



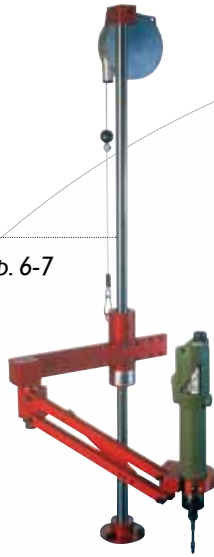
Torque Reaction Systems



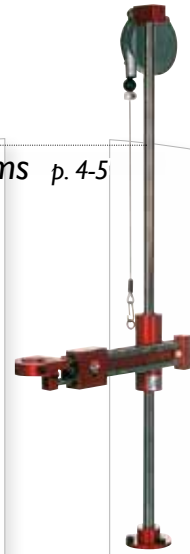
DOGA Torque Reaction Systems

A comprehensive range to meet your various and demanding applications.

BA.. R
Articulated Arms p. 6-7



BA..
Linear Arms p. 4-5



DMF..
Carbon Fiber Arms p. 8-9



Improve your **ergonomy**
and your **productivity !**



Air and electric powered hand tools produce a torque reaction transmitted to the operator's hand. Over a period of time this reaction can cause injuries to the hand, wrist and shoulder. These injuries mean reduced productivity and increased employee absenteeism.

This could be prevented by using one of our reaction arms designed to absorb the torque reaction but also to improve the ergonomics and productivity of the workstation.

