

PRECISION  
SCREW  
TIGHTENING



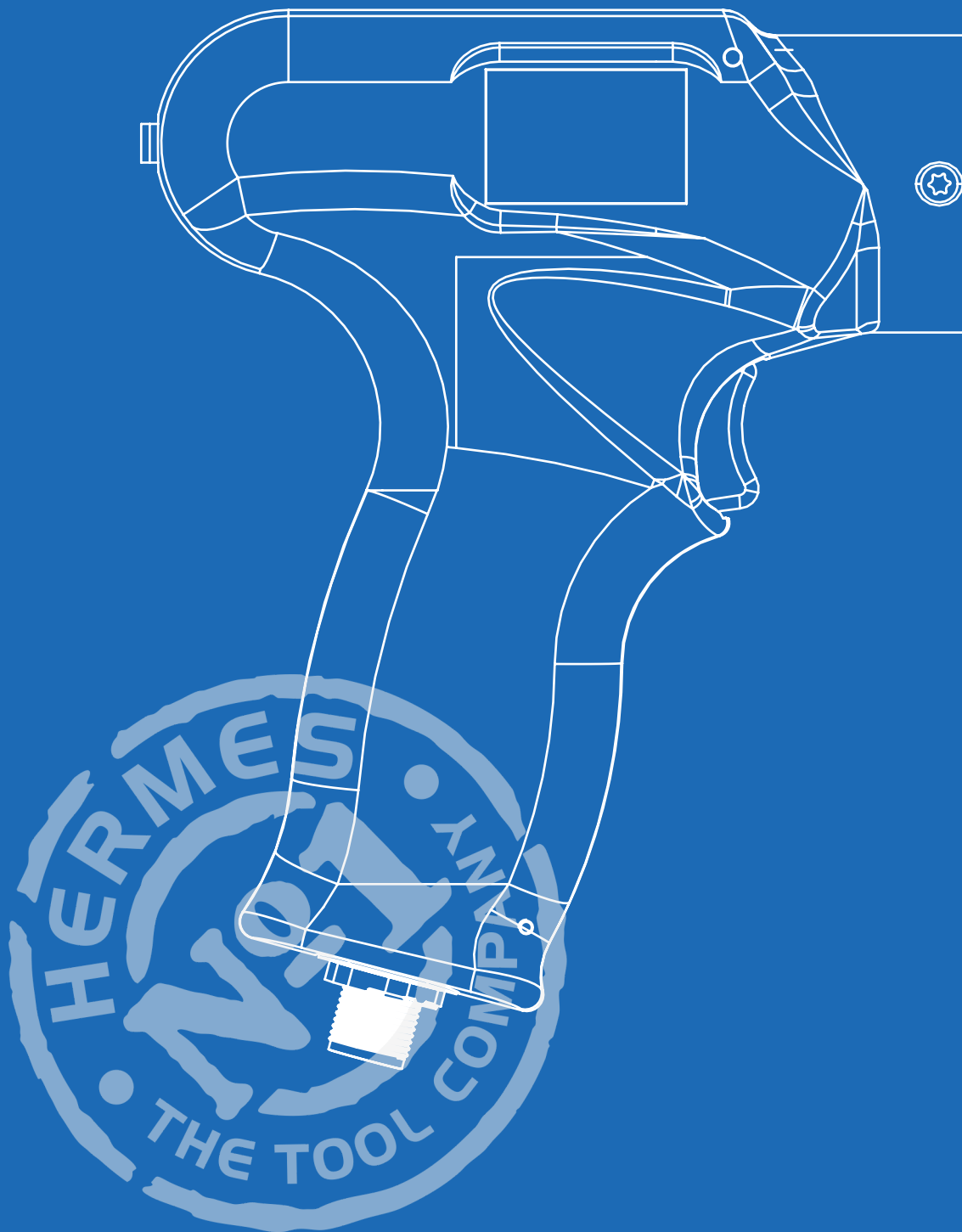
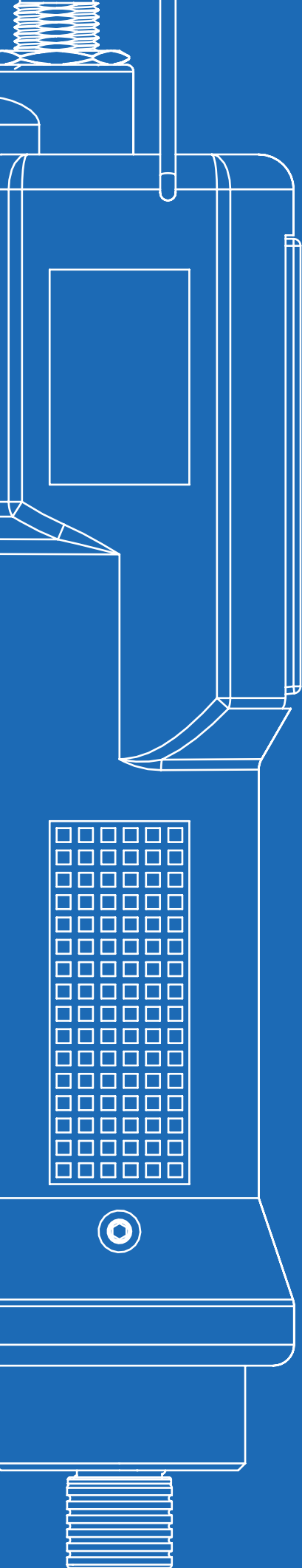
# ELECTRIC SCREWDRIVERS 2020 Catalogue

**HERMES**   
THE TOOL COMPANY

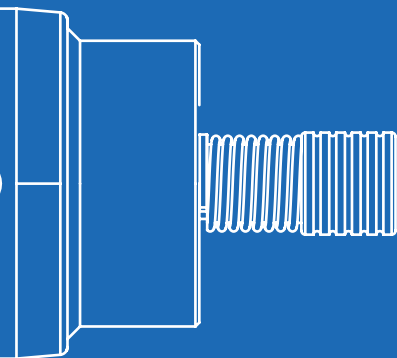
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# KOLVER



**KOLVER**



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# Kolver's History

*30 Years of success*

Simple, accurate, cost effective, their design was so good they are still popular.



**FAB & RAF Series reach the market**

**1989**

**1998**

**1992**

## Kolver: a star is born



At the time Kolver was founded, the market was dominated by air tools. Few people believed in electric tools – we went all in.

## A Year of Firsts



### **The first ISO9000 Certification**

The first electric screwdriver manufacturing company to be certified.

### **The first ESD-safe driver in the world**

We were the first and remained unequalled in the market for 4 years.



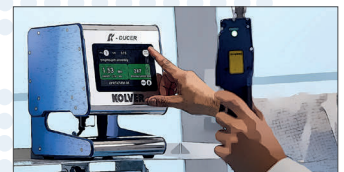
KOLVER Srl is currently one of the major players in the global market of electric screwdrivers for industry. Founded in 1989, KOLVER has soon taken the leadership in the European market of precision electric screwdrivers for industry. Thousands of state-of-the-art drivers are produced every year in Italy and then shipped to more than 30 Countries worldwide. Product innovation, rigorous respect for man and his environment and fast and accurate service have been the key factors of KOLVER's success.

Our famous PLUTO Series was launched in 2000 and since then it has been often imitated, but never duplicated.



**PLUTO Screwdrivers  
set a new standard**

The introduction of K-DUCER screwdrivers marks a turning point – fully Industry 4.0 ready, K-DUCER represents the next generation of screw tightening.



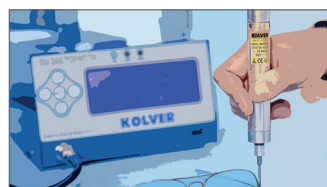
**K-DUCER is the  
new challenge**

**2011**

**2000**

**2019**

**The MITO Range  
joins the family**



Specifically designed for high-precision applications, MITO tools were born to guarantee the same flexibility of current-controlled screwdrivers even on low torques.

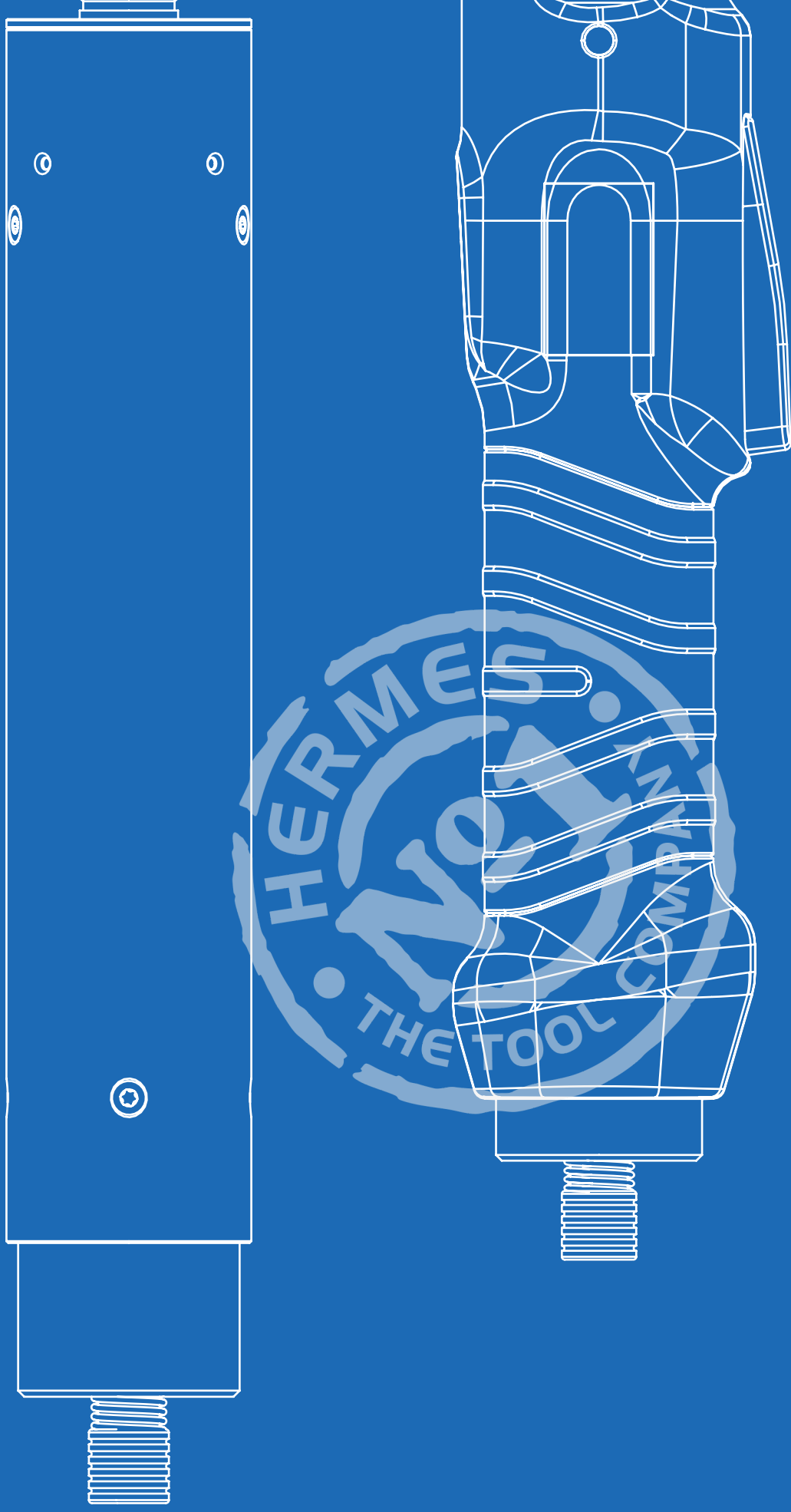


# KOLVER: MORE QUALITY THAN YOU MAY EVER NEED

You've got an assembly job to do, and there are a lot of people counting on you to get it done right. At KOLVER, we know what you are looking for. We deliver the most innovative and cost-effective electric fastening systems in the industry and that's why our tools have countless happy users and... pale imitators worldwide!

KOLVER solutions represent the true answer to your assembly needs. ISO 9001 certified since 1998, Kolver's mission has always been to fulfill customers' expectations, delivering the right quality products at the right time, at the right price. About 50% of the products in our catalogue have been launched or upgraded during the last 3 years. Clutch tools, current-control tools, transducerized tools: inline, pistol, angle and fixtured, along with controllers and software in an outstanding combination of ergonomics, performance, error proofing and durability. Kolver range helps you maximize your productivity and stay ahead of your competition.

SERIES	CLUTCH TOOLS	TORQUE & ANGLE CURRENT CONTROL	TORQUE & ANGLE TRANSDUCERIZED	TORQUE RANGE Nm	TORQUE RANGE in.lbs
FAB	•			0.05 - 1.8	0.44 - 15.9
RAF	•			0.7 - 5.0	6.2 - 44.25
KBL	•			0.04 - 4.0	0.35 - 35.4
ACC	•			0.2 - 4.5	1.77 - 39.8
NATO		•		0.01 - 0.5	0.09 - 4.4
MITO		•		0.2 - 1.5	1.8 - 13.3
PLUTO	•	•		0.5 - 70	4.4 - 664
KDS			•	0.5 - 15	4.4 - 132.8



## TRANSDUCERIZED SCREWDRIVERS



## K-DUCER Transducerized Screwdrivers | Torque range 0.1 – 15 Nm

K-Ducer is the new A-class intelligent transducerized assembly system from Kolver, the electric tool pioneer since 1989. The system consists of an advanced state-of-the-art controller and a range of handheld and fixtured electric screwdrivers with torque up to 15 Nm (to be extended to 50 Nm soon).

### Finest accuracy and precision

KDS transducerized electric tools cover all assembly line requirements for an accurate, high-quality torque and angle-controlled tightening experience.

A built-in compact transducer provides torque control with excellent repeatability.

### Excellent ergonomics

KDS screwdrivers feature unsurpassed ergonomics, soft touch design, status LED, temperature protection combined with full traceability and error-proofing capabilities.

Available in straight, pistol and fixture configuration.

### Connectivity and Industry 4.0

KDS tools are the ideal solution for your Industry 4.0 production line. Built-in LED lights give you immediate feedback on each tightening process, i.e. you'll be able to check at a glance whether the part is correctly tightened or not.

KDS screwdrivers work in combination with KDU control units to gather, analyse and process detailed assembly information.

Their built-in transducer continuously reads torque and position of the screw and sends the gathered data to the KDU controller for analysis.

### Available Housings



INLINE (KDS-PL) – Inline versions available in lever start. ESD-safe option available on models KDS-PL /ESD.



PISTOL GRIP – Trigger start, pistol grip available with top connector (KDS-PL P/U) or bottom connector (KDS-PL P). Also available in ESD-safe option (KDS-PL P/ESD and KDS-PL P/U/ESD).



