

User Manual

XGRIP N10QI



MASTERFIX PRODUCTS BV EUROPE

Maastricht-Airport
The Netherlands

CONTENTS OF USER MANUAL N10QI

- 1 Area of application**
- 2 Specifications and dimensions**
- 3 Standard equipment**
- 4 Safety instructions**
- 5 Initial start-up**
- 6 Description of the N10QI**
 - 6.1 Operation
 - 6.2 Threaded mandrel, adapter and nose replacement
 - 6.3 Setting the stroke
- 7 Maintenance**
 - 7.1 Daily maintenance
 - 7.2 Weekly maintenance
 - 7.3 Overhaul
 - 7.4 Adding oil
- 8 Parts list with general arrangement**
- 9 Guarantee and service**
 - Guarantee form

1 AREA OF APPLICATION

The N10QI riveter is intended for installing blind rivet nuts/bolts in the following materials and sizes:

Opmerking [*1]:

RIVET NUTS			RIVET BOLTS
aluminium	steel	stainless steel	all materials
M5	M5	M5	M5
M6	M6	M6	M6
M8	M8	M8	M8
M10	M10	M10	

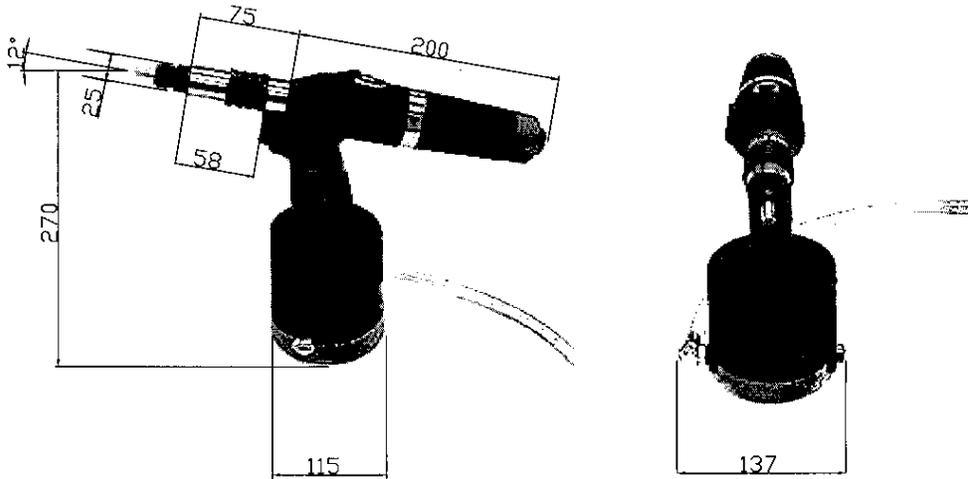
2 SPECIFICATIONS

Weight	2,3 kg
Length	313 mm
Height	276 mm
Stroke	max. 9 mm
Air consumption per stroke	max. 2.7 litres
Operating pressure	5 - 7 bar
Traction power at 6 bar	29800N
Nose holder dia. x L	25 x 75 mm

Subject to technical alterations.

The N10QI is conform to the EC standard 98/37 EEC.

DIMENSIONS



3 STANDARD EQUIPMENT FOR N10QI

- nose pieces: M5 - M6 - M8 - M10
- mandrels for rivet nuts M5 - M6 - M8 - M10
- adapters for rivet bolts M5 - M6 - M8
- One oil refill kit comprising:
 - one bottle hydraulic oil
 - one 3 mm Allen key
 - one filling syringe
- one user manual

4 SAFETY INSTRUCTIONS

Anyone who operates or maintains the N10 riveter must first read this User Manual carefully, paying extra attention to the instructions below.

Never dismantle the tool without first having thoroughly studied the instructions given in this User Manual and applying them.

