







# **Danfoss LUK55034 Termix Compact Installation Guide**

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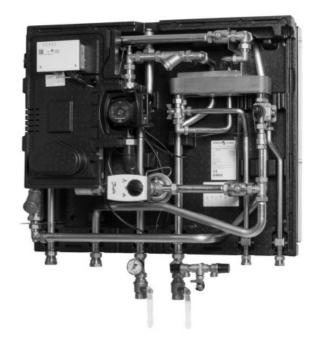
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**Danfoss LUK55034 Termix Compact** 





#### **Product Information**

## **Specifications**

- Model: Termix Compact 28 MST VVX
- Function: District heating substation for indirect heating and instantaneous domestic hot water
- Heat Exchanger: Efficient plate heat exchanger
- Insulation: Complete insulation for minimal heat loss
- Installation: Easy assembly of two modules into one single module
- Flexibility: Pipe connection can be made from top or bottom
- · Manufacture: Quality product manufactured in Denmark

## **Product Usage Instructions**

#### Installation

The Termix Compact 28 MST VVX consists of two modules, one for space heating and one for domestic hot water production. Follow these steps for installation:

- 1. Assemble the two modules into one single module.
- 2. Ensure proper insulation to minimize heat loss.
- 3. Connect the pipes either from the top or bottom for flexibility.

## Operation

To operate the Termix Compact 28 MST VVX:

- 1. Ensure the district heating is the primary energy source.
- 2. Follow local legislation for material choices.
- 3. Maintain chloride compounds in the flow medium below 150 mg/l to prevent corrosion.

#### **Maintenance**

To maintain the Termix Compact 28 MST VVX:

- 1. Regularly check for any signs of corrosion.
- 2. Clean and inspect the plate heat exchanger for optimal performance.

## **FAQ**

#### Q: Can other energy sources apart from district heating be used with this product?

A: Yes, other energy sources can be used if they are comparable to district heating and operating conditions allow it.

#### Q: How should I handle equipment corrosion risk?

A: Keep the chloride compounds in the flow medium below 150 mg/l to minimize the risk of equipment corrosion.

## **Functional description**

District heating substation for indirect heating and instantaneous domestic hot water.

## Space heating and domestic hot water (DHW)

The Termix Compact 28 MST VVX is a complete unit for indirect space heating and domestic hot water for district heating in large buildings such as sports centres, schools, blocks of flats etc.

It can be used for connection to indirect district heating in places where the district heating plant requires a hydraulic break. It is also suitable for conversion to district heating when the secondary heating system is unsuitable to being connected to direct district heating or when a particularly effective security against leakage in the heating system is required.

### Efficient heat exchanger

The substation is fitted with an efficient plate heat exchanger, which ensures the most favourable heat extraction and achieves optimum comfort and operating economy.

### **Electronic regulation**

The Termix Compact 28 MST VVX is built with a plate heat exchanger for instantaneous domestic hot water production and heat exchanger for space heating. Each circuit is also supplied with its own flow controller. This allows the greatest degree of individual control, thus preventing oscillation at different loads. The electronic controller is factory pre-set. Electrical components are pre-wired, and the unit is equipped with a plug for 230 V a.c.

It is recommended that balancing valves are installed in the building's risers in the heat supply and on the heating system's return line immediately before the unit.

## Minimal heat loss

Complete insulation of the unit ensures minimal heat loss.

## **Easy installation**

The unit consists of two modules, one for space heating and one for domestic hot water production, which is easily assembled into one single module. This modular design makes work during installation significantly easier, as the weight is split between two modules during handling.

#### Flexible solution

Pipe connection can be made from either the top or bottom, which makes this solution highly flexible. At the same time, both space and time are saved when installing.

## Reliable and easy to install

Termix Compact 28 MST VVX is operationally reliable. A quality product manufactured in Denmark which is easy to install and quickly commissioned.

## Safety notes

## Safety Notes - general

The following instructions refer to the standard design of substation. Special versions of substations are available on request.

This operating manual should be read carefully before installation and start-up of the substation. The manufacturer accepts no liability for damage or faults that result from non-compliance with the operating manual. Please read and follow all the instructions carefully to prevent accidents, injury and damage to property. Assembly, start-up and maintenance work must be performed by qualified and authorized personnel only.