ALUMINIUM BODY (KDS-PL CA) – Specifically designed for automation. Easy to install on any machine or robot. Version with flange mount available



## Inline KDS Screwdrivers

Code	Model	Torque Nm	RPM min-max	Dimensions mm	Weight kg	Bit Drive
175015	KDS-MT1.5	0.1 - 1.5	50 - 850	254 x 52	0.7	Hex 1/4"
135006	KDS-PL6	0.5 - 6	50 - 850	251 x 52	0.7	Hex 1/4"
135010	KDS-PL10	0.8 - 10	50 - 600	251 x 52	0.7	Hex 1/4"
135015	KDS-PL15	0.5 - 15	50 - 320	251 x 52	0.7	Hex 1/4"

## Pistol grip KDS Screwdrivers

Code	Model	Torque Nm	RPM min-max	Dimensions mm	Weight kg	Bit Drive
175016	KDS-MT1.5P	0.1 - 1.5	50 - 850	186 x 172 x 50	0.7	Hex 1/4"
135007	KDS-PL6P	0.5 - 6	50 - 850	186 x 170 x 50	0.7	Hex 1/4"
135011	KDS-PL10P	0.8 - 10	50 - 600	186 x 170 x 50	0.7	Hex 1/4"
135016	KDS-PL15P	0.5 - 15	50 - 320	186 x 170 x 50	0.7	Hex 1/4"

## Inline KDS Screwdrivers in ESD-safe housing

Code	Model	Torque Nm	RPM min-max	Dimensions mm	Weight kg	Bit Drive
175015/ESD	KDS-MT1.5/ESD	0.1 - 1.5	50 - 850	254 x 52	0.7	Hex 1/4"
135006/ESD	KDS-PL6/ESD	0.5 - 6	50 - 850	251 x 52	0.7	Hex 1/4"
135010/ESD	KDS-PL10/ESD	0.8 - 10	50 - 600	251 x 52	0.7	Hex 1/4"
135015/ESD	KDS-PL15/ESD	0.5 - 15	50 - 320	251 x 52	0.7	Hex 1/4"

## Pistol grip KDS Screwdrivers in ESD-safe housing

Code	Model	Torque Nm	RPM min-max	Dimensions mm	Weight kg	Bit Drive
175016/ESD	KDS-MT1.5P/ESD	0.1 - 1.5	50 - 850	186 x 172 x 50	0.7	Hex 1/4"
135007/ESD	KDS-PL6P/ESD	0.5 - 6	50 - 850	186 x 170 x 50	0.7	Hex 1/4"
135011/ESD	KDS-PL10P/ESD	0.8 - 10	50 - 600	186 x 170 x 50	0.7	Hex 1/4"
135016/ESD	KDS-PL15P/ESD	0.5 - 15	50 - 320	186 x 170 x 50	0.7	Hex 1/4"

## Aluminium housing KDS Screwdrivers

Code	Model	Torque Nm	RPM min-max	Dimensions mm	Weight kg	Bit Drive
175115	KDS-MT1.5CA	0.1 - 1.5	50 - 850	237 x 40	0.9	Hex 1/4"
135106	KDS-PL6CA	0.5 - 6	50 - 850	248 x 40	0.9	Hex 1/4"
135110	KDS-PL10CA	0.8 - 10	50 - 600	248 x 40	0.9	Hex 1/4"
135115	KDS-PL15CA	0.5 - 15	50 - 320	248 x 40	0.9	Hex 1/4"

## Aluminium housing KDS Screwdrivers with flange mount

Code	Model	Torque Nm	RPM min-max	Dimensions mm	Weight kg	Bit Drive
175115/FN	KDS-MT1.5CA/FN	0.1 - 1.5	50 - 850	316 x 40	1.1	Sq 3/8"
135106/FN	KDS-PL6CA/FN	0.5 - 6	50 - 850	350 x 40	1.1	Sq 3/8"
135110/FN	KDS-PL10CA/FN	0.8 - 10	50 - 600	350 x 40	1.1	Sq 3/8"
135115/FN	KDS-PL15CA/FN	0.5 - 15	50 - 320	350 x 40	1.1	Sq 3/8"

## Angle head KDS Screwdrivers

Code	Model	Torque Nm	RPM min-max	Dimensions mm	Weight kg	Bit Drive
135006/A	KDS-PL6/ANG	0.5 - 5.5	50 - 850	288 x 52	0.7	Hex 1/4"
135010/A	KDS-PL10/ANG	0.8 - 9	50 - 600	288 x 52	0.7	Hex 1/4"
135015/A	KDS-PL15/ANG	0.5 - 14	50 - 320	326 x 52	0.9	Sq 3/8"

**IMPORTANT:** Continuous use over 80% of torque range is not recommended.

KDS Screwdrivers work in combination with KDU series controllers. See page 10 for further information.



## KDU-1 Controllers | K-Ducer Power Units

The KDU-1 Series of controllers give you full control of your fastening operation in an industry leading compact size.

### Features

With features like touch screen color display, multiple programs and sequences, intuitive programming interface, torque and angle control and graphs output, the KDU-1 units provide unmatched performance and value.

### Easy to use

Set-up and operation are really an easy task. Units may be programmed either through the touch screen or via a PC software.

### Different models, plenty of options

The power unit comes in two versions depending on the functionality level required.

The KDU-1 basic unit includes serial and USB ports.

In addition to that, KDU-1A advanced controllers feature a Modbus TCP communication port.

Most communication protocols are available with the support of external modules.

KDU controllers will operate all KDS series of tools.

### Connectivity and Industry 4.0

Industry 4.0 – The Fourth Industrial Revolution – is driving the evolution of the assembly process. The digitalization of manufacturing and assembly means shifting the way we look at manufacturing in terms of production optimization and automation.

The more informed you are, the better decisions you can make. Having smart tools on your line means that you have specific tightening information fed into the production system – information concerning critical details of your components, materials and tightening process.

This provides a valuable opportunity to increase efficiency and results in pro-active problem solving, alongside with considerable energy savings from efficiency improvements.

### Optional supports

A table stand or wall mount are available for KDU units.

Wall mounts can be easily installed on any vertical surface and allow KDU controllers to tilt up/down and left/right – place your KDU unit anywhere and adjust its position to best suit your needs.

A table stand ensures quick access to cables when placing your KDU unit on a flat surface. It is the best option in case you'd like to keep your KDU controller right at hand.

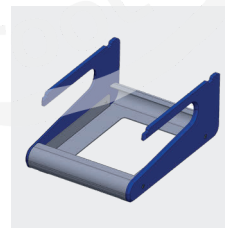
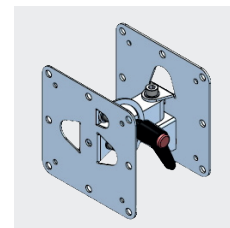


Table Stand



Wall Bracket

### Supports for KDU control units

Code	Model	Description
010400	Table stand	For table use
010401	Wall mount tilting bracket	For wall or column use



Features	KDU-1 Basic	KDU-1A Advanced
5" Touch Screen	•	•
Number of programs	64	64
Sequences	8	8
20 Input NPN	•	•
21 Outputs	•	•
Torque graph	•	•
Bar code reading	•	•
Torque & angle control	•	•
Multiple parameters	•	•
RS 232 (2)	•	•
Mini USB	•	•
USB	•	•
Modbus TCP		•
Devicenet		+
CC-Link		+
Profibus		+
Ethernet / IP		+
Profinet		+
Profinet FO		+
Ethercat		+
CC-Link IE Field		+
Powerlink		+

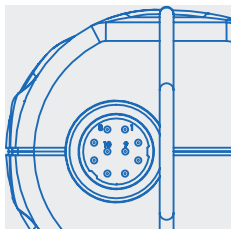
+ = Requires separate module to convert Modbus TCP to the desired protocol



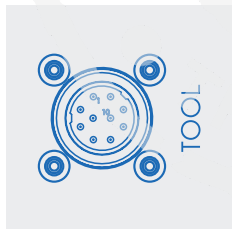


**Cables** | K-Ducer Screwdrivers and Control Units

Cables are required to complete any K-Ducer system, as they connect KDS screwdrivers to KDU control units. They're made of sturdy materials to guarantee exceptional resistance to wear and tear. Also, they're superquick to connect thanks to their one-click connector. Two different lengths (2.5 m and 5 m) are available to meet any production requirement.



Driver connector (KDS view)

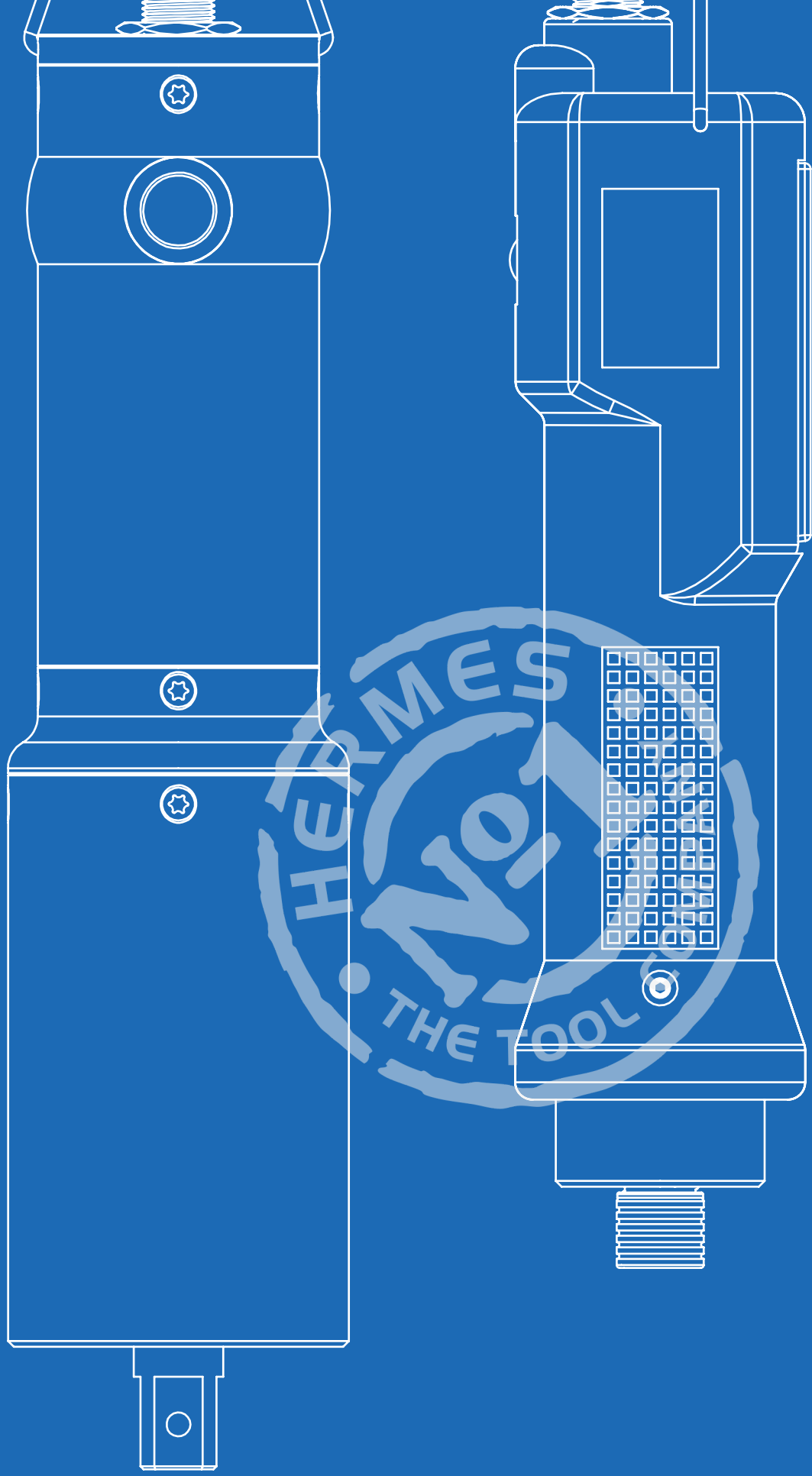


Unit connector (KDU view)

Cables to connect KDS screwdrivers to KDU units

Code	Model	Description
250064	Cable 2.5 m	M16 10pin 2.5 m
250064/H	Cable 2.5 m, heavy duty	M16 10pin 2.5 m
250564	Cable 5 m	M16 10pin 5 m
250564/H	Cable 5 m, heavy duty	M16 10pin 5 m





## CURRENT-CONTROLLED SCREWDRIVERS



### MITO Screwdrivers | Torque range 0.35 – 1.5 Nm

MITO screwdrivers are the ideal solution for high-precision low torques. Their accurate and smooth torque control makes them perfect for the mobile, watchmaking and eyewear industry.

#### Precise low-torque screwdrivers

Kolver's experience with current-controlled technology has led to the creation of the MITO series; truly accurate current-controlled torque drivers designed for applications in which torques below 1.5 Nm are required.

#### Long-lasting accuracy

MITO drivers feature an innovative electric motor coupled with planetary gearboxes, producing extremely low inertia and minimal friction for long life and very accurate torque production.

#### Compact ergonomic design

All MITO screwdrivers feature an ESD-safe housing, either in hand-held option or aluminium body for automation.

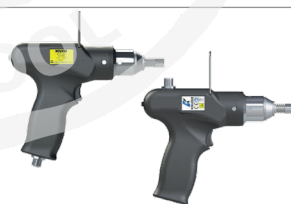
MITO drivers are available in pistol or inline style, catering to operator preference and comfort.

Foot pedals are available in cases where the operator would like the convenience of manual operation with the MITO/CA series.

#### Available Housings



INLINE (MITO..D) – Inline versions available in lever start, current-controlled style.



PISTOL GRIP – Trigger start, pistol grip available with top connector (MITO15P/U) or bottom connector (MITO15P).



ALUMINIUM BODY (MITO..CA) – For automation, they can also be used with foot pedals for manual operations. Also available with flange mount.





## Inline MITO Screwdrivers

Code	Model	Torque Nm	RPM min-max	Dimensions mm	Weight kg	Bit Drive
170015	MITO15D	0.35 - 1.5	450 - 850	216 x 33	0.35	Hex 1/4"

## Pistol grip MITO Screwdrivers

Code	Model	Torque Nm	RPM min-max	Dimensions mm	Weight kg	Connector Option
170014	MITO15P	0.35 - 1.5	450 - 850	159 x 195 x 45	0.50	Bottom connector
170014/U	MITO15P/U	0.35 - 1.5	450 - 850	163 x 195 x 45	0.50	Top connector

## Aluminium housing MITO Screwdrivers

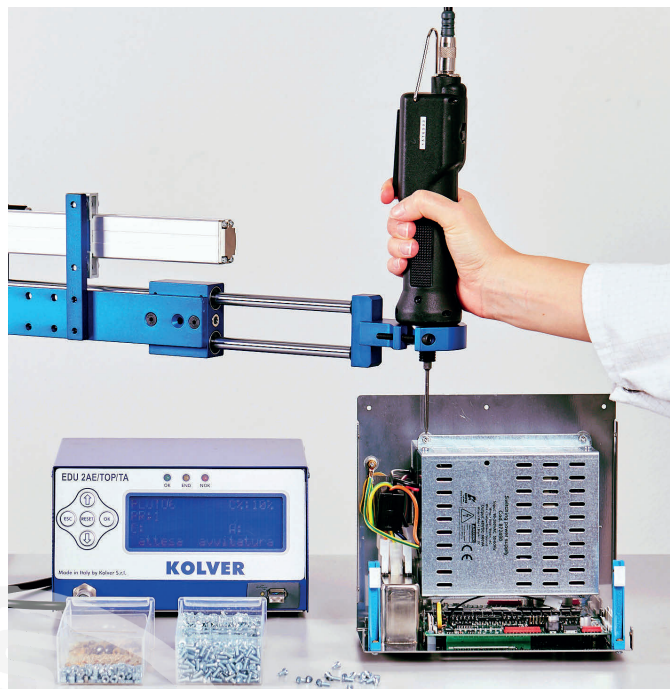
Code	Model	Torque Nm	RPM min-max	Dimensions mm	Weight kg	Bit Drive
170016	MITO15CA	0.35 - 1.5	450 - 850	193 x 32	0.36	Hex 1/4"
Model with flange mount						
170016/FN	MITO15CA/FN	0.35 - 1.5	450 - 850	271 x 33	1.3	Hex 1/4"

## Control units for MITO Screwdrivers

Code	Model	Single Program	Torque Value in Nm	Serial Port	Multitorque (8 P-sets)	USB Port	PC Software	Weight kg	Dimensions mm
032000	EDU2AE	•	-	-	-	-	-	2.40	195 x 170 x 110
032000/HPRO	EDU2AE/HPRO	•	•	•	-	-	-	2.40	195 x 170 x 110
032000/TOP	EDU2AE/TOP	-	•	•	•	-	-	2.50	190 x 205 x 120
032000/TOP/E	EDU2AE/TOP/E	-	•	•	•	•	•	2.50	190 x 205 x 120

See page 18 for a complete list of features.

