



## **HENKELMAN DT 60 & 100**

# **GEBRUIKSAANWIJZING INSTRUCTION MANUAL BEDIENUNGSANLEITUNG MODE D'EMPLOI**

Nederlands	<input checked="" type="checkbox"/>
English	<input type="checkbox"/>
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### ***Setting of desired temperature***

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*This manual is written specifically for the HENKELMAN DT 60 Dip Tank. Henkelman B.V. can not be held responsible for any damage due to different specifications.*

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## **INTRODUCTION**

Original Henkelman is superior vacuum technique developed by professionals with 25 years of experience. Specialist know-how of the market and product guarantee that these durable machines satisfy the most stringent requirements for quality, operational safety and ease of service.

Using Original Henkelman vacuum machines will boost production efficiency and heighten the quality, storage life and presentation of the product.

## **MACHINE APPLICATION DIP TANK**

The dip tank is applied in food packaging processes. Food products are usually packed in shrink bags closed by a sealing process. The food packaging can also include a vacuum process for food preservation.

After the packaging process, food products are placed into the dip tank with warm water in which the shrink bag will smoothly shrink around the food product.

The main objectives for the dip tank shrinking process is to shrink the plastic flaps from the packaging material around the food product in order to enhance the product packaging presentation and to make the product handling and distribution process easier.

- ❑ Use de-chalked water, this to prevent unnecessary problems
- ❑ Make sure the water level is always above the heating elements
- ❑ Check monthly the proper function of the floating element.
- ❑ Please note: do not drain the water before it is cooled down. This to prevent accidents with hot water.
- ❑ If you want to clean the tank, after you drain the water, the heating element can still be hot.

## **INSTALLATION PROCEDURE**

- Turn the knob at the arm to release this. Pull it up to the desired height and turn it to the right so it is **not** above the tank. Then tighten the knob again.
- Remove the bolts on top of the sliding rod. Remove the platform.
- Place the isolation balls on the surface of the water. (option)
- Make sure the tap at the back of the machine is closed. Manually fill the tank with de-chalked water.
- Place the platform on the sliding rod and make sure the ring are fitted as well. Tighten the bolts.
- Open the operation box and set the desired temperature for the water; see instruction manual (Temperature control settings)

## **OPERATION PROCEDURE**

- Place packaged products on the platform
- Hold the start button for **1 second**  
(the platform with products will now automatically descend into the water and rise again. The whole process takes approximately 3 seconds)
- Take the products from the platform and this procedure can start again.

## **AFTER-OPERATION PROCEDURE**

- Lower the temperature on the regulator; see instruction manual page 4
- After the water is cool, open the tap.  
(the water is flowing out of the dip tank)

## **MAINTENANCE PROCEDURES**

- Check monthly the proper function of the floating element.
- Clean the tank and platform regularly. Make sure the heating elements are free of chalk but do not damage them. (use de-chalk fluid the clean them)
- Also clean the guiding beam in the tank, this will make sure the platform can freely move up and down.

## **TEMPERATURE CONTROL SETTINGS**

### ***Setting of desired temperature (Heating/Cooling mode)***

- Press the "SET" button twice shortly
- The adjusted temperature is displayed.
- The shown value can be changed with help of the "UP" or "DOWN" button.
- If no buttons are used within 10 seconds, the control unit automatically will switch back to the normal operating mode; the last entered set point temperature will stay in memory.
- If the correct temperature is reached, you have to push the " FNC" button twice shortly to store the new value into the memory of the temperature control unit.



