
Operating Instructions

destillo Mixed-Bed Demineraliser Stainless Steel Model

destillo

D12 dE kpl

D17 dE kpl

D22 dE kpl

D26 dE kpl

D46 dE kpl

D100 dE kpl



Translation of original instructions

Overview of contents

General Information	A
Transport and Storage	B
Technical data/ Product description	C
Set-up and Assembly	D
Placing the system in service / Taking it out of service	E

Appendix

Dimensional Drawing destillo d12-d100 dE kpl	I
Dimensional Drawing Conductivity Meter type 330 dE	II
Operating Instructions type 330 dE	III

Imprint

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Content Chapter A

1	Notes on using the Operating Instructions	2
2	General safety information.....	3
2.1	Explanation of symbols and references.....	3
2.2	Additional safety requirements	3
2.3	Usage in accordance with intended purpose	3
2.4	Inappropriate Usage.....	3
2.5	Operating staff.....	3
2.6	Residual dangers.....	4
2.7	Bringing the system to a stop in the event of an emergency	4
2.7.1	Safety information for maintenance task.....	5
2.8	Disposing of system parts and operating materials.....	5
2.9	Unauthorized conversion and manufacturing replacement parts	5
2.10	Warrantee claims and liability.....	5

1 Notes on using the Operating Instructions

Purpose:

The Operating Instructions are intended for users of the system and contain information on how to operate and maintain the system safely and reliably.

Availability:

The Operating Instructions must always be available at the place where the system is in use.

Subdivision:

The Operating Instructions consist of a number of chapters named by letters of the alphabet. An outline of all the chapters appears on Page 1.

The header and page numbering, along with the letter identifying each chapter, make it easier for you to orient yourself.

For information on the content of a specific chapter, please refer to the contents on the first page of that chapter.

Conventions/abbreviations:

OI	Operating Instructions
TD	Technical Documentation
CY	Conductivity
-	Enumerated items
☞	Steps to be performed

2 General safety information

2.1 Explanation of symbols and references



This symbol refers to an immediate danger that threatens the safety and life of persons.

Failure to observe these notices will have severe consequences on health and safety, including life-threatening injuries.



This symbol refers to a possible danger that threatens the safety and life of persons.

Failure to observe these notices may have severe consequences on health and safety, including life-threatening injuries.



This symbol refers to a possibly hazardous situation.

Failure to observe these references may result in minor injuries and/or damage to property.



This symbol points out important information for working with the system in a proper manner.

Failure to observe these references may result in malfunctions in the system or disturbances in the environment.

2.2 Additional safety requirements

Country-specific requirements, standards and regulations must be observed.

2.3 Usage in accordance with intended purpose

The destilto-unit is used for demineralization and purification of potable water.

The system must not be operated unless it is in proper working order. Any malfunctions must be rectified immediately.

2.4 Inappropriate Usage

The foreseeable misuse of the device results from all actions, on and with the device, which are not listed in this manual and exhaustively described and counteract the appropriate usage. For example, any operation with a liquid other than potable water and also too high operating temperatures.

2.5 Operating staff

Only persons who have read and understood these Operating Instructions are permitted to operate the system. When operating the system, it is particularly important to observe the safety information strictly.

2.6 Residual dangers

Water damage

To avoid accumulation of spills caused by leaks, the area in which the system is set up must be equipped with a floor drain and/or a leak monitoring system and corresponding alarm.



Danger

Electrical shock

Do not touch electrical components with wet hands.

Before performing tasks on parts of electrical system, disconnect the system from electrical power supply.

Mechanical force

Parts of the system are under excess pressure of up to 10 bar (g). Release the pressure from the system before repairs and maintenance tasks.

2.7 Bringing the system to a stop in the event of an emergency

- ☞ Disconnect the mains plug
- ☞ Shut off the water supply
- ☞ Open deaeration valve

After remedying the damage:

- ☞ Close deaeration valve
- ☞ Open the water supply
- ☞ Connect the mains plug

2.7.1 Safety information for maintenance task

The operator must take pains to ensure that all maintenance, inspection and assembly tasks are performed by authorized and qualified professionals who have been sufficiently informed for the task at hand by thoroughly studying the Operating Instructions.

These tasks must be properly performed by professionally trained staff member.

The system must be shut down and protected from being placed in operation again unintentionally before all repair and maintenance tasks.

It is absolutely essential to observe the procedure described in these Operating Instructions for shutting down the system.

Before beginning tasks on the electrical equipment of the system, a check must confirm that power has been disconnected from the corresponding section of the system. In addition, the system must be secured to prevent it from being turned on again unintentionally.

Protective clothing suitable for the hazard at hand must be worn while performing the task.

After having finished the maintenance tasks, all safety and protective devices must be put in service again.

2.8 Disposing of system parts and operating materials

When they need to be discarded, system parts must be disposed of according to local requirements including separately, if so required.

2.9 Unauthorized conversion and manufacturing replacement parts

Conversion or modification of the system is only permitted with the approval of the manufacturer.

Original replacement parts and accessories authorized by the manufacturer enhance safety.

Use of other parts will void the warrantee.

2.10 Warrantee claims and liability

This product corresponds to the state of the art and was designed and manufactured in accordance with applicable rules of the technology, after which it was subjected to a quality control process.

If there should nevertheless be any grounds for complaint, please direct requests for replacement to the manufacturer of this product in accordance with the general terms and conditions of sale and delivery.

1 Transport and Storage



Caution

During transport, all systems must be secured against slipping and falling over!

The transport weight corresponds to the empty weight. For transport weights, please refer to the Technical Data in Chapter C/2.

The system can be damaged by frost. Because of this, the system must be protected against frost and freezing during transport and storage.