Please comply with the instructions issued by the system manufacturer or system operator.

## **Corrosion protection**

All pipes and components are made of stainless steel and brass. The maximum chloride compounds of the flow medium should not be higher than 150 mg/l.

The risk of equipment corrosion increases considerably if the recommended level of permissible chloride compounds is exceeded.

#### **Energy source**

The substation is designed for district heating as the primary source of energy. However, also other energy sources can be used where the operating conditions allow it and always are comparable to district heating.

#### **Application**

The substation is designed to be connected to the house installation in a frost-free room, where the temperature does not exceed 50 °C and the humidity does not exceed 60%. Do not cover or wall up the substation or in any other way block the entrance to the station.

## **Choice of material**

Choice of materials always in compliance with local legislation.

## Safety valve(s)

We recommend mounting of safety valve(s), however, always in compliance with local regulations.

#### Connection

The substation must be equipped with features that ensure that the substation can be separated from all energy sources (also power supply).

#### **Emergency**

In case of danger or accidents – fire, leaks or other dangerous circumstances – interrupt all energy sources to the station if possible, and seek expert help.

In case of discoloured or bad-smelling domestic hot water, close all shut-off valves on the substation, inform the operating personnel and call for expert help immediately.

## **REACH**

All Danfoss A/S products fulfill the requirements in REACH.

One of the obligations in REACH is to inform customers about presence of Candidate list substances if any, we hereby inform you about one substance on the candidate list: The product contains brass parts which contains lead (CAS no: 7439-92-1) in a concentration above 0.1% w/w.

#### **Storage**

Any storage of the substation which may be necessary prior to installation should be in conditions which are dry and heated.

## · Authorized personnel only

Assembly, start-up and maintenance work must be performed by qualified and authorized personnel only.

### · Please observe instructions carefully

To avoid injury to persons and damage to the device, it is absolutely necessary to read and observe these instructions carefully.

## · Warning of high pressure and temperature

- Be aware of the installation's permissible system pressure and temperature.
- The maximum temperature of the flow medium in the substation is 110 °C.
- The maximum operating pressure of the substation is 16 bar.
- The risk of persons being injured and equipment damaged increases considerably if the recommended permissible operating parameters are exceeded.
- The substation installation must be equipped with safety valves, however, always in accordance with local regulations.

## · Warning of hot surface

The substation has got hot surfaces, which can cause skin burns. Please be extremely cautious in close proximity to the substation.

Power failure can result in the motor valves being stuck in open position. The surfaces of the substation can get hot, which can cause skin burns. The ball valves on district heating supply and return should be closed.

#### Warning of transport damage

Before substation installation, please make sure that the substation has not been damaged during transport.

### • IMPORTANT – Tightening of connections

Due to vibrations during transport all flange connections, screw joints and electrical clamp and screw connections must be checked and tightened before water is added to the system. After water has been added to the system and the system has been put into operation, re-tighten ALL connections.

## Mounting

## **Mounting the Compactstation**

Installation must be in compliance with local standards and regulations.

District heating (DH) – In the following sections, DH refers to the heat source which supplies the substations. A variety of energy sources, such as oil, gas or solar power, could be used as the primary supply to Danfoss substations. For the sake of simplicity, DH can be taken to mean the primary supply.

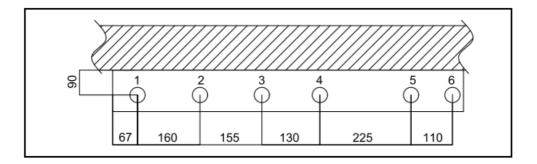
#### Authorized personnel only

Assembly, start-up and maintenance work must be performed by qualified and authorized personnel only.

#### **Connections**

- 1. District heating (DH) supply
- 2. District heating (DH) return
- 3. Heating (HE) supply

- 4. Heating (HE) return
- 5. Domestic hot water (DHW)
- 6. Domestic cold water (DCW)



The pipe placement can deviate from the shown drawing. Please note the markings on the station.