## **TROUBLE SHOOTING - 1**

PROBLEM	CAUSE	SOLLUTION
The machine doesn't function. (no power light or display)	<ul style="list-style-type: none"> <li>• The plug is not connected.</li> <li>• The fuse(s) from the main power supply are burned</li> <li>• The automatic fuse in the electrical cabinet is switched off.</li> <li>• Main switch (S1) is switched off</li> </ul>	<ul style="list-style-type: none"> <li>• Check the Plug on a proper connection.</li> <li>• Replace the fuse(s)</li> <li>• Check the automatic fuse, and reset it.</li> <li>• Switch on the main switch on the backside of the machine</li> </ul>
The machine doesn't heat up The power light is on.	<ul style="list-style-type: none"> <li>• Insufficient level of water.</li> <li>• The adjusted value is to low</li> <li>• Temperature control is malfunction</li> </ul>	<ul style="list-style-type: none"> <li>• Ad water to the recommended level. Max. level :10 cm under the edge. Preference un-chalked water</li> <li>• Increase the temperature.</li> <li>• Check the temperature control</li> </ul>
Pump is running after completing the total cycle	<ul style="list-style-type: none"> <li>• Micro switch (S4) has a short cut.</li> <li>• Start button (S3) has a short cut</li> </ul>	<ul style="list-style-type: none"> <li>• Check the proper function and the correct position.</li> <li>• Check the proper function and the correct position.</li> </ul>
The platform is not going down.	<ul style="list-style-type: none"> <li>• Rotating direction of the pump is wrong</li> <li>• The start switch is disconnect or broken</li> <li>• Thermical overload pump is activated</li> </ul>	<ul style="list-style-type: none"> <li>• Interchange two phases</li> <li>• Check the start switch</li> <li>• Check the setting. The used thermical overload will activate automatically after cooling down.</li> </ul>
The platform is only going down when start button is pushed	<ul style="list-style-type: none"> <li>• Micro switch (S4) is malfunctioning</li> </ul>	<ul style="list-style-type: none"> <li>• Check the micro switch (S4)</li> </ul>
The platform is not rising.	<ul style="list-style-type: none"> <li>• The total weight of the products is to much.</li> <li>• Thermical overload is activated.</li> <li>• Time relay is malfunction</li> <li>• Insufficient amount of oil</li> </ul>	<ul style="list-style-type: none"> <li>• Switch of the machine. Let the water cool down or drain it. Take out the product and start again.</li> <li>• Check the setting.</li> <li>• Check the time relay.</li> <li>• Check the oil level</li> </ul>
Machine is heating up despite absent of water.	<ul style="list-style-type: none"> <li>• Floating device is stuck in top position.</li> </ul>	<ul style="list-style-type: none"> <li>• Check floating device. If necessary clean it.</li> </ul>

<p>The display shows "E1".</p>	<ul style="list-style-type: none"> <li>• Insufficient level of water.</li> <li>• Disconnection or malfunction of the connection cable, the temperature sensor (P1) / or floating device (S5).</li> </ul>	<ul style="list-style-type: none"> <li>• Ad water to the recommended level. Max. level :10 cm under the edge. Preference un-chalked water</li> <li>• Check the connections and the function of the mentioned elements.</li> </ul>
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## **TECHNINICAL SPECIFICATIONS**

	<b>DT 60</b>	<b>DT 100</b>
Machine type		
Dimensions machine(mm) (L x B x H)	770 x 740 x 1320 (1530)	880 x 940 x 1320 (1530)
Dimensions plateau (mm) (L x B)	600 x 500	800 x 600
Stroke length (mm)		260
Dip depth (mm)		200
Weight machine (Kg)	120	150
Volume (M <sup>3</sup> )	0.75	1.1
Dimensions incl. Packaging (mm) (L x B x H)	870 x 860 x x1330	970 x 1070 x 1410
Weight incl. Packaging (Kg)	170	210
Volume incl. Packaging (M <sup>3</sup> )	1.0	1.5
Working height (mm)		900
Water capacity (L)	95	150
Connection voltage		230 – 3 phase – ground 50/60 HZ 400 – 3 phase – neutral – ground 50/60 Hz
Max. voltage tolerance	+/- 10% on the described voltage on the type plate	
Electrical power consumption (Kw)	9	15
Amperage at 400 Volt	16 AT	25 AT
Recommended fuses main power supply	3 x 20 AT	3 x 35 AT
Amperage at 230 Volt	26 AT	40 AT
Recommended fuses main power supply	3 x 35 AT	3 x 50 AT
Movement of the plateau		Hydraulic
Capacity oil reservoir (L)		8
Recommended amount (L)		5
Recommended oil type		ISO VG 32
Max. load on plateau		35 Kg
Temperature control		Digital
Sound level		< 70 DB
Material housing/plateau		RVS
Amount of balls for isolation	200	320



## **LIABILITY**

1. We exclude all responsibility inasmuch it is not provided for by law.
2. Our liability will never exceed the total amount of the particular order.
3. Subject to the generally accepted rules of law concerning public order and good faith, we are not obliged to compensate for damages of any nature, direct or indirect, including operational damages to movable and immovable property or damage to any persons including the contracting party or any third party.
4. Under any circumstances we are not responsible for damage that is caused by or is the result of misuse of the equipment as delivered or through using said equipment for any other purpose than for what the contracting party has purchased it.

