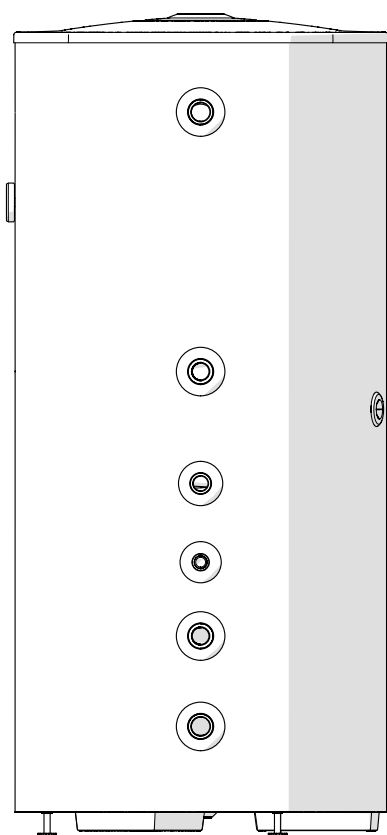


IDRA BV 200-1000

Storage cylinder

EN Installation and Operation Manual



RANGE

MODEL	CODE
IDRA BV 200	20101895
IDRA BV 300	20101897
IDRA BV 430	20101899
IDRA BV 550	20101900
IDRA BV 800	20101901
IDRA BV 1000	20101902

ACCESSORIES

For a complete list of accessories and details of their compatibility, refer to the Catalogue.

*Dear heating engineer,
We would like to congratulate you on having recommended a **Beretta** storage cylinder unit: a modern product that's capable of ensuring a high degree of reliability, efficiency, quality and safety.*

While your technical skills and knowledge will certainly be more than sufficient, this booklet contains all the information that we have deemed necessary for the device's correct and easy installation.

Thank you again, and keep up the good work,

Beretta

CONTENTS

GENERAL INFORMATION 2

- 1 General Safety Information 2
- 2 Precautions 3
- 3 Identification 3
- 4 Structure, dimensions and fittings 4
- 5 Technical specifications 5

INSTALLATION 6

- 6 Assembly of the insulation and the lining 6
- 7 Place of installation 6

TECHNICAL ASSISTANCE CENTRE 7

- 8 Maintenance 7
- 9 Cleaning and removing internal components ... 7
- 10 Recycling and disposal 7

The following symbols are used in this manual:



CAUTION! = Identifies actions that require caution and adequate preparation.



STOP! = Identifies actions that you **MUST NOT** do.

1 GENERAL SAFETY INFORMATION



Check that the product is complete, undamaged and as ordered as soon as you receive it. Report any discrepancies or damage to the **Beretta** dealer who sold it.



This product must be installed by a legally qualified heating engineer. On completion of the installation, the installer must issue the owner with a declaration of conformity confirming that the installation has been completed to the highest standards in compliance with the instructions provided by **Beretta** in this instruction manual, and that it conforms to all applicable laws and standards.



This product must only be used for the purpose for which it is designed and made, as specified by **Beretta**. **Beretta** declines all responsibility, contractual or other, for damage to property or injury to persons or animals caused by improper installation, adjustment, maintenance or use.



The product must be serviced at least once a year. Servicing must be arranged in advance with the **Beretta** Technical Assistance Centre.



All servicing and repairs must be performed by a qualified heating engineer.



If water leaks from the storage cylinder, turn off the water supply and contact **Beretta's** Technical Assistance Centre or a qualified heating engineer immediately.



If the product is not going to be used for an extended period of time, contact the manufacturer's Technical Assistance Centre to have at least the following operations performed:

- Close the shut-off cocks for the domestic hot water circuit
- Shut down the boiler connected to the storage cylinder as instructed in its own manual
- Switch the storage cylinder OFF at the control panel (if fitted) and at the mains power switch
- Drain the central heating circuit and domestic hot water circuit if there is any risk of freezing.










This instruction manual is an integral part of the product. It must be kept safe and must **ALWAYS** accompany the product, even if it is sold to another owner or transferred to another user or to another installation. If you lose this manual, order a replacement immediately. Keep the product purchase documents to be presented to the **Beretta** authorised Technical Assistance Centre to request a service call under warranty.



At the end of its life, the product should be not be disposed of as solid urban waste, but rather it should be handed over to a differentiated waste collection centre.