### **Connection sizes:**

DH + HE : G 1" (int. thread)

HWC+ DHW + DCW: G 3/4" (int. thread)

## Dimensions (mm)

**With insulation:** H 914 x W 905 x D 400

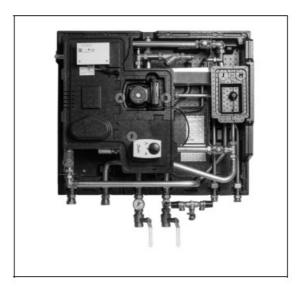
Weight (approx.): 54kg

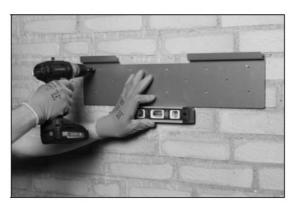
· Remove the front.

· Remove other blocks.

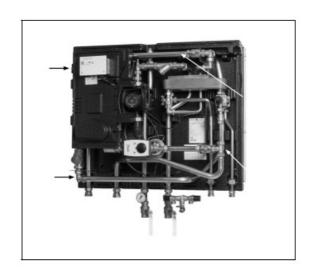
• Attach the mounting rail to the wall.



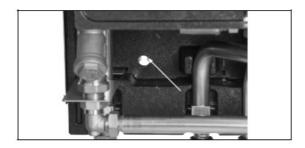




- Lift the station.
- Mount the station on the mounting rail.
- Attach the station to the wall in the holes on the mounting plate.

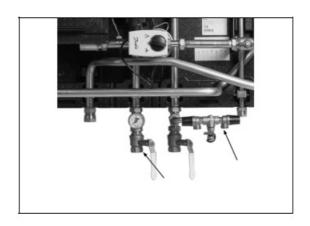


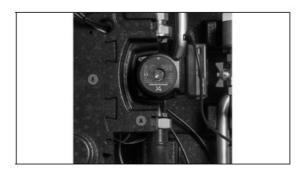


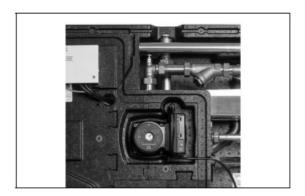


- Install isolation valve with pressure gauge to the left Heating supply.

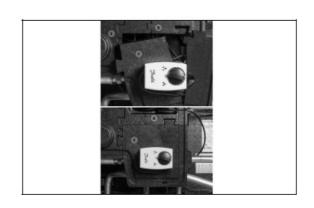
  Install isolation valve with safety valve to the right Heating return.
- Mount block A on the left-hand side of the pump. Attach block E to block A, and attach it to the pipe above the pump by clicking it in place.
- Mount block B on the right-hand side of the pump.

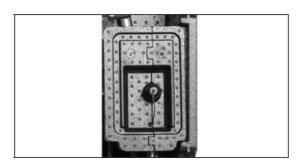


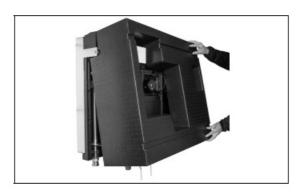




- Mount block F. The block is hinged and can be drawn around the valve. Attach the block to block B and E.
- Mount block J and H around the valve for the tank control.
- Mount the front cover.







## **Installing the Compactstation**

## Mounting

## Adequate space

Please allow adequate space around the substation for mounting and maintenance purposes.

## Orientation

The station must be mounted so that components, keyholes and labels are placed correctly. If you wish to mount the station differently please contact your supplier.

## • Drillings

Where substations are to be wall-mounted, drillings are provided in the back mounting plate. Floor mounted units have support.

## Labelling

Each connection on the substation is labelled.

### Before installation:

## Clean and rinse

Prior to installation, all substation pipes and connections should be cleaned and rinsed.

## **Tightening**

Due to vibration during transport, all substation connections must be checked and tightened before installation.

#### **Unused connections**

Unused connections and shut-off valves must be sealed with a plug. Should the plugs require removal, this must only be done by an authorized service technician.

#### Installation:

### **Strainer**

If a strainer is supplied with the station it must be fitted according to schematic diagram. Please note that the strainer may be supplied loose.

#### **Connections**

Internal installation and district heating pipes connections must be made using threaded, flanged or welded connections.



Keyhole for mounting.

### Start-up

## Start-up, Indirect heating

### Filling:

## 1. First fill

When carrying out first fill, the heat exchanger must be slowly filled with water until it reaches working pressure.

#### 2. Pressure gauge

The HE pressure gauge indicates the pressure of the HE system. This instruction must be followed strictly, to avoid dangerous situations.

