

KOLVER




KOLVER
The easy solution®

ELECTRIC SCREWDRIVERS

AVVITATORI ELETTRICI

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.

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 indefinite number of applications. 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.



KOLVER SCREWDRIVER IS



ERGONOMIC

Advanced grip design, light in weight, vibrations within the norms, for maximum operator comfort



CLEAN

No air exhaust + No lubrication = a cleaner environment



SAFE

Because of the transformer, only 30 V to the tool



FLEXIBLE

From the controller you can adjust the running speed and the slow start duration.
Multi torque models also available for additional functions



ACCURATE

With the electronic shut off mechanism the accuracy is better than $\pm 5\%$ of the pre-set value



FOR EVERY APPLICATION

Range up to 35 Nm, straight, pistol, 90°, ESD, with vacuum, lever start or push to start...



NOISELESS

Noise within 55 dB(A)



COST EFFECTIVE

Low purchasing price + virtually no maintenance + no need of compressed air line + no need of spiral hoses & couplers & filters & regulators-lubricators = operating cost up to 200 times cheaper than pneumatic screwdrivers



KOLVER

TORQUE CHART

MODEL	TORQUE Nm																											
	0,05			0,5		1		2		2,5		3		3,5		4	4,5		10	15	20	35						
FAB10																												
FAB12																												
FAB18																												
RAF32																												
RAF38																												
BRL07FR																												
BRL10FR																												
BRL07AS																												
BRL10AS																												
BRL16																												
BRL27																												
BRL35																												
BRL45																												
ACC2210																												
ACC2220																												
ACC2230																												
ACC2245																												
PLUT03																												
PLUT010 + LTP																												
PLUT015 + LTP																												
PLUT010																												
PLUT015																												
PLUT020																												
PLUT035																												

FAB & RAF SERIES

TORQUE UP TO 3,8 NM

FAB series electric screwdrivers are our "best sellers" for the electronic industry. RAF series screwdrivers are designed to meet higher torque applications.

Their advanced ergonomic design, ease of use, high accuracy and durability have made these drivers the standard by which all others are measured. They are lightweight, compact, powerful and come standard with ESD-safe housing certified to SP method 2472 (Ericsson approved). These screwdrivers are available in an inline body style with either a lever start or push to start or in a pistol grip with a trigger start (also available with the cord coming out from the top - U option) and different speeds, for different assembly requirements.

The torque is set externally: an adjusting nut controls output torque by changing the clutch spring compression. A reference scale will indicate the torque setting. The low voltage 30 V DC rare earth motors combine high performances and long life. Replacing their carbon brushes once a year is all you need for maintenance.

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

In addition the controller can be supplied with torque reached signal, lever signal, remote start and reverse (see page of control units for all the details) and with ACE screw counter unit.

All FAB and RAF drivers come standard with ESD-safe body, suspension bail and 2.5 m connection cable. Spiral cable available on request.

The new heavy duty cables and connectors, developed for robotic applications, are made of antistatic dissipative material for a safe use in EPA environment.



Code	Model	Torque Nm	Screw size	RPM max	Start option	Weight kg	L x Ø mm	Housing option
110010/FR	FAB10RE/FR	0,05÷0,8	M2.5	1000	Lever	0,48	226x36	
110012/FR	FAB12RE/FR	0,2÷1,2	M3	1000	Lever	0,48	226x36	
112012/FR	FAB12PS/FR	0,2÷1,2	M3	1000	Push start	0,48	226x36	
110013/FR	FAB12PP/FR	0,2÷1,2	M3	1000	Lever	0,55	200x150x34	Pistol grip
110013/FR/U	FAB12PP/FR/U	0,2÷1,2	M3	1000	Lever	0,55	200x150x34	Pistol grip with top connector
110618/FR	FAB18RE/FR	0,3÷1,8	M4	650	Lever	0,48	226x36	
112618/FR	FAB18PS/FR	0,3÷1,8	M4	650	Push start	0,48	226x36	
110619/FR	FAB18PP/FR	0,3÷1,8	M4	650	Lever	0,55	200x150x34	Pistol grip
110619/FR/U	FAB18PP/FR/U	0,3÷1,8	M4	650	Lever	0,55	200x150x34	Pistol grip with top connector
120032/FR	RAF32NS/FR	0,7÷3,2	M5	1000	Lever	0,65	247x40	
122032/FR	RAF32PS/FR	0,7÷3,2	M5	1000	Push start	0,65	247x40	
120033/FR	RAF32PP/FR	0,7÷3,2	M5	1000	Lever	0,70	200x150x40	Pistol grip
120033/FR/U	RAF32PP/FR/U	0,7÷3,2	M5	1000	Lever	0,70	200x150x40	Pistol grip with top connector
120638/FR	RAF38NS/FR	0,9÷3,8	M5	650	Lever	0,65	247x40	
122638/FR	RAF38PS/FR	0,9÷3,8	M5	650	Push start	0,65	247x40	
120639/FR	RAF38PP/FR	0,9÷3,8	M5	650	Lever	0,70	200x150x40	Pistol grip
120639/FR/U	RAF38PP/FR/U	0,9÷3,8	M5	650	Lever	0,70	200x150x40	Pistol grip with top connector

ELECTRIC SCREWDRIVERS WITH TORQUE AND ANGLE CONTROL



PLUTO../TA

+



T&A CONTROLLER AND DISPLAY

+



EDU1AE/TA

In the industrial tightening you may need different control strategies and solutions. The most common cases are: torque control with angle monitoring and angle control with torque monitoring.

