



Operating Manual

HP 07

Hand Gun

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Introduction

Congratulation. You made a good choice buying an UES handgun of the series “HP 07”.

UES hot melt products meet your highest demands regarding quality, safety and convenience in maintenance and operation.

Through the combination of most modern automatic control engineering and control technique with a comfortable and complete equipment the best advantages can be offered to you. A most compact construction and the possibility of modular extension guarantees a variable use at multi-purpose applications.

Information about the equipment and options is given in the paragraphs 6.1 and 6.4 of this documentation.

The UES handgun „HP07“ is equipped with carefully chosen components of high quality so that, considering the operating instructions, the appliance can be used for a long time with unrestricted performance.

In addition to a complete program for standard applications of hot melt technique with tank, hose and gun systems we offer individual solution of problems and system components for special applications in different kinds of industry.

Feel free to contact us for individual requests.

UES AG

Krefeld, March 2012

Safety instructions

The following safety instructions must be adhered to!



Attention: Before installation- and adjustment work is carried out, the appliance must be disconnected from the mains!

Qualified personnel can only carry out installation and maintenance work, meaning only the personnel that has been trained on such appliances and who has the required experience and qualification with these or similar appliances and who is experienced in the safety and accident prevention procedures and thus can recognise these immediately.

Any work, repairs or maintenance made on the gluing pattern system is only to be carried out when the appliance has been disconnected from the main power supply and the compressed air has been cut off (depressurise the system).

The appliance may not be operated without the relevant casing and safety protection. Beware of exposed moving and rotating appliance parts such as motor and pump movement and also rising/sinking parts.

Attention! Do not use this appliance for anything other than that, for which it was manufactured!

Many exposed parts of this unit, such as the hot glue hose and order valve operate at a very high temperature, which can result, when coming into contact with hot and pressurised glue, in severe burns to the skin. Therefore when operating this unit, filling the melting tanks, installation and construction of a hose and order valves, protective clothing (safety gloves and glasses as well as clothing and shoes) are to be worn at all time. Several glues produce poisonous gases, which have to be filtered.

Under no circumstances is the glue application unit to be operated under the following conditions:

- Near escaping substance or exploding gases or materials
- Without the appropriate safety appliances
- Temperatures lower than 5° C and more than 45°

Safety precautions regarding the glue

The utmost care is required when working with hotmelt glues! Material of this kind has a high and quick bonding quality, so that it can even still be very hot when it is hardened and can lead to burns when coming into to contact with exposed skin.

The safety procedures of the glue manufactures are to be followed. They can be found in the relevant information sheet of the respective glue.

Always abide to the operational gluing temperatures suggested by the manufactures!



During work with hotmelt glues wear protective gloves, glasses and long sleeved clothes to reduce the risk of burns. In the event of an accident happening with hot glue, do not try and remove the glue from the skin but run the burnt area under cold water until the glue has cooled off and then contact a doctor immediately.

Safety precautions relating to the production machine

The recommended safety procedures when dealing with production- and or packing machines are to be taken from the manual delivered with these machines.

When installing, operating and maintaining the unit the safety measures referring to the main machine which the unit is built into must be taken into consideration.

Safety symbols

The safety symbols shown below indicate operations where increased is called for.
The safety procedures should be followed to at all times:



Attention, general safety instructions:

Regards to safety instructions when working with glues and other machines.

Additional (special) safety instructions can follow



Caution hot surface:

Danger of burning. Appliance parts have a high operating temperature.



Caution high voltage:

This type of work is only to be carried out by qualified personal.

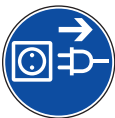


Caution hand injury:

Risk of entrapment if incautiously operated.



Caution, possible danger of uncontrolled release/leakage of hot liquids!



*Disconnect power
plug before opening!*



Wear full suit!



*Disconnect
power supplier!*



Use safety glasses!



Wear safety gloves!



Use face shield!

Technical description

Introduction

The HP07 is prepared for the manual application of hot melt adhesive or other thermoplastic materials. The supply of hot melt exclusively takes part via a flexible hose (max. \varnothing of the cap at the end of the hose 44 mm), which is connected with an UES hot melt system.



A heater cartridge and a temperature sensor (Ni 120, PT100, NTC etc.) regulate the temperature of the handgun independent of the hose and the tank temperature.

When tank, hose and handgun reach the temperatures which were adjusted before, an electronically release of the pump in the tank takes place. The hot melt adhesive is transported with the before adjusted pump pressure to the handgun with a gear ratio of 14:1

The HP07 is equipped with a micro switch, with which a gear pump, a bulk melter or an air heater (HP07SP) can be controlled.



Note! For general directions regarding the operating of hot melt systems please consult the manual for each individual hot melt system.

