



## **NG STEEL RULE NICK-GRINDER**

### **Mod. "NG-E"**

**Mod. "NG-E /std" and "NG-E /ext" - electrically operated**

Declaration of conformity

Operation manual

- Field of application
- Work station
- Main components
- Instruction for installation
- Instructions for operation
- Drawing spare-parts-lists
- Technical data - electrical drive motor - Minifix 25R



#### **NOR-GRAPHIC LTD**

Bodalsvei 28, 1743 Klavestadhaugen, Norway

Phone +47-69143954 Fax +47-69120257 E-mail: [post@nor-graphic.no](mailto:post@nor-graphic.no) - Vat.no.: 922423466



## **NOR-GRAPHIC LTD**

Bodalsvei 28, 1743 Klavestadhaugen, Norway

Phone +47-69143954 Fax +47-69120257 E-mail: [post@nor-graphic.no](mailto:post@nor-graphic.no) - Vat.no.: 922423466

# **DECLARATION OF CONFORMITY**

We  
**NOR-GRAPHIC LTD,**  
declare under our sole responsibility that the product:

**NG-Steel rule nick-grinder – Mod. “NG-E”**  
–electrically operated

-to which this declarations relates, is in conformity with the previsions  
of the following EU-directive:

**98/ 37/ EEC**



Klavestadhaugen, 01.01.2009

**NOR-GRAPHIC LTD**

Hilde Jelsness-Larsen

# OPERATION MANUAL

- **Field of application:**

The NG Steel rule nick-grinder is designed to the sole purpose of grinding “nicks” of various widths and depths in the cutting rule of steel rule dies used for the die cutting and creasing of paper, cardboard and corrugated board. **THE MACHINE MUST NOT BE USED FOR ANY OTHER PORPOSES.**

- **Work station:**

The NG-Steel rule nick-grinder is installed and operated:

- In the die-room at a suitable working table, or
- At the die-cutting machine with the die pulled out and supported by the two carrier arms of the die cutter.

**For maximum safety:**

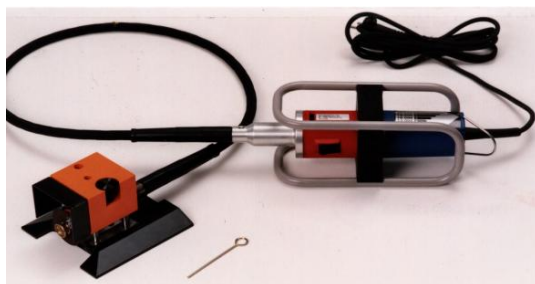
- Keep work area clean and tidy.
- Use appropriate lighting in work areas
- When not in use, store the NG-steel rule nick-grinder n a safe place to avoid unintentional starting
- 

IF STORED A WAY IN A DRAWER, DISCONNECT THE UNIT FROM THE AIR SUPPLY LINC.

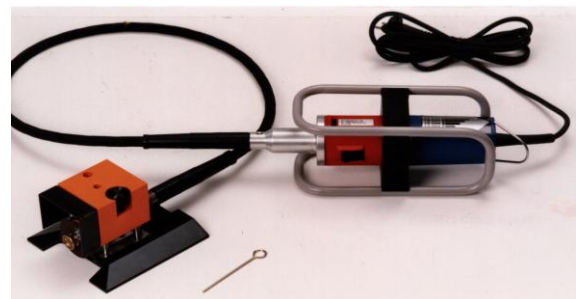
- **Main components:**

The NG Steel rule nick-grinder consists of the following main components:

Mod: " NG-E/std"



Mod: " NG-E/ext"



- **Instruction for installation:**

The NG Steel rule nick-grinder is delivered with the quill mounted in the grinding head.

Complete the assembly by:

1. **Connecting the flexible drive shaft to the quill mounted in the grinding head.**

- Pull the inner-cable (B5) slightly out of the outer protective casing (B4) to get access to the threaded coupling (B1)
- Lock the inner-cable (B5) by inserting the tommy bar (5) in the retaining hole of the treaded coupling (B1)
- Screw the threaded part of the quill-spindle onto the treaded coupling (B1) by turning it clockwise. – fasten tightly.
- Depress the spring loaded button (B3) and slide the coupling (B2) into the quill-coupling. – make sure that the spring oaded button (B3) snaps into the retention hole of the quill coupling for safe locking.