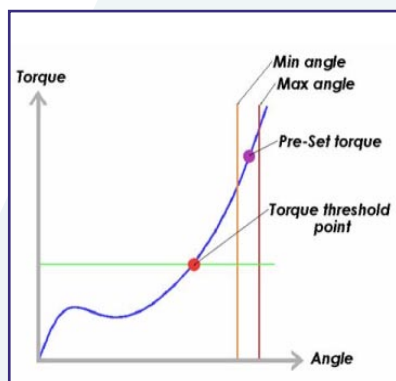
Kolver T & A control units can manage all such strategies.

The Torque/Angle Control

The main parameters to be controlled are the tightening torque applied to the screw and the rotation angle of the screw, with priority to the torque value. If the torque and angle values found by the system are within the programmed settings, the motor stops automatically and the indication of OK cycle (green led turned on) is given, otherwise an error (red led) is generated.

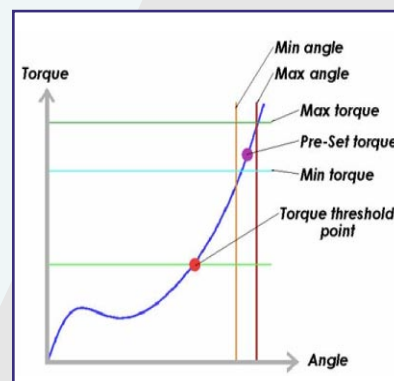
The Angle Control

The main parameter to be controlled is the rotation angle of the screw. The motor stops automatically when the pre-set angle value has been reached and an indication of OK cycle (green led turned on) is given.



Main features:

- Display shows torque value in Nm or lbf.in and angle in degree
- 8 different programs for custom joints with description
- Selection of factory pre set joints (hard to soft)
- User friendly menu
- Nm and lbf.in unit
- Password protected



Code	Model	Torque Nm EDU1AE/TA	Torque Nm EDU1AE/LTP/TA	RPM max EDU1AE/TA	RPM max EDU1AE/LTP/TA	To be used with
130211/TA	PLUTO10D/TA	2÷10	0,6÷4,0	600	400	EDU1AE/TA and EDU1AE/LTP/TA
130210/TA	PLUTO10P/TA	2÷10	0,6÷4,0	600	400	EDU1AE/TA and EDU1AE/LTP/TA
130210/U/TA	PLUTO10P/U/TA	2÷10	0,6÷4,0	600	400	EDU1AE/TA and EDU1AE/LTP/TA
133211/TA	PLUTO10CA/TA	2÷10	0,6÷4,0	600	400	EDU1AE/TA and EDU1AE/LTP/TA
130216/TA	PLUTO15D/TA	2÷15	0,6÷6,8	320	220	EDU1AE/TA and EDU1AE/LTP/TA
130215/TA	PLUTO15P/TA	2÷15	0,6÷6,8	320	220	EDU1AE/TA and EDU1AE/LTP/TA
130215/U/TA	PLUTO15P/U/TA	2÷15	0,6÷6,8	320	220	EDU1AE/TA and EDU1AE/LTP/TA
133216/TA	PLUTO15CA/TA	2÷15	0,6÷6,8	320	220	EDU1AE/TA and EDU1AE/LTP/TA
030000/TA	EDU1AE/TA					any PLUTO../TA
030000/LTP/TA	EDU1AE/LTP/TA					any PLUTO../TA
020025	T&A Controller and display					any PLUTO../TA + any EDU1AE/TA

TLS Positioning Arm

The TLS 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 TLS 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 TLS 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 TLS 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.

TLS includes arm + unit + cable for EDU..BR/SG or EDU1AE (code 020024) or EDU1FR/SG control unit (code 020023).

Main features:

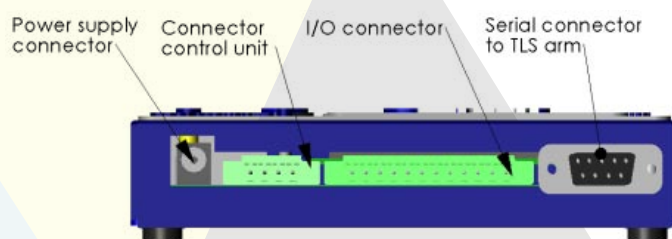
- 3 programmable assembly pattern
- 6 programs per assembly
- Up to 93 screws per assembly
- Screw position (length/ angle)
- Programmable Tolerance
- Statistics
- Manual Reset
- Password protected
- Units of measurement (mm, in)
- Language option
- Accuracy: length ± 1 mm
angle $\pm 1^\circ$
- Minimum distance between screw centers at max extension: 7 mm
- External keyboard and serial port as options.



