

Operating Instructions
for

novopress

CRIMPING TOOL

HP 300

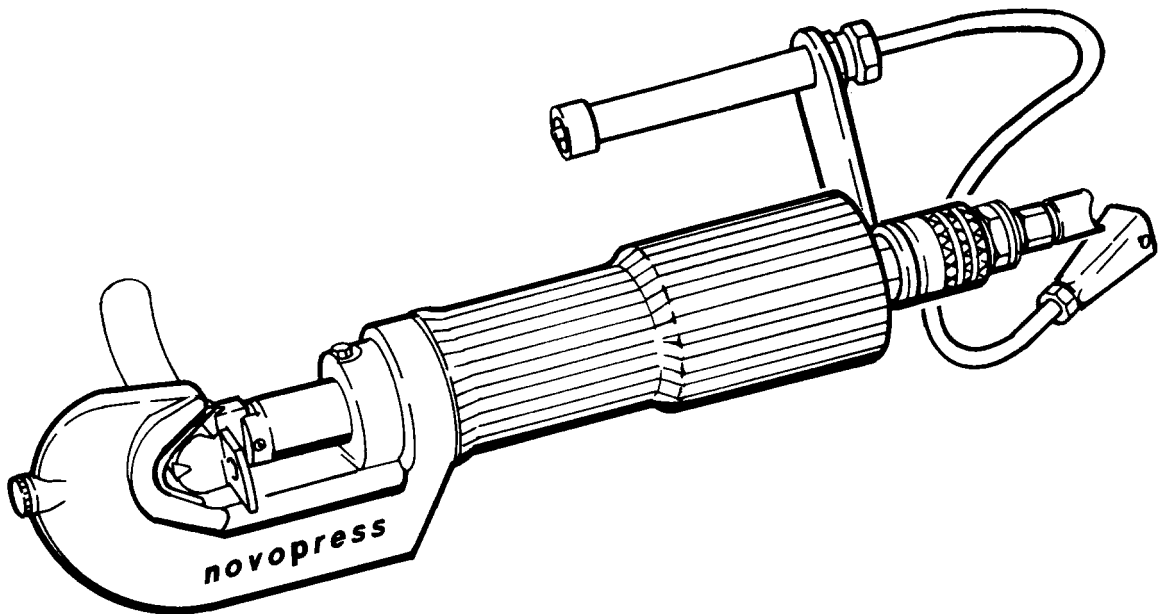


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HYDRAULIC CRIMPING TOOL HP-300, Order No.: 1000

Operative Range

WARNING!

THE HP 300 IS A HAND TOOL AND SHOULD NOT BE USED AS A STATIONARY TOOL.

Cable lugs and pressing connectors for copper and aluminium conductors can be pressed with the HP 300.

Pressing Range for V-pressings:



Copper conductors from 50 to 300 mm²

Aluminium conductors from 35 to 240 mm²

For the minimum quantity of the V-pressings to be carried out per cable termination, see the table on page 7.

The lower tool is to be changed as follows for aluminium conductors:

from 35 to 50 mm ²	Lower tool, No. 1018
from 70 to 240 mm ²	Lower tool, No. 1015

Pressing Range for Hexagon Pressings:



Copper conductors from 35 to 240 mm²

Aluminium conductors from 25 to 185 mm²

For the minimum quantity of the hexagon pressings to be carried out per cable termination, see the table on page 7.

The HP300 can be operated with the hydraulic unit HA 1-ES, Order No. 31070, or the foot pump HA 1-FS, Order No. 2900.

Technical specifications

Diameter:	80	mm	(3.8")
Length:	430	mm	(17")
Weight:	4.55	kg	(10 lb)
Operating pressure	min.150	bar	(2200 psi)
(measured on hydr. unit)	max.160	bar	(2346 psi)
Power:	98.5	kN	(9.85 tonf)

Operation:

Crimping has three phases.