**IMPORTANT:** Continuous use over 80% of torque range is not recommended.



## PLUTO Hand-held Screwdrivers | Torque range 0.5 – 70 Nm

PLUTO® (PLUs TORque) are among the most advanced DC tools in the assembly market. Priced at the same level as obsolete air tools, PLUTO® screwdrivers are available in plenty of options to meet any assembly requirement.

### Extremely versatile

PLUTO® Series screwdrivers feature a wide torque range: starting at 0.5 Nm with PLUTO3, they reach up to 70 Nm with PLUTO70ANG. Pick the one that best suits your application among the many current-controlled models.

Also, you can handle up to 8 different joints by connecting your PLUTO screwdriver to one of our EDU2AE/TOP multiprogram control units (see page 18).

### Precise and accurate

High performances are guaranteed on any type of joint. PLUTO® current-controlled tools can reach 70 Nm with a repeatability of +/-5% with a unique electronic torque control system.

### Long-lasting quality

PLUTO® Screwdrivers feature an innovative coreless motor with low inertia and friction and absence of iron losses for extreme efficiency and extended life.

Planetary gearboxes are made of high-quality composite materials for excellent accuracy and repeatability throughout the wide 0.5 - 70 Nm torque range.

### Highest environmental protection requirements

- Low energy consumption
- No polluting emissions
- Low noise level
- Minimal vibrations
- ESD-safe

### Available Housings



INLINE (PLUTO..D) – Inline versions available in lever start. Current-controlled style. Bit Drive: 1/4" hex quick change chuck. Available with reduced front ring upon request.



PISTOL GRIP – Trigger start, pistol grip available with top connector (PLUTO..P/U) or bottom connector (PLUTO..P). Current-controlled style. Bit Drive: 1/4" hex quick change chuck



ALUMINIUM BODY (PLUTO..CA/SR) – For 20+ Nm torque models. Current-controlled style. With start and reverse buttons.



ANGLE MODELS (PLUTO..ANG) – Inline models with angle head attached. Current-controlled style.





## Inline PLUTO Screwdrivers

Code	Model	Torque Nm	RPM min-max	Dimensions mm	Weight kg	Bit Drive
130203	PLUTO3D	0.5 - 3	370 - 1300	226 x 40	0.55	Hex 1/4"
130206	PLUTO6D	0.85 - 6	200 - 850	226 x 40	0.55	Hex 1/4"
130211/N	PLUTO10D/N	1.5 - 10	110 - 600	226 x 40	0.55	Hex 1/4"
130216/N	PLUTO15D/N	2.0 - 15	60 - 320	226 x 40	0.60	Hex 1/4"

## Pistol grip PLUTO Screwdrivers

Code	Model	Torque Nm	RPM min-max	Dimensions mm	Weight kg	Connector Option
130204	PLUTO3P	0.5 - 3	370 - 1300	159 x 174 x 45	0.55	Bottom connector
130205	PLUTO3P/U	0.5 - 3	370 - 1300	163 x 174 x 45	0.55	Top connector
130207	PLUTO6P	0.85 - 6	200 - 850	159 x 174 x 45	0.55	Bottom connector
130207/U	PLUTO6P/U	0.85 - 6	200 - 850	163 x 174 x 45	0.55	Top connector
130210/N	PLUTO10P/N	1.5 - 10	110 - 600	159 x 174 x 45	0.55	Bottom connector
130210/U/N	PLUTO10P/U/N	1.5 - 10	110 - 600	163 x 174 x 45	0.55	Top connector
130215/N	PLUTO15P/N	2.0 - 15	60 - 320	159 x 174 x 45	0.55	Bottom connector
130215/U/N	PLUTO15P/U/N	2.0 - 15	60 - 320	163 x 174 x 45	0.55	Top connector

## Aluminium body PLUTO Screwdrivers

Code	Model	Torque Nm	RPM min-max	Dimensions mm	Weight kg	Bit Drive
133221/SR	PLUTO20CA/SR	3.0 - 20	50 - 200	232 x 53	1.10	Sq 3/8"
133236/SR	PLUTO35CA/SR	3.0 - 35	40 - 140	247 x 57	1.50	Sq 3/8"
133250/SR	PLUTO50CA/SR	5.0 - 50	20 - 90	252 x 57	1.50	Sq 1/2"

## Angle head PLUTO Screwdrivers

Code	Model	Torque Nm	RPM min-max	Dimensions mm	Bit Drive	Start Option
130203/A	PLUTO3ANG	0.5 - 2.5	370 - 1300	261 x 40	Hex 1/4"	Lever start
130206/A	PLUTO6ANG	1.0 - 6	200 - 850	261 x 40	Hex 1/4"	Lever start
130208	PLUTO8ANG	1.5 - 8	110 - 600	261 x 40	Hex 1/4"	Lever start
130216/A	PLUTO15ANG	2.0 - 13	100 - 320	286 x 40	Sq 3/8"	Lever start
133220	PLUTO20ANG	3.0 - 18	60 - 200	302 x 40	Sq 3/8"	Start/Reverse Buttons
133231	PLUTO30ANG	6.0 - 30	30 - 130	435 x 54	Sq 3/8"	Start/Reverse Buttons
133245	PLUTO45ANG	10 - 45	20 - 90	445 x 57	Sq 1/2"	Start/Reverse Buttons
133270	PLUTO70ANG	15 - 70	20 - 50	458 x 57	Sq 1/2"	Start/Reverse Buttons

## Control units for PLUTO Screwdrivers

Code	Model	Single Program	Torque Value in Nm	Serial Port	Multitorque (8 P-sets)	USB Port	PC Software	Weight kg	Dimensions mm
032000	EDU2AE	•	-	-	-	-	-	2.40	195 x 170 x 110
032000/HPRO	EDU2AE/HPRO	•	•	•	-	-	-	2.40	195 x 170 x 110
032000/TOP	EDU2AE/TOP	-	•	•	•	-	-	2.50	190 x 205 x 120
032000/TOP/E	EDU2AE/TOP/E	-	•	•	•	•	•	2.50	190 x 205 x 120

See page 18 for a complete list of features.

**IMPORTANT:** Continuous use over 80% of torque range is not recommended.



## EDU2AE Control Units | For PLUTO and MITO Screwdrivers

EDU2AE control units are meant to be used in combination with Kolver current controlled MITO and PLUTO and/or clutch PLUTO screwdrivers. EDU2AE series switching controllers act as an AC to DC transformer and torque controller. The electronic control circuit cuts the power supply to the motor as soon as the pre-set torque has been reached.

### Universal usage

All units are equipped with a high power switching transformer with 90-260 V AC power supply for universal usage. EDU2AE control units are multilanguage: you can choose among English, Italian, German, French, Portuguese or Spanish.

### Single & Multi-Torque

Choose the control unit that best suits your requirements among our single-torque controllers or multi-torque. Multi-torque control units are designed to expand the functionality of PLUTO screwdrivers by enabling multiple torque settings (up to 8) using one controller and one driver.

### Extremely accurate

Thanks to the latest state-of-the-art advanced software for torque controlling it is now possible to reach the most accurate results with CM / CMK values higher than ever. The combination of the software and switching transformer allows the MITO & PLUTO screwdrivers to reach a +/- 5% precision all over the torque range.

### Better endurance

All units comply to norms 61000-6-2 and 61000-6-3, and therefore have better endurance in environments with high noise and interference levels. Improved EMC features are guaranteed thanks to their solid steel base and back panel.

### Connectivity and Industry 4.0

All functions can be set and controlled via user interface screens or remotely via 15 input and 11 output connectors. A wide range of accessories for remote programming and PC interface is available for the complete EDU2AE series (see page 51). EDU2AE/TOP/E and EDU2AE/TOP/TA come standard with the EXPAND software package to set, change and save all parameters via USB key & PC.

### EDU2AE & Screwdriver Series Combination

Control units	Screwdriver models	
	Hand-held	Automation
EDU2AE EDU2AE/HPRO EDU2AE/TOP EDU2AE/TOP/E	MITO D	MITO CA
	MITO P	MITO CA/FN
	PLUTO D, D/N	PLUTO CA
	PLUTO P, P/N	PLUTO CA/FN
	PLUTO P/U, P/U/N	PLUTO CA/FN2
	PLUTO CA/SR	
	PLUTO ANG	
	PLUTO ANG/SR	
EDU2AE/TOP/TA	Hand-held	Automation
	MITO D/TA	MITO CA/TA
	PLUTO D/TA	PLUTO CA/TA
	PLUTO D/TA/LED	PLUTO CA/FN/TA
	PLUTO P/TA	PLUTO CA/FN2/TA
	PLUTO CA/SR/TA	





## Control Units for PLUTO & MITO Screwdrivers / **EDU2AE Series**

Features	EDU2AE	EDU2AE/FR	EDU2AE/HPRO	EDU2AE/TOP	EDU2AE/TOP/E	EDU2AE/TOP/TA
Switching power supply	•	•	•	•	•	•
Settable Torque percentage	•		•	•	•	•
Ramp and Speed settings	•	•	•	•	•	•
Speed 1 and Speed 2 settings	•		•	•	•	•
Min/max or infinite time settings	•	•	•	•	•	•
Auto reverse	•	•	•	•	•	•
Pre Reverse			•	•	•	•
Settable loosening speed	•		•	•	•	•
Settable loosening torque	•		•	•	•	•
Run time	•	•	•	•	•	•
Prevailing torque			•	•	•	•
Clockwise/anticlockwise tightening			•	•	•	•
Password protected		•	•	•	•	•
Calibration			•		•	•
Nm - lb/in - Kgf.cm selection			•	•	•	•
Settable Min/max torque			•	•	•	•
Screw count and end cycle signal	•	•	•	•	•	•
Screw reset				•	•	•
Program reset		•	•	•	•	•
Sequence reset			•	•	•	•
Multitorque				•	•	•
Lever error			•	•	•	•
Enable/Disable loosening			•	•	•	•
Barcode			•	•	•	•
Serial print		•	•	•	•	•
Error, motor on and correct screw signals	•	•	•	•	•	•
Optional screwdriver connector on back panel		•	•			
Multilanguage	•	•	•	•	•	•
Use with DOCK04 double output connector				•	•	•
Use with PRNTR1 serial printer		•	•	•	•	•
Printing options for each program				•	•	•
Use with TLS1	•	•	•	•	•	•
>> w/ automatic program switch				•	•	•
PC programming (EDU EXPAND software)					•	•
USB flash drive & port					•	•



## Torque & Angle Hand-held Screwdrivers | Torque range 0.05 – 50 Nm

Industrial tightening requires precise control strategies. TA systems feature Torque and Angle monitoring, making it possible to manage both torque and rotation angle of the screw.

### The Torque/Angle Control

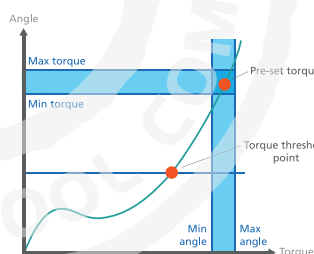
The main parameters to be controlled are the tightening torque and the rotation angle of the screw, either with torque or angle priority. The screwdriver stops automatically when the pre-set angle and torque value have been reached and an indication of OK cycle (green led turned on) is given, otherwise a red led turns on if the tightened screw doesn't match the pre-set parameters. The final torque and angle values are also displayed.

### Main features

- 'EDU Expand' software for remote programming via USB port and PC.
- USB port on front panel for uploading and downloading programs.
- Easy to program user interface screens.
- Password protected.
- Torque value in Nm, lbf.in and kgf.cm.
- Angle value in degrees.
- 8 independent programs including the options:
  - Min/Max torque value.
  - Min/Max angle value.
  - Rundown speed.
  - Slow start/Soft stop.
  - Hard/soft joint.
  - Min/Max rundown time.
  - Prevailing torque (threadcutting).
  - Auto reverse if required.
- 6 Torque & Angle strategies:
  - Torque priority: angle count from torque threshold (T) or from remote input (T/I) or from lever input (T/L).
  - Angle priority: driver stops when angle is reached from threshold torque (A) or from remote input (A/I) or from lever (A/L).

### EDU2AE/TOP/TA Torque and Angle Functionalities

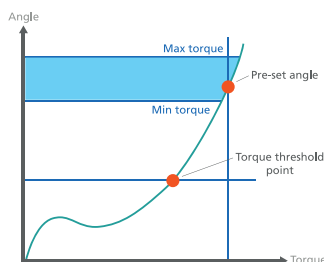
#### Torque Mode



It's the most common mode. If the final torque and angle values are within the pre-set minimum and maximum values, the screw is tightened correctly and the controller will give an OK message.

If the torque and/or angle are outside the pre-set values, the screw will be considered incorrectly tightened and the controller will give an error message.

#### Angle Mode



This mode gives priority to the angle to be reached. Starting from the pre-set threshold torque, the system will start counting the degrees and when the pre-set angle is reached the screwdriver will stop.

The control unit will give an OK or NOK message depending on whether the screw is tightened correctly or not. It is also possible to set minimum and maximum values within which the set angle must be reached.







## Inline TA Screwdrivers

Code	Model	Torque Nm	RPM min-max	Dimensions mm	Weight kg	Bit Drive
160015/TA	NATO15D/TA	0.02 - 0.27	100 - 700	210 x 33	0.25	Half moon 4 mm
160050/TA	NATO50D/TA	0.05 - 0.5	200 - 700	210 x 33	0.25	Hex 1/4"
170015/TA	MITO15D/TA	0.35 - 1.5	450 - 850	216 x 33	0.35	Hex 1/4"
130203/TA	PLUTO3D/TA	0.5 - 3	370 - 1300	226 x 40	0.55	Hex 1/4"
130206/TA	PLUTO6D/TA	0.85 - 6	200 - 850	226 x 40	0.55	Hex 1/4"
130211/TA	PLUTO10D/TA	1.5 - 10	110 - 600	226 x 40	0.55	Hex 1/4"
130216/TA	PLUTO15D/TA	2.0 - 15	60 - 320	226 x 40	0.55	Hex 1/4"
Models with LED light ring						
130203/TA/LED	PLUTO3D/TA/LED	0.5 - 3	370 - 1300	226 x 40	0.55	Hex 1/4"
130206/TA/LED	PLUTO6D/TA/LED	0.85 - 6	200 - 850	226 x 40	0.55	Hex 1/4"
130211/TA/LED	PLUTO10D/TA/LED	1.5 - 10	110 - 600	226 x 40	0.55	Hex 1/4"
130216/TA/LED	PLUTO15D/TA/LED	2.0 - 15	60 - 320	226 x 40	0.55	Hex 1/4"

## Pistol grip TA Screwdrivers

Code	Model	Torque Nm	RPM min-max	Dimensions mm	Weight kg	Connector Option
130204/TA	PLUTO3P/TA	0.5 - 3	370 - 1300	159 x 174 x 45	0.55	Bottom connector
130205/TA	PLUTO3P/U/TA	0.5 - 3	370 - 1300	163 x 174 x 45	0.55	Top connector
130207/TA	PLUTO6P/TA	0.85 - 6	200 - 850	159 x 174 x 45	0.55	Bottom connector
130207/U/TA	PLUTO6P/U/TA	0.85 - 6	200 - 850	163 x 174 x 45	0.55	Top connector
130210/TA	PLUTO10P/TA	1.5 - 10	110 - 600	159 x 174 x 45	0.55	Bottom connector
130210/U/TA	PLUTO10P/U/TA	1.5 - 10	110 - 600	163 x 174 x 45	0.55	Top connector
130215/TA	PLUTO15P/TA	2.0 - 15	60 - 320	159 x 174 x 45	0.55	Bottom connector
130215/U/TA	PLUTO15P/U/TA	2.0 - 15	60 - 320	163 x 174 x 45	0.55	Top connector

## Aluminium body TA Screwdrivers

Code	Model	Torque Nm	RPM min-max	Dimensions mm	Weight kg	Bit Drive
133221/SR/TA	PLUTO20CA/SR/TA	3.0 - 20	50 - 200	232 x 53	1.10	Sq 3/8"
133236/SR/TA	PLUTO35CA/SR/TA	3.0 - 35	40 - 140	247 x 57	1.50	Sq 3/8"
133250/SR/TA	PLUTO50CA/SR/TA	5.0 - 50	20 - 90	252 x 57	1.50	Sq 1/2"

## Angle head TA Screwdrivers

Code	Model	Torque Nm	RPM min-max	Dimensions mm	Bit Drive	Start Option
130203/A/TA	PLUTO3ANG/TA	0.5 - 2.5	370 - 1300	286 x 40	Hex 1/4"	Lever start
130206/A/TA	PLUTO6ANG/TA	1.0 - 6	200 - 850	286 x 40	Hex 1/4"	Lever start
130208/TA	PLUTO8ANG/TA	1.5 - 8	110 - 600	286 x 40	Hex 1/4"	Lever start
130216/A/TA	PLUTO15ANG/TA	2.0 - 13	100 - 320	286 x 40	Hex 1/4"	Lever start

## Control units for TA Screwdrivers

Code	Model	NATO TA Series	PLUTO, MITO TA Series	Serial Port	Multitorque (8 P-sets)	Computer Interface	Torque & Angle	Weight kg	Dimensions mm
031000/TOP/NT/TA	EDU2AE/TOP/NT/TA	•	-	•	•	•	•	2.00	190 x 205 x 120
032000/TOP/TA	EDU2AE/TOP/TA	-	•	•	•	•	•	2.50	190 x 205 x 120

See page 18 for a complete list of features.