SLIDER..
Suspended Arms p. 10

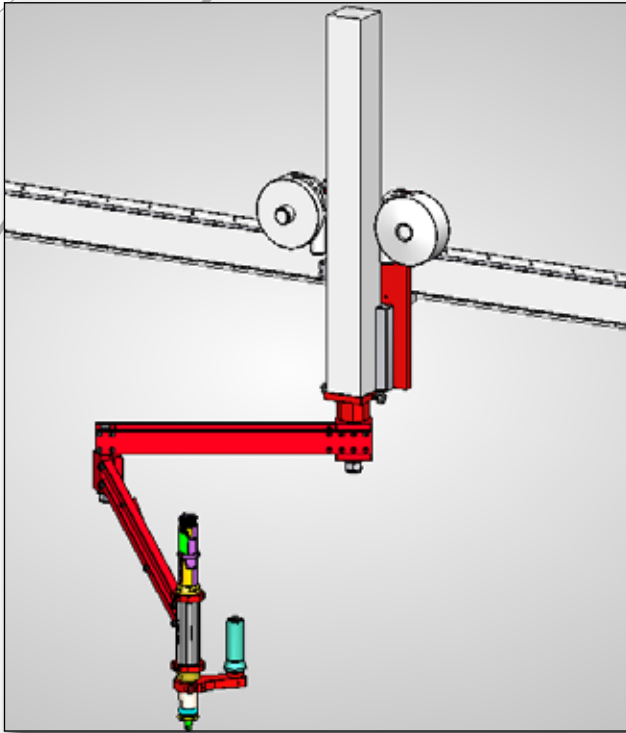


BA..C
Travelling Arms p. 12

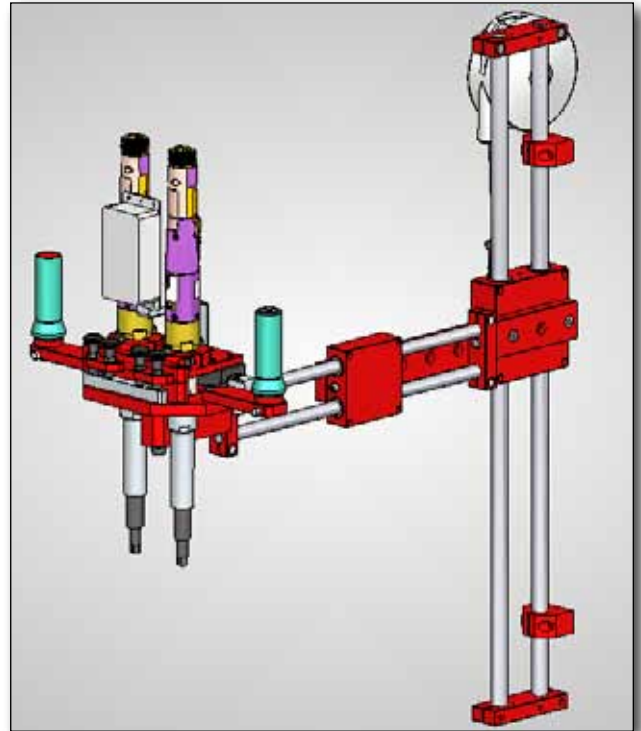


SPECIAL ARMS ON REQUEST

SLIDER BA 100 R

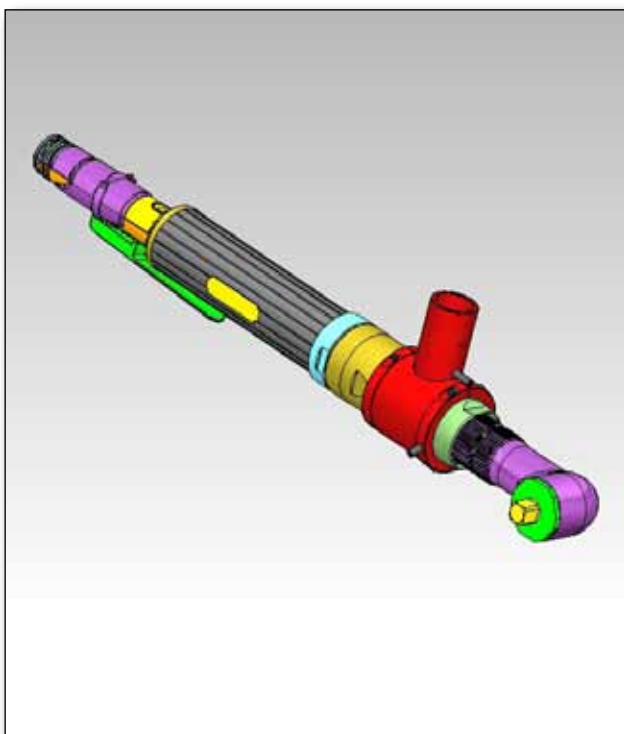


DOUBLE SPINDLE



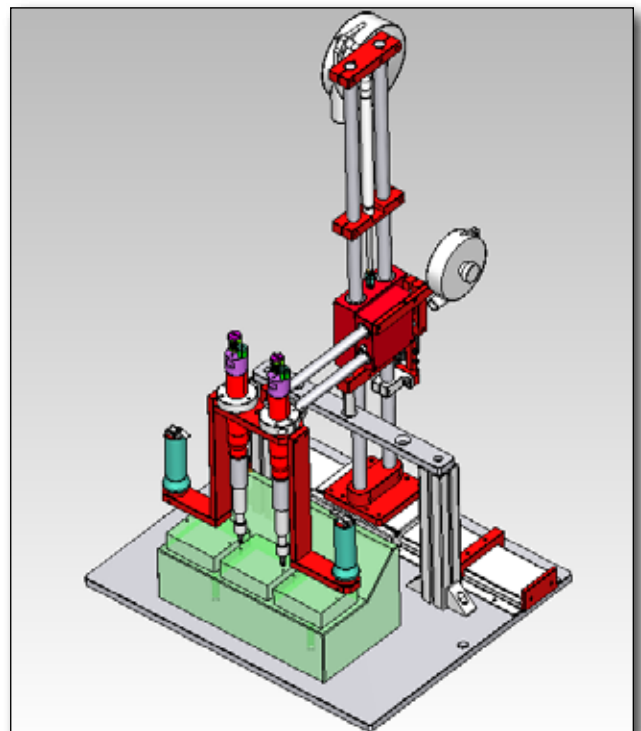
BA 60 L - Double spindle with variable pitch.

ROTATING CLAMP



To tighten left and right side.

3-AXLES CARTESIAN ARM

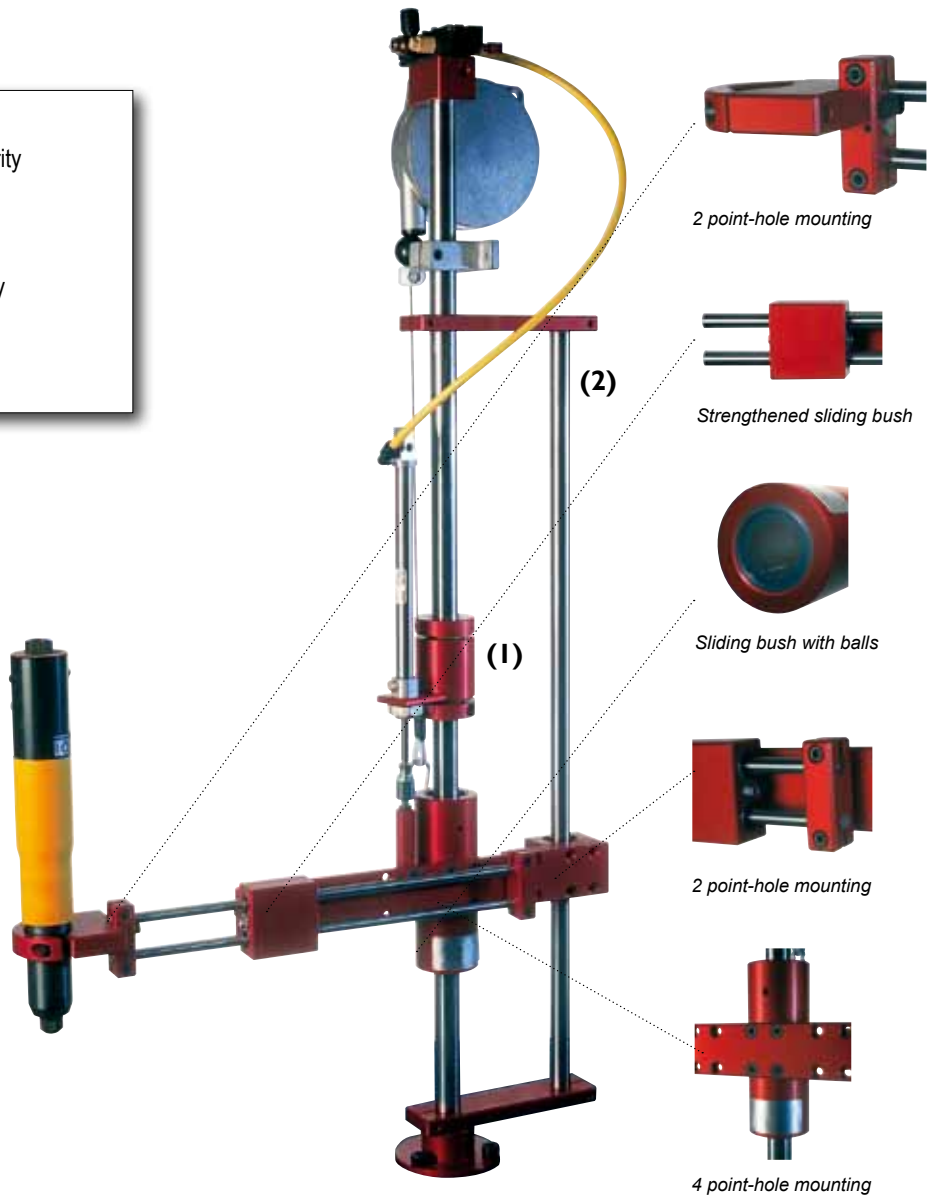


LINEAR REACTION ARMS

BA Serie : 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 12



BA 12 shown with EASY PUSH KIT(1) and anti rotation clamp(2)

BA.. Serie

Model Code	Maxi torque (Nm)	Tool diameter (mm)	Maxi load (kg)
BA 5	5	20-35	0,9
BA 12	12	25-40	1,2
BA 25	25	28-52	2,2
BA 40	40	28-52	2,2/4*
BA 100	100	28-52	3,5/6*