Putting into operation

Check

You acquired a product which left out house in unobjectionable condition.

After unwrapping the HP07 please check the completeness of the delivery (delivery note) and whether there are damages. Please control whether there is packing material in the ventilation slots of the HP07 which might burn during heating.

Read this manual before putting the handgun into operation.

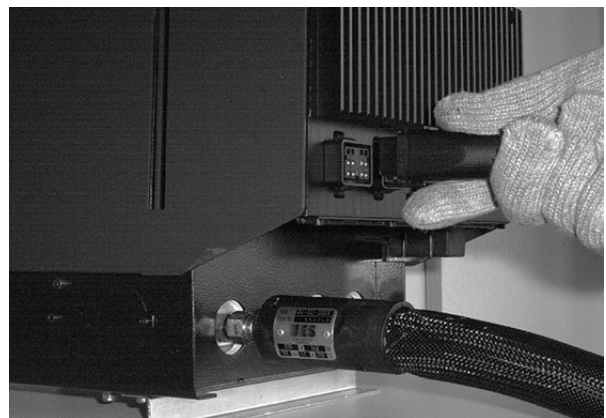
In case of complains please contact our service to the customer.

Hydraulic connections

- ▶ Screw the hose using a spanner SW 19 onto the turning nipple. To avoid the turning of the turning nipple hold it with a spanner SW 19. Before fastening the hose, remount the hose clamp and tighten it.
- ▶ Should you realise a resistance when tightening the clamp, turn the screw cap of the hose another ¼ turn maximum. Too strong tightening of the hose destroys the sealing surface and the thread of the hose.
- ▶ Now put the plug of the handgun into the hose connector.
- ▶ Connect the hose with the hot melt system and supply it with power according to the directions for the first installation of hot melt systems (Manual UES series compact).
- ▶ Now switch on the system and adjust, according to the manual of hot melt systems, the temperatures which are recommended by the adhesive producer.



Plug in hose connector



Connection unit hose

Release stop

Make sure that the trigger of the handgun is secured. The safety lever is placed at the left side of the HP07. In secured state the trigger cannot be pulled.

Leave the release stop locked until you get the instruction to loosen it in this manual. That way you avoid an unintentional release of the handgun.



HP07 secured



HP07 not secured

Start off the system

- ▶ To start with adjust a low pressure at your hot melt system in order to avoid an uncontrolled leak of hot melt adhesive.
- ▶ After reaching the adjusted temperatures please tighten once more all hydraulic screw connections and fix the enclosed contact protection at the hydraulic connection between hose and HP07 by tightening the two-piece protection cap at the turning nipple.
- ▶ Release the trigger by turning the safety lever and slowly pull the trigger. While doing so hold the handgun over a cardboard box or similar case. Adjust now the required quantity of the glue by means of the regulator at your hot melt appliance. Now you can start your production.



Important! Do never hang up the handgun at the handle but always at the suspension at the top of the handgun.



Contact protection



Suspension

Handling

Module inset

The HP07 can be provided with three different module types. As standard it is delivered with the module H300P. This module is technically based upon the UES standard module H300 so the entire UES nozzle programme for this type of module can be used.

Optional the HP07 can be delivered with the module H300PNA. The model NA (Nadelsitz = needle seat) offers the following advantages:

- Needle seat with integrated nozzle (0,20 mm – 1,5 mm)
- Special hardened needle seat
- Strong reducing of nozzle obstructions
- Angle hair is reduced to minimum

Using the module H300PSP the HP07 can be developed to a spraying version (refer to „Spraying application on page 17).

The difference to spot and bead application (H300P / H300PNA) is that through the diagonal placed integrated air drillings the ray of glue is put into a spiral motion. Hereby an extreme flat, sharp edged and nearly invisible application is gained, which width and bead size can be individually regulated via air and pump pressure.