**IMPORTANT:** Continuous use over 80% of torque range is not recommended.



## PLUTO Screwdrivers for Automation | Torque range 0.5 – 50 Nm

PLUTO CA screwdrivers are designed for automated and fixtured applications. Whether you're working with a robot or adapting your assembly line to Industry 4.0 standards, we have the right solution for automation in all its forms.

### Long-lasting quality

PLUTO® Screwdrivers feature an innovative coreless motor with low inertia and friction and absence of iron losses for extreme efficiency and extended life.

Planetary gearboxes are made of high-quality composite materials for excellent accuracy and repeatability throughout the wide 0.5 - 50 Nm torque range.

### Perfect for automatic machines

PLUTO CA are supplied in an aluminium body for a quick and easy integration with automatic machines and screwfeeding systems. PLUTO tools in CA/FN version are equipped with a flange mount and reciprocating spindle for high volume/high duty applications.

### Robotic applications

Our PLUTO CA screwdrivers can be easily interfaced with robots. The EDU2AE screwdriver controller connects to robots to determine screw speed, torque and time out. The controller sends a signal to the robot when the screw reaches the specified torque.

### Industry 4.0 ready

Simply connect the screwdriver controller to your PLC, robot or machine through the proper connectors to manage input/output signals such as start, stop, error and more.

You can also get data reports of the full tightening procedure on advanced control units like EDU2AE/TOP/E and EDU2AE/TOP/TA.

### Available Housings



ALUMINIUM BODY (PLUTO CA and PLUTO CA/N) – Specifically designed for automation. Easy to install on any machine or robot.



ALUMINIUM BODY WITH FLANGE MOUNT (PLUTO CA/FN and PLUTO CA/FN2) – Ideal for automated high volume/high duty applications. Flange and telescopic spindle available together or separately.



Robotic application  
**SCAN TO WATCH**



ESD-safe housing



### Aluminium housing PLUTO Screwdrivers

Code	Model	Torque Nm	RPM min-max	Dimensions mm	Weight kg	Bit Drive
130303	PLUTO3CA	0.5 - 3	370 - 1300	168 x 40	0.50	Hex 1/4"
133206	PLUTO6CA	0.85 - 6	200 - 850	168 x 40	0.50	Hex 1/4"
133211/N	PLUTO10CA/N	1.5 - 10	110 - 600	168 x 40	0.50	Hex 1/4"
133216/N	PLUTO15CA/N	2.0 - 15	60 - 320	168 x 40	0.50	Hex 1/4"
133221	PLUTO20CA	3.0 - 20	50 - 200	232 x 47	1.10	Sq 3/8"
133236	PLUTO35CA	3.0 - 35	40 - 140	247 x 57	1.50	Sq 3/8"
133250	PLUTO50CA	5.0 - 50	20 - 90	252 x 57	1.50	Sq 1/2"

### Aluminium housing PLUTO Screwdrivers with flange mount

Code	Model	Torque Nm	RPM min-max	Dimensions mm	Weight kg	Bit Drive
130303/FN2	PLUTO3CA/FN2	0.5 - 3	370 - 1300	268 x 40	0.70	Sq 3/8"
133206/FN2	PLUTO6CA/FN2	0.85 - 6	200 - 850	268 x 40	0.70	Sq 3/8"
133211/FN2	PLUTO10CA/FN2	1.5 - 10	110 - 600	268 x 40	0.70	Sq 3/8"
133216/FN2	PLUTO15CA/FN2	2.0 - 15	60 - 320	268 x 40	0.70	Sq 3/8"
133221/FN	PLUTO20CA/FN	3.0 - 20	50 - 200	323 x 47	1.35	Sq 3/8"
133236/FN	PLUTO35CA/FN	3.0 - 35	40 - 140	338 x 57	1.95	Sq 3/8"
133250/FN	PLUTO50CA/FN	5.0 - 50	20 - 90	351 x 57	1.95	Sq 1/2"

### Control units for PLUTO Screwdrivers

Code	Model	Single Program	Torque Value in Nm	Serial Port	Multitorque (8 P-sets)	USB Port	PC Software	Weight kg	Dimensions mm
032000	EDU2AE	•	-	-	-	-	-	2.40	195 x 170 x 110
032000/HPRO	EDU2AE/HPRO	•	•	•	-	-	-	2.40	195 x 170 x 110
032000/TOP	EDU2AE/TOP	-	•	•	•	-	-	2.50	190 x 205 x 120
032000/TOP/E	EDU2AE/TOP/E	-	•	•	•	•	•	2.50	190 x 205 x 120

See page 18 for a complete list of features.

**IMPORTANT:** Continuous use over 80% of torque range is not recommended.



## Torque & Angle Screwdrivers for Automation | Torque range 0.05 – 50 Nm

Automation requires accurate torque controlling techniques. TA automated systems feature advanced monitoring strategies such as torque and rotation angle of the screw, for precise torque and angle control on all automated operations.

## The Torque/Angle Control

The main parameters to be controlled are the tightening torque and the rotation angle of the screw, either with torque or angle priority. The screwdriver stops automatically when the pre-set angle and torque value have been reached and an indication of OK cycle (green led turned on) is given, otherwise a red led turns on if the tightened screw doesn't match the pre-set parameters. The final torque and angle values are also displayed.

## Easy interface

TA Screwdrivers work in combination with EDU2AE/TOP/TA control units, which allow to set, change and save all parameters via PC, USB key and a wide range of I/O connections for an easy interface with your PLC, robot or machine.

## Plenty of options

PLUTO, MITO and NATO automated torque & angle screwdrivers cover a wide torque range of 0.1-50 Nm: choose the tool that best suits your application and set the desired working cycle through TOP/TA control units. You can set 8 independent programs either directly on control unit or remotely.

TA automated screwdrivers give you total control over automated applications.

## Industry 4.0

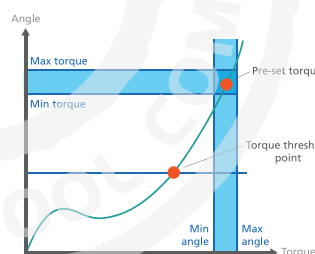
Interconnection, automatic control and continuous monitoring are fundamental aspects of Industry 4.0.

Through EDU2AE/TOP/TA control units you can easily manage input and output signals such as start, stop, error and more.

You can also get data reports of the full tightening procedure on PC, USB key or serial connection.

## EDU2AE/TOP/TA Torque and Angle Functionalities

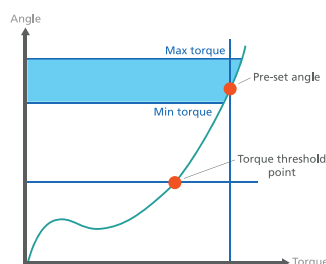
### Torque Mode



It's the most common mode. If the final torque and angle values are within the pre-set minimum and maximum values, the screw is tightened correctly and the controller will give an OK message.

If the torque and/or angle are outside the pre-set values, the screw will be considered incorrectly tightened and the controller will give an error message.

### Angle Mode



This mode gives priority to the angle to be reached. Starting from the pre-set threshold torque, the system will start counting the degrees and when the pre-set angle is reached the screwdriver will stop.

The control unit will give an OK or NOK message depending on whether the screw is tightened correctly or not. It is also possible to set minimum and maximum values within which the set angle must be reached.





## Aluminium housing TA Screwdrivers

Code	Model	Torque Nm	RPM min-max	Dimensions mm	Weight kg	Bit Drive
163015/TA	NATO15CA/TA	0.02 - 0.27	100 - 700	150 x 25	0.18	Half moon 4 mm
163050/TA	NATO50CA/TA	0.05 - 0.5	200 - 700	150 x 25	0.18	Hex 1/4"
170016/TA	MITO15CA/TA	0.35 - 1.5	450 - 850	193 x 32	0.36	Hex 1/4"
130303/TA	PLUTO3CA/TA	0.5 - 3	370 - 1300	168 x 40	0.50	Hex 1/4"
133206/TA	PLUTO6CA/TA	0.85 - 6	200 - 850	168 x 40	0.50	Hex 1/4"
133211/TA	PLUTO10CA/TA	1.5 - 10	110 - 600	168 x 40	0.50	Hex 1/4"
133216/TA	PLUTO15CA/TA	2.0 - 15	60 - 320	168 x 40	0.50	Hex 1/4"
133221/TA	PLUTO20CA/TA	3.0 - 20	50 - 200	232 x 47	1.10	Sq 3/8"
133236/TA	PLUTO35CA/TA	3.0 - 35	40 - 140	247 x 57	1.50	Sq 3/8"
133250/TA	PLUTO50CA/TA	5.0 - 50	20 - 90	252 x 57	1.50	Sq 1/2"

## Aluminium housing TA Screwdrivers with flange mount

Code	Model	Torque Nm	RPM min-max	Dimensions mm	Weight kg	Bit Drive
130303/FN2/TA	PLUTO3CA/FN2/TA	0.5 - 3	370 - 1300	268 x 40	0.70	Sq 3/8"
133206/FN2/TA	PLUTO6CA/FN2/TA	0.85 - 6	200 - 850	268 x 40	0.70	Sq 3/8"
133211/FN2/TA	PLUTO10CA/FN2/TA	1.5 - 10	110 - 600	268 x 40	0.70	Sq 3/8"
133216/FN2/TA	PLUTO15CA/FN2/TA	2.0 - 15	60 - 320	268 x 40	0.70	Sq 3/8"
133221/FN/TA	PLUTO20CA/FN/TA	3.0 - 20	50 - 200	323 x 47	1.35	Sq 3/8"
133236/FN/TA	PLUTO35CA/FN/TA	3.0 - 35	40 - 140	338 x 57	1.95	Sq 3/8"
133250/FN/TA	PLUTO50CA/FN/TA	5.0 - 50	20 - 90	351 x 57	1.95	Sq 1/2"

## Control units for TA Screwdrivers

Code	Model	NATO TA Series	PLUTO, MITO TA Series	Serial Port	Multitorque (8 P-sets)	Computer Interface	Torque & Angle	Weight kg	Dimensions mm
031000/TOP/NT/TA	EDU2AE/TOP/NT/TA	•	-	•	•	•	•	2.00	190 x 205 x 120
032000/TOP/TA	EDU2AE/TOP/TA	-	•	•	•	•	•	2.50	190 x 205 x 120

See page 18 for a complete list of features.

**IMPORTANT:** Continuous use over 80% of torque range is not recommended.



# THE BENEFITS OF CURRENT-CONTROLLED SCREWDRIVERS

The MITO & PLUTO screwdriver range is the most advanced current-controlled tightening solution for torque applications up to 70 Nm. Extremely ergonomic, compact and full of functionalities, it is the right tool to boost productivity, resulting in high efficiency and cost reduction.

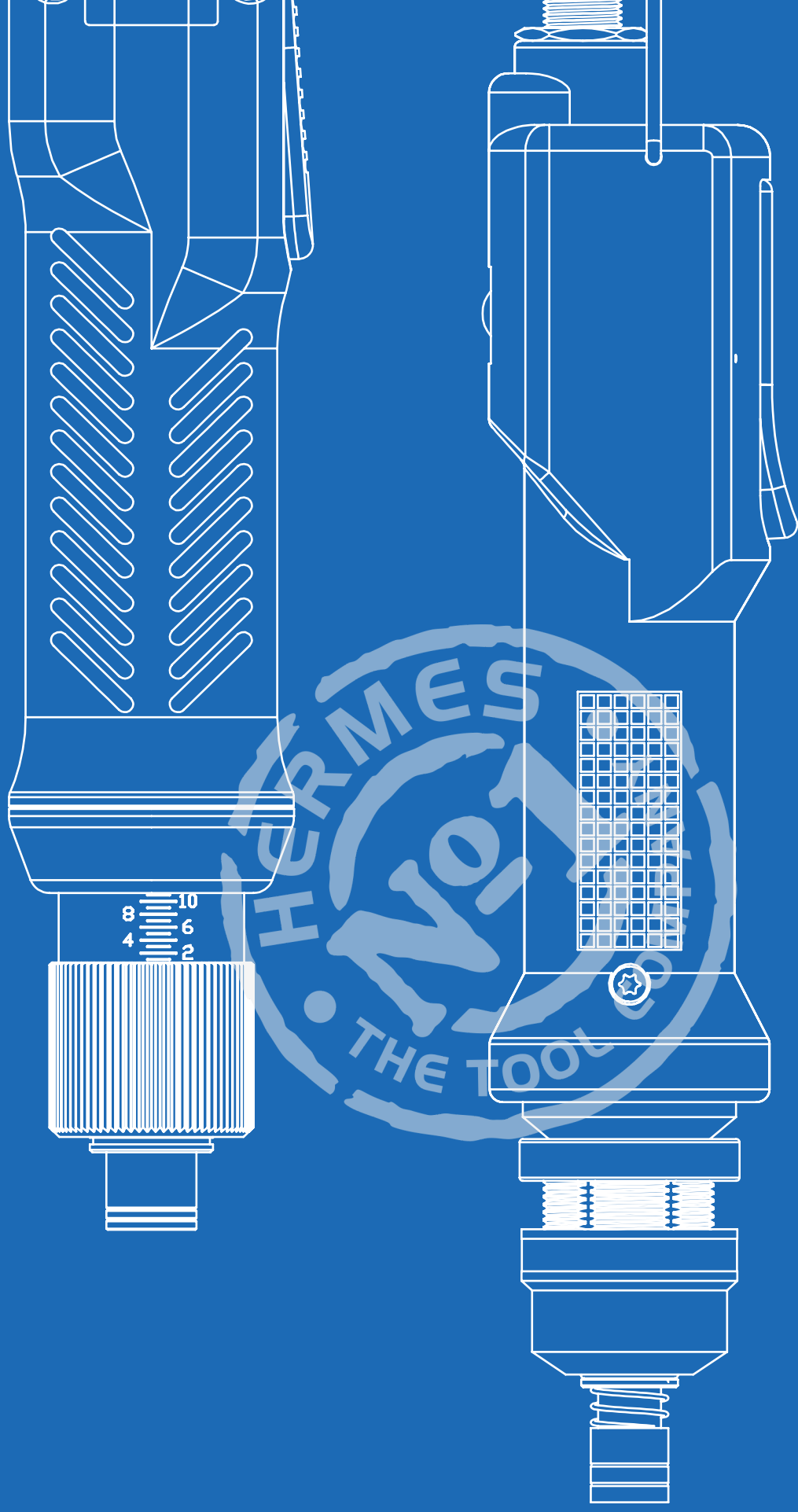
The MITO & PLUTO system is flexible and provides clear operator feedback. All MITO & PLUTO screwdrivers are ESD (electrostatic discharge) approved to guarantee the best quality, no matter the requirement of the surroundings.