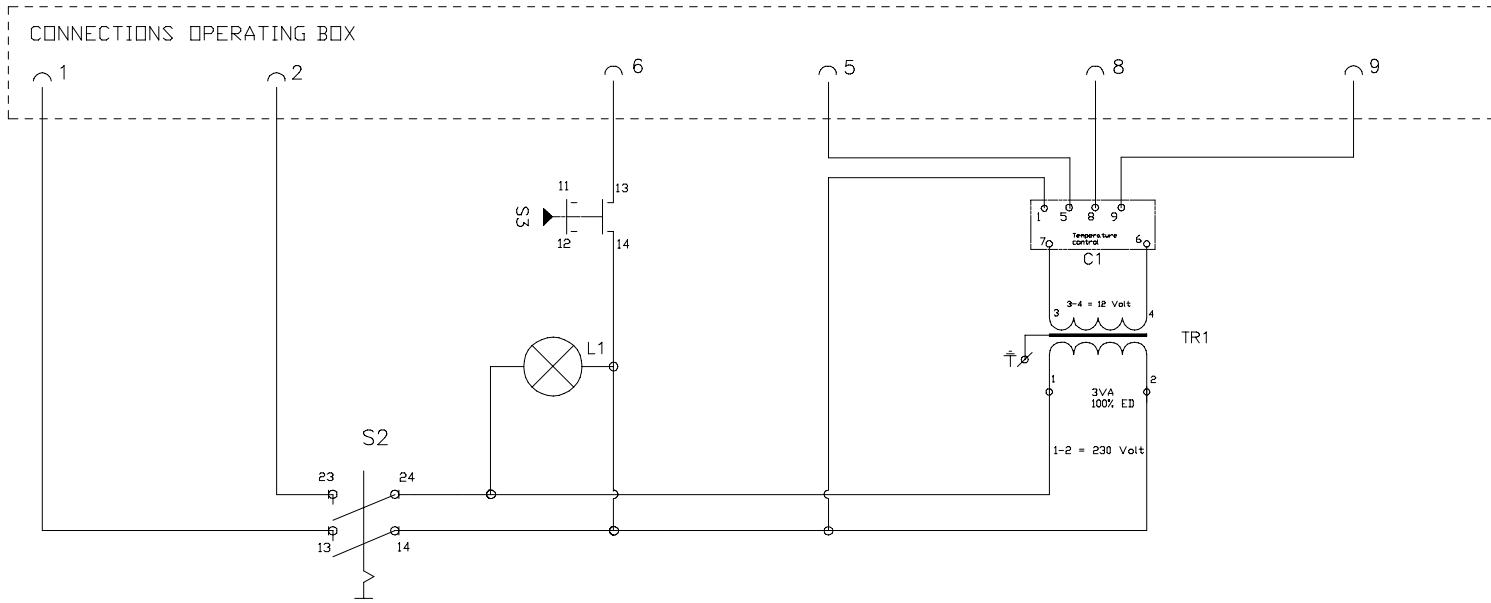
## **GUARANTEE**

1. In compliance with the under mentioned restrictions, we guarantee the equipment as delivered by us for a period of 6 months. This guarantee is limited to those malfunctions occurring due to factory defects, and does not include malfunctions that are caused by any form of wear or tear during use of the equipment or parts as delivered.
2. Any parts or attachments that we have received from any third party are not guaranteed for any period longer than the guarantee given us by said third party.
3. The guarantee is cancelled if the contracting party or any third party brought in by the contracting party, uses the equipment in an incompetent manner.
4. The guarantee is also cancelled if the contracting party or any third party brought in by the contracting party, makes any changes or adjustments to the equipment as delivered.
5. If it is necessary to replace any parts in accordance with this guarantee, than all parts replaced become our property.
6. If the contracting party fails to fulfill in whole or part of any obligations in compliance with this agreement for any period of time, then we are not bound to the guarantee as long as the situation continues.

The term of warranty and liability are a subdivision of the general sales conditions and are available on request.

