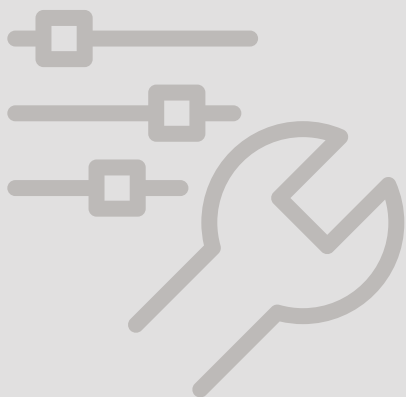


Storage tank

NIBE UKV 20 *500, 750, 1000*



 **NIBE**

Table of Contents

1	<i>Important information</i> _____	4
	Safety information _____	4
	General _____	4
2	<i>For the User</i> _____	6
	Maintenance _____	6
	Emptying _____	6
	Service _____	6
3	<i>For the Installer</i> _____	7
	General _____	7
	Transport _____	7
	Assembly _____	7
	Component location and pipe connections _____	8
	Removing the insulation _____	9
	Installation _____	10
	Pipe installation _____	11
	Filling _____	11
	Electrical installation _____	11
4	<i>Technical data</i> _____	12
	Dimensions _____	12
	Technical specifications _____	13
	Energy labelling _____	13
	Accessories _____	13
	<i>Contact information</i> _____	15

1 Important information

Safety information

This manual describes installation and service procedures for implementation by specialists.

The manual must be left with the customer.

This appliance can be used by children aged from 8 years and above and persons with reduced physical, sensory or mental capabilities or lack of experience and knowledge if they have been given supervision or instruction concerning use of the appliance in a safe way and understand the hazards involved. Children shall not play with the appliance. Cleaning and user maintenance shall not be made by children without supervision.

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SYMBOLS



NOTE

This symbol indicates danger to person or machine.



Caution

This symbol indicates important information about what you should consider when installing or servicing the installation.

MARKING

CE The CE mark is obligatory for most products sold in the EU, regardless of where they are made.

General

NIBE UKV 20 is designed and manufactured according to good technical practice¹ in order to ensure safe usage.

¹ Pressure Equipment Directive 2014/68/EU Article 4 point 3.

SERIAL NUMBER

You will find the serial number on the product's jacket by the lower connections.



Caution

Always give the product's serial number when reporting a fault.

RECOVERY



Leave the disposal of the packaging to the installer who installed the product or to special waste stations.

Do not dispose of used products with normal household waste. It must be disposed of at a special waste station or dealer who provides this type of service.

Improper disposal of the product by the user results in administrative penalties in accordance with current legislation.

INSPECTION OF THE INSTALLATION

Current regulations require the heating installation to be inspected before it is commissioned. The inspection must be carried out by a suitably qualified person.

✓	Description	Notes	Signature	Date
	Heating medium (page 11)			
	Shut off valves			
	Safety valve			

2 For the User

Maintenance

The safety valve in the system where the accumulator tank is installed must be inspected regularly (about four times a year) to prevent blockages.

To inspect the valve, open the safety valve manually and check that water flows through the overflow pipe. If this does not happen then the safety valve is defective and must be replaced.

Emptying

1. If an immersion heater is installed, disconnect the power to the accumulator tank.
2. Shut off the incoming cold water.
3. Open the drain connection, or the drain valve if fitted.



NOTE

Water may splash at the drain connection or the drain valve.

There is a risk of scalding.

During draining, air must be let into the accumulator tank by opening a vent valve or a hot water connection.

To ensure that the accumulator tank drains completely, a hose or a pipe with an outlet below the lowest level of the water heater must be attached to the drain connection or drain valve. When installed where there is a risk of frost, the accumulator tank must be emptied whenever it is not in operation. Freezing could result in the accumulator tank bursting.

Service

For service, contact the installer. Serial number (PZ3) (14 digits) and installation date should always be stated.

Only replacement parts supplied by NIBE may be used.

3 For the Installer

General

NIBE UKV 20 is an accumulator tank that is suitable for connection to a heat pump or other external heat source.

NIBE UKV 20 can have several different areas of application, and can be used during external control of the heating system.