## KOLVER's Current-controlled solution means:

- High accuracy, normally better than +/-10%, Cmk always better than 1.66
- Torque and angle control and monitoring
- Ergonomic and lightweight design
- Multiple communication ports

## Benefits of KOLVER's current-controlled tools:

- The best price to quality ratio
- Secure product quality
- Direct error detection and error proofing
- Reduction of missing screws and stripped joints
- Improved process control and reduced setup time
- Industry 4.0 ready



## CLUTCH SCREWDRIVERS





## PLUTO Clutch Screwdrivers | Torque range 0.5 – 7 Nm

PLUTO® (PLU TORque) clutch screwdrivers combine the versatility of PLUTO tools with the precision of clutch screwdrivers.

### Precise and accurate

High performances are guaranteed on any type of joint. PLUTO® clutch models ensure an excellent accuracy on the whole torque range.

### Long-lasting quality

PLUTO® Screwdrivers feature an innovative coreless motor with low inertia and friction and absence of iron losses for extreme efficiency and extended life.

Planetary gearboxes and clutches are made of high-quality composite materials for excellent accuracy and repeatability throughout the whole torque range.

### Hand-held and fixture mount models

PLUTO FR are available in inline or pistol grip ESD-safe housing. Angle attachments for hand-held tools are also available.

PLUTO FR/CA are supplied in an aluminium body for a quick and easy integration with automatic machines and screwfeeding systems. PLUTO tools in CA/FN version are equipped with a flange mount and reciprocating spindle for high volume/high duty applications.

### Specific control unit

Any PLUTO FR operates with a specific control unit, model EDU2AE/FR. It is designed to best run PLUTO FR screwdrivers, with the addition of some high-end features such as password protection and serial print.

### Highest environmental protection requirements

- Low energy consumption
- No polluting emissions
- Low noise level
- Minimal vibrations
- ESD-safe

### Available Housings



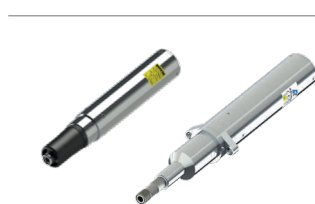
INLINE (PLUTO..FR) – Inline versions available in lever start. Clutch style.  
Bit Drive: 1/4" hex quick change chuck



PISTOL GRIP – Trigger start, pistol grip available with top connector (PLUTO FR/P/U) or bottom connector (PLUTO FR/P). Clutch style.  
Bit Drive: 1/4" hex quick change chuck



ANGLE MODELS (PLUTO FR/ANG) – Inline models with angle head attached. Clutch style.



ALUMINIUM BODY (PLUTO FR/CA and PLUTO FR/CA/FN) – Specifically designed for automation. Easy to install on any machine or robot. Flange and telescopic spindle for automated high volume/high duty applications available together or separately.



ESD-safe housing





## Inline PLUTO Clutch Screwdrivers

Code	Model	Torque Nm	RPM min-max	Dimensions mm	Weight kg	Output
131203/HS	PLUTO3FR/HS	0.5 - 2.8	1550 - 2400	259 x 40	0.55	Hex 1/4"
131205	PLUTO5FR	1 - 5	600 - 1000	274 x 40	0.55	Hex 1/4"
131207	PLUTO7FR	1.5 - 7	350 - 600	274 x 40	0.55	Hex 1/4"

## Pistol grip PLUTO Clutch Screwdrivers

Code	Model	Torque Nm	RPM min-max	Dimensions mm	Weight kg	Connector Option
131204/HS	PLUTO3FR/P/HS	0.5 - 2.8	1550 - 2400	158 x 224 x 45	0.55	Bottom connector
131204/U/HS	PLUTO3FR/P/U/HS	0.5 - 2.8	1550 - 2400	163 x 232 x 45	0.55	Top connector
131206	PLUTO5FR/P	1 - 5	600 - 1000	158 x 224 x 45	0.55	Bottom connector
131206/U	PLUTO5FR/P/U	1 - 5	600 - 1000	163 x 232 x 45	0.55	Top connector
131208	PLUTO7FR/P	1.5 - 7	350 - 600	158 x 224 x 45	0.55	Bottom connector
131208/U	PLUTO7FR/P/U	1.5 - 7	350 - 600	163 x 232 x 45	0.55	Top connector

## Angle head PLUTO Clutch Screwdrivers

Code	Model	Torque Nm	RPM min-max	Dimensions mm	Output	Start Option
131205/A	PLUTO5FR/ANG	1 - 5	600 - 1000	336 x 40	Hex 1/4"	Lever start
131207/A	PLUTO7FR/ANG	1.5 - 7	350 - 600	336 x 40	Hex 1/4"	Lever start

## Aluminium housing PLUTO Clutch Screwdrivers

Code	Model	Torque Nm	RPM min-max	Dimensions mm	Weight kg	Output
133203/HS	PLUTO3FR/CA/HS	0.5 - 2.8	1550 - 2400	252 x 40	0.75	Hex 1/4"
133205	PLUTO5FR/CA	1 - 5	600 - 1000	252 x 40	0.75	Hex 1/4"
133207	PLUTO7FR/CA	1.5 - 7	350 - 600	252 x 40	0.75	Hex 1/4"

## Aluminium housing PLUTO Clutch Screwdrivers with Flange Mount

Code	Model	Torque Nm	RPM min-max	Dimensions mm	Weight kg	Output
133205/FN	PLUTO5FR/CA/FN	1 - 5	600 - 1000	328 x 40	0.80	Hex 1/4"
133207/FN	PLUTO7FR/CA/FN	1.5 - 7	350 - 600	328 x 40	0.80	Hex 1/4"

**IMPORTANT:** Continuous use over 80% of torque range is not recommended.

**PLUTO Screwdrivers work in combination with EDU2AE/FR controllers. See page 18 for further information.**



## FAB & RAF Screwdrivers | Torque range 0.05 – 5 Nm

FAB & RAF screwdrivers have been well-known in the electronic industry since we first developed them in the early 1990s. FAB and RAF series are Kolver's powerful, reliable and truly cost-effective tools.

### Quick to set up, easy to use

FAB and RAF tools are incredibly easy to install and operate. The torque is set externally: you'll only have to turn the clutch adjusting nut according to the required torque setting. Each screwdriver works in combination with a control unit. Its electronic control circuit cuts the power supply to the screwdriver motor in response to the clutch action as soon as the pre-set torque has been reached.

### Simple maintenance

Replacing carbon brushes and greasing the gears once a year is all you need for maintenance. EDU1FR control units for FAB and RAF screwdrivers feature a maintenance-free, state-of-the-art electronics and no wearing components. This design results in very low current to the driver's start switch and clutch switch to extend their life indefinitely.

### Safe, clean and low noise

All FAB and RAF models come standard with ESD-safe housings against electrostatic discharge. Their electric motor makes them not only energy efficient but also free of pollutants and contributes to a quieter environment (noise within 55 dB(A)). Ergonomic grip, lightweight and compact design for maximum operator comfort.

### Basic and advanced functionalities

FAB and RAF work in combination with EDU1FR series controllers, acting as an AC to DC transformer and torque controller with adjustable slow start and speed. More features available when used in combination with EDU2AE/FR controller or EDU1FR/SG with ACE screw counter (see chart on next page).

### Available Housings



INLINE – Inline versions available in lever start or push-to-start.  
Bit Drive: 1/4" hex quick change chuck



PISTOL GRIP – Trigger start, pistol grip available with top connector (PP/FR/U) or bottom connector (PP/FR).  
Bit Drive: 1/4" hex quick change chuck



ANGLE HEAD OPTION – 90° angle heads can be easily attached to inline models. Angle attachments are the ideal solution to operate where space is limited. See page 46.





## Inline FAB Screwdrivers

Code	Model	Torque Nm	RPM min-max	Dimensions mm	Weight kg	Start Option
110003/FR	FAB03SS/FR	0.05 - 0.3	450 - 650	237 x 33	0.50	Lever Start
110010/FR	FAB10RE/FR	0.05 - 0.8	600 - 1000	237 x 33	0.50	Lever Start
110012/FR	FAB12RE/FR	0.2 - 1.2	600 - 1000	237 x 33	0.50	Lever Start
112012/FR	FAB12PS/FR	0.2 - 1.2	600 - 1000	249 x 33	0.50	Push-to-start
110618/FR	FAB18RE/FR	0.3 - 1.8	450 - 650	237 x 33	0.50	Lever Start
112618/FR	FAB18PS/FR	0.3 - 1.8	450 - 650	249 x 33	0.50	Push-to-start

## Inline RAF Screwdrivers

Code	Model	Torque Nm	RPM min-max	Dimensions mm	Weight kg	Start Option
120032/FR	RAF32NS/FR	0.7 - 3.2	600 - 1000	259 x 40	0.65	Lever Start
122032/FR	RAF32PS/FR	0.7 - 3.2	600 - 1000	269 x 40	0.65	Push-to-start
120638/FR	RAF38NS/FR	0.9 - 3.8	450 - 650	259 x 40	0.65	Lever Start
122638/FR	RAF38PS/FR	0.9 - 3.8	450 - 650	269 x 40	0.65	Push-to-start
120650/FR	RAF50NS/FR	0.9 - 5	400 - 700	259 x 40	0.65	Lever Start
122650/FR	RAF50PS/FR	0.9 - 4.5	400 - 700	269 x 40	0.65	Push-to-start

## Pistol grip FAB Screwdrivers

Code	Model	Torque Nm	RPM min-max	Dimensions mm	Weight kg	Connector Option
110013/FR	FAB12PP/FR	0.2 - 1.2	600 - 1000	220 x 159 x 44	0.55	Bottom connector
110013/FR/U	FAB12PP/FR/U	0.2 - 1.2	600 - 1000	220 x 163 x 44	0.55	Top connector
110619/FR	FAB18PP/FR	0.3 - 1.8	450 - 650	220 x 159 x 44	0.55	Bottom connector
110619/FR/U	FAB18PP/FR/U	0.3 - 1.8	450 - 650	220 x 163 x 44	0.55	Top connector

## Pistol grip RAF Screwdrivers

Code	Model	Torque Nm	RPM min-max	Dimensions mm	Weight kg	Connector Option
120033/FR	RAF32PP/FR	0.7 - 3.2	600 - 1000	220 x 159 x 44	0.65	Bottom connector
120033/FR/U	RAF32PP/FR/U	0.7 - 3.2	600 - 1000	220 x 163 x 44	0.65	Top connector
120639/FR	RAF38PP/FR	0.9 - 3.8	450 - 650	220 x 159 x 44	0.65	Bottom connector
120639/FR/U	RAF38PP/FR/U	0.9 - 3.8	450 - 650	220 x 163 x 44	0.65	Top connector
120651/FR	RAF50PP/FR	0.9 - 5	400 - 700	220 x 159 x 44	0.70	Bottom connector
120651/FR/U	RAF50PP/FR/U	0.9 - 5	400 - 700	220 x 163 x 44	0.70	Top connector

## Control units for FAB & RAF Screwdrivers

Code	Model	Adjustable Speed	Ramp Option	I/O Signals	Serial Print	Screw Count	Run Time	Weight kg	Dimensions mm
010010/FR	EDU1FR	•	•	-	-	-	-	0.60	138 x 118 x 67
010010/FR/SG	EDU1FR/SG	•	•	•	with ACE	with ACE	-	0.60	138 x 118 x 67
032000/FR	EDU2AE/FR	•	•	•	•	•	•	2.40	195 x 170 x 110

**IMPORTANT:** Continuous use over 80% of torque range is not recommended.



## KBL Brushless Screwdrivers | Torque range 0.04 – 4 Nm

The perfect solution for clean room applications. KBL screwdrivers feature state-of-the-art brushless motors and clutch torque control.

### Simple set up

KBL tools are very easy to install and operate. The torque is set externally: you'll only have to manually adjust the front clutch according to the required torque setting.

Each screwdriver works in combination with a control unit. Its electronic control circuit cuts the power supply to the screwdriver motor in response to the clutch action, as soon as the pre-set torque has been reached.

### Maintenance-free

No wearing components and no brush replacement – KBL Screwdrivers combine Swiss brushless motors with magnetic clutch switches for a real maintenance-free solution. The absence of maintenance operations guarantees high productive continuity.

EDU1BL control units for KBL screwdrivers feature state-of-the-art electronics working at only 30 VDC. This design results in very low current to the driver's start and clutch switches to extend their life even further.

### For a cleaner environment

No brushes means zero emissions of carbon dust or other pollutants into the working environment, which makes KBL screwdrivers perfect for clean-room applications.

### Safe and ergonomic

KBL hand-held screwdrivers are available in inline and pistol type and they all come standard with ESD-safe housing. Small and lightweight for utmost operator comfort and with advanced ergonomic design, they ensure very low noise level, minimum vibrations and maximum safety.

### Improve your productivity by cutting investments

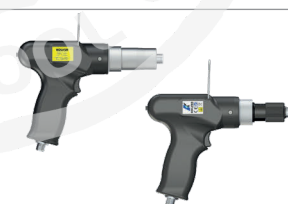
It is possible to use two screwdrivers with just one control unit by connecting a double output device called DOCK 02 (for KBL FR) or DOCK 02/S (for KBL FR/S).

The two screwdrivers can be used at the same time for maximum productivity. 230V only.

### Available Housings



**INLINE** – Inline versions available in lever start with signals (KBL FR/S) or without (KBL FR). Also available with autoreverse feature (KBL FR/AR), best used with RIV HD riveting heads. Bit Drive: 1/4" hex quick change chuck



**PISTOL GRIP** – Trigger start, pistol grip available with signals (KBL P/S) or without (KBL P/FR). Bit Drive: 1/4" hex quick change chuck



**ANGLE HEAD OPTION** – 90° angle heads can be easily attached to inline models. Angle attachments are the ideal solution to operate where space is limited.



ESD-safe housing



## Inline KBL Screwdrivers

Code	Model	Torque Nm	RPM min-max	Dimensions mm	Weight kg	Control unit
Standard models						
190004	KBL04FR	0.04 - 0.4	700 - 1150	255 x 37	0.50	EDU1BL
190015	KBL15FR	0.4 - 1.5	700 - 1150	255 x 37	0.50	EDU1BL
190030	KBL30FR	0.7 - 3	700 - 1150	268 x 43	0.65	EDU1BL
190040	KBL40FR	0.9 - 4	400 - 700	268 x 43	0.65	EDU1BL
Models with I/O signals						
190004/S	KBL04FR/S	0.04 - 0.4	700 - 1150	255 x 37	0.50	EDU1BL/SG
190015/S	KBL15FR/S	0.4 - 1.5	700 - 1150	255 x 37	0.50	EDU1BL/SG
190030/S	KBL30FR/S	0.7 - 3	700 - 1150	268 x 43	0.65	EDU1BL/SG
190040/S	KBL40FR/S	0.9 - 4	400 - 700	268 x 43	0.65	EDU1BL/SG

Inline KBL Screwdrivers are also available in KBL FR/AR, with autoreverse feature.