Phase 1 - quick idle stroke and supercharging

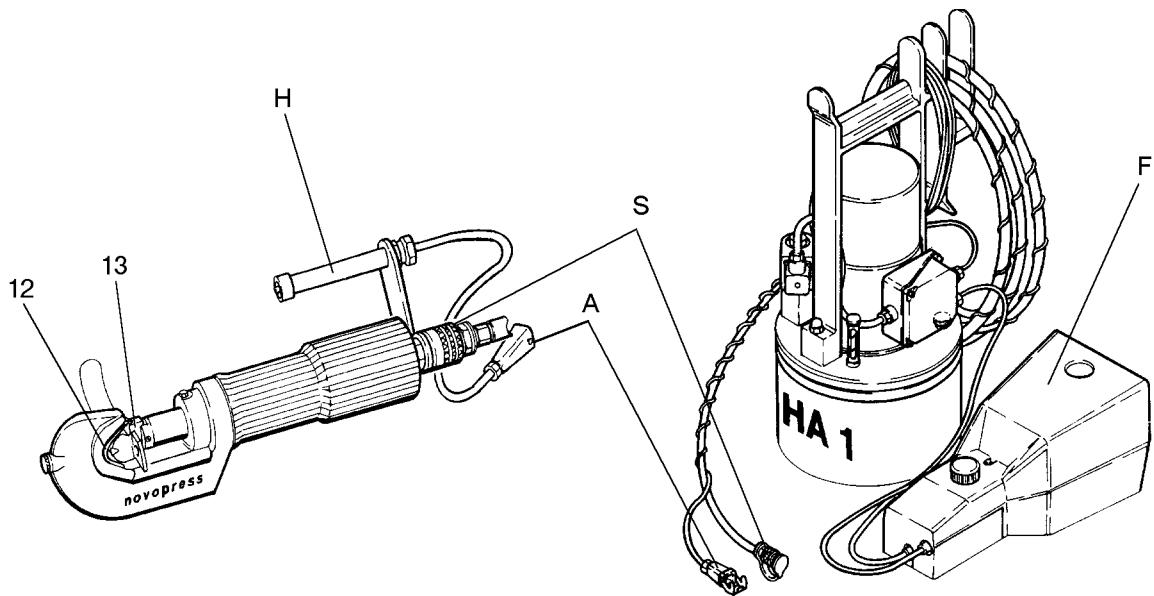
Phase 2 - slow crimping stroke

Phase 3 - hydraulic shut off after completion of crimping and the return stroke.

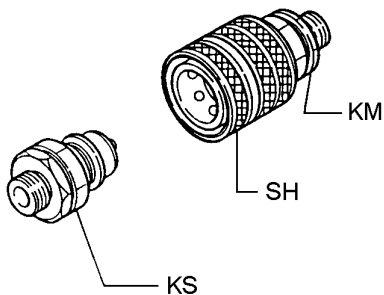
The three phases are carried out automatically.

The piston returns after the hand switch (H) has been released.

Use



1. Connect the crimping tool to the HA 1 hydraulic unit by using the rapid-action coupling (S).
2. **Rapid-action coupling**

**Coupling**

Hold the coupling sleeve (KM) on to the sliding sleeve (SH) and slide it on to the coupling plug (KS).

De-coupling

Hold the coupling sleeve (KM) on to the sliding sleeve (SH) and pull away from the coupling plug (KS).

WARNING!

While hydraulic unit is connected, keep fingers out of crimping area (area between upper (12) and lower tool (13)).

RISK OF INJURY!

3. Connect the crimping tools to the hydraulic unit HA 1 using the connector (A).

Note!

The HP 300 can only be operated with the hand switch (H). The foot switch (F) is used only for the EMERGENCY STOP function (see operating instructions HA 1 / HA 2).

4. Carry out a few idle strokes to remove air from the system.
The hydraulic unit should be on a higher level than the crimping tool during the operation.
5. The hand switch (H) is a swivelling switch and can be locked into any desired position.
Proceed as follows:
 - Slacken the set screw in the nut SW 36 (between hand switch (H) and coupling plug)
 - Tighten the nut SW 36.
 - Tighten the set screw.