- Always use the tool in accordance with the specified safety instructions. Direct any queries regarding optimal and safe operation or use of the tool to Masterfix Products.
- The safety instructions must be made clear to all persons involved.
- Never connect the tool to any medium other than compressed air.
- Hold the air hose firmly when disengaging to prevent it from hurtling to and fro due to the escaping air.
- Use the tool only for the installation of blind rivet nuts/bolts. The tool must never be used for giving blows or impacting or as a hammer.
- Do not make any modification(s)/change(s). Any modifications to the tool or (supplied) parts and their consequences are completely outside the liability of Masterfix Products and are entirely the liability of the operator; any guarantee claim shall then be null and void. Masterfix Products is always prepared to advise you with regard to different applications.
- The tool must be constantly maintained and examined/inspected at regular intervals. Maintenance shall be performed by staff trained for that purpose. Do not perform any maintenance before reading this User Manual. Do not hesitate to contact Masterfix Products. If you should need training. Always use the tool in accordance with the specified safety instructions. Direct any queries regarding optimal and safe operation or use of the tool to Masterfix Products. The safety instructions must be made clear to all persons involved.
- Always shut off the air supply before replacing the mandrel/adaptor or nose piece.
- Always disconnect the tool from the air supply before carrying out repairs or maintenance. Disconnect the tool in case of failure before investigating the reason.
- Never aim the tool at any person or object other than the material to be riveted.
- Adopt a stable position and location before operating the tool.
- The air discharge openings (at the bottom and back) must never be covered or blocked. Ensure that air hoses are in good condition and can withstand a minimum compressed air pressure of 10 bar.
- Never exceed the maximum air pressure of 7 bar.
- Always wear eye protection when using the riveter. Eye protection must be worn not only by the user but also by everyone at the working place.
- Prevent excessive contact with hydraulic oil which could produce a rash.
- To prevent accidental operation the trigger must never be touched when the tool is being relocated.
- Ensure that loose garments, ties, long hair, rags, etc. cannot be caught by the moving parts of the tool.
- Hearing protection is advised.

5 INITIAL START-UP

The tool must be connected to an air filter-/separator unit; this unit filters the compressed air to separate dirt and condensate.

A pressure regulator with a preferred setting of 6 bar (min. 5 bar, max. 7 bar) must be installed if the operating pressure of the compressed air exceeds (or might exceed) 7 bar.

Use dry and clean materials (hoses, couplings, fittings, etc.) to connect the tool to the filter/separator unit.

Check whether any leakage occurs anywhere in the compressed air supply. If so, replace the damaged hoses or coupling.

Check the compressed air supply pressure to the tool; this may be max. 7 bar.

Drain the condensate from the filter/separator unit. Also check the dirt filter.

The riveter is supplied ready for use. The tool need not be filled with oil prior to initial start-up.

The N10QI is supplied as standard with fitted M8 nose and threaded mandrel.

The N10QI is standard set at its minimum pressure adjustment.

6 DESCRIPTION OF THE N10QI

The following can be found at the bottom of the tool:

- Compressed air supply hose (0.5 m length, 6 mm ID), with union coupling (item 56, see fig. 6.1).
- Pressure relief valve (item 48) acting as safety valve to prevent overloading of the tool. The valve opens if the compressed air pressure exceeds 7 bar.
You can see the pressure with the green indicator (item 48a)
- It is possible to fit the supply hose to the other side (at the location of the pressure relief valve). The pressure relief valve is then relocated to the supply hose connection.
- Set screw for pressure adjustment (item 52).
- Pressure indicator (item 45).
- Oil level indicator (item 46).
- Needle valve for time of return (item 72).

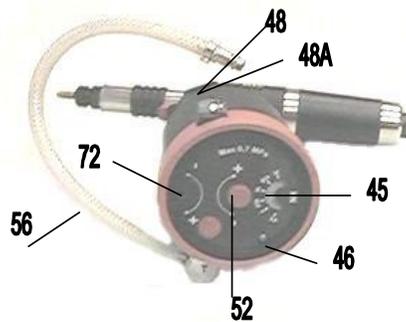


figure 6.1

6.1 OPERATION

Fit the correct threaded mandrel/adaptor (item 1, see chapter 8) and nose piece (item 2) to the tool (see section 6.2 for threaded mandrel/adaptor or nose piece replacement).

Set the nose piece. The nose piece is correctly set if the mandrel protrudes by one thread from the back of the nut (see section 6.2, item 7 for setting the nose piece).

Connect the tool to the compressed air supply using the quick-action coupling. Ensure that the filter/separator unit is set at an operating pressure between 5 and 7 bar.

Set the correct pressure. The pressure can be adjusted by the set screw (item 52) at the bottom of the tool (see section 6.3 for setting the pressure).