2 PRECAUTIONS

The operation of any appliance that uses electrical power demands that a number of fundamental safety precautions be respected. In particular:


-  Never attempt to install the system without using suitable personal protection equipment and without following all applicable occupational safety standards.
-  Do not touch the product when barefoot or wet if it has any electrical accessories installed in it.
-  Never clean or service the storage cylinder without first turning the mains power switch OFF to disconnect all electrical accessories (if fitted) from the mains electricity supply.
-  Never pull, disconnect, or twist any electrical cables coming from the appliance even if it is disconnected from the mains electricity supply.
-  Do not expose the storage cylinder to the elements. It is not designed for use outdoors.
-  Do not allow children or infirm persons to operate the system unsupervised.
-  Do not dispose of packaging material into the environment, or leave it within the reach of children, since it can become a potential hazard. Dispose of packaging material in compliance with applicable legislation.

3 IDENTIFICATION

The **Beretta IDRA BV** solar heaters can be identified by:


Data plate

Data plate
This lists the technical specifications and performance of the product.



Bertetta

Bertetta Caldaie
Via Risorgimento, 23/A
23900 Lecco (L.C.)



**BOLLITORE
BALLON
BOILER**

Modello	Matricola
Modello	Fabbricato
Modello	Serial number
Codice	Anno
Codice	Anno
Codice	Year

Massima potenza assorbita (T° Primario 80°C) _____ kW

Massima assorbibile superficie (T° Primaria 80°C) _____

Prodotto per litri all'ora (T° primaria 80°C) _____ l/h

Produzione acqua calda sanitaria (T° 20°C) _____

Domestico hot water production (at 20°C) _____

Scambio superficie _____ m²

Press. asportabile _____ bar

Calore heat exchange surface area _____

Press. esercizio max _____ bar

Max. working pressure _____

Maximum working pressure of storage cylinder _____

Capacità del bollitore _____ l

Capacità di bollitura _____ l

Capacità di bollitura _____ capacity

Potenza elettrica assorbita _____ W

Electrical consumption _____

Potenza elettrica _____ W

Electrical power _____

Alimentazione _____ V-V/Hz


Power supply _____

Depositi secondi EN 12887 _____

Depository class EN 12887 _____


Not loss according to EN 12887 _____

Collegamento da terra obbligatorio - Raccomandato a tutte obbligazioni
obligatory ground connection

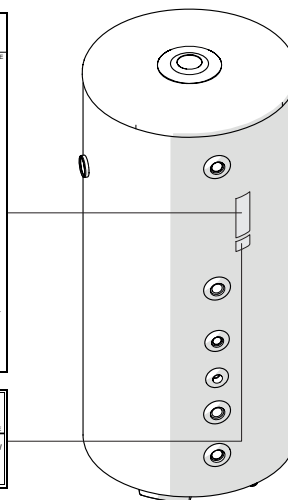


Bertetta

Bertetta Caldaie
Via Risorgimento, 23/A
23900 Lecco (L.C.)





Matricola	Max pot. assorbita
Matricola	Max power absorbed
Serial number	Power abs. by coil