TLS ARM



TLS BOX



Code	Model		Dimensions mm	Weight kg	Controller
020023	TLS	Box	137x113,40x30,20	0,55	EDU1FR/SG
		Arm min	535,50x183x96	1,40	
		Arm max	1025,50x183x96		
020024	TLS	Box	137x113,40x30,20	0,55	EDU..BR/SG and EDU1AE
		Arm min	535,50x183x96	1,40	
		Arm max	1025,50x183x96		

PLUTO SERIES

TORQUE UP TO 35 NM

Kolver's ingenuity and experience have led to the development of Pluto (PLU's TORque) screwdrivers, the most advanced DC tools in the market, able to reach 35 Nm of torque (4 times more than any competitor's tool). They feature:



An innovative electric motor concept with low inertia and friction with absence of iron losses for extreme efficiency and extended life. Planetary gearboxes with high quality composite materials. Pistol grip to fit operator's hand ergonomically.

A weight of 470 g to reduce operator's fatigue. Fully electronic torque control system, manually set by a dial on the controller, to shut the tool off automatically once the preset torque has been reached. The Pluto Series is ideal for high volume applications where millions of cycles at high torque are required. The Pluto Series is available in a molded pistol grip with the cord set exiting from the top (U option) or bottom, or in a standard inline housing with lever start. ESD-safe housing is standard. All Pluto series electric screwdrivers come standard with suspension bail and 2.5 m connection cable. Spiral cable available on request. The new heavy duty cables and connectors, developed for robotic applications, are made of antistatic dissipative material for a safe use in EPA environment.

Also available Torque & Angle models, see T&A for details.

Pluto 20CA (20 Nm) and Pluto 35CA (35 Nm) available on request with auxiliary external housing (IMPEXT). See Accessories for details.

Pluto drivers are the real alternative to the pneumatic screwdriver.



EDU1AE



U MODEL



INLINE MODEL



PLUTO08ANG

Code	Model	Torque Nm EDU1AE	Torque Nm EDU1AE/LTP	RPM max EDU1AE	RPM max EDU1AE/LTP	Weight kg	Dimensions mm	Controller	Housing option
130203	PLUT03D	-	0,3÷3	-	1200	0,5	216x40	EDU1AE/LTP	
130204	PLUT03P	-	0,3÷3	-	1200	0,5	150x150x45	EDU1AE/LTP	Pistol grip
130211/N	PLUT010D/N	2÷10	0,6÷4,0	600	400	0,5	216x40	EDU1AE and EDU1AE/LTP	
130210/N	PLUT010P/N	2÷10	0,6÷4,0	600	400	0,5	150x150x45	EDU1AE and EDU1AE/LTP	Pistol grip
130210/U/N	PLUT010P/U/N	2÷10	0,6÷4,0	600	400	0,5	150x150x45	EDU1AE and EDU1AE/LTP	Pistol grip with top connector
130216/N	PLUT015D/N	2÷15	0,6÷6,8	320	220	0,5	216x40	EDU1AE and EDU1AE/LTP	
130215/N	PLUT015P/N	2÷15	0,6÷6,8	320	220	0,5	150x150x45	EDU1AE and EDU1AE/LTP	Pistol grip
130215/U/N	PLUT015P/U/N	2÷15	0,6÷6,8	320	220	0,5	150x150x45	EDU1AE and EDU1AE/LTP	Pistol grip with top connector
130208	PLUT008ANG	1,5÷8	-	600	-	0,75	260x40	EDU1AE	



EDU1AE



EDU1AE/TOP



SOCKET TRAY



SWITCH BOX

CONTROL UNITS PLUTO SERIES

All Kolver screwdrivers work in combination with a control unit acting 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.

For the Pluto series the EDU1AE gives you all the advantages of precision torque controlled electric tools at a fraction of the price of transducerized tools. The microprocessor based unit cuts the power supply to the motor calculating the correct torque in response to 3 parameters, voltage frequency and current, according to the selected options.

Additional features:

- One controller only for a torque range from 2 to 35 Nm. For lower torque values: EDU1AE/LTP model.
- User interface screens: walk through a few simple steps to input the parameters requested for your application and your fastening process can begin.
- Slow start and adjustable speed.
- Soft or hard joint option.
- High speed rundown and slow speed tightening for improved accuracy.
- Autostop on elapsed time, automatic reverse at cycle end with adjustable time stop.
- Torque reached signal and lever signal, remote start and reverse contacts.
- Serial port for data downloading available on request for all models.
- ACE screw counter to monitor for fastening assembly process.

The EDU1AE/TOP and EDU1AE/TOP/LTP multiple torque system is designed to expand the functionality of the PLUTO screwdriver and its controller by enabling easy access to multiple torque settings with one EDU1AE controller and one Pluto driver only.

