

KOLVER



KOLVER

The easy solution®

ELECTRIC SCREWDRIVERS









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. More than 80% of the products you find in this catalogue have been introduced over the last 2 years: no other manufacturer of electric screwdrivers comes close to this record.

Screwdrivers is the term commonly used for assembly tools in the screw size up to M8. This catalogue is designed to help you select the right screwdriver for your assembly application. The Kolver family of tools is one of the most complete in the electric power tool industry. Kolver line of tools covers a wide range of torque at several speeds, suitable for an indefinite number of applications. Whether your job is in the Electronics, PC assembly, Telecommunication or in the Motor vehicles or Household appliances industry, you'll find the optimum screwdriver for each application.



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. PLC models also available for additional functions
-  **ACCURATE**
With the electronic shut off mechanism the accuracy is better than +/- 5% of the pre-set value
-  **FOR EVERY APPLICATION**
Range up to 15 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



FAB SERIES (TORQUE UP TO 1,8 NM)

FAB series electric screwdrivers are our “best sellers” for the electronic industry. 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). The FAB 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.

Standard features are the slow start (ramp from 0 to 2 seconds) and adjustable speed (from 60% to 100% of nominal speed).

In addition the controller can be supplied with torque reached signal, lever signal, remote start and reverse (see page of control units) or with PLC option.

All FAB drivers come standard with an ESD-safe body, 2.5 m connection cable and suspension bail.

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



TORQUE SET UP



PISTOL MODEL



ANGLE HEAD
CODE 010100 (ONLY
FOR LEVER TYPE)



NEW CABLE WITH M12
CONNECTOR

Code	Model	Torque Nm	Screw size	RPM	Start option	Weight kg	L x Ø mm	Voltage cc	Controller	Housing option
110003/FR	FAB03SS/FR	0,05±0,3	M2.5	650	Lever	0,45	220x33	30 Vcc	EDU1FR	
110010/FR	FAB10RE/FR	0,05±0,8	M2.5	1000	Lever	0,48	220x33	30 Vcc	EDU1FR	
110012/FR	FAB12RE/FR	0,2±1,2	M3	1000	Lever	0,48	220x33	30 Vcc	EDU1FR	
112012/FR	FAB12PS/FR	0,2±1,2	M3	1000	Push start	0,48	220x33	30 Vcc	EDU1FR	
110013/FR	FAB12PP/FR	0,2±1,2	M3	1000	Lever	0,55	200x150x34	30 Vcc	EDU1FR	Pistol grip
110013/FR/U	FAB12PP/FR/U	0,2±1,2	M3	1000	Lever	0,55	200x150x34	30 Vcc	EDU1FR	Pistol grip with top connector
110618/FR	FAB18RE/FR	0,3±1,8	M4	650	Lever	0,48	220x33	30 Vcc	EDU1FR	
112618/FR	FAB18PS/FR	0,3±1,8	M4	650	Push start	0,48	220x33	30 Vcc	EDU1FR	
110619/FR	FAB18PP/FR	0,3±1,8	M4	650	Lever	0,55	200x150x34	30 Vcc	EDU1FR	Pistol grip
110619/FR/U	FAB18PP/FR/U	0,3±1,8	M4	650	Lever	0,55	200x150x34	30 Vcc	EDU1FR	Pistol grip with top connector

RAF SERIES (TORQUE UP TO 3,8 NM)

RAF Series screwdrivers are designed to meet higher torque applications. The advanced ergonomic body design reduces Carpal Tunnel Syndrome. They are lightweight, compact, powerful and come standard with ESD-safe housing certified to SP method 2472 (Ericsson approved). The RAF series' wide torque range and tight torque accuracy combined with the adjustable RPMs and slow-start options, make it a versatile tool ideal for multiple applications. The RAF 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. Standard features are the slow start (ramp from 0 to 2 seconds) and adjustable speed (from 60% to 100% of nominal speed).