Modules for H300P, H300PNA und H300PSP

Change of module

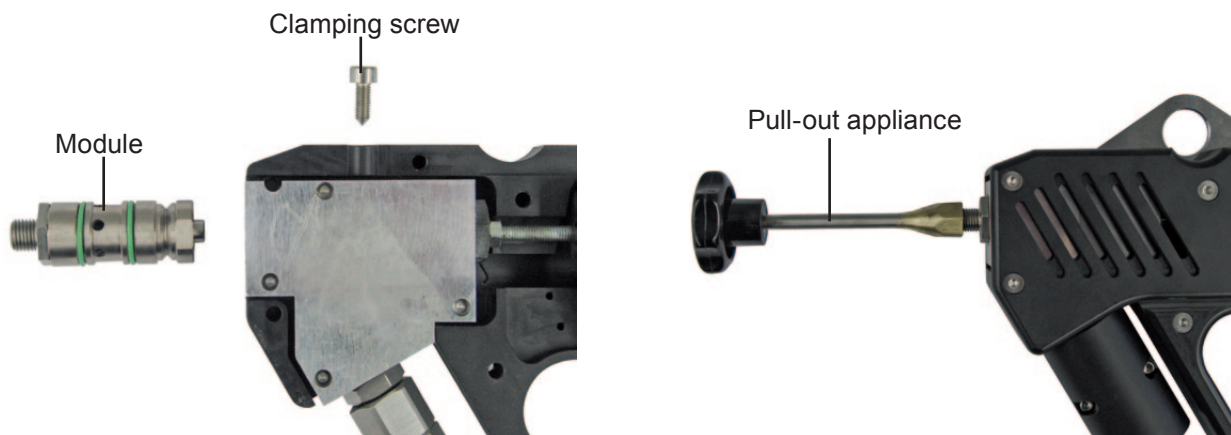


Changing the module please observe the already mentioned safety precautions. The change of modules should only take place in pressure free state (hydraulic and pneumatic).

Before changing the module of the HP07, release the pressure of the system.

The following steps have to be carried out:

- ▶ Put pump pressure to 0 bar.
- ▶ Screw off the nozzle (H300P/H300PSP).
- ▶ Place collecting basin below the HP07 in order to avoid pollution
- ▶ Pull trigger of the HP07 until there does not leak any adhesive out off the handgun any more
- ▶ Loosen now the glue drain at the tank (see operating instruction Compact) so that no new pressure can be built up
- ▶ Turn off the appliance
- ▶ Loosen the clamping screw with a 4 mm hexagon socket screw key. Pull the trigger to the end and screw off the clamping screw counter-clockwise.
- ▶ After having removed the clamping screw out of the service block the trigger can be put back to normal position. Hereby the module is pushed about 4mm out of the service block and you are able to pull the module using a pull-out appliance out of the service block.
- ▶ Check whether the service block is polluted (modul retainer) and clean it if necessary.
- ▶ Put the new module into the service block and push it leaving a space of about 4mm into the block.
- ▶ Now pull the trigger and push the module up to stop into the service block.
- ▶ Retighten the clamping screw. The module now closely abuts on the front side of the service block.
- ▶ After you have tightened the clamping screw the trigger can be released.
- ▶ Put the system into operation and after having reached the operating temperature readjust the pump pressure.
- ▶ Should you realise that the nozzle has become leaky after several openings and closings, the system is to be put again into pressure free state and step 7, 11 and 12 have to be repeated.



Change of module

Adjustment of needle stroke

After the exchange of the module it might be necessary to readjust the needle stroke.

- ▶ Adjust at first a low pressure at your hot melt appliance in order to avoid an uncontrolled leakage of hot melt adhesive.
- ▶ Please turn the stroke adjusting screw using a 4mm hexagon socket screw key clockwise (trigger moves backwards) up to a difference of 0,5 mm between trigger and HP07 housing. When using a hand gun with electrical release (EA) please mind that the micro switch must not audible release.
- ▶ Readjust the operating pressure and check the needle stroke.



4 mm hexagon socket screw key

Stroke adjusting screw



Distance between lever and housing about 0.5 to 1 mm

Maintenance and repair

Should the handgun does not close tightly, the nozzle seat might have become leaky due to wear. In this case please proceed as explained in chapter „Change of module“.

Mechanical defects

Problem	Possible reason	Recommendation
Bead is wavy or interrupted	Too low temperature	Increase temperature
	Too low pump pressure	Increase pump pressure
	glue too old	Drain off glue and fill in new one
	Nozzle obstructed	Replace or clean nozzle
	Nozzle too big	Install smaller nozzle
Bead too thick or glue splashes from the substratum	Too high pump pressure	Reduce pump pressure
	Adhesive is too hot	Reduce temperature
Glue forms bubbles	Too high temperature	Reduce temperature
	Tank is empty	Refill adhesive
	Moisture in the glue or on the pasteboard	
Glue drops out of the gun	Needle and/or seat is worn-out or dirty	Clean and/or replace worn-out parts
		Adjust needle stroke
Frequent nozzle obstructions	Glue crusts in the system (caused by too high temperature, standstill for some time or dirty glue store-container)	Clean system, change inline filters and check tank filter. Clean or replace nozzles. Check cause, e.g. too high temperature in the tank.

