

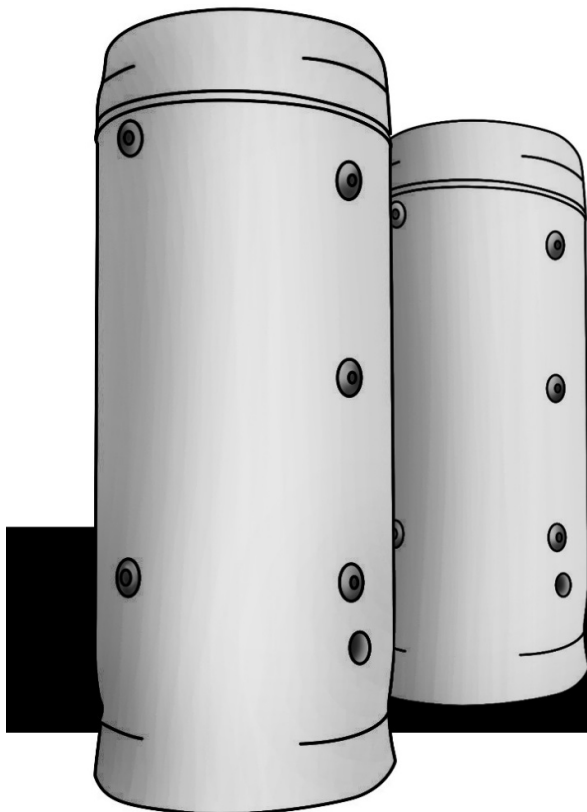


**Refra**<sup>®</sup>  
Steel equipment



COMBI TANK

**MODEL CTVF**



Issue: 1:2016.02.12  
Replacement: none

**EN**

TECHNICAL DATASHEET -  
OPERATION MANUAL -  
WARRANTY CARD -

**UNIT TECHNICAL DATA TABLE**

Device type	Combi tank
Model	CTVF
Date of manufacture	2016
Overall dimensions (width x height)	See the table below
Tank weight	See the table below
Volume	See the table below

**TERMS OF USE**

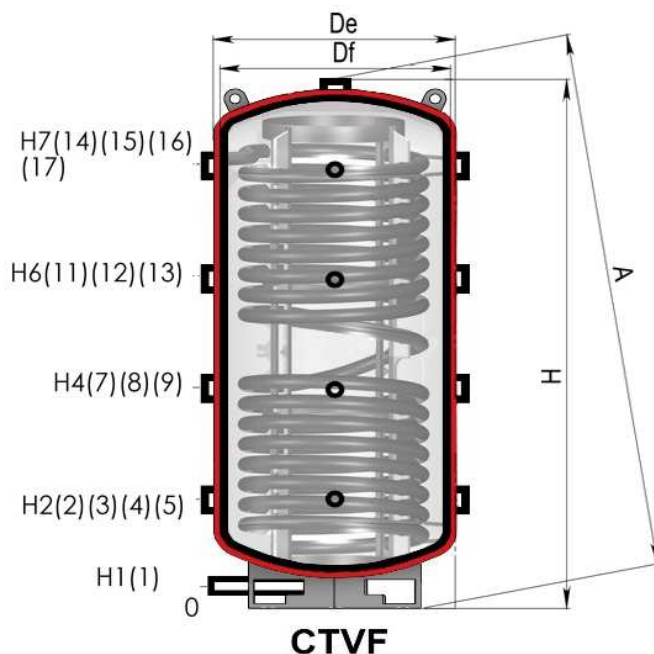
Ambient temperature, maximal	+40°C
Ambient temperature, minimal	+4°C
Operating temperature inside the tank, min./max.	+10/+95°C
Max. operating temperature inside the heat exchanger	+99°C
Max. operating pressure inside the tank	6 bar
Max. operating pressure in the heat exchanger	10 bar

**CONNECTIONS**

Inlet/outlet, air	See table below
Fluid inlet	See table below
Fluid outlet	See table below
Device connection , mm	4 x ½"
Drain	See table below
Internal heat exchanger water Inlet	G 1 ½
Internal heat exchanger water outlet	G 1 ½
Electric heater installation	G 1 ½

**OTHER PARAMETERS**

Operating fluid group	Group 2
Main material	S235JR (1.0038) carbon steel
Internal heat exchanger material	AISI 316 (1.4404) stainless steel
Corrosion protection	Magnesium anode
Additional	Electric heater (optional)
Insulation	100 mm thickness soft foam polyurethane (PU)
External lining	Removable red color PVC jacket with zip



