

Hot Pressing Device PQ-58



The PQ-58 is a hot pressing device for joining of Habasit machine- and spindle tapes up to a width of 50 mm and a thickness of 3.6 mm with the Quickmelt or Flexproof method. With an additional cooling tong and a guide rail in the width required for your application you have a joining system that enables you to exchange a tape in minutes.

The width of the press plate is increased somewhat compared to the PQ-57. This enables you to make 35 mm long Flexproof joints also in situations where space is tight and visibility poor.

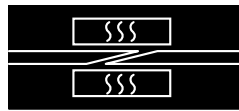
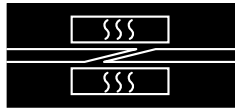


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1. General information

1.1 Application

The hot-pressing device PQ-58 was specifically designed for rapid and safe hot-pressing of Habasit machine tapes made of Hamid and spindle tape W-8 / W-16 with the Quickmelt and Flexproof systems. Tapes can be up to 50 mm / 2 in. wide and 3.6 mm / 0.14 in. thick.

The PQ-58 hot-pressing device was developed solely for the purposes described in the operating instructions. Improper use, or use for other reasons than those described in the instructions, is not permissible. Habasit accepts no liability for the consequences of improper application.

The hot-pressing device PQ-58 is manufactured according to recognized engineering principles and state-of-the-art technology, and complies with applicable regulations.

These operating instructions imply that all assembly, maintenance, and repair work, as well as operation of the press, be carried out by skilled personnel or monitored by responsible specialists.

For reasons of scope, these instructions cannot cover all possible aspects of operation, maintenance, or repair. The indications given herein refer to the use of the machines according to their designated purpose by skilled personnel.

In case of doubt or if further detailed information is required, please consult the manufacturer (Chapter 1.4)

1.2 Important safety terms

In these operating instructions, you will find the terms WARNING, CAUTION, and INDICATION. They signal dangers or special information to be borne in mind.

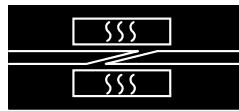
WARNING If disregarded, there is a danger of severe injury, and/or severe material damage.

CAUTION If disregarded, there is a danger of injury, and/or material damage may be caused.

INDICATION Technical information is emphasized if it is important and not readily apparent, even for skilled personnel.

Please observe all indications for assembling, operating, and maintaining the machines, as well as all technical data! This will prevent possible trouble and/or damage to people or materials.

Skilled personnel refer to persons authorized to perform the required work. These people have been sufficiently trained and introduced to their field of activity so that they are able to recognize and prevent dangers. They are aware of the pertinent provisions and safety regulations.



1.3 Scope of supply

Qty.	Item
1	PQ-58 hot-pressing device packed in a carton box, with
1	Operating instructions

1.3.1 Available accessories

Also refer to chapter 9.

- Guide rails of fixed width, inclusive of covering plate:

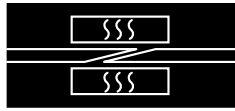
6 mm	(672006)	3/8"	(672113)
8 mm	(672008)		
10 mm	(672010)	1/2"	(672101)
11 mm	(672011)	5/8"	(672114)
12 mm	(672012)		
13 mm	(672013)		
14 mm	(672014)	3/4"	(672102)
15 mm	(672015)	7/8"	(672109)
16 mm	(672016)	1"	(672103)
18 mm	(672018)	1 1/8"	(672110)
20 mm	(672020)	1 1/4"	(672104)
22 mm	(672022)	1 3/8"	(672105)
25 mm	(672025)	1 1/2"	(672106)
30 mm	(672030)	1 5/8"	(672111)
35 mm	(672035)	1 3/4 "	(672107)
40 mm	(672040)	1 7/8 "	(672112)
50 mm	(672050)	2"	(672108)

and 2 clamps for each guide rail

- Guide rail of adjustable width, from 25 to 50 mm, including 1 covering plate each for 25, 30, 40, 45 and 50 mm tape width and 2 metal clamps (672201), or from 1/2" to 2", including 1 covering plate each for the tape widths 1/2", 3/4", 1", 1 1/4", 1 1/2", 1 3/4" and 2", and 2 metal clamps (672202).