### 3. Supply hose

A ball valve with plug is installed in the HE return line. To fill the system, the ball valve must first be closed, the plug removed and a supply hose connected. On re-opening the ball valve, system fill can commence.

## 4. Pre-pressure

When filling the system with water, the pressure gauge should be observed closely. The expansion vessel is supplied pre-pressurised to 0.5 bar. The pre-pressure required at each substation will depend on system head (the distance between the lowest and highest point in the system), for example:

## 5. Filling stop

Filling must stop when the pressure gauge shows a pressure approximately 1-2 bar higher than the pre-

pressure setting. The ball valve is then closed, the hose removed and the plug put back in.

## Start-up:

## 1. Pump speed

Set the pump to highest speed before start-up.

### 2. Start pump

Start the pump and heat through the system.

### 3. Open shut-off valves

The shut-off valves should then be opened and the unit observed as it enters service. Visual checking should confirm temperatures, pressures, acceptable thermal expansion and absence of leakage. If the heat exchanger operates in accordance with design, it can be put to regular use.

#### 4. Vent system

Switch off the pump and vent the installation after the radiators have been warmed up.

## 5. Adjust pump speed

Set the pump to the lowest speed consistent with comfort and electricity consumption.

Normally the change-over switch is set in the mid position (default). However for systems with under floor heating or single pipe loop systems, it may be necessary to turn the change-over switch upwards.

Higher pump speeds are only used if the heating requirement increases.

## Re-tighten connections

After water has been added to the system and the system has been put into operation, re-tighten ALL connections.

## **Pump**

The pump must be switched off during system fill.

Height (m)	Pressure (bar)	
0-5	0,5	
5 – 10	1,0	
10 – 15	1,5	
15 – 20	2,0	

### **Under floor heating:**

#### Pump stop function

If the substation is used in connection with under floor heating, the circulation pump must be connected to the pump stop function in the under floor heating controller. The pump must be stopped if all under floor heating circuits are closed.

## Warranty

If this is not possible, then flow must be continued through the by-pass. Failing this, the pump will be at risk of seizure and any remaining warranty will be withdrawn.

#### Summer operation:

## Switch off pump

In summer the circulation pump must be switched off and the shut-off valve to HE supply closed.

## Running pump bi-weekly

It is recommended to start up the circulation pump (for 2 minutes) once a month during summer; the shut-off valve of the HE supply must be shut.

#### **Electronic controller**

Most electronic controllers will start up the pump automatically (please note manufacturer's instructions).

#### **Electrical connections**

Before making electrical connections, please note the following:

### Safety notes

Please read the relevant parts of the safety notes.

#### 230 V

The substation must be connected to 230 V AC and earth.

#### Potential bonding

Potential bonding should be carried out according to 60364-4-41:2007 and IEC 60364-5-54:2011.

Bonding point on the mounting plate below right corner marked with earth symbol.

#### **Disconnection**

The substation must be electrically connected so that it can be disconnected for repairs.

### **Outdoor temperature sensor**

Outdoor sensors should be mounted so as to avoid exposure to direct sunlight. They should not be placed close to doors, windows or ventilation outlets.

The outdoor sensor must be connected to the station on the terminal block under the electronic control.

## **Authorized electrician**

Electrical connections must be made by an authorized electrician only.

## **Local standards**

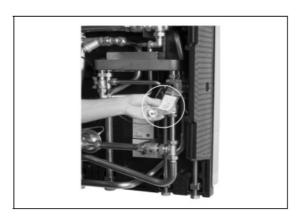
Electrical connections must be made in accordance with current regulations and local standards.

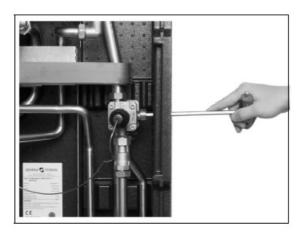
## Installation of other components

## Prepararing for hot water recirculation

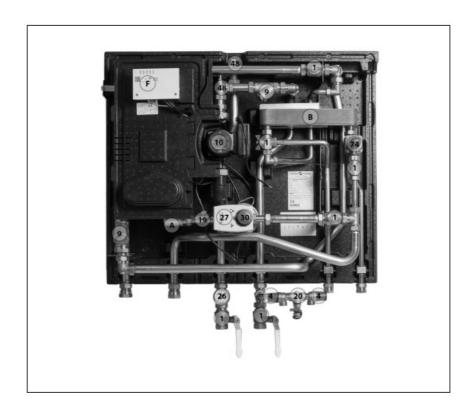
- Mark the position of the connection point and use a 35 mm drill cup.
   (Be mindful of the components on the other side of the insulation)
- Locate the bag with accessories.
- Mount the accessories on the IHPT and install a hot water recirculation pump.