Figure 6.1.1



Figure 6.1.2

The N10QI is provided with a fully automatic air motor for screwing nuts/bolts on and off. First screw the nut/bolt one turn on the mandrel/adaptor. By pushing the nut/bolt straight against the mandrel/adaptor (see Fig. 6.1.1), the mandrel/adaptor will start to rotate in clockwise direction to screw the nut/bolt on. Ensure that the collar of the nut/bolt is facing towards the nose piece. The rotation stops automatically when the nut/bolt hits the nose piece. Place the nut/bolt in the material. Be sure to use the correct hole size (consult the catalogue for the hole sizes to be used). The following rule of thumb applies: the hole size in the material is 0.1 mm larger than the outside diameter of the nut/bolt.

The nut/bolt is installed by operating the trigger. The mandrel/adaptor automatically rotates anti-clockwise and comes off the nut/bolt when the trigger is released. The next nut/bolt can now be placed on the tool.

The time of anti-clockwise rotation can be set by turning the adjustment screw (item 72, see Fig. 6.1.2). By turning the screw clockwise the time of rotation is enlarged.

By pushing the push button (item 34), extra anti-clockwise rotation is possible.

6.2 THREADED MANDREL, ADAPTER AND NOSE REPLACEMENT

You have the correct mandrel/adaptor (item 1, see 6.2.1) if its threads correspond to that of the nut/bolt.

You have the correct nose piece (item 2) if it fits tightly round the thread of the mandrel or bolt.

Proceed as follows to replace a mandrel/adapter with nose piece:

- 1 Disconnect the tool from the compressed air supply.

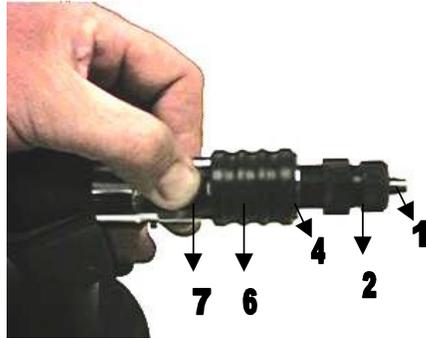


figure 6.2.1

- 2 Unscrew the lock nut of the nose piece (item 2) from the nose piece holder (item 4) (key SW 20).
- 3 Screw the nose piece with the lock nut right out of the nose piece holder. The lock nut remains on the nose piece.
- 4 Push the protective sleeve (item 6) forward.
- 5 Push the security part (item 7) backwards.
- 6 In this position, release the mandrel/adapter by turning it anti-clockwise.
- 7 In this position, screw the selected mandrel/adapter until it stops by turning clockwise. You have the correct mandrel/adapter if its thread corresponds to that of the nut/bolt.
- 8 Release the security part (item 7) and ensure that the retaining device covers the hexagon of the mandrel/adapter well.
- 9 Push the protective sleeve (item 6) backwards and secure it.
- 10 Screw the relevant nose piece with the lock nut into the nose piece holder. You have the correct nose piece if it fits tightly round the thread of the mandrel or bolt.
- 11 Adjusting the nose piece (item 2).
 - A For nuts.
Screw a nut up to its collar against the nose piece on the mandrel and adjust the nose piece. The nose piece is set properly if the thread of the mandrel protrudes 1 thread from the back of the nut screwed on the mandrel. Retain the nose piece and lock it with the lock nut (key SW 20).
 - B For bolts.
Connect the tool to the compressed air supply.
Screw the nose piece against the adapter. The air motor should not start running (if it does, unscrew the nose piece until it stops). Now unscrew the nose piece by another 1½ turns.
Disconnect the tool from the compressed air supply. Retain the nose piece and lock it with the lock nut.
- 12 Replacement of the mandrel/adapter with nose piece is now completed. Then the riveter must be set at the correct pressure belonging to the nut/bolt and the clamping capacity (see section 6.3 setting the pressure).

6.3 SETTING THE PRESSURE

The pressure can be adjusted by the set screw (item 52 see Fig. 6.3.1) at the bottom of the tool. The tool is set at its minimum pressure when it leaves the factory.

Turn the set screw clockwise to increase the pressure. Turn the set screw anti-clockwise to reduce the pressure. When reducing the pressure, always operate the trigger to let the pressure release.

The set pressure can be read from the pressure indication (see Fig. 6.3.1).

For adjusting the pressure belonging to the nut/bolt:

- first adjust to the minimum pressure and then slowly increase;
- place a nut/bolt on the mandrel/adaptor;
- operate the trigger and increase the pressure by turning the set screw (item 52) clockwise until the nut/bolt deforms.



Figure 6.3.1

If problems should occur with the setting of the pressure, disconnect the tool from the compressed air supply, to release the tool from the pressure.