Crimping

Place the end of the cable with the terminal into the crimping head.

Then:

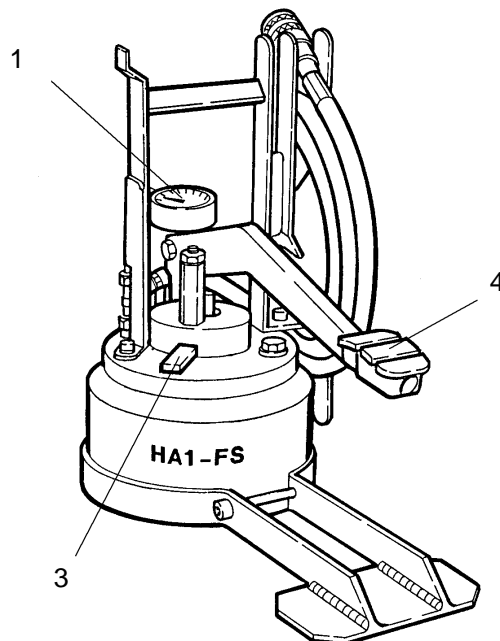
A: If the **HA 1-ES**

is used, press the hand switch (H) and keep pressed until the control valve shuts the machine off. Then release the hand switch (H).

NOTE:

The piston must return completely before the next crimp is made.

OTHERWISE THE NEXT PRESSING WILL BE TOO DEEP!



B: If the **HA1FS**

is used, operate the pressure lever (4) of the pump until the piston stroke stops and the gauge (1) constantly shows the maximum pressure.

By pressing the release lever (3) oil is released from the cylinder.

NOTE:

Keep the release lever pressed until the gauge shows Zero and the piston has returned to its original position.

OTHERWISE THE NEXT PRESSING WILL BE TOO DEEP!

NOTE:

Only for V-pressings:

When crimping aluminium conductors, the sleeve may bend. This can be prevented if every other crimp is made at 180° with respect to the first.

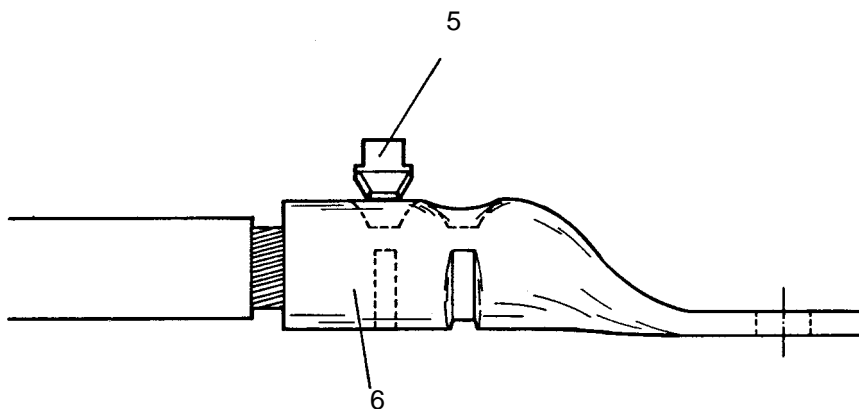
NOTE!

- Crimping should not be interrupted before the hydraulic valve has automatically shut off. Otherwise the crimp depth will not be sufficient.
- Only for V-pressings:
If more than one crimp is made in the same place, the cross-section will be too small.
- We can supply test pieces for checking the depth (Order No. 4104).

