## BA...G Series



| Model      | A (down position) | B mini | B maxi | C Vertical Stroke | D   | Dim. E | Dim. F | Dim. G | Max radius (mm) |
|------------|-------------------|--------|--------|-------------------|-----|--------|--------|--------|-----------------|
| BA10 G     | 260               | 202    | 252    | 170               | 600 | 8,5    | 78     | 65     | 470             |
| BA10 G/600 | 260               | 357    | 407    | 170               | 600 | 8,5    | 78     | 65     | 600             |
| BA30 G     | 391               | 250    | 350    | 218               | 800 | 8,5    | 118    | 100    | 670             |
| BA30 G/800 | 391               | 405    | 505    | 218               | 800 | 8,5    | 118    | 100    | 800             |



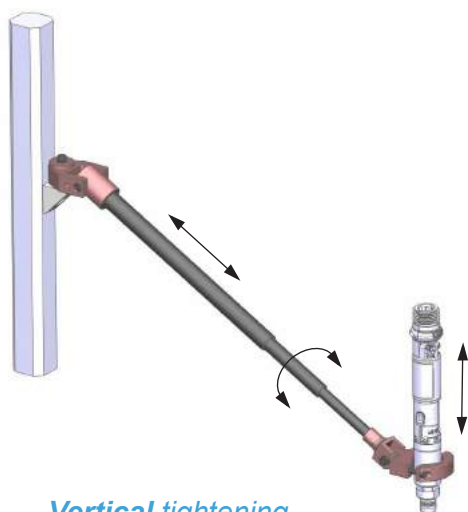
# Carbon telescoping arms

## DMF/DMFI Series



**DMF Series : Erase your torque reaction until 300 Nm.**

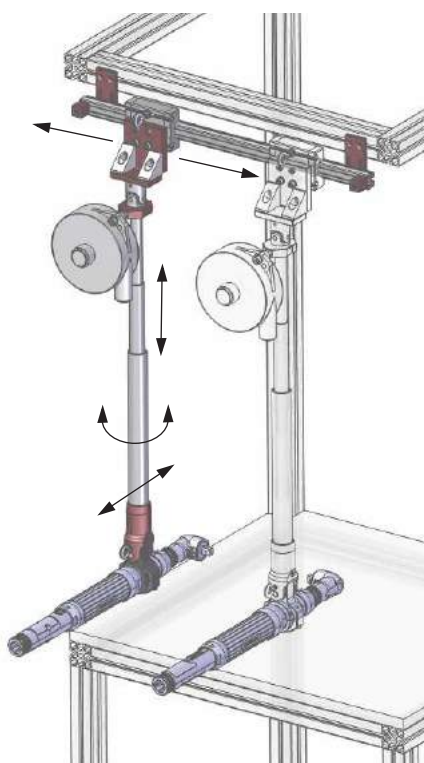
- **Comfort** : Easy to install on moving assembly line (mountable on existing standard rail). Require little space and doesn't disrupt flow production. Erase torque reaction of power tools.
- **Economy** : Maintenance free thanks to the carbon fiber (no greasing). Long last of living thanks to the durable carbon fiber.
- **Productivity** : Easy and quick operator handling thanks to the light weight carbon fiber.



*Vertical tightening*

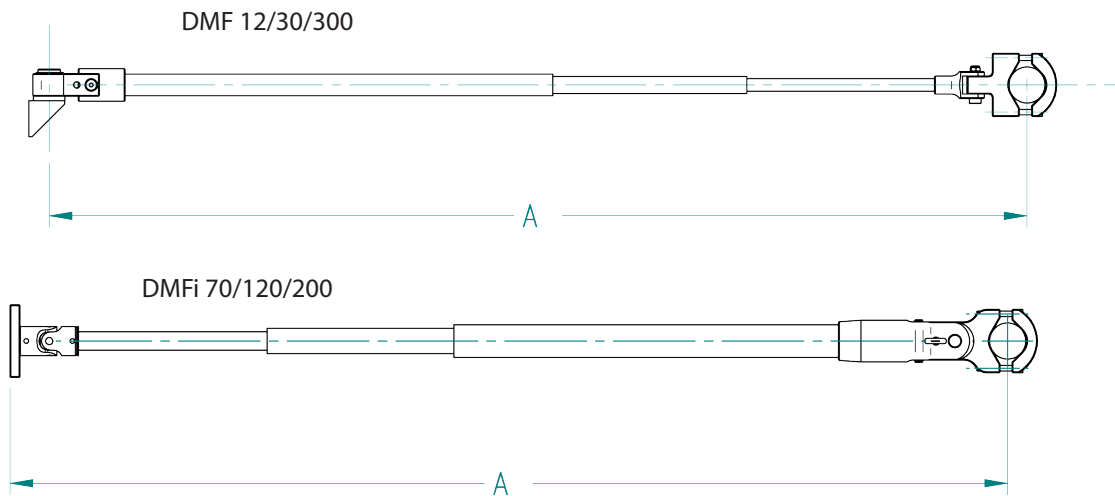


*Frontal tightening*



*Side tightening*

# Carbon telescoping arms



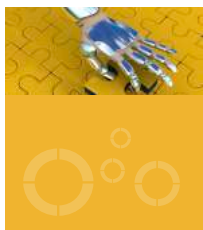
## Standard stroke

| Model         | Max torque (Nm) | Standard clamp | Tool Ø (mm) | A min (mm) | A max (mm) | Code          |            |
|---------------|-----------------|----------------|-------------|------------|------------|---------------|------------|
|               |                 |                |             |            |            | Without clamp | With clamp |
| DMF 5/950     | 5               | P1             | 25 - 42     | 460        | 950        |               | 4-5200445  |
| DMF 12/950    | 12              | P1             | 27 - 50     | 460        | 950        |               | 4-5201004  |
| DMF 12/1500   | 12              | P1             | 27 - 50     | 650        | 1500       |               | 4-5201005  |
| DMF 12/2000   | 12              | P1             | 27 - 50     | 820        | 2000       |               | 4-5201006  |
| DMF 30/960    | 30              | P1             | 28 - 52     | 475        | 960        | 4-5244000     | 4-5200074  |
| DMF 30/1500   | 30              | P1             | 28 - 52     | 656        | 1500       | 4-5244001     | 4-5200282  |
| DMF 30/2000   | 30              | P1             | 28 - 52     | 823        | 2000       | 4-5244002     | 4-5200283  |
| DMF 30/2500   | 30              | P1             | 28 - 52     | 993        | 2500       | 4-5244003     | 4-5200284  |
| DMF 30/3000   | 30              | P1             | 28 - 52     | 1321       | 3000       | 4-5200813     | 4-5200818  |
| DMFi 70/1500  | 70              | P2             | 35 - 52     | 667        | 1500       | 4-5244004     | 4-5244020  |
| DMFi 70/2000  | 70              | P2             | 35 - 52     | 833        | 2000       | 4-5244005     | 4-5244021  |
| DMFi 70/2500  | 70              | P2             | 35 - 52     | 1000       | 2500       | 4-5244006     | 4-5244022  |
| DMFi 70/3000  | 70              | P2             | 35 - 52     | 1330       | 3000       | 4-5200814     | 4-5200819  |
| DMFi 120/1500 | 120             | P2             | 35 - 52     | 691        | 1500       | 4-5244007     | 4-5244023  |
| DMFi 120/2000 | 120             | P2             | 35 - 52     | 857        | 2000       | 4-5244008     | 4-5244024  |
| DMFi 120/2500 | 120             | P2             | 35 - 52     | 1023       | 2500       | 4-5244009     | 4-5244025  |
| DMFi 120/3000 | 120             | P2             | 35 - 52     | 1347       | 3000       | 4-5200815     | 4-5200820  |
| DMFi 200/1500 | 200             | P2             | Maxi 63     | 920        | 1500       | 4-5244050     | 4-5244026  |
| DMFi 200/2000 | 200             | P2             | Maxi 63     | 1170       | 2000       | 4-5244051     | 4-5244027  |
| DMFi 200/2500 | 200             | P2             | Maxi 63     | 1420       | 2500       | 4-5244052     | 4-5244028  |
| DMFi 200/3000 | 200             | P2             | Maxi 63     | 1720       | 3000       | 4-5200816     | 4-5200821  |
| DMF 300/1500  | 300             | P2             | Maxi 73     | 970        | 1500       | 4-5244053     | 4-5244029  |
| DMF 300/2000  | 300             | P2             | Maxi 73     | 1220       | 2000       | 4-5244054     | 4-5244030  |
| DMF 300/2500  | 300             | P2             | Maxi 73     | 1470       | 2500       | 4-5244055     | 4-5244031  |
| DMF 300/3000  | 300             | P2             | Maxi 73     | 1800       | 3000       | 4-5200817     | 4-5200822  |

Other dimensions on request (max lenght 4 meters).  
Torque up to 600 Nm is available on request.

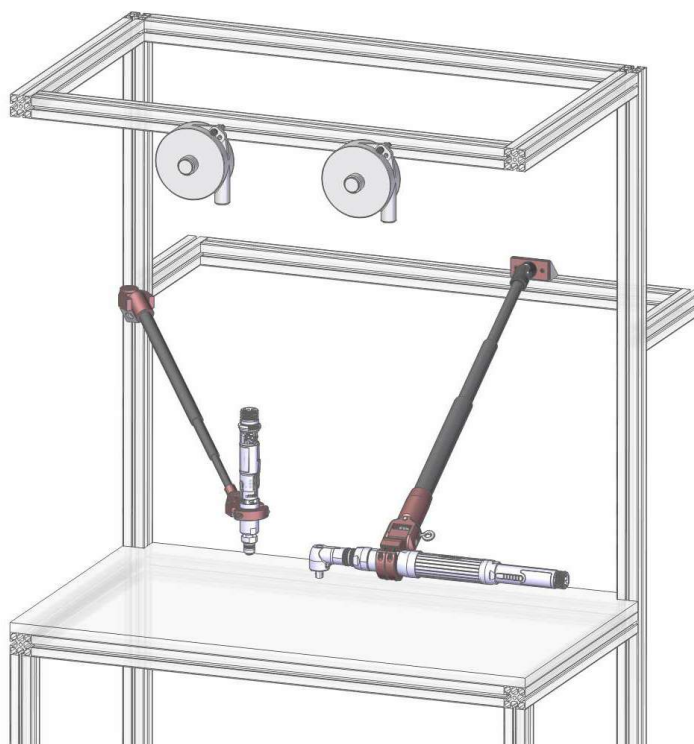
## Long stroke (LS)

| Model            | Max torque (Nm) | Standard clamp | Tool Ø (mm) | A min (mm) | A max (mm) | Code          |            |
|------------------|-----------------|----------------|-------------|------------|------------|---------------|------------|
|                  |                 |                |             |            |            | Without clamp | With clamp |
| DMF 30/1500 LS   | 30              | P1             | 28 - 52     | 555        | 1500       | 4-5200852     | 4-5200855  |
| DMF 30/2000 LS   | 30              | P1             | 28 - 52     | 680        | 2000       | 4-5200853     | 4-5200856  |
| DMF 30/2500 LS   | 30              | P1             | 28 - 52     | 805        | 2500       | 4-5200854     | 4-5200857  |
| DMFi 100/1500 LS | 100             | P2             | 35 - 52     | 592        | 1500       | 4-5201213     | 4-5201221  |
| DMFi 100/2000 LS | 100             | P2             | 35 - 52     | 717        | 2000       | 4-5201214     | 4-5201222  |
| DMFi 100/2500 LS | 100             | P2             | 35 - 52     | 842        | 2500       | 4-5201215     | 4-5201223  |
| DMFi 200/1500 LS | 200             | P2             | Maxi 63     | 728        | 1500       | 4-5201216     | 4-5201224  |
| DMFi 200/2000 LS | 200             | P2             | Maxi 63     | 894        | 2000       | 4-5201217     | 4-5201225  |
| DMFi 200/2500 LS | 200             | P2             | Maxi 63     | 1060       | 2500       | 4-5201220     | 4-5201226  |



# Vertical tightening

## DMF/DMFI Series



### P1 clamp

| For          | Clamping                 | Code      |
|--------------|--------------------------|-----------|
| DMF12        | Clamp 27/50              | Standard  |
| DMF30        | Clamp 28/52              | Standard  |
| DMFi 70      | Mounting plate interface | 4-5244032 |
| DMFi 120/200 | Mounting plate interface | 4-5244033 |

### P2 clamp

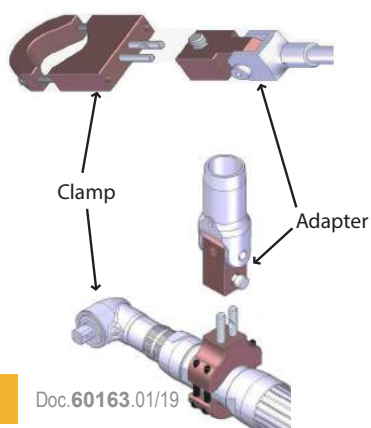
| For         | Capacity | Code      |
|-------------|----------|-----------|
| DMF30       | 28/52    | 4-5200300 |
| DMFi70      | 35/52    | Standard  |
| DMFi120/200 | 35/52    | Standard  |
| DMFi200     | 63       | Standard  |
| DMF300      | 73       | Standard  |

### Quick release clamp

| For          | Type | Code      |
|--------------|------|-----------|
| DMF12        | P1   | 4-5201003 |
| DMF30        | P1   | 4-5200017 |
| DMFi 70      | P2   | 4-5283102 |
| DMFi 120/200 | P2   | 4-5283103 |

### Quick release interface

| For        | Code      |
|------------|-----------|
| DMF12      | 4-5200470 |
| DMF30      | 4-5200471 |
| DMF70      | 4-5283100 |
| DMF120/200 | 4-5283101 |