TESTING THE PRESSURE

Checking the pressure setting in a field test is recommended. A number of blind riveting nuts or bolts are installed into the original material or a test plate for this purpose. This test plate must have the same thickness and hole diameter; also ensure that the test plate and the work piece are made of the same material.

7 MAINTENANCE OF THE N10QI

7.1 DAILY MAINTENANCE

- Check the mandrel/adaptor for damage. The threads must not be damaged.
- Check the pressure setting (see section 6.3 for setting the pressure).
- Check if there is any leakage in the compressed air supply. If yes, replace the damaged hoses or couplings.
- Check the compressed air supply pressure; this may be max. 7 bar.
- Drain the condensate from the filter/separator unit. Also check the dirt filter.

7.2 WEEKLY MAINTENANCE

- Check the oil level. There may be insufficient oil if the stroke of the tool is insufficient for correct fitting of the nut/bolt. Add oil in that case (see section 7.4 adding oil).

7.3 OVERHAUL

Overhaul shall be performed after every 300,000 rivet nuts/bolts or once every 3 years. The tool is then completely dismantled and all seals and worn parts are replaced. We advise to have the overhaul performed by Masterfix Products.

7.4 ADDING OIL

There may be insufficient oil if the stroke of the tool is too small for proper installation of nuts/bolts.

(First check whether the stroke setting is correct; see section 6.3 for setting the stroke).

The oil level indicator (item 46) shows whether loss of oil has occurred. The tool has lost oil if the oil level indicator pin no longer protrudes.



Proceed as follows to add oil:

1. Keep the tool upright during all operations.
Disconnect the tool from the air supply.
2. Unscrew the M4 cap screw (item 18) from the body (item 21) using the size 3 mm Allen key. **Make sure the O-ring (item 19) remains in the hole.**
3. Fill the (supplied) syringe with hydraulic oil (a bottle is also supplied with the tool).
4. Screw the filled syringe up to the O-ring in the hole. Then slowly inject the oil into the tool (ensure no air is injected). Adequate oil has been added as soon as resistance is sensed. The tool now has its optimal stroke again. The excess oil will flow back when the syringe is released if more oil is added than necessary.
5. Unscrew and remove the syringe from the body. Check whether the O-ring remains in the hole.
6. Screw the M4 cap screw into the hole using the size 3 mm Allen key.
7. Wipe off the excess oil.

8 PARTS LIST

Item No.	Quantity	Description
1	1	mandrel M5
1	1	mandrel M6
1	1	mandrel M8
1	1	mandrel M10
1	1	adaptor M5
1	1	adaptor M6
1	1	adaptor M8
2	1	anvil M5
2	1	anvil M6
2	1	anvil M8
2	1	anvil M10
3-6	1	front sleeve complete
7	1	security part
8	1	springholder
9	1	spring
10	1	Pin cylindrical 3,0 x 6
11	1	Lock - nut
12	1	o-ring 14.3/2.4, hydraulic plunger rod
13	1	o-ring 20/1, front sleeve
14	1	hydraulic plunger complete
15	1	o-ring 18/2.2, hydraulic plunger rod
16	1	lip seal 26 / 18-6, hydraulic plunger rod
17	1	buffer ring, hydraulic plunger
18	1	cap screw M4 x 8
19	1	o-ring 4/1.5
20	1	hanger
21	1	hydraulic body
22	1	lip seal 34 / 22-9,4, hydraulic piston
23	1	guide ring 34/22/2.5 Teflon
24	1	o-ring 28/3, hydraulic piston
25	1	o-ring 36/2 , rear screwed joint
26	1	sleeve
27	1	protective sleeve
28	1	Pin cylindrical 4,0 x 10
29	1	compression spring
30	1	compression spring
31	1	rear screwed joint
32	1	ring for compression spring
33	1	muffler
34	1	push button
35	1	lip seal 22/12-7, pneumatic plunger rod
36	1	guide ring
37	1	bottom ring
38	1	pneumatic plunger
39	1	pneumatic cylinder
40	1	cover ring
41	1	o-ring 14/2