**ELEKTRISCH SCHEMA BEDIENINGSKAST**  
**ELECTRICAL DIAGRAM CONTROL BOX**  
**(230 VOLT)**

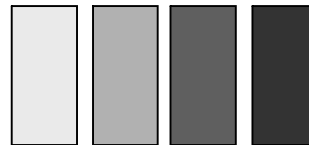
1	2	3	4	5	6
INPUT	INPUT	START_SIGNAL	SIGNAL_FOR_HEATING_CONTACTOR	SIGNAL_FROM_TEMP._SENSOR	SIGNAL_FROM_TEMP._SENSOR
230_VOLT	0_VOLT	START-BUTTON		TEMP._CONTROL_UNIT	
	MAIN_SWITCH	S3		C1	
	2,2	CONTROL_LIGHT		POWER_TRANSFORMER_TEMP.UNIT	
		L1		TR1	



H				Datum	Naam	Benaming:
G				31.11.01	MD	CONNECTION_DIAGRAM_CONTROL_BOX
F				Gecon.		DIP_TANK
E				Type:	DIPTANK	
D				Span.	230/12	V
C				Fasen	1	~
B				Freq.	50	Hz
A				Tolerantie op vrije maten		
REV	Revisie	Datum	Ini.	volgens DIN 7168 : m		
				Vervang. van:		Verval. voor:



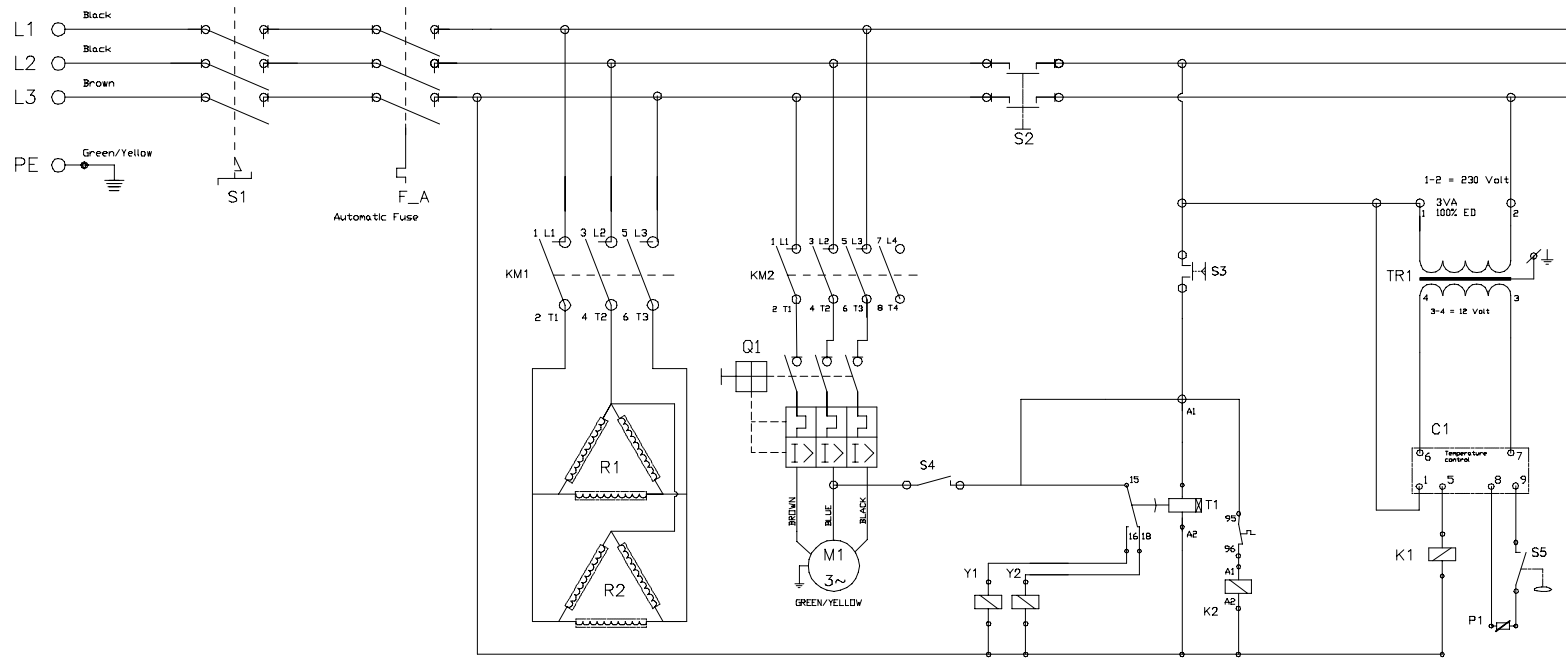
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Artikel nummer:  
DT-230-1