## Pistol grip KBL Screwdrivers

Code	Model	Torque Nm	RPM min-max	Dimensions mm	Weight kg	Control unit
Standard models						
190005	KBL04P/FR	0.04 - 0.4	700 - 1150	154 x 210 x 45	0.50	EDU1BL
190016	KBL15P/FR	0.4 - 1.5	700 - 1150	154 x 210 x 45	0.50	EDU1BL
190031	KBL30P/FR	0.7 - 3	700 - 1150	154 x 217 x 45	0.65	EDU1BL
190041	KBL40P/FR	0.9 - 4	400 - 700	154 x 217 x 45	0.65	EDU1BL
Models with I/O signals						
190005/S	KBL04P/S	0.04 - 0.4	700 - 1150	154 x 210 x 45	0.50	EDU1BL/SG
190016/S	KBL15P/S	0.4 - 1.5	700 - 1150	154 x 210 x 45	0.50	EDU1BL/SG
190031/S	KBL30P/S	0.7 - 3	700 - 1150	154 x 217 x 45	0.65	EDU1BL/SG
190041/S	KBL40P/S	0.9 - 4	400 - 700	154 x 217 x 45	0.65	EDU1BL/SG

## Angle head KBL Screwdrivers

Code	Model	Torque Nm	RPM min-max	Dimensions mm	Weight kg	Control unit
190004/A	KBL04FR/ANG	0.04 - 0.4	700 - 1150	316 x 37	0.60	EDU1BL
190015/A	KBL15FR/ANG	0.4 - 1.5	700 - 1150	316 x 37	0.60	EDU1BL
190030/A	KBL30FR/ANG	0.7 - 3	700 - 1150	330 x 43	0.75	EDU1BL
190040/A	KBL40FR/ANG	0.9 - 4	400 - 700	330 x 43	0.75	EDU1BL

## Control units for KBL Screwdrivers

Code	Model	Settable Speed	Ramp Option	I/O Signals	Serial Print	Screw Count	Min-Max Run Time	Weight kg	Dimensions mm
003000	EDU1BL	•	-	-	-	-	-	0.60	138 x 118 x 67
003000/SG	EDU1BL/SG	•	•	•	with ACE	with ACE	with ACE	0.60	138 x 118 x 67

IMPORTANT: Continuous use over 80% of torque range is not recommended.





### KBL Screwdrivers for Automation | Torque range 0.04 – 4 Nm

KBL CA Screwdrivers combine state-of-the-art brushless motors with an aluminium housing for quick and easy installation on robots and automatic machines.

#### Designed for automation

KBL CA tools are supplied in an aluminium body for a quick and easy integration with automatic machines and screw feeding systems. KBL tools in CA/FN version are equipped with a flange mount and reciprocating spindle for high-intensity applications.

#### Easy to install and operate

Each KBL CA screwdriver works in combination with an EDU1BL/SG control unit. Its electronic control circuit cuts the power supply to the screwdriver motor in response to the clutch action, as soon as the pre-set torque has been reached.

KBL's torque clutch only needs to be set once and guarantees accurate repeatability on any kind of joint.

#### Industry 4.0 with KBL

Transitioning to Industry 4.0 is easy with KBL CA screwdrivers. They can be easily connected to robots or automatic machines through their EDU1BL/SG controller's proper connectors to manage input/output signals such as start, stop, error and more.

#### No maintenance required

Automation requires tools capable of keeping high quality standards, even on heavy-duty applications. KBL Screwdrivers combine Swiss brushless motors with magnetic clutch switches for a real maintenance-free solution. The absence of maintenance operations guarantees high productive continuity.

#### For clean-room environments

KBL screwdrivers are perfect for automated applications requiring clean-room standards. No brushes means zero emissions of carbon dust or other pollutants into the working environment, which guarantees high-quality assembly on any joint.

#### Available Housings

ALUMINIUM BODY (KBL CA) – Specifically designed for automation. Easy to install on any machine or robot.



ALUMINIUM BODY WITH FLANGE MOUNT (KBL CA/FN) – Ideal for automated high volume/high duty applications. Flange and telescopic spindle available together or separately.



Robotic application  
**SCAN TO WATCH**



ESD-safe housing



### Aluminium housing KBL Screwdrivers

Code	Model	Torque Nm	RPM min-max	Dimensions mm	Weight kg	Bit Drive
190004/CA	KBL04FR/CA	0.04 - 0.4	700 - 1150	257 x 40	0.60	Hex 1/4"
190015/CA	KBL15FR/CA	0.4 - 1.5	700 - 1150	257 x 40	0.60	Hex 1/4"
190030/CA	KBL30FR/CA	0.7 - 3	700 - 1150	264 x 40	0.75	Hex 1/4"
190040/CA	KBL40FR/CA	0.9 - 4	400 - 700	264 x 40	0.75	Hex 1/4"

### Aluminium housing KBL Screwdrivers with flange mount

Code	Model	Torque Nm	RPM min-max	Dimensions mm	Weight kg	Bit Drive
190004/CA/FN	KBL04FR/CA/FN	0.04 - 0.4	700 - 1150	330 x 40	0.65	Hex 1/4"
190015/CA/FN	KBL15FR/CA/FN	0.4 - 1.5	700 - 1150	330 x 40	0.65	Hex 1/4"
190030/CA/FN	KBL30FR/CA/FN	0.7 - 3	700 - 1150	338 x 40	0.80	Hex 1/4"
190040/CA/FN	KBL40FR/CA/FN	0.9 - 4	400 - 700	338 x 40	0.80	Hex 1/4"

### Control unit for KBL CA Screwdrivers

Code	Model	Settable Speed	Ramp Option	I/O Signals	Serial Print	Screw Count	Min-Max Run Time	Weight kg	Dimensions mm
003000/SG	EDU1BL/SG	•	•	•	with ACE	with ACE	with ACE	0.60	138 x 118 x 67

**IMPORTANT:** Continuous use over 80% of torque range is not recommended.





### ACC Screwdrivers | Torque range 0.2 – 4.5 Nm

ACC screwdrivers are direct plug-in tools with built-in PCB for automatic cut off and AC to DC rectifier. They are ideal for applications where portability is needed to minimize costly set-up time. ACC models have the unique feature of selectable push to start or push and lever start: to select the working mode just slide the switch located by the start lever.

All ACC models feature shut off torque control through mechanical clutch. It is possible to lock their mechanical clutch and avoid any accidental torque change by adding an optional Lock-out Cover, available for all ACC models (code 219011).



Reverse Switch



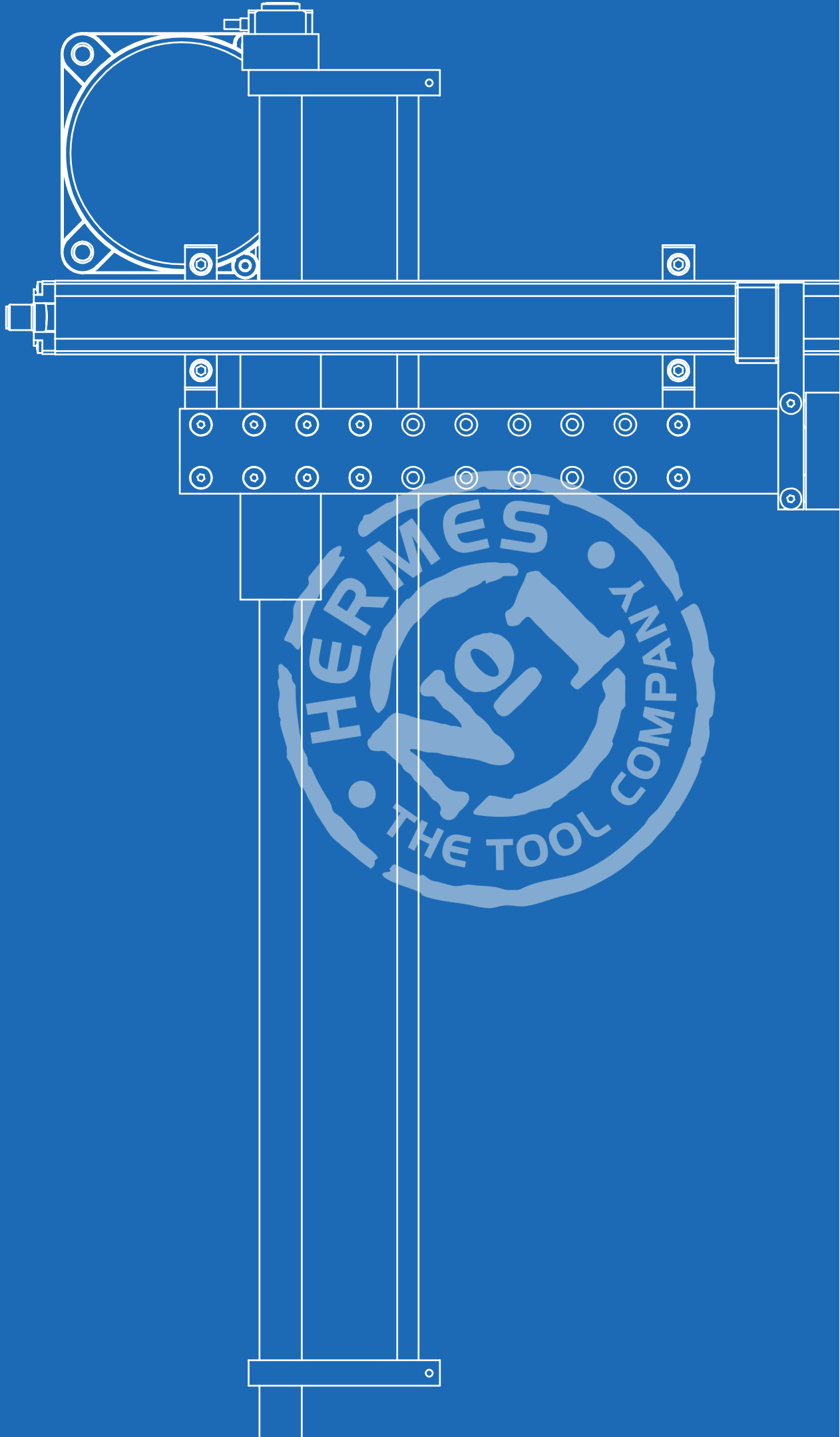
Torque Adjusting Nut Cover

#### Inline ACC Screwdrivers with Built-in Controller

Code	Model	Torque Nm	RPM max	Dimensions mm	Weight kg	Bit Drive
141910	ACC2210	0.2 - 1	950	255 x 35	0.75	Hex 1/4"
141920	ACC2220	0.7 - 2	950	255 x 35	0.80	Hex 1/4"
151222	ACC2222	0.9 - 2	2400	265 x 38	0.85	Hex 1/4"
151930	ACC2230	1.0 - 3	950	265 x 38	0.85	Hex 1/4"
151945	ACC2245	1.0 - 4.5	450	265 x 38	0.85	Hex 1/4"

**IMPORTANT:** Continuous use over 80% of torque range is not recommended.





**TORQUE TESTERS / SCREW FEEDERS  
REACTION ARMS / POSITIONING SYSTEMS**



## K and Mini K/S Series Torque Testers | Torque range 0.05 – 50 Nm

Controlling torque is vital for companies to ensure their product's quality. Fasteners that are insufficiently torqued can vibrate loose and excessive torque can strip threaded fasteners. Using a quality torque tester has become increasingly important for most companies to ensure that proper torque is being applied.

### Mini Ke/S Series with External Transducer

The Mini Ke/S system consists of a torque readout and an external rotary transducer. By connecting a rotary torque transducer between an electric or pneumatic tool and an assembly application, you can monitor the real torque being applied from the tool to fastener or bolt.

It is possible to connect different transducers to the same torque reader by setting the proper Correction Factor (FATC). A Mini Ke/S is the ideal torque-auditing tool for testing the actual torque being applied on the assembly application.

### Mini K/S Series – Portable Torque Testers

MINI K/S Torque Testers feature a built-in transducer. These easy-to-use torque testers are ideal for checking all power tools up to 20 Nm. The small size and portability of MINI K/S make them ideal for checking torque tools on the production floor regularly to ensure the tools are always calibrated.

- Three units of torque measurement available; Nm, Kg.cm, in/lbs.
- Manual and auto reset functions to clear displayed values.
- Battery powered (9V) and AC adapter. 9V battery provides 30 hours of continuous operation.
- Automatic shut down to extend battery life.
- mini USB port for printing torque values, date and hour
- Torque Tester includes a washer-based joint simulator (miniK5/S and miniK20/S) or built in joint simulator (miniK1/S), instructions manual, certificate of calibration and a case.

### K Series – Advanced Torque Testers

The K Series Torque Testers feature a built-in transducer and can also be connected to an external transducer. They collect, store and eventually download torque measures for a complete analysis of the tool and/or the joint.

Main features include:

- 500 readings memory.
  - Selection among Nm, Ncm, Kg.cm, in/lbs.
  - RS232C output (cable not included).
  - Indication < = > of the preset values
  - Output signal at preset reached value.
  - Clockwise and counter-clockwise measurements.
  - 3 models of operation: Peak +, Peak -, Track.
  - Manual or automatic reset.
  - 9 V rechargeable battery provides 4 hours of continuous operation.
- Automatic switch off to reduce battery consumption.

Supplied in a plastic carrying case, with one rechargeable battery, 1 joint simulator (semielastic), instructions manual and certificate of calibration.



## Model K Torque Testers

Code	Model	Torque range Nm	Dimensions mm	Weight kg	Joint Simulator	External Transducer	Connecting Port
020402	K1	0.05 - 1	172 x 142 x 41	1.0	Semi-Elastic M6	-	RS232C
020403	K5	0.3 - 5	172 x 142 x 41	1.0	Semi-Elastic M6	KTE5 (optional)	RS232C
020404	K20	0.5 - 20	172 x 142 x 41	1.0	Semi-Elastic M8	KTE25 (optional)	RS232C
Optional External Transducers							
022405	KTE5	0.5 - 5	25 x 92	0.3		External Transducer for K5	
022425	KTE25	2 - 25	25 x 92	0.3		External Transducer for K20	

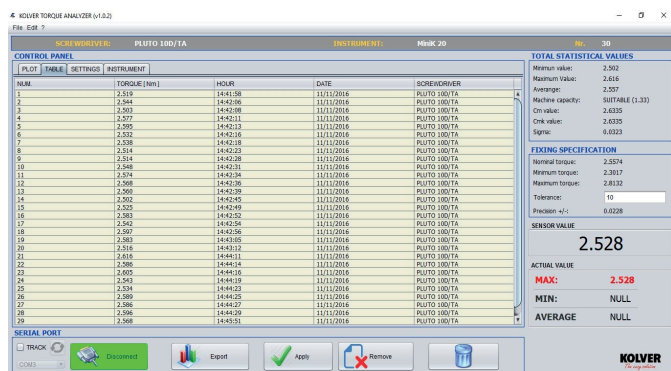
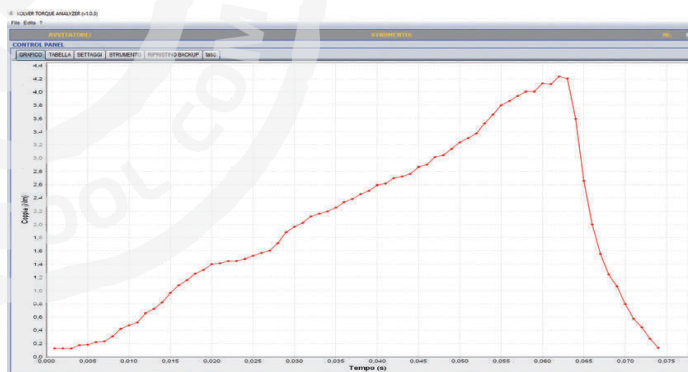
## Model Mini K/S Torque Testers

Code	Model	Torque range Nm	Dimensions mm	Weight kg	Joint Simulator	External Transducer	Connecting Port
021402/S	Mini K1/S	0.05 - 1	150 x 70 x 45	0.80	Internal Simulator	-	mini USB
021403/S	Mini K5/S	0.3 - 5	150 x 70 x 45	0.80	Semi-Elastic M6	-	mini USB
021404/S	Mini K20/S	0.5 - 20	150 x 70 x 45	0.80	Semi-Elastic M8	-	mini USB
021405/S/S	Mini Ke5/S	0.5 - 5	150 x 70 x 45	0.50	-	KTE5 (included)	mini USB
021405/25/S	Mini Ke25/S	2 - 25	150 x 70 x 45	0.50	-	KTE25 (included)	mini USB
021405/50/S	Mini Ke50/S	5 - 50	150 x 70 x 45	0.50	-	KTE50 (included)	mini USB

## Torque Analyser Software

The new Kolver Torque Analyser software for Mini K/S and Mini Ke/S Torque Testers features real-time tracking of each measurement and calculation of CM and CMK.

A Real-time chart for each torque measurement is displayed on your PC screen (when "track mode" on the tester is enabled). The chart will show the trend of the single screwing operation or, in case of multiple screwing operations it will show the results according to the settings on the torque tester and software (for example if you're keeping track of multiple operations at max torque, the chart will show the trend of these max torques). You can also export an Excel file (max 30 measurements) with corresponding CM-CMK values: this is useful for testing the torque accuracy of the screwdriver.





## Torque Reaction Arms | Up to 75 Nm

Support arms manoeuvre smoothly as they absorb the torque reactions from the screwdrivers providing ergonomic support for the operator. They reduce RMI (Repetitive Motion Injury) and CTS (Carpal Tunnel Syndrome) while boosting production.

### Folding and Linear Torque Reaction Arm Series

Torque folding arms have been designed to eliminate the reaction generated by screwdrivers when they stop at the pre-set torque. Options include table or wall mount.

Linear arms keep the tool perpendicular and prevent cross threading and side load. Each model extends in horizontal direction and arm length is adjustable. The fluid movement increases precision and production for a variety of torque applications.

### Telescopic Carbon Arm Series

CAR series torque reaction arms eliminate the reaction that screwdrivers generate when they stop at the pre-set 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.

### Suspended Torque Arm Series

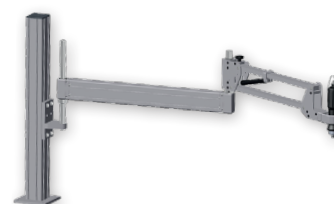
SAR Suspended Torque Arms are the ideal solution to increase productivity. They can be easily installed on most workplaces to help the operator handle the screwdriver in total safety and stability while keeping the workspace clear. With minimized reaction force you will also improve finished product quality because there is no movement of the tool and all torque is absorbed in the joint.

Three models available, depending on the motion of the axes. SAR arms are supplied without tool holder – to be purchased depending on the screwdriver used (see chart on the next page).

### Support arm models



PA2KOL Folding Arm



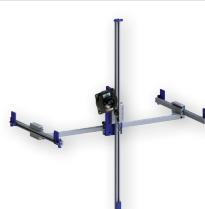
PS7KOL Folding Arm



LINAR and LINART Arms



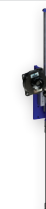
CAR Telescopic Carbon Arm



SAR XYZ Suspended Arm



SAR XZ



SAR Z



## Folding and Linear Torque Reaction Arms

Code	Model	Arm Weight kg	Max Payload kg	Min Reach mm	Max Reach mm	Max Torque Nm
010600	PA2KOL	2.5	1.5	440	640	20
010602	PA7KOL	4.2	10*	500	950	75
010603	PS7KOL	5.3	10*	300	1000	75
010681	LINAR1	1.5	1.5	184	665	25
010682	LINAR2	1.5	1.5	184	665	50
010683	LINART	1.6	1.4	114	740	25

\* Required payload is to be specified with order

## Telescopic Torque Reaction Arms

Code	Model	Arm Weight kg	Max Payload kg	Min Reach mm	Max Reach mm	Max Torque Nm
010661	CAR101	0.20	2.7	549	906	10
010663	CAR281	0.60	2.7	490	950	25
010664	CAR282	0.75	2.7	730	1650	25
010665	CAR501	0.65	2.7	490	950	50
010666	CAR502	0.80	2.7	730	1650	50

## Suspended Torque Arms

Code	Model	Arm Weight kg	Max Payload kg	Vertical Z Stroke mm	Horizontal X Stroke mm	Lateral Y Stroke mm	Max Torque Nm
010690/Z/5	SAR15 Z	1.2	1.8	364	-	-	15
010690/XZ/85	SAR15 XZ 85	1.2	1.8	364	692	-	15
010690/XYZ/855	SAR15 XYZ 855	1.7	1.3	885	692	376	15

### Tool holders for SAR arms

010695	Tool holder for PLUTO and RAF series inline screwdrivers
010698	Tool holder for FAB, NATO & MITO series inline screwdrivers
010695/P	Tool holder for right angle PLUTO screwdrivers (up to 15 Nm)
010695/UNI	Universal Tool Holder for any screwdriver (max diameter 47 mm)

**IMPORTANT: A diameter reduction adapter (code 234545) is required when LINAR and CAR arms are used with PLUTO35 or PLUTO50 screwdrivers (Ø 57 mm).**





## Positioning Arms | Up to 50 Nm

TLS1 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.

### Main features

- 8 available programs and up to 35 screws per program.
- Screw position (length/angle) with accuracy: length  $\pm 1$  mm; angle  $\pm 1^\circ$ .
- Programmable tolerance and manual reset.
- Password protected.
- External keyboard and serial port for easy programming and statistics.

### TLS1 with CAR Arm

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. X-Y accuracy can be set by the operator according to each application.

### TLS1 with Linear Arm

TLS1/LINAR1 and TLS1/LINAR2 positioning arms work just like LINAR1 and LINAR2 with the addition of positioning sensors for a real time feedback on the position of the arm. Max torque and reach are the same as LINAR1 and LINAR2 respectively (see page 41). Adapter code 234545 is required for screwdriver model PLUTO35 and PLUTO50.

### TLS1 with Folding 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 (see page 41).

### 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 (see page 41).

### Positioning arm models



TLS1/CAR Positioning Carbon Arm

TLS1/LINAR1 and TLS1/LINAR2



TLS1/LINART Positioning Folding Arm

TLS1/SAR XYZ Suspended Arm





## Folding and Linear Positioning Arms

Code	Model	Max Torque Nm	Min Reach mm	Max Reach mm	Min distance between screws at max extension
010681/TLS1	LINAR1/TLS1	25	184	665	6 mm
010682/TLS1	LINAR2/TLS1	50	184	665	6 mm
010683/TLS1	LINART/TLS1	25	114	740	7 mm

Either of the following cables must be specified at time of purchase

260003/1	Cable to connect TLS system to EDU1FR/SG controller
260004/1	Cable to connect TLS system to EDU1BL/SG, EDU2AE, EDU2AE/HPro, EDU2AE/TOP or EDU2AE/TOP/TA controller
260004/KDU	Cable to connect TLS system to KDU controller

## Telescopic Positioning Arms

Code	Model	Max Torque Nm	Min Reach mm	Max Reach mm	Min distance between screws at max extension
010663/TLS1	CAR281/TLS1	25	490	950	9 mm
010664/TLS1	CAR282/TLS1	25	730	1650	15 mm
010665/TLS1	CAR501/TLS1	50	490	950	9 mm
010666/TLS1	CAR502/TLS1	50	730	1650	15 mm

Either of the following cables must be specified at time of purchase

260003/1	Cable to connect TLS system to EDU1FR/SG controller
260004/1	Cable to connect TLS system to EDU1BL/SG, EDU2AE, EDU2AE/HPro, EDU2AE/TOP or EDU2AE/TOP/TA controller
260004/KDU	Cable to connect TLS system to KDU controller

## Suspended Positioning Arms

Code	Model	Max Torque Nm	Arm Weight kg	Vertical Stroke Z mm	Vertical Stroke X mm	Vertical Stroke Y mm
010690/XYZ/TLS1	SAR15 XYZ/TLS1	15	8	885	692	376

Tool holders for SAR arm

010695	Tool holder for PLUTO and RAF series inline screwdrivers
010698	Tool holder for FAB, NATO & MITO series inline screwdrivers
010695/P	Tool holder for right angle PLUTO screwdrivers (up to 15 Nm)
010695/UNI	Universal Tool Holder for any screwdriver (max diameter 47 mm)

Either of the following cables must be specified at time of purchase

260003/1	Cable to connect TLS system to EDU1FR/SG controller
260004/1	Cable to connect TLS system to EDU1BL/SG, EDU2AE, EDU2AE/HPro, EDU2AE/TOP or EDU2AE/TOP/TA controller
260004/KDU	Cable to connect TLS system to KDU controller

**IMPORTANT: A diameter reduction adapter (code 234545) is required when LINAR and CAR arms are used with PLUTO35 or PLUTO50 screwdrivers (Ø 57 mm).**



## NFK Screw Feeders | Up to M5 Screws

When it comes to speeding up assembly operations, NFK screw feeders are a game changer. These simple and small devices are meant to avoid any time loss between one tightened screw and the next. Screw feeders present one screw at a time with no need for the operator to manually pick up each screw. Models for automated applications are also available.

### Fully adjustable

NFK-N screw feeders are supplied with interchangeable spacers between the rails (spacer size: 1.3 to 5.3 mm). You can also combine spacers to reach the desired rail width. Model NFK UNI can be used with any (non-countersunk) screw with diameter 1.4 – 5.0 mm.

### Speed up automated applications

NFK RS delivers one screw at a time to a specific position so that one single screw can be easily picked up when using an autocatcher or suction head (see section Accessories for further information). A trimmer on the side panel allows to adjust how fast each screw is supplied. Available for screws with shank diameter from 1.2 mm up to 5 mm. An optional cover is available in order to avoid screws falling inside the NFK RS screw feeder.

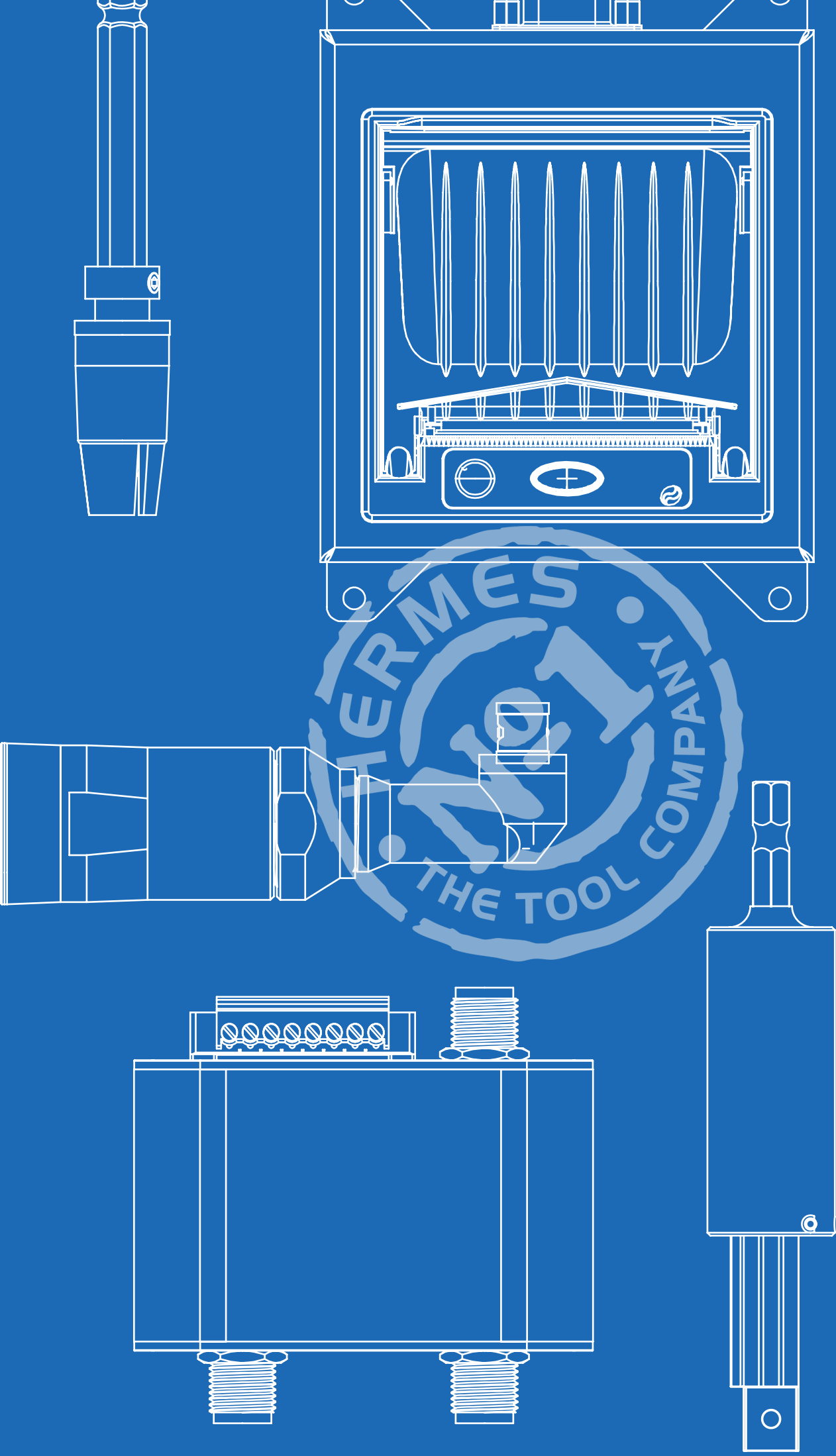
The whole NKF Screw Feeder series can handle max. 20 mm long screws.

### NFK Series Screw Suppliers for Manual Use

Code	Model	Max Shank Diameter mm
014705	NFK UNI	Any size inbetween 1.4 - 5.0
014514	NFK N14	1.4
014517	NFK N17	1.7
014520	NFK N20	2.0
014523	NFK N23	2.3
014526	NFK N26	2.6
014530	NFK N30	3.0
014540	NFK N40	4.0
014550	NFK N50	5.0

### NFK Series Screw Suppliers for Automation

Code	Model	Max Shank Diameter mm
014512/RS	NFK N12/RS	1.2
014514/RS	NFK N14/RS	1.4
014517/RS	NFK N17/RS	1.7
014520/RS	NFK N20/RS	2.0
014523/RS	NFK N23/RS	2.3
014526/RS	NFK N26/RS	2.6
014530/RS	NFK N30/RS	3.0
014540/RS	NFK N40/RS	4.0
014550/RS	NFK N50/RS	5.0



## ACCESSORIES



## Accessories for FAB &amp; RAF Screwdrivers

Code	Model	Description
90° Angle attachments		
010100	ANG HD1	90° Angle head for FAB Series, 1/4" hex output
010120	ANG HD2	90° Angle head for RAF Series, 1/4" hex output
010143	ANG HD8	Heavy duty 90° angle head for FAB Series, 1/4" hex output
010144	ANG HD9	Heavy duty 90° angle head for RAF Series, 1/4" hex output
Tool holders		
010500	ARM PV1	ARM PV1 support arm consists of a vertical support on which a 180° pivoting arm is attached.
010300	TECBA1	TECBA1 tool balancers allow screwdrivers to be positioned over the workstation for maximum operator comfort. 0.4-1 kg capacity.
Cables (to connect FAB & RAF screwdrivers to EDU1FR controllers)		
200063	2.5 m	Standard 5 pin cable for FAB & RAF – included with screwdriver
200063/H	2.5 m	5 pin cable with strain relief – for heavy duty applications
200563	5 m	5 pin cable, 5 m length
200563/S	5 m	5 pin spiral cable
200863	8 m	5 pin cable, 8 m length





## Accessories for KBL Hand-held Screwdrivers

Code	Model	Description
<b>Clutch cover</b>		
020028	Clutch cover	Model for KBL04FR and KBL15FR. It prevents the operator from accidentally altering the clutch adjustment.
020029	Clutch cover	Model for KBL30FR and KBL40FR. It prevents the operator from accidentally altering the clutch adjustment.
<b>Riveting heads</b>		
010181	RIV HD2	8 mm hole. Model for KBL30FR and KBL04FR screwdrivers, also for models with signals (KBL FR/S) and autoreverse (KBL FR/AR).
010183	RIV HD4	3 mm hole. Model for KBL04FR and KBL15FR screwdrivers, also for models with signals (KBL FR/S) and autoreverse (KBL FR/AR).
010184	RIV HD5	3 mm hole. Model for KBL30FR and KBL04FR screwdrivers, also for models with signals (KBL FR/S) and autoreverse (KBL FR/AR).
<b>Tool holders</b>		
010500	ARM PV1	ARM PV1 support arm consists of a vertical support on which a 180° pivoting arm is attached.
010300	TECBA1	TECBA1 tool balancers allow screwdrivers to be positioned over the workstation for maximum operator comfort. 0.4-1 kg capacity.

## Accessories for KBL CA Automated Screwdrivers

Code	Model	Description
<b>Flange mount kits</b>		
800406	1/4" - 1/4" kit for 04-15	1/4" - 1/4" flange mount kit that turns KBL04 CA and KBL15 CA screwdrivers into KBL CA/FN.
800407	1/4" - 1/4" kit for 30-40	1/4" - 1/4" flange mount kit that turns KBL30 CA and KBL40 CA screwdrivers into KBL CA/FN.
<b>Telescopic spindle</b>		
800322	1/4" - 1/4"	Model for KBL /FN. Max 7 Nm.
<b>Clutch cover</b>		
020028/CA	Clutch cover	Model for KBL04FR/CA and KBL15FR/CA. It prevents the operator from accidentally altering the clutch adjustment.
020029/CA	Clutch cover	Model for KBL30FR/CA and KBL40FR/CA. It prevents the operator from accidentally altering the clutch adjustment.
<b>Vacuum attachments</b>		
010111/1	A2	For non-magnetic M2-M2.6 screws. It can be installed on any screwdriver.
010111/2	A3	For non-magnetic M3-M4 screws. It can be installed on any screwdriver.
<b>Autocatchers</b>		
010113	AC 2.3	For M2-M3 screws. Easily picks up non-magnetic screws with a small plastic clamp.
010114	AC 3.5	For M3-M5 screws. Easily picks up non-magnetic screws with a small plastic clamp.
<b>Cables (to connect KBL screwdrivers to EDU1BL controller)</b>		
200063	2.5 m	Standard 5 pin cable for KBL series – included with screwdriver
250063/N	2.5 m	Standard 8 pin cable for KBL /S (with signals) series – included with screwdriver
200063/H	2.5 m	5 pin cable with strain relief for KBL series – heavy duty applications
250063/H	2.5 m	8 pin cable with strain relief for KBL /S (with signals) series – heavy duty applications
200563	5 m	5 pin cable, 5 m length for KBL series
250563	5 m	8 pin cable, 5 m length for KBL /S (with signals) series
200563/S	5 m	5 pin spiral cable for KBL series
250563/S	5 m	8 pin spiral cable for KBL /S (with signals) series



### Accessories for PLUTO Hand-held Screwdrivers

Code	Model	Description
<b>Riveting heads</b>		
010180	RIV HD1	8 mm hole. Model for PLUTO3D, PLUTO6D, PLUTO10D/N, PLUTO15D/N.
010182	RIV HD3	3 mm hole. Model for PLUTO3D, PLUTO6D, PLUTO10D/N, PLUTO15D/N.
<b>Vacuum attachments</b>		
010111/1	A2	For non-magnetic M2-M2.6 screws. It can be installed on any screwdriver.
010111/2	A3	For non-magnetic M3-M4 screws. It can be installed on any screwdriver.
010121	ASP HD9	For non magnetic screws. Model specifically designed for PLUTO3, PLUTO6, PLUTO10 and PLUTO15.
<b>Autocatchers</b>		
010113	AC 2.3	For M2-M3 screws. Easily picks up non-magnetic screws with a small plastic clamp.
010114	AC 3.5	For M3-M5 screws. Easily picks up non-magnetic screws with a small plastic clamp.
<b>Tool holders and adaptors</b>		
234545	Diametre adaptor	Reduction adaptor for PLUTO35 & 50CA drivers allowing interface with LINAR and CAR series arms
010300	TECBA1	TECBA1 tool balancers allow screwdrivers to be positioned over the workstation for maximum operator comfort. 0.4-1 kg capacity.
010312	TECBA2	TECBA2 tool balancers allow screwdrivers to be positioned over the workstation for maximum operator comfort. 1-2 kg capacity.
010313	TECBA3	TECBA3 tool balancers allow screwdrivers to be positioned over the workstation for maximum operator comfort. 2-3 kg capacity.
010500	ARM PV1	ARM PV1 support arm consists of a vertical support on which a 180° pivoting arm is attached.
<b>Cables (to connect screwdriver to controller)</b>		
200063	2.5 m	Standard 5 pin cable for PLUTO series – included with screwdriver
250063/N	2.5 m	Standard 8 pin cable for PLUTO /TA (Torque & Angle) series – included with screwdriver
200063/H	2.5 m	5 pin cable with strain relief for PLUTO series – heavy duty applications
250063/H	2.5 m	8 pin cable with strain relief for PLUTO /TA (Torque & Angle) series – heavy duty applications
200563	5 m	5 pin cable, 5 m length for PLUTO series
250563	5 m	8 pin cable, 5 m length for PLUTO /TA (Torque & Angle) series
200563/S	5 m	5 pin spiral cable for PLUTO series
250563/S	5 m	8 pin spiral cable for PLUTO /TA (Torque & Angle) series





## Accessories for PLUTO CA Automated Screwdrivers

Code	Model	Description
<b>Flange mount kits</b>		
800400	1/4" - 3/8" kit	An 1/4" - 3/8" flange mount kit turns a PLUTO (3, 6, 10 or 15) CA into PLUTO CA/FN2.
800401	3/8" - 3/8" kit	For PLUTO20. It turns a PLUTO20CA into PLUTO20CA/FN.
800403	3/8" - 3/8" kit	For PLUTO35. It turns a PLUTO35CA into PLUTO35CA/FN.
800404	1/4" - 1/4" kit	An 1/4" - 1/4" flange mount kit turns a PLUTO FR/CA clutch screwdriver into PLUTO FR/CA/FN.
<b>UR (Universal Robots®) adaptor</b>		
010695/UR	UR-Mount	Tool holder for PLUTO3, 6, 10 & 15CA and CA/FN2 series drivers.To be attached to Universal Robots® robotic arm.
<b>Telescopic spindles</b>		
800319	1/2" - 1/2"	Model for PLUTO 50/FN. Max 50 Nm.
800320	1/4" - 3/8"	Model for PLUTO CA/FN2. Max 15 Nm.
800321	3/8" - 3/8"	Model for PLUTO20 and PLUTO35. Max 35 Nm.
800322	1/4" - 1/4"	Model for PLUTO FR/FN and MITO /FN. Max 7 Nm.
<b>Vacuum attachments</b>		
010111/1	A2	For non-magnetic M2-M2.6 screws. It can be installed on any screwdriver.
010111/2	A3	For non-magnetic M3-M4 screws. It can be installed on any screwdriver.
010121	ASP HD9	For non magnetic screws. Model specifically designed for PLUTO3, PLUTO6, PLUTO10 and PLUTO15.
<b>Autocatchers</b>		
010113	AC 2.3	For M2-M3 screws. Easily picks up non-magnetic screws with a small plastic clamp.
010114	AC 3.5	For M3-M5 screws. Easily picks up non-magnetic screws with a small plastic clamp.
<b>Cables (to connect screwdriver to controller)</b>		
200063	2.5 m	Standard 5 pin cable for PLUTO CA series – included with screwdriver
250063/N	2.5 m	Standard 8 pin cable for PLUTO CA/TA (Torque & Angle) series – included with screwdriver
200063/H	2.5 m	5 pin cable with strain relief for PLUTO CA series – heavy duty applications
250063/H	2.5 m	8 pin cable with strain relief for PLUTO CA/TA (Torque & Angle) series – heavy duty applications
200563	5 m	5 pin cable, 5 m length for PLUTO CA series
250563	5 m	8 pin cable, 5 m length for PLUTO CA/TA (Torque & Angle) series
200563/S	5 m	5 pin spiral cable for PLUTO CAseries
250563/S	5 m	8 pin spiral cable for PLUTO CA/TA (Torque & Angle) series





## Accessories for NATO and MITO Screwdrivers

Code	Model	Description
<b>Flange mount kit</b>		
800406	1/4" - 1/4" kit for 04-15	An 1/4" - 1/4" flange mount kit turns a MITO CA screwdriver into MITO CA/FN.
<b>Telescopic spindle</b>		
800322	1/4" - 1/4"	Model for MITO /FN. Max 7 Nm.
<b>Vacuum attachments</b>		
010111/1	A2	For non-magnetic M2-M2.6 screws. It can be installed on any screwdriver.
010111/2	A3	For non-magnetic M3-M4 screws. It can be installed on any screwdriver.
010118	ASP HD7	For non magnetic screws. Model specifically designed for NATO50.
010119	ASP HD8	For non magnetic screws. Model specifically designed for MITO15.
<b>Autocatchers</b>		
010113	AC 2.3	For M2-M3 screws. Easily picks up non-magnetic screws with a small plastic clamp.
010114	AC 3.5	For M3-M5 screws. Easily picks up non-magnetic screws with a small plastic clamp.
<b>Cables (to connect screwdriver to controller)</b>		
200063	2.5 m	Standard 5 pin cable for NATO and MITO series – included with screwdriver
250063/N	2.5 m	Standard 8 pin cable for NATO and MITO /TA (Torque & Angle) series – included with screwdriver
200063/H	2.5 m	5 pin cable with strain relief for NATO and MITO series – heavy duty applications
250063/H	2.5 m	8 pin cable with strain relief for NATO and MITO /TA (Torque & Angle) series – heavy duty applications
200563	5 m	5 pin cable, 5 m length for NATO and MITO series
250563	5 m	8 pin cable, 5 m length for NATO and MITO /TA (Torque & Angle) series
200563/S	5 m	5 pin spiral cable for NATO and MITO series
250563/S	5 m	8 pin spiral cable for NATO and MITO /TA (Torque & Angle) series

### Accessories for EDU2AE series controllers (PLUTO Screwdrivers)

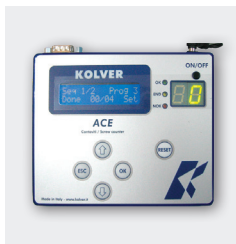
Code	Model	Description
<b>Program selection</b> – To be used with EDU2AE/TOP, EDU2AE/TOP/E or EDU2AE/TOP/TA (multiprogram controllers).		
020042	CB5880 Switchbox	Select the right pre-set program by simply pushing a button. 8-program selection.
020033	SWBX88 Socket tray	When a bit or socket is removed from the tray, the control unit automatically selects the pre-set program. 8-program selection.
020050	BRCR90 Barcode reader	Multiprogram units can also be controlled via a barcode scanner. Scan the right barcode to select the correct pre-set program.
<b>Dual output connector</b>		
020045	DOCK 04	Dual output connector for PLUTO Series, to be used with EDU2AE/TOP. Run two drivers with one controller (not simultaneously).
020045/TA	DOCK 04/TA	Dual output connector for PLUTO TA Series, to be used with EDU2AE/TOP/TA. Run two drivers with one controller (not simultaneously).
<b>Remote start and reverse</b>		
020070	Start / Reverse pedals	Start and reverse signals can be activated using a foot pedal. Supplied standard with 3.5 m cable and connector for any EDU2AE controller.
<b>Data printer</b>		
020026	PRNTR1 Serial printer	Instantly print each screw tightening result via a serial printer. It connects directly to multiprogram units and K and Mini K/S torque testers.
<b>Computer connection</b>		
020075	Ethernet device	Connect your PC to any EDU2AE/TOP, EDU2AE/TOP/E or EDU2AE/TOP/TA via remote LAN connection using an ethernet device.
<b>Visual signals</b>		
020080	Light tower stack	A light stack makes output signals clearly visible. Supplied standard with 2.5 cable and 10 pin connector for EDU2AE series.

### Accessories for EDU1FR series controllers (FAB & RAF Screwdrivers)

Code	Model	Description
<b>Dual output connector</b>		
020020	DOCK 01	Dual output connector for EDU1FR controllers. Run two drivers with one controller. Drivers cannot be used at the same time.
<b>Screw counting device</b>		
020021	ACE	Screw counting device for EDU1FR/SG controller. It keeps track of either correct and wrong tightenings, as well as cycles and sequences.

### Accessories for EDU1BL series controllers (KBL Screwdrivers)

Code	Model	Description
<b>Dual output connector</b>		
020035	DOCK 02	Dual output connector for EDU1BL controllers. Run two drivers with one controller. Both drivers can be used at the same time.
020035/S	DOCK 02/S	Dual output connector for EDU1BL/SG controllers. Run two drivers with one controller. Both drivers can be used at the same time.
<b>Screw counting device</b>		
020022	ACE	Screw counting device for EDU1BL/SG controller. It keeps track of either correct and wrong tightenings, as well as cycles and sequences.





**KOLVER  
USA**

#### KOLVER USA

In 2002 Kolver USA was founded in Salem, NH with the intent to provide superior products and service to North American customers. Covering the U.S., Mexico, Canada and the Caribbean we stand by the motto "our commitment to our customers is a commitment to excellence".

The Kolver family of tools is one of the most comprehensive in the electric power tool industry covering a wide range of torque at several speeds, suitable for an infinite number of applications. We are also a leader in the industry 4.0 revolution, rising to the challenge of even the most challenging customer applications.

If you are looking for a long lasting, cost effective solution along with excellent customer support in North America then look no further than Kolver USA!

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#### OUR COMPANY

Founded in 1989, KOLVER has soon taken the leadership in the European market of precision electric screwdrivers for industry. Thousands of state-of-the-art drivers are produced every year in Italy and then shipped to more than 30 countries worldwide.

ISO 9001 certified since 1998, KOLVER has gained international recognition for building premier quality innovative products that meet or even anticipate the most rigorous customer requirements.

Kolver tools feature either shut off clutch or current control system, coreless or brushless motors all controlled by a state-of-the-art electronic control unit. Thanks to their low installation, operating and maintenance costs as well as to their reduced vibration and noise level, Kolver electric screwdrivers represent the perfect alternative to pneumatic screwdrivers for screws up to M10.

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#### ONE YEAR LIMITED WARRANTY

KOLVER products are guaranteed against defective workmanship or materials, for a maximum period of 12 months following the date of purchase from KOLVER, provided that its usage is limited to single shift operation throughout that period.

If the usage rate exceeds that of single shift operation, the guarantee period shall be reduced on a prorata basis. If, during the guarantee period, the product appears to be defective in workmanship or materials, it should be returned to KOLVER or its distributors, transport prepaid, together with a short description of the alleged defect. KOLVER shall, at its sole discretion, arrange to repair or replace free of charge such items. This guarantee does not cover repair or replacement required as a consequence of products which have been abused, misused or modified, or which have been repaired using not original KOLVER spare parts or by not authorized service personnel. KOLVER accepts no claim for labour or other expenditure made upon defective products. Any direct, incidental or consequential damages whatsoever arising from any defect are expressly excluded. This guarantee replaces all other guarantees, or conditions, expressed or implied, regarding the quality, the marketability or the fitness for any particular purpose. No one, whether an agent, servant or employee of KOLVER, is authorized to add to or modify the terms of this limited guarantee in any way. However it's possible to extend the warranty with an extra cost.





Due to our policy of continuous product improvement at KOLVER,  
the design, data and specifications are subject to change without prior notice.

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