WARNING	Use only Habasit guide rails. Particularly the use of metallic guide rails is not admissible, it may destroy the hot-pressing device.
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- Scissors for cutting to length AQ-40 (690020)
- Scissors for cutting of Flexproof fingers AF-102 (690060)
- Punching device for Flexproof fingers AF-30 (690280)
- Cooling tongs CD-60 (690030)
- Temperature measuring device (N-28714 or N-28715) for checking the pressing temperature



1.4 Ordering of accessories/spare parts

Spare parts and accessories can be ordered directly from the manufacturer.

Address:

Habasit Italiana S.p.A.
Via A. Meucci 8, Zona Industriale
I-31029 Vittorio Veneto/TV
Tel. ++39 438 91 13
Fax ++39 438 91 2374

Please accurately describe the parts required.

State the numbers according to Section 8.3, Drawings – Assembly of press and, if applicable, the required electric voltage for connection to the mains.

WARNING

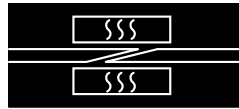
The use of parts by other manufacturers not meeting Habasit specifications is not admissible.
Habasit declines all responsibility for the consequences if non-Habasit parts are used.

1.5 Warranty

All tools undergo a strict final inspection. On the assumption of correct handling, they are warranted against material and manufacturing defects for 1 year.

1.6 Technical advice

Our specialists will be pleased to advise you. For technical questions concerning function and condition of the hot-pressing device, please contact the manufacturer (see Chapter 1.4 for the address).



2. Mode of operation

The hot-pressing device PQ-58 functions according to the pressing-tongs principle: To open the heating plates pressed together by springs, apply substantial pressure to both handles.

The hot-pressing device PQ-58 operates at a pressing temperature of 190 °C / 374 °F, preset at the factory. The temperature of the heating plates is regulated by an electronic circuit. Each heating plate comes with an exchangeable electric heat cartridge, the lower heating plate also with a temperature sensor, the upper heating plate with a thermofuse. The function of the hot-pressing device is indicated with a light indicator in the handle.

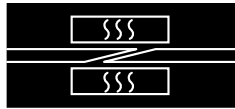
3. Initial start-up

- Check to make sure that the voltage indicated on the rating plate (5) conforms to the electrical connection voltage.
- Check to make sure that the metal heating plates (4) are clean.
- Check temperature of the heating plate. The temperature is preset at the factory at 190 °C / 374 °F. If a lower temperature is required, the temperature regulator can be adjusted accordingly (see 5.2, Measuring of the plate temperature).

INDICATION	Safe operation is assured if the marked handle (1) with the light indicator (2) is facing up (cable connection on the upper handle).
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- For stationary operation, place hot-pressing device PQ-58 on a solid and heat-resistant support.

WARNING	Do not hang up hot-pressing device by the electrical connecting cable! During work breaks, while hot-pressing device is connected, put it on a flat surface with the marked side facing up.
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4. Hot-pressing of the belt/tape

Procedure:

For Hamid machine tapes → manual 32103 and individual product datasheets.

For spindle tape W-8, W-16 → manuals 32110, 32111 and individual product datasheets.

- Plug in electrical connecting cable and preheat hot-pressing device.
- Preheating will take approx. 5 minutes. The light indicator (2) will change from a continuous light during heating up to intermittent light as soon as the adjusted temperature is reached.

WARNING	Do not touch the hot-pressing zone (3). Keep device away from water and meltable substances.
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- Open hot-pressing device by squeezing the handles (6) and place guide rail with inserted, prepared belt/tape ends into the hot-pressing device, as described in the corresponding manual (also refer to chapter 9).
- Close hot-pressing device.
- After the prescribed pressing time, remove guide rail and let it cool under pressure in a suitable device → chapter 9.

WARNING	After use, disconnect the hot-pressing device from the power supply and allow it to cool completely before storing it.
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5. Service

5.1 Maintenance

- ❑ Keep the hot-pressing device clean at all times. Clean the heating plates (4) regularly and remove all material residues.

WARNING

For cleaning with a cloth moistened with water or solvent, the press must be disconnected from the power supply.
Do not reconnect to the power supply until the press is completely dry.

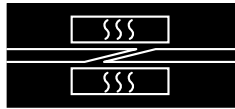
- ❑ Periodically inspect the power supply cable and connector plug for defects (insulation damage, etc.) and rectify or replace with the correct type where necessary.

5.2 Measuring of the plate temperature

Check the operating temperature of the hot-pressing device once a month.