Electrical defects

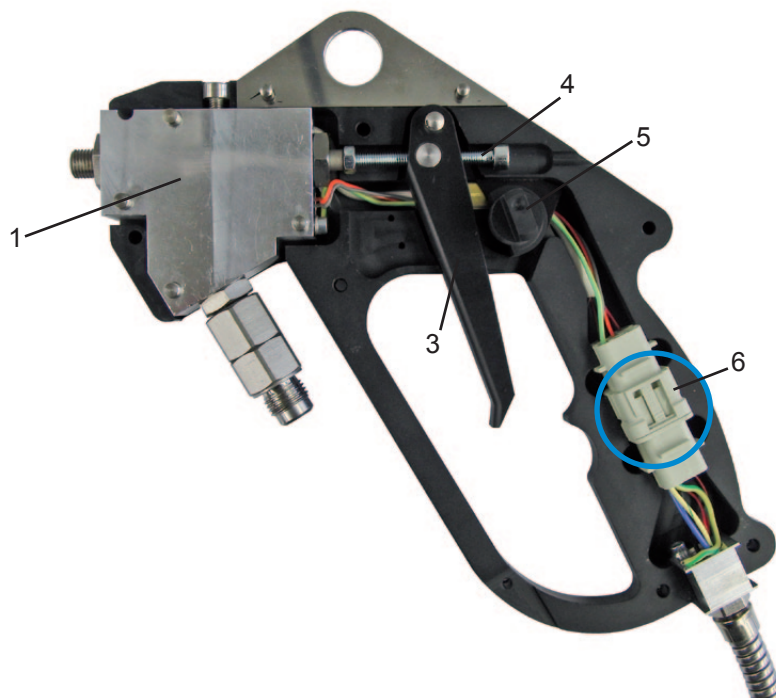


In case of a breakdown of heating or sensor, the electric of the HP07 has to be exchanged. The procedure is as follows;

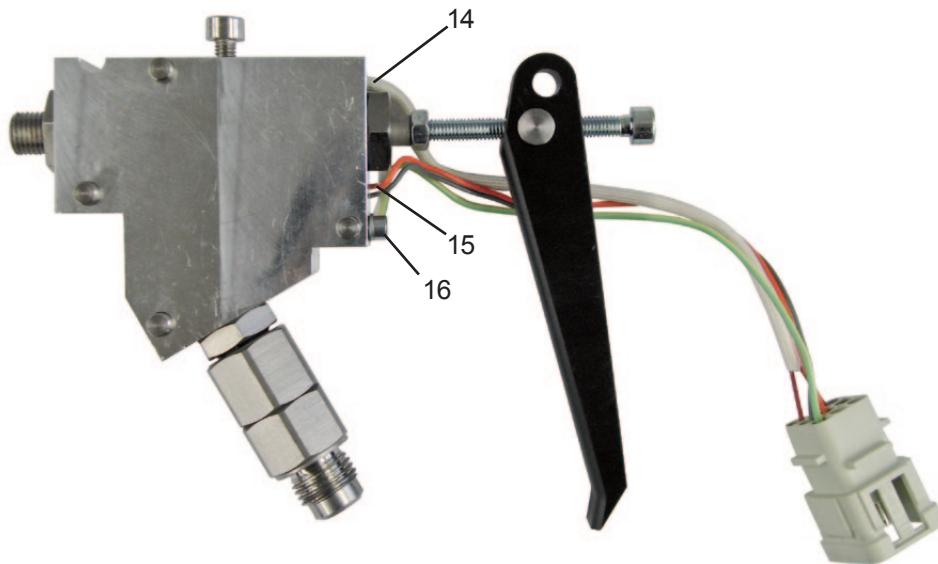
- ▶ Release pressure of the system
- ▶ Disconnect the electrical connection of hose and HP07
- ▶ Disconnect the hydraulic connection of hose and HP07
- ▶ Loosen all hexagon socket screws and remove HP07 housing



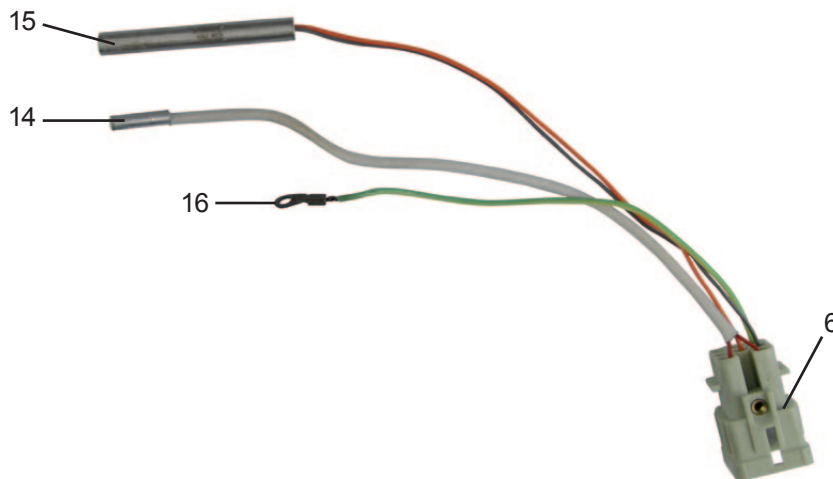
- ▶ Disconnect electric and cord set (Pos.6)
- ▶ Remove the entire service block with trigger and electric out of the housing (Pos.1, 3, 4)
- ▶ The safety lever has to be put into secured position so that the cable channel is laid open and the service block with trigger and electric can be taken out of the housing.



