

**DICHIARAZIONE DI CONFORMITA'/
DECLARATION OF CONFORMITY**



KOLVER S.r.l.

**VIA DELL'ELETTRONICA, 14/16
36016 THIENE (VI) ITALIA**

Dichiara che la macchina nuova qui descritta/ *Declare that the new tool here described:*
Avvitatore elettrico e unità di controllo/ *Electric screwdriver and control unit:*

KBL SERIE/ SERIES & EDU1BL SERIE/ SERIES

È conforme alle disposizioni legislative che traspongono le direttive/ *Is in conformity with the following standards and other normative documents:* 2006/42/CE, LVD 2014/35/UE, EMCD 2014/30/UE, EN 62841-2-2:2014, EN 62841-1:2015, EN 60204-1:2018, EN 61000-6-2:2005+AC:2005, EN 61000-6-4:2007+A1:2011 and 63000:2021.

È conforme alla direttiva RoHS III (2011/65/UE e successiva 2015/863)/

It is also in conformity with RoHS III normative (2011/65/UE and following 2015/863).

Nome/Name:

Giovanni Colasante

Posizione/Position:

Amministratore Delegato/General Manager

Persona incaricata a costituire il fascicolo tecnico presso la Sede/
Person authorized to compile the technical file in Kolver

Thiene, 1° gennaio 2024

Giovanni Colasante



Manuale Istruzioni/ *Operator's Handbook*

KBL

Avvitatori/ Screwdrivers

EDU1BL - EDU1BL/SG

Unità di controllo/ Control units

**KOLVER S.r.l.
VIA DELL'ELETTRONICA 14/16
36016 THIENE (VI) ITALIA
TEL +39 0445 371068
www.kolver.com**

Modello/ Model	Codice/ Code	Coppia/ Torque Nm	RPM min-max	Output	Unità di controllo/ Control unit
Diritti/ Inline					
KBL04FR	190004	0,04-0,4	700-1150	¼ Hex	EDU1BL o/or EDU1FR
KBL15FR	190015	0,4-1,5	700-1150		
KBL30FR	190030	0,7-3,0	700-1150		
KBL40FR	190040	0,9-4,0	400-700		
Diritti - segnali/ Inline - signals					
KBL04FR/S	190004/S	0,04-0,4	700-1150	¼ Hex	EDU1BL/SG
KBL15FR/S	190015/S	0,4-1,5	700-1150		
KBL30FR/S	190030/S	0,7-3,0	700-1150		
KBL40FR/S	190040/S	0,9-4,0	400-700		
Per automazione/ For automation					
KBL04FR/CA	190004/CA	0,04-0,4	700-1150	¼ Hex	EDU1BL/SG
KBL15FR/CA	190015/CA	0,4-1,5	700-1150		
KBL30FR/CA	190030/CA	0,7-3,0	700-1150		
KBL40FR/CA	190040/CA	0,9-4,0	400-700		
KBL04FR/CA/FN	190004/CA/FN	0,04-0,4	700-1150		
KBL15FR/CA/FN	190015/CA/FN	0,4-1,5	700-1150		
KBL30FR/CA/FN	190030/CA/FN	0,7-3,0	700-1150		
KBL40FR/CA/FN	190040/CA/FN	0,9-4,0	400-700		
Con testina ad angolo/ With angle head					
KBL04FR/ANG	190004/A	0,04-0,4	700-1150	¼ Hex	EDU1BL
KBL15FR/ANG	190015/A	0,4-1,5	700-1150		
KBL30FR/ANG	190030/A	0,7-3,0	700-1150		
KBL40FR/ANG	190040/A	0,9-4,0	400-700		
Con testina ad angolo + segnali/ With angle head + signals					
KBL04FR/S/ANG	190004/S/A	0,04-0,4	700-1150	¼ Hex	EDU1BL/SG
KBL15FR/S/ANG	190015/S/A	0,4-1,5	700-1150		
KBL30FR/S/ANG	190030/S/A	0,7-3,0	700-1150		
KBL40FR/S/ANG	190040/S/A	0,9-4,0	400-700		

KBL../AR

Modello/ Model	Codice/ Code	Coppia/ Torque Nm	RPM min-max	Output	Unità di controllo/ Control unit
Diritti Auto-reverse/ Inline Auto-reverse					
KBL04FR/AR	190004/AR	0,04-0,4	700-1150	¼ Hex	EDU1BL
KBL15FR/AR	190015/AR	0,4-1,5	700-1150		
KBL30FR/AR	190030/AR	0,7-3,0	700-1150		
KBL40FR/AR	190040/AR	0,9-4,0	400-700		
Diritti - segnali Auto-reverse / Inline – signals Auto-reverse					
KBL04FR/S/AR	190004/S/AR	0,04-0,4	700-1150	¼ Hex	EDU1BL/SG
KBL15FR/S/AR	190015/S/AR	0,4-1,5	700-1150		
KBL30FR/S/AR	190030/S/AR	0,7-3,0	700-1150		
KBL40FR/S/AR	190040/S/AR	0,9-4,0	400-700		

NB: Utilizzato a 110V, il KBL40 raggiunge al massimo 3 Nm.

NB: Used at 110V, the KBL40 reaches a maximum of 3 Nm.

IMPORTANTE: E' sconsigliato l'uso continuo oltre l'80% del campo di coppia!

IMPORTANT: Continuous use over 80% of torque range is not recommend!

WARNING: To reduce the risk of injury, before using or servicing the tool, read and understand the following information as well as separately provided safety instructions (Item number: 0MS000). The features and descriptions of our products are subject to change without prior notice.

1. Applications

KOLVER electric screwdrivers are used to tighten to the required torque screws, nuts, studs and any other kind of threaded connection on any material. Obviously, it is possible to use the screwdrivers with screw having a larger diameter if the torque falls within the indicated range. All models are reversible and can consequently be used to unscrew. Electric screwdrivers are mainly used in the electronic industry as well as for electric appliances, wiring, toys, lamps, glasses, in the mechanical light industry etc.

2. Use

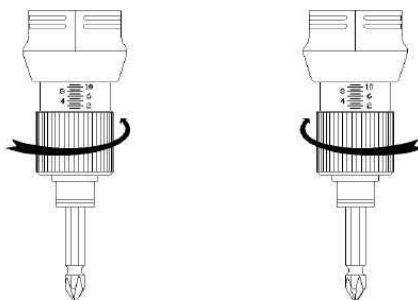
KOLVER screwdriving system is composed by a screwdriver, a cable with 2 x M12 female 5 pin connectors and a power supply and control unit. To install it please follow the instructions.