> BA 200 / 400 / 600 Upon request

*With additional balancer - Code : 1200143

ACCESSORIES

Model	For	Code
Anti rotation clamp	BA 5	1200348
Anti rotation clamp	BA 12 & 25	1200116
Anti rotation clamp	BA 40 & 100	1200117

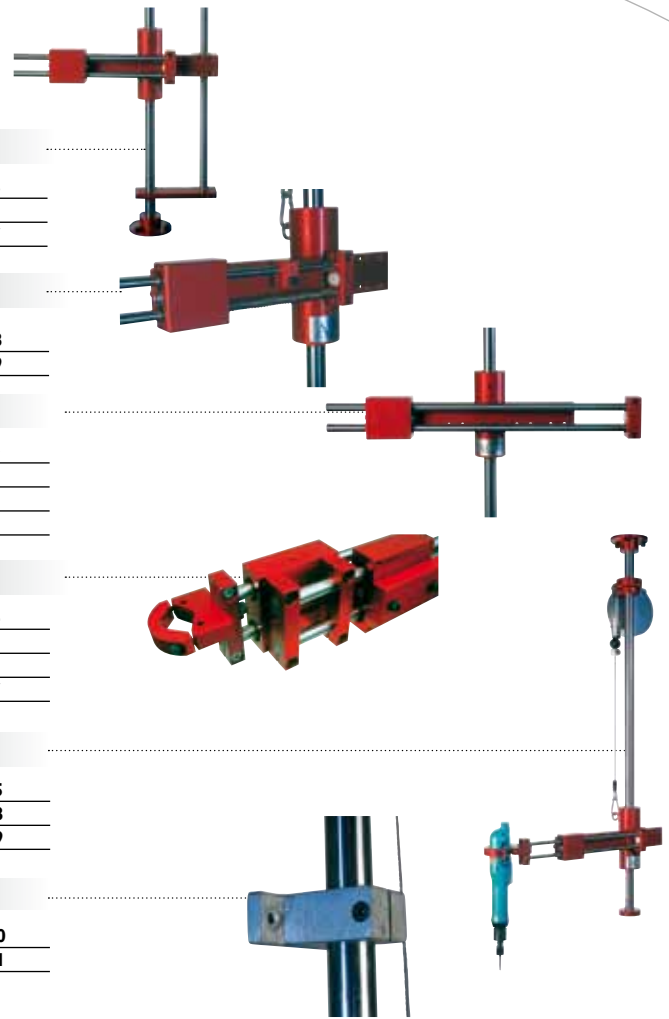
Model	For	Code
ARP system	BA 5 & 12	1200118
ARP system	BA 25 & 40	1200119

Model	For	Stroke (mm)	Code
Extended slides	BA 12	+ 130	1200120
Extended slides	BA 25	+ 130	1200121
Extended slides	BA 40	+ 170	1200122
Extended slides	BA 100	+ 200	1200123

Model	For	Stroke (mm)	Code
Double slide	BA 12	+ 230	1200124
Double slide	BA 25	+ 210	1200125
Double slide	BA 40	+ 295	1200126
Double slide	BA 100	+ 330	1200127

Model	For	Code
Inverse mounting kit	BA 5	1200385
Inverse mounting kit	BA 12 & 25	1200128
Inverse mounting kit	BA 40 & 100	1200129

Model	For	Stroke (mm)	Code
Pole upper clamp	BA 12 & 25	2 Ø 4,3 Center distance 45	1200130
Pole upper clamp	BA 40 & 100	2 Ø 5,3 Center distance 60	1200131



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.

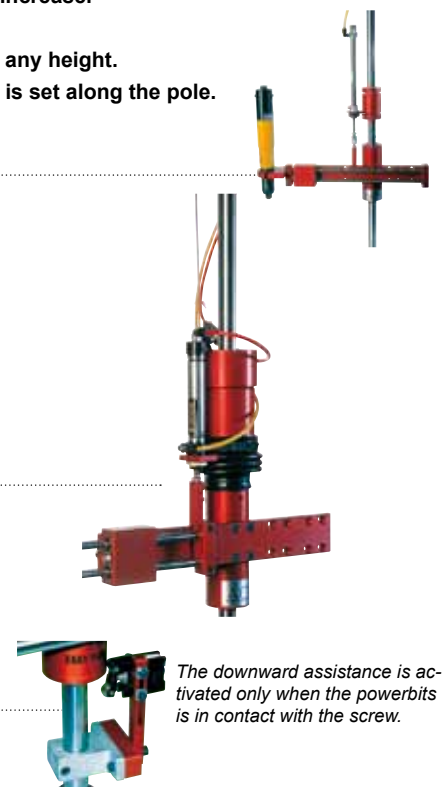
BAPER system features a built-in collet chuck that allows the system to be used at any height.

Easy Push system operates only at a preset height by using a mechanical stop that is set along the pole.

Model	For	Pushing force (kg)	Stroke (mm)	Type	Code
EASY PUSH	BA 12	5	125	pneumatic	1200099
EASY PUSH	BA 25	9	160	-	1200102
EASY PUSH	BA 40 & 100	9	200	-	1200103
EASY PUSH	BA 40 & 100	20	200	-	1200144
EASY PUSH	BA 100	25	200	-	1200145
EASY PUSH	BA 12	5	125	electric	1200109
EASY PUSH	BA 25	9	160	-	1200110
EASY PUSH	BA 40 & 100	9	200	-	1200111
EASY PUSH	BA 40 & 100	15	200	-	1200146
EASY PUSH	BA 100	25	200	-	1200147

Model	For	Pushing force (kg)	Type	Code
BAPER	BA 12	5	pneumatic	1200095
BAPER	BA 25	8	-	1200096
BAPER	BA 40 & 100	8	-	1200097
BAPER	BA 12	5	electric	1200105
BAPER	BA 25	8	-	1200106
BAPER	BA 40 & 100	8	-	1200107

Model	For	Code
Safety kit	BA 12 & 25	1200134
Safety kit	BA 40 & 100	1200135
U3-D interface for GX screwdrivers	BA12 to BA100	1041888

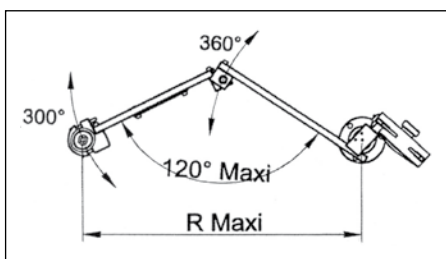


The downward assistance is activated only when the powerbits is in contact with the screw.

