

REACTION ARMS



Folding and Linear Torque Reaction Arm Series

Linear arms manoeuvre smoothly as they absorb the torque reactions from the screwdrivers providing ergonomic support for the operator. The fluid movement increases precision and production for a variety of torque applications. Linear arms keep the tool perpendicular and prevent cross threading and side load. They reduce RMI (Repetitive Motion Injury) and CTS (Carpal Tunnel Syndrome) while boosting production. Each model extends in horizontal direction and arm length is adjustable.

A diameter reduction adapter (code 234545) is available for our PLUTO35 and PLUTO50 screwdriver (Ø 57 mm).

Torque reaction arm PA2KOL, code 010600, has been designed to eliminate the reaction generated by screwdrivers when they stop at the pre-set torque. Options include table or wall mount.

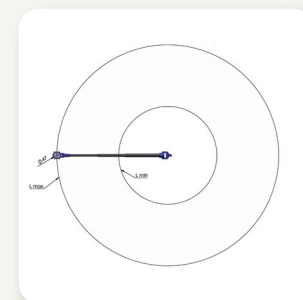
Model	Code	Max Torque Nm	Min Reach mm	Max Reach mm
PA2KOL	010600	20	440	640
LINAR1	010681	25	184	665
LINAR2	010682	50	184	665
LINART	010683	25	114	740

TELESCOPIC TORQUE REACTION ARMS

Telescopic Arm Series



CAR series torque reaction arms are designed to eliminate the reaction that screwdrivers generate when they stop at the preset torque (up to 50 Nm). Their carbon structure makes them extremely lightweight and incredibly resistant at the same time. This means that they resist degradation in high fatigue applications much better than conventional materials. A diameter reduction adapter (code 234545) is available for our PLUTO35 and PLUTO50 screwdriver (Ø 57 mm).



Model	Code	Min Reach (L min) mm*	Max Reach (L max) mm*	Weight kg	Max Torque Nm
CAR101	010661	549	906	0,25	10
CAR281	010663	490	950	0,60	25
CAR282	010664	730	1650	0,75	25
CAR501	010665	490	950	0,65	50
CAR502	010666	730	1650	0,80	50

* Measured with clamp Ø 47 mm

Suspended Torque Arm Series

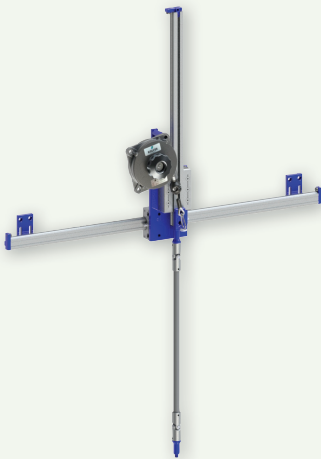
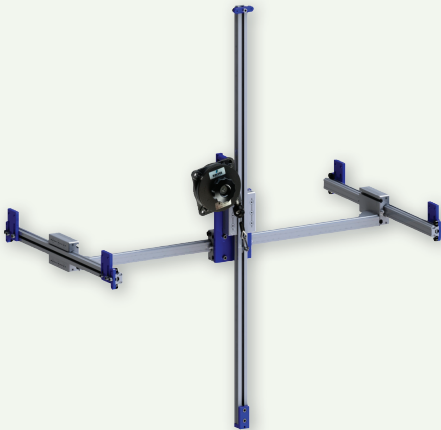
The new Suspended Torque Arms are the ideal solution to increase productivity. They can be easily installed on most workplaces to help the operator handle the screwdriver in total safety and stability:

- With minimized reaction force you will also improve finished product quality because there is no movement of the tool and all torque is absorbed in the joint.
- Improve the comfort of the operator and the productivity clearing the work area.

Three models available, depending on the motion of the axes:

- SAR15 Z -> Z Axis
- SAR15 XZ 85 -> XZ Axes
- SAR15 XYZ 855 -> XYZ Axes

The new arms are supplied without tool holder - to be purchased depending on the screwdriver:



*TOOL HOLDER FOR PLUTO
INLINE*



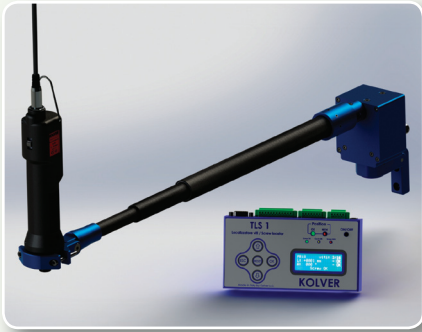
*TOOL HOLDER FOR PLUTO
WITH ANGLE HEAD*



*UNIVERSAL TOOL HOLDER
FOR ANY SCREWDRIVER*

Model	Code	Vertical Stroke "Z" (mm)	Horizontal Stroke "X" (mm)	Lateral Stroke "Y" (mm)	Max Torque Nm
SAR15 Z	010690/Z/5	364	/	/	15
SAR15 XZ 85	010690/XZ/85	364	692	/	15
SAR15 XYZ 855	010690/XYZ/855	885	692	376	15
Tool holder for PLUTO inline		010695	For any PLUTO..D, PLUTO..FR, PLUTO..D/TA and RAF..NS/FR		
Tool holder for PLUTO w/angle head		010695/P	For any PLUTO..ANG		
Universal Tool Holder		010695/UNI	For any screwdriver (max diameter 47 mm)		

