

DECLARATION OF CONFORMITY

Place and date

Signature

Error! No topic specified.

KOLVER S.r.l.
Via MARCO CORNER, 19
36016 THIENE (VI) ITALIA

Declare that the new tool here described:

Electric screwdriver Model RAF38NS N°.....

Is in conformity with the following standards and other normative documents :

89/392 and following amendments

73/23 e 93/68

Name: Giovanni Colasante

Position: Managing Director

Thiene,

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GENERAL SAFETY RULES

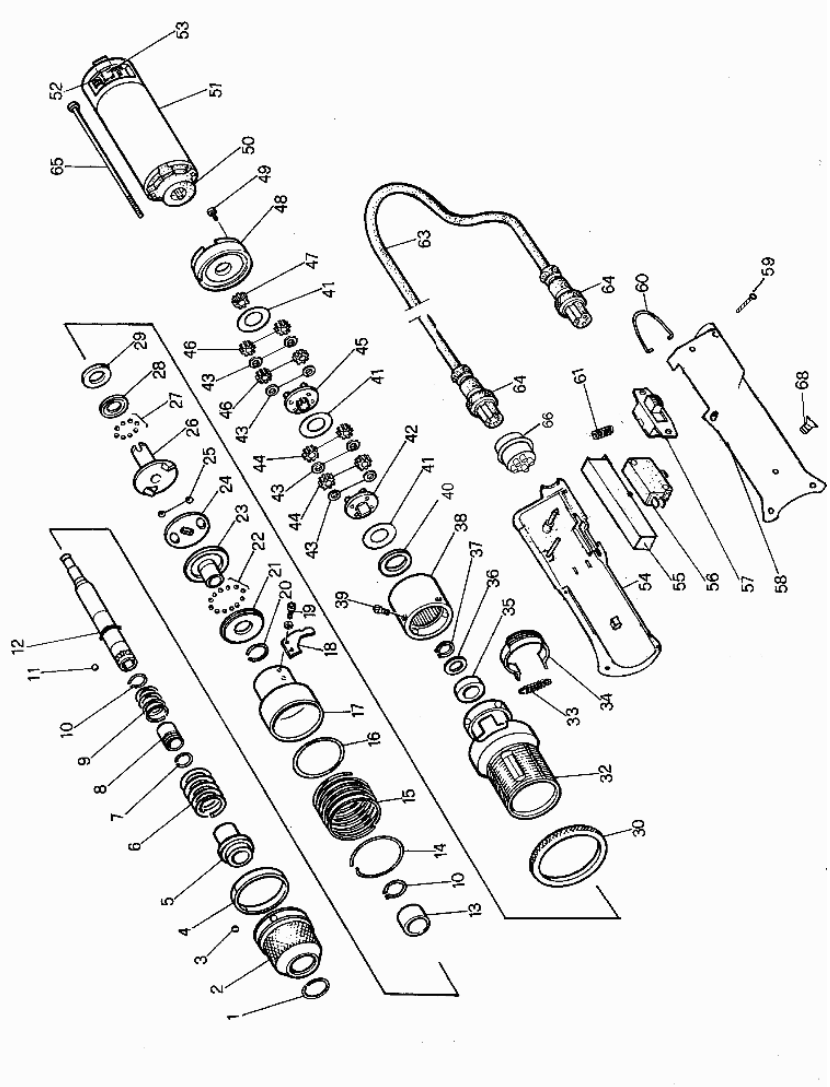
WARNING: when using electric screwdrivers, basic safety precaution should always be followed to reduce the risk of fire, electric shock and personal injury. Read all the instructions below before using the screwdriver and save them.

1. Keep the work area clean and well lit.
2. Do not use the electric screwdrivers in damp or wet locations or in presence of flammable liquid or gases.
3. Avoid body contact with grounder surface as pipes, radiator, refrigerators, etc.
4. Keep children and visitors away from work area.
5. When not in use screwdrivers should be stored in dry and locked-up place and out of the reach of children.
6. Do not use the screwdrivers for purposes or work not intended.
7. Dress properly. Do not wear loose clothing and jewelry. Wear protective hair covering to contain long hair.
8. Never carry the screwdriver by cable or yank it to disconnect it from socket.
9. Use clamps or a vice to hold work.
10. Keep proper footing and balance at all times.
11. Inspect tool cable periodically and, if damaged, have it repaired or replaced by authorized service facility. Always keep handles dry, clean and free from oil and grease.
12. Disconnect tools from power supply before any operation of servicing, when changing accessories and when you do not use them.
13. When screwdriver is used outdoors, only operate with extension cords intended for use outdoors and so marked .
14. Pay attention while working. Do not operate screwdriver when you are tired.
15. Always check the screwdriver is not damaged before using it. Detective switches must be replaced by authorized service center. Never use tools that cannot be turned on or off by the switch .
16. The use of any other accessory other than recommended in this operating instruction may represent a risk of personal injury.
17. Have the screwdriver repaired only by authorized and expert people. Failing to do so may represent a serious danger.

WARNING: before connecting the control unit and power supply to the socket, please check the voltage you are using is that indicated on the label of the unit itself.