Content Chapter C

1	Technical Data	2
2	Product Description	3
2.1	Functional Description	3

1 Technical Data

destillo D_{xxdE}	12	17	22	26	46	100
capacity max (l/h)	300	700	950	1.000	1.600	2.500
at pressure p (bar)	1,3	1,4	2,0	2,0	2,5	4
capacity at 10 °dH total content (l)	1.400	2.000	2.800	4.000	6.000	13.000
capacity mol/z (Val)	5,0	7,14	10	14,28	21,40	46,42
at point of exhaustion (µS/cm)	20					
volume of mixes-bed resin (l)	12	17	22	26	46	100
connections inlet/outlet	R 3/4					
operating temperature max. (°C)	30					
ambient temperature max (°C)	40					
operating pressure max. (bar)	10					
electr. connection	220/240V-50/60 Hz					
Dimensions:						
-diameter (mm)	237	237	237	237	235	363
-height (mm)	590	670	785	885	1337	1207
weight (kg)	13	17,5	23,5	28	47	104

2 Product Description

2.1 Functional Description

The destillo-unit is used for demineralisation and purification of potable water to achieve a product of highest quality.

Because of their pressure resistivity the destillo-units suit excellently for the supply of pure water consuming installations (air humidifiers, sterilizers, washing machines), the direct supply of several consuming installations, the connection of a solenoid valve in the pure water outlet, downstream following filterunits or filtersystems, the supply of air conditioners and the combination with washing-, cleaning- and sterilization units.

Destillo mixed bed demineralisers produce demineralised water down to a conductivity of 0,1 $\mu\text{S}/\text{cm}$. The quality mixed bed resins absorbs the water-dissolved ions.

Contents Chapter D

- 1 Set-up2
 - 1.1 Requirements for the set-up location2
 - 1.2 Setting up the system.....2
- 2 Water-side connections3
 - 2.1 Necessary qualifications of the assembly staff.....3
 - 2.2 Making the hydraulic connections3
- 3 Electrical connection4
 - 3.1 Connecting the power supply4

1 Set-up

1.1 Requirements for the set-up location

- The space required for the system may be derived from the specified measurements.
- The set-up surface must be even and run horizontally.
- The room must be well ventilated and not exposed to freezing temperatures.
- To avoid accumulation of spills caused by leaks, the area in which the system is set up must be equipped with a floor drain and/or a leak monitoring system and corresponding alarm.
- The necessary electrical connections must be available on the construction side.
- The feed water connection must be provided with a shut-off valve.

1.2 Setting up the system

- ☞ Unpack the system.
- ☞ Check over the delivery for completeness and transport damage.
Any deviations or damage must be reported to the manufacturer immediately.
- ☞ Move the system carefully to the place provided for it with a suitable lifting device.

2 Water-side connections

2.1 Necessary qualifications of the assembly staff



The water-side connection must only be made by trained professional staff members.

Observe general regulations (in German-speaking countries, DIN, DVGW, SVGW and ÖKGW) as well as local installation requirements while installing the system

2.2 Making the hydraulic connections

- ☞ place the destillo unit close to the water tap
- ☞ connect the cartridge via hose to the water tap
- ☞ connect conductivity meter to the cartridge
- ☞ connect pure water outlet to conductivity meter
- ☞ connect mains plug

- ☞ open water tap



Caution

Close water tap when destillo unit is not in use, relief existing pressure in the pure water outlet. This avoids unnecessary rising pressure and prematurely aging of connecting hoses.

3 Electrical connection

3.1 Connecting the power supply

Make the power supply connection of the destillo unit via mains plug with grounding receptacle and a fuse.

Content Chapter E

1	Placing the system in service	2
1.1	Qualifications of the commissioning staff	2
1.2	Commissioning.....	2
1.3	Taking the conductivity meter in service.....	2
2	Taking the system out of service for changing the cartridge	2

1 Placing the system in service

1.1 Qualifications of the commissioning staff



The system must be placed in service by qualified professionals.

1.2 Commissioning



Before the system is placed in service, all screw connections must be retightened. Prior each commissioning of a pressure vessel, prove functioning of all shut-off valves and safety installations. There must be no pressurized hollow spaces left.

Sealing surfaces must be clean and in good condition. Connections must be thoroughly sealed. The cartridge must be deaerated, so that water is coming out of the opened deaeration screw.