- ▶ Loosen the earthing screw M3X6 using a 2.5 mm hexagon socket screw key (Pos.16)
- ▶ Pull the sensor and the heating out of the service block (Pos.14, 15)



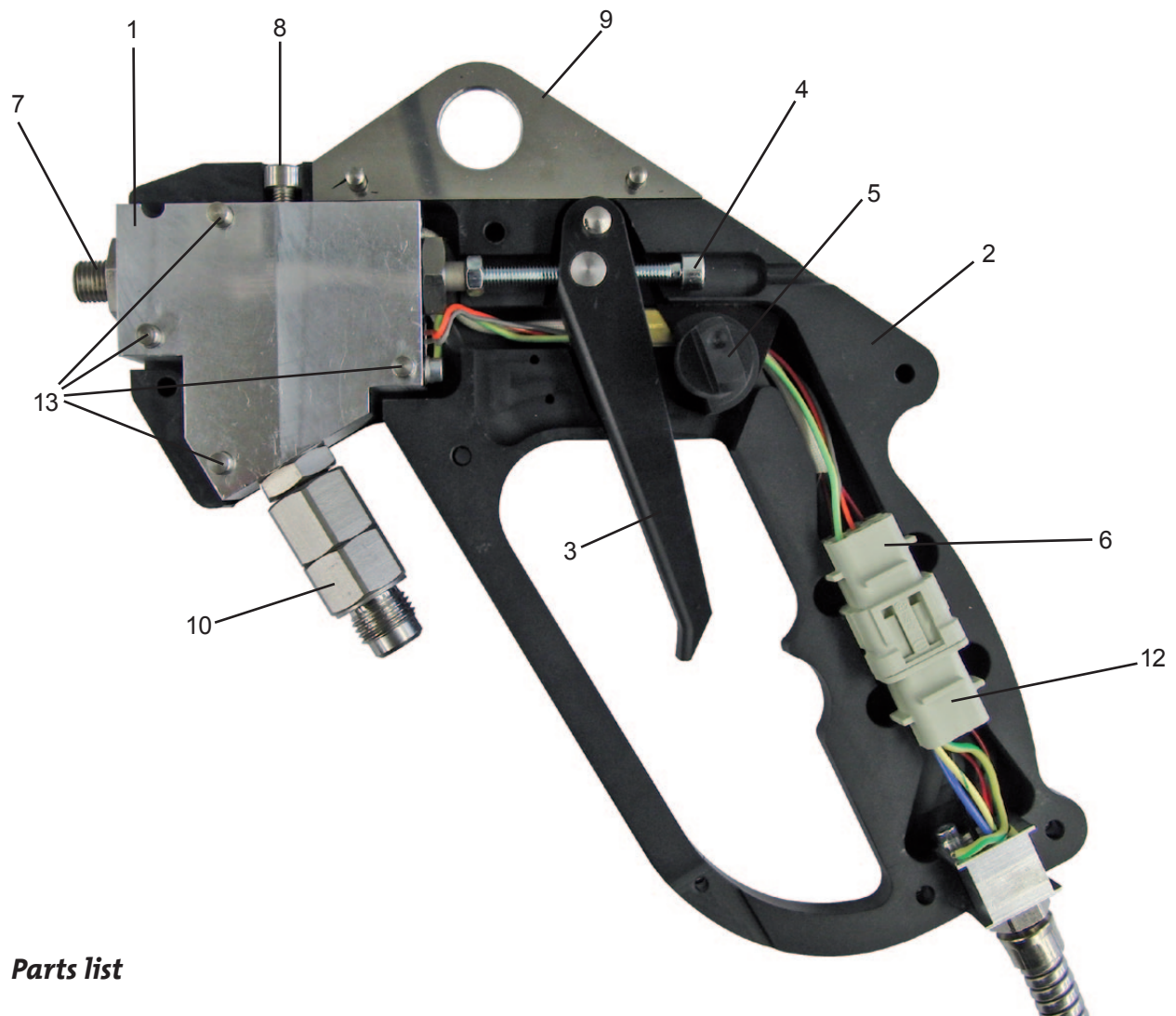
- ▶ Exchange the electronic set for a new one and assemble the HP07 in opposite sequence.
- ▶ During installation please take care that the distance rolls (4 pieces per page) are placed in the service block and all cables are in the cable shaft so that no cables are squeezed in when assembling the HP07.