- ❑ Carry out this check in an interior room in a draft-free environment with an ambient temperature of between 18 °C / 64 °F and 25 °C / 77 °F
- ❑ Clamp sensor of temperature gauge between the heating plates (4) and heat for 5 minutes. Both plates are thus measured jointly.
- ❑ Heat up press for at least 5 minutes.
- ❑ The operating temperature has been reached when the electronic control switches the heating on and off in short intervals; the light indicator (2) will blink.
- ❑ The temperature gauge ought to indicate 190°C ± 3°C / 374°F ± 5,4°F
- ❑ If this is not the case, the temperature regulator has to be adjusted. See 5.3, Adjusting of the thermostat.





5.3 Adjusting of the thermostat

The maximum plate temperature of 190 °C / 374 °F, preset at the factory, must not be exceeded by more than ± 3 °C / ± 5.4 °F from 190 °C / 374 °F. It can therefore only be adjusted with a precision temperature measuring device (see 1.3.1, Available accessories).

WARNING	All work on the hot-pressing device involving electrical parts has to be carried out by the respective specialists only. Observe your local laws about required training of such personnel.
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If the measured temperature deviates above the maximum value of 193°C / 379.4°F or below 187°C / 368.6°F, the heating control is to be adjusted as follows:

- Remove cover screw (8) from adjustment potentiometer (7)
- Move adjustment potentiometer of the heating control (7), using an insulated screwdriver, turning it ever so slightly:
 - clockwise: temperature will rise,
 - counterclockwise: temperature will drop.
- After 5 minutes measure plate temperature to check as described above.
- Proceed carefully and adjust gradually. Observe temperature change.
- Re-cover adjustment potentiometer (7) with cover screw (8)

CAUTION	Make sure not to let the temperature rise above 195°C / 383°F during adjustment. Excessive temperatures may damage the hot-pressing device or blow the thermofuse.
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5.4 Replacement of the power cord

Check power cord periodically. In case of damage replace with the same type (H05-RNF). To make sure only skilled staff will do this repair, special tools are required for this operation.

WARNING	All work on the hot-pressing device involving electrical parts has to be carried out by the respective specialists only. Observe your local laws about required training of such personnel.
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6. Illustrations