1.3 Taking the conductivity meter in service



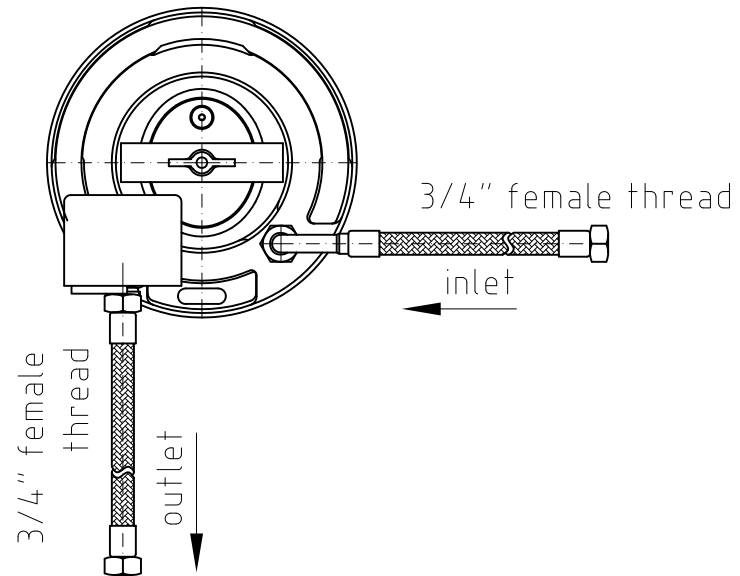
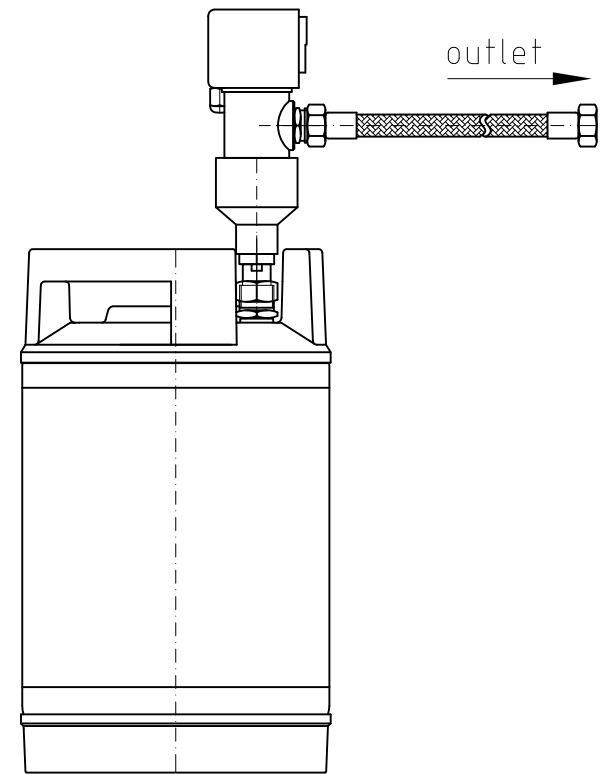
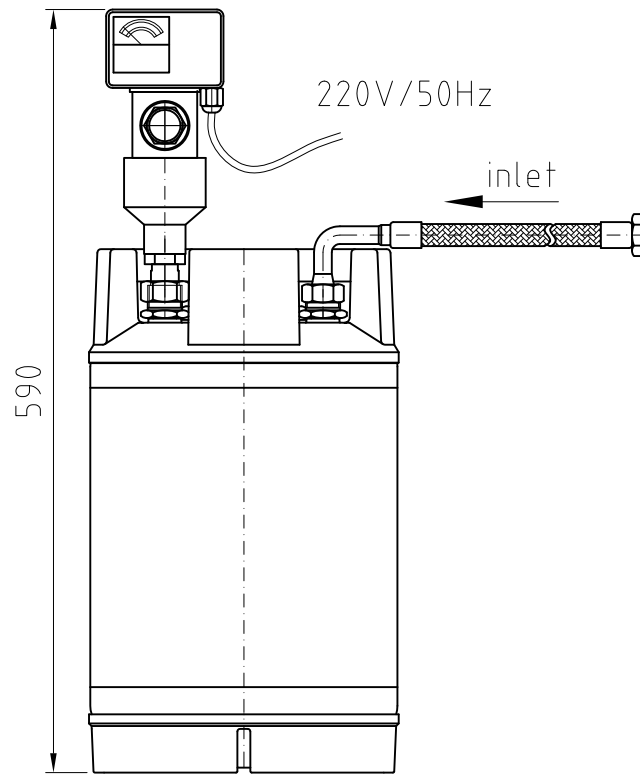
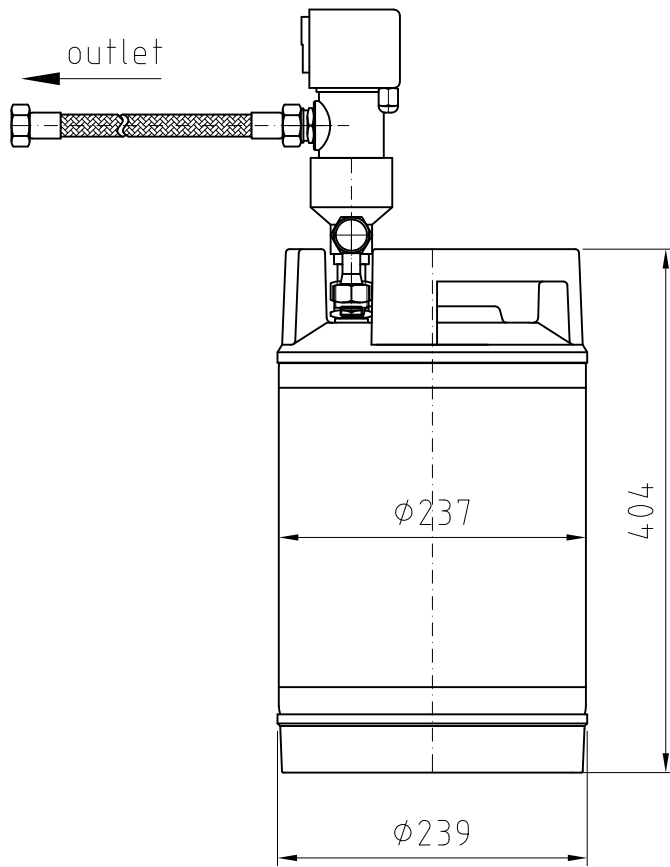
Take the conductivity meter in service according to the instructions given in the operating manual for the conductivity meter in the appendix.