As the HP07 can be connected to different systems (PT100, NI120, NTC etc.) please learn from the appendix "circuit diagram" for which system your electronic set has to be prepared.

Electric set HP07 (UES/3000) consisting of	
Pos.6	Plug
not shown	Micro switch (optional for spraying application)
Pos.14	Temperature sensor
Pos.15	Heater cartridge
Pos.16	Earthing cable

Technical appendix



Parts list

Pos.	Description	Art.-No.
1	Service block	
2	Housing L-R	
3	Trigger	
4	Stroke adjusting screw	
5	Safety lever	
6	Electronic plug	
7	Module H300P	000174
	Module H300PNA (0.50 mm)	000181
	Module H300PSP	000180
8	Clamping screw	
9	Suspension	
10	Revolving glue nipple	000221
not shown	Micro switch (optional for spraying application)	Kit
12	Cord set P	000267
	Cord set P-EA (electrical)	000266
13	Distance pin	

Technical Data

Modular system for three types of manual hot melt application:

- Spot/bead - H300 P
- Needle seat - H300 P-NA
- Spraying application - H300 P-SP

The basis body of the gun is the same for all three types. The desired type of handgun is constructed by exchanging the module and adding extern components.

The storage takes place in construction groups so that the assembly can take place in short time.

Weight	1.15kg with cord set without hose
Measurement	220 x 210 x 38 mm
Voltage	230V AC, 50Hz
Power	150W
Start time	15 min to set temperature
Degree of protection	IP22
Housing	PA6.6GFK30 heat resistant and isolating
Temperature	200 °C long run, 230 °C short term
Work pressure	40 – 50 bar, short term max. 75 bar
Flowing through	without nozzle 0.45l/min at 1000mPas
Needle stroke	depending on the module 2.4 mm max. linear opening at the entire stroke
Heating	transmission of the heat at the entire length of the glue block, 2 sensor positions for differentiated heating characteristics
Sensor	Ni120 or Pt100, FeKo, NTC Dm4-0.05x15 mm cord set length 500 mm compatible to UES, Nordson®, Meltex®, Robatech®

The standard installation of each handgun includes the electrical release and opening and closing appliance.

Exchange of the module should only take place when the trigger is pulled to the end.

The adjustment of the release depends on the pressure. 0,5mm clearance between housing and trigger (see drawing 6.3). In this position the switch must not yet be switched.

Through connectors the cord set can be exchanged, e.g. connection of the UES hose for AD31.

The length of the standard needle seat is 40 mm- reaching from glue block to nozzle tip.

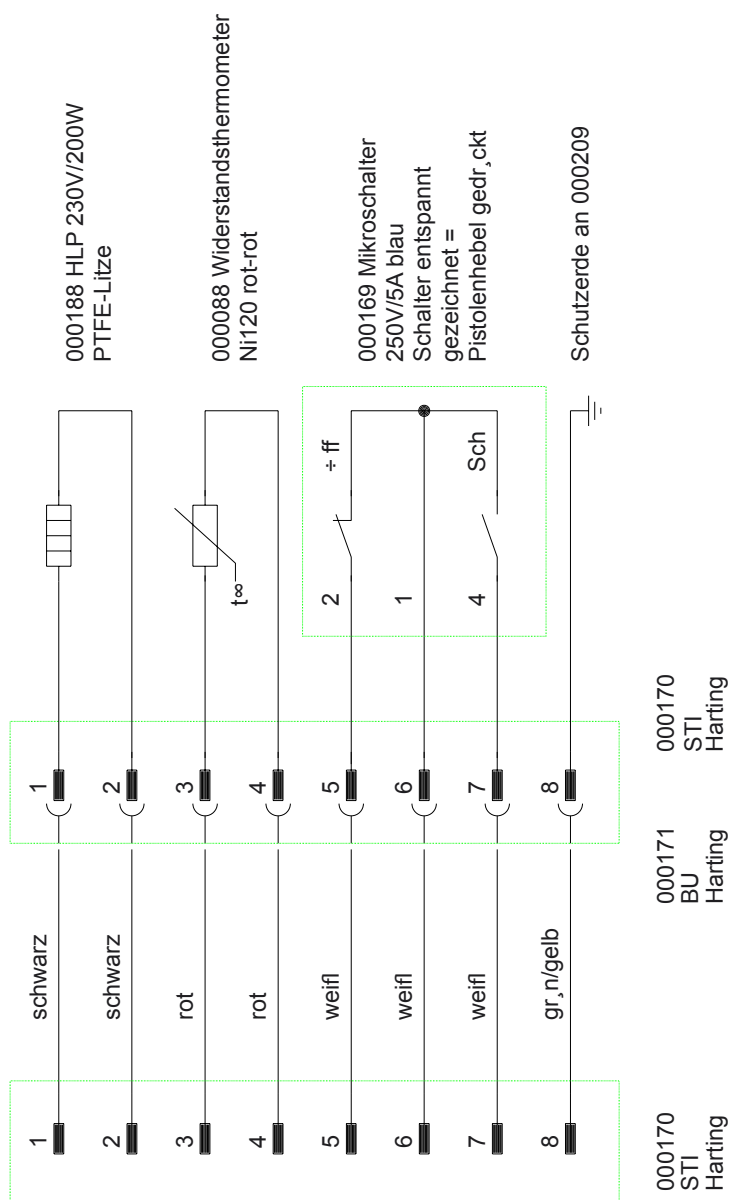
The STOP position of the safety lever avoids an unintentional release of the trigger.