Design



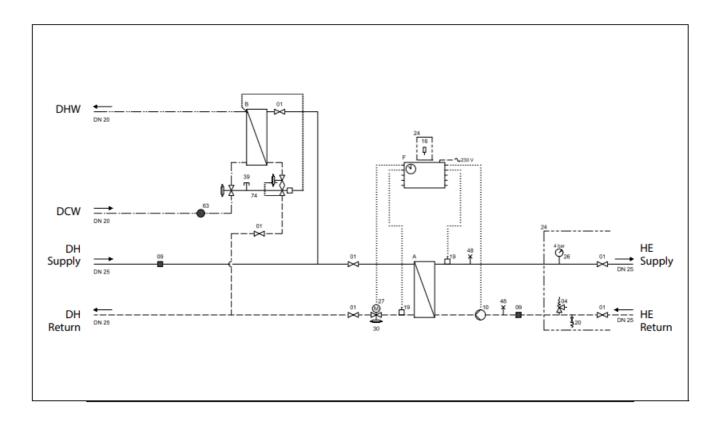
Your substation might look different than the substation shown.

## **Design description**

- A Heat exchanger, HE
- B Heat exchanger, DHW
- F Electronic controller
- 1 Isolation valve
- 4 Safety valve, HE
- 9 Strainer
- 10 Circulator pump
- 19 Surface sensor
- 20 Filling/drain valve
- 26 Pressure gauge
- 27 Actuator
- 30 Flow controller w/intg. control valve
- 48 Air vent, manual
- 74 IHPT

## Schematic diagram

Schematic diagram Termix Compact 28 MST VVX



Your substation might look different than the schematic diagram shown.

## Schematic description

- · A Heat exchanger, HTG
- B Heat exchanger DHW
- F Electronic controller
- 1 Isolation valve
- · 4 Safety valve
- 9 Strainer
- 10 Circulator pump
- 16 Outdoor sensor
- 19 Surface sensor
- 20 Filling/drain valve
- 24 Delivered loose with unit
- 26 Pressure gauge
- 27 Actuator
- 30 Flow controller w/intg.control valve
- 39 Connection closed
- 48 Air vent, manual
- 63 Sieve
- 74 IHPT

**DH Supply:** District Heating Supply **DH Return:** District Heating Return

**HE Supply:** Heating Supply **HE Return:** Heating Return **DHW:** Domestic hot water

DCW: Domestic cold water

## **Technical parameters**

• Nominal pressure: PN 16

• Max. DH supply temperature: 110 °C

• Brazing material (HEX): Copper

· Heat exchangers test pressure: 30 bar

• Sound level: R 55 dB

## **Controls**

## **Heating circuit**

## Flow controller with integrated control valve

The controller is a self-acting flow controller with integrated control valve. The controller closes when set max. flow is exceeded and can be used in combination with Danfoss electrical actuators with or with out safety function. Spring return motor can be used as safety function by power failure.

#### **Electronic control**

Substations with electronic control must be set in accordance with the manufacturer's instructions. Where the room temperature is controlled by radiator thermostats, it is recommended that thermostats be set for minimum temperature in each room.



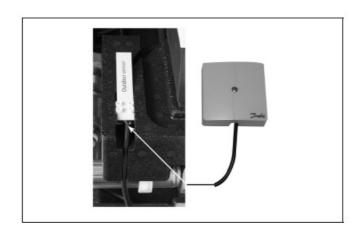


## Outside temperature sensor

Outdoor sensors should be mounted so as to avoid exposure to direct sunlight. They should not be placed close to doors, windows or ventilation outlets.