In addition the controller can be supplied with torque reached signal, lever signal, remote start and reverse (see page of control units) or with PLC option.

All RAF drivers come standard with an ESD-safe body, 2.5 m connection cable and suspension bail.

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



TORQUE SET UP



PISTOL MODEL



ANGLE HEAD
CODE 010120 (ONLY
FOR LEVER TYPE)



NEW CABLE
WITH M12 CONNECTOR

Code	Model	Torque Nm	Screw size	RPM	Start option	Weight kg	L x Ø mm	Voltage cc	Controller	Housing option
120032/FR	RAF32NS/FR	0,7÷3,2	M5	1000	Lever	0,65	225 x 39	30 Vcc	EDUIFR	
122032/FR	RAF32PS/FR	0,7÷3,2	M5	1000	Push start	0,65	225 x 39	30 Vcc	EDUIFR	
120033/FR	RAF32PP/FR	0,7÷3,2	M5	1000	Lever	0,70	220x150x40	30 Vcc	EDUIFR	Pistol grip
120033/FR/U	RAF32PP/FR/U	0,7÷3,2	M5	1000	Lever	0,70	220x150x40	30 Vcc	EDUIFR	Pistol grip with top connector
120638/FR	RAF38NS/FR	0,9÷3,8	M5	650	Lever	0,65	225 x 39	30 Vcc	EDUIFR	
122638/FR	RAF38PS/FR	0,9÷3,8	M5	650	Push start	0,65	225 x 39	30 Vcc	EDUIFR	
120639/FR	RAF38PP/FR	0,9÷3,8	M5	650	Lever	0,70	220x150x40	30 Vcc	EDUIFR	Pistol grip
120639/FR/U	RAF38PP/FR/U	0,9÷3,8	M5	650	Lever	0,70	220x150x40	30 Vcc	EDUIFR	Pistol grip with top connector

PLUTO SERIES

Kolver's ingenuity and experience have led to the development of Pluto (PLUs TORque) screwdrivers, the most advanced DC tools in the market, able to reach 15Nm 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 (clutchless) 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. This tool is the real alternative to the pneumatic screwdriver. The controller is supplied with slow start and adjustable speed, soft or hard joint option, high speed rundown and slow speed tightening for improved accuracy, automatic reverse at cycle end, autostop on elapsed time, torque reached signal and lever signal, remote start and reverse contacts (see page of control units for details) or with PLC option for multiple functions.

All Pluto series electric screwdrivers come standard with 2.5 m connection cable and suspension bail.

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



TORQUE SET UP ON THE CONTROLLER



U MODEL



INLINE MODEL WITH ADAPTER KPO5 FOR EASY CLAMPING ON REACTION ARM



INLINE MODEL

Code	Model	Torque Nm	Screw size	RPM	Start option	Weight kg	Dimensions mm	Voltage cc	Comtroller	Housing option
130213/FR	PLUTO03FR	0,3÷3	M5	800	Lever	0,60	225x39	30 Vcc	EDU1FR	
130214/FR	PLUTO03PP/FR	0,3÷3	M5	800	Lever	0,65	200x150x34	30 Vcc	EDU1FR	Pistol grip
130211/N	PLUTO10D/N	2÷10	M6	600-200	Lever	0,50	180x40	40 Vcc	EDU1AE	
130210/N	PLUTO10P/N	2÷10	M6	600-200	Lever	0,50	160x130x45	40 Vcc	EDU1AE	Pistol grip
130210/U/N	PLUTO10P/U/N	2÷10	M6	600-200	Lever	0,50	160x130x45	40 Vcc	EDU1AE	Pistol grip with top connector
130216/N	PLUTO15D/N	2÷15	M8	320-100	Lever	0,50	180x40	40 Vcc	EDU1AE	
130215/N	PLUTO15P/N	2÷15	M8	320-100	Lever	0,50	160x130x45	40 Vcc	EDU1AE	Pistol grip
130215/U/N	PLUTO15P/U/N	2÷15	M8	320-100	Lever	0,50	160x130x45	40 Vcc	EDU1AE	Pistol grip with top connector