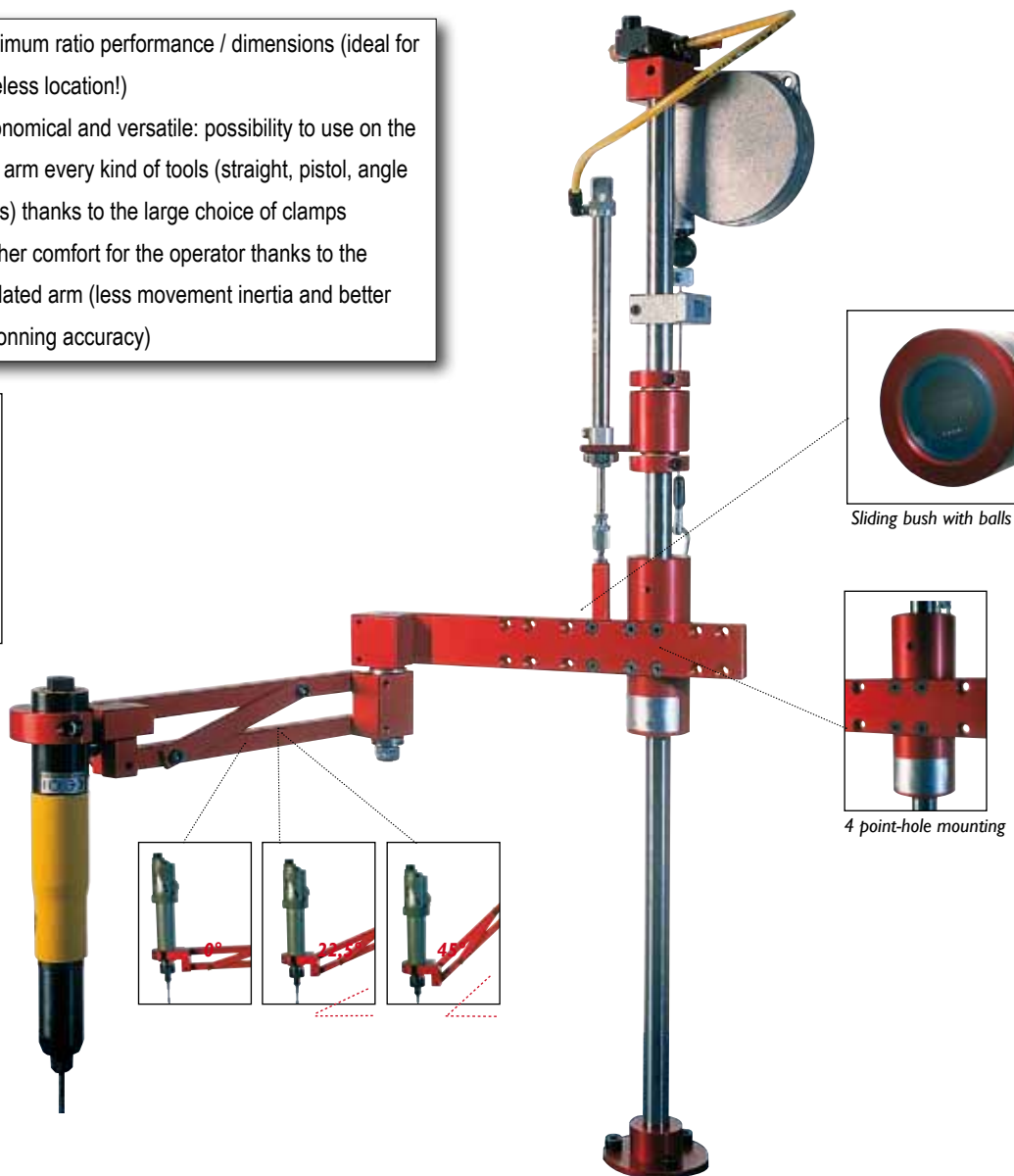
ARTICULATED REACTION ARMS

BA..R Serie are equipped with a rotating articulation enabling a high working flexibility. Swivelling and folding up like a human arm, they are particularly 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)



Maximum workstation coverage (R maxi)
 (recommended maximum workstation coverage with an arm inclination of 22.5° and an arm angle of 120°)
 BA 5 R : 435 mm BA 40 R : 630 mm
 BA 12 / 25 R : 445 mm BA 100 R : 715 mm



BA 12 R shown with EASY PUSH KIT

BA 12 R



BA..R Serie

Model	Maxi Torque (Nm)	Tool Ø (mm)	Maxi Load (kg)	Maxi Radius (mm)	Code
BA 5 R	5	20-35	0,9	435	1200098
BA 12 R	12	25-40	1,2	445	1200069
BA 12 R	-	-	-	600	1200273
BA 25 R	25	28-52	2,2	445	1200070
BA 25 R	-	-	-	600	1200274
BA 25R	-	-	-	800	1200275
BA 40 R	40	-	2,2-4*	630	1200071
BA 40 R	-	-	-	800	1200276
BA 40 R	-	-	-	1000	1200277
BA 100 R	100	-	3,5-6*	715	1200072
BA 100 R	-	-	-	900	1200278
BA 100 R	-	-	-	1100	1200279

*With additional balancer - Code :1200143

ACCESSORIES

Model	For	Tool Ø (mm)	Code
Clamp for pistol tool	BA 12 R	25-40	1200087
Clamp for pistol tool	BA 25 & 40 R	28-52	1200088