- a) Connect the connectors of the cable to the controller and to the screwdriver and tighten the relevant nuts.
- b) Connect the controller plug to a main supply socket 90/230V- 50/60Hz.
- c) Switch the controller on through the black button on the back panel.
- d) Select the desired setting of speed (A) through the relevant knob. Please make sure that such setting is compatible with the torque setting. Since the speed reduction is obtained through a voltage reduction (= power reduction), if the torque setting is too high for a low speed setting, the clutch may not operate correctly and get stuck. In such a case, the driver will not run and when you press the start lever the red light will signal. To reset the driver just turn the bit chuck until you hear the clutch “click” (usually 180°). Increase the speed setting before running the driver again.
- e) Do not slide the forward/reverse while the motor is running, it's dangerous for the motor.

3. Adjusting the torque

The torque value of the screwdriver is adjusted by changing the tension of the clutch spring, i.e. screwing or unscrewing the threaded nut. To increase the torque, turn the nut clockwise; to decrease it, turn the nut anticlockwise.

To change the spring remove the nut, replace the spring and then adjust the torque value as mentioned above.



After each adjustment, it is possible to lock the nut with the clutch cover (sold separately). To place properly this cover, you must remove the stopper ring #2, unscrew the adjusting nut #3, unscrew and remove the front ring #1 and replace it with the clutch cover #35.

When the pre-set torque is reached, the **KBL.../AR** models automatically reverse the direction of rotation until the operator releases the lever. The unscrewing will start approximately 0.5 seconds after reaching the torque. The operator will release the lever only when the unscrewing has been completed.

To check the torque value we suggest the use of K5 or MINI K5 electronic torque tester.

4. Control unit and power supply

EDU1BL, EDU1BL/SG and EDU 1FR power supply and control units act as voltage transformer and electronic torque controller.

The power supply, 90/260VAC-50/60Hz, is converted into 18-30V DC required by KBL series screwdrivers through an electronic transformer with constant power of 120W.

KBL..FR models – 5 pin cable – use with EDU 1BL controller

EDU1BL is made especially to work in combination with KBL screwdrivers either lever or push start, inline or pistol type. The motor is controlled by the board inside the screwdriver. The screwdriver is connected to the controller through a 5 pin cable.

The electronic control circuit cuts the power supply to the motor in response to the clutch action as soon as the pre-set torque is reached.

On the front panel of the control unit you can find the “A” knob, through which you can set the speed: 1 corresponds to 60% and 10 corresponds to 100%.

You can also find a green led on the front panel of the control unit, showing if the controller is on or off.

The temperature of the unit can normally reach 45°C.

On the back panel you can find a socket equipped with a fuse holder and on/off switch. To replace the fuse just pull out the fuse holder and change the fuse.

KBL..FR models – 5 pin cable – use with EDU 1FR controller

EDU1FR is meant to work with FAB&RAF screwdrivers, but it can be used with KBL screwdrivers, too.

On the front panel of the controller there are two knobs indicated with the letters “R” and “A”.

Knob “R” is used to adjust the slow start option (ramp), but it’s only enabled for FAB and RAF screwdrivers, not for KBL.

Knob “A” is used to adjust the motor speed for nominal speed, i.e. speed as per ctg. data sheet, to 60% of nominal speed. “1” stands for minimum speed and “10” for nominal speed.

On the front panel you can also see two lights: the green one will light permanently when the power is on, the red one will light only when the clutch “fires” indicating the preset torque has been reached.

The temperature of the unit can normally reach 45°C.

On the back panel you can find a socket equipped with a fuse holder and on/off switch. To replace the fuse just pull out the fuse holder and change the fuse.

Control unit	Features	Dimensions mm	Weight kg
EDU1BL	120W, 5 pin connector, adjustable speed	130 x 118 x 67	0,6
EDU1FR	120W, 5 pin connector, adjustable speed	130 x 118 x 67	0,6

KBL..FR/S, KBL..FR/CA models – 8 pin cable – use with EDU 1BL/SG controller

EDU1BL/SG is made especially to work in combination with KBL../S (either lever or push start, inline or pistol type) and KBL..CA screwdrivers.

The motor is controlled by the board inside the screwdriver. The screwdriver is connected to the controller through a 8 pin cable.

The electronic control circuit cuts the power supply to the motor in response to the clutch action as soon as the pre-set torque is reached.

On the front panel of the controller, there are two knobs indicated with the letters “R” and “A”.

Knob “R” is used to adjust the slow start option (ramp) from 0 to 2 seconds, i.e. the motor will reach the nominal speed gradually. Dial “1” for no ramp and “10” for maximum ramp.

Knob “A” is used to adjust the motor speed for nominal speed, i.e. speed as per ctg. data sheet, to 60% of nominal speed. Dial “1” for minimum speed and “10” for nominal speed.

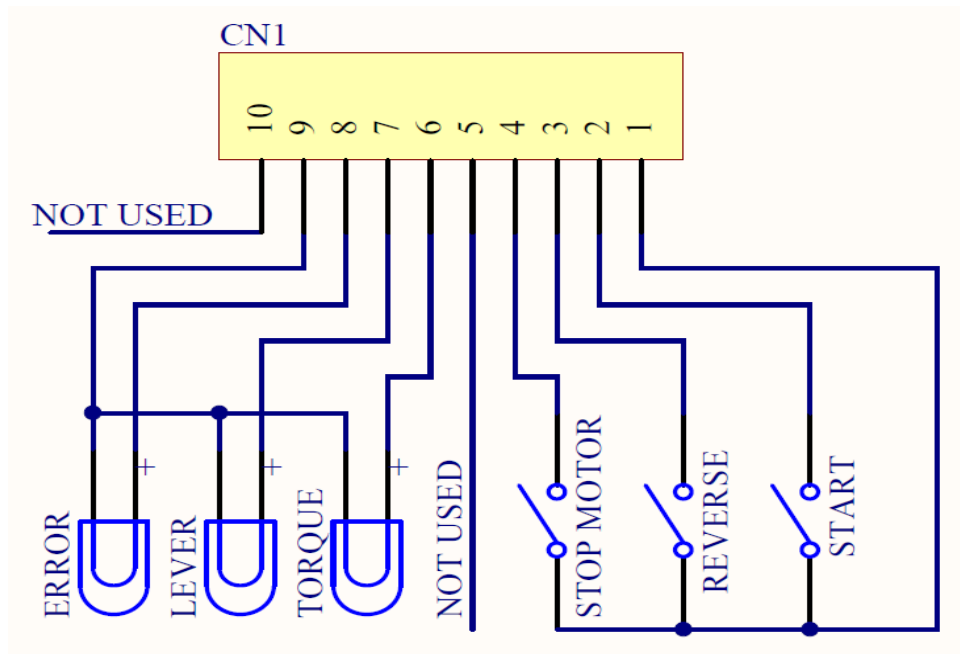
On the front panel you can also see 2 lights: the green one will light permanently when the power is on, the red one will light only when the clutch “fires” indicating the preset torque has been reached.

The temperature of the unit can normally reach 45°C.

On the back panel you can find a socket equipped with a fuse holder and on/off switch. To replace the fuse just pull out the fuse holder and change the fuse.