42	1	o-ring 89/4, pneumatic plunger
43	1	coupling for pressure gauge
44	1	o-ring 10/1.5
45	1	pressure gauge
46	1	oil level indicator
47	1	o-ring 10/1.5
48	1	pressure relief valve
49	1	pressure regulation valve
50	2	o-ring 18/1.5
51	1	retaining ring 6 DIN 471
52	1	Pressure regulation screw
53	1	Covering
54	1	retaining ring
55	1	bottom ring
56	1	union coupling 90°
57	2	connecting bolt
58	2	copper washer for connecting bolt
59	2	M6 cap nut for connecting bolt
60	1	bolt below valve pin
61	1	o-ring 4/2, valve pin
62	1	sleeve for needle valve
63	1	muffler
64	2	o-ring 4/2
65	3	Adjusting ring diameter 14
66	3	o-ring 10/2
67	1	valve pin
68	1	Pin cylindrical 3,0 x 20
69	1	eccentric trigger
70	1	trigger
71	1	o-ring 4/1, valve pin
72	1	Needle valve for time of return
73	1	cap screw M6 x 16
74	1	o-ring 4/2,2, valve pin
75	1	o-ring 30/2
77	1	compression spring, valve pin
81	1	o-ring 7/1.2
	1	oil syringe
	1	bottle with oil, 30 cc
	1	size 3 mm Allen key

9 GUARANTEE AND SERVICE

The user will not be able to claim under guarantee if he does not observe the instructions specified in this User Manual.

A guarantee period of 6 months applies, starting from the date of purchase.

The liability of Masterfix Products for this riveter and/or any of its defective parts shall be limited to their replacement, the changing of wear and tear parts (like mandrels, sealings etc) is excluded. In no case shall the liability exceed the invoiced value of the supplied items. Masterfix Products shall not be liable under any circumstances for damage or costs occurring due to inexpert use of the tool and repair or replacement of parts performed by anyone other than Masterfix Products itself.

To be able to make any guarantee claim, the guarantee form must be completed and sent to Masterfix Products (see last page of the User Manual for guarantee form).

Maintenance shall be performed in accordance with the instructions solely by technical persons qualified for the purpose.

It is advisable to consult Masterfix Products for advice on repairs or to present the tool for repair to Masterfix Products.

MASTERFIX PRODUCTS B.V. EUROPE

P.O. Box 21
6190 AA Beek
The Netherlands
Europalaan 12
6199 AB Maastricht-Airport

Tel: +31 (0)43 350 84 84

Fax: +31 (0)43 350 84 88

GUARANTEE FORM

MASTERFIX PRODUCTS BV EUROPE
P.O. BOX 21
6190 AA Beek
The Netherlands

To be completed on purchase and sent to Masterfix Products B.V.

This Masterfix XGRIP N10QI riveter Nr. _____

was sold to:

Stamp/address buyer:

Stamp/address vendor:

Date _____ Signature of sales person _____

EC-DECLARATION OF CONFORMITY FOR MACHINERY

We

MASTERFIX PRODUCTS BV EUROPE
Europalaan 12
6199 AB Maastricht-Airport
The Netherlands

herewith declare that the product

type: XGRIP N10QI pneumatic-hydraulic riveter
application: blind rivet nuts all materials M5 - M10
blind rivet bolts all materials M5 - M8

which this declaration refers to,
is in conformity with the provisions of the regulations EC standard 98/37 EEC.

The Netherlands, Maastricht-Airport 29-08-2001

J.M.E.L. Aarts

**WWW.MASTERFIX.COM****The Netherlands (Head Office)**

Masterfix Products b.v.
Europalaan 12
6199 AB Maastricht Airport
Tel. +31-43-350 84 84
Fax +31-43-350 84 88
E-Mail: r.pisters@masterfix.com

Germany

Europalaan 12
6199 AB Maastricht Airport
Tel. +31-43-350 84 84
Fax +31-43-350 84 88
E-Mail: m.smeets@masterfix.com

Polen

Masterfix Poland
ul. Daleka 16
60-124 Poznan
Poland
Tel. +48-61-86 66 297/ 376
Fax +48-61-86 65 733
E-Mail: n.dziedzic@masterfix.com

United Kingdom

Masterfix Products UK Ltd.
Units 4a,b& d, Ring Road
Zone 2, Burntwood Business Park
Burntwood
Staffordshire WS7 3JQ
Great Britain
Tel. +44-1543-686 989
Fax +44-1543-675 822
E-Mail: k.johal@masterfix.com

Spain

Black & Decker Ibérica, S.C.A
Business Unit Masterfix
Ctra. M-300, Km 29,700
28802 Alcalá de Henares
Madrid, España
Teléfono +34-91-883 57 30
Fax +34-91-880 87 20
E-mail: d.gomez@masterfix.com