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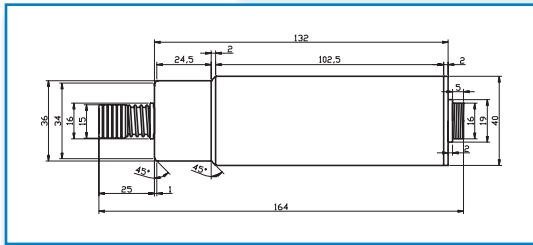
CA SERIES

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.

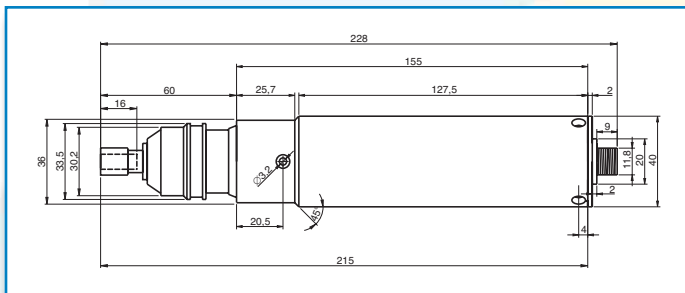
The ideal alternative to pneumatic drivers, they feature a long life maintenance free electric motor with a unique electronic torque control system for high accuracy throughout a wide torque range; an aluminium body, for easy and quick clamp, supplied with 2.5 m cable.



CA SERIES



PLUTO CA



PLUTO CA/FR

Code	Model	Torque Nm	RPM	Start option	L x Ø mm	Voltage cc	Controller
130203/FR	PLUTO03CA/FR	0,3÷3	800	Remote	228x40	30 Vcc	EDU1FR/SG
133211/N	PLUTO10CA/N	2÷10	600-200	Remote	164x40	40 Vcc	EDU1AE
133216/N	PLUTO15CA/N	2÷15	320-100	Remote	164x40	40 Vcc	EDU1AE



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ACC SERIES

ACC screwdrivers with shut off torque control through mechanical clutch 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.



TORQUE SET-UP



3 POSITIONS
REVERSE SWITCH



START MODE
(PUSH TO START
OR PUSH + LEVER)



TORQUE
ADJUSTING NUT COVER

Code	Model	Torque Nm	Screw size	RPM	Weight kg	L x Ø mm	Voltage cc
141910	ACC2210	0,2÷1,0	M3	950	0,75	255x35	230 Vca
141920	ACC2220	0,7÷2,0	M4	950	0,80	255x35	230 Vca
151222	ACC2222	0,9÷2,0	M4	2400	0,85	265x38	230 Vca
151930	ACC2230	1,0÷3,0	M5	950	0,85	265x38	230 Vca
151945	ACC2245	1,0÷4,5	M5	450	0,85	265x38	230 Vca

ACC SERIES



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CONTROL UNITS

All the FAB, RAF and Pluto series 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 new EDU1FR control units for FAB and RAF screwdrivers feature a maintenance free state-of-the-art electronics with no wearing components with a circuit design suitable to both lever start and push start drivers with protection against current overload up to 10A. This design results in very low current to the driver's start switch and clutch switch to extend their life indefinitely. Additional features:

- Suitable to universal supply from 90 to 260 V ac 50/60 hz.
- Slow start (0-2 seconds) and RPM (60% to 100%).
- Visual indicators (green-red) for power on/off and clutch action.
- Reduced weight (0.6 kg) and compact size for easy placement.
- New M12 waterproof connector with silver and gold contacts for perfect conductivity.