Main features:

- One controller only for a torque range from 2 to 35 Nm. For lower torque values: EDU1AE/TOP/LTP model.
- User interface screens.
- 8 independent programs: with one PLUTO screwdriver you can replace 8 conventional screwdrivers.
- Each program can accept the following settings: Torque, Speed, Type of Joint, Number of Screws to be tightened, Number of Rejects allowed, Minimum screwing time, Maximum screwing time, Ramp time, Auto reverse, Auto switch to the next program with any sequence, Allow or Prevent reverse option.
- Password protected.
- Statistics menu with summary of work done: total number of cycles performed correctly and wrongly; at the end of the day you'll know how many cycles have been performed correctly, how many wrongly, total number of screws etc.
- 15 input and 11 output connectors: you can control all functions from PLC.
- USB port as option.
- Options also include Socket tray (code 020041) or Switch box (code 020032): for programs to be selected from the TOP unit by the removal of one of eight bit from the tray or by the push of one of eight buttons.

Code	Model	Features	Dimensions mm	Weight kg
030000	EDU1AE	Programmable with user interface screens	185x125x95	3,150
030000/LTP	EDU1AE/LTP	Lower torque and speed	185x125x95	3,150
030000/C	EDU1AE/C	Remote double torque selection	185x125x95	3,150
030002	EDU1AE/MT	Max torque time option	185x125x95	3,150
030002/LTP	EDU1AE/MT/LTP	Max torque time option - Lower torque and speed	185x125x95	3,150
030000/TOP	EDU1AE/TOP	With programmable system - 8 different programs	236x12x208	4,0
030000/TOP/LTP	EDU1AE/TOP/LTP	With programmable system - 8 different programs Lower torque and speed	236x12x208	4,0
030002/TOP	EDU1AE/MT/TOP	With programmable system - 8 different programs Max torque time option	236x12x208	4,0
030002/TOP/LTP	EDU1AE/MT/TOP/LTP	With programmable system - 8 different programs Max torque time option - Lower torque and speed	236x12x208	4,0

BRUSHLESS SERIES

TORQUE 0,05 - 4,5 NM

BRL series electric screwdrivers feature state-of-the-art brushless motors and clutchless torque control, the perfect solution for clean room applications thanks to zero emissions of coal dust and other pollutants into the working environment. Extremely small and lightweight for utmost operator comfort and with advanced ergonomic design, they ensure very low noise level, minimum vibrations, maximum safety (low supply voltage), lasting performance as well as maintenance free operation.

BRL screwdrivers are available either with current control system (AS series) or with mechanical clutch (FR series). In both cases the electronic controller (EDU..BR series) will cut the power supply to the motor as soon as the pre set torque has been reached.

BRL are available in an inline body style with lever start or pistol grip option (on request also available with the cord coming out from the top - U option).

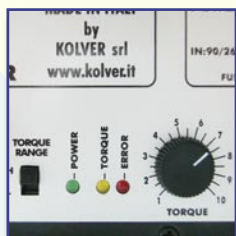
BRL models with a wide range of torque and speed to cover many different assembly requirements.

All BRL drivers come standard with an ESD-safe body, 2.5 m connection cable and suspension bail. The heavy duty cables and connectors, developed for robotic applications, are made of antistatic dissipative material for a safe use in EPA environment.

The absence of maintenance operations guarantees high productive continuity.



EDU1BR/SG
CONTROL UNIT



TORQUE
ADJUSTMENT



AUTOMATION
MODEL



8 PIN CABLE

Code	Model	Torque Nm	RPM max	Weight kg	L x Ø mm	Controller	
160007	BRL07AS	0,1÷0,7	1000	0,35	205x33	EDU1BR	EDU1BR/SG
160010	BRL10AS	0,1÷1,0	650	0,35	205x33	EDU1BR	EDU1BR/SG
160016	BRL16AS	0,1÷1,6	450	0,35	205x33	EDU1BR	EDU1BR/SG
181027	BRL27AS	0,3÷2,7	1200	0,55	230x40	EDU2BR	EDU2BR/SG
181635	BRL35AS	0,5÷3,5	800	0,55	230x40	EDU2BR	EDU2BR/SG
181945	BRL45AS	0,5÷4,5	540	0,55	230x40	EDU2BR	EDU2BR/SG
160007/FR	BRL07FR	0,05÷1,0	1000	0,50	226x36	EDU1BR	EDU1BR/SG
160010/FR	BRL10FR	0,05÷1,2	650	0,50	226x36	EDU1BR	EDU1BR/SG
180027	BRL27FR	0,3÷2,7	1200	0,70	247x40	EDU2BR	EDU2BR/SG
180635	BRL35FR	0,5÷3,5	800	0,70	247x40	EDU2BR	EDU2BR/SG

CONTROL UNITS BRL SERIES



All Kolver screwdrivers work in combination with a control unit acting 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.

The EDU1BR and EDU2BR control units for BRL screwdrivers feature a maintenance free state-of-the-art electronics with no wearing components. They come standard with the torque knob to adjust the torque of current control tools and the selection of two ranges of torque through a switch in the front panel: L (from 0 to 30% of the torque range) and H (from 20 to 100%).

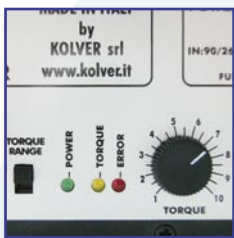
The EDU1BR/SG and EDU2BR/SG controllers additionally feature slow start (0-2 sec), adjustable speed (60% to 100%) and visual indicators (green-yellow-red) for power on/off, torque reached or not reached.