Control unit	Features	Dimensions mm	Weight kg
EDU1BL/SG	120W, 8 pin connector, adjustable speed Input: start and reverse contacts Output: reached torque and lever pressed	130 x 118 x 67	0,6

On the back panel, you can also find a 10 pin connector for input and output signals.



PIN	NAME	FUNCTION
INPUT		
1	COM 0VDC	Common pin. By closing the contact between pin 1 and any of the other pins (2, 3, 4, 5) to start the function you need. This pin is connected to 0VDC and to the ground.
2	START	Remote start. Clockwise. Torque control.
3	REVERSE	Reverse remote start. Counterclockwise. Torque control.
4	STOP	Stop motor. "STOP MOTOR ON" screen. Motor stops and starts again after the contact has opened.
5		Not used
OUTPUT		
6	TORQUE	Torque reached signal. Signal is 24VDC.
7	LEVER	Lever signal: when lever is pressed or when the start is remote. No signal during unscrewing cycle. It resets after their release. Signal is 24VDC.
8	ERROR	Error signal: it activates every time an error occurs. Error signal resets when the torque is reached or after releasing the lever or of the remote start. Signal is 24VDC.
9	COM 0VDC	Common pin for any output. Signals must be taken between this pin (0VDC common) and the other pins (6,7 and 8).
10		Not used

5. Maintenance

The brushless motor and control unit are maintenance free, which means they are not subjected to wear and tear. Kolver suggests greasing the gears after half a million cycles. Should you have any problems or doubts, please contact the nearest Kolver technical centre.

We kindly remind you to switch the control unit off when not in use.

NOTE

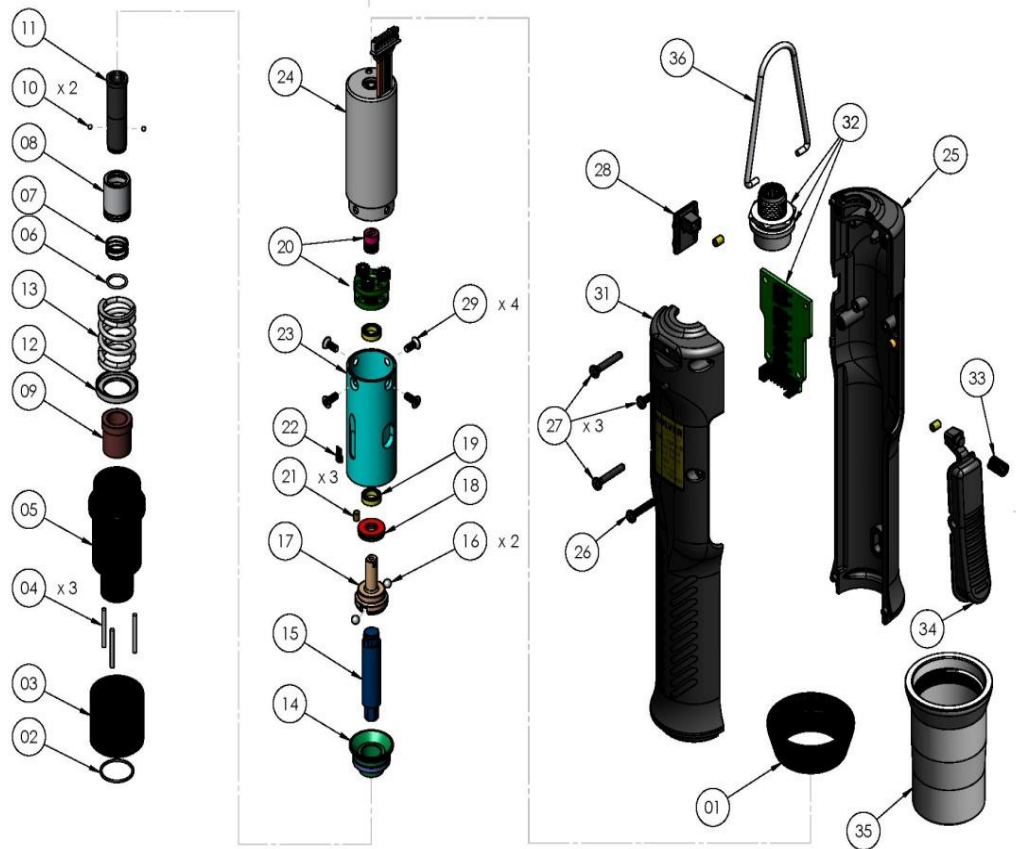
The sound level generated by Kolver electric screwdrivers is always lower than 70dB(A).
The vibrations transmitted to operator's hand are lower than 2.5m/s². In particular the exposition to vibrations is lower than 1m/s² for operators who make up to 4200 screwing cycles per day.

IMPORTANT: For each second of operation the motor needs 3 seconds of rest, as indicated on the tool label (1s/3s). Failure to do so may result in motor overheating and eventually damage and will be considered as a misuse. Our warranty will not apply.

GUARANTEE

1. This KOLVER product is 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 of single shift operation, the guarantee period shall be reduced on a prorata basis.
2. 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.
3. 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.
4. KOLVER accepts no claim for labour or other expenditure made upon defective products.
5. Any direct, incidental or consequential damages whatsoever arising from any defect are expressly excluded.
6. This guarantee replaces all other guarantees, or conditions, expressed or implied, regarding the quality, the marketability or the fitness for any particular purpose.
7. 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. Further information at kolver@kolver.it.