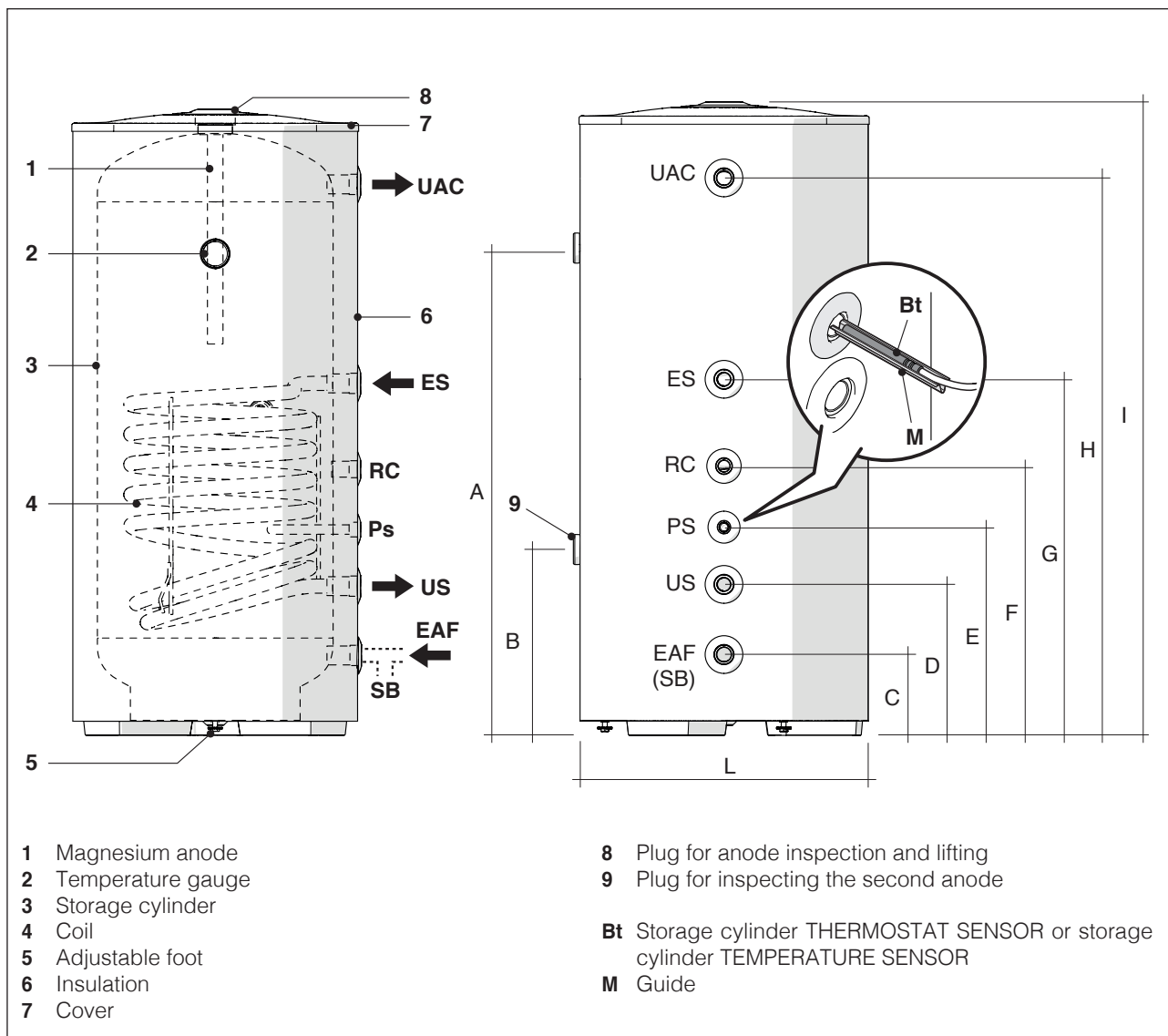


Serial number plate

This specifies the serial number and model.

-  Technical data plate and Serial number plate are to be applied (by the installer) after installation is complete.
-  If these plates or any other means of clearly identifying the product are defaced, removed or lost, proper installation and servicing may be rendered difficult.

4 STRUCTURE, DIMENSIONS AND FITTINGS



DESCRIPTION		IDRA BV						
		200	300	430	550	800	1000	
UAC	Domestic hot water outlet	1"F				1"1/4M		Ø
ES	Heat exchanger inlet	1"F		1"1/4F				Ø
RC	DHW recirculation	3/4"F				1"M		Ø
US	Heat exchanger outlet	1"F		1"1/4F				Ø
EAF (SB) Domestic cold water inlet (storage cylinder drain)		1"F				1"1/4M		Ø
Ps	Temperature sensor socket	16/175						Ø/L
A		1025	1495	1305	1645	1470	1695	mm
B		-					550	mm
C		170	170	205	205	75	75	mm
D		315	315	405	405	355	355	mm
E		435	435	555	555	600	600	mm
F		565	805	780	780	825	910	mm
G		745	965	1005	1005	1125	1125	mm
H		1170	1670	1440	1785	1705	2030	mm
I		1335	1835	1645	1990	1835	2165	mm
L		605	605	755	755	1000	1000	mm

We recommend that you install isolating valves in the outlet and return lines.

⚠ Check the efficiency of the seals when filling/refilling the storage cylinder.