The new EDU1FR/SG controller features additional circuits wired to 2 connectors in the back panel: one connector sends out 24V signals for torque reached and lever (motor running), the second connector is designed to accept remote start and remote reverse signals. A double output connector (DOCK01) is also available for operators using two screwdrivers on the same working area. One end of this device is to be connected to the controller (cable included), the other end to the drivers. The screwdrivers are not to be used at the same time.

For the Pluto series the new EDU1AE gives you all the advantages of precision torque controlled electric tools at a fraction of the price of transducerized tools. The micro-processor 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 15 Nm.
- 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.



VISUAL INDICATORS



SOFT START AND SPEED REGULATION



TORQUE ADJUSTMENT ON EDU1AE



DOUBLE OUTPUT DEVICE WITH CABLE

Code	Model	Features	Dimensions mm	Weight kg	Screwdriver
010010/FR	EDU 1FR	In: 90-260Vca out: 18-30Vcc power 120VA slow start and adjustable speed	138x118x67	0,600	All FAB and RAF
010010/FR/SG	EDU1FR/SG	Input: start and reverse contacts Output: torque reached & lever signal	138x118x67	0,600	All FAB and RAF
030000	EDU1AE	Programmable with user interface screens	185x125x95	3,150	PLUTO
030000/C	EDU1AE/C	Remote double torque selection	185x125x95	3,150	PLUTO
030000/RT	EDU1AE/RT	Remote multiple torque selection	185x125x95	3,150	PLUTO

CONTROL UNITS



INSPECTOR CONTROL UNIT

The INSPECTOR is a PLC based process control system that monitors the fastening assembly process: EDU1FR/PLC for the FAB and RAF series; EDU1AE/PLC for the PLUTO driver.

It compares the actual triggered torque time to a pre-set tolerance, ignoring joints that fall out of the process window. It tracks, in real time, the completion of each screw joint in an assembly, then notifies the operator upon its completion. It keeps a summary of good and incomplete assemblies throughout the production day.

Additional features:

- Set up of number of screws for a complete cycle (1 to 99999) and display of completed assemblies, total acceptable and rejected assemblies.
- Set up of minimum fastening time in 0,1 sec. steps (to avoid the counting of torque reached signals obtained re-fastening an already tied up screw or fastening screws that stop before reaching the right position).
- Set up of maximum fastening time (to avoid the counting of stripped screws).
- Remote starting and reversing (option).
- Output signals: torque reached, lever, cycle end and alarm (24 V 100mA).

Code	Model	Power	Dimensions mm	Weight kg	Screwdriver
010010/FR/PLC	EDU 1FR/PLC	120VA	135x115x135	1,00	Series FAB and RAF
030000/PLC	EDU1AE/PLC	200VA	185x140x185	3,85	Series PLUTO



CONTROL UNITS WITH PROGRAMMABLE SYSTEM

- The multiple torque system is designed to expand the functionality of the PLUTO screwdriver and EDU1AE controller by enabling easy access to multiple torque settings with one EDU1AE controller and one Pluto driver only. Models include a double torque output unit and a multiple torque unit with remote setting. When used with a socket tray at 8 positions, every time a bit (or socket) is taken out of the tray the unit will automatically switch to the pre-set torque. These control units are extremely flexible and easily adaptable to different applications.
- A special model PLC/TOP is available on request featuring up to 8 programs each one with different torque values, speed, ramp, screw counting, batch counting, RS232 port for printer and PC connection, torque chart with real time clock.

Code	Model	Power	Dimensions mm	Weight kg	Screwdriver
030000/PLC/CC	EDU1AE/PLC/CC	200VA	185x140x185	3,85	Series PLUTO
030000/PLC/TOP	EDU1AE/PLC/TOP	200VA	150x250x150	4,00	Series PLUTO



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TORQUE TESTER

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: +/- 0,5% of the displayed value +/-1 digit.
- 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 (semi-elastic), instruction manual and certificate of calibration.