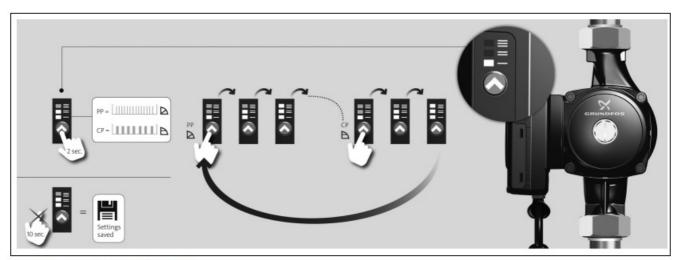
## Circulator pump UPML

UPML Pumps can be controlled in constant pressure or proportional pressure mode defined by the means of a smart user interface. The variable speed modulating modes allow the pump to match its performance to the system requirements, helping to reduce noise when thermostatic valves are closing down. Energy labelling class A





## **Grundfos UPML / UPMXL instructions**

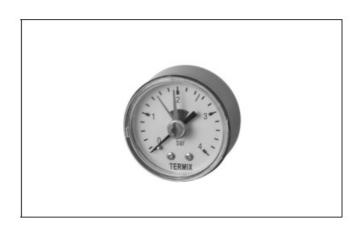


PP = Proportional pressure (fast flash)

CP = Constant pressure (slow flash)

## HE pressure gauge

The HE pressure gauge indicates the pressure of the HE system.



### Other

## Safety valve

The purpose of the safety valve is to protect the substation from excessive pressure.

The blow-off pipe from the safety valve must not be closed. The blow-off pipe outlet should be placed so that it discharges freely and it is possible to observe any dripping from the safety valve.

It is recommended to check the operation of safety valves at intervals of 6 months. This is done by turning the valve head in direction indicated.

#### Strainer

Strainers should be cleaned regularly by authorized personnel. The frequency of cleaning would depend on operating conditions and the manufacturer's instructions.

## IHPT 180 controller (45-65°)

IHPT is a self-acting flow-compensated temperature controller with integrated differential pressure controller. The IHPT operates at its best at DH supply temperatures of up to 100 °C.

By turning the handle for temperature setting in (+) direction the setting is increased, by turning it in (-) direction the setting is decreased.







Turns*	Scale	DHW Temperature Setting [°C]	
0	7	64	
1	6	61	
2	5	58	
3	4	55	
4	3	52	
5	2	48	
6	1	44	
7	0	43	

<sup>\*</sup>Start position: Handle turned fully in (+) direction. The values are intended as a guide.



#### **Maintenance**

The substation requires little monitoring, apart from routine checks. It is recommended to read the energy meter at regular intervals, and to write down the meter readings.

Regular inspections of the substation according to this Instruction are recommended, which should include:

#### **Strainers**

Cleaning of strainers.

#### **Meters**

Checking of all operating parameters such as meter readings.

#### **Temperatures**

Checking of all temperatures, such as DH supply temperature and DHW temperature.

#### **Connections**

Checking all connections for leakages.

### Safety valves

The operation of the safety valves should be checked by turning the valve head in the indicated direction.

## **Venting**

Checking that the system is thoroughly vented.

Inspections should be carried out minimum every two years.

Spare parts can be ordered from Danfoss. Please ensure that any enquiry includes the substation serial number.

## **Authorized personnel only**

Assembly, start-up and maintenance work must be performed by qualified and authorized personnel only.

## **Troubleshooting**

#### Troubleshooting in general

In the event of operating disturbances, the following basic features should be checked before carrying out actual troubleshooting:

- the substation is connected to electricity,
- the strainer on the DH supply pipe is clean,
- the supply temperature of the DH is at the normal level (summer, at least 60 °C winter, at least 70 °C),
- the differential pressure is equal to or higher than the normal (local) differential pressure in the DH network if in doubt, ask the DH plant supervisor,
- pressure on the system check the HE pressure gauge.

## **Authorized personnel only**

Assembly, start-up and maintenance work must be performed by qualified and authorized personnel only.