Additional features : output 24V for torque reached and lever signals; input start and reverse contacts.

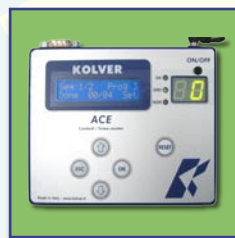
All EDU...BR controllers can drive either current control tools and clutch tools.

In particular:

- EDU1BR & EDU1BR/SG are intended for use with BRL07, 10 & 16 AS and BRL07, 10 FR.
- EDU2BR & EDU2BR/SG are intended for use with BRL27, 35 & 45 both AS and FR.



TORQUE ADJUSTMENT



ACE SREW COUNTER



BACK CONNECTOR



TLS POSITIONING ARM

Code	Model	Features	Dimensions mm	Weight kg	Screwdriver
001000	EDU1BR	IN: 90-260 Vca OUT: 36 VDC - 120VA - adjustable torque	135x180x65	0,95	BRL07, 10 & 16
001000/SG	EDU1BR/SG	slow start and adjustable speed, INPUT: start and reverse contacts, external stop and L/H torque switch OUTPUT: torque reached & lever & error signals	135x180x65	0,95	BRL07, 10 & 16
002000	EDU2BR	IN: 90-260 Vca OUT: 36 VDC - 120VA - adjustable torque	135x180x65	0,95	BRL27, 35 & 45
002000/SG	EDU2BR/SG	slow start and adjustable speed, INPUT: start and reverse contacts, external stop and L/H torque switch OUTPUT: torque reached & lever & error signals	135x180x65	0,95	BRL27, 35 & 45

TORQUE TESTER - K SERIES

The K series is a totally new class of torque analyzers. They feature a built-in transducer and also have the unique ability to connect to an external transducer. Using a high performance circuitry they collect, store and eventually download torque measures for a complete analysis of the tool and/or the joint. Priced at an outstanding low level, this tester has soon become very popular among those companies wishing to improve their product quality through the precise control of torque.

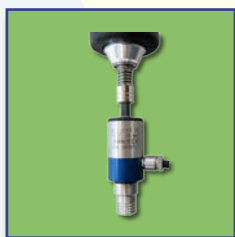
- User friendly menu.
- Accuracy: $\pm 0,5\%$ of the displayed value.
- Internal transducer for tests on a joint simulator (supplied with the unit).
- Connection for external transducer (transducer not included).
- 500 readings memory.
- Selection among Nm, Ncm, kg.cm, in.lbs.
- RS232C output (cable not included).
- Indication \Leftrightarrow of the preset values.
- Output signal at preset reached value.
- Clockwise and counter-clockwise measurement.
- 3 modes of operation: Peak + , Peak - , Track.
- Manual or automatic reset.
- 9 V rechargeable battery provide 4 hours continuous operation. Automatic switch off to reduce battery consumption.
- 125% transducer overload protection.
- English and Italian menu.

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

Additional joint simulators (rundown adapters) for hard joint or fully elastic joint available on request.



JOINT SIMULATOR



EXTERNAL ROTARY TRANSDUCER



CONNECTING PORTS



KEYPAD

Code	Model	Torque Nm	Dimensions mm	Weight kg
020402	K1	0,05÷1	180x105x55	1,0
020403	K5	0,3÷5	180x105x55	1,0
020404	K20	0,5÷20	180x105x55	1,0
022405	KTE5	0,5÷5		
022425	KTE25	2÷25		



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 analyzer has become increasingly important for many companies to ensure that proper torque is being applied.

MINI K Torque Tester

MINI K Torque Analyzers feature a built-in transducer. The easy-to-use torque tester is ideal for checking all power tools up to 20Nm. The small size and portability of the MINI K makes it ideal for checking torque tools on production floor regularly to ensure the tools are always calibrated

- Built-in transducer.
- Three models with 1Nm, 5Nm and 20Nm max torque
- Three units of torque measurement available: N.m, kgf.cm, lbf.in.
- Four digit display.
- Manual and auto reset functions to clear displayed values.
- Battery powered (9V) or AC adapter (option at extra cost). 9V battery provides 30 hours of continuous operation.
- Automatic shut down to extend battery life.
- Torque Tester includes a spring washers joint simulator (miniK20) or built in joint simulator and a case.

Accuracy: $\pm 0.5\%$ of reading from 10% to 100%.

Accuracy: $\pm 1\%$ of reading from 1% to 10%.

Code	Model	Torque Nm	Dimensions mm	Weight kg
021402	mini K1	0,05÷1	150x70x45	0,80
021403	mini K5	0,3÷5	150x70x45	0,80
021404	mini K20	0,5÷20	150x70x45	0,80



MINI Ke

The Mini Ke system consists of a torque readout and an external rotary transducer. The Rotary Torque Transducer is the ideal torque-auditing tool for testing the actual torque being applied on the assembly application. 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.

Accuracy: $\pm 0.5\%$ of reading from 10% to 100%.