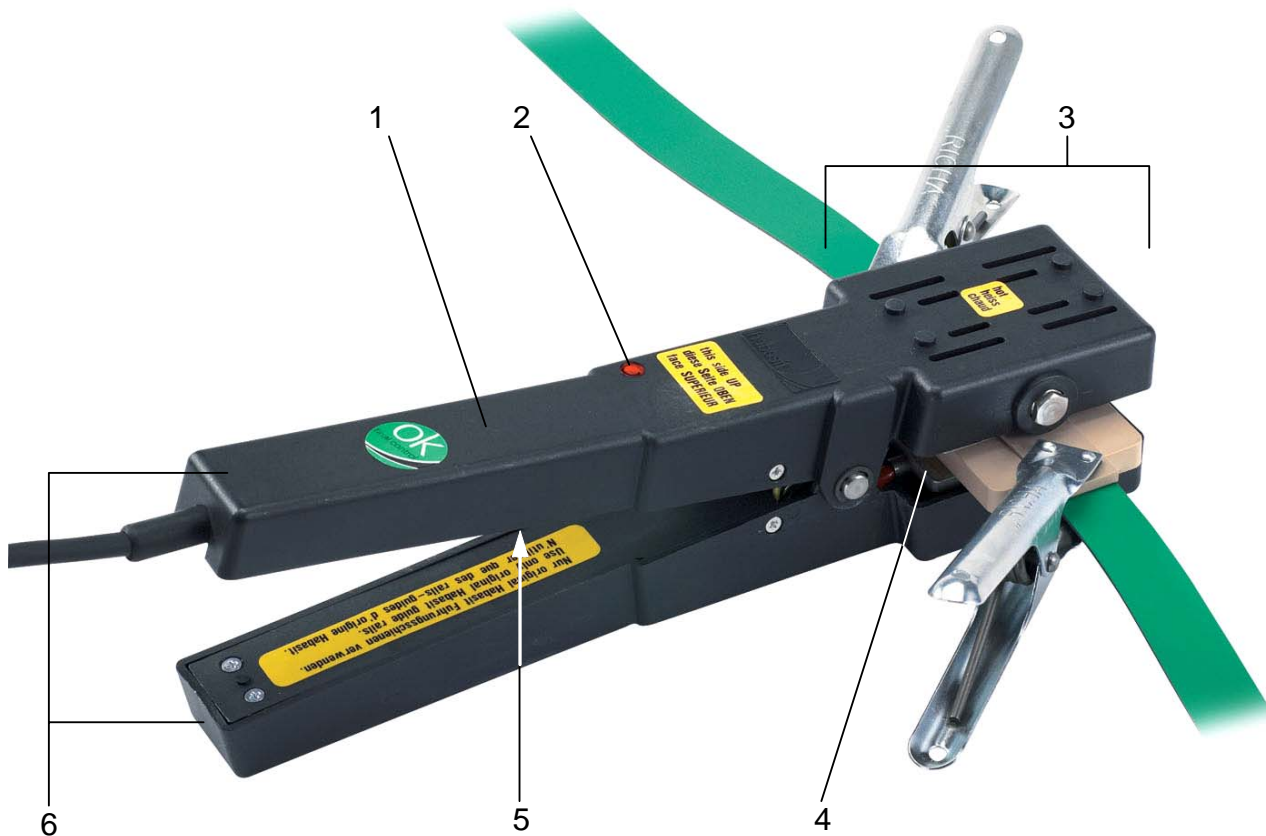


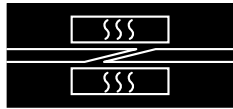
Illustration 1



Illustration 2

Legend illustration 1 and 2

- 1 Top side of the hot-pressing device
- 2 Light indicator
- 3 Hot-pressing zone
- 4 Pivoting metal heating plates
- 5 Rating plate
- 6 Heat insulated handles
- 7 Adjustment potentiometer of the heating controller
- 8 Cover screw of adjustment potentiometer



7. Technical data

Belt / tape width max. [mm] [<i>in</i>]	50		2.0
Belt / tape thickness max. [mm] [<i>in</i>]	3.6		0.14
Finger length for Flexproof, max. [mm] [<i>in</i>]	35		1.4
Min. endless belt/tape length [mm] [<i>in.</i>]	250		10
Max. deviation of plate temperature [°C] [°F]	± 3		± 5.4
Heating up time to 190 °C / 374 °F [min.]	5		
Power consumption [W]	2 x 225		
Voltage [V~]	230 (PQ-58/8)	or	120 (PQ-58/6)
Dimensions (L x W x H) [mm] [<i>in</i>]	280 x 70x 120		11 x 2.8 x 4.7
Net weight [kg] [<i>lbs</i>]	0.83		1.85