2 Taking the system out of service for changing the cartridge

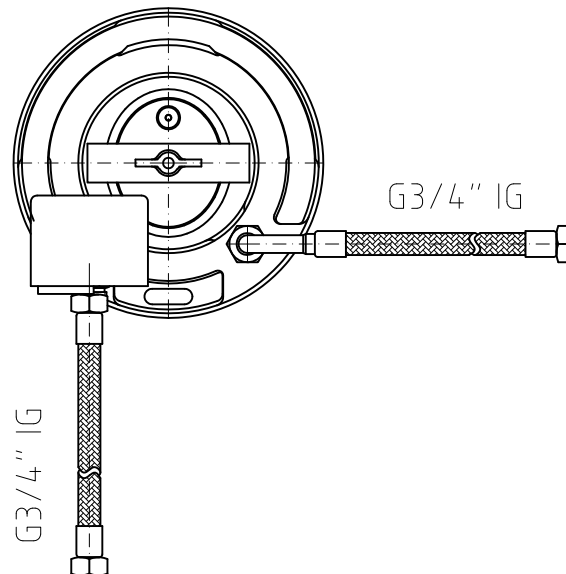
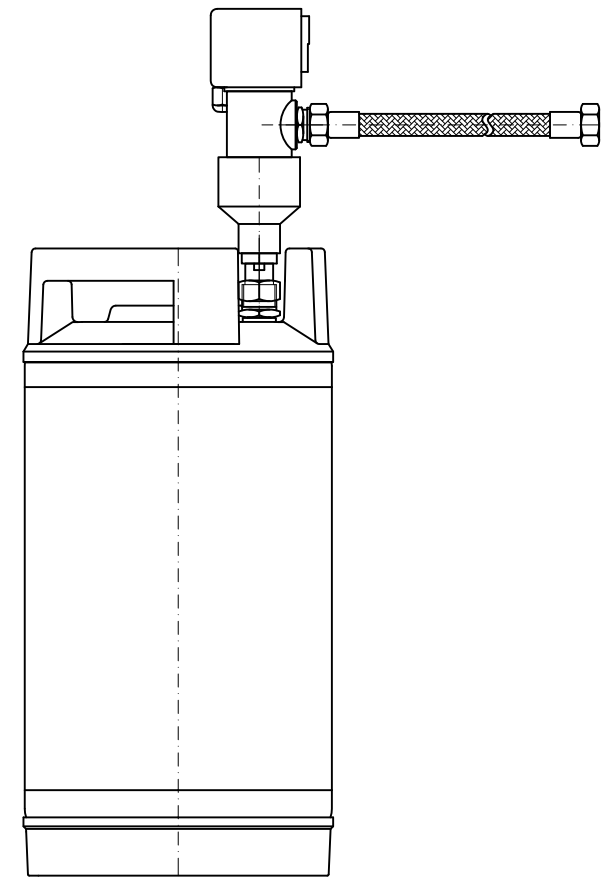
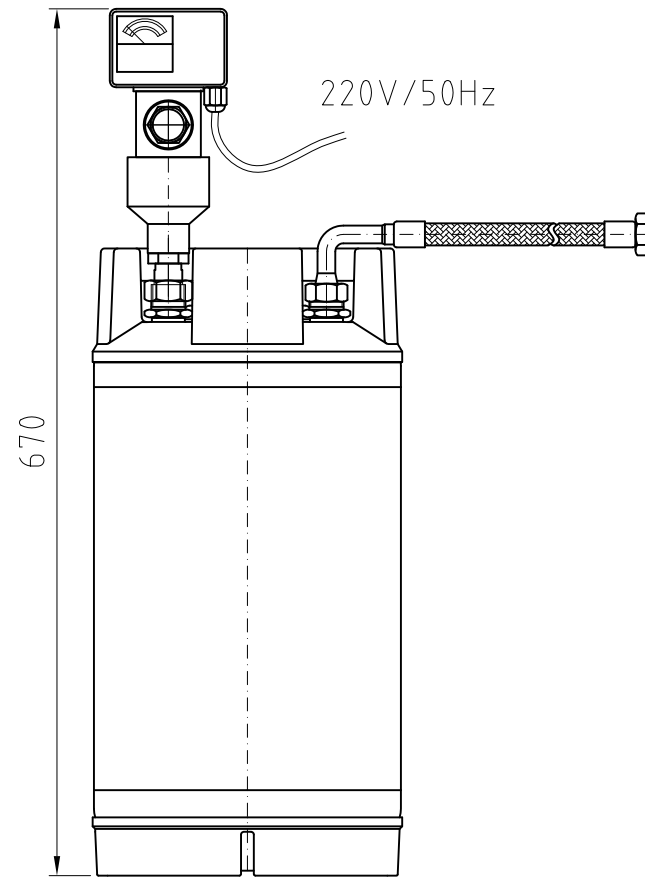
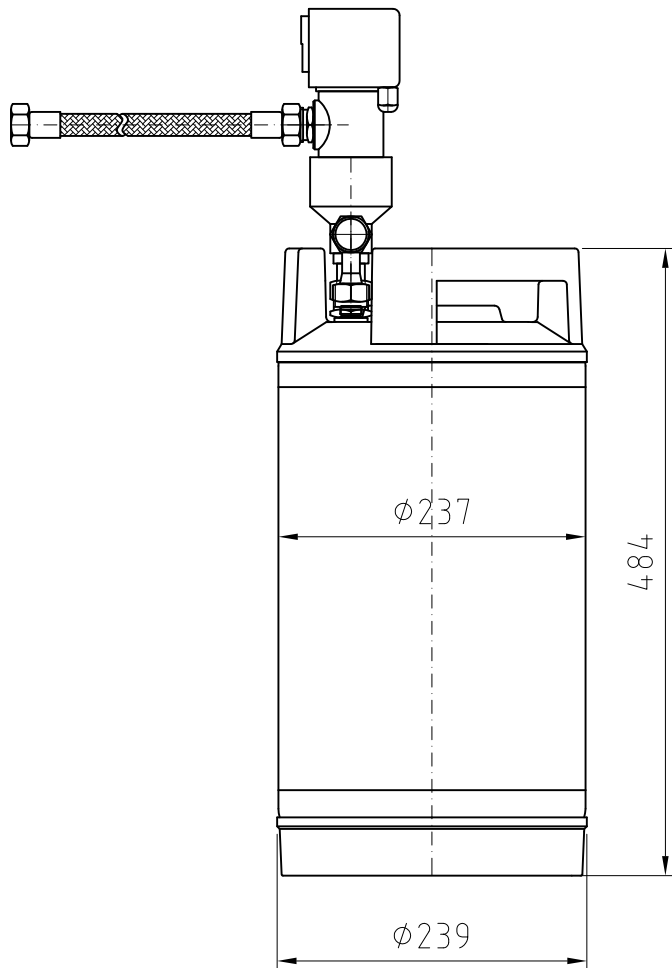


