

Operating Instructions

for

novopress

CRIMPING TOOL

with manual hydraulics

HPM 400

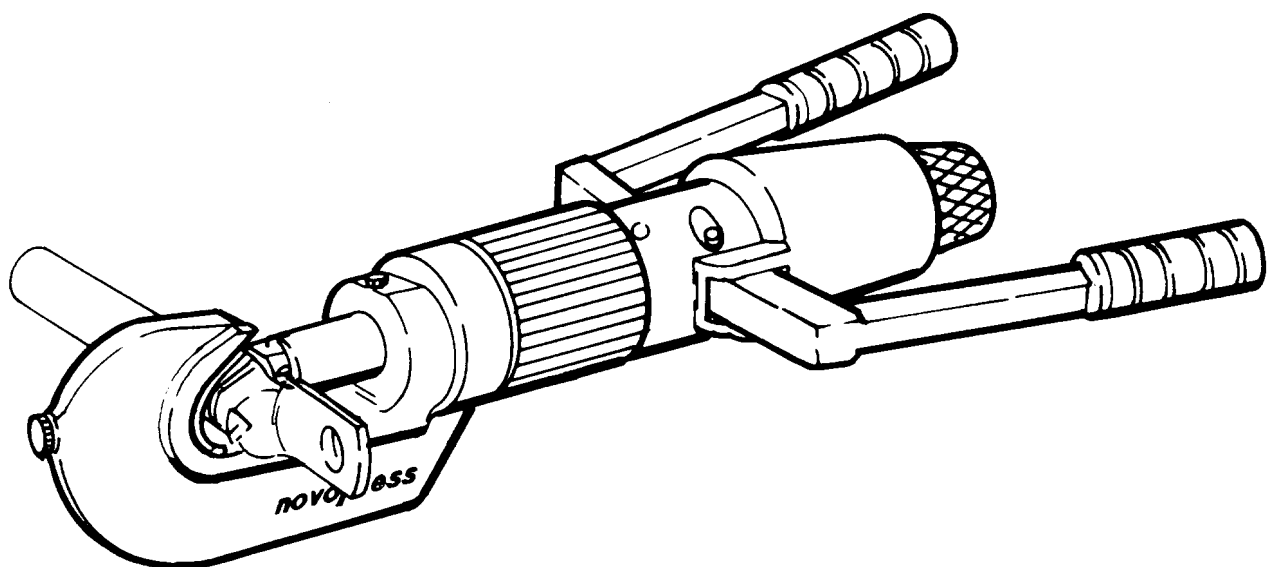


TABLE OF CONTENTS

Safety Regulations	
Operative Range.....	1
Technical Specifications	1
Crimping	2
Description of Functions	3
Return stroke	3
Changing Tools.....	4
Maintenance	4
Minimum Quantity of Pressing Operations to be carried out per Cable Termination.....	5

CRIMPING TOOL WITH MANUAL HYDRAULICS HPM 400, Order No.: 5200

Operative range:

Cable lugs and pressing connectors for copper and aluminium conductors can be pressed with the HPM 400.

Pressing Range for V-pressings:



Copper conductors	from 16 to 400 mm ²
Aluminium conductors	from 50 to 400 mm ²

For the minimum quantity of the V-pressings to be carried out per cable termination, see table on page 5.

NOTE:

The largest outer diameter of the connectors/connector sleeves is 38.5 mm (1.5"). Optimum crimpings of all connectors with cross-sections in the above range is guaranteed by the automatic indentation depth control which is built into the crimping tool.

Pressing Range for Hexagon Pressings:



Copper conductors	from 16 to 240 mm ²
Aluminium conductors	from 25 to 185 mm ²

For the minimum quantity of the hexagon pressings to be carried out per cable termination, see table on page 5.

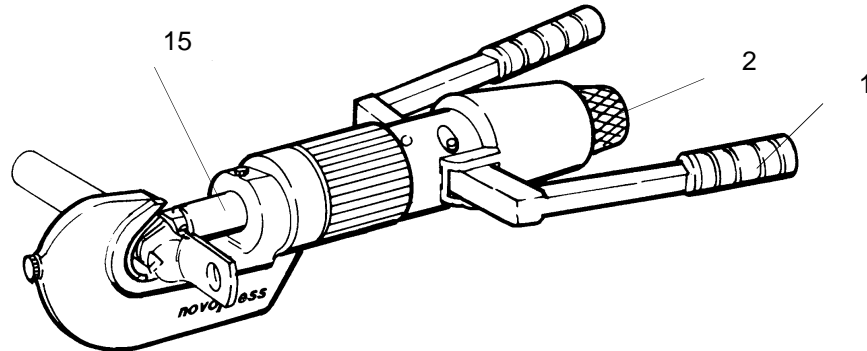
Technical data :

Length	approx.	550	mm	(21,6")
Width	approx.	180	mm	(7")
Force		110	kN	(11 ton f)
Weight		5,9	kg without case	(13 lb)
Max. work-piece dia.		38,5	mm	

Crimping

Insert the connector/connector sleeve with cable into the crimping head.