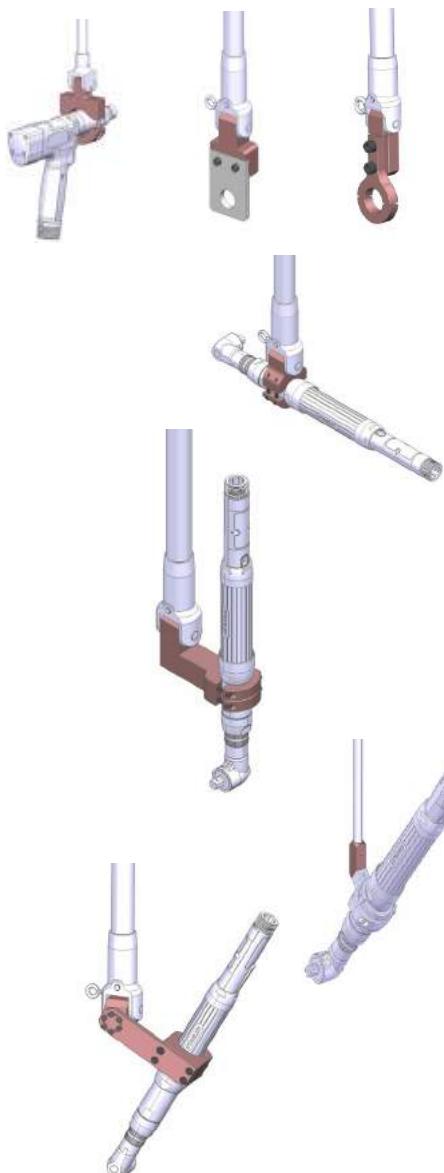
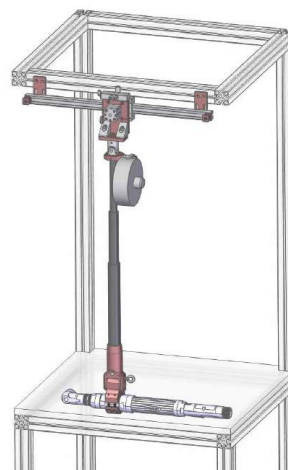
# Frontal tightening

## DMF/DMFI Series

### Fixed mounting



### Mounting on rail with locker



### P1 clamp

| For         | Clamping                 | Code       |
|-------------|--------------------------|------------|
| DMF12       | Clamp 27/50              | Standard   |
| DMF30       | Clamp 28/52              | Standard   |
| DMFi70      | Mounting plate interface | 4-5244032  |
| DMFi120/200 | Mounting plate interface | 4-5244033  |
| DMF300      | Mounting plate interface | On request |

### P2 clamp

| For         | Tool Ø | Code      |
|-------------|--------|-----------|
| DMF30       | 28/52  | 4-5200300 |
| DMFi70      | 35/52  | Standard  |
| DMFi120/200 | 35/52  | Standard  |
| DMFi200     | Max 63 | Standard  |
| DMF300      | Max 73 | Standard  |

### P4 clamp

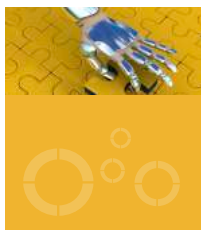
| For         | Tool Ø | Code      |
|-------------|--------|-----------|
| DMF30       | 28/52  | 4-5200302 |
| DMFi70      | 35/52  | 4-5244015 |
| DMFi120/200 | 35/52  | 4-5244016 |
| DMFi200     | Max 63 | 4-5244058 |
| DMF300      | Max 73 | 4-5244059 |

### Tilt interface

| For                                   | Tool Ø | Code                           |
|---------------------------------------|--------|--------------------------------|
| Interface/DMF30 (for all clamp types) | -      | 30° 45°<br>4-5201140 4-5201141 |

### Swivel clamp

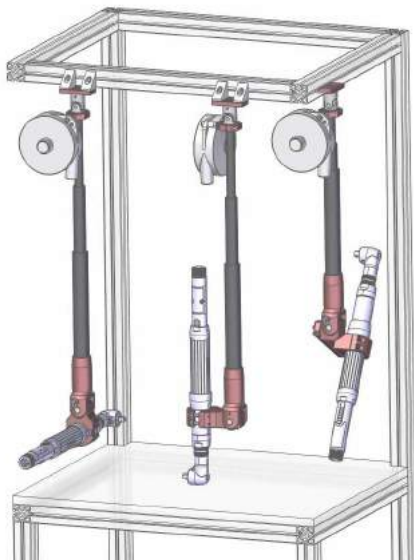
| For               | Tool Ø | Code       |
|-------------------|--------|------------|
| DMFi70 P2/P4      | 35/52  | 4-5201137  |
| DMFi120/200 P2/P4 | 35/52  | 4-5201138  |
| DMFi200 P2/P4     | Max 63 | 4-5201139  |
| DMF300            | Max 73 | On request |



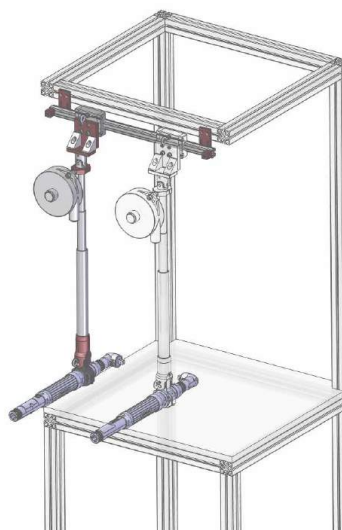
# Side tightening

## DMF/DMFI Series

### Fixed mounting



### Mounting on rail



### P2 Clamp

| For         | Tool Ø | Code      |
|-------------|--------|-----------|
| DMF30       | 28/52  | 4-5200300 |
| DMFi70      | 35/52  | Standard  |
| DMFi120/200 | 35/52  | Standard  |
| DMFi200     | Max 63 | Standard  |
| DMF300      | Max 73 | Standard  |

### P3 Clamp

| For         | Tool Ø | Code      |
|-------------|--------|-----------|
| DMF30       | 28/52  | 4-5200301 |
| DMFi70      | 35/52  | 4-5244013 |
| DMFi120/200 | 35/52  | 4-5244014 |
| DMFi200     | Max 63 | 4-5244056 |
| DMF300      | Max 73 | 4-5244057 |

### Tilt interface

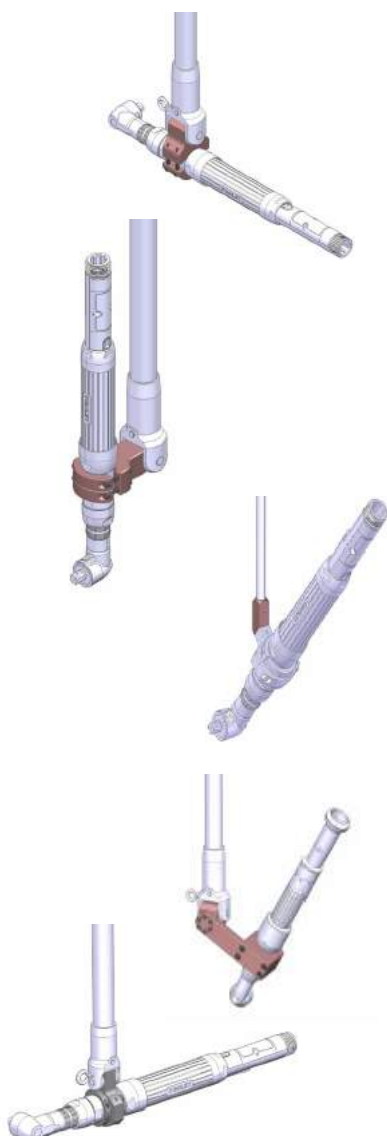
| For               | Tool Ø | Code                           |
|-------------------|--------|--------------------------------|
| Interface / DMF30 | -      | 30° 45°<br>4-5201140 4-5201141 |

### Swivel clamp

| For         | Tool Ø | Code       |
|-------------|--------|------------|
| DMFi70      | 35/52  | 4-5201137  |
| DMFi120/200 | 35/52  | 4-5201138  |
| DMFi200     | Max 63 | 4-5201139  |
| DMF300      | Max 73 | On request |

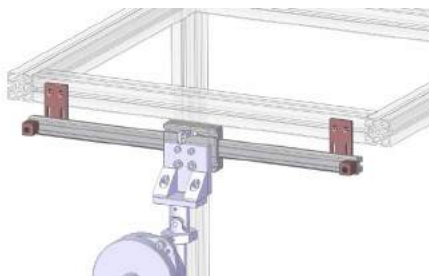
### Rotating clamp

| For         | Tool Ø     | Code      |
|-------------|------------|-----------|
| DMF30       | On request | 4-5201134 |
| DMFi70      | On request | 4-5244034 |
| DMFi120/200 | On request | 4-5244035 |
| DMFi200     | On request | 4-5244060 |
| DMF300      | On request | 4-5201136 |



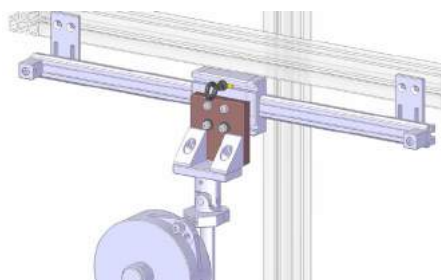
# DMF/DMFi

## Mounting on rail



### Rails

| Length | Stroke | Number of flanges | Code      |
|--------|--------|-------------------|-----------|
| 600    | 450    | 2                 | 4-5200132 |
| 800    | 650    | 2                 | 4-5200160 |
| 1000   | 850    | 2                 | 4-5200161 |
| 1200   | 1050   | 3                 | 4-5200162 |
| 1500   | 1350   | 3                 | 4-5200163 |
| 2000   | 1850   | 4                 | 4-5200164 |

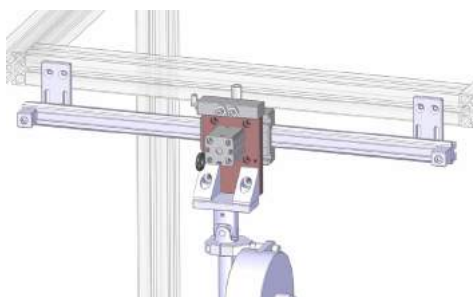


### Rail interface

Allows installation of DMF on rail.

| For            | Code      |
|----------------|-----------|
| DMF12/30       | 4-5200341 |
| DMFi70/120/200 | 4-5200708 |
| DMF300         | 4-5200342 |

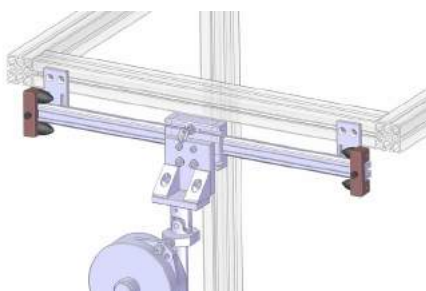
**NOTE** : delivered without safety hook (Code 4-5200309)



### Pneumatic locker

| For        | Type      | Code      |
|------------|-----------|-----------|
| DMF12/30   | Pneumatic | 4-5200442 |
| DMF12/30   | Electric  | 4-5200869 |
| DMFi70/120 | Pneumatic | 4-5200706 |
| DMFi70/120 | Electric  | 4-5200707 |
| DMFi200    | Electric  | 4-5201150 |
| DMF300     | Electric  | 4-5201142 |

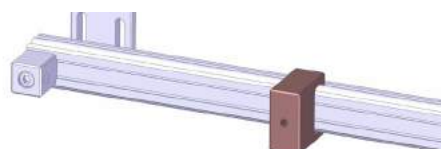
The power tool has to be equipped with a motor run signal.



### Absorbing stop

Recommended in case of repeatable side shocks.

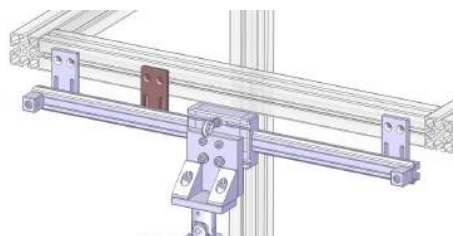
**Code 4-5201121** Set of 2



### Adjustable stop

To limit the slide of the arm on the rail.

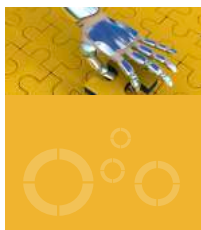
**Code 4-5200167**



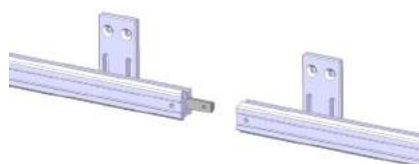
### Additional flange

To reinforce the rail installation for high torque applications.

**Code 4-5200873**



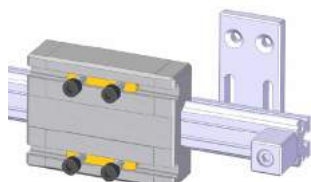
# Accessories DMF/DMFi



## Rail link

To link two rails together.

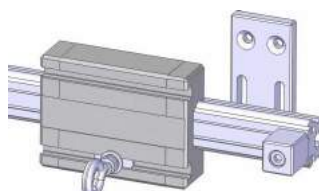
Code 4-5200307



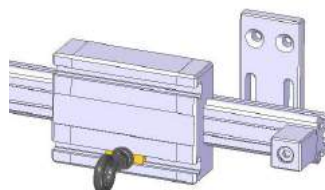
## Single trolley

To mount additional tools on the same rail.

- Single trolley Code 4-5200165



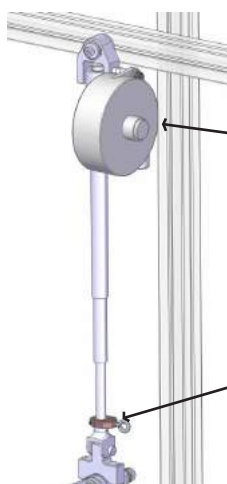
- Trolley for additional balancer Code 4-5200166



## Additional safety hook

To secure balancer.