Close water tap when destillo unit is not in use, relief existing pressure in the pure water outlet. This avoids unnecessary rising pressure and prematurely aging of connecting hoses.

- ☞ Disconnect mains plug
- ☞ Close water tap
- ☞ Open deaeration valve
- ☞ Disconnect hose from water tap
- ☞ Disconnect conductivity meter
- ☞ Position the regenerated cartridge
- ☞ Connect cartridge according to Chapter D, Set up and Assembly, point 2.2
- ☞ Make sure that no residual water stays in the exhausted cartridge before shipment
- ☞ For shipment, close open connections with closures that were in scope of delivery
- ☞ For regeneration send the exhausted cartridge to the manufacturer

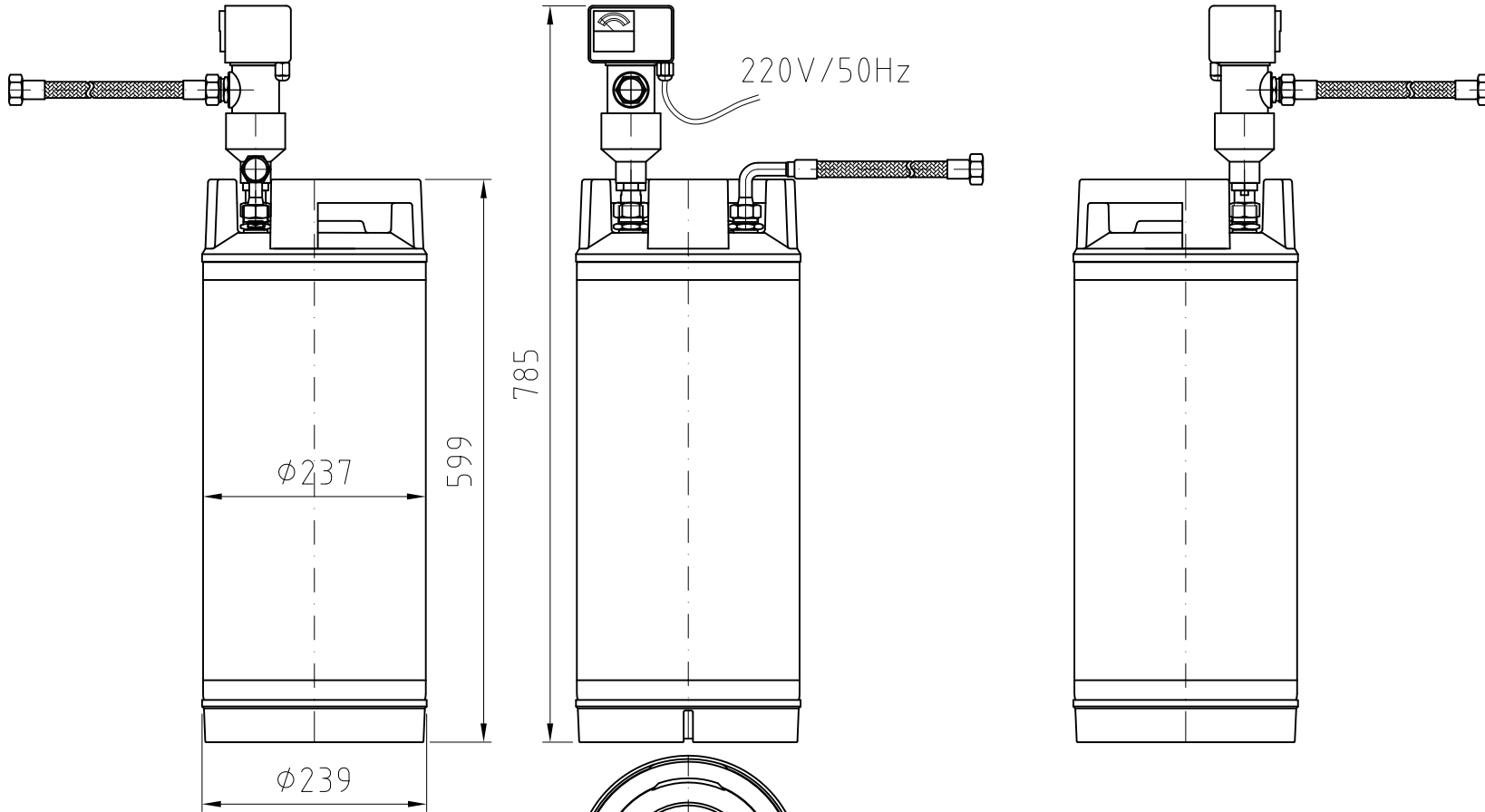


		Oberfläche	Maßstab	1:2	Position	Menge
		Datum	Name			
		Bearb.	11.01.2007	Liebscher		
		Gepr.				
		Norm.				
		HERCO-Destillo 12dE Gerät kpl.				
		00020001-10010				
		Blatt				
		Bl				
Zust.	Aenderung	Datum	Name	GW-Nr.	00020001-10010	



capacity
 at a total
 salinity of 10°dH: 2000l
 capacity:300l/h
 operating pressure:max. 10bar