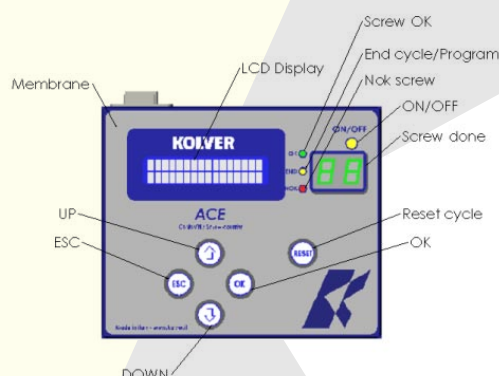
Accuracy: $\pm 1\%$ of reading from 1% to 10%.

Code	Model	Torque Nm	Dimensions mm	Weight kg
021405/5	mini Ke 5	0,5÷5 Nm external rotary transducer	150x70x45	0,50 (without transducer)
021405/25	mini Ke 25	2÷25 Nm external rotary transducer	150x70x45	0,50 (without transducer)
021405	mini Ke	Up to 500 Nm depending on transducer	150x70x45	0,50 (without transducer)



The ACE screw counter is a process control system that monitors the fastening assembly process. It tracks, in real time, the fastening of each screw in an assembly, then notifies the result. It keeps a summary of good and complete assemblies as well as of bad and incomplete ones throughout the production day. The ACE is easily programmed with user interface screens through the keypad. Walk through a few simple steps to input the parameters for total number of fasteners required in a completed assembly and the fastening process can begin. The unit gives the operator audible and visual indications that the assembly has been completed without error and it is safe to move on to the next process step or if it has been rejected.

- To be connected to EDU..BR/SG or EDU1AE (code 020022) or to EDU1FR/SG (code 020021).
- ACE includes the screw counter + cable for connection to the control unit
- 8 independent programs
- Up to 99 screw for each program
- Sequence of 4 programs
- Min and max fastening time (accuracy: 0.01 sec)
- Separate displays for parameters setting and fasteners count
- OK & Error lights
- Statistics: total number of correct screws done, wrong screws, cycles done, sequences done
- I/O signals
- Password protected
- Wall mountable
- Remote control of the system (optional)
- RS232 port



Code	Model	Dimensions mm	Weight kg	Controller
020021	ACE	137x113,40x30,20	0,55	EDU1FR/SG
020022	ACE	137x113,40x30,20	0,55	EDU..BR/SG and EDU1AE

SCREW PRESENTERS

The NFK series is a simple but effective device where screws are brought to pick up position one after another and stay there lining up. A magnetized bit, an Autocatcher or a suction head is required to chuck the screw.

The NFK 707 is a universal feeder adjustable for any size of screw from 1.4 through 5.0 mm. With NFK..RS series, it is also possible to work with pick & place devices.

Each screw is separated and brought into place with very accurate positioning ready for automatic pick-up action.

The ASP HD4 Suction Head is designed to interface with FAB and RAF series of screwdrivers. It consists of a torque adjusting nut with locking ring and a vacuum adapter with vacuum port. A Screw Finder completes the assembly. Based on the head diameter of your screw, the screw finder must be counterbored to allow the head of the screw to fit up into the recess.



NFK SCREW PRESENTER



NFK..RS MODEL



ASP HD4
SUCTION HEAD

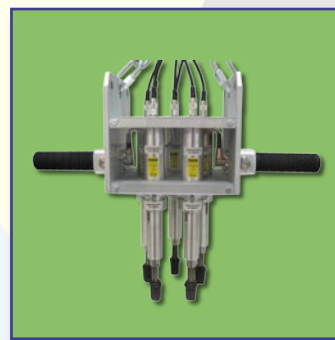


AUTOCATCHER

Code	Model	Ø Shank mm	Screw lenght min. mm	Screw lenght max mm
013514	NFK 514	1,4	1,8	10
013517	NFK 517	1,7	1,7	10
013520	NFK 520	2,0	2,5	18
013523	NFK 523	2,3	2,8	18
013526	NFK 526	2,6	3,5	18
013530	NFK 530	3,0	4,0	18
013540	NFK 540	4,0	5,0	18
013550	NFK 550	5,0	6,0	18
013707	NFK 707	1,4 - 5,0	1,8	18



MULTI-SPINDLE



MULTI-SPINDLE

MULTI-SPINDLE UNIT

Multi-spindle tightening applications improve assembly results and increase productivity. Kolver creates custom designed multi-spindle equipment that can be configured in either vertical or horizontal orientations depending on the application and customer requirements. Designs may incorporate operator input or be fully automated. Spindles can be mounted and arranged to accommodate and match any bolt pattern using in-line, 90° angle or special offset drives. Kolver multi-spindle tightening systems allow for spindle synchronization, operator feedback and error proofing solutions.

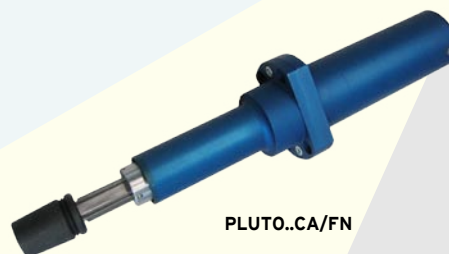


CA SERIES

The CA screwdrivers are designed for automated and fixtured applications. Special wiring and dedicated controllers are equipped with electric signals and contacts for immediate and easy interface. The ideal alternative to pneumatic drivers, they feature a long life maintenance free electric motor with a unique electronic torque control system for high accuracy throughout a wide torque range (up to 35 Nm); an aluminium body, for easy and quick clamp, supplied with 2.5 m cable.