Spraying application

For spraying application you need additionally compressed air at your handgun.

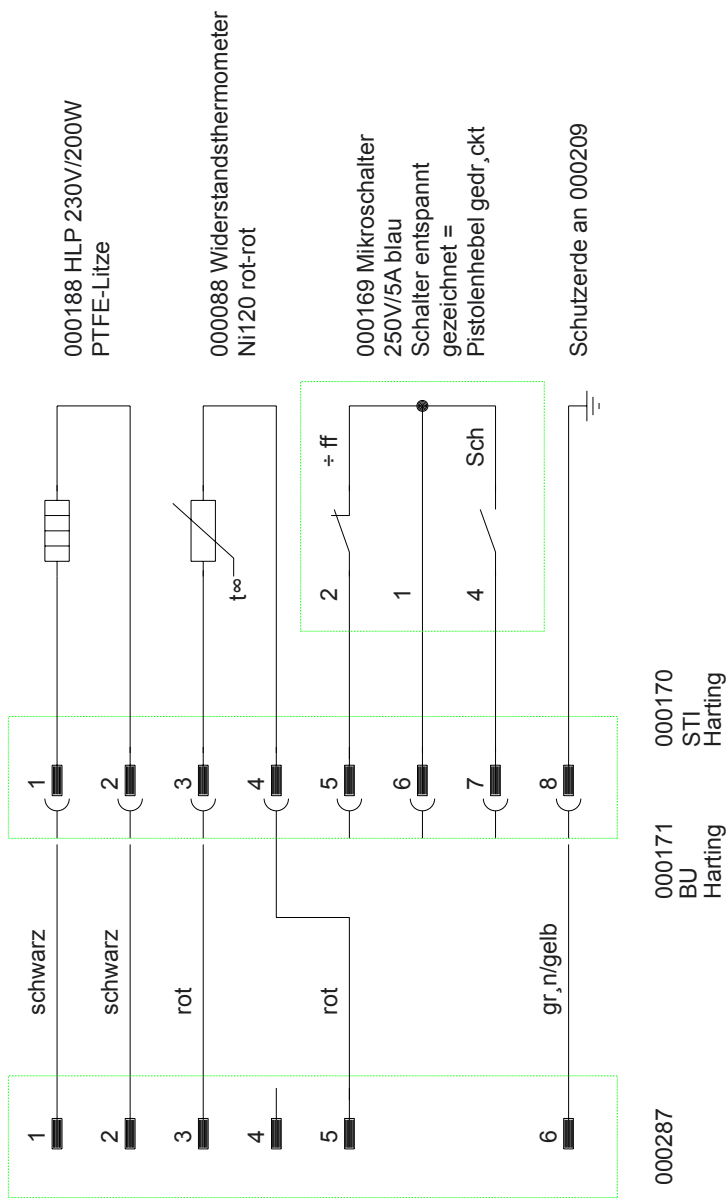
- e.g. usage hose with integrated spray air tube (e.g. 2,4m hose; UES part no. 100292)
- handy appurtenance: Spray air control HP 07 – not operated grip shift switched off the air for the gun (inline micro switch) (UES article: 100493)