### MEASUREMENTS

Model	Volume [L]	H1	H2	H3	H4	H5	H6	H7	H	A	Df	W [kg]
CTVF300-65	300	94	370	508	554	646	738	921	1260	1300	650	106
CTVF500-65	500	94	370	658	750	946	1140	1520	1860	1887	650	150
CTVF800-85	800	96	422	680	767	936	1192	1448	1837	1888	850	190
CTVF1000-85	1000	86	424	767	882	1111	1340	1797	2187	2227	850	225
CTVF1200-110	1200	84	524	605	750	864	978	1205	1696	1776	1100	230
CTVF1500-110	1500	84	524	784	872	1044	1217	1564	2056	2117	1100	
CTVF2000-110	2000	84	524	912	1042	1300	1560	2075	2569	2622	1100	

### CONNECTIONS / MUFF VERSION

Volume, L		300	500-800	1000	1500-2000
1	Drain	G 3/4"		G 1"	
2-5-7-9-11-13-14-17-18	Connection to the system	G 2"	G 3"		
3-8-12-15	Connections for instruments	G 1/2"			
6	Magnesium anode				G 1 1/4"
10	El. Immersion resistance				G 1 1/2"

### CONNECTIONS / FLANGE VERSION

Volume, L		300	500-800	1000	1500-2000
1	Drain	G 3/4"		G 1"	
2-5-7-9-11-13-14-17-18	Connection to the system	DN50	DN80		
3-8-12-15	Connections for instruments	G 1/2"			
6	Magnesium anode				G 1 1/4"
10	El. Immersion resistance				G 1 1/2"

## **IMPORTANT**

Before installing or operating on the device, carefully read the instructions in this manual. They provide details and advice on the correct method of installing, using and maintaining this unit, in order to obtain maximum reliability, efficiency and long life.

## **RECIPIENT INFORMATION**

Translation from the original manufacturer's manual in Lithuanian.

This manual supplied with the machine and they are an integral part. Manual material protected by copyright. All rights reserved.

Full or partial copying, storing, transmission, sending e-mail of this manual without reference to the source and without the owner's permission prohibited.

Manual contains information on refrigeration machines, produced by JSC "Refra".

Sign REFRA ©, which marks its products manufacturer is a registered trademark.

This manual applies only to the specified therein models.

Manual can changed without notice. The following publications may supplemented.

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## • GENERAL INFORMATION

Translation from the original manufacturer's manual in Lithuanian.

This manual supplied with the machine and they are an integral part. Manual material protected by copyright. All rights reserved. Full or partial copying of the head without reference to the source and the owner's permission prohibited.

Manual contains information on buffer tanks, produced by JSC "Refra".

Sign REFRA®, which marks its products manufacturer is a registered trademark.

This manual applies only to the specified therein models.

Manual can be changed without notice. The following publications may be supplemented.

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## • APPOINTMENT AND APPLICATION

JSC „Refra“ produce a wide range of buffer tanks specifically designed for heating/cooling systems where no special conditions are needed for the water inside the tank.

Buffer tanks are generally used for fluid systems where it is needed to store and supply low temperature liquids in the interval from -10°C till +95°C (water from +1°C till +95°C). Direct chilling is used as a chiller is connected directly to the buffer tank and after accumulation directly provided to the consumer.

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## • RECIPIENT INFORMATION

**Information in this manual is insufficient for preparing the installation or service specialist of this type of equipment or for replacing it.**

The manufacturer reserves the right to modify equipment at any time, without notice or liability.

If there is no doubt that you have correctly understood the instructions in the manual or have questions about this equipment please contact:

UAB „Refra“,  
Dariaus ir Gireno str. 179, LT-02189 Vilnius, Lithuania,  
Tel. +370 5 2031020, info@refra.eu www.refra.eu

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## • CERTIFICATIONS

**Directive 97/23CE** The entire range of REFRA® buffer tanks are manufactured in accordance with 97/23 CE directive, and it has lower levels than the threshold values described as follows:

- Receptacle for water containment (group 2) with maximum permitted temperature less than 0.5 bar over normal atmospheric pressure (1033 mbar) maximum operating pressure PS < 10 bar, product PS x V < 10 000 (bar x l).
- Piping for water containment (group 2) with vapour pressure at maximum permitted temperature less than 0.5 bar over normal atmospheric pressure (1033 mbar), minimum operating pressure PS < 10 bar, diameter DN > 200 and product PS x DN < 5000 bar x mm.

Therefore all REFRA® buffer tanks in accordance with Art. 3.3, must not be CE marked. However REFRA® guarantees standard manufactured procedure as established by directive, which ensures user safety and manufacturer identification. Furthermore REFRA® working based on quality management standards LST EN ISO 9001:2008.