2. **Connecting the flexible drive shaft to the electrical drive motor.**

- Insert the driving pin (B6) of the inner-cable into the hole of the Motor connection (A4).
- Depress the spring loaded button (B7) and slide the coupling (B8) into the motor connection (A5). –make sure that the spring loaded button (B7) snaps into the retention hole (8) of the motor connection (A5) for safety locking.

THE ASSEMBLY IS COMPLETED.

### ELECTRICAL DRIVE MOTOR - MINIFIX 25R, spec.

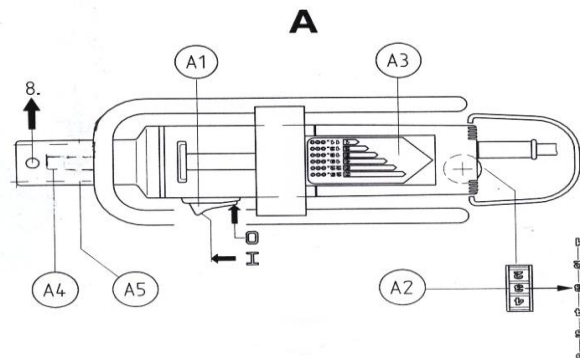
“A1” – on/off switchch

“A2” – speed selector

“A3” – speed indicator label

“A4” – motor shaft

“A5” – motor connection



### FLEXIBLE DRIVE SHAFT - NA4/ 1.250mm.

“B1” – threaded coupling – inner-cable

“B2” – coupling – outhter protective casing.

“B3” – spring loaded button

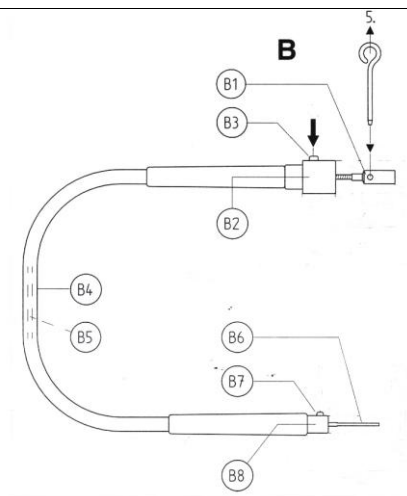
“B4” – outer protective casing

“B5” – inner cable

“B6” - driving pin

“B7” - spring loaded button

“B8” – couling – outhter protective casing.



- **Instructions for operation:** - ref. drawing 1474-6173

- A NG-grinding disc (50x8mm) in the desired widths – (thickness available from 0.3 – 6.0mm) is chosen and mounted on the air motor spindle between the two discs – pos. 15.  
Lock the spindle with the spanner, and fasten securely by means of the knurled retaining nut – pos. 17.
- The depth of the nick to be ground can be set by adjusting the depth control screw – pos. 9. By turning the depth control screw clockwise, the grinding depth will be reduced, and vice versa. The depth of the nick should be equivalent to the thickness of the board to be die-cut.  
Avoid grinding unnecessarily deep, as this will only cause undue wear on the grinding discs.
- Select a correct rotational speed for the electrical drive motor.  
Speed indicator label “A-3”, shows all 6 speed alternatives.  
Set required speed by turning the speed selector “A2”  
-for 230 volt, 50 cycles motor – speed selector position “4” – 19.000 r.p.m.  
-for 110 volt, 50 cycles motor – speed selector position “3” – 16.000 r.p.m./operated at 60 cycles – rotational speed: 19.200 r.p.m.  
NB: never change the rotational speed while the motor is running.
- Switch on the electric drive motor by operating the on/off-switch “A1”.
- Position the handpiece squarely on top of the cutting rule to be nicked, and press down firmly and quickly to bring the grinding disc into the steel rule.

A quick grinding action will considerably reduce the wear on the grinding discs.