TLS1 POSITIONING ARMS



TLS1/CAR

TLS1 Positioning Arm

The TLS1 Arm is an "intelligent" system that error-proofs your assembly ensuring that every screw is in the correct location at the right torque. Assembly sequences and X-Y coordinates are easily programmed with user interface screens through the keypad from the intuitive menu. Torque programs are automatically selected and enabled from the screwdriver controller based on the TLS1 Arm locations and current sequence step. No PC is required. A fixture to hold your work in the same place every time is highly recommended.

The TLS1/CAR Arm consists of a torque reaction arm with an encoder mounted at the pivot point and with a linear metering resistor. The encoder records the angle and the linear resistor records the distance. The TLS1 Control Box converts the angle counts of the encoder and the distance detected by the resistor to the precise X-Y position of the screwdriver. X-Y accuracy can be set by the operator according to each application.

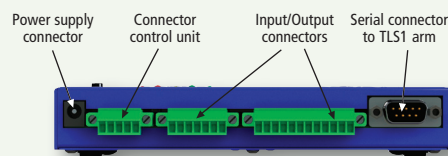
TLS1 arm includes cable for EDU1FR/SG (code 260003/1) or EDU2AE and EDU1BL/SG (code 260004/1) controllers.

Main features:

- 8 available programs.
- Up to 35 screws per program.
- Screw position (length/angle).
- Programmable tolerance.
- Statistics.
- Manual reset.
- Password protected.
- Units of measurement (mm, in).
- Language option.
- Accuracy: length ± 1 mm; angle $\pm 1^\circ$.
- External keyboard and serial port for easy programming and reporting.



TLS1 BOX





TLS1/LINAR1

TLS1 with Linear Arm

The new error proof positioning arms TLS1/LINAR1 and TLS1/LINAR2 work just like LINAR1 and LINAR2 with the addition of positioning sensors for a real time feedback on the position of the arm, which is very useful for default calibrations. Max torque and reach are the same as LINAR1 and LINAR2 respectively.

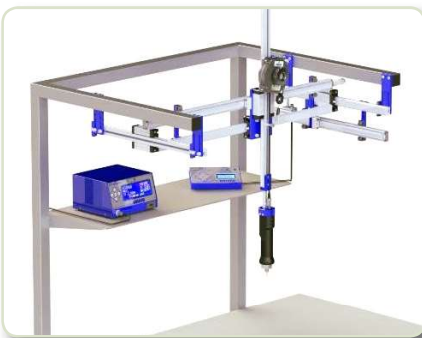
Adapter code 234545 is required for screwdriver model PLUTO35 and PLUTO50.



TLS1/LINART

TLS1 with Folding Arm

The new error proof positioning arm TLS1/LINART features a folding arm for extreme flexibility and accuracy. Thanks to the positioning sensors you can have a real time feedback on the position of the arm, which is very useful for default calibrations. Max torque and reach are the same as LINART.



SAR XYZ/TLS1

TLS1 with Suspended Arm

A SAR XYZ/TLS1 is ideal for assembly stations where space is limited. It can be easily installed on most workplaces to help the operator handle the screwdriver in total safety and stability.

The TLS1 System makes each operation truly error-proof: it tracks the X-Y-Z coordinates to make sure that each screw is tightened only when the screwdriver is in correct position.

Max torque and reach are the same as SAR XYZ.

Model	Code	Max Torque Nm	Dimensions mm Min	Dimensions mm Max	Min distance between screws at the max arm extension
TLS1/CAR281	010663/TLS1	25	500	950	9 mm
TLS1/CAR282	010664/TLS1	25	750	1670	15 mm
TLS1/CAR501	010665/TLS1	50	500	950	9 mm
TLS1/CAR502	010666/TLS1	50	750	1670	15 mm
TLS1/LINAR1	010681/TLS1	25	272	653	6 mm
TLS1/LINAR2	010682/TLS1	50	272	653	6 mm
TLS1/LINART	010683/TLS1	25	114	740	7 mm
SAR XYZ/TLS1	010690/XYZ/TLS1	15	see SAR15 XYZ 855, page 21		-

To be used with:

260004/1 Cable TLS1 for EDU2AE + EDU2AE/TOP + EDU1BL/SG

260003/1 Cable TLS1 for EDU1FR/SG