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## • SAFETY



**This product must be installed and serviced by a qualified professional.**

This buffer tank has been designed for water storage at the maximum pressure and temperature listed on the tank data label. Any installations that do or have the ability to exceed the listed ratings are UNSAFE and can cause serious bodily injury or death, flooding and property damage. The manufacturer of this product does not accept liability for personal injury or death that results from improper use, installation, or operation of this tank.

- Overpressurization can result in serious personal injury or death as well as serious damage to the tank and its surroundings. Take necessary precautions to protect the tank, the environment it is in and those living and working around it
  - Tank designed for indoor use only
  - The installation must provide adequate means of drainage and be in a location where leaking or flooding will not cause property damage.
  - The manufacturer of this product does not accept liability for property damage that results from improper use, installation or operation of the tank or from failure to provide adequate drainage.
  - Stagnant water promotes the growth of bacteria. Potable water tanks must be drained if they are going to be left unused for extended periods of time.
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## • GUARANTEE

The Refra guarantees that the buffer tank to the published specifications and safety requirements, subject to the rules of consumer use, transportation, storage, installation and operation.

The performance standards and quality of tank corresponds to the best achievements for today's engineering practice.

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## • GUARANTEE LIABILITY

Warranty is usually stipulated in the contract of sale.

If the contract does not otherwise specify, the manufacturer REFRA® provides warranty for 2 years from the date of delivery, regardless of whether or operated installation.

Warranty and contract do not restrict the rights of the buyer.

Warranty liabilities apply to all defects caused by the fault of the manufacturer.

The guarantee applies exclusively to units and their parts.

The guarantee applies only to units that had been stored, installed and operated in accordance with the requirements set forth in the manufacturer's instructions and in the presence of the duly warranty coupon, copy of which is sent to the supplier and the original filed with the buffer tank.

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• **WARRANTY SERVICE**

Confirming the discrepancy, the manufacturer fixes the defect consistent way by the agreed time.  
Additional costs caused by work conditions, difficult access to the equipment, etc. the cost of consumables will not be compensated.  
Defective parts are the property of the manufacturer and should be returned to him.

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• **GUARANTEE PAYMENT**

The decision to guarantee compensation to the manufacturer takes on the basis of examination of defective parts, except the obvious violation of the defect, or manufacturing technology.  
The total amount of the claim can not exceed the cost of the equipment.  
The manufacturer does not compensate for the cost of shipping the defective parts.

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• **WARRANTY DOES NOT APPLY**

In case where:

- The buyer does not adhere to the contract and payment terms,
  - Machine is properly transported,
  - The machine is operating in the system, a project which meets the requirements,
  - foreign objects inside the system,
  - the machine was operated in the bypass security systems and security,
  - defects arise as a result of delayed elimination of other faults,
  - unit is operated without adhering to the manufacturer's instructions or to change its design without the written consent of manufacturer,
  - damage due to force majeure ( lightning, fire, flood, earthquake, war, etc.).
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• **WARRANTY CLAIMS**

Claims must be accompanied by evidence that the defect is detected during the warranty period.  
Warranty claims should be sent directly to manufacturer.

Companies that are not direct importers, end-operating organizations warranty claims on equipment REFRA © should be sent to sellers of equipment.

In case of unsubstantiated claims, costs associated with diagnostic, equipment review and departure of the expert paid by the buyer at the rates established by the service center.

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• **CLAIMS**

On the subject of complaints please contact your nearest sales.

Back to details is not an application for its replacement.

Order for the purchase of new parts to replace defective send the nearest distributor or regional sales office.

Application must include the name and part number, model number and serial number of the unit.

If the result of direct inspection of the returned items will be found that the refusal is a consequence of a defect in material or workmanship, and falls under warranty, purchase order will be filled by the manufacturer.

For all the details are returned to the manufacturer, you need to prepay the cost of transportation.

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• **RECYCLING**

Materials used for packaging are not harmful to the environment. They can be recycled according to local requirements or burned.  
Plastic parts, which can be recycled, shall be labelled as follows:



- |                    |   |
|--------------------|---|
| PE - Polyethylene  | - the outer protective coating, bags of manuals |
| PP - Polypropylene | - packaging fasteners                           |
| PS - Polystyrene   | - protective packaging components               |

To ensure the lowest environmental contamination, please use the least harmful cleansers for cleaning the device.

**Disposal of waste**

Please hand over device repair and maintenance waste in accordance with the regulations in force in the country in which the device is operated.