Circuit diagram



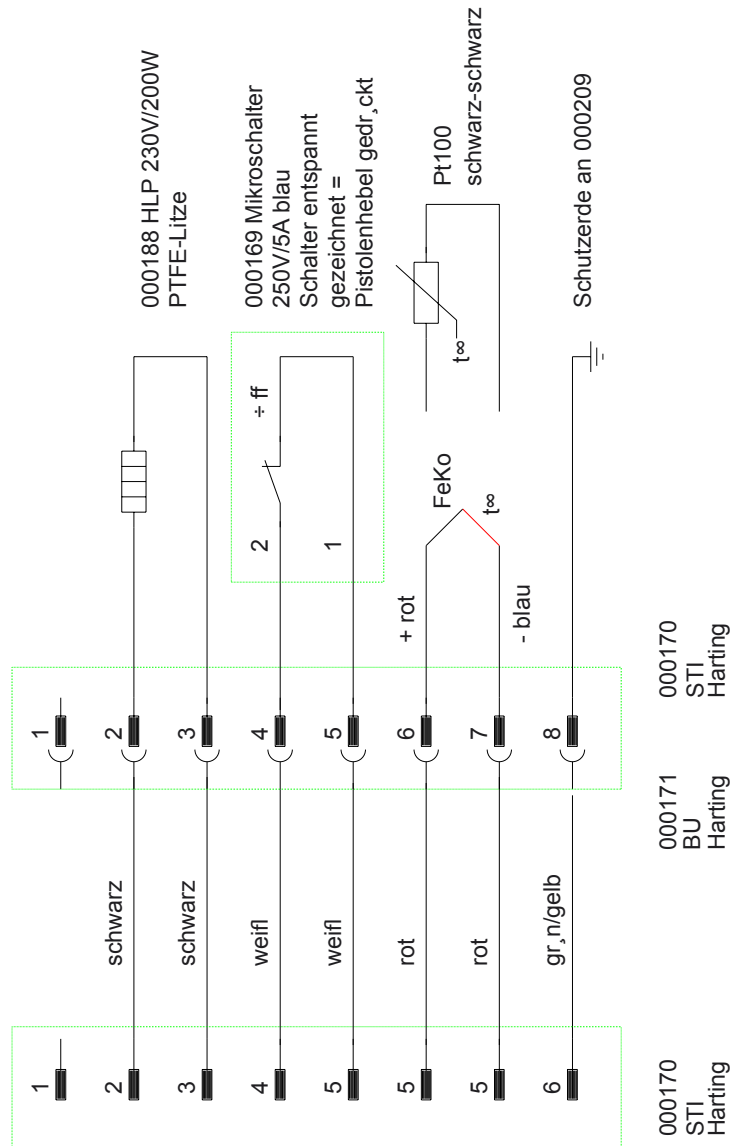
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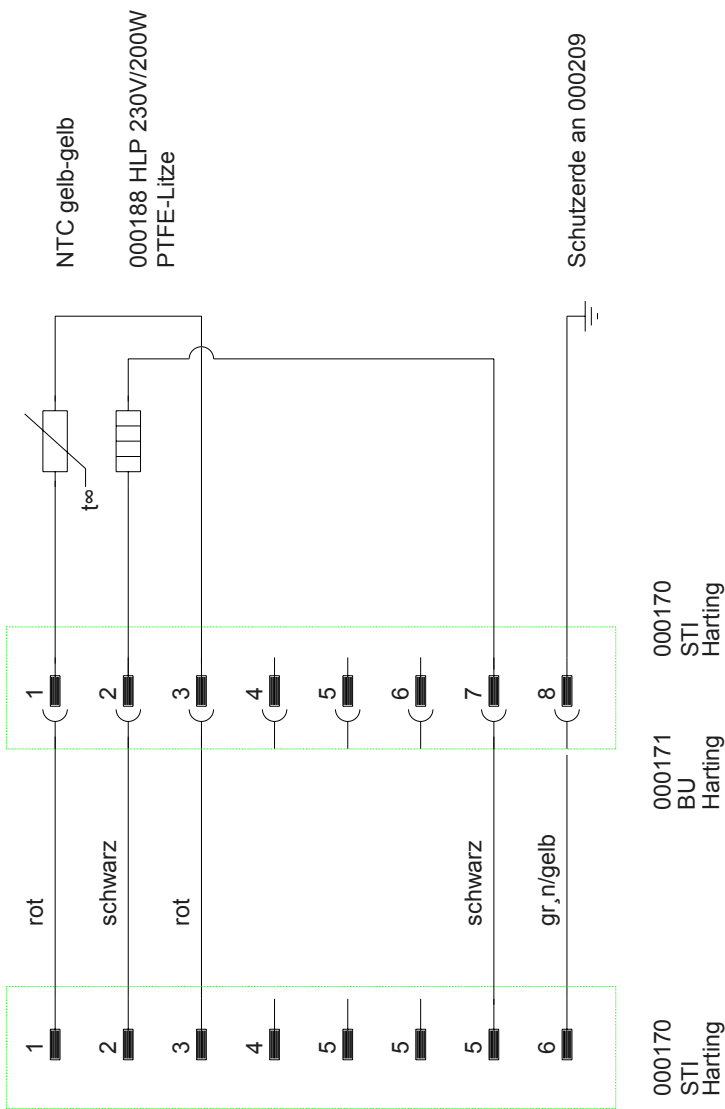
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			Datum	01.12.1998	Zeichnung unterliegt dem Urheberrecht ! Verfälschung und Weitergabe an Dritte ist strengstens untersagt !	