**ELECTRIC DRIVE MOTOR – MINIFIX 25R, spec.:**

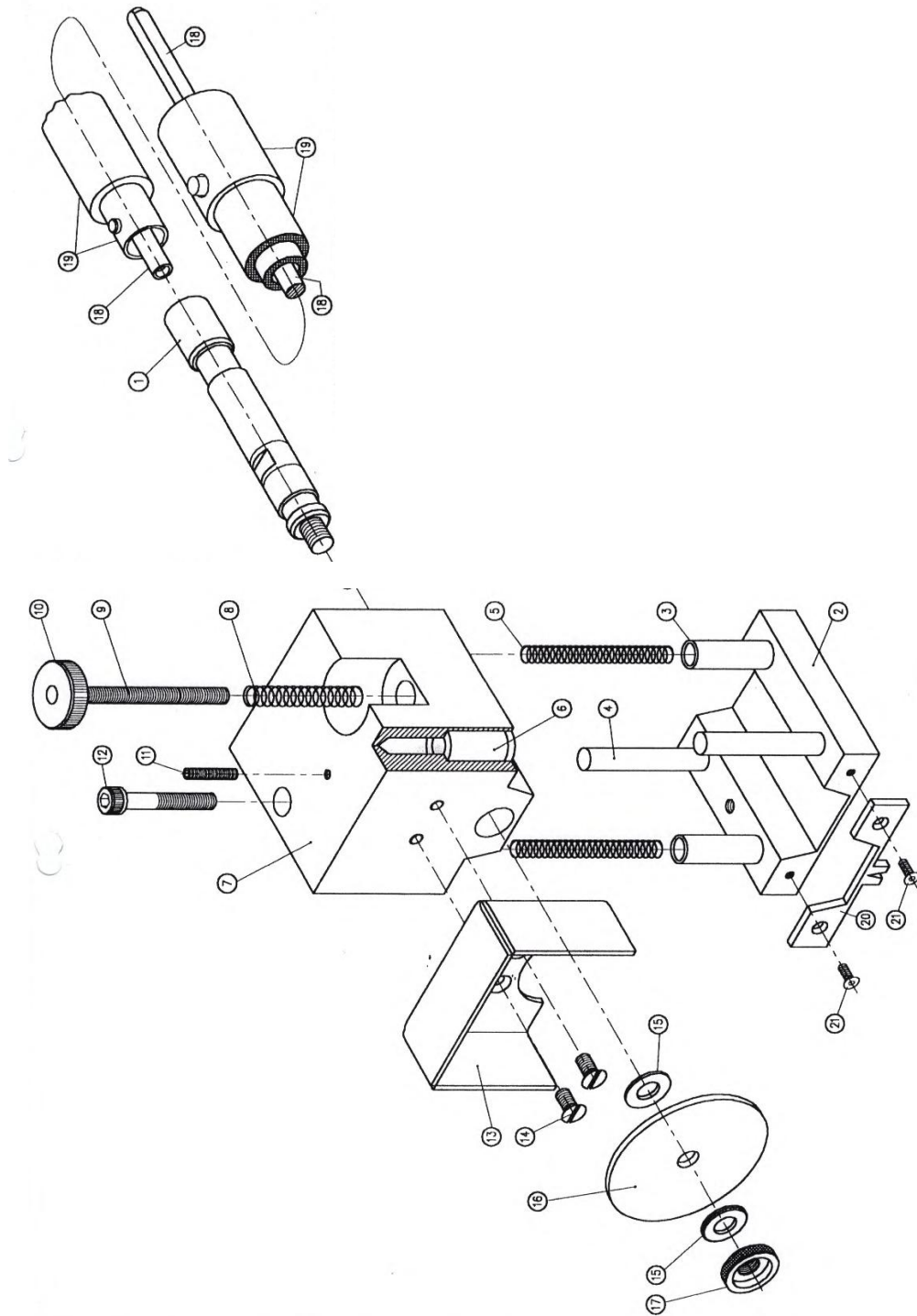
The motor is equipped with an electronic variable speed tachometer selector and an overload cut-out switch, which operates as follows:

- Soft start
- With increased work pressure more current is drawn. The rotational speed of the motor is virtually kept at a constant level.
- If the motor is overloaded, the overload cut-out switch will automatically shut off the power supply. In this event, immediately switch of the power supply by means of on/off-switch “A1”. Restart the motor immediately to take advantage of the cooling effect in no load mode. Repeated automatic cut-offs indicate general overloading of the motor.