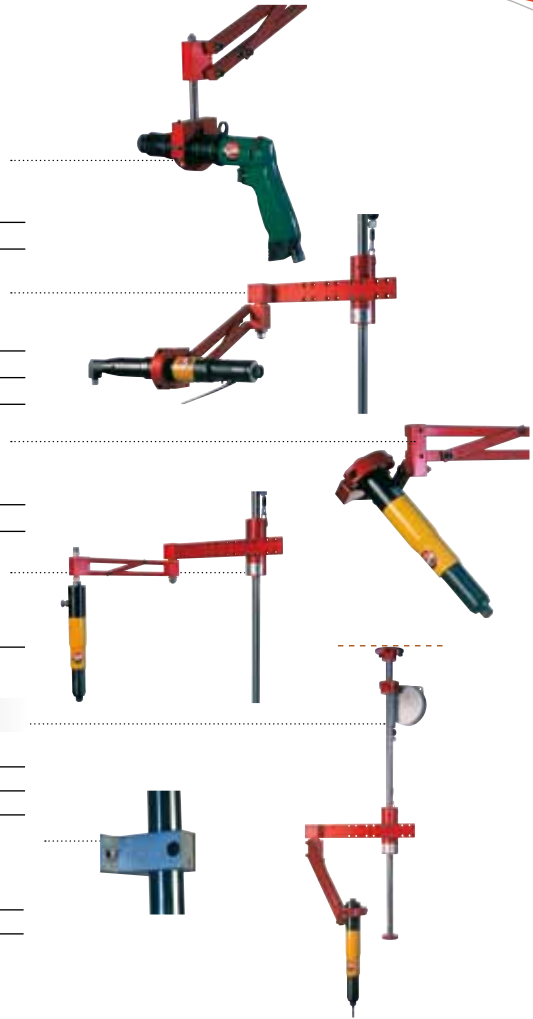
Model	For	Tool Ø (mm)	Code
Clamp for angle tool	BA 12 R	25-35	1200089
Clamp for angle tool	BA 25 & 40 R	28-52	1200090
Clamp for angle tool	BA 100 R	28-52	1200091

Model	For	Tool Ø (mm)	Code
Rotating clamp	BA 12 R	25-40	1200093
Rotating clamp	BA 25 & 40 R	28-52	1200094

Model	For	Tool Ø (mm)	Code
Nipple clamp	BA 5 & 12 R	1/4 G Connector	1200092

Model	For	Code
Inverse mounting kit	BA 5 R	1200385
Inverse mounting kit	BA 12 & 25 R	1200128
Inverse mounting kit	BA 40 & 100 R	1200129

Model	For	Ø Diameter (mm)	Code
Pole upper clamp	BA 12 & 25 R	2 Ø 4,3 Center distance 45	1200130
Pole upper clamp	BA 40 & 100 R	2 Ø 5,3 Center distance 60	1200131



Downward assistance Kits

Downward Assistance Kits will provide you with Extreme Comfort and productivity increase.

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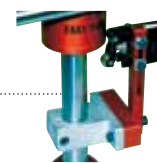
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Easy Push system operates only at a preset height by using a mechanical stop that is set along the pole.

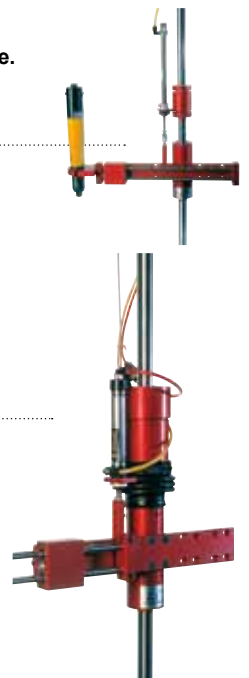
Model	For	Pushing force (kg)	Stroke (mm)	Type	Code
EASY PUSH	BA 12 R	5	125	pneumatic	1200099
EASY PUSH	BA 25 R	9	160	-	1200102
EASY PUSH	BA 40 & 100 R	9	200	-	1200103
EASY PUSH	BA 12 R	5	125	electric	1200109
EASY PUSH	BA 25 R	9	160	-	1200110
EASY PUSH	BA 40 & 100 R	9	200	-	1200111

Model	For	Pushing force (kg)	Type	Code
BAPER	BA 12 R	5	pneumatic	1200095
BAPER	BA 25 R	8	-	1200096
BAPER	BA 40 & 100 R	8	-	1200097
BAPER	BA 12 R	5	electric	1200105
BAPER	BA 25 R	8	-	1200106
BAPER	BA 40 & 100 R	8	-	1200107

Model	For	Code
Safety kit	BA 12 & 25 R	1200134
Safety kit	BA 40 & 100 R	1200135
U3-D interface for GX screwdrivers	BA12 to BA100	1041888



The downward assistance is activated only when the powerbits is in contact with the screw.



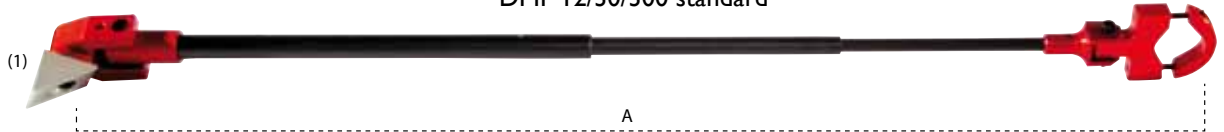
TELESCOPING ARMS

DMF Serie : Erase your torque reaction until 300 Nm.



- Confort : 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.