SPARE PARTS LIST RAF38NS

REF	DESCRIPTION	CODE	REF	DESCRIPTION	CODE
1	Stop Ring	200001	35	Bearing	220035
2	Torque Nut	201002	36	Spacer	220036
3	Steel Ball	200003	37	Circlip	220037
4	Circlip	200004	38	Inner Gear	220038
5	Bushing	200005	39	Screw	200039
6	Torque Spring	220406	40	Circlip	220040
7	Circlip	200007	41	Washer	220041
8	Bit Ring	200008	42	Reduction Plate	220442
9	Bit Spring	200009	43	Washer (8)	220043
10	Circlip	200010	44	Planet Gear (4)	220444
11	Ball	200011	45	Reduction Plate	220445
12	Spindle	221012	46	Planet Gear (4)	220446
13	Needle Bearing	200013	47	Main Gear	220447
14	Circlip	221014	48	Motor Joint	220048
15	Spring	221015	49	Screw	220049
16	Ring	221016	50	Motor Head	220050
17	Buffer Cone	221017	51	Motor	220051
18	Hook Piece	201018	52	Carbon Brush Spring	220052
19	Screw	201019	53	Carbon Brush	220053
20	Ring	220020	54	Grey Housing Right	220454
21	Bearing	220021	55	Start Lever	221455
22	Balls	220022	56	Start Switch	201056
23	Bearing Seat	220023	57	Reverse Switch	200057
24	Bearing Balls Seat	220024	58	Grey Housing Left	220458
25	Ball	220025	59	Housing Screw (4)	220059
26	Fixed Clutch	220026	60	Hook	200060
27	Balls	220027	61	Spring	221061
28	Bearing	220028	63	Cable	201063
29	Oil Protector	220029	64	5 Pin Plug	201064
30	Locking Nut	201030	65	Motor Locking Screw	220065
32	Clutch Housing	221032	66	5 Pin Connector	201066
33	Spring	200033	68	Screw (2)	210068
34	Clutch Switch	200034			



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. Table 1 will help you to identify the capacity and the torque range of each model. Obviously, it is possible to use the screwdrivers with screw having a larger diameter if the torque fall 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.

Model	Capacity	Speed RPM	Torque range Nm
FAB 10 RE	M2,5	1000	0,05 – 0,8
FAB 12 RE	M3	1000	0,2 – 1,4
FAB 18 RE	M4	650	0,3 – 1,8
RAF 32 NS	M5	1000	0,7 – 3,2
RAF 38 NS	M5	650	0,9 – 4,1

Table 1

2. Use

The screwing system is composed by a screwdriver, a cable with 5 pin connectors and by a control unit and power supply. To install it please follow the instructions.

- a) Connect the 5-pin plug of the cable to the controller socket and to the screwdriver and tighten the relevant nuts.
- b) Push the collect ring of the quick charge chuck towards the body of the screwdriver, insert the desired bit into the exagonal seat $\frac{1}{4}$ " and release the ring.
- c) Connect the controller plug to a mains supply socket 230V-50Hz.
- d) Switch on the controller through the green light button "POWER".
- e) Position the bit head firmly into the fastener head, press the starting trigger and run the faster down. The tool stops automatically when the preset torque is reached and it is ready for the following operation.

3. Adjusting the torque

The torque value of the screwdriver is adjusted by changing the tension of the clutch spring, screwing or unscrewing the threaded #2 nut. After each adjustment lock the nut by means of #30 ring.

To increase the torque turn the nut clockwise, to decrease it turn the nut anticlockwise.

The tool is equipped with an extra spring to reach the higher torque values indicated in TABLE 1. To change the spring remove #2 nut, replace the spring and then adjust the torque value as mentioned above.

To check the torque value we suggest the use of TL50i electronic torque tester.

WARNING: in cause the screwdriver does not stop automatically you should reduce the torque setting by turning the #2 nut anticlockwise.

4. Control unit and power supply

EDU power supply and control units act as voltage transformer and electronic torque controller.

The power supply 230V-50Hz AC is converted into 30V DC required by FAB and RAF series screwdrivers through a transformer certified EN61558-1/p2-6.

The electronic control circuit cuts the power supply to the motor in response to the clutch action as soon as the preset torque has been reached.

The table below summarizes all the possible combinations and different options.

Type of control unit	Features	Applications
EDU1NS	67VA, 1 plug, 1 speed	Metric screws or self tapping screws on plastic
EDU1NS/RA	67 VA, 1 plug, speed regulation, soft start regulation	Metric screws or self tapping screws on plastic
EDU2CL	100VA, 2 plugs, 2 speeds	Metric screws or self tapping screws for 2 screwdrivers

Table 2

Units EDU2CL is equipped with a two positions speed selector switch. When the switch is in the "A" position the screwdriver will operate at the speed indicated in table 1, when the switch is in "B" position the screwdriver will rotate at 70% of the speed indicated in table 1.

All units are equipped with a power outlet on the back panel with autostopping fuse holder certified IEC/CEE22. To replace the fuse just pull out the fuse holder and change the fuse.

Always remember to switch off the control unit at the end of each working shift.

WARNING: always disconnect the mains plug of the power supply before operating on the control units.

5. Maintenance

The screwdriver's motor is equipped with carbon brushes 9mm long. When their length is about 5mm it is time to replace them as per the following instructions:

- a. Remove the #59 and #68 screws and the #54 and #58 housings.
- b. Remove #53 brushes from their seat by delicately lifting up the #52 spring and desolder their wire.
- c. Solder the wire of the new brushes, insert them into their seat and stop them with the relevant #52 springs.
- d. Re-mount the housing.

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.

WARRANTY

KOLVER warrants its products for a period of one year from the date of original purchase. Any products which examination proves to be defective in workmanship on material will be repaired or replaced free of charge during the warranty period. For repair or replacement return the product, transportation prepaid, to your nearest KOLVER service center. This warranty does not repair or replacement required as a consequence of misuse, abuse, normal wear and tear.