**Important safety precautions:**

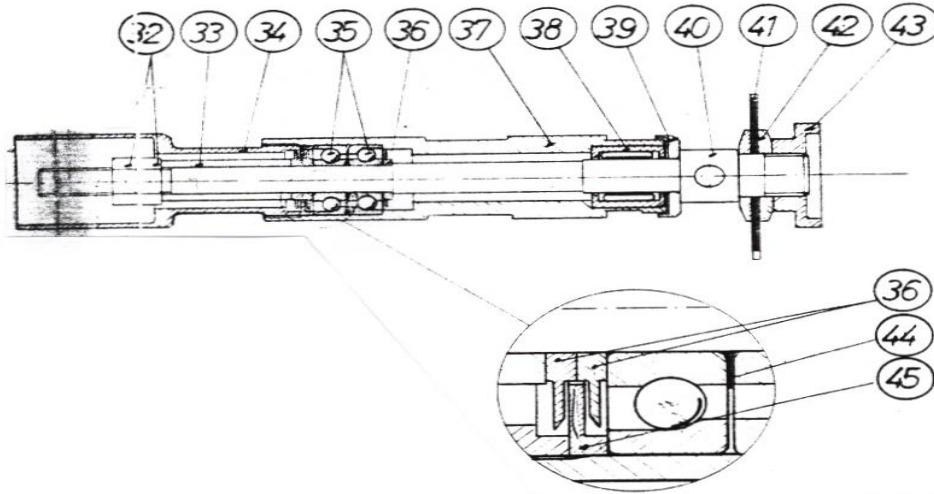
- During the grinding action it is vitally important to keep the grinding head absolutely steady as the grinding disc is penetrating the cutting rule. Twisting or undue movement of the grinding head at this stage, may cause breakage or damage to the grinding disc.
- The operator should wear safety goggles and face the grinding disc guard at all times.
- If the noise level at the work station exceeds 85 db (A), the operator must use ear-protection (ear-plugs/or ear-mufflers.)
- Disconnect air supply before changing grinding discs.
- Check that the spanner used for locking the air-motor spindle when changing grinding discs, is removed before starting the motor.
- Check that the grinding disc has no cracks or other damages before starting the nick-grinder.
- Run the unit for a few seconds at no load before starting the grinding operation.

Use only original, “NG”-marked grinding discs which have been tested for safe performance in the NG-steel rule nick-grinder.



Qty:	Item: “ng-..”	Description:	Qty:	Item:	Description:
1	1	Quill – (separate drawing and spare-parts list	1	13	Metal guard
1	2	Baseplate	2	14	Flat head sunk screw
2	3	Sleeve	2	15	Disc
2	4	Steel shaft	1*	16-.	NG grinding disc (50x8)mm
2	5	Spring	1	17	Retaing nut
2	6	Linear ball bearing	1	18	Inner-cable – NA4/1250mm
1	7	Grinding head	1	19	Outer protective casing – NA4/1250mm
1	8	Spring			
1	9	Socket head cap screw	<b>Not standard:</b>		
1	10	Knob skiffy	1	20	Grinding disc centering guide
1	11	Socket set screw	2	21	Socket head sunk screw
1	12	Socket head cap screw			

**Quill - pos.1 - drawing no. 1474.6173.**



Qty	Description of part:	Pos:	Ordering ref:
1	Quill – complete	1	12396A
2	Ring nut	32	1938
1	Distance sleeve	33	3615
1	Redutcion sleeve	34	12396 A-2
2	Ball bearing	35	1550
3	Slighshot disc	36	2754
1	Toolholder sleeve	37	12396 A-1
1	Needle roller bearings	38	NK 6/10
1	Slighshot disc	39	12396 A-6
1	Spindle	40	12396 A-3
1	Sawblade – ø35	41	12396 A.14
2	Disc	42	12396 A-11
1	Knurled nut	43	12396 A-12
1	Adjusting disc	44	2621
1	Cover plate	45	2756

**Tecninal Data: Electrical drive motor**

**Minifix 25R, spec. (universal, single-phase AC motor)**

Power input:	500 watt
Power output:	300 watt
Weight:	1,65 kg.
Insulation protection class:	II
Voltage:	110 and 230 volt, 50 cycles.
Soft start for smooth starting.	
Cut-out carbon brushes:	2 pcs.
Overload protection switch.	
Variable speed positons:	6 (11.000 – 25.000 r.p.m.)
Tacho speed control.	
Sound pressure level CEN/TC 255N	73 db (A)