The PLUTO..CA/FN series incorporates the PLUTO DC-controlled electric screwdriver design, supplied in a inline aluminium housing for flange mounting applications. The DC motor and solid state controls of the PLUTO are ideal for automated high volume/ high duty applications.

Flange and telescopic spindle available together or separately.



PLUTO..CA/FN

Code	Model	Torque Nm	RPM Max	L x Ø mm	Output	Control unit
130303	PLUTO3CA	0,3÷3	1000	160x40	Hex. 1/4"	EDU1AE/LTP
133211/N	PLUTO10CA/N	0,6÷4,0 2÷10	400 600	160x40	Hex. 1/4"	EDU1AE/LTP EDU1AE
133216/N	PLUTO15CA/N	0,6÷6,8 2÷15	220 320	160x40	Hex. 1/4"	EDU1AE/LTP EDU1AE
133221	PLUTO20CA	2,5÷20	130	196,10x47	Sq 3/8"	EDU1AE
133236	PLUTO35CA	3÷35	140	206,50x57	Sq 3/8"	EDU1AE
130303/FN	PLUTO3CA/FN	0,3÷3	1200	257,25x39,80	Hex. 1/4"	EDU1AE/LTP
133211/FN	PLUTO10CA/FN	0,6÷4,0 2÷10	400 600	257,25x39,80	Hex. 1/4"	EDU1AE/LTP EDU1AE
133216/FN	PLUTO15CA/FN	0,6÷6,8 2÷15	220 320	257,25x39,80	Hex. 1/4"	EDU1AE/LTP EDU1AE
133221/FN	PLUTO20CA/FN	2,5÷20	130	276,35x47	Sq 3/8"	EDU1AE
160007/CA	BRL07AS/CA	0,1÷0,7	1000	179,50x32,8	Hex. 1/4"	EDU1BR/SG
160010/CA	BRL10AS/CA	0,1÷1,0	650	179,50x32,8	Hex. 1/4"	EDU1BR/SG
160016/CA	BRL16AS/CA	0,1÷1,6	450	179,50x32,8	Hex. 1/4"	EDU1BR/SG
181027/CA	BRL27AS/CA	0,3÷2,7	1200	207,50x40	Hex. 1/4"	EDU2BR/SG
181635/CA	BRL35AS/CA	0,5÷3,5	800	207,50x40	Hex. 1/4"	EDU2BR/SG
181945/CA	BRL45AS/CA	0,5÷4,5	540	207,50x40	Hex. 1/4"	EDU2BR/SG
160007/FR/CA	BRL07FR/CA	0,05÷1,2	1000	212,30x35	Hex. 1/4"	EDU1BR/SG
160010/FR/CA	BRL10FR/CA	0,05÷1,2	650	212,30x35	Hex. 1/4"	EDU1BR/SG
180027/CA	BRL27FR/CA	0,3÷2,7	1200	228x40	Hex. 1/4"	EDU2BR/SG
180635/CA	BRL35FR/CA	0,5÷3,5	800	228x40	Hex. 1/4"	EDU2BR/SG



EDU1AE



EDU..BR/SG



TELESCOPIC SPINDLE



MULTI SPINDLE

CONTROL UNITS CA SERIES

All Kolver screwdrivers work in combination with a control unit acting 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.

For the Pluto..CA series the EDU1AE gives you all the advantages of precision torque controlled electric tools at a fraction of the price of transdurized tools. The microprocessor based unit cuts the power supply to the motor calculating the correct torque in response to 3 parameters, voltage frequency and current, according to the selected options.

Additional features:

- One controller only for a torque range from 2 to 35 Nm
For lower torque values: EDU1AE/LTP model.
- User interface screens: walk through a few simple steps to input the parameters requested for your application and your fastening process can begin.
- Slow start and adjustable speed.
- Soft or hard joint option.
- High speed rundown and slow speed tightening for improved accuracy.
- Autostop on elapsed time, automatic reverse at cycle end with adjustable time stop.
- Torque reached signal and lever signal, remote start and reverse contacts.
- Serial port for data downloading available on request for all models.
- ACE screw counter to monitor the fastening assembly process.

The EDU1BR/SG and EDU2BR/SG control units for BRL..CA screwdrivers feature a maintenance free state-of-the-art electronics with no wearing components.

They come standard with:

- torque knob to adjust the torque with current control tools
- selection of two ranges of torque through a switch in the front panel:
L (from 0 to 30% of the torque range) and H (from 20 to 100%)
- slow start (0-2 sec) and adjustable speed (60% to 100%)
- visual indicators (green-yellow-red) for power on/off, torque reached or not reached
- input: start and reverse contacts
- output 24V for torque reached and lever signals.

All EDU...BR controllers can drive either current control tools and clutch tools.