## **Troubleshooting DHW**

Problem	Possible cause	Solution	
	Strainer in supply or return line clog ged.	Clean strainer(s).	
	DHW circulation pump out of order or with too low setting.	Check circulation pump.	
	Defective or clogged non-return valve.	Replace – clean.	
	No electricity.	Check.	
Too little or no DHW.	Wrong setting of automatic controls , if any.	To adjust an electronic controller for DHW, pls. note enclosed instruction s for electronic controller.	
	Scaling of the plate heat exchanger.	Replace – rinse out.	
	Defective motorized valve.  Check (use manual function) ace.		
	Defective temperature sensors.	Check - replace.	
	Defective controller.	Check – replace.	
Hot water in some taps but not in al	DCW is being mixed with the DHW, e.g. in a defective thermostatic mixing valve.	Check – replace.	
1.	Defective or clogged non-return valve on circulation valve.	Replace – clean.	
Tap temperature too high; DHW tap load too high.	Thermostatic valve adjusted to a to o high level.	Check – set.	
	Scaling of the plate heat exchanger.	Replace – rinse out.	
Temperature drop during tapping.	Larger DHW flow than the substation has been designed for.	Reduce DHW flow.	
Thermostatic control valve does not close  Temperature difference between D H supply and DHW set point too lo w.		Lower the set point temperature or i ncrease the DH supply temperature .	

## **Troubleshooting HE**

Problem	Possible cause	Solution
	Strainer clogged in DH or HE circuit (radiator circuit).	Clean gate/strainer(s).
	The filter in the energy meter on DH circuit clogged.	Clean the filter (after consulting the DH plant operator).

	Defective or wrongly adjusted differ ential pressure controller.	Check the operation of the differential pressure controller – clean the valve seat if required.
	Sensor defective – or possibly dirt i n the valve housing.	Check the operation of the thermostat – clean the valve seat if required.
	Automatic controls, if any, wrongly	Check if the setting of the controller is correct – see separate instruction s.
	set or defective – possibly power fai lure.	Check the power supply. Temporar y setting of motor to "manual" contr ol – see instructions on automatic c ontrols.
Too little or no heat.	Pump out of operation.	Check if the pump is receiving pow er and that it turns. Check if there is air trapped in the pump housing – s ee pump manual.
	The pump is set at too low speed of rotation.	Set the pump at higher speed of rot ation.
	Pressure drop – the pressure drop on the radiator circuit shows lower t han recommended operating press ure.	Fill water on the system and check the functioning of the pressure expansion vessel if required.
	Air pockets in the system.	Vent the installation thoroughly.
	Limiting of the return temperature a djusted too low.	Adjust according to instructions.
	Defective radiator valves.	Check – replace.
	Uneven heat distribution in building because of incorrectly set balancing valves, or because there are no balancing valves.	Adjust/install balancing valves.
	Diameter of pipe to substation too s mall or branch pipe too long.	Check pipe dimensions.
Uneven heat distribution.	Air pockets in the system.	Vent the installation thoroughly.
	Wrong setting of thermostat or of a utomatic controls, if any.	Adjust automatic controls, – see ins tructions for automatic controls.
DH supply temperature too high.	Defective controller. The controller does not react as it should accordin g to the instructions.	Call automatic controls manufacturer or replace the regulat or.
	Defective sensor on self-acting ther mostat.	Replace thermostat – or sensor onl y.

DH supply temperature too low.	Defective controller. The controller does not react as it should accordin g to the instructions.	Call in automatic controls manufact urer or replace controller.
	Defective sensor on self-acting ther mostat.	Replace thermostat – or sensor onl y.
	Wrong placement/fitting of outdoor temperature sensor.	Adjust location of outdoor temperat ure sensor.
	Strainer clogged.	Clean gate/strainer.

	Too small heating surface/too small radiators compared to the total heat ing requirement of the building.	Increase total heating surface.	
	Poor utilization of existing heating s urface. Defective sensor on self-acting thermostat.	Make sure the heat is distributed evenly across the full heating surface – open all radiators and keep the radiators in the system from heating up at the bottom. It is extremely important to keep the supply temperature to the radiators as low as possible, while maintaining a reasonable level of comfort.	
Too high DII yetuwa tewaneyetuwa	The system is single pipe loop.	The system should feature electronic controls as well as return sensors.	
Too high DH return temperature.	Pump pressure too high.	Adjust pump to a lower level.	
	Air in system.	Vent the system.	
	Defective or incorrectly set radiator valve(s). Single pipe loop systems r equire special one-pipe radiator val ves.	Check – set/replace.	
	Dirt in the motorized valve or in the differential pressure controller.	Check – clean out.	
	Defective motorized valve, sensor o r automatic controller.	Check – replace.	
	Electronic controller not adjusted co rrectly.	Adjust according to instructions.	
Noise in system.	Pump pressure too high.	Adjust pump to a lower level.	
Heat load too high.	Defective motorized valve, sensor o r electronic controller.	Check – replace.	