8. Drawings

8.1 Wiring diagram PQ-58/8 (230 V)

PQ-58/8 230V: wiring diagram

RS = Upper heater

RI = Lower heater

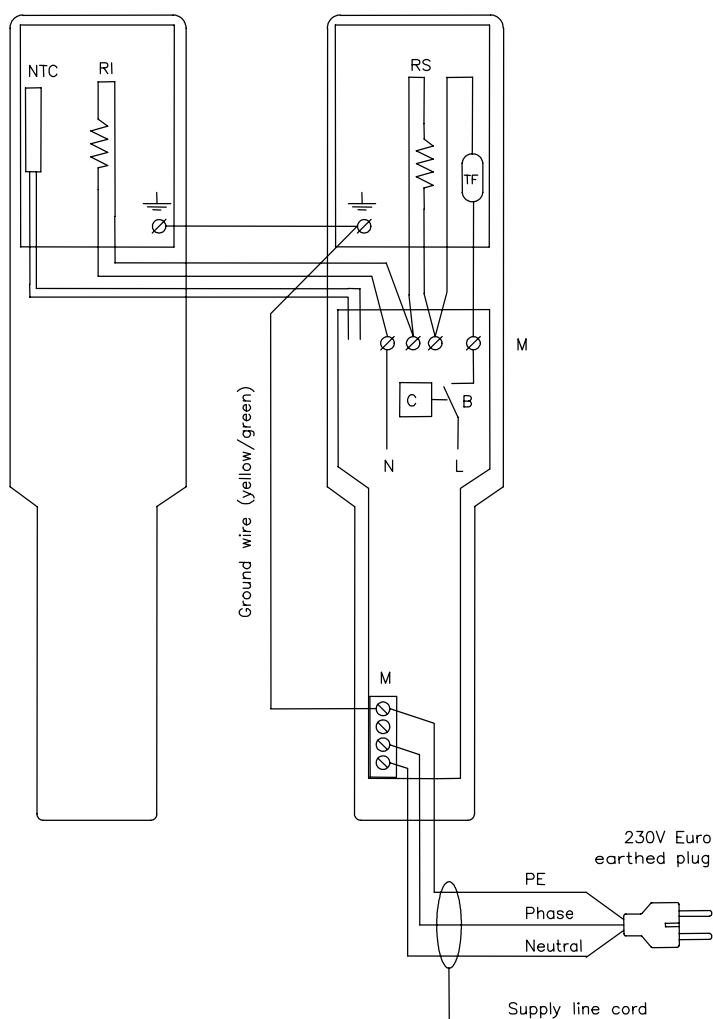
TF = Thermofuse

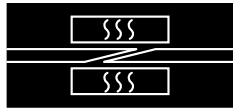
NTC = NTC temperature sensor

C = Electronic control

M = 4 poles clamp

B = Relay (NO contact)