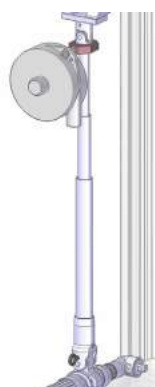
Code 4-5200309



## Balancing kit for DMF 12/30/300

| For    | Tool (Kg) | Code      |
|--------|-----------|-----------|
| DMF12  | 1 to 2    | 4-5200303 |
| DMF30  | 1 to 2,5  | 4-5200304 |
| DMF30  | 2 to 4    | 4-5200305 |
| DMF300 | 4 to 8    | 4-5200704 |
| DMF300 | 6 to 10   | 4-5200705 |

Balancer attachment kit for DMF30 Code 4-5201143

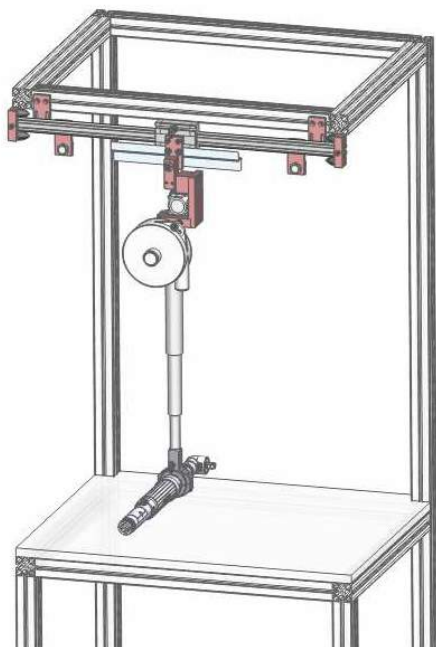


## Balancing kit for DMFi 70/120/200

| For             | Capacity (Kg) | Code      |
|-----------------|---------------|-----------|
| DMFi 70/120/200 | 2 - 4         | 4-5200701 |
| DMFi 70/120/200 | 4 - 6         | 4-5200702 |
| DMFi 70/120/200 | 6 - 8         | 4-5200703 |

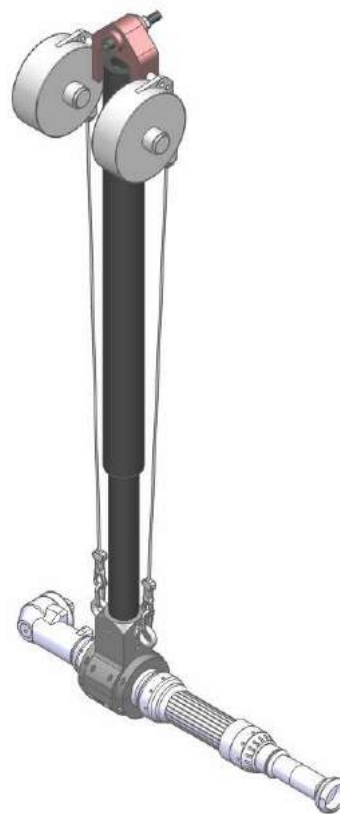
Delivered with balancer attachment kit.

# Special arms on request



**DMF...PC + horizontal rail with**

Additional presence sensors on the rail allow identification of two working zones (right and left). Contact us for more information.



**DMF 300 with rotative clamp and balancing kit**

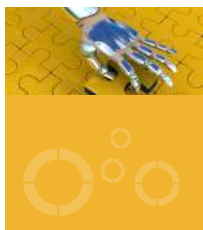


**DMFi 200 with remote start handle**



**DMFi 600 with air locker + special tool holder for pistol tool**





# Suspended arms

## Slider



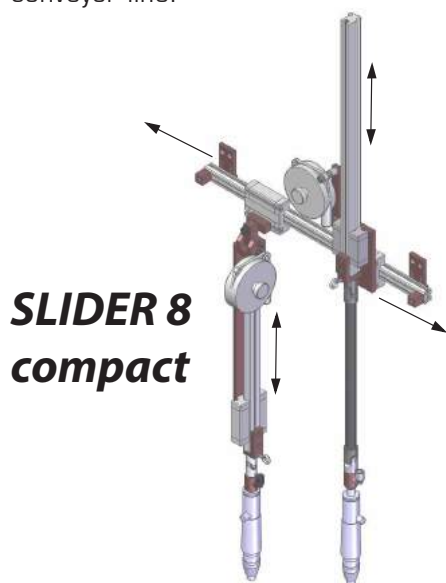
**SLIDER Series : Erase your torque reaction until 300 Nm.**

- **IMPROVE YOUR COMFORT AND PRODUCTIVITY**

Easy to install and smart-sized the SLIDER arms improve the comfort of the operator and the productivity clearing the work area.

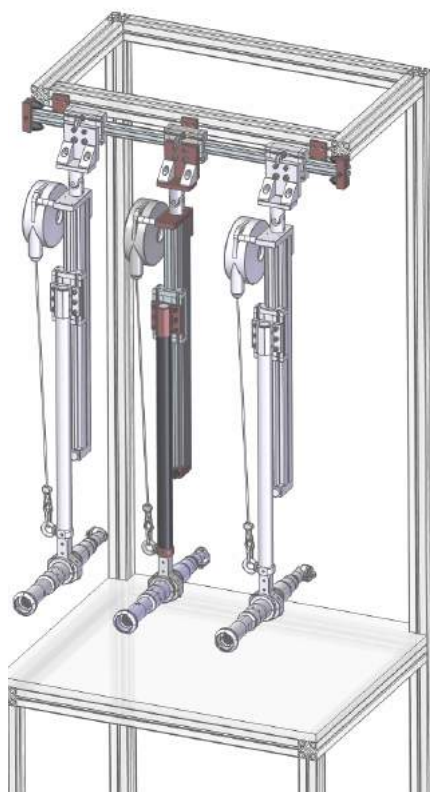
- **IMPROVE YOUR ERGONOMY**

Mounted with horizontal stroke the SLIDER becomes the ideal ergonomical solution on conveyor line.

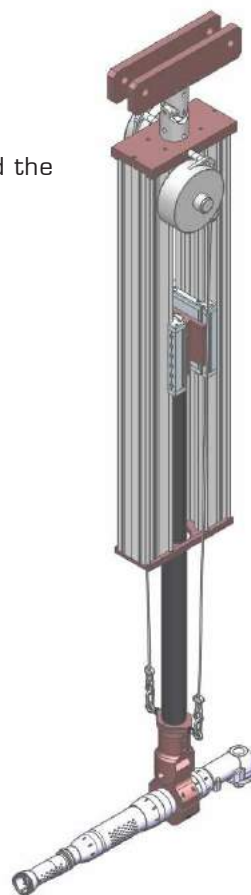


**SLIDER 8  
compact**

**SLIDER 8/20**



**SLIDER 50/150 COMPACT  
Tightening vertical/horizontal**

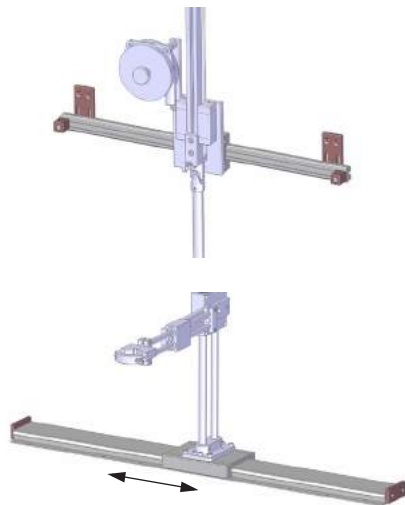


**SLIDER 300  
COMPACT**

| Model                   | Max torque (Nm) | Clamping Ø (mm) | Vertical stroke (mm) | Working radius (mm) | Load (kg)  | Code       |
|-------------------------|-----------------|-----------------|----------------------|---------------------|------------|------------|
| SLIDER 08               | 8               | 1/4" G          | 450                  | 100                 | 1,2        | 4-5200077  |
| SLIDER 08 COMPACT       | 8               | 1/4" G          | 250                  | 150                 | 1,2        | 4-5200179  |
| SLIDER 20               | 20              | 1/4" G          | 450                  | 100                 | 2,2        | 4-5200457  |
| SLIDER 50 COMPACT 450   | 50              | 32 - 52         | 450                  |                     | 3          | 4-5283110  |
| SLIDER 50 COMPACT 650   | 50              | 32 - 52         | 650                  |                     | 3          | 4-5283111  |
| SLIDER 50 COMPACT 850   | 50              | 32 - 52         | 850                  |                     | 3          | 4-5283112  |
| SLIDER 150 COMPACT 600  | 150             | Max 63          | 600                  |                     | 5          | 4-5283113  |
| SLIDER 150 COMPACT 800  | 150             | Max 63          | 800                  |                     | 5          | 4-5283114  |
| SLIDER 150 COMPACT 1000 | 150             | Max 63          | 1000                 |                     | 5          | 4-5283115  |
| SLIDER 300 COMPACT      | 300             | On request      | On request           | On request          | On request | On request |

# Suspended arms

## Options SLIDER



### Rails / SLIDER 8/20/50

| Length (mm) | Stroke (mm) | Number of flanges | Code      |
|-------------|-------------|-------------------|-----------|
| 600         | 450         | 2                 | 4-5200132 |
| 800         | 650         | 2                 | 4-5200160 |
| 1000        | 850         | 2                 | 4-5200161 |
| 1200        | 1050        | 3                 | 4-5200162 |
| 1500        | 1350        | 3                 | 4-5200163 |
| 2000        | 1850        | 4                 | 4-5200164 |

### Rails / SLIDER 150

| Model        | Length (mm) | Stroke (mm) | Code      |
|--------------|-------------|-------------|-----------|
| Guiding rail | 600         | 420         | 4-5200294 |
| Guiding rail | 1000        | 820         | 4-5200295 |
| Guiding rail | 1500        | 1320        | 4-5200296 |
| Guiding rail | 2000        | 1820        | 4-5200297 |



### Clamp option

Clamp Ø28-52 mm for angle nutrunner for SLIDER 20 **Code : 4-5200392.**

### Clamp for straight electric screwdriver

| For       | Clamping                      | Tool Ø (mm) | Code      |
|-----------|-------------------------------|-------------|-----------|
| SLIDER 8  | On the top of the screwdriver | 28 - 52     | 4-5200133 |
| SLIDER 20 | On the top of the screwdriver | 28 - 52     | 4-5200148 |

### Rotative clamp

| For                | Clamping Ø (mm) | Code      |
|--------------------|-----------------|-----------|
| SLIDER 50 COMPACT  | 35 - 52         | 4-5283116 |
| SLIDER 150 COMPACT | Max 63          | 4-5283117 |

### Rail link

To link two rails together. **Code 4-5200307**

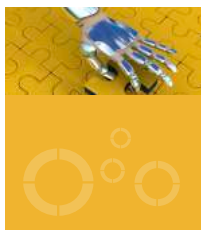
### Additional flange

To reinforce the rail installation for high torque applications.

**Code 4-5200873**

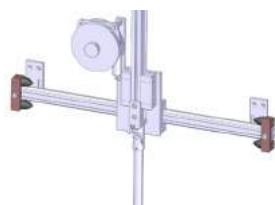
### Rail interface

| For                          | Code      |
|------------------------------|-----------|
| Rail interface for SLIDER50  | 4-5200708 |
| Rail interface for SLIDER150 | 4-5200009 |



# Suspended arms

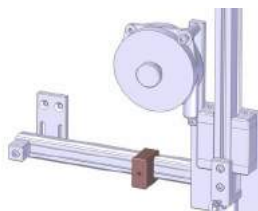
## SLIDER 8/8 COMPACT/20 Dimensions



### ***Absorbing stop***

Recommended in case of repeatable side shocks.

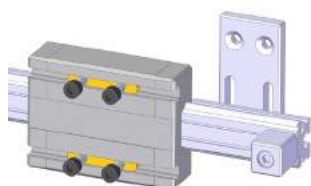
Code 4-5201121 Set of 2



### ***Adjustable stop***

To limit the slide of the arm on the rail.

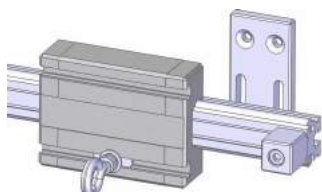
Code 4-5200167



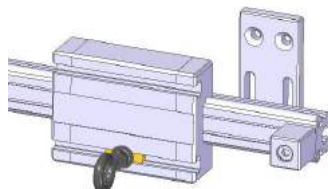
### ***Single trolley***

To mount additional tools on the same rail.