Pressing of Al conductor

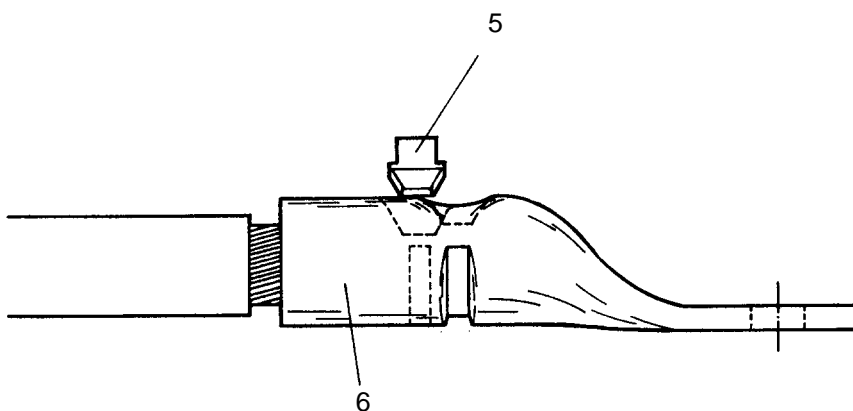
- Roughen oxidized cable ends with abrasive paper before pressing.
- Use cable/pressing connectors filled with quartz containing heat-conductive grease or lubricate the cable terminations with a suitable grease.
- Select the distance to the next pressing operations such that the tool is fully contacting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

Selected distance all right: identical pressing depth



Key:
5 = Lower tool
6 = Cable lug

Too close a distance: pressed too deep



Changing Tools

WARNING!

UNCOUPLE HYDRAULIC UNIT OR DISCONNECT IT FROM THE MAINS BEFORE CARRYING OUT MAINTENANCE WORK!

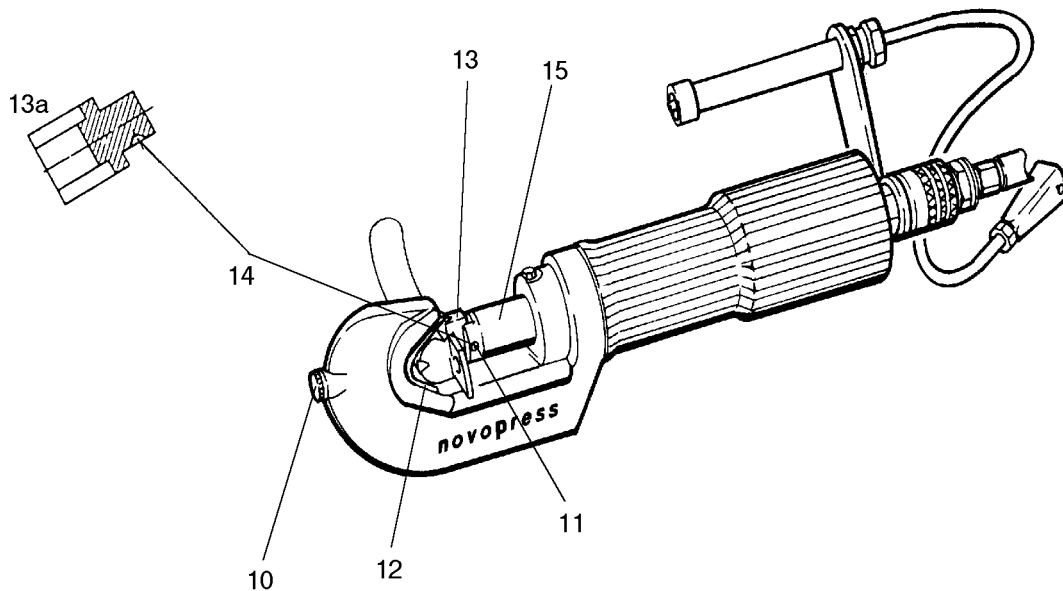
Loosen the retaining screw (10) and threaded pin (11) until the upper tool (12) can be removed from the crimping head or the lower tool (13) can be removed from the piston rod (15).

Insert the new tool and tighten the screws firmly.

NOTE:

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

FAULTY PRESS MOULDING IN CASE OF ANY NON-COMPLIANCE



Maintenance

WARNING!