DMF 12/30/300 standard



Adjustable balancing kit (keep the tool in the right position)



DMF SERIES

Model	Max torque (Nm)	Standard clamp	Tool Ø (mm)	A mini (mm)	A maxi (mm)	Code
DMF 5/950	5	P1	20 - 35	460	950	1200445
DMF 12/950	12	P1	25 - 40	460	950	1200073
DMF 12/1500	12	P1	25 - 40	650	1500	1200280
DMFi 12/2000	12	P1	25 - 40	820	2000	1200281
DMF 30/960	30	P1	28 - 52	475	960	1200074
DMF 30/1500	30	P1	28 - 52	656	1500	1200282
DMF 30/2000	30	P1	28 - 52	823	2000	1200283
DMF 30/2500	30	P1	28 - 52	993	2500	1200284
DMFi 70/1500	70	P2	35 - 52	667	1500	1244020
DMFi 70/2000	70	P2	35 - 52	833	2000	1244021
DMFi 70/2500	70	P2	35 - 52	1000	2500	1244022
DMFi 120/1500	120	P2	35 - 52	691	1500	1244023
DMFi 120/2000	120	P2	35 - 52	857	2000	1244024
DMFi 120/2500	120	P2	35 - 52	1023	2500	1244025
DMFi 200/1500	200	P2	Maxi 63	920	1500	1244026
DMFi 200/2000	200	P2	Maxi 63	1170	2000	1244027
DMF 200/2500	200	P2	Maxi 63	1420	2500	1244028
DMF 300/1500	300	P2	Maxi 73	970	1500	1244029
DMF 300/2000	300	P2	Maxi 73	1220	2000	1244030
DMF 300/2500	300	P2	Maxi 73	1470	2500	1244031

DMFi 70/120/200 inverted

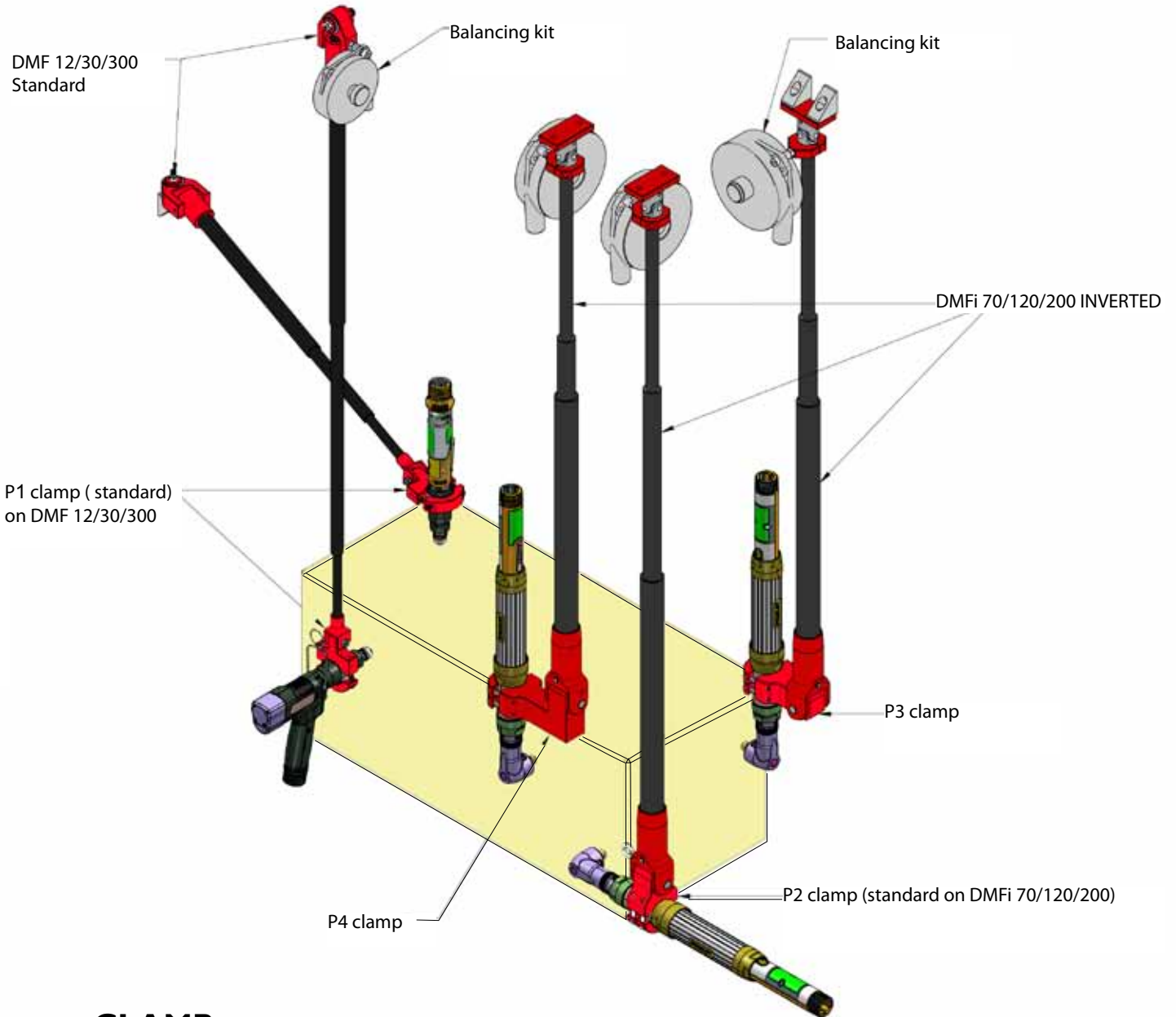
Reinforced sleeve for long durability and extreme rigidity

Large choice of clamps according to the tool position required

TELESCOPING ARMS

DMF arms may be installed in vertical and horizontal position. A large choice of clamps is available to meet your various applications.