- Single trolley Code 4-5200165



- Trolley for additional balancer Code 4-5200166



### ***Additional safety tool hook***

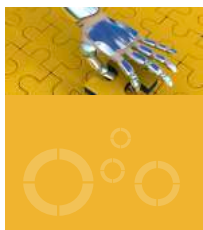
To secure balancer. Code 4-5200309



## SLIDER 8/8 COMPACT/20 Dimensions

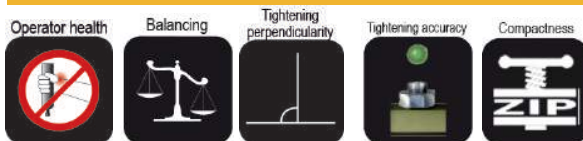


# Rails

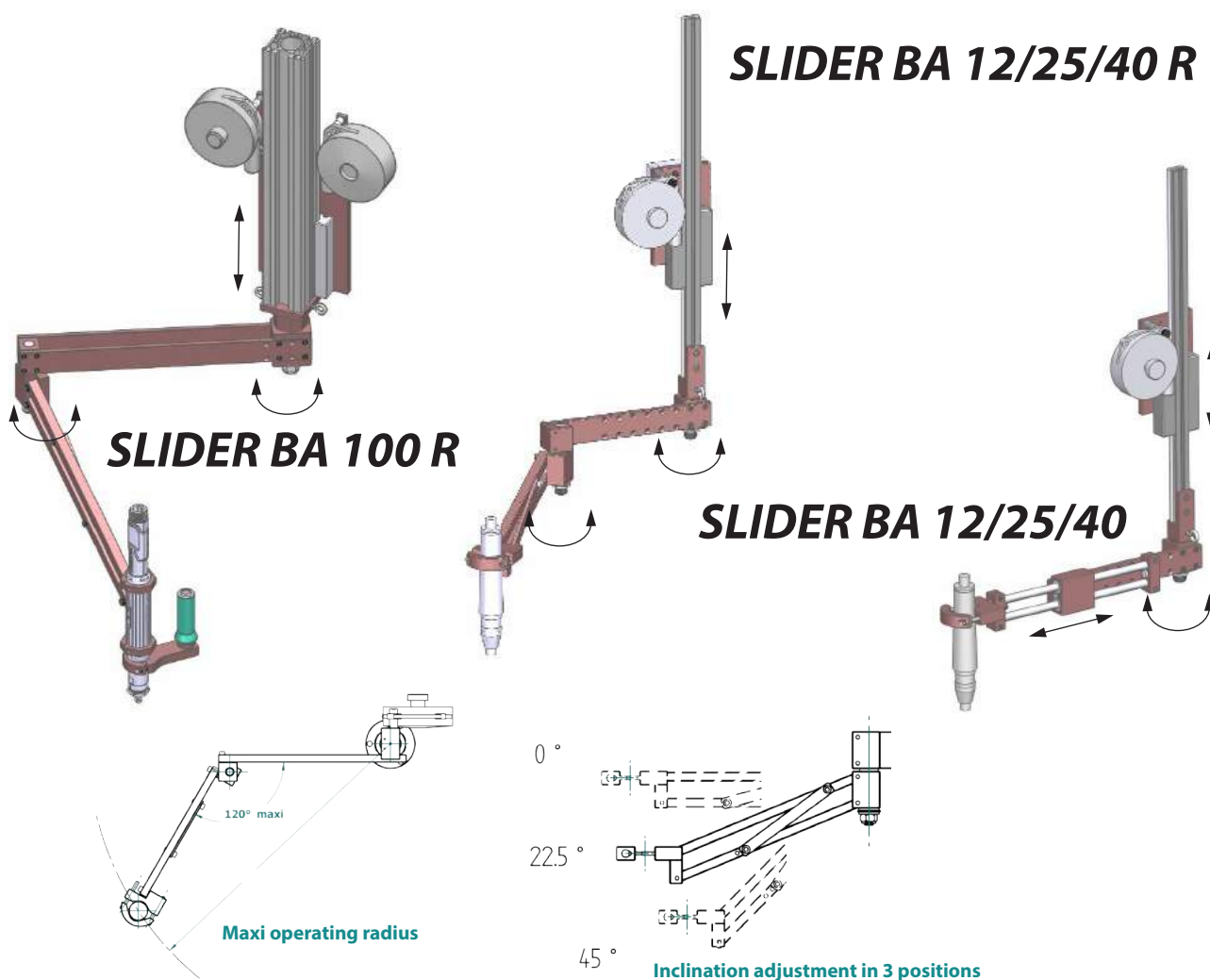


# Suspended arms

## SLIDER BA / SLIDER BA...R Series



Mounted on the top, the working area remains free. The SLIDER Series can be installed on rail. Then a pneumatic locker is necessary to counter react.

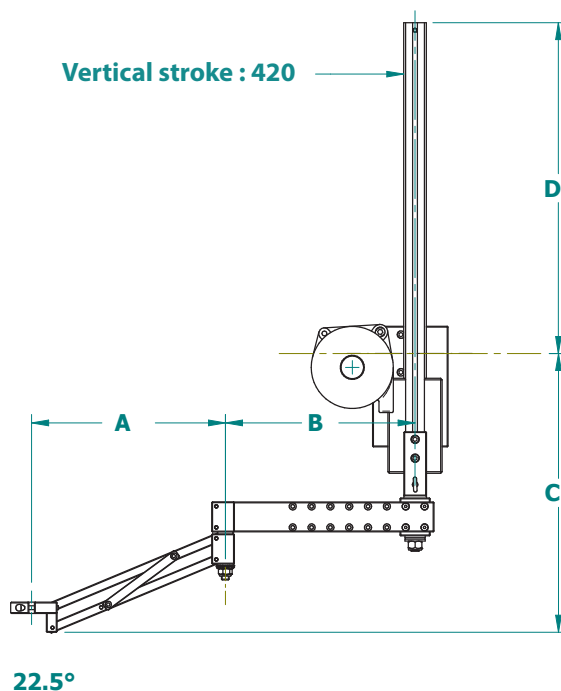


| Model               | Max torque (Nm) | Tool Ø (mm) | Vertical stroke (mm) | Stroke (mm) | Operating range (mm) | Load (kg) | Code      |
|---------------------|-----------------|-------------|----------------------|-------------|----------------------|-----------|-----------|
| SLIDER BA 12        | 12              | 27/50       | 420                  | 225         |                      | 1,2       | 4-5201007 |
| SLIDER BA 25        | 25              | 28/52       | 420                  | 250         |                      | 2,2       | 4-5200726 |
| SLIDER BA 40        | 40              | 28/52       | 420                  | 295         |                      | 3         | 4-5201119 |
| SLIDER BA 100       | 100             | 28/52       | 420                  | 330         |                      | 5         | 4-5201120 |
| SLIDER BA 12 R      | 12              | 27/50       | 420                  |             | 450                  | 1,2       | 4-5201008 |
| SLIDER BA 25 R      | 25              | 28/52       | 420                  |             | 460                  | 2,2       | 4-5200872 |
| SLIDER BA 25 R/600  | 25              | 28/52       | 420                  |             | 600                  | 2,2       | 4-5201114 |
| SLIDER BA 40 R      | 40              | 28/52       | 420                  |             | 650                  | 3         | 4-5201115 |
| SLIDER BA 40 R/800  | 40              | 28/52       | 420                  |             | 800                  | 3         | 4-5201116 |
| SLIDER BA 100 R     | 100             | 28/52       | 420                  |             | 730                  | 5         | 4-5201117 |
| SLIDER BA 100 R/900 | 100             | 28/52       | 420                  |             | 900                  | 5         | 4-5201118 |

# Suspended arms

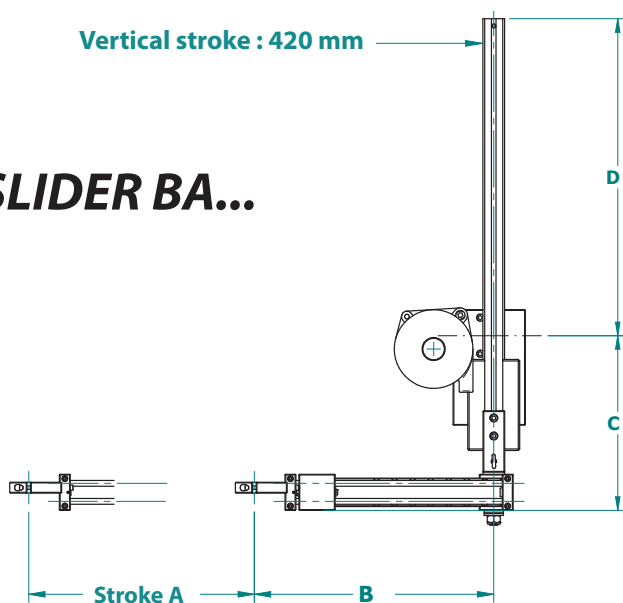
## SLIDER BA / BA...R Dimensions

### SLIDER BA...R

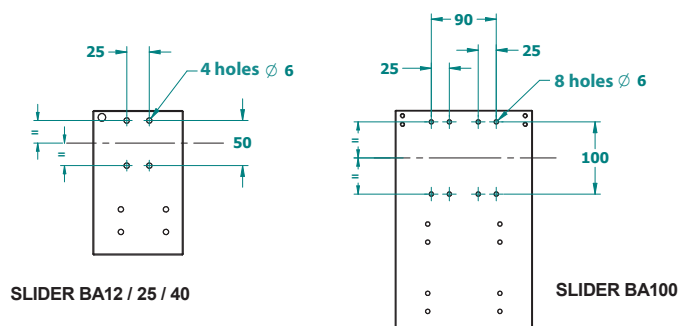


| Model               | A     | B mini | B maxi | Operating range at 120° | C   | D   |
|---------------------|-------|--------|--------|-------------------------|-----|-----|
| SLIDER BA 12 R      | 261   | 102    | 252    | 474                     | 370 | 440 |
| SLIDER BA 25 R      | 278   | 95     | 245    | 485                     | 394 | 425 |
| SLIDER BA 25 R/600  | 336   | 305    | 330    | 607                     | 417 | 425 |
| SLIDER BA 40 R      | 387,5 | 150    | 350    | 667                     | 482 | 419 |
| SLIDER BA 40 R/800  | 470   | 415    | 415    | 800                     | 496 | 419 |
| SLIDER BA 100 R     | 433   | 205    | 405    | 730                     | 597 | 358 |
| SLIDER BA 100 R/900 | 528   | 470    | 520    | 900                     | 634 | 358 |

### SLIDER BA...



#### Mounting dimensions SLIDER BA... BA...R



| Model         | Stroke A | B mini | B maxi | C   | D   |
|---------------|----------|--------|--------|-----|-----|
| SLIDER BA 12  | 225      | 186    | 336    | 246 | 436 |
| SLIDER BA 25  | 250      | 221    | 396    | 250 | 436 |
| SLIDER BA 40  | 295      | 260    | 460    | 314 | 419 |
| SLIDER BA 100 | 330      | 315    | 515    | 395 | 358 |

# Position control system

Improve your manufacturing quality with zero fault process. DOGA Posi Control system is the ideal Sequencing, Error proofing and positioning unit. Compatible with your air, electric and DC tools, your assembly process remains under control regardless operator's qualification.

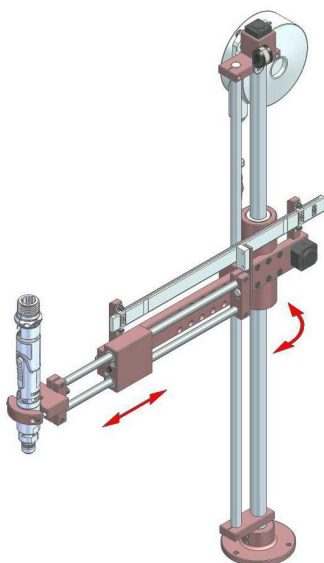
- Page 37 • Posi-control arms
- Page 38 to 39 • Controller DPC-Touch
- Page 40 to 41 • Linear arms BA...PC series
- Page 42 to 43 • Articulated arms BA...RPC series
- Page 44 to 47 • Telescoping carbon arms
- Page 48 to 49 • Suspended arms



*DPC-Touch Controller*

# POSI-CONTROL System

Position control



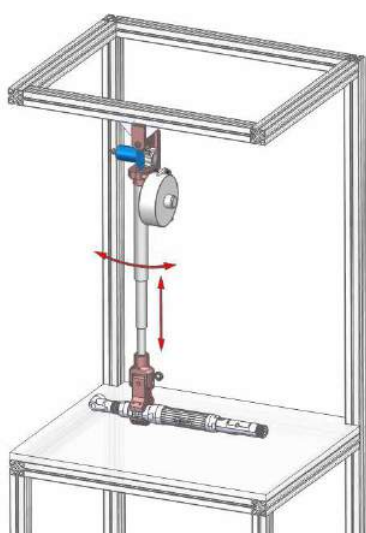
Linear arms BA...PC series



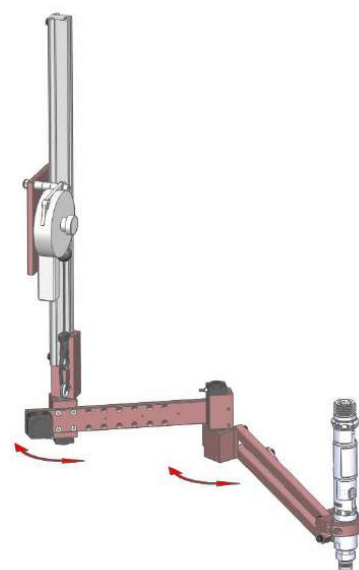
Articulated arms BA...RPC series



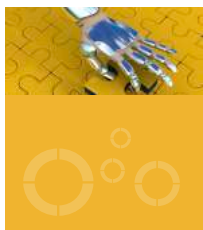
- Zero fault process
- Error proofing
- Sequencing
- Suitable with air and electric tools
- Automation device management