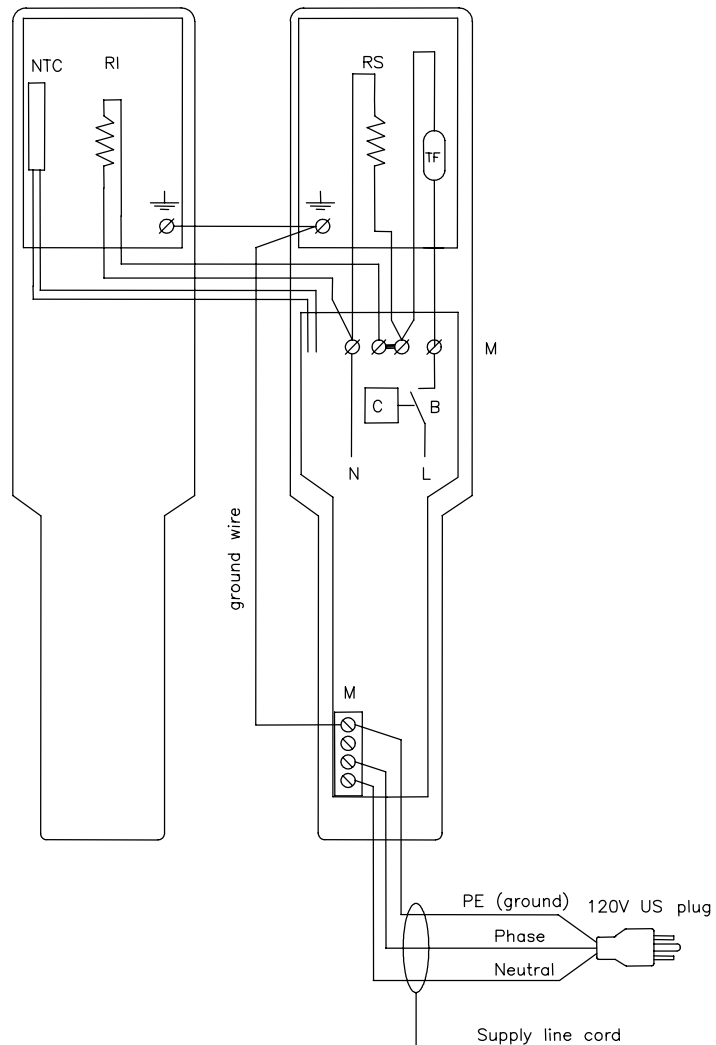


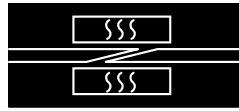


8.2 Wiring diagram PQ-58/6 (120 V)

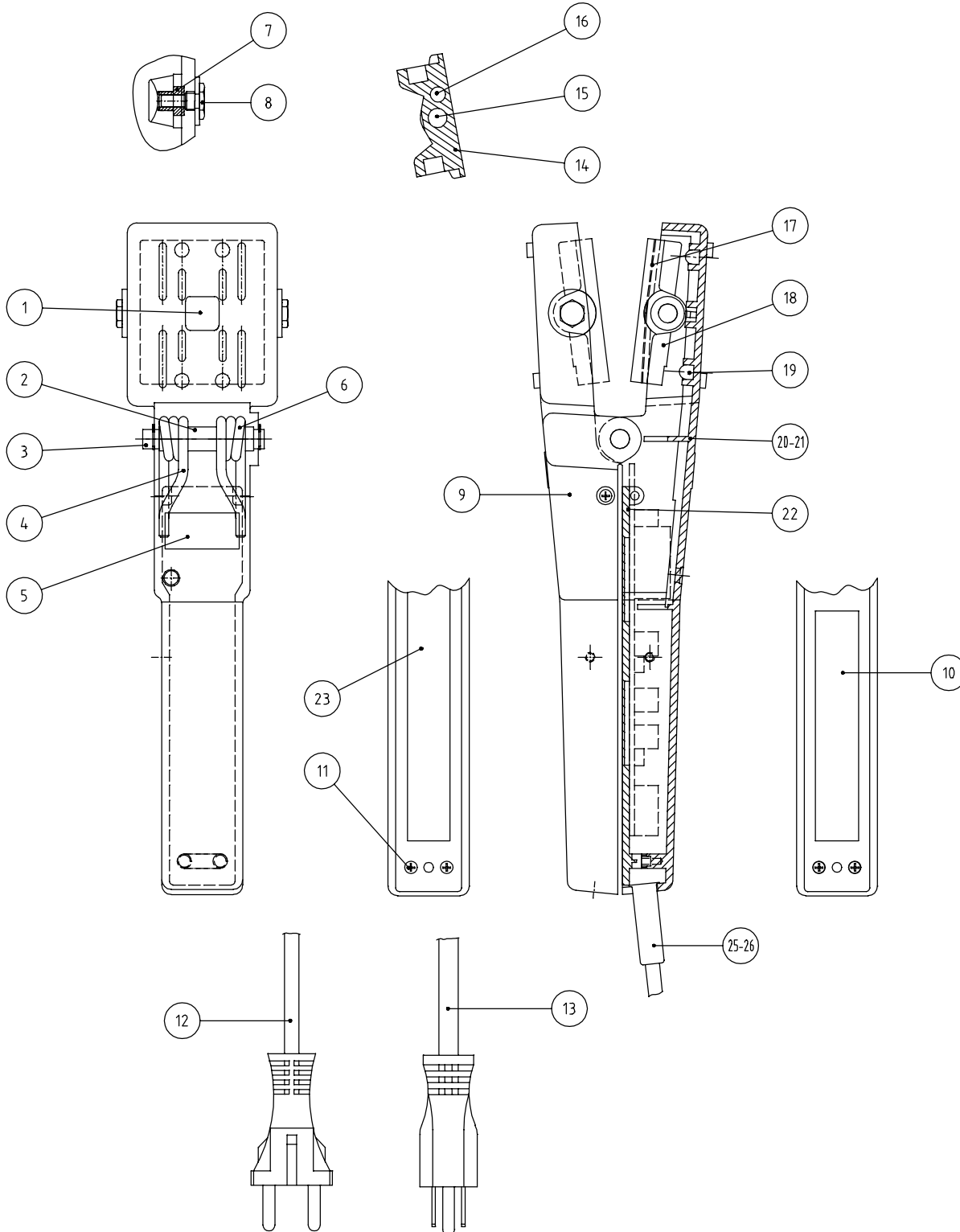
PQ-58/6 120V: wiring diagram

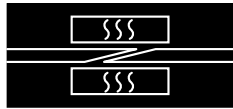
- RS = Upper heater
- RI = Lower heater
- TF = Thermofuse on upper plate
- NTC = NTC sensor on lower plate
- C = Electronic control
- M = 4 poles clamp
- B = Relay (NO contact)





8.3 Assembly of press





9. Required accessories

9.1 Guide rails, clamps

- These accessories are necessary for producing perfect fusion joints. The width and numbers of guide rails to be used will depend on the width of the tape used and the requirements of the machine/installation.
- Once the tape ends have been inserted into the corresponding guide rail of fixed width → ill. (3), or adjustable width → ill. (4) and fixed in place with the covering plate, the two clamps are applied at an angle so as to prevent the tape from shifting during the hot-pressing process.
- Place the guide rail in the precise center of the open hot-pressing device and close → ill. (5). This assures uniform distribution of the heat to guide rail and joining area.