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**REKLAMACIJA SU GARANTINIAIS REIKALAVIM AIS  
THE RECLAMATION WITH WARRANTY DEMANDS  
РЕКЛАМАЦИЯ С ГАРАНТИЙНЫМИ ТРЕБОВАНИЯМИ**

№..... 2016

**IMONĖ  
COMPANY  
ФИРМА** .....

<p><b>A</b> Gaminys, kuriam pateikiami garantiniai reikalavimai <i>Unit, that meets the requirements for guarantees</i> <i>Изделие, которому предъявляются требования по гарантии</i></p>	
1	<p>Užsakymo Nr <i>Order No.</i> <i>Заказ Но</i></p>
2	<p>Įrenginio modelis <i>Unit model</i> <i>Модель машины</i></p>
3	<p>Serijinis Nr. <i>Serial No</i> <i>Серийный Но</i></p>
4	<p>Gauta pagal invertisą, data <i>Consignee document: invoice, other, date</i> <i>Получено по инверису, его дата</i></p>
5	<p>Aktas paleidimo į eksploataciją <i>Act of commissioning</i> <i>Акт ввода в эксплуатацию</i></p>
<p><b>B</b> Neatitiktis, gedimas <i>Discrepancy, the defect</i> <i>Несоответствие, дефект</i></p>	
6	<p>Sugedo arba nėra <i>Damaged or missing</i> <i>Повреждено или отсутствует</i></p>
7	<p>Defektinės detalės Nr. <i>Article of the defective part Nr</i> <i>Артикул дефектной детали №</i></p>
8	<p>Aptikta aplinkybėmis <i>Detected under conditions</i> <i>Обнаружено при условиях</i></p>
9	<p>Priedamos nuotraukos, kiekis, num. <i>Attached photos, number, quantity</i> <i>Приложенные фотографии, номер, кол.</i></p>
10	<p>Pastabos <i>Notes</i> <i>Примечания</i></p>

Pareiškėjo atsakingas asmuo

Responsible person

Ответственное лицо компании заявителя

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Explonations for completing the form.

In the title part, please state your company ,number of complaints in the accounting system of outgoing documents of your company and the date of registration.

Next in the following graphs fill as follows:

Part A please spicity the information to identify the product and its commissioning.

Part B please specify the information to indicate a defect, the operating parameters, the conditions at the time of the onset of failure.

Part A:

1 – please specify the order number, according to which the vechicle was manufactured,

2 –unit model (from the nameplate on the technical data package),

3 – unit serial number,

4 – invoice number, on which the vechicle is obtained the numbet and date of invoice – invoice payment,

5 – act of commissioning with the date and the company that performed the installation.

Part B:

6 – please specify the name of defect or missining, the underdelivered details,

7 - article, code, other information needed for ordering of defect or missing, the underdelivered details

8 - when found the materials missing.

9 – number and quantity of attached photos,

10 – please note the additional, necessary, in your opinion, additional information.

## WARRANTY CARD No.

**PRODUCT:** *Combi tank*

**MODEL:**

**SERIAL NUMBER:**

**NAME AND ADDRESS OF THE ORGANISATION:**

**JSC "Refra"**

**REGISTRATION ADDRESS - IMONIU STR.21, LT-35101 PANEVEZYS, LITHUANIA**

**MANUFACTURE ADDRESS - S. DARIAUS IR S. GIRENO STR.179, LT-02189 VILNIUS, LITHUANIA**

**Tel. +370 52031023, Fax. +370 52105410 info@refra.eu www.refra.eu**

**DATE OF SALE** \_\_\_\_\_

**THE SELLER'S SIGNATURE** \_\_\_\_\_

**STAMP OR SEAL  
OF THE TRADING ORGANISATION**

**STAMP OF ACCEPTANCE**

*The warranty terms AGREED AND ACCEPTED:*

**BUYER** \_\_\_\_\_ (signature)

*Warranty period: Twenty four months from the date of purchase*

For all issues, including warranty repair, order of spare parts, contact:

**JSC "Refra"**

**REGISTRATION ADDRESS - IMONIU STR.21, LT-35101 PANEVEZYS, LITHUANIA**

**MANUFACTURE ADDRESS - S. DARIAUS IR S. GIRENO STR.179, LT-02189 VILNIUS, LITHUANIA**

**Tel. +370 52031023, Fax. +370 52105410 info@refra.eu www.refra.eu**

When giving the notice of fault, please send an approved copy of the commissioning certificate and a written report including the following information:

1. Name of the customer organization and contacts of the responsible person;
2. Device fault symptoms;
3. An obligation to pay for spare parts and/or works in case of disclaimer of a warranty case.
4. A copy of proof of purchase of the product (waybill, receipt).
5. A copy of the filled-up warranty card.

*Mark of return or replacement of the product:*

**Date:** \_\_\_\_\_

**Signature:** \_\_\_\_\_

TO CONFIRM BEGINNING OF WARRANTIES THE COMPLETED FORM WE WENT INTO THE ADDRESS OF THE MANUFACTURER