Telescoping arms DMF...PC series

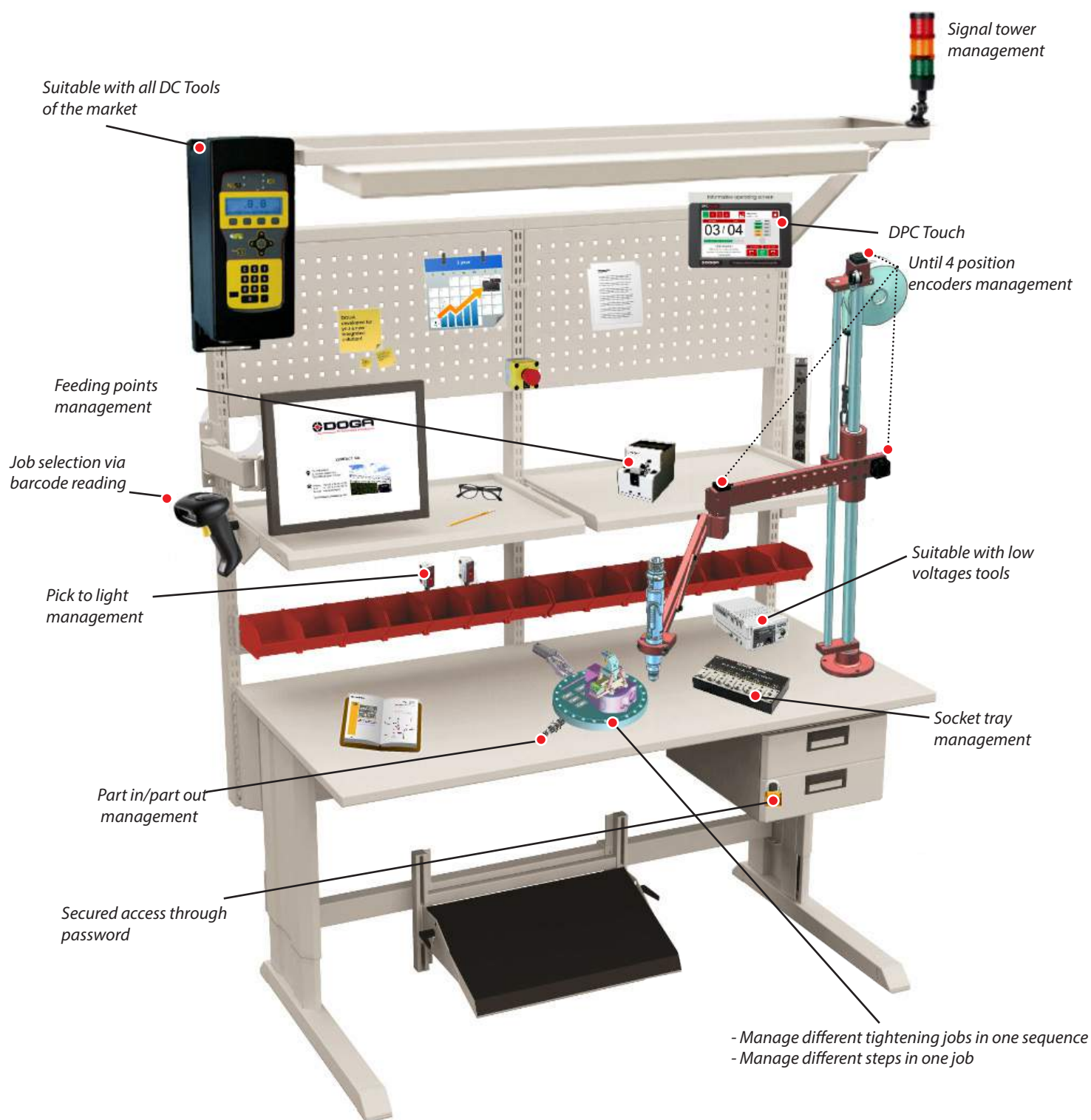


Suspended arms Slider BA...RPC series



# POSI-CONTROL System

- Open job structure allows set up of customized logical sequences of fastenings, messages and I/O's.



- More than a sequencing and Poka-Yoke controller the DPC Touch may easily manage the automation devices of your workstation on assembly line.

# POSI-CONTROL DPC-Touch

Powerful - user friendly - versatile



## • TECHNICAL FEATURES :

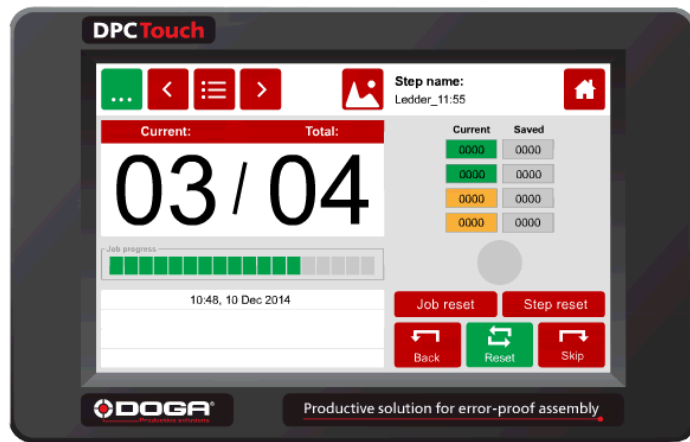
Dimensions : 202 x 127 x 38 mm

Weight : 550 gr

I/O's : 12 inputs, 12 outputs, 24 Volts

LCD screen : 7" touch screen (800 x 480 m/m)

Encoders : until 4 encoders, [0 - 5 V]



Power supply

2 ports for low voltage DOGA screwdrivers

12 inputs/12 outputs (assignable)

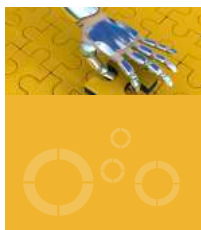
Encoders port

RS232 port (firmware upgrade and bar code reading/Job selection)

- Fast and powerful :
  - In house operating system
  - Until 999 programable jobs !
  - Until 255 steps per jobs !
  - Until 99 positions per step !
  - Until 4 position encoders
- User friendly :
  - Embedded soft
  - Touch screen
  - Self teaching sequencing
  - Smart tolerance detection
  - Process and sequencing visualization - operator instructions guidance
- Versatile :
  - Suitable with all DC Tools - low voltage and air tools
  - Poka-Yoke or/and sequencing controller
  - Assignable I/O's
  - Suitable with screwfeeders pick up
  - Opened job structure enables customized logical sequences
  - Management of your automation devices

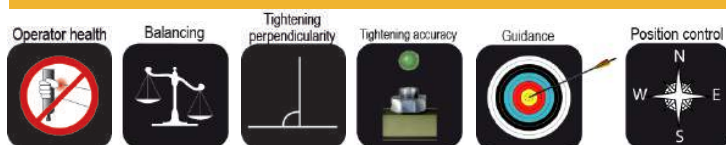
| Model                                           | Code      |
|-------------------------------------------------|-----------|
| DPC Touch                                       | 4-1290016 |
| DPC Touch / GX, GY, DO, GA cable                | 4-1290008 |
| DPC Touch / DOGA HD, SD cable                   | 4-1290013 |
| DPC Touch / Stanley TAU/THETA cable             | 4-5241036 |
| DPC Touch / Stanley KAPPA ALPHA IV cable        | 4-5241050 |
| DPC Touch / Stanley ALPHA V cable               | 4-5241051 |
| DB9 3m/free wires (4 outputs/3 inputs) cable    | 4-5200542 |
| DB25 3m/free wires (9 outputs/12 inputs) cable  | 4-5200770 |
| DB44 3m/free wires (12 outputs/12 inputs) cable | 4-1290009 |
| Air kit for pneumatic tool / DPC Touch          | 4-5200771 |
| Firmware upgrade kit                            | 4-1290003 |





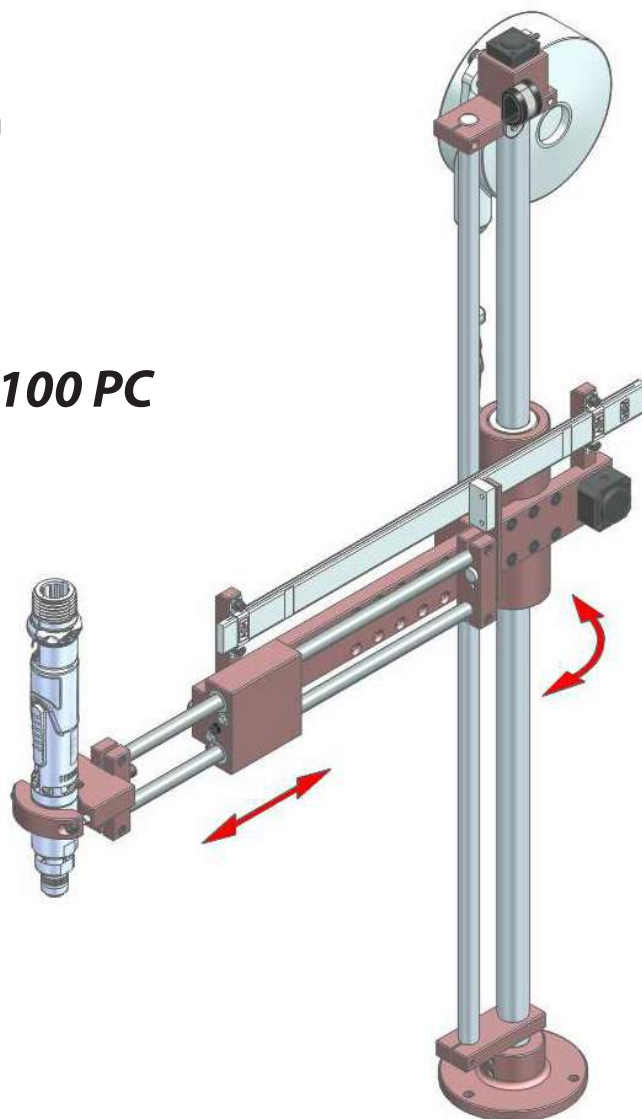
# Linear arms

## BA...PC Series



- Torque up to 100 Nm
- Equipped with absolute angle encoders (12 bits)
- Higher torque is available on request

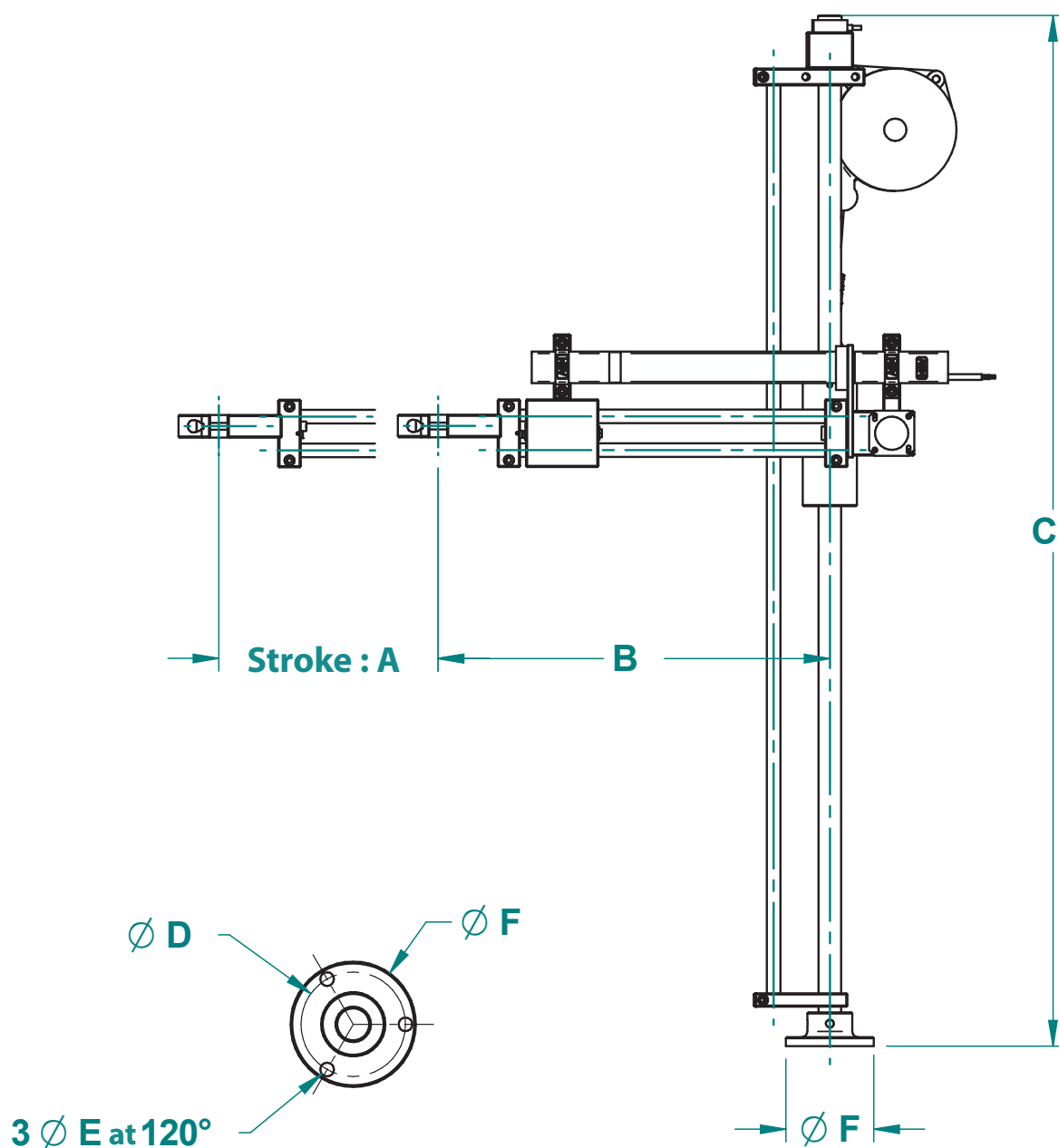
### BA 12/25/40/100 PC



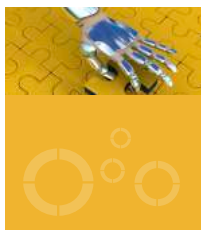
| Model         | Max torque (Nm) | Tool Ø (mm) | Stroke (mm) | Max load (Kg) | Code      |
|---------------|-----------------|-------------|-------------|---------------|-----------|
| BA 12 PC      | 12              | 27 - 50     | 195         | 1,2           | 4-5201009 |
| BA 25 PC      | 25              | 28 - 52     | 195         | 2,2           | 4-5201086 |
| BA 40 PC      | 40              | 28 - 52     | 295         | 3             | 4-5201087 |
| BA 40 PC/400  | 40              | 28 - 52     | 395         | 3             | 4-5201088 |
| BA 100 PC     | 100             | 28 - 52     | 295         | 4             | 4-5201089 |
| BA 100 PC/400 | 100             | 28 - 52     | 395         | 4             | 4-5201091 |