The heat pump then charges NIBE UKV 20 with floating or fixed condensing. The external control function controls the heat distribution from NIBE UKV 20 to the consumer. If the flow to the heating system can be restricted, for example by using radiator thermostats, install a NIBE UKV 20 as an intermediate tank. This ensures a secure flow for the heat pump. NIBE UKV 20 also allows a greater flow to the heating system than across the heat pump. In some installations, so-called heating clicks occur as a result of movements during changes in temperature. To eliminate temporary changes in temperature, and thereby prevent heating clicks, install a NIBE UKV 20 between the heat source and the heating installation.

The water tank consists of a high-quality steel jacket, the outside of which is coated with rust-protection paint.

UKV 20-500 is designed and manufactured for a maximum cut-off pressure of 10 bar in the water tank. UKV 20-750 and UKV 20-1000 are designed and manufactured for a maximum cut-off pressure of 3 bar in the water tank. The maximum permitted temperature is 85 °C. All NIBE UKV 20 are equipped with a temperature gauge, which can be installed at different levels in the accumulator tank.

UKV 20-750 and UKV 20-1000 are equipped with a diffuser plate, which is tasked with preserving the stratification of the water in the accumulator tank.

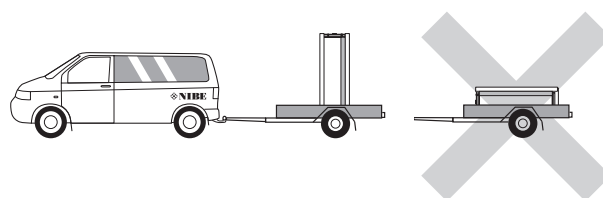
The insulation is polyurethane, which provides excellent heat insulation. The insulation and grey plastic outer cladding can be removed to make it easier to move the water heater through doorways, for example.

NIBE UKV 20 is equipped with an immersion heater socket and a submerged tube for controlling hot water heating.

UKV 20-750 and UKV 20-1000 can be equipped with an immersion heater and UKV 20-500 can be equipped with up to two immersion heaters.

Transport

NIBE UKV 20 should be transported and stored vertically in a dry place. The NIBE UKV 20 may, however, be carefully laid on its back when being moved into a building.



Assembly

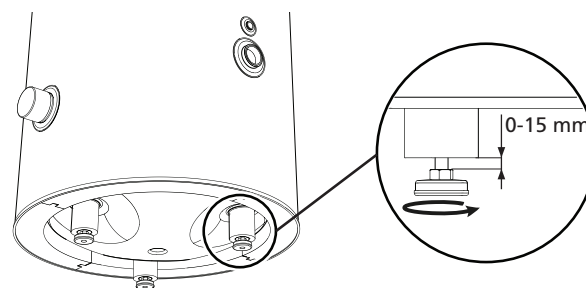
NIBE UKV 20 must only be installed vertically.

The accumulator tank must be installed in a dry area at a temperature that does not drop below 0 °C (frost-free).