UNCOUPLE HYDRAULIC UNIT OR DISCONNECT IT FROM THE MAINS BEFORE CARRYING OUT MAINTENANCE WORK!

If dirty:

Clean upper and lower tool.
Clean entire crimping cylinder.

Every week:

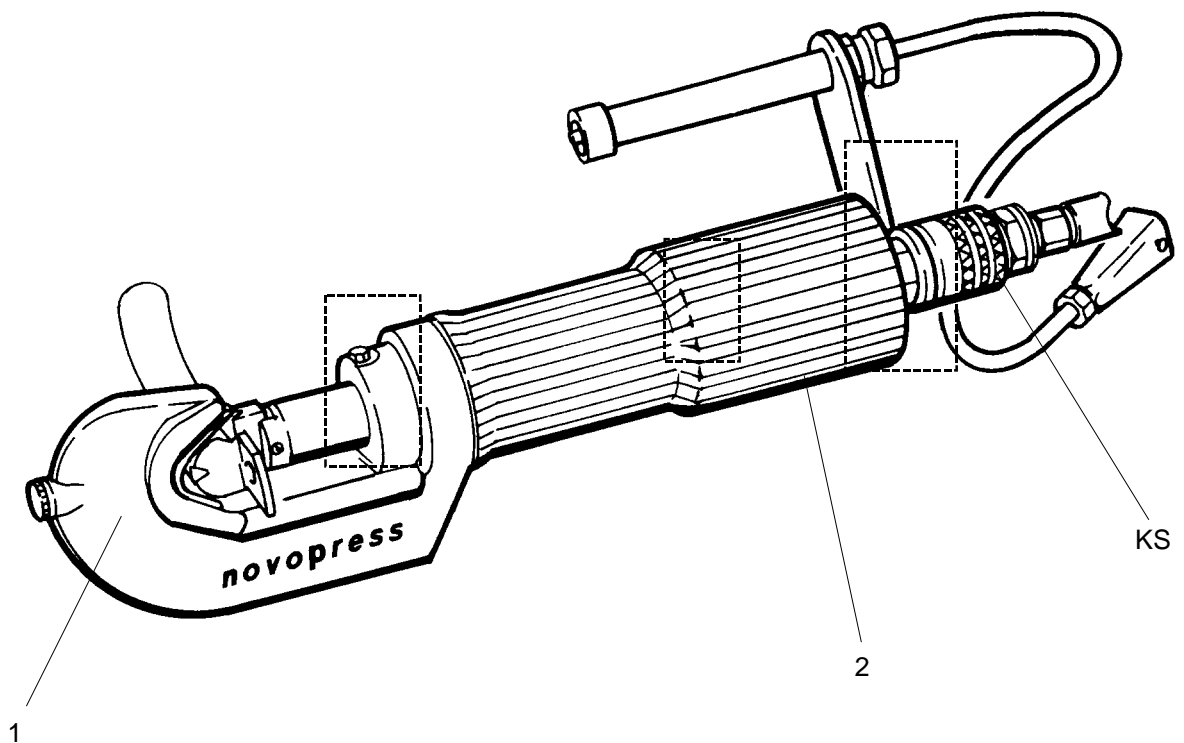
Check upper and lower tool for any damage.
Replace, if necessary.



Every month:

Check marked areas for possible leakage and send in HP300 for repair, if necessary.

Every 3 months:

Load crimping head (1) into a vise. Place 30mm wrench on coupling plug (KS) and fasten cylinder (2).



Pressing Cylinder HP 300 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
10	—	—	—	6	—	—	—
16	—	—	—	8	10	—	—
25	—	—	—	10	12	—	2
35	—	2*	2*	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	22	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	—	—	—	—	—	—

* Lower tool No. 1018 for an aluminium cross section of 35 to 50 mm²

** Lower tool No. 1015 for an aluminium cross section of 70 to 240 mm²

*** Crimp DIN 46234 cable lugs only once.

Repairs / Service

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