		Oberfläche	Maßstab 1:2	Position	Neige
	Datum	Name			
	Bearb.	16.02.2004	Liebscher		
	Gepr.				
	Norm				
		HERCO-Destillo 17dE			
		00020054-10000			Blatt
Zust.	Aenderung	Datum	Name	GW Nr.	00020054-10000



220V/50Hz

785

599

Ø237

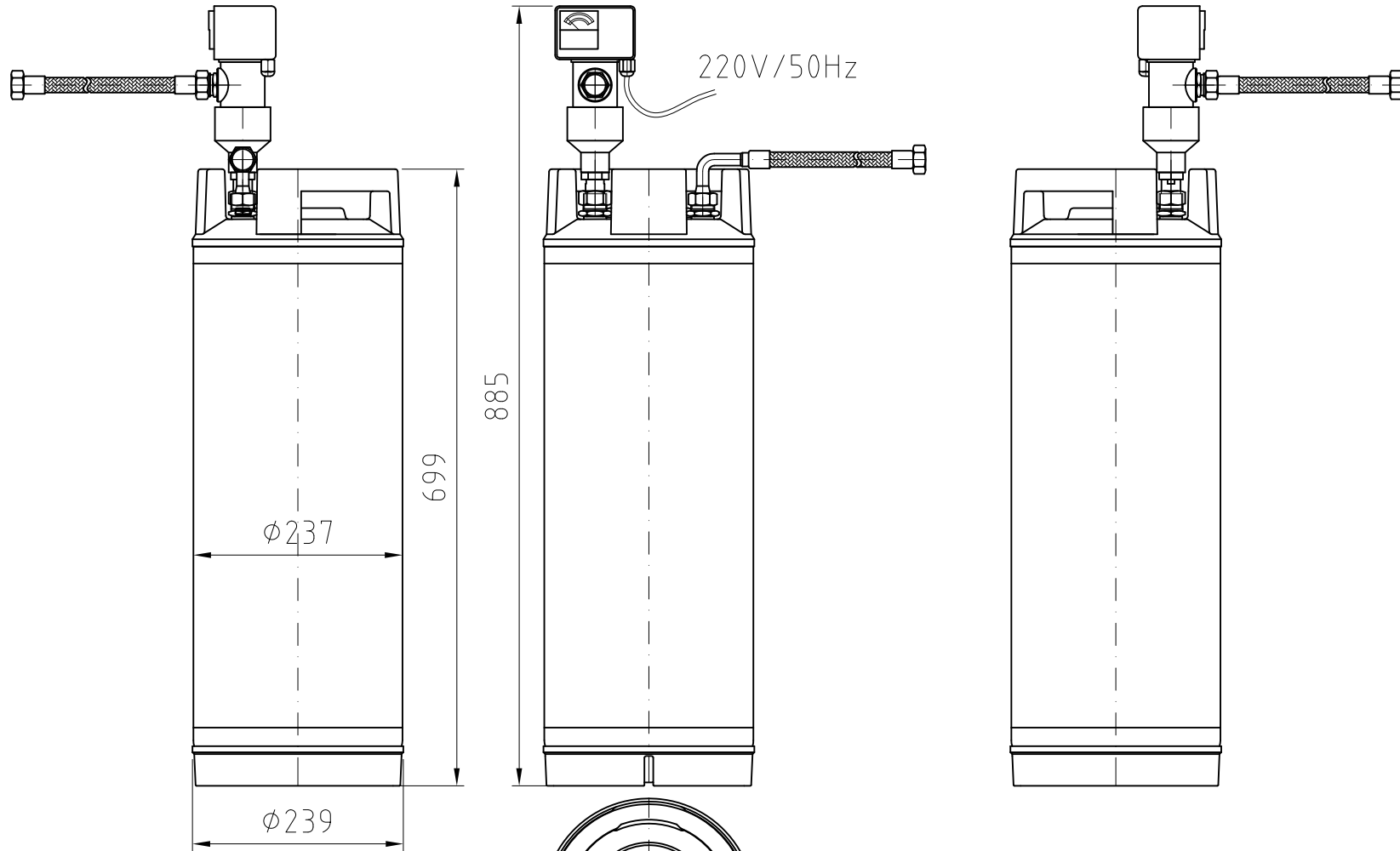
Ø239

G3/4" IG

G3/4" IG

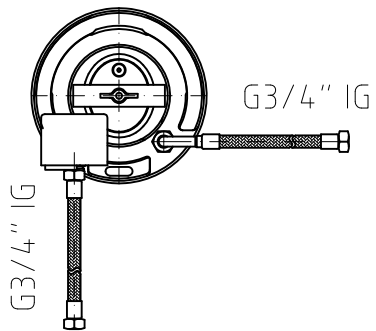