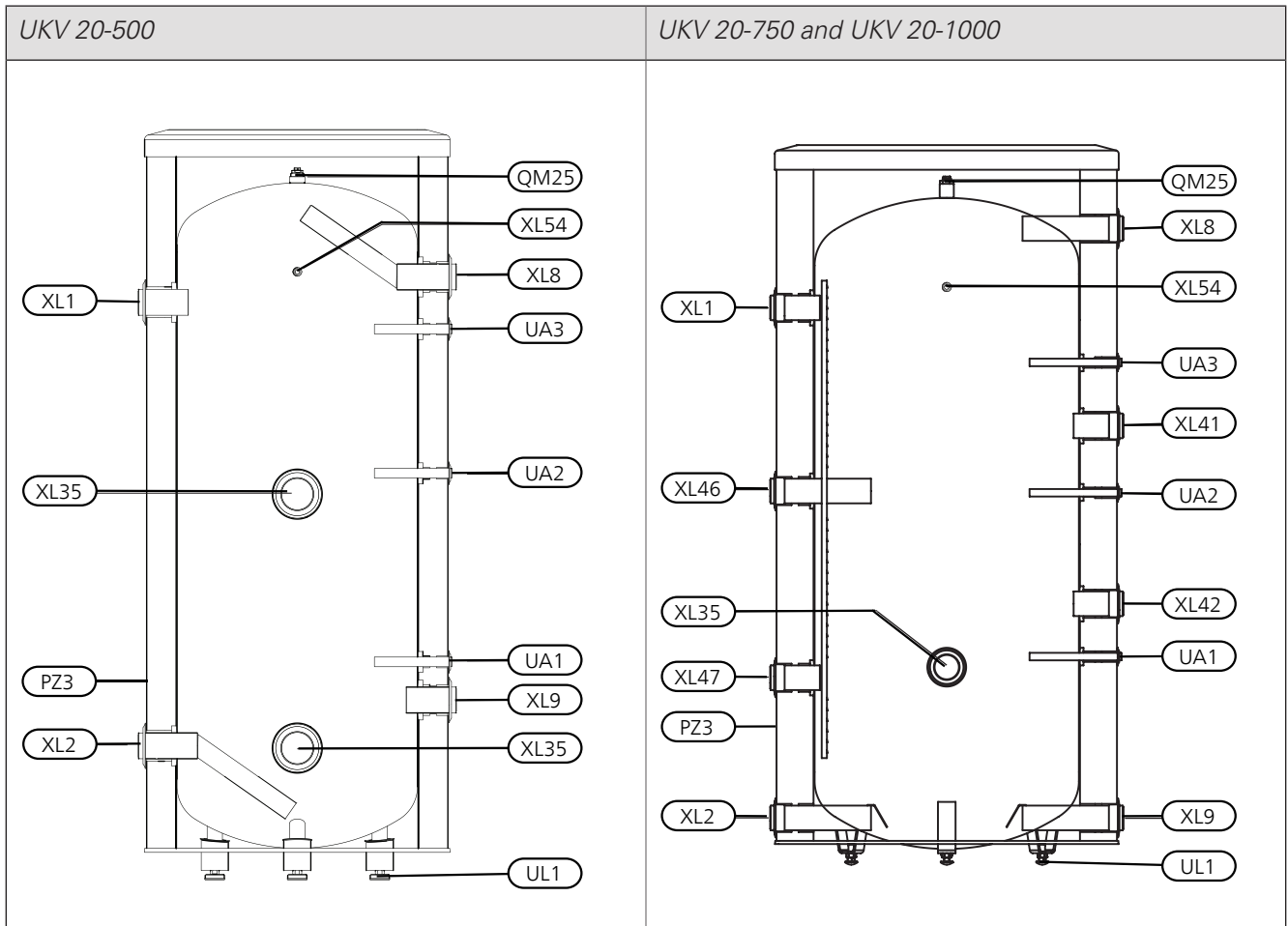
Position NIBE UKV 20 on a firm base that can take the weight, preferably on a concrete floor or foundation. Use the product's adjustable feet to obtain a horizontal and stable set-up.

Ensure that there is sufficient space to perform servicing and maintenance.

The area where NIBE UKV 20 is located must be equipped with floor drainage.



Component location and pipe connections

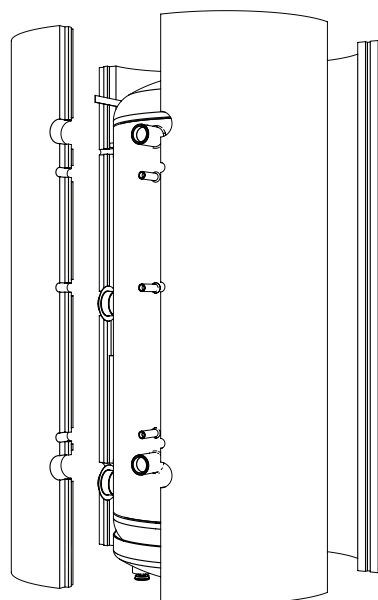
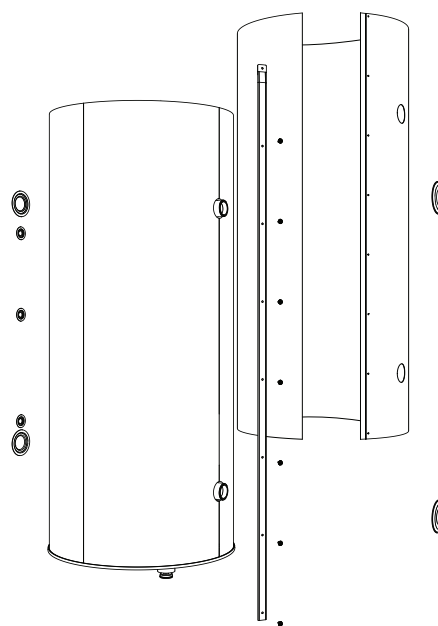
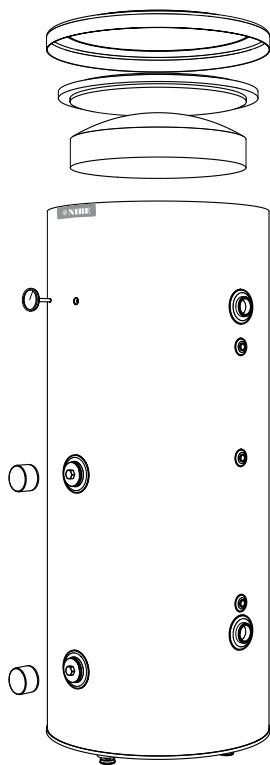