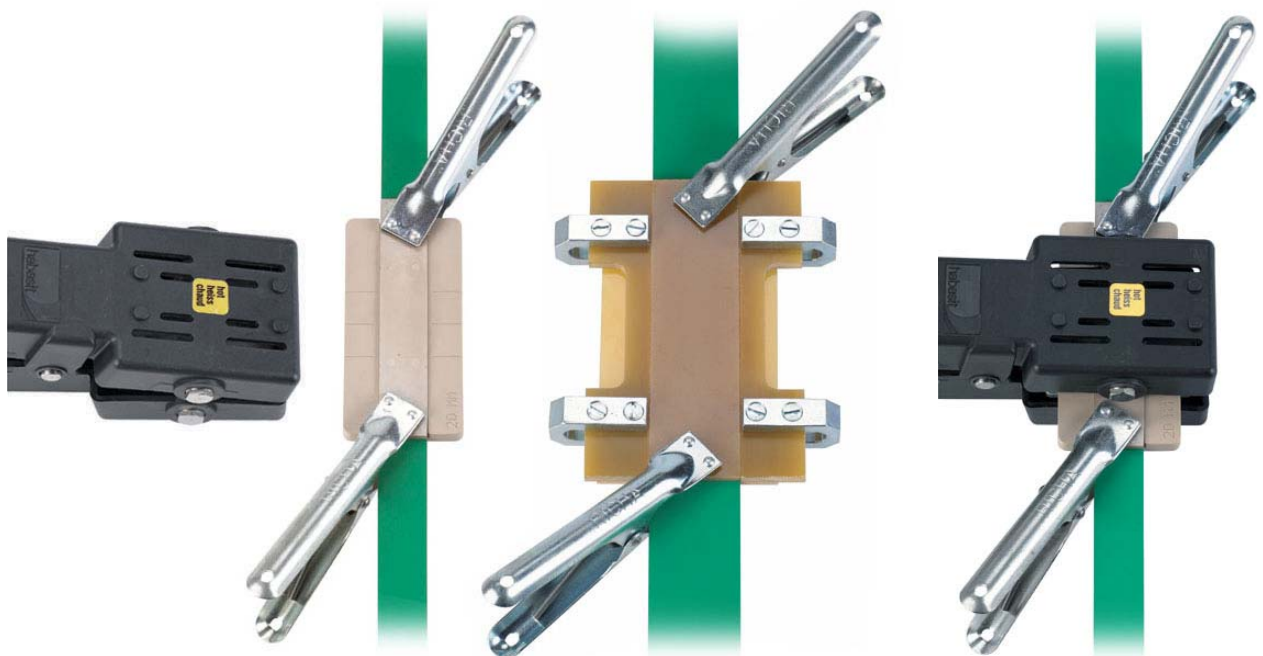
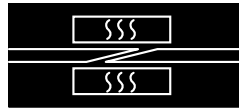


Illustration 3

Illustration 4

Illustration 5



9.2 Cooling tongs CD-60, CD-54

- ❑ The cooling tongs CD-60 and CD-54 are designed for the rapid cooling of the joint, still within the guide rail → ill. (6). After the specified pressing time has elapsed, the cooling tongs must be clamped onto the guide rail as quickly as possible.
- ❑ If the cooling tongs are used repeatedly at short intervals, they get warm. They may be cooled by dipping them in cold water.



Illustration 6

9.3 Preparing devices

9.3.1 Scissors for cutting to length AQ-40

The scissors for cutting to length AQ-40 permit clean cutting of the tapes at a 60° angle. Tapes up to 40 mm / 1.57 in. wide and 3 mm / 0.12 in. thick can be cut to length with these scissors → ill. (7).

9.3.2 Flexproof cutter AF-102

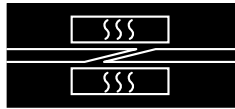
The Flexproof-Cutter AF-102 is a device for preparing (finger cutting) Habasit machine tapes up to a width of 100 mm/4 in. and a thickness of 2 mm/0.08 in. for Flexproof (finger) joints. It is suitable for the standard Habasit 8 x 30 mm finger geometry. The tape is positioned and securely clamped on an aluminum support. Fingers are then cut manually. The cutter is precisely positioned on the support with a pin matching a row of precisely cut indexing grooves; the angle is given by a guiding block fixed to the cutter. → ill. (8).