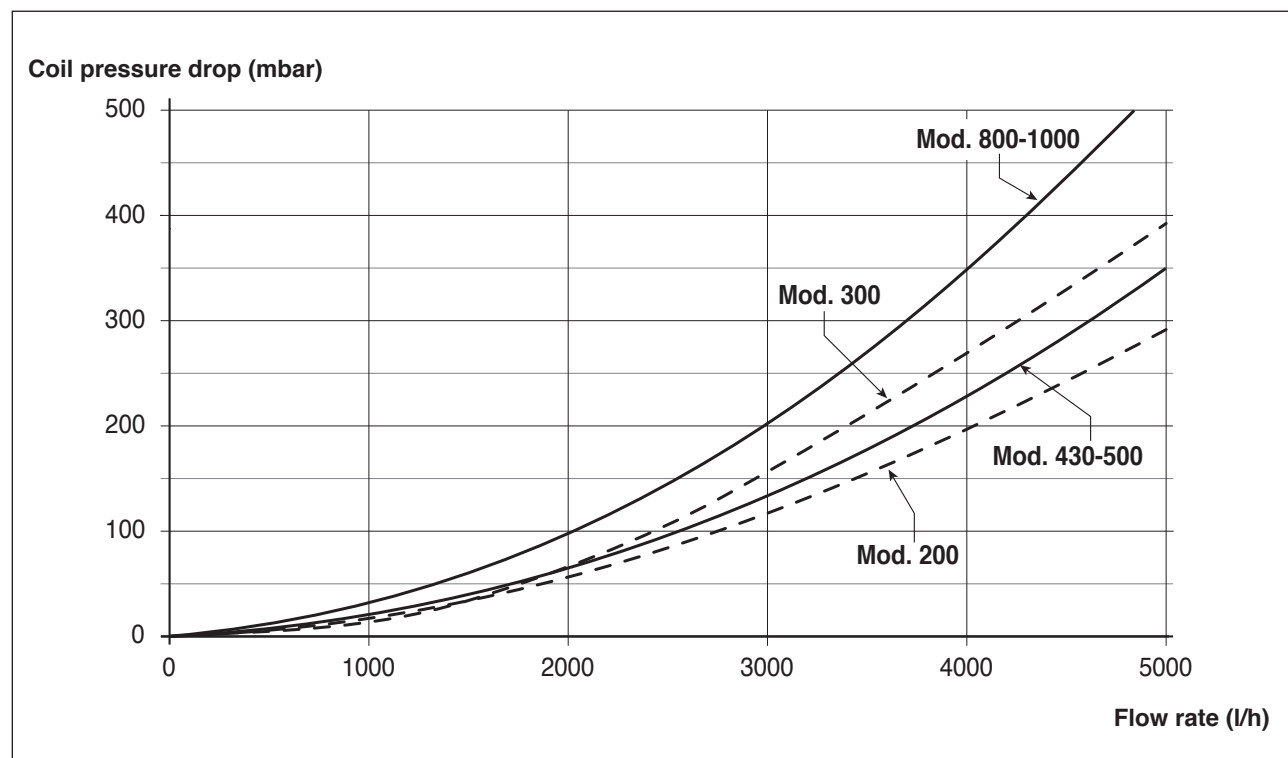
5 TECHNICAL SPECIFICATIONS

DESCRIPTION	IDRA BV						
	200	300	430	550	800	1000	
Type of storage cylinder	Vitrified						
Storage cylinder layout	Vertical						
Heat exchanger layout	Vertical						
Storage cylinder capacity	210	304	444	556	735	890	l
Diameter of storage cylinder with insulation	605		755		1000		mm
Diameter of storage cylinder without insulation	500		650		790		mm
Height with insulation	1335	1835	1645	1990	1835	2165	mm
Insulation thickness	50				100		mm
Diameter/length of first magnesium anode	26/500		33/450		33/520	33/450	mm
Diameter/length of second magnesium anode	-					33/330	mm
Diameter/length of sensor sockets	16/175						Ø mm
Maximum power absorbed							
Primary at 80-70°C	24	34	52	52	71	71	kW
Primary at 90-80°C	33	43	66	66	94	94	kW
Coil water capacity	4,8	6,9	9,8		16,30		l
Coil heat exchange surface area	0,78	1,13	1,49		2,47		m²
Domestic hot water production (ΔT 35°C)							
Primary coil at 80°C	590	831	1260	1260	1700	1700	l/h
Primary at 90°C	810	1070	1600	1600	2300	2300	l/h
Maximum working pressure of coils	10						bar
Specific flow rate over 10 minutes	35	50	66	75	100	135	l/min
Heat loss	58	68	73	84	93	98	W
Maximum working pressure of storage cylinder	10				7		bar
Maximum operating temperature	99						°C
Net weight with insulation	75	99	130	151	190,5	214,5	kg
Energy efficiency class	B	B	B	B	B	B	



This **IDRA BV** storage cylinder is delivered without a charging pump. A suitably rated pump must therefore be provided and installed separately.