# ELEKTRISCH HOOFDSTROON SCHEMA ELECTRICAL DIAGRAM

(230 VOLT 3 Phase)

1	2	3	4	5	6	7	8
MAIN_SUPPLY	GENERAL_MAIN_SWITCH	AUTOMATIC_FUSE	CONTACTOR_HEATING	CONTACTOR_HYDRAULICPUMP	MAIN_SWITCH	START_SWITCH	POWER_TRANSF._TEMP.CONTROL
L1_L2_L3_PE	S1	F_A	KM1	KM2	S2	S3	TR1
			HEATINGELEMENTS	THERMIC_OVERLOAD	MICROSWITCH	TIME_RALAIS	TEMPERATURE_CONTROL
			R1+R2	Q1	S4	T1 (1_SEC)	C1
				HYDRAULICPUMP	HYDRALIC_VALVES	COIL_OF_CONTACTOR_KM1	TEMPERATURE_SENSOR
				M1	Y1+Y2	K1	P1
							FLOTING_DEVICE
							S5



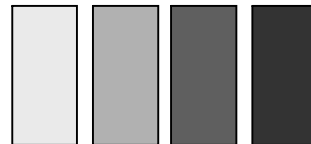
Powerconsumption Heating Elements	Specification for automatic fuses
DT 60 R1/R2 4,5 KW each	3x 25 A / 230V
DT 100 R1/R2 7,5 KW each	3x 50 A / 230V

H				Datum	Naam
G				Getek. 28.06.01	MD
F				Gecon.	
E				Type: DT60&100	
D				Span. 230	V
C	THERMIC OVERLOAD	15/11/01	MD	Fasen 3	~
B	3~ pomp	02/11/01	MD	Freq. 50/60	Hz
A	Voeding pomp	01/11/01	MD	Tolerantie op vrije maten	
REV	Revisie	Datum	Ini.	volgens DIN 7168 : m	

Benaming: CONNECTION\_D\*AGRAM\_DIPTANK\_DT60&100  
MAIN\_POWER\_SUPPLY

Tekening nummer: PAGE\_1-2  
Artikel nummer: DT-1-230-3

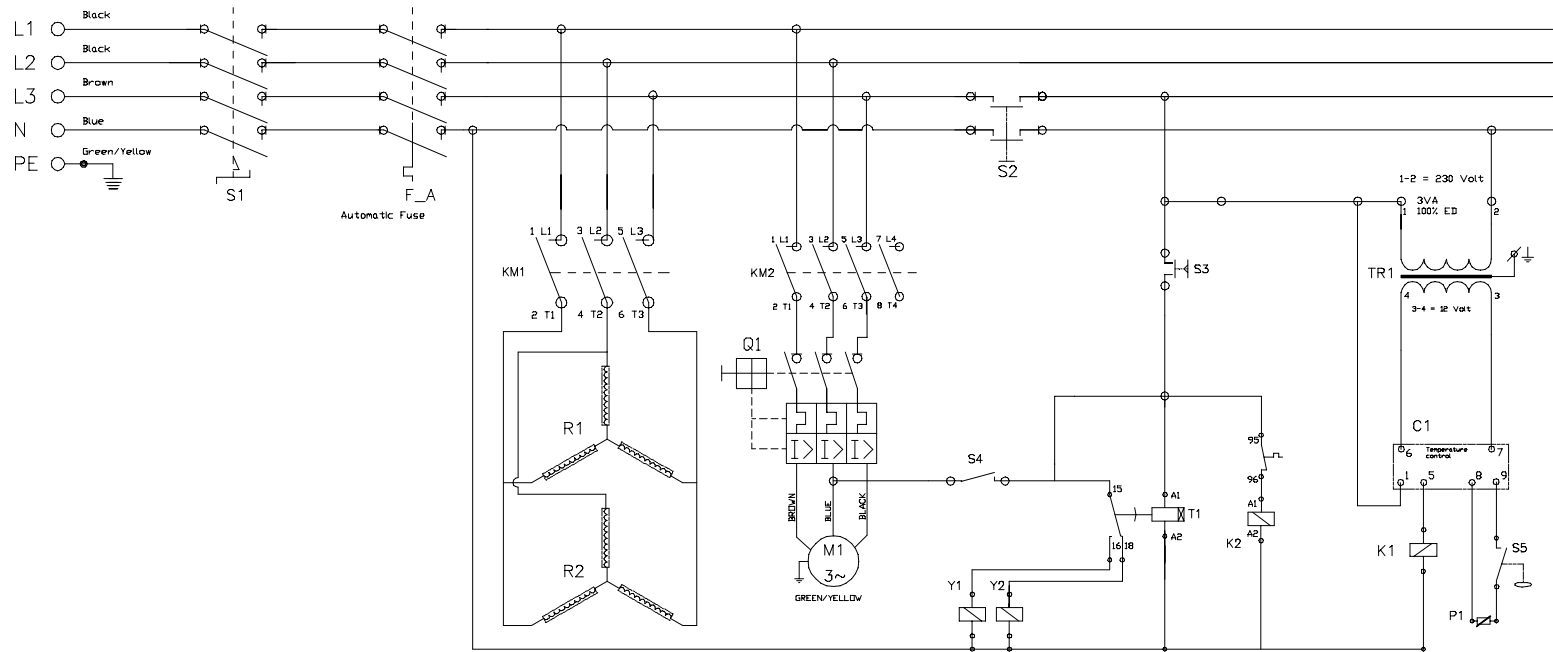
Vervang. van: Verval. voor:



# ELEKTRISCH HOOFDSTROOMSCHEMA ELECTRICAL DIAGRAM

(400 VOLT 3 Phase + Neutral)

1	2	3	4	5	6	7	8
MAIN_SUPPLY	GENERAL_MAIN_SWITCH	AUTOMATIC_FUSE	CONTACTOR_HEATING	CONTACTOR_HYDRAULICPUMP	MAIN_SWITCH	START_SWITCH	POWER_TRANSF_TEMP_CONTROL
L1_L2_L3_N_PE	S1	F_A	KM1	KM2	S2	S3	TR1
			HEATINGELEMENTS	THERMIC_OVERLOAD	MICROSWITCH	TIME_RALAIS	TEMPERATURE_CONTROL
			R1+R2	Q1	S4	T1 (1_SEC)	C1
				HYDRAULICPUMP	HYDRALIC_VALVES	COIL_OF_CONTACTOR_KM1	TEMPERATURE_SENSOR
				M1	Y1+Y2	K1	P1
							FLOTING_DEVICE
							S5



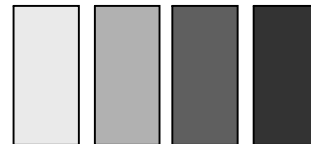
H				Datum	Naam	Benaming:
G				Getek. 28.06.01	MD	CONNECTION_D+GRAM_DIPTANK_DT60&100
F				Gecon.		MAIN_POWER_SUPPLY
E				Type: DT60&100		
D				Span. 400	V	
C				Fasen 3	~	
B	3~PUMP	02/11/01	MD	Freq. 50/60	Hz	
A	Voeding pomp	01/11/01	MD	Tolerantie op vrije maten		
REV	Revisie	Datum	Ini.	volgens DIN 7168 : m		

Powerconsumption Heating Elements		Specification for automatic fuses	
DT 60	R1/R2 4,5 KW each	3x 16 A / 400V	
DT 100	R1/R2 7,5 KW each	3x 25 A / 400V	