Operate the pump levers (1) until a clear recoil is felt. The crimping process is then completed. Depending on the cross-section to be crimped, up to 50 strokes may be necessary.



NOTE:

Only for V-pressings:

When crimping aluminium conductors, the sleeve may be bent. To avoid this, perform every other crimping with an offset of 180°.

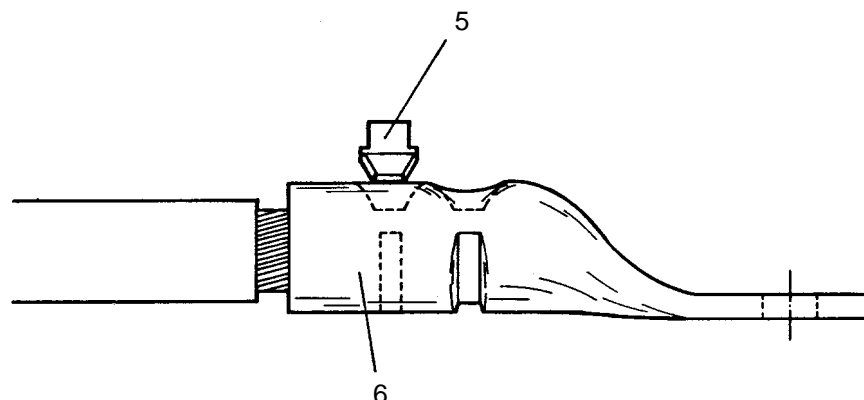
NOTE:

- Only for V-pressings:
Crimping in the same place more than once results in over-crimping and reduces the cross-section.
- In order to check the indentation depth we supply test rods with test instructions (Order No.6468) on request.

Pressing of AL conductor

- Roughen oxidized cable ends with abrasive paper before crimping.
- Use cable lugs/pressing connectors filled with a quartz containing heat-conductive grease or lubricate the cable terminations with a suitable grease.
- Select the distance to the next pressing operations such that the tool is fully contacting a nondeformed area.

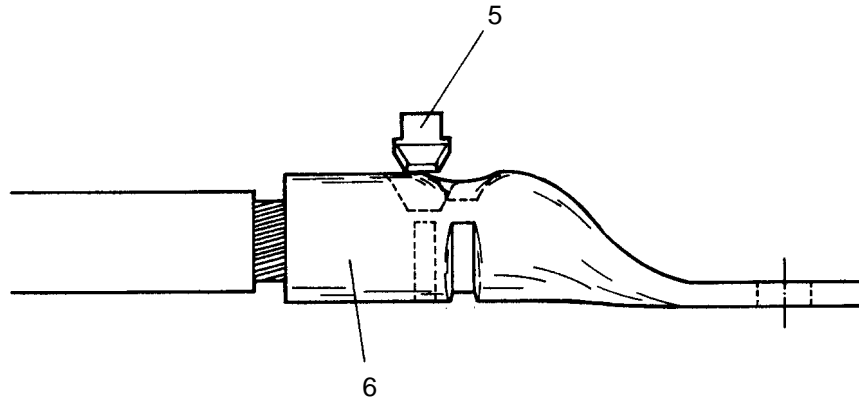
Selected distance all right: identical pressing depth



Key:

- 5 = Lower tool
- 6 = Cable lug

Too close a distance: pressed too deep



Description of functions

While the pump levers (1) are being operated the following functions are performed automatically:

- Accelerated pre-stroke of the piston with the lower die until contact is made with the connector/connector sleeve at the point to be crimped. This pre-stroke occurs when the pump levers are moved apart.
- Determination of the cross-section of the connector/connector sleeve to be crimping and the indentation depth correct for this cross-section.
- Changeover to the crimping process. Crimping occurs when the pumping levers are moved together.
- Completion of the crimping process on reaching the required indentation depth. At this point a clear recoil can be felt in the pump levers, which spring apart slightly.

If the crimping cylinder reaches its maximum force during crimping, the recoil effect pulls the pump levers together.

Return stroke

1. Rotate the turn button (2) by a maximum of 45 degrees and hold it there; the piston (15) returns. Release the turn button (2); the piston (15) stops.

The return stroke of the piston (15) may be halted in any position.
The idle stroke can thus be restricted to a minimum.