## Disposal

## Disposal note

This symbol on the product indicates that it may not be disposed of as household waste..

It must be handed over to the applicable take-back scheme for the recycling of electrical and electronic equipment.

• Dispose of the product through channels provided for this purpose.

Comply with all local and currently applicable laws and regulations.

#### **Declaration**

#### **Declaration of conformity**



Danfoss A/S 6430 Nordborg Denmark CVR nr.: 20 16 57 15

Telephone: +45 7488 2222 Fax: +45 7449 0949

#### EU DECLARATION OF CONFORMITY

#### Danfoss A/S

**Danfoss District Energy Division** 

Declares under our sole responsibility that the:

Product category: Small substations

#### Type designations:

	BTD VMTD mini mix	KST-I	One Solar A+/B+		
, III	BVX	VMTD mix	KST-M	One Solar	Mixing loop
HD	PU LINETE E KST-	In the control of the	KST-L	FLS	Measuring Unit
BV	VM I D F mix	VX	VVX	BL	
CS 28 HD	CS 28 BV	CS 28 VMTD	CS 28 VX	CS 28 VVX	CS 28 BL
CS 32 HD	CS 32 BV	CS 32 VMTD	CS 32 VX	CS 32 VVX	CS 28 BL
CS 40 HD	CS 40 BV	CS 40 VMTD	CS 40 VX	CS 40 VVX	CS 40 BL
	CS 32 HD	HD BVX BV  CS 28 HD CS 28 BV  CS 32 HD CS 32 BV	BVX	HD	HD

Covered by this declaration is in conformity with the following directives, standards or other normative documents, provided that the product is used in accordance with our instructions.

## Machinery Directive 2006/42/EC

#### EN ISO 12100:2011

Safety of machinery – General principles for design – Risk assessment and risk reduction

#### EN 60204-1:2018

Safety of machinery – Electrical equipment of machines – Part 1: General requirements

## RoHS Directive 2011/65/EU

Including amendment 2015/863

#### EN IEC 63000:2018

Technical documentation for the assessment of electrical and electronic products with respect to the restriction of hazardous substances.

## EMC Directive - 2014/30/EU

#### EN 61000-6-1:2007

Electromagnetic compatibility (EMC) – Part 6-1: Generic standards – Immunity residential, commercial and light-industrial environments

#### EN 61000-6-2:2005

Electromagnetic compatibility (EMC) – Part 6-2: Generic standards – Immunity for industrial environments

#### EN 61000-6-3:2007 + A1:2011

Electromagnetic compatibility (EMC) – Part 6-3: Generic standards – Emission standard for residential, commercial and light-industrial environments

Date: 2021.07.20 Place of issue: DK-7451 Sunds	Issued by:  Claus G. Mortensen  Title: Quality Manager	Date: 2021.07.20 Place of Issue: DK-7451 Sunds	Approved by: Signature: Name: Karina Friis Skov Title: Director, Engineering
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Danfoss only vouches for the correctness of the English version of this declaration. In the event of the declaration being translated into any other language, the translator concerned shall be liable for the correctness of the translation

ID No: LUK30002 Revision No: 01 This doc. is managed by 50080577

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## Gemina Termix A/S • Member of the Danfoss Group

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Any information, including, but not limited to information on selection of product, its application or use, product design, weight, dimensions, capacity or any other technical data in product manuals, cataloaues descrintions. advertisements. etc. and whether made available in writing. or allv. electronically.online.or via download.shallbe considered informative. ands.on/v binding if and to the extent, explicit reference is made in a quotation or order confirmation. Danfoss cannot accept any responsibility for possible errors in catalogues, brochures, videos and other material.

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AQ461050953124en-000201 / LUK55034

## **Documents / Resources**



<u>Danfoss LUK55034 Termix Compact</u> [pdf] Installation Guide AQ461050953124en-000201, LUK55034, LUK55034 Termix Compact, LUK55034, Termix Compact, Compact

### References

User Manual

#### Manuals+, Privacy Policy

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