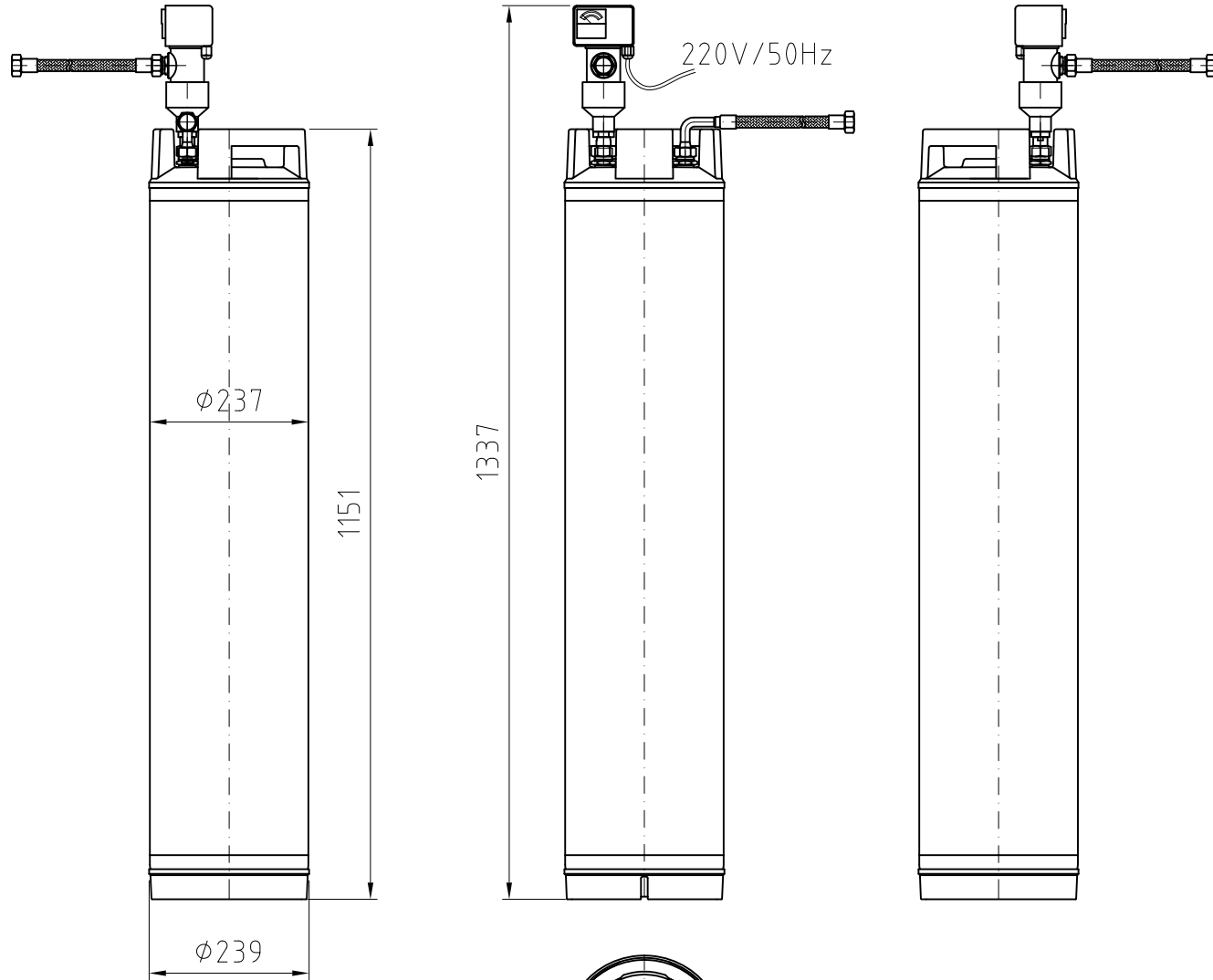
Capacity with 10° total salt content: 2800l
 achievement: 950l/h
 operating pressure: max. 10bar

		Oberfläche		Maßstab 1:5	Position	Menge
		Datum	Name	HERCO-Destillo 22dE completely		
		Bearb. 21.03.2005	Münzer			
		Gepr.				
		Norm				
				00020056-10010		Blatt
						Bl
Zust.	Änderung	Datum	Name	EDV Nr.	00020056-10010	