CHOOSE THE RIGHT CLAMP



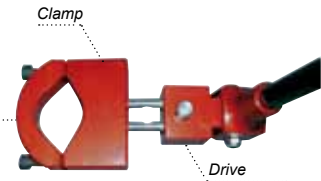
CLAMP

	P1	P2	P3	P4
DMF 12	Standard	Not available	Not available	Not available
DMF 30	Standard	1200300	1200301	1200302
DMFi 70	1244032	Standard	1244013	1244015
DMFi 120	1244033	Standard	1244014	1244016
DMFi 200	1244033	Standard	On request	On request
DMF 300	On request	Standard	On request	On request

ACCESSORIES

Quick release clamps

Model	For	Code
Quick change clamp	DMF 12	1200016
Quick change clamp	DMF 30	1200017
Quick change drive	DMF 12	1200470
Quick change drive	DMF 30	1200471



Accessories for linear guide bush

Model	For	Power supply	Code
Air locker*	DMF 12 & 30	Pneumatic	1200442
Air locker*	DMFi 70 & 120	-	1200706
Air locker*	DMFi 12 & 30	Electric	1200869
Air locker*	DMFi 70 & 120	-	1200707
Trolley adapter	DMF 12 & 30	-	1200341
Trolley adapter	DMFi 70, 120, 200	-	1200708

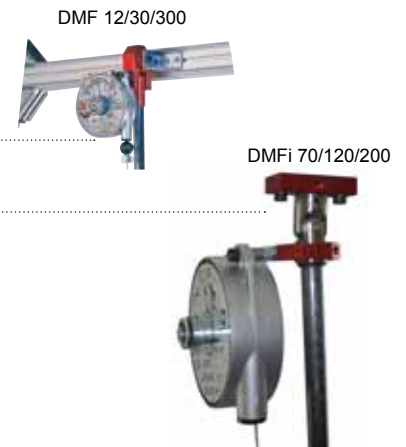
*Recommended over 9 Nm.
Motor rotation signal required on tool.
Delivered with a single carriage.*



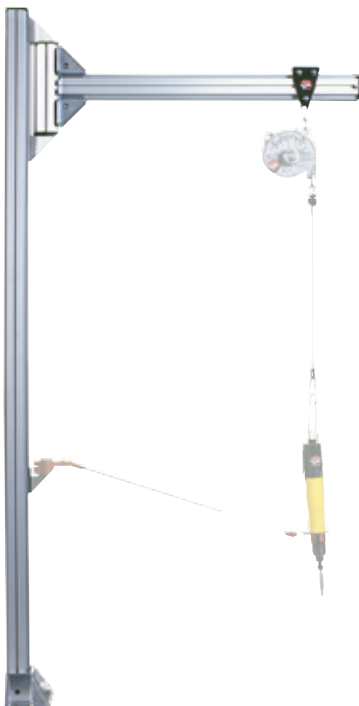
Balancing kit ⁽¹⁾ for vertical mounting

Balancing capacity (Kg)	For	Code
1 to 2	DMF 12	1200303
1 to 2,5	DMF 30	1200304
2 to 4	DMF 30	1200305
2 to 4	DMFi 70, 120, 200	1200701
4 to 6	DMFi 70, 120, 200	1200702
6 to 8	DMFi 70, 120, 200	1200703
4 to 8	DMF 300	1200704
6 to 10	DMF 300	1200705

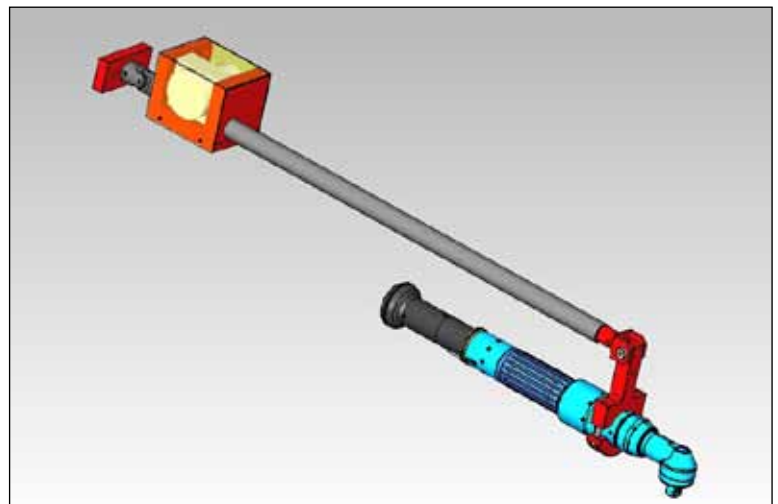
For DMF 200, use 2 swivel support balancers to improve the slide of carbon fiber rod.



SWIVEL SUPPORT PP 1406



Delivered without tool, balancer and DMF arm.



DMF with built-in cable coder to control the tool position.

Model	Dimensions	Maxi Load (kg)	Code
PP 1406 with roller slide	1400 x 600 mm	15	1200571
Additional roller slide	CR 5050	-	1209004

TRAVELLING ARMS

BA..C Serie Ideal for tightening operations on large surface or with repetitive tightening tasks.



BA..C Serie

Model	Maxi Torque (Nm)	Tool Ø (mm)	Maxi Load (kg)	Code
BA 25 C	25	28-52	2,2	I200450
BA 60 C	60	28-52	3,5**	I200451

Delivered without horizontal rail.

** with additional balancer. Code I000143

Rails

Model	Lenght (mm)	Stroke (mm)	Code
Horizontal linear guide bush	600	420	I200294
Horizontal linear guide bush	1000	820	I200295
Horizontal linear guide bush	1500	1320	I200296
Horizontal linear guide bush	2000	1820	I200297



Downward assistance Kits

Model	Pushing force (kg)	Stroke (mm)	Type	Code
EASY PUSH 25 P	9	160	Pneumatic	I200452
EASY PUSH 25 E	9	160	Electric	I200454
EASY PUSH 60 P	9	200	Pneumatic	I200453
EASY PUSH 60 E	9	200	Electric	I200455