# Linear arms

## BA...PC Dimensions

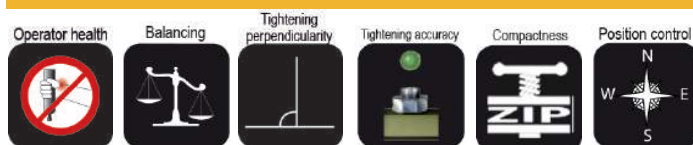


| Model         | Stroke A | B mini | B maxi | C    | D   | E    | F   |
|---------------|----------|--------|--------|------|-----|------|-----|
| BA 12 PC      | 195      | 186    | 336    | 816  | 65  | 8,5  | 78  |
| BA 25 PC      | 195      | 201    | 351    | 916  | 65  | 8,5  | 78  |
| BA 40 PC/300  | 295      | 320    | 470    | 1016 | 100 | 8,5  | 118 |
| BA 40 PC/400  | 395      | 420    | 570    | 1016 | 100 | 8,5  | 118 |
| BA 100 PC/300 | 295      | 335    | 485    | 1016 | 126 | 10,5 | 148 |
| BA 100 PC/400 | 395      | 435    | 585    | 1016 | 126 | 10,5 | 148 |

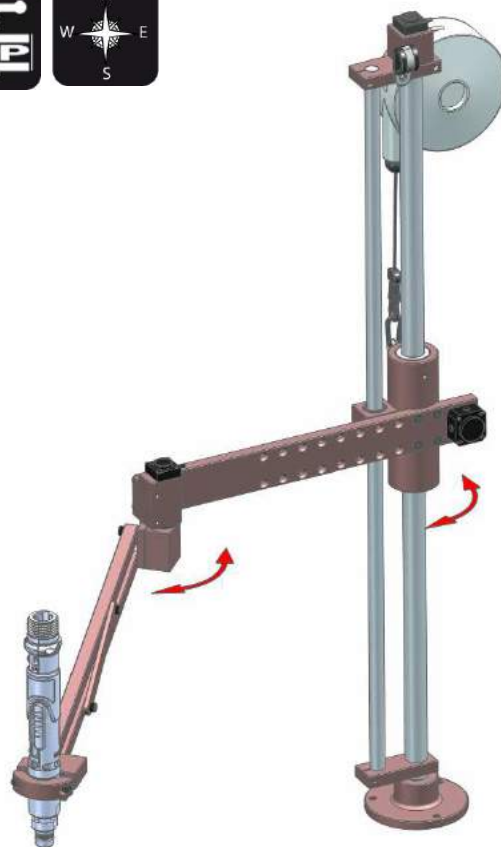


# Articulated arms

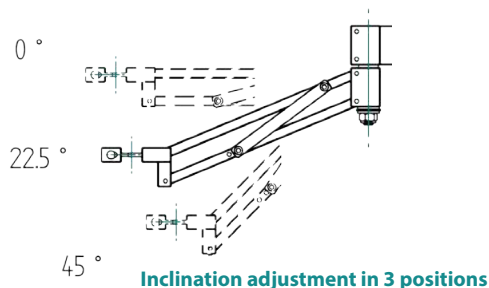
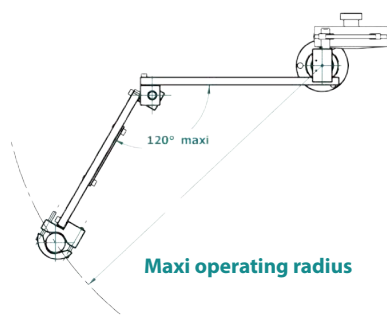
## BA...RPC Series



- Torque up to 100 Nm
- Operating range up to 1100 mm
- Equipped with two absolute angle encoders 12 bits (0,1°)
- Higher torque is available on request



### BA 12/25/40/100 RPC



| Model           | Max torque (Nm) | Tool Ø (mm) | Operating range (mm) | Max load (Kg) | Code      |
|-----------------|-----------------|-------------|----------------------|---------------|-----------|
| BA 12 RPC       | 12              | 27 - 50     | 450                  | 1,2           | 4-5201010 |
| BA 25 RPC       | 25              | 28 - 52     | 460                  | 2,2           | 4-5200472 |
| BA 25 RPC/600   | 25              | 28 - 52     | 600                  | 2,2           | 4-5200475 |
| BA 40 RPC       | 40              | 28 - 52     | 650                  | 3             | 4-5200473 |
| BA 40 RPC/800   | 40              | 28 - 52     | 800                  | 3             | 4-5200476 |
| BA 100 RPC      | 100             | 28 - 52     | 730                  | 4             | 4-5200474 |
| BA 100 RPC/900  | 100             | 28 - 52     | 900                  | 4             | 4-5200477 |
| BA 100 RPC/1100 | 100             | 28 - 52     | 1100                 | 3             | 4-5200478 |

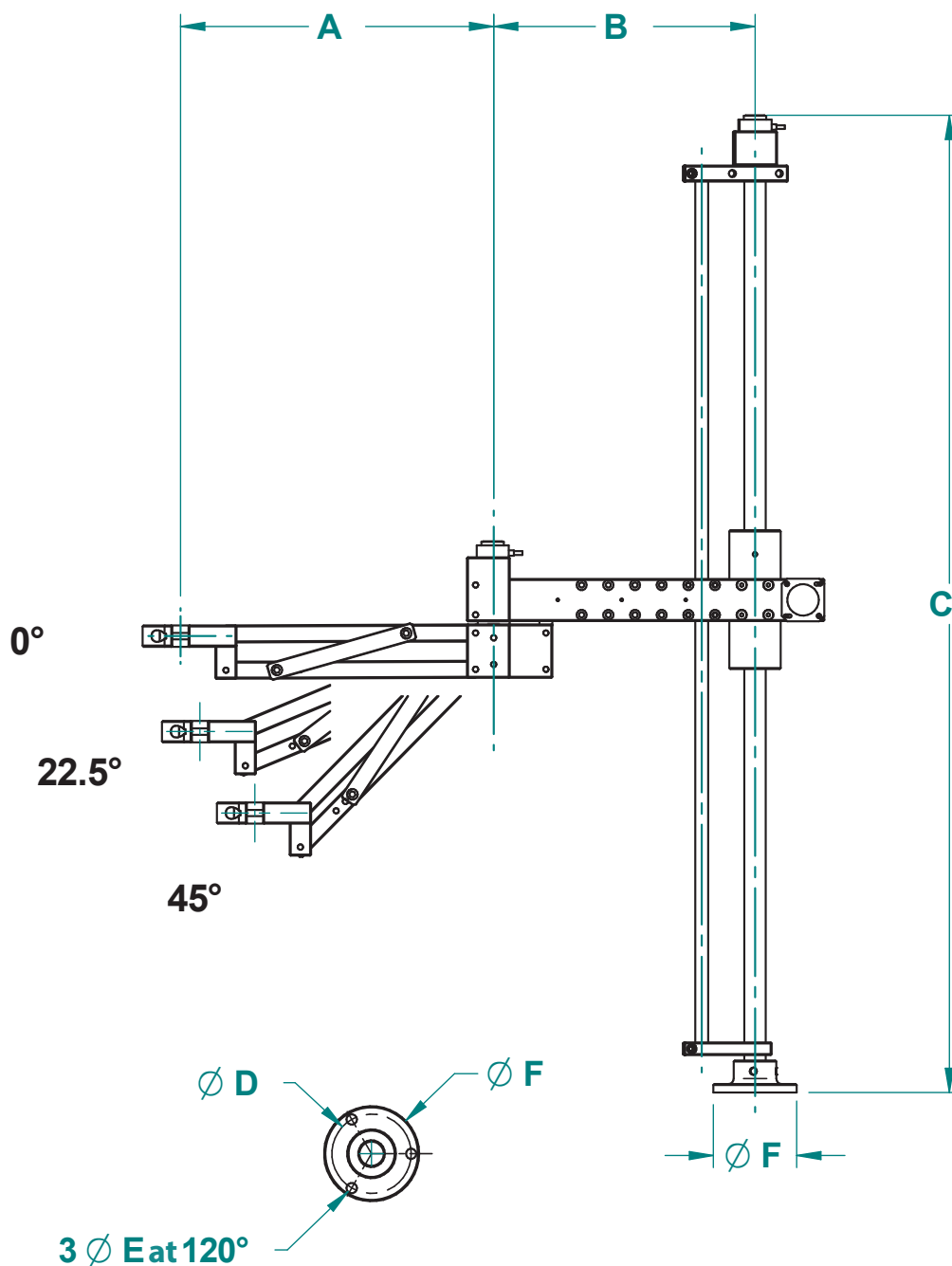


### Option

Z encoder / BA RPC. **Code : 4-5283125.**  
Encoder cable Z. **Code 4-5200725.**

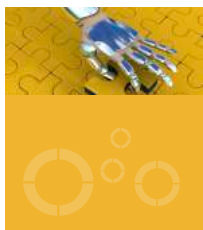
# Articulated arms

## BA...RPC Series Dimensions



| Model           | At 0° | At 22,5° | At 45° | B min | B max | C    | Operating range<br>at 22,5° |
|-----------------|-------|----------|--------|-------|-------|------|-----------------------------|
| BA 12 RPC       | 279   | 261      | 209    | 145   | 245   | 816  | 450                         |
| BA 25 RPC       | 296   | 278      | 227    | 145   | 245   | 916  | 460                         |
| BA 25 RPC/600   | 358   | 336      | 271    | 330   | 330   | 916  | 600                         |
| BA 40 RPC       | 414   | 387,5    | 310,5  | 200   | 350   | 1016 | 650                         |
| BA 40 RPC/800   | 503   | 470      | 374    | 415   | 415   | 1016 | 800                         |
| BA 100 RPC      | 462   | 433      | 351    | 255   | 405   | 1016 | 730                         |
| BA 100 RPC/900  | 564   | 528      | 425    | 520   | 520   | 1016 | 900                         |
| BA 100 RPC/1100 | 694   | 648      | 517    | 635   | 635   | 1016 | 1100                        |

D, E, F similar to BA...R

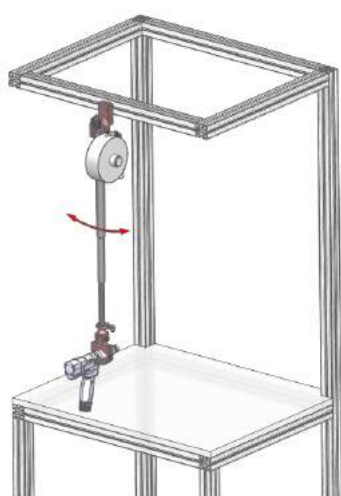


# Carbon telescoping arms

## DMF...PC Series

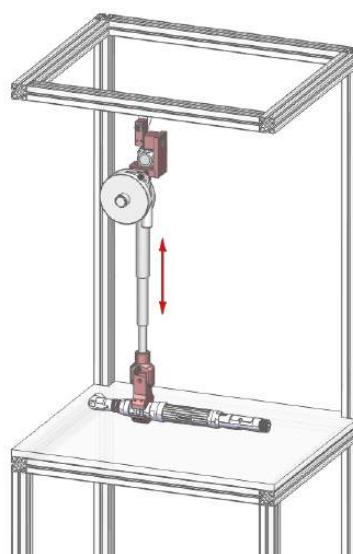


- Torque up to 140 Nm
- Equipped with absolute angle encoders 12 bits ( $0,1^\circ$ )
- ↔ Monitored movement