Designation	Name	UKV 20-500	UKV 20-750/UKV 20-1000
XL1	Connection, HP, Supply	int. 1½"	int. 2"
XL2	Connection, HP, Return	int. 1½"	int. 2"
XL8	Docking connection, heating system, supply	int. 1½"	int. 2"
XL9	Docking connection, heating system, return	int. 1½"	int. 2"
XL35	Connection, immersion heater		int. 2"
XL41	Docking connection, level 1		int. 2"
XL42	Docking connection, level 2		int. 2"
XL46	Docking connection, level 3		int. 2"
XL47	Docking connection, level 4		int. 2"
XL54	Connection, measurement point (thermometer)		int. Ø 10 mm
QM25	Valve, bleeding		int. ¾"
UA1	Submerged tube, docking		int. Ø 16 mm
UA2	Submerged tube, docking		int. Ø 16 mm
UA3	Submerged tube, docking		int. Ø 16 mm
UL1	Adjustable feet		
PZ3	Serial number plate		

Removing the insulation

The insulation can be removed to facilitate handling in confined spaces.

- Remove the temperature gauge and the covers over the immersion heater connections.
- Lift off the top cover and remove the insulation at the top.
- Remove the covers over the connections and the cover discs.
- Remove all screws along the joining plate.
- Remove the insulated jacket.
- Remove the four insulated jacket sections; the outer diameter of the accumulator tank decreases by 100 mm without the insulated jackets.



When the accumulator tank has been placed in the correct location, reinstall the removed components in the reverse order.

Finally, fit all the supplied cover discs on the relevant connections by pressing them over the connections.



Caution

Fit the cover discs before the pipe installation is made.

Installation

The accumulator tank must be installed in an upright position. The four feet are vertically adjustable.

All connections (including connections or holes that are not used) must be insulated to minimise energy losses.

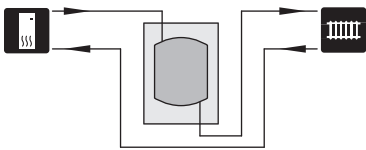
DOCKINGS



NOTE

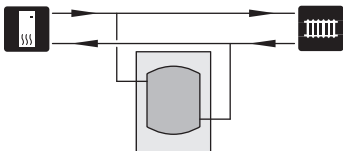
These are outline diagrams. Actual installations must be planned according to applicable standards.

Volume increase as well as reduction of heat spikes



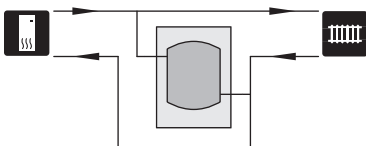
A NIBE UKV 20 is installed as a volume increaser in those cases where the system volume in the climate system is below the minimum recommended volume for the heat pump.

Volume and flow increaser and reduction in heat spikes



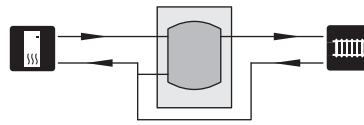
A NIBE UKV 20 is installed as a volume and flow increaser in those cases where the system volume in the climate system is below the minimum recommended volume for the heat pump and/or the flow is restricted without control.

Volume and flow equaliser, 2-pipe, low temperature, unbalanced and low flow



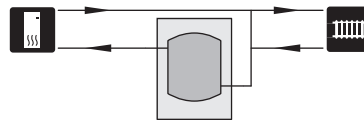
A NIBE UKV 20 is installed as a volume and flow increaser in those cases where the system volume in the climate system is below the minimum recommended volume for the heat pump and/or the flow is restricted without control.