KBL04 – 15 – 30 – 40/FR:
ESPLOSO/ EXPLODED VIEW

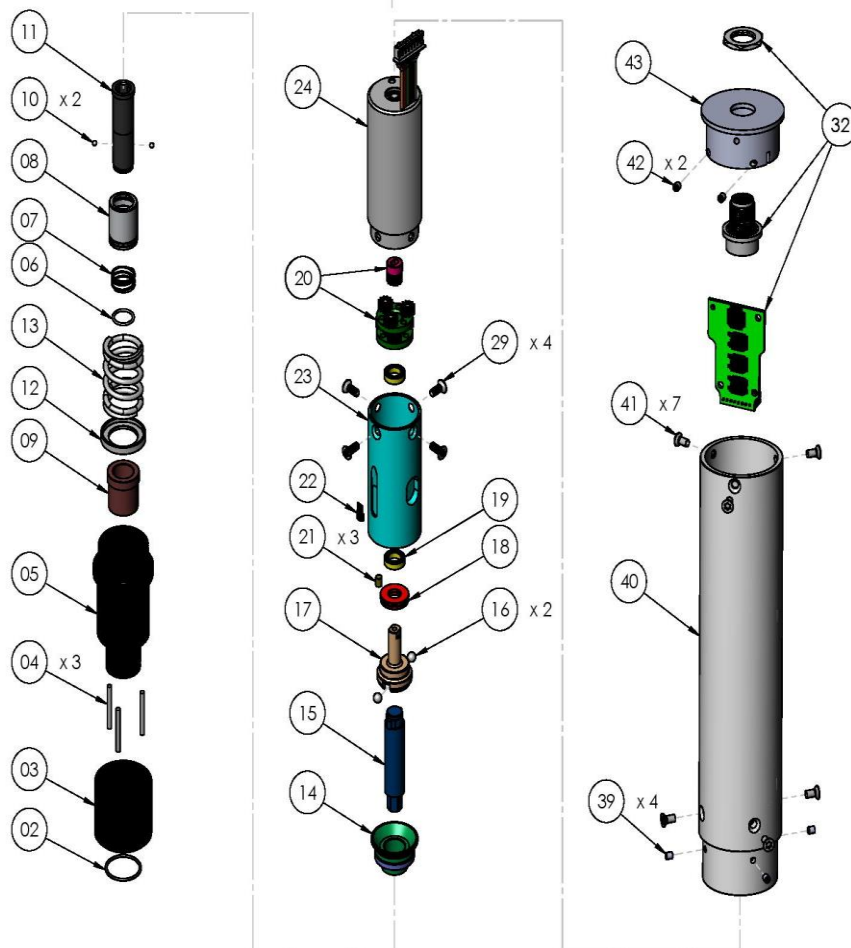


PARTI DI RICAMBIO/ SPARE PARTS

RIF	DESCRIZIONE/ DESCRIPTION	COD. KBL04	COD. KBL15	COD. KBL30	COD. KBL40
1	Anello frontale/ Front ring	251101	251101	251201	251401
2	Anello di fermo/ Nut stopper ring	251102	251102	251202	251402
3	Ghiera regolazione coppia/ Torque adjusting nut	251103	251103	251203	251403
4	Pin/ Knotting pin (3)	251004	251004	251004	251004
5	Corpo sede frizione/ Torque adjusting bolt	251105	251105	251205	251205
6	Anello di fermo/ Collar stopper	251006	251006	251006	251006
7	Molla/ Collar spring	251007	251007	251007	251007
8	Boccola/ Joint shaft collar	251008	251008	251008	251008
9	Cuscinetto/ Bearing	251009	251009	251009	251009
10	Sfera/ Steel ball (2)	251010	251010	251010	251010
11	Alberino/ Joint shaft	251011	251011	251011	251011
12	Ferma molla/ Spring holder	251112	251112	251212	251412
13	Molla coppia/ Torque adjusting spring	251313	251113	251213	251413
14	Sede frizione/ Clutch seat	251114	251114	251214	251214
15	Camma/ Cam	251015	251015	251015	251015
16	Sfera/ Steel ball (2)	251116	251116	251216	251416
17	Salterello/ Fixed clutch	251117	251117	251217	251417
18	Cuscinetto/ Thrust bearing	251118	251118	251218	251418
19	Cuscinetto/ Bearing	251119	251119	251219	251419
20	Riduzioni/ Gears	251120	251120	251220	251420
21	Magnete/ Magnet (3)	251021	251021	251021	251021
22	Sensore/ Brake sensor	251022	251022	251022	251022
23	Sede ingranaggi/ Gear case	251123	251123	251223	251223
24	Motore/ Motor	251124	251124	251224	251224
25	Impugnatura dx/ Right housing	251125	251125	251225	251225
26	Vite impugnatura/ Screw (1)	251126	251126	251226	251226
27	Vite impugnatura/ Screw (3)	251127	251127	251227	251227
28	Interruttore reversibilità/ Reverse switch	251028	251028	251028	251028
29	Vite sede ingranaggi/ Gear case screw (4)	251029	251029	251029	251029
31	Impugnatura sx/ Left housing	251131	251131	251231	251231
32	Scheda incluso connettore 5 pin/ PCB included 5 pin connector KBL..FR	251032+ 251030	251032+ 251030	251232+ 251030	251232+ 251030
	Scheda incluso connettore 8 pin/ PCB included 8 pin connector KBL..FR/S	251032/S+ 251730	251032/S+ 251730	251232/S+ 251730	251232/S+ 251730
33	Molla leva/ Lever spring	251133	251133	251233	251233
34	Leva/ Lever	251134	251134	251234	251234
35	Cover –COV KB1 (option)	020028	020028	020029	020029
36	Gancio/ Hook	200060	200060	200060	200060
	Cavo/ Cable 5 pin	200063	200063	200063	200063
	Cavo/ Cable 8 pin for KBL..FR/S	250063/N	250063/N	250063/N	250063/N

KBL04 – 15 – 30 – 40FR/CA:

ESPLOSO/ EXPLODED VIEW

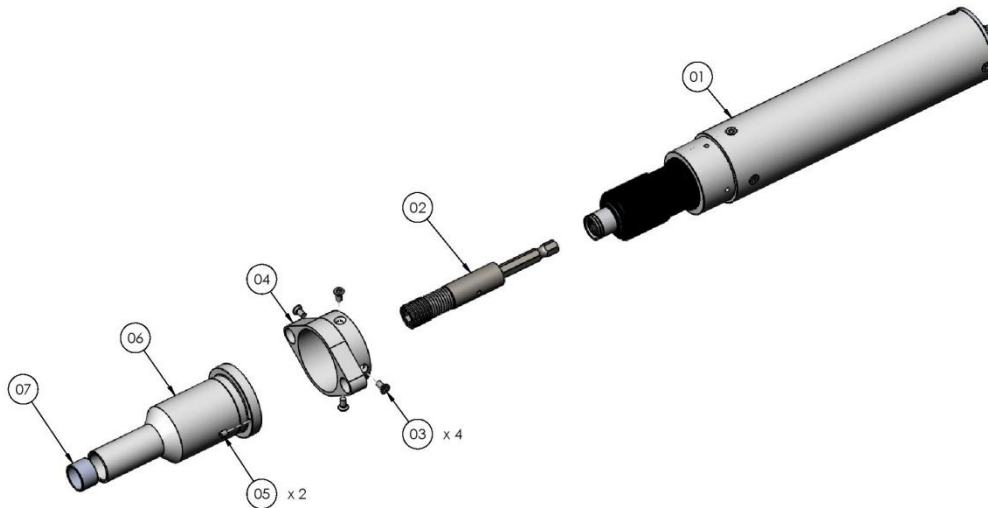


PARTI DI RICAMBIO/ SPARE PARTS

RIF	DESCRIZIONE/ DESCRIPTION	COD. KBL04	COD. KBL15	COD. KBL30	COD. KBL40
2	Anello di fermo/ <i>Nut stopper ring</i>	251102	251102	251202	251402
3	Ghiera regolazione coppia/ <i>Torque adjusting nut</i>	251103	251103	251203	251403
4	Pin/ <i>Knotting pin</i> (3)	251004	251004	251004	251004
5	Corpo sede frizione/ <i>Torque adjusting bolt</i>	251105	251105	251205	251205
6	Anello di fermo/ <i>Collar stopper</i>	251006	251006	251006	251006
7	Molla/ <i>Collar spring</i>	251007	251007	251007	251007
8	Boccola/ <i>Joint shaft collar</i>	251008	251008	251008	251008
9	Cuscinetto/ <i>Bearing</i>	251009	251009	251009	251009
10	Sfera/ <i>Steel ball</i> (2)	251010	251010	251010	251010
11	Alberino/ <i>Joint shaft</i>	251011	251011	251011	251011
12	Ferma molla/ <i>Spring holder</i>	251112	251112	251212	251242
13	Molla coppia/ <i>Torque adjusting spring</i>	251313	251113	251213	251413
14	Sede frizione/ <i>Clutch seat</i>	251114	251114	251216	251216
15	Camma/ <i>Cam</i>	251015	251015	251015	251015
16	Sfera/ <i>Steel ball</i> (2)	251116	251116	251216	251416
17	Salterello/ <i>Fixed clutch</i>	251117	251117	251217	251417
18	Cuscinetto/ <i>Thrust bearing</i>	251118	251118	251218	251418
19	Cuscinetto/ <i>Bearing</i>	251119	251119	251219	251419
20	Corona riduzioni/ <i>Gear assembly</i>	251120	251120	251220	251220
21	Magnete/ <i>Magnet</i>	251021	251021	251021	251021
22	Sensore/ <i>Brake sensor</i>	251022	251022	251022	251022
23	Sede ingranaggi/ <i>Gear case</i>	251123	251123	251223	251223
24	Motore/ <i>Motor</i>	251124	251124	251224	251224
29	Vite sede ingranaggi/ <i>Gear case screw</i> (4)	251029	251029	251029	251029
30	Connettore M 8 pin/ <i>8 pin connector</i> KBL..FR/CA	251730	251730	251730	251730
32	Scheda incluso connettore 8 pin/ <i>PCB included 8 pin connector</i> KBL..FR/CA	251032/S	251032/S	251032/S	251032/S
39	Grano/ <i>Screw</i> M3x3 (4)	200039	200039	200039	200039
40	Cannotto/ <i>Aluminium body</i>	251138	251138	251238	251238
41	Vite/ <i>Screw</i> M3x6 (7)	801002	801002	801002	801002
42	Grano/ <i>Screw</i> M4x4 (2)	895014	895014	895014	895014
43	Coperchio/ <i>Cap</i>	251034	251034	251034	251034
	Cover – COV KB01/CA (option)	020028/CA	020028/CA	020029/CA	020029/CA
	Cavo/ <i>Cable</i> 8 pin	250063/N	250063/N	250063/N	250063/N

KBL04 – 15FR/CA/FN:

ESPLOSO/ EXPLODED VIEW

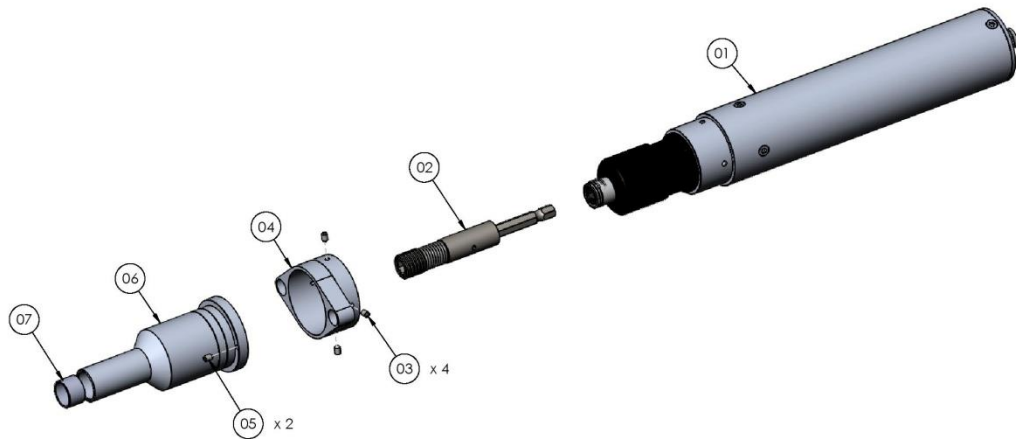


PARTI DI RICAMBIO/ SPARE PARTS

RIF	DESCRIZIONE/ DESCRIPTION	COD.
1	KBL04FR/CA	190004/CA
	KBL15FR/CA	190015/CA
2	Compensatore/ Axial compensator	800322
3	Vite/ Screw M3x5 T10 (4)	801003
4	Flangia supporto/ Support plate	251140
5	Vite/ Screw M3x5	200039
6	Bussola guida telescopica/ Telescopic drive bush	251141
7	Permaglide	800334
	Cavo/ Cable 5 pin	200063

KBL30-40FR/CA/FN:

ESPLOSO/ EXPLODED VIEW

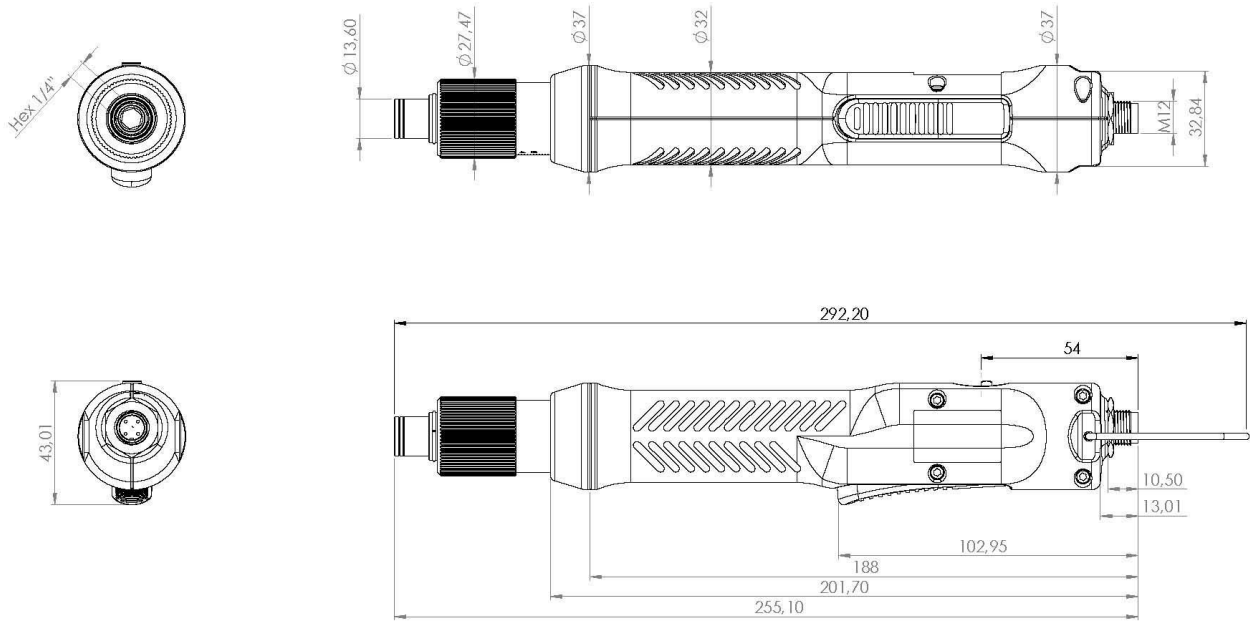


PARTI DI RICAMBIO/ SPARE PARTS

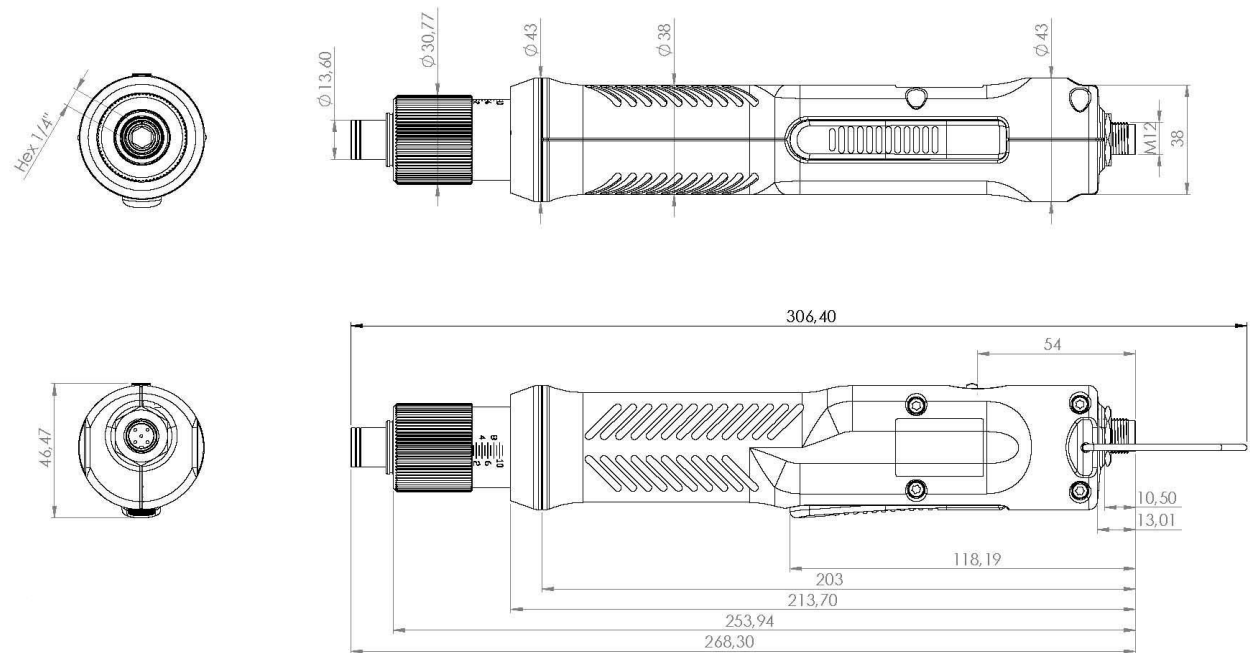
RIF	DESCRIZIONE/ DESCRIPTION	COD.
1	KBL30FR/CA	190030/CA
	KBL40FR/CA	190040/CA
2	Compensatore/ Axial compensator	800322
3	Vite/ Screw M3x5	200039
4	Flangia supporto/ Support plate	251240
5	Vite/ Screw M3x5	200039
6	Bussola guida telescopica/ Telescopic drive bush	251241
7	Permaglide	800334
	Cavo/ Cable 5 pin	200063

INGOMBRI/ DRAWINGS:

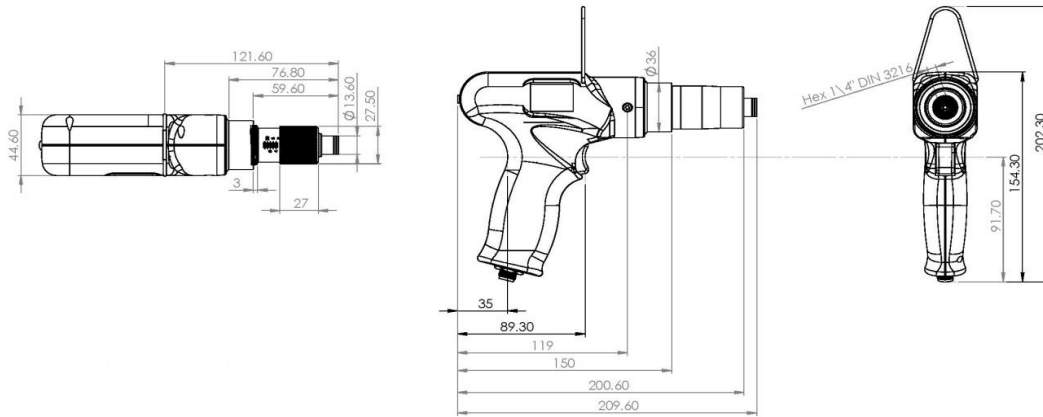
KBL04-15FR – KBL04-15FR/S:



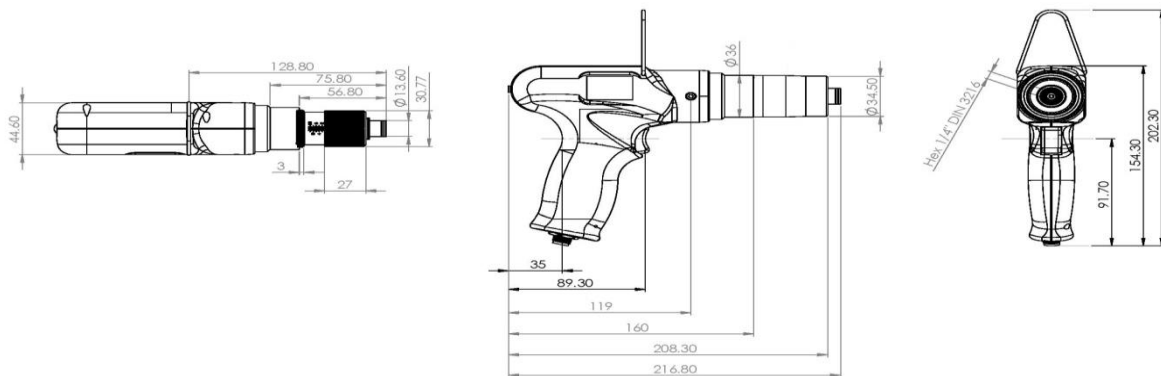
KBL30-40FR – KBL30-40FR/S:



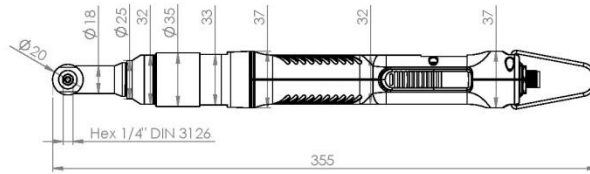
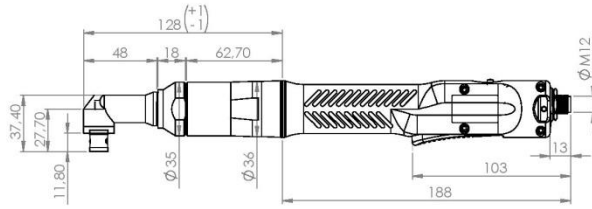
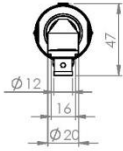
KBL04-15P



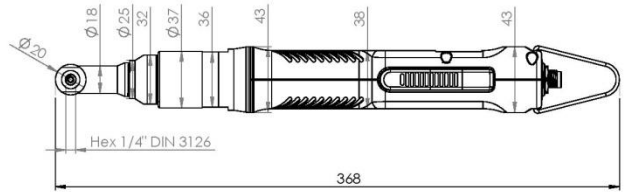
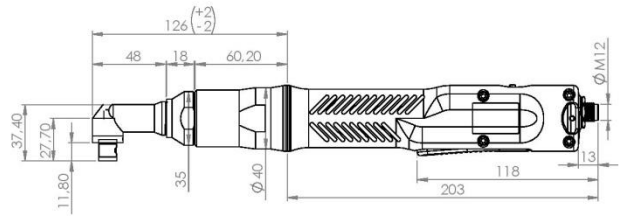
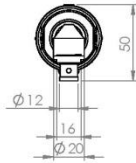
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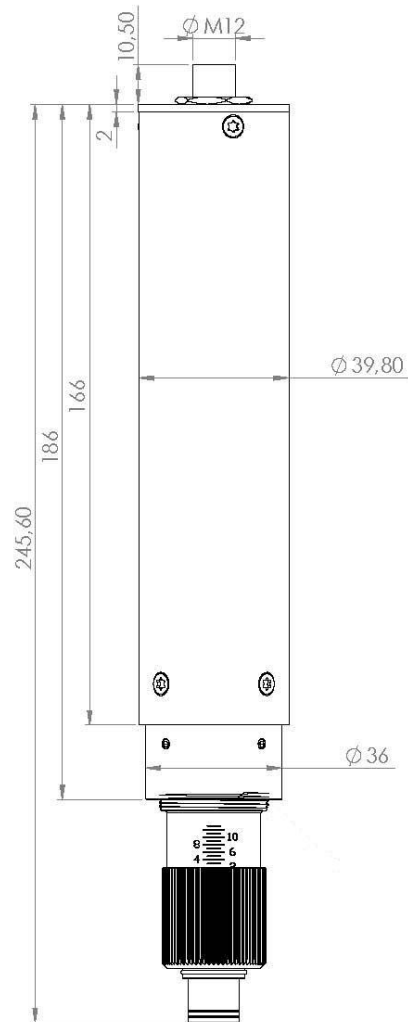
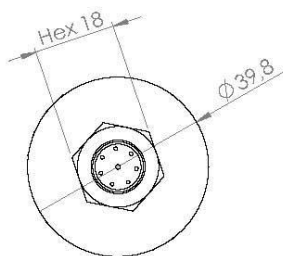
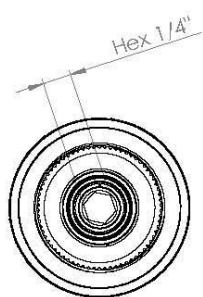
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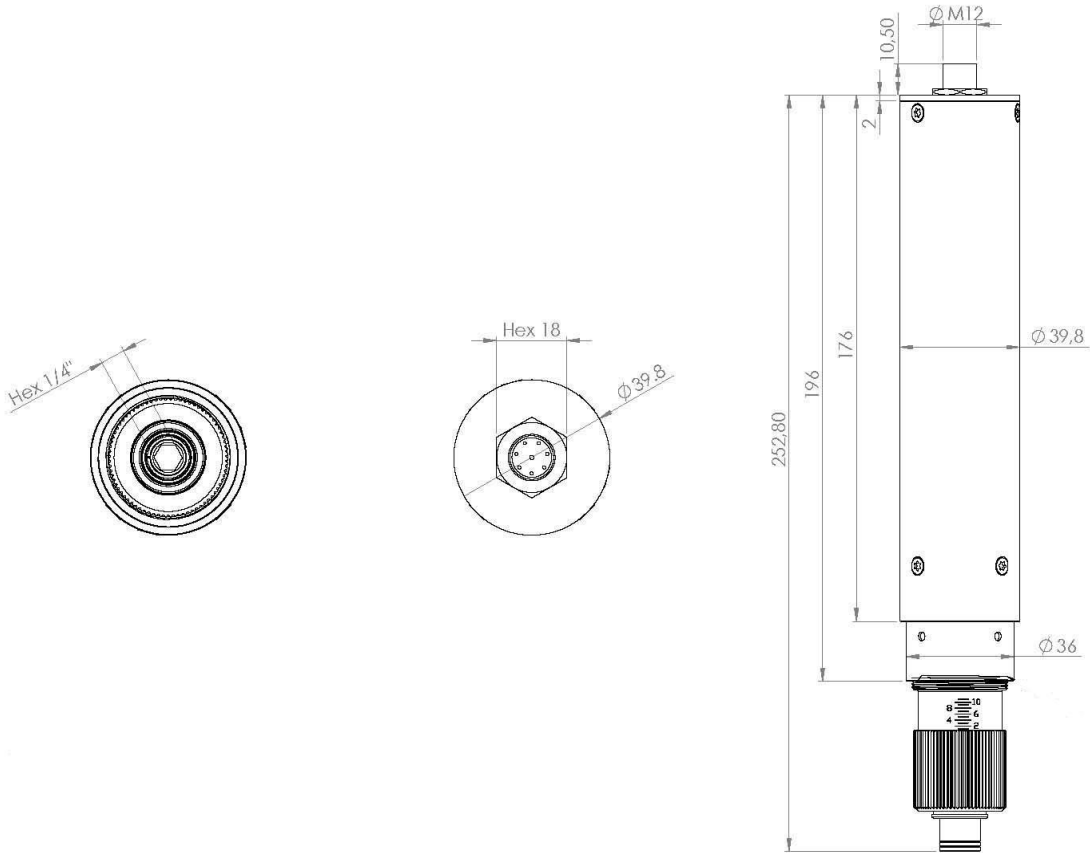
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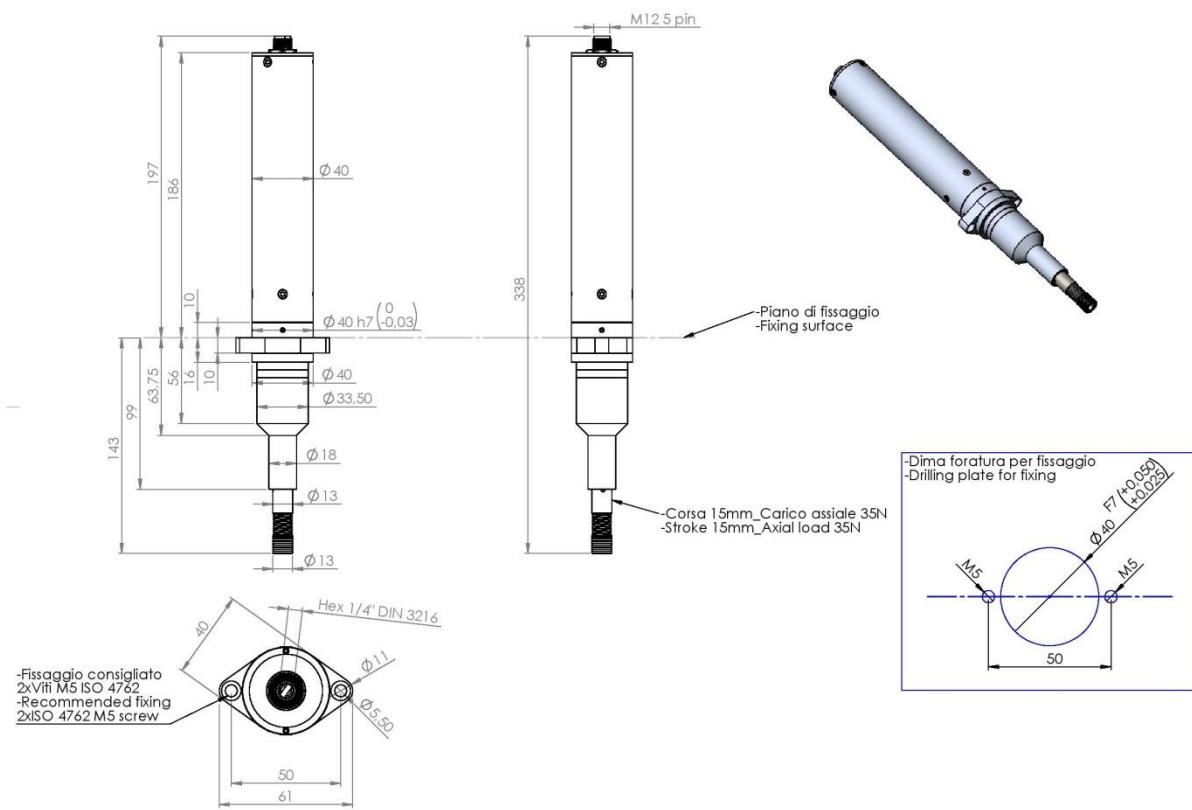
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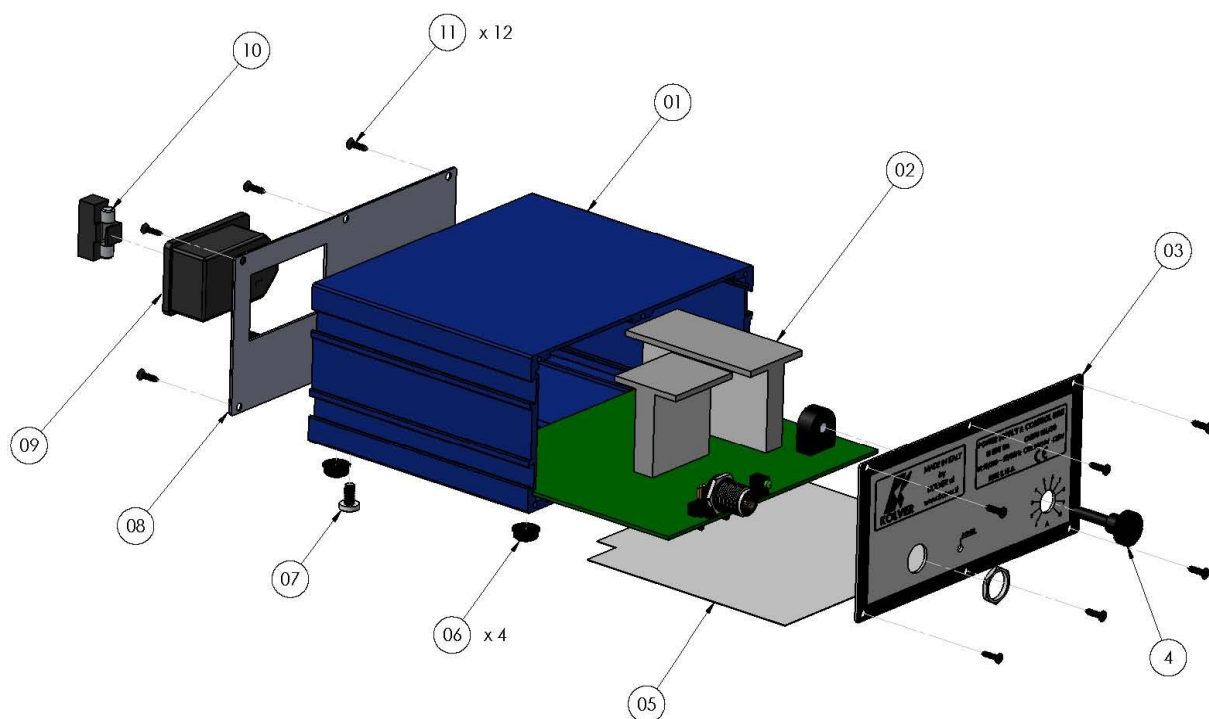
KBL30-40FR/CA:



KBL30-40FR/CA/FN :



EDU 1BL: ESPLOSO / EXPLODED VIEW



EDU 1BL: PARTI DI RICAMBIO/ SPART PARTS

RIF	DESCRIZIONE/ DESCRIPTION	COD.	RIF	DESCRIZIONE/ DESCRIPTION	COD.
1	Contenitore/ Box	811010/VB	7	Vite/ Screw M4 x 4 mm	806635
2	Scheda PCB/ Main board	856807/B	8	Pannello posteriore/ Back panel	831617
3	Pannello anteriore/ Front panel	821605	9	Presca con portafusibile/ Socket with fuseholder 230V	800618
4	Manopola plastica/ Plastic knob	800640	10	Fusibile rapido/ Fuse 3,15 A	800619
5	Foglio isolante/ Isolating sheet	800653	11	Vite autofil./ Self tapping screw (12)	800605
6	Piedino plastica/ Plastic support (4)	800016			