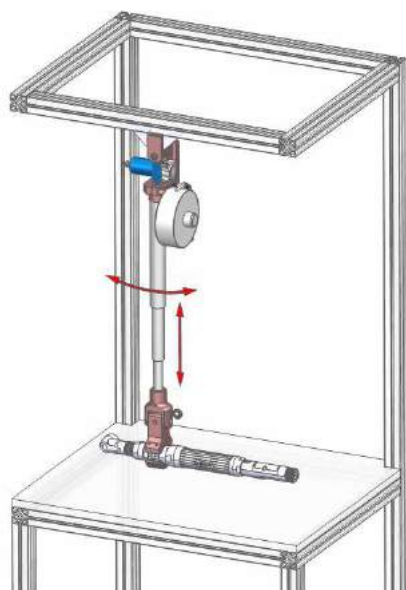
**DMF APC**

*Equipped with one angle encoder*



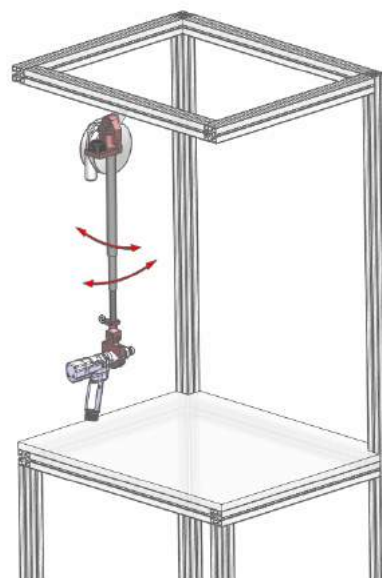
**DMF LPC**

*Equipped with one length encoder*



**DMF LAPC**

*Equipped with one length encoder and one angle encoder*



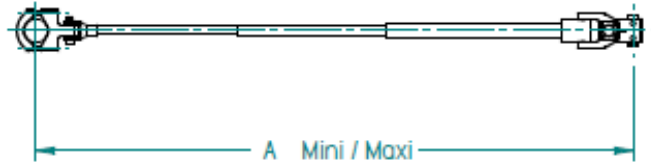
**DMF AAPC**

*Equipped with two angle encoders (inclinometer)*

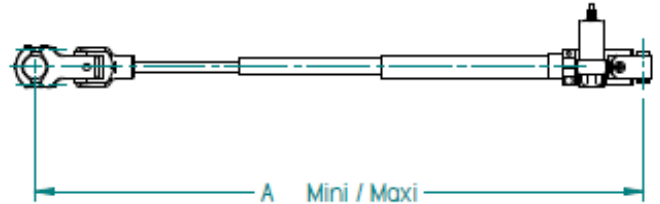
# Carbon telescoping arms

## DMF...PC Series

### DMF APC

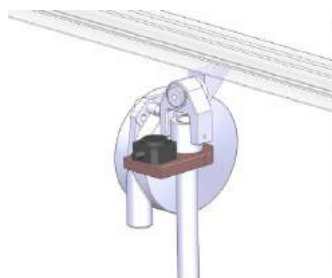


### DMF LPC/LAPC



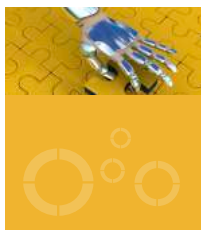
| Model             | Torque | Clamp | Tool Ø | Min  | Max  | Code without clamp | Code with clamp |
|-------------------|--------|-------|--------|------|------|--------------------|-----------------|
| DMF 30 APC/960    | 30     | P1    | 28-52  | 560  | 960  | 4-5200574          | 4-5200564       |
| DMF 30 APC/1500   | 30     | P1    |        | 706  | 1500 | 4-5200575          | 4-5200565       |
| DMF 30 APC/2000   | 30     | P1    |        | 873  | 2000 | 4-5200576          | 4-5200566       |
| DMF 80 APC/1500   | 80     | P2/P3 | 35-52  | 764  | 1500 | 4-5200577          | 4-5200567       |
| DMF 80 APC/2000   | 80     | P2/P3 |        | 930  | 2000 | 4-5200578          | 4-5200568       |
| DMF 140 APC/1500  | 140    | P2/P3 |        | 978  | 1500 | 4-5200579          | 4-5200569       |
| DMF 140 APC/2000  | 140    | P2/P3 |        | 1228 | 2000 | 4-5200580          | 4-5200572       |
| DMF 30 LPC/960    | 30     | P1    | 28-52  | 560  | 960  | 4-5200588          | 4-5200581       |
| DMF 30 LPC/1500   | 30     | P1    |        | 727  | 1500 | 4-5200589          | 4-5200582       |
| DMF 30 LPC/2000   | 30     | P1    |        | 894  | 2000 | 4-5200590          | 4-5200583       |
| DMF 80 LPC/1500   | 80     | P2/P3 | 35-52  | 780  | 1500 | 4-5200591          | 4-5200584       |
| DMF 80 LPC/2000   | 80     | P2/P3 |        | 947  | 2000 | 4-5200592          | 4-5200585       |
| DMF 140 LPC/1500  | 140    | P2/P3 |        | 991  | 1500 | 4-5200593          | 4-5200586       |
| DMF 140 LPC/2000  | 140    | P2/P3 |        | 1241 | 2000 | 4-5200594          | 4-5200587       |
| DMF 30 LAPC/960   | 30     | P1    | 28-52  | 560  | 960  | 4-5200662          | 4-5200595       |
| DMF 30 LAPC/1500  | 30     | P1    |        | 727  | 1500 | 4-5200663          | 4-5200596       |
| DMF 30 LAPC/2000  | 30     | P1    |        | 894  | 2000 | 4-5200664          | 4-5200597       |
| DMF 80 LAPC/1500  | 80     | P2/P3 | 35-52  | 780  | 1500 | 4-5200665          | 4-5200598       |
| DMF 80 LAPC/2000  | 80     | P2/P3 |        | 947  | 2000 | 4-5200666          | 4-5200599       |
| DMF 140 LAPC/1500 | 140    | P2/P3 |        | 991  | 1500 | 4-5200667          | 4-5200660       |
| DMF 140 LAPC/2000 | 140    | P2/P3 |        | 1241 | 2000 | 4-5200668          | 4-5200661       |

### AAPC Option



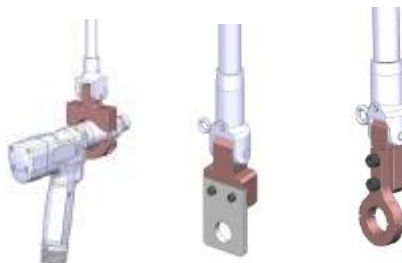
*Inclinometer may be installed on standard DMF arms (DMF30, DMFi 70/120/200) to monitor angular position.*

| For             | Code      |
|-----------------|-----------|
| DMF 30          | 4-5200809 |
| DMFi 70/120/200 | 4-5200810 |



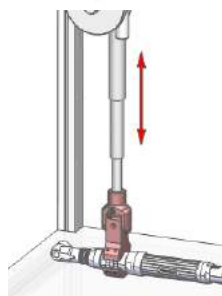
# Carbon telescoping arms

## Clamps for DMF...PC



### P1 clamp

| For        | P1                       | Tool Ø     |
|------------|--------------------------|------------|
| DMF 30     | Standard                 | 28/52      |
| DMF 80/140 | Mounting plate interface | On request |



### P2 clamp

| For        | Tool Ø | Code      |
|------------|--------|-----------|
| DMF 30     | 28/52  | 4-5200300 |
| DMF 80/140 | 35/52  | Standard  |



### P3 clamp

| For        | Tool Ø | Code      |
|------------|--------|-----------|
| DMF 30     | 28/52  | 4-5200301 |
| DMF 80/140 | 35/52  | Standard  |



### P4 clamp

| For        | Tool Ø | Code      |
|------------|--------|-----------|
| DMF 30     | 28/52  | 4-5200302 |
| DMF 80/140 | 35/52  | 4-5200343 |



### Tilt interface

| For        | Code      |
|------------|-----------|
| DMF 30 30° | 4-5201140 |
| DMF 30 45° | 4-5201141 |

### Swivel clamp

| For        | Tool Ø     | Code       |
|------------|------------|------------|
| DMF 80/140 | On request | On request |

### P2 Rotating clamp

| For        | Tool Ø     | Code      |
|------------|------------|-----------|
| DMF 30     | On request | 4-5201134 |
| DMF 80/140 | On request | 4-5201135 |





# Carbon telescoping arms

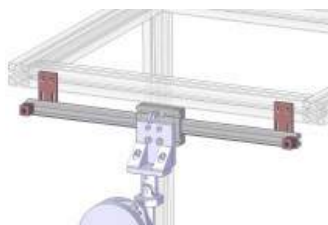
## DMF...PC Accessories



### Balancing kit for DMF...PC

| Max load tool (kg) | For        | Code      |
|--------------------|------------|-----------|
| 1/2,5              | DMF 30     | 4-5200304 |
| 2/4                | DMF 30/80  | 4-5200305 |
| 4/6                | DMF 80/140 | 4-5200306 |

Balancer attachment kit for DMF30 **Code 4-5201143.**

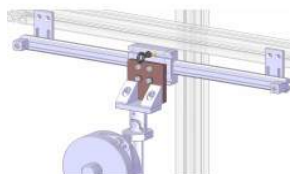


### Rails

| Length | Stroke | Number of flanges | Code      |
|--------|--------|-------------------|-----------|
| 600    | 450    | 2                 | 4-5200132 |
| 800    | 650    | 2                 | 4-5200160 |
| 1000   | 850    | 2                 | 4-5200161 |
| 1200   | 1050   | 3                 | 4-5200162 |
| 1500   | 1350   | 3                 | 4-5200163 |
| 2000   | 1850   | 4                 | 4-5200164 |

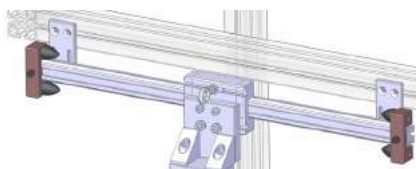
### Rail interface

Allows installation of DMF on rail.



| For           | Code      |
|---------------|-----------|
| DMF 30/80/140 | 4-5200341 |
| DMF 300       | 4-5200342 |

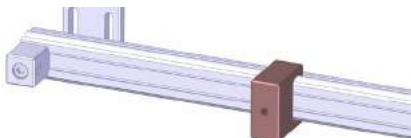
**NOTE** : delivered without safety hook (**Code 4-5200309**)



### Absorbing stop

Recommended in case of repeatable side shocks.

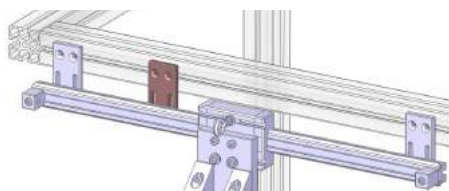
**Code 4-5201121** Set of 2



### Adjustable stop

To limit the slide of the arm on the rail.

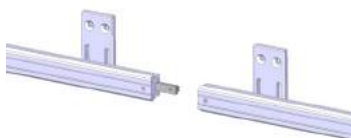
**Code 4-5200167**



### Additional flange

To reinforce the rail installation for high torque applications.

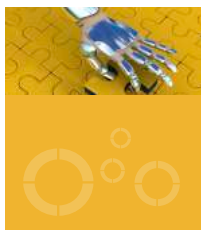
**Code 4-5200873**



### Rail link

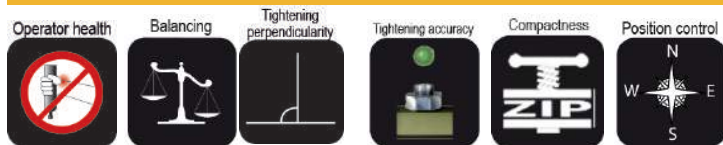
To link two rails together.

**Code 4-5200307**

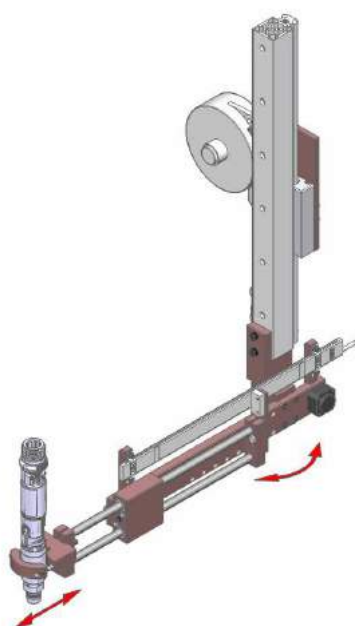


# Suspended arms

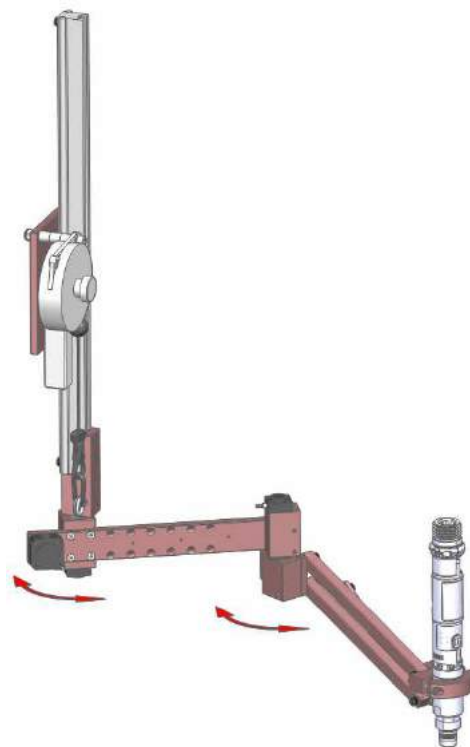
## SLIDER BA...PC/RPC



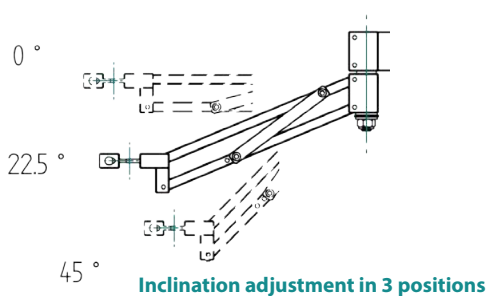
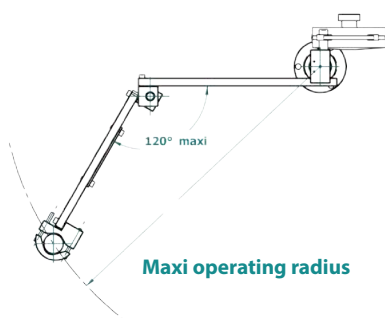
- Torque up to 100 Nm
  - Operating range up to 900 mm
  - Equipped with 2 absolute encoders 12 bits [0,1°]
  - Higher torque available on request
- ↔ Monitored movement