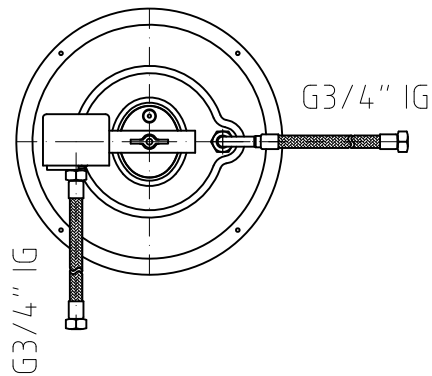
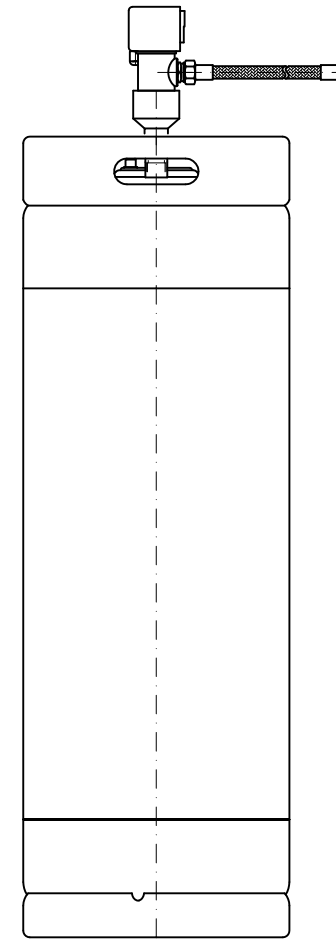
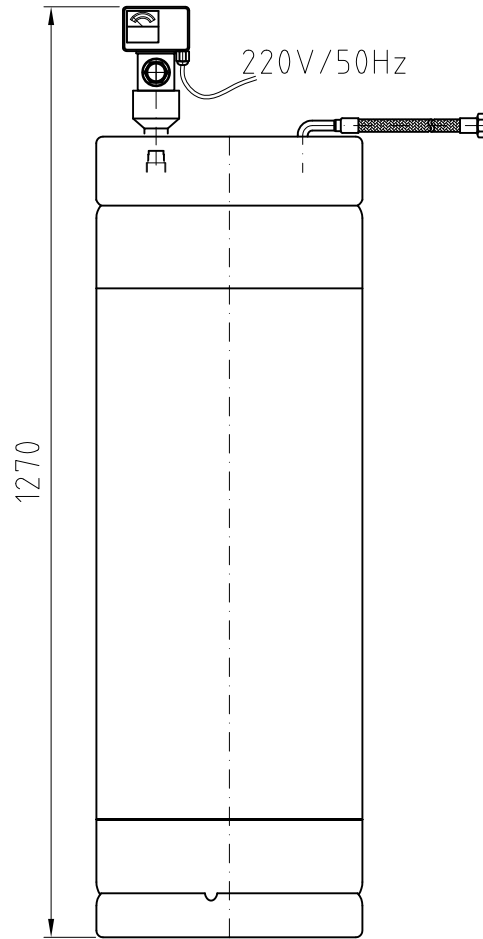
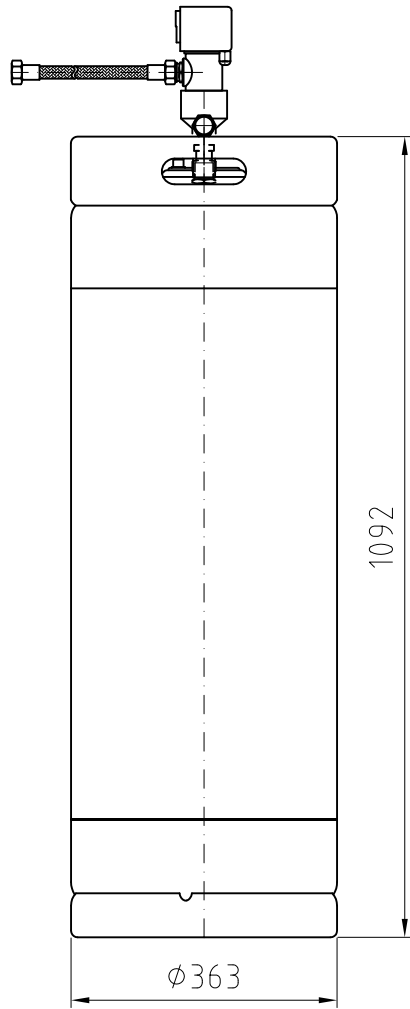
Capacity with 10° total salt content: 4000l
 achievement: 1000l/h
 operating pressure: max. 10bar

				Oberfläche		Maßstab	1:5	Position	Menge
		Datum	Name		HERCO-Destillo 26dE complete				
		Bearb.	16.02.2004	Liebscher					
		Gepr.							
		Norm							
						00020058-10000			Blatt
									Bl
Zust.	Änderung	Datum	Name	EDV Nr.	00020058-10000				



Capacity with 10° total salt content: 6000l
 achievement: 1200l/h
 operating pressure: max. 10bar

		Oberfläche		Maßstab 1:5	Position	Menge
		Datum	Name	HERCO-Destillo46dE complete		
		Bearb. 16.02.2004	Liebscher			
		Gepr.				
		Norm				
				00020060-10000		Blatt
						Bl.
Zust.	Anderung	Datum	Name	EDV Nr. 00020060-10000		



Capacity with 10° total salt content: 13000l
 achievement: 2500l/h
 operating pressure: max. 10bar

		Oberfläche		Maßstab	1:5	Position	Menge	
		Datum	Name	HERCO-Destillo 100dE complete				
		Bearb.	16.02.2004					Liebscher
		Gepr.						
		Norm						
				00020007-10000				
Zust.	Änderung	Datum	Name	EDV Nr.	00020007-10000	Blatt		
						Bl		

Conductivity Meter Type LWM 330 dE

Item- No.: 060 003

Conductivity Meter

The conductivity meter measures the electric conductivity of the desalinated water between two electrodes and displays the value on a scale in $\mu\text{S}/\text{cm}$. Measuring range from 0.1 to 100 $\mu\text{S}/\text{cm}$. An integrated stabilization ensures a genuine reading of the measured value, not influenced by changes in voltage and frequency. The adjustment screw on the display must not be turned as the unit has been calibrated.

Operation display

When the unit is not operating, the pointer of the scale is on the left side. After turning it on the pointer moves to the right and shows that the unit is in operation. The pointer stays in the green section of the scale until the supply of desalinated water is coming to an end. Then it moves into the red field.

Measuring Cell

The measuring cell creates a geometrically defined connection between medium and metering unit. The availability of a closed AC circuit is a prerequisite for the provision of measuring results. The pure water flows through the measuring cell from bottom to top. This flow direction ensures that enclosed air is completely removed from the cell so that trapped air cannot produce false readings. The electrodes are made of stainless and acid resistant steel,

- mat.no. : 1.4571
- VDE-code : X 10Cr Ni Mo T 1810

Technical Data

electric connection:	220-240 V / 50-60 Hz
power consumption:	3 – 15 VA
measuring range (analogue display):	0.1 - 100 $\mu\text{S}/\text{cm}$
accuracy:	class 2
water temperature max.:	30°C
ambient temperature:	0 °C - +40 °C
operating pressure max.:	10 bar
protection class:	IP 40
operation duration:	100 %
measuring voltage:	max. 24 V

Connection

The conductivity meter is ready for operation as soon as it has been screwed onto the deionizer cartridge and plugged in.

connection IN/ OUT: i $\frac{3}{4}$ - o $\frac{3}{4}$