Illustration 7



Illustration 8



9.3.3 Flexproof die-cutting device AF-30

The AF-30 is a device for preparing (die-cutting) of Habasit belts and tapes up to width of 30 mm / 1.2 in. and a thickness of 3 mm / 0.12 in. for Flexproof (finger) joints. It is suitable for the standard Habasit finger geometries with a pitch of 6 or 8 x 30 mm (different cutting heads). Die-cutting is done in just two manual strokes, resulting in the most precise finger cut and therefore optimum joint strength.

The AF-30 lends itself especially well to low to high volume production of spindle and machine tapes off pre cut coils. → ill. (9).

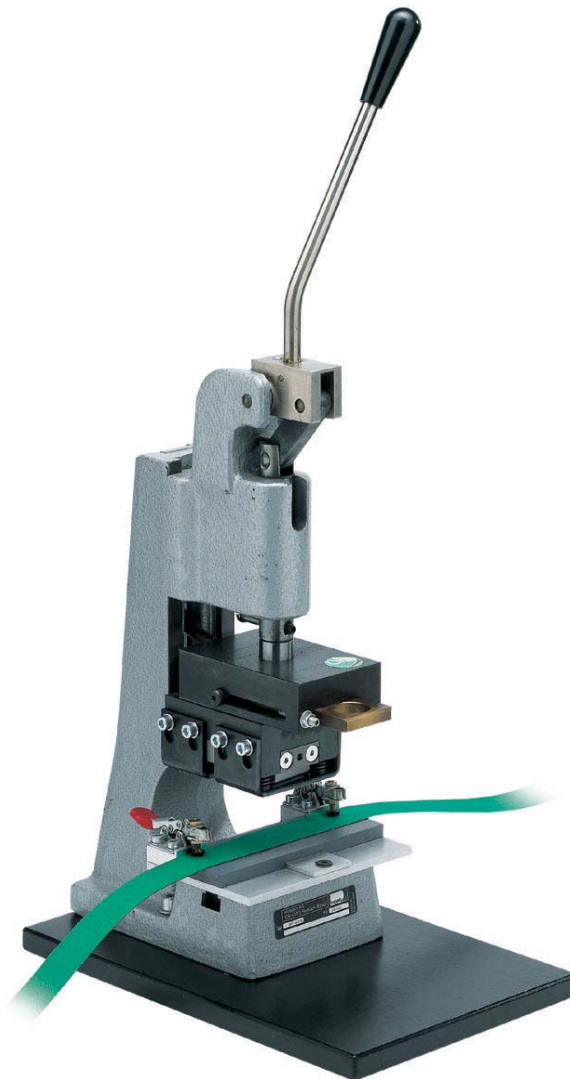
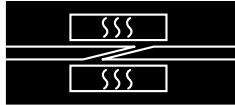


Illustration 9



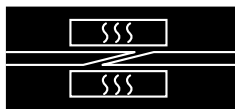
Checklist preventive maintenance Hot-pressing device PQ-58



Responsible persons:
A: Machine Operator
B: Maintenance Technician

Work to be carried out (see operating instructions No. 36007 for further information and reference numbers)	Daily	Performance periodically (monthly)		Remarks	Spares number Evaluation criterion
		1	6		
1. Cleaning					
1.1 Clean the press after use, remove residual deposits	A				
2. Inspect the connector cable					
2.1 Examine the cable and connector plug for defects		B			damaged insulation, defective couplings
3. Measurement of the heater plate temperature					
3.1 Proceed as detailed in operating instructions 36007, Section 5.2		B			

Remarks and notes:



Machine type:

Machine no.:

Date of first placing in operation:

Actions to be performed – see checklist (daily work not recorded)	Next	Performed		Next	Performed		Next	Performed		Next	Performed	
	Check	Initials	Date	Check	Initials	Date	Check	Initials	Date	Check	Initials	Date
2.1 Inspect the cable for damage												
3.1 Measure the heater plate temperature												

Observations, repairs:



Product liability, application considerations

If the proper selection and application of Habasit products are not recommended by an authorized Habasit sales specialist, the selection and application of Habasit products, including the related area of product safety, are the responsibility of the customer.

All indications / information are recommendations and believed to be reliable, but no representations, guarantees, or warranties of any kind are made as to their accuracy or suitability for particular applications. The data provided herein are based on laboratory work with small-scale test equipment, running at standard conditions, and do not necessarily match product performance in industrial use. New knowledge and experiences can lead to modifications and changes within a short time without prior notice.

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