2. Rotate the turn button (2) by 90 degrees. The piston (15) will retract fully. Return the turn button (2) to its original position before crimping again.

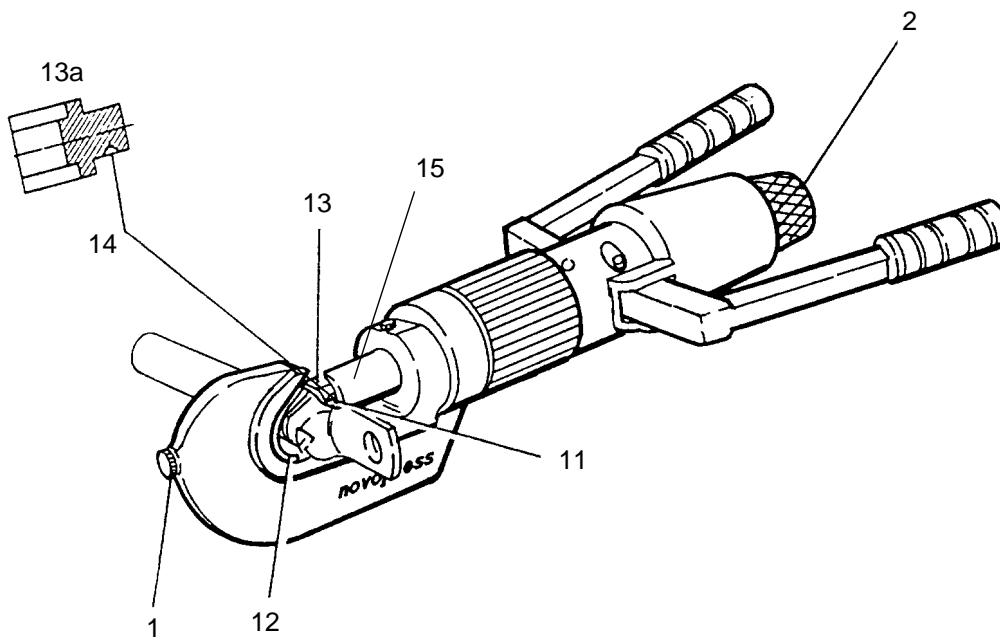
Changing tools

1. Loosen the retaining screws (10)+(11) until the upper tool (12) can be removed from the crimping head or the lower tool (13) can be removed from the piston rod (15).
2. Insert the new tools and tighten the screws firmly.

NOTE:



When mounting a lower tool for hex. press moulding operations (13a), care is to be taken that the side with the centering bore (14) will ALWAYS point to the retaining screw (11).

FAULTY PRESS MOULDING IN CASE OF ANY NON-COMPLIANCE



Maintenance

- | | |
|--------------|---|
| If dirty: | Clean upper and lower tool.
Clean entire crimping cylinder. |
| Every week: | Check upper and lower tool for any damage.
Replace, if necessary. |
| Every month: | Check marked areas for possible leakage and send in HPM 400 for repair, if necessary. |

Pressing Cylinder HPM 400 Minimum Quantity of the Pressing Operations to be carried out per Cable Termination							
Cross section mm ²	V-pressings 			Hexagon Pressings as per DIN 48083, Part 4 			
	Cu	Al		Tool Ident No.		Cu	Al
		<80 N/mm ²	>80 N/mm ²	Cu	Al	Cable Lug DIN 46235 Connector DIN 46267 Part 1	Cable Lug DIN 46329 Connector DIN 46267 Part 2
16	1	—	—	8	10	1	—
25	1	—	—	10	12	1	2
35	1	—	—	12	14	1	3
50	1	2	2	14	16	2	3
70	1	3	2	16	18	2	3
95	1	3	2	18	22	2	4
120	2	4	3	20		2	4
150	2*	4	3	22	25	2	5
185	2*	4	3	25	28	3	5
240	2	4	3	28	32	3	—
300	2	4	3	—	—	—	—
400	2	4	3	—	—	—	—

* Crimp DIN 46234 cable lugs only once.

Service

NOVO  **press**

Scharnhorststraße 1
D-41460 Neuss

Postfach 101163
D-41411 Neuss
Telex 8 518 015
Tel. 02131 / 288-0
Telefax 02131 / 28855

Pump levers	Lower die	Turn button	Retaining screw	Upper die
Retaining screw				
Lower tool				
Cable lug				
Lower tool				
Cable lug				
Unterwerkzeug =	bottom tooling			
Oberwerkzeug =	top tooling			
Gewindestift	Retaing screw			
Halteschraube=	holding screw			
Unterwerkzeug 6-kant	Hexagon lower tool			
Zentrierbohrung		Centering bore		