Model	For	Code
Safety kit	BA 25 C	I200134
Safety kit	BA 60 C	I200135



SUSPENDED ARMS

SLIDER Serie : Erase your torque reaction until 80 Nm

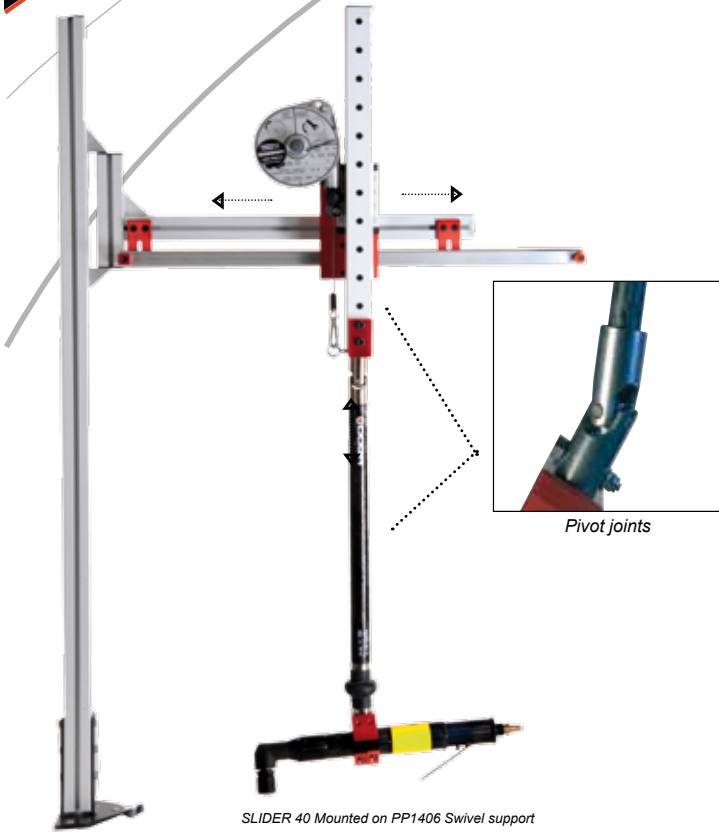


- IMPROVE YOUR COMFORT AND PRODUCTIVITY

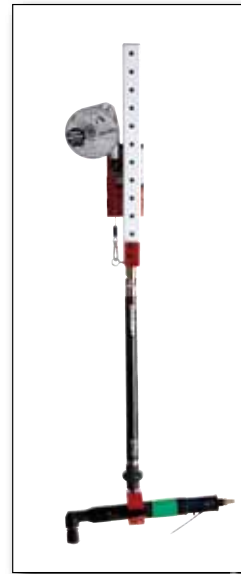
Easy to install and smart-sized the SLIDER arms improve the comfort of the operator and the productivity clearing the work area.

- IMPROVE YOUR ERGONOMY

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



SLIDER 40



SLIDER 8 COMPACT

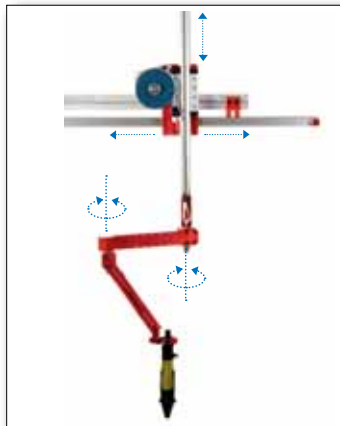


SLIDER Serie

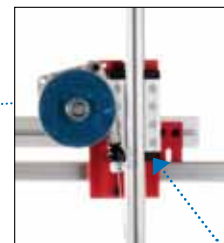
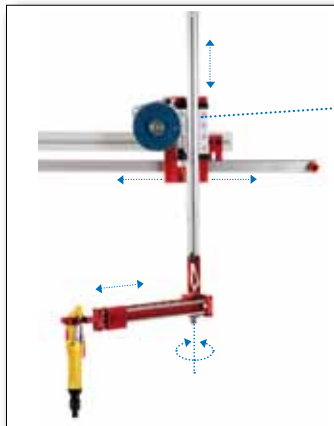
Model	Maxi Torque (Nm)	Flange Ø (mm)	Vertical Stroke (mm)	Workstation coverage (mm)	Maxi load (kg)	Code
Slider 08	8	1/4" G	450	150	1,2	I200077
Slider 08 Compact	20	1/4" G	250	150	1,2	I200179
Slider 20	20	1/4" G	450	150	1,6	I200457
Slider 40	40	32 - 52	420	150	3	I200298
Slider 80	80	35 - 52	420	150	4	I200299

Swivel support on request

Slider BA 12R



Slider BA 12



Linear guide with built-in rollers

SLIDER BA & BA..R Serie

Model	Maxi Torque (Nm)	Tool Ø (mm)	Vertical Stroke (mm)	Maxi Load (kg)	Code
Slider BA 12	12	25-40	420	1,2	I200339
Slider BA 12 R	12	25-40	420	1,2	I200340

SLIDER BA25, 40, 100 on demand.

ACCESSORIES

Extend the workstation coverage of your slider arm !

Rails for SLIDER 8, 20, 40 & SLIDER BA & BA..R

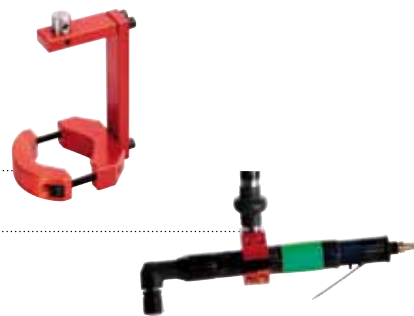
Model	Length (mm)	Stroke (mm)	Code
Horizontal linear guide bush	600	450	I200132
Horizontal linear guide bush	800	650	I200160
Horizontal linear guide bush	1000	850	I200161
Horizontal linear guide bush	1200	1050	I200162
Horizontal linear guide bush	1500	1350	I200163
Horizontal linear guide bush	2000	1850	I200164

Accessories	Code
Single carriage	I200165
Balancer carriage	I200166
Thrust stopper	I200167
Rail link	I200307



Options for SLIDER 8 and 20

Model	Code
Clamp for electric tool SLIDER 8	I200133
Clamp for electric tool SLIDER 20	I200148
Clamp for angle nutrunner SLIDER 20	I200392
Clamp for electric GX 40 Volts / SLIDER 8	I200278
GX 30 Volts adapter to mount on I200133	3000302



Rails for SLIDER 80

Model	Length (mm)	Stroke (mm)	Code
Horizontal linear guide bush	600	420	I200294
Horizontal linear guide bush	1000	820	I200295
Horizontal linear guide bush	1500	1320	I200296
Horizontal linear guide bush	2000	1820	I200297





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