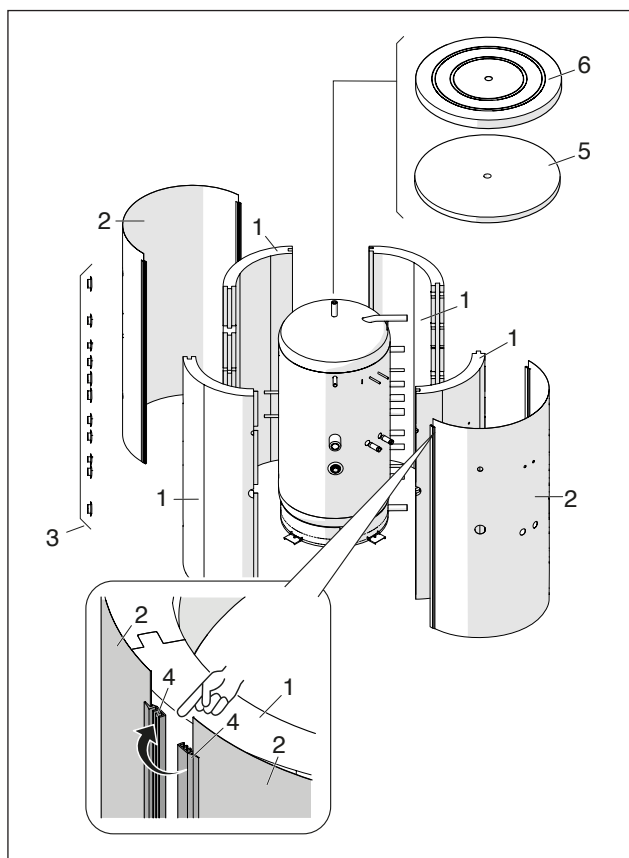
5



6 ASSEMBLY OF THE INSULATION AND THE LINING

IDRA BV 800 - 1000

The assembly of the insulation and lining components must be performed at the site of installation to facilitate passage through any doors and/or entries to the room.



Proceed as follows:

- Assemble the insulating covers (1) around the body of the heater, making sure that the engagement points on the edges are positioned correctly. The edges are not required to be closed completely
- Place the front protection plate (2) correctly on the attachments
- Put the washers on the attachments (3)
- Place the rear protection plate by closing the interlocking flaps (4) without closing completely (leave one tooth open)
- Apply the upper insulation (5) and the upper cover (6) (in order to insert the cover, exert a light and homogeneous pressure)
- Close the interlocking flaps (4) completely, which were previously left with an open tooth
- Apply the technical data plate and serial number plate

If disassembling is required, proceed in reverse order.



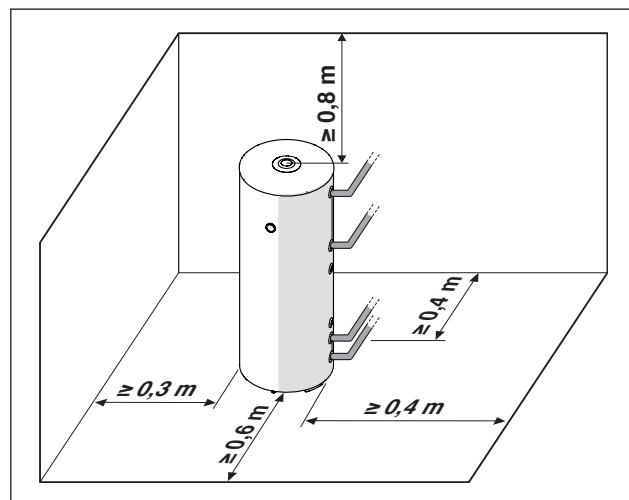
Wear suitable personal protective equipment and use suitable safety devices.



Do not dispose of packaging material into the environment, or leave it within the reach of children, since it can become a potential hazard. Dispose of packaging material in compliance with applicable legislation.