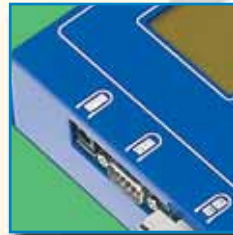
Additional joint simulators (rundown adapters) for hard joint or fully elastic joint available on request.



JOINT SIMULATOR



EXTERNAL ROTARY TRANSDUCER RTSX



CONNECTING PORTS



KEYPAD

Code	Model	Torque Nm	Dimensions mm	Weight kg.
020402	K1	0,05÷1	180x105x55h	1,0
020403	K5	0,3÷5	180x105x55h	1,0
020404	K20	0,5÷20	180x105x55h	1.0
M170015	RTSX50i-H	0,5÷5		
M170016	RTSX100i-H	1÷10		
M170017	RTSX200i-H	2÷20		

TORQUE TESTER

SCREW PRESENTERS AND AUTOMATIC SYSTEMS

The NJK 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 or an "autocatcher" (see accessories) is required to chuck the screw.

The NJK705 is a universal feeder adjustable for any size of screw from 1.4 through 5.0 mm.

With a special bit guide, 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.

Autofeed hand screwdrivers and fixed screwing units are easy-to-use and reliable systems where the screw or the nut is automatically fed into the driver collet head increasing assembly rate and productivity. Suitable to feed and tighten machine screws, self tapping screws, nuts, studs and any other threaded fasteners with or without washers.



FIXED SCREWING UNIT



AUTOFEED HAND SCREWDRIVER



AUTOFEED HAND SCREWDRIVER WITH AUTOMATIC DOWN STROKE



DESKTOP ROBOT

Code	Model	∅ shank	Screw length min.	Screw length max
010514	NJK 514	1,4	1,8	10
010517	NJK 517	1,7	1,7	10
010520	NJK 520	2,0	2,5	18
010523	NJK 523	2,3	2,8	18
010526	NJK 526	2,6	3,5	18
010530	NJK 530	3,0	4,0	18
010540	NJK 540	4,0	5,0	18
010550	NJK 550	5,0	6,0	18
010705	NJK 705	1,4 - 5,0	1,8	18
010707	NJK 707	1,4 - 5,0	1,8	18



PIVOTING ARM

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.



BALANCER

Tool balancers TECBA1, code 010300, allow screwdrivers to be positioned over the work station for comfortable operation. Models with capacity up to 200 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 and tool holders for inline or pistol screwdrivers.



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 vertical support.



ANGLE HEAD PLUTO

ANGHD3, code 010130, can be used with Pluto drivers when space is limited or for a more comfortable operation at high torque.



ANGLE HEAD FAB/RAF

When space is limited right angle head ANGHD1, code 010100, can be easily attached to lever start FAB drivers and ANGHD2, code 010120, to lever start RAF drivers. Both the connection nut and the torque adjusting nut are equipped with M3 threaded holes to lock the head in the desired position.



The double output connector DOCK01, code 020020, is intended to connect two screwdrivers, not to be used at the same time, to one EDU1FR controller only.



KP05, code 234511/K, is an extension ring to be used with Pluto inline drivers for easier clamping on reaction arms.



AUTOCATCHER

For screws you cannot pick up with magnetic bits or difficult to handle the autocatcher is the perfect solution. You can automatically feed stainless steel or brass or aluminum screws with NJK705 and then pick them up thru the adjustable plastic collets of autocatcher ATCO23, code 010113, for screws up to M3 and ATCO35, code 010114 for screws up to M5.



SUCTION HEAD

Vacuum pick up head ASPHD3, code 010111, can be mounted on any driver thru the bit chuck. The torque remains externally adjustable while nonferrous fasteners are picked up. The head is ready to be plugged into a vacuum generator (included) or into an electric vacuum pump (optional). Used in combination with NJK705 screw feeder this system will increase your productivity without the expense of automated screwdrivers.



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The easy solution®



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