Volume and flow equaliser, 3-pipe, low temperature, unbalanced flow, max. two compressors



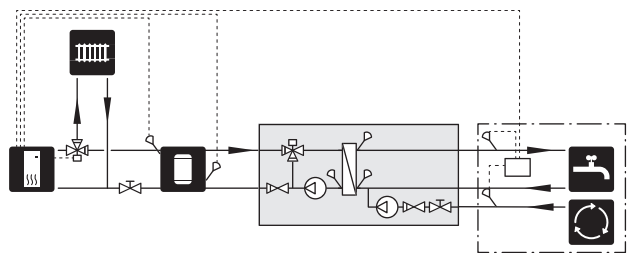
A NIBE UKV 20 is installed as a volume and flow increaser in those cases where the system volume in the climate system is below the minimum recommended volume for the heat pump and/or the flow is restricted without control.

Volume increase as well as reduction of heat spikes



A NIBE UKV 20 is installed as a volume increaser in those cases where the system volume in the climate system is below the minimum recommended volume for the heat pump.

Cetetherm AquaEfficiency



The heat pump is connected to UKV 20 and charges them.

The energy is transferred via Cetetherm AquaEfficiency from UKV 20 to the tap side. The hot water is heated when needed, but not stored.

Pipe installation

Pipe installation must be carried out in accordance with current norms and directives.

The drain valve is installed on the heating system's return line (XL9).

The system where UKV 20-500 is installed must be supplied with a safety valve of max. 10 bar (1.0 MPa), and the system where UKV 20-750 or UKV 20-1000 is installed must be supplied with a safety valve of max. 3 bar (0.3 MPa).

The overflow pipe must be the same size as the safety valve's. Route the overflow pipe from the safety valve, sloping along its entire length, and ensure that it is frost-proof and well supported. The mouth of the overflow pipe must be visible and not placed close to electrical components.

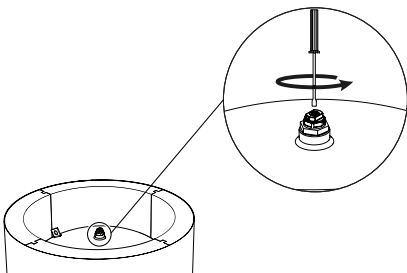
Ensure that incoming water is clean.

If uncertain, contact a plumber alternatively see applicable standards.

Filling

Fill the accumulator tank as follows:

1. Open the vent valve (QM25) at the top of the accumulator tank.
2. Fill the vessel through the drain valve.
3. When only water comes out of the vent valve (initially an air-water mixture comes out of the valve), the vent valve can be closed the accumulator tank is filled.



Electrical installation



NOTE

Electrical installation and service must be carried out under the supervision of a qualified electrician, and in accordance with applicable electrical safety regulations.

UKV 20-750 and UKV 20-1000 can be equipped with one immersion heater and UKV 20-500 can be equipped with up to two immersion heaters, connection dimension G50.

Each immersion heater is supplemented with junction box type K11 (2-pole thermostat, 3-pole temperature limiter). Do not modify or reconnect! A separate supply from group central is routed to each immersion heater.

When installing, ensure that there is enough room in front of the connection area to remove the element (see the following table).

IMMERSION HEATERS

Element	Output	Free space	RSK no.
IU 31	1500 W	250 mm	695 20 14
IU 33	2250 W	260 mm	695 20 22
IU 34	3000 W	280 mm	695 20 30
IU 36	4500 W	400 mm	695 20 55
IU 39	6000 W	400 mm	695 20 71
IU 310	7500 W	400 mm	695 20 89
IU 311	9000 W	400 mm	695 20 97



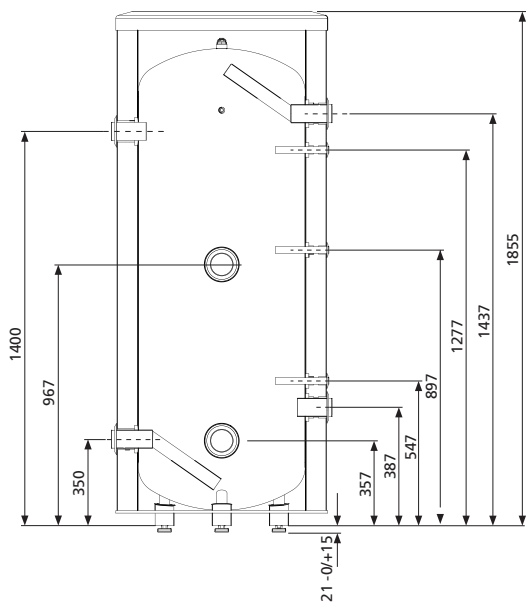
NOTE

The accumulator tank must be completely filled with water before it can be connected on the electrical side.