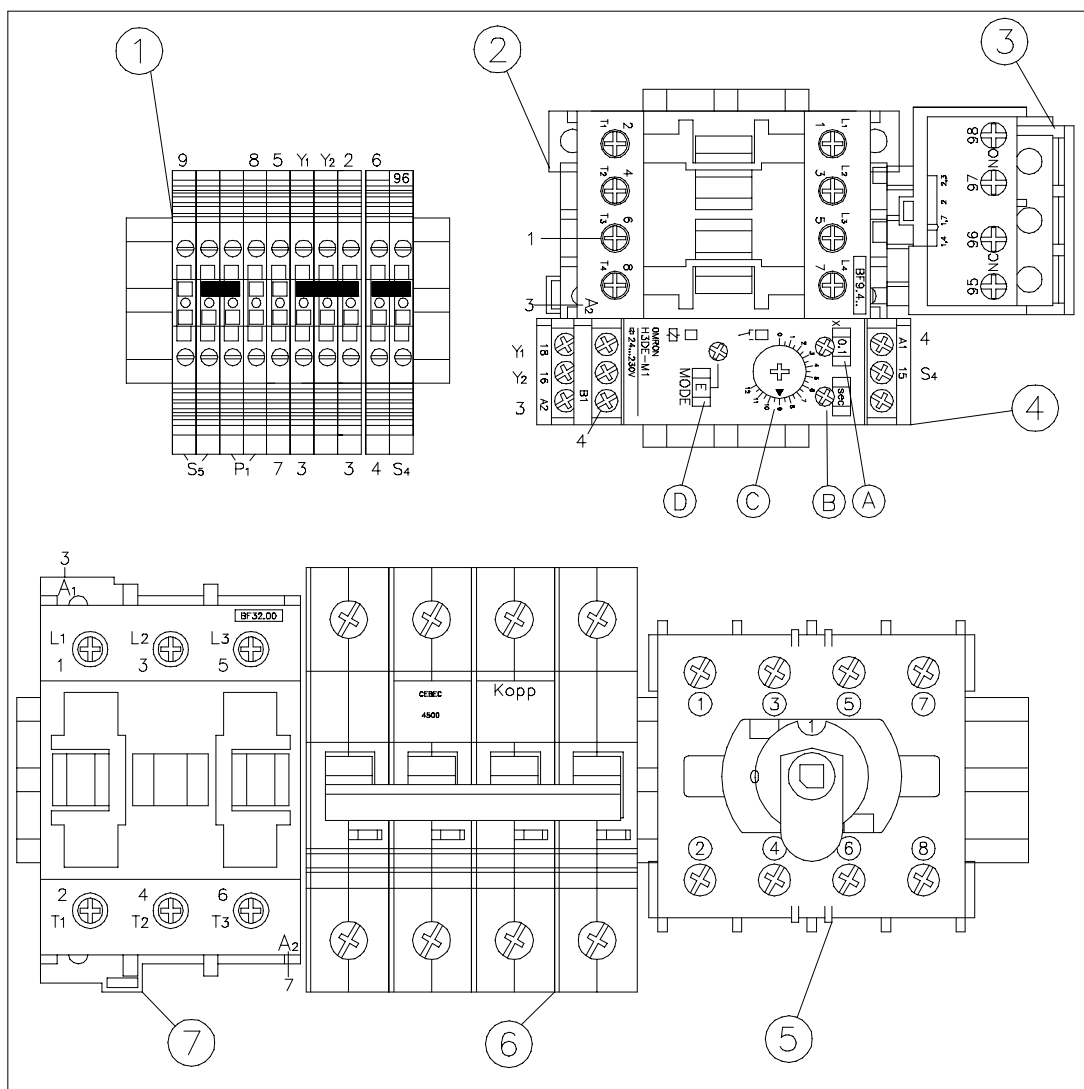
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Artikel nummer:  
DT-1-400-3

Vervang. van: Verval. voor:



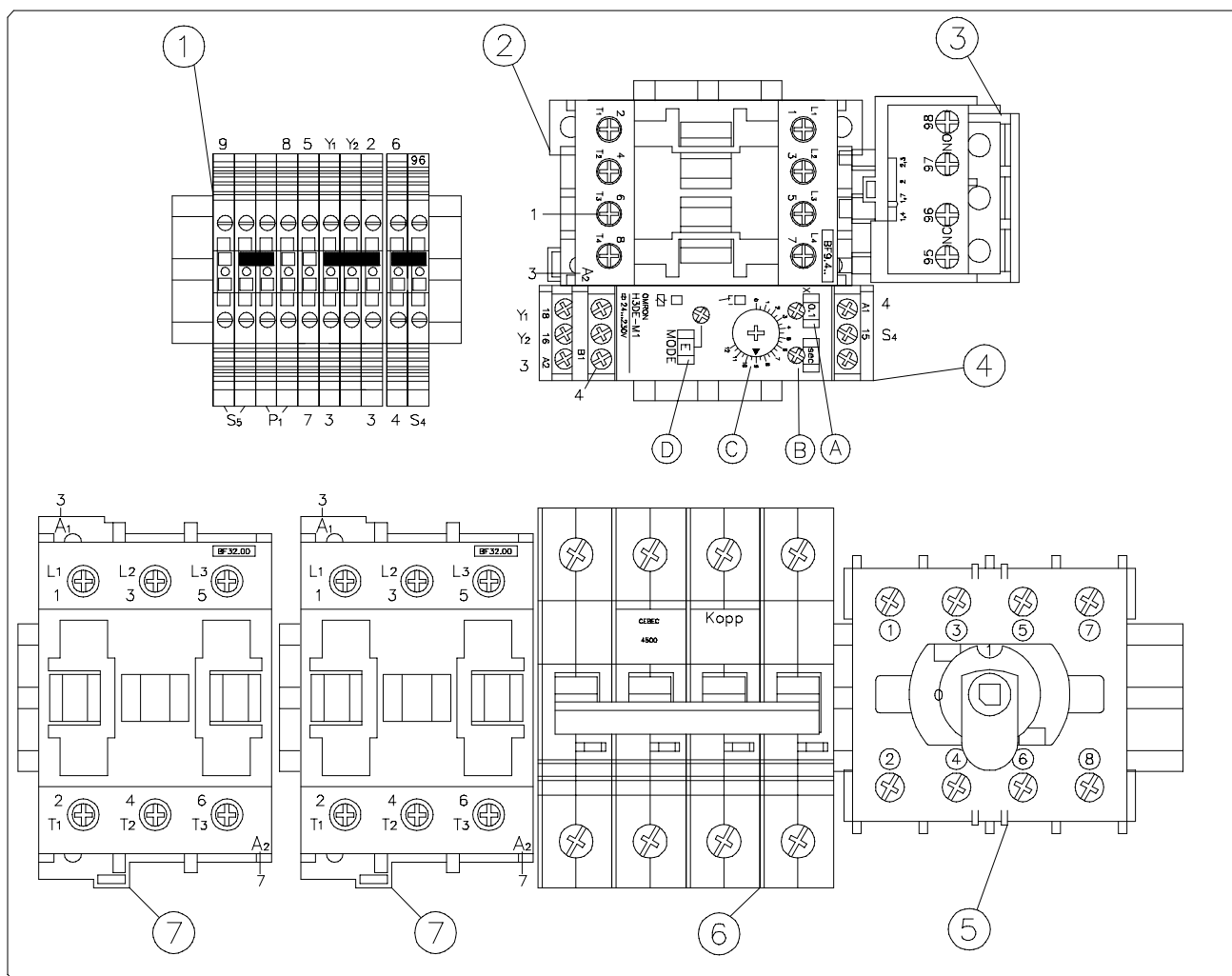
# **COMPONENTEN IN DE ELECTROKAST DT 60 230 / 400 VOLT** **COMPONENTS ELECTRICAL CABINET DT 60 230/ 400 VOLT**

- 1 TERMINAL BLOCKS
- 2 CONTACTOR PUMP
- 3 THERMIC OVERLOAD (DEFAULT ADJUSTMENTS)
  - 230 Volt 4 Amp.
  - 400 Volt 3 Amp.
- 4 TIME RELAIS (DEFAULT ADJUSTMENTS)
  - A = 0,1
  - B = sec
  - C = 9
  - D = E
- 5 GENERAL MAIN SWITCH (3 FASE + NEUTRAL)
- 6 AUTOMATIC FUSE (3 FASE + NEUTRAL)
- 7 CONTACTOR HEATING ELEMENTS



# **COMPONENTEN IN DE ELECTROKAST DT 100 230 / 400 VOLT** **COMPONENTS ELECTRICAL CABINET DT 100 230/ 400 VOLT**

- 8      TERMINAL BLOCKS
- 9      CONTACTOR PUMP
- 10     THERMIC OVERLOAD (DEFAULT ADJUSTMENTS)
  - 230 Volt    4 Amp.
  - 400 Volt    3 Amp.
- 11     TIME RELAIS (DEFAULT ADJUSTMENTS)
  - A = 0,1
  - B = sec
  - C = 9
  - D = E
- 12     GENERAL MAIN SWITCH (3 FASE + NEUTRAL)
- 13     AUTOMATIC FUSE (3 FASE + NEUTRAL)
- 14     CONTACTOR HEATING ELEMENTS



# HYDRAULISCH SCHEMA HYDRAULIC DIAGRAM