**SLIDER BA 12/25/40 PC**



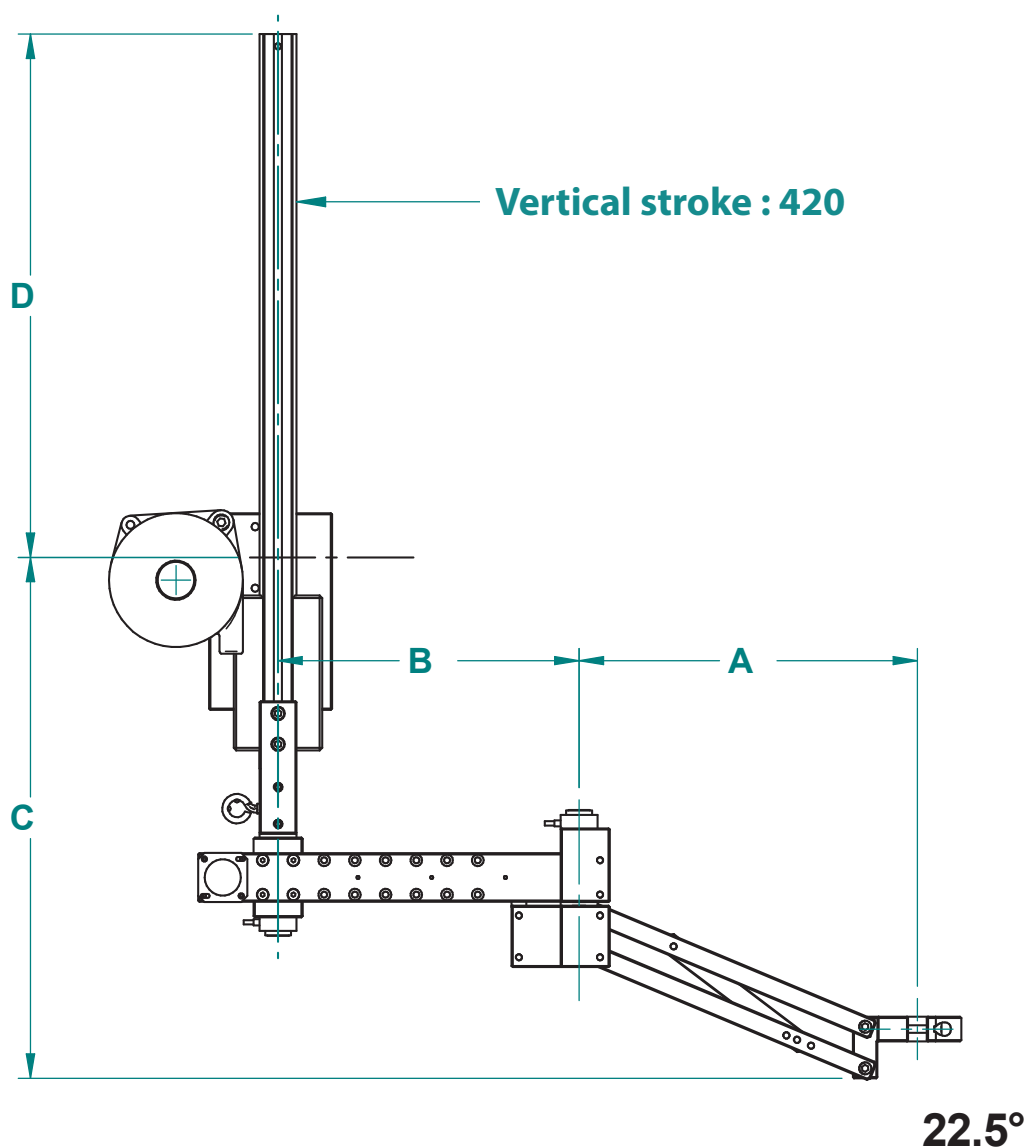
**SLIDER BA 12/25/40/100 RPC**



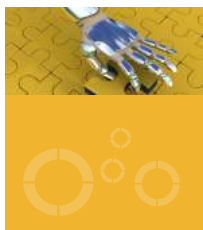
| Model                 | Max torque (Nm) | Tool Ø (mm) | Operating range (mm) | Stroke (mm) | Operating range (mm) | Max load (Kg) | Code      |
|-----------------------|-----------------|-------------|----------------------|-------------|----------------------|---------------|-----------|
| SLIDER BA 12 PC       | 12              | 27/50       | 420                  | 195         |                      | 1,2           | 4-5283120 |
| SLIDER BA 25 PC       | 25              | 28/52       | 420                  | 195         |                      | 2,2           | 4-5283121 |
| SLIDER BA 40 PC       | 40              | 28/52       | 420                  | 295         |                      | 3             | 4-5283122 |
| SLIDER BA 12 RPC      | 12              | 27/50       | 420                  |             | 450                  | 1,2           | 4-5201078 |
| SLIDER BA 25 RPC      | 25              | 28/52       | 420                  |             | 460                  | 2,2           | 4-5201079 |
| SLIDER BA 25 RPC/600  | 25              | 28/52       | 420                  |             | 600                  | 2,2           | 4-5201080 |
| SLIDER BA 40 RPC      | 40              | 28/52       | 420                  |             | 650                  | 3             | 4-5201081 |
| SLIDER BA 40 RPC/800  | 40              | 28/52       | 420                  |             | 800                  | 3             | 4-5201082 |
| SLIDER BA 100 RPC     | 100             | 28/52       | 420                  |             | 730                  | 4             | 4-5201083 |
| SLIDER BA 100 RPC/900 | 100             | 28/52       | 420                  |             | 900                  | 4             | 4-5201084 |

# Suspended arms

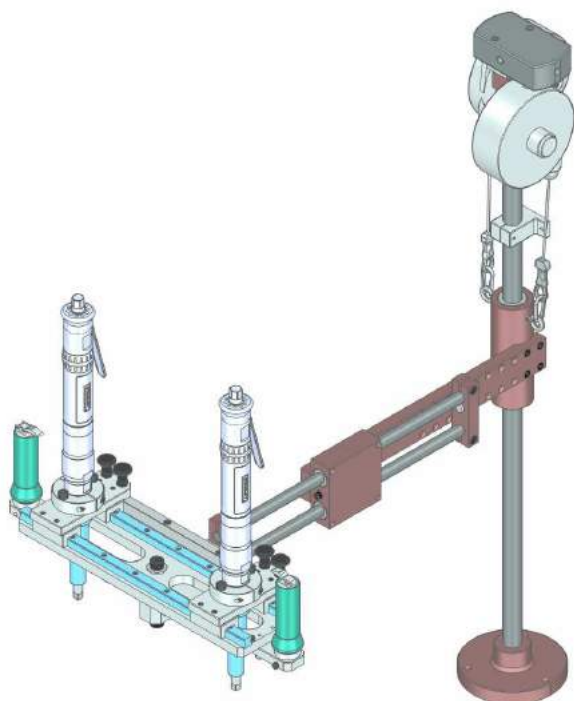
## SLIDER BA...RPC Dimensions



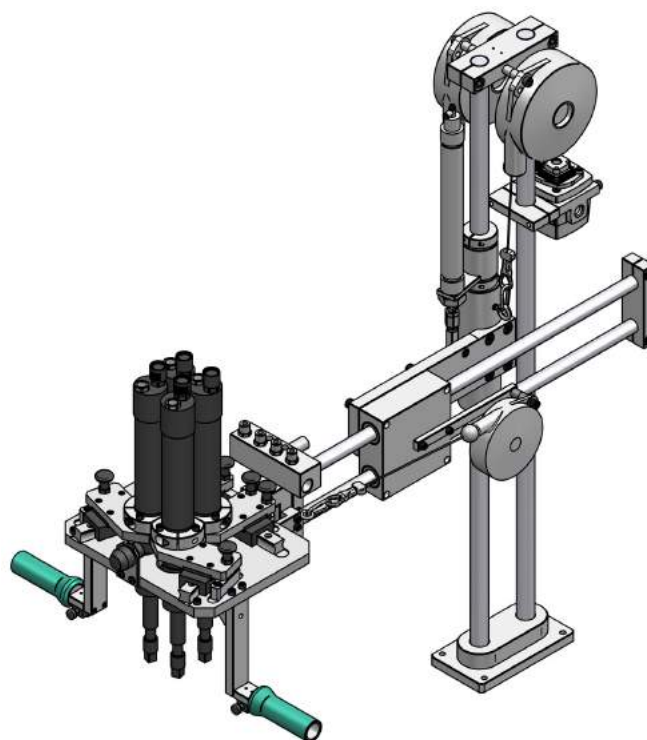
|                       | A     | B min | B max | Operating range<br>at 22,5° | C   | D   |
|-----------------------|-------|-------|-------|-----------------------------|-----|-----|
| SLIDER BA 12 RPC      | 261   | 102   | 252   | 474                         | 380 | 440 |
| SLIDER BA 25 RPC      | 278   | 95    | 245   | 485                         | 424 | 425 |
| SLIDER BA 25 RPC/600  | 336   | 305   | 330   | 607                         | 447 | 425 |
| SLIDER BA 40 RPC      | 387,5 | 150   | 350   | 667                         | 482 | 419 |
| SLIDER BA 40 RPC/800  | 470   | 415   | 415   | 801                         | 496 | 419 |
| SLIDER BA 100 RPC     | 433   | 205   | 405   | 758                         | 597 | 358 |
| SLIDER BA 100 RPC/900 | 528   | 470   | 520   | 908                         | 634 | 358 |



# Special arms



BA for double spindle with variable pitch

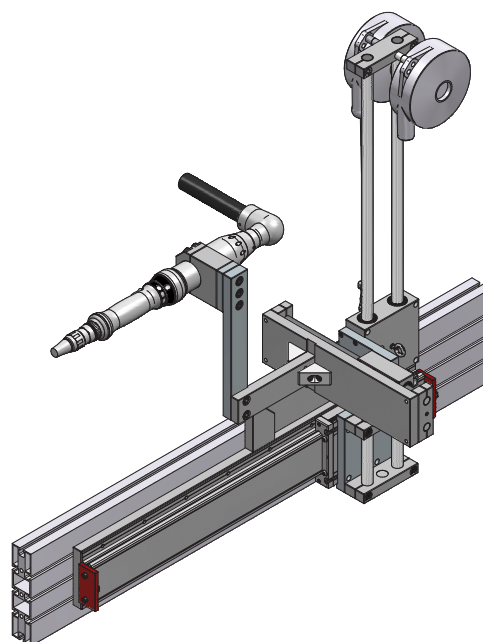


BA 200 with 4 spindles + easy push kit



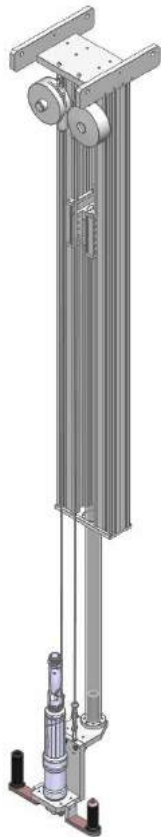
## SLIDER 50 COMPACT :

- With rail
- With air locker
- With rotative clamp

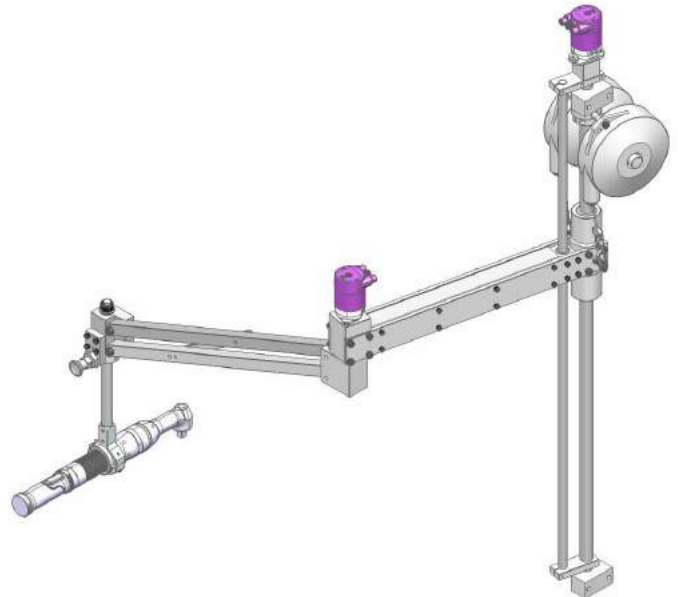


Cartesian arm, 3 axes

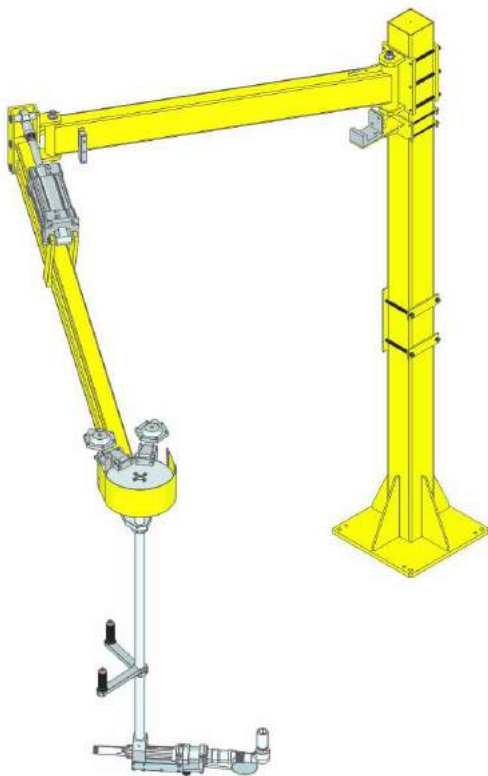
# Special arms



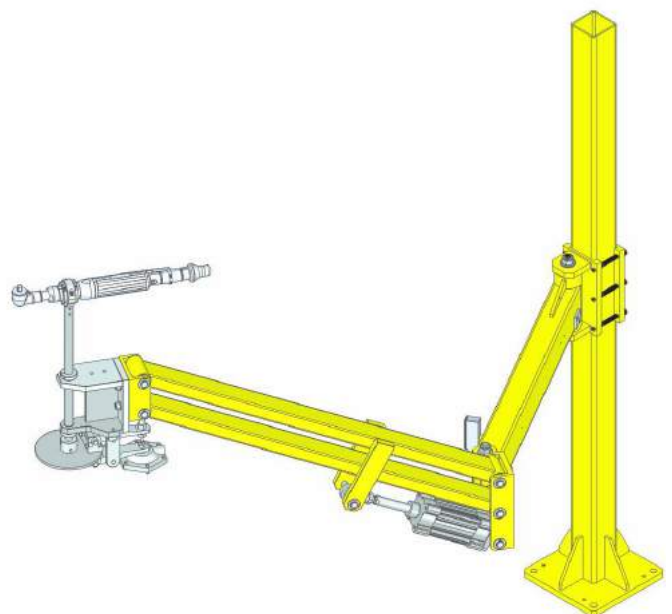
**SLIDER 300 COMPACT for straight nutrunner**



**BA 180 R with :**  
 - Profinet coders  
 - Rotative and swivelling clamp



**BA 500R/3000 with :**  
 - Disk break  
 - Rotative clamp



**BA 200 R for under body tightening :**  
 - With disk break  
 - Rotative clamp



## **DISA Elektro AG**

Kägiswilerstrasse 33, CH-6060 Sarnen, Tel. +41 41 666 70 50, Fax +41 41 666 70 49  
E-Mail: [info@disa.ch](mailto:info@disa.ch) [www.disa.ch](http://www.disa.ch) Ein Unternehmen der ELBET Holding AG