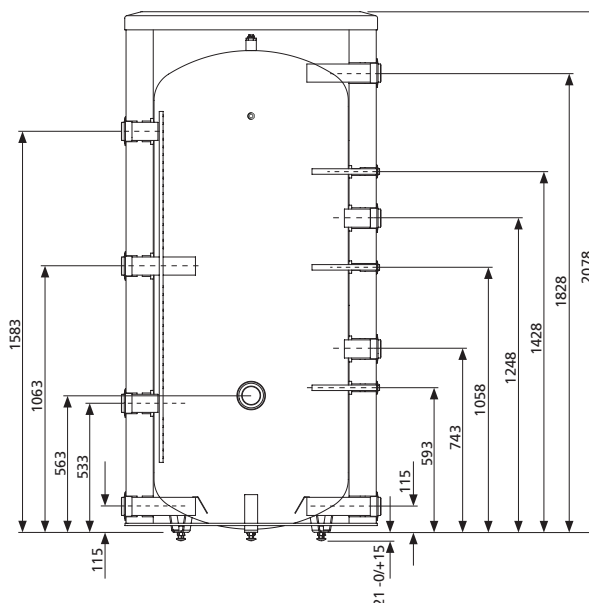
4 Technical data

Dimensions

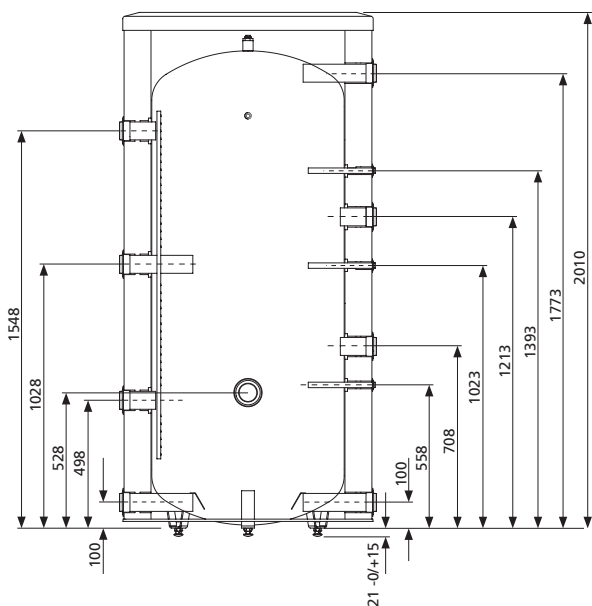
UKV 20-500



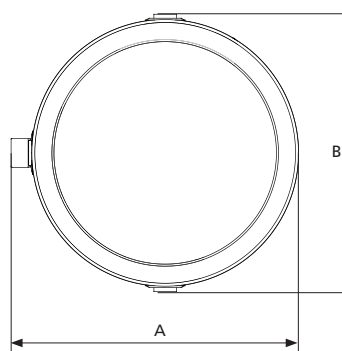
UKV 20-1000



UKV 20-750



Insulator end panel NIBE UKV 20



Model		A	B
UKV 20-500	mm	852	856
UKV 20-750	mm	1020	1000
UKV 20-1000	mm	1130	1110

Technical specifications

Type		UKV 20-500	UKV 20-750	UKV 20-1000
Efficiency class ¹		C		
Max. temperature in the tank	°C	85		
Max. working pressure in the tank	(bar)	10	3	
Weight	kg	110	170	200
Part No.		080 014	085 002	085 003

¹Scale for the product's efficiency class A+ to F.

Energy labelling

Supplier		NIBE		
Model		UKV 20-500	UKV 20-750	UKV 20-1000
Energy efficiency class		C		
Heat loss	W	98	123	140
Volume	l	496	741	992

Accessories

Not all accessories are available on all markets.

Detailed information about the accessories and complete accessories list available at nibe.eu.

IMMERSION HEATER IU

Immersion heater IU 31 - IU 311

See table (page 11)

CONNECTION BOX K11

Connection box with thermostat and overheating protection.

(When connecting Immersion heater IU)

Part no. 018 893

Contact information

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