In particular:

- EDU1BR/SG are intended for use with BRL07, 10 & 16 AS and BRL 07, 10FR.
- EDU2BR/SG are intended for use with BRL27, 35 & 45 both AS and FR.

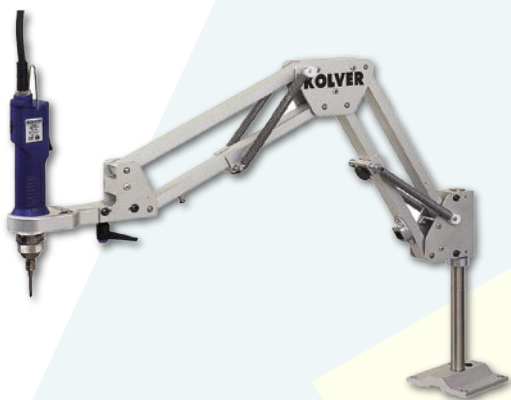
Code	Model	Features	Dimensions mm	Weight kg	Screwdriver
030000	EDU1AE	Programmable with user interface screens	185x125x95	3,150	PLUTO
030000/LTP	EDU1AE/LTP	Lower torque and speed	185x125x95	3,150	PLUTO
030000/C	EDU1AE/C	Remote double torque selection	185x125x95	3,150	PLUTO
030002	EDU1AE/MT	Max torque time option	185x125x95	3,150	PLUTO
030002/LTP	EDU1AE/MT/LTP	Max torque time option - lower torque and speed	185x125x95	3,150	PLUTO
030000/TOP	EDU1AE/TOP	With programmable system - 8 different programs	236x12x208	4,0	PLUTO
030000/TOP/LTP	EDU1AE/TOP/LTP	With programmable system - 8 different programs lower torque and speed	236x12x208	4,0	PLUTO
030002/TOP	EDU1AE/MT/TOP	With programmable system - 8 different program Max torque time option	236x12x208	4,0	PLUTO
030002/TOP/LTP	EDU1AE/MT/TOP/LTP	With programmable system - 8 different program Max torque time option - lower torque and speed	236x12x208	4,0	PLUTO
001000/SG	EDU1BR/SG	slow start and adjustable speed, INPUT: start and reverse contacts, external stop and L/H torque switch OUTPUT: torque reached & lever & error signals	135x180x65	0,95	BRL07, 10 & 16
002000/SG	EDU2BR/SG	slow start and adjustable speed, INPUT: start and reverse contacts, external stop and L/H torque switch OUTPUT: torque reached & lever & error signals	135x180x65	0,95	BRL27, 35 & 45



PIVOTING ARM AND BALANCER

ARMPV1 support arms, code 010500, consist of a vertical support on which a 180° pivoting arm is attached. It is equipped with an adjustable clamp for quick installation without drilling the table.

Tool balancers TECBA1, code 010300, allow screwdrivers to be positioned over the work station for comfortable operation. Models with capacity up to 180 kg available on request.



TORQUE REACTION ARM

Torque reaction arms PA2KOL, code 010600, have been designed to eliminate the reaction generated by screwdrivers when they stop at the pre-set torque up to 15Nm.

Options include table or wall mount, tool holders for inline or pistol screwdrivers and clamp for torque up to 20 Nm.



TELESCOPIC TORQUE REACTION ARM

Torque reaction arms DMFK90, code 010660, have been designed to eliminate the reaction generated by screwdrivers when they stop at the pre-set torque up to 15Nm. Options include arms up to 40 Nm.



LINEAR ARM

The Linear arms maneuver smoothly as it absorbs 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. Prevents cross threading and side load. Keeps tool perpendicular. Reduces RMI (Repetitive Motion Injury) and CTS (Carpal Tunnel Syndrome) while boosting production. Extends in horizontal direction and arm length is adjustable. Torque capacity of up to 20 Nm.



TELESCOPIC SPINDLE

The Telescopic Spindle (axial compensator) is designed to interface with all CA screwdrivers for use in fixtured applications. Mainly used in multi spindle applications to balance the screw tightening process and compensate depth difference across multiple fasteners.



ANGLE HEADS

When space is limited right angle heads can be easily attached to lever start FAB (ANG HD6, code 010142) and RAF (ANG HD5, code 010141) drivers. The connection and torque adjusting nut is equipped with 2 x M3 threaded holes to lock the head in the desired position. For Pluto series see specific angle tools.



IMPEKT

Auxiliary external starting device for PLUTO20CA (20 Nm) and PLUTO35CA (35Nm) for remote start. Code 010150.



SUCTION HEAD and AUTOCATCHER

The ASP HD4 Suction Head is designed to interface with FAB and RAF series of screwdriver. It consists of a torque adjusting nut with locking ring and a vacuum adapter with vacuum port. A Screw Finder completes the assembly. Based on the head diameter of your screw, the screw finder must be counterbored to allow the head of the screw to fit up into the recess. For stainless steel, brass, copper and plastic screws, take the Autocatcher and you will be able to pick up and fasten the screws by one hand! Used both in combination with NFK..RS screw feeder, this system will increase your productivity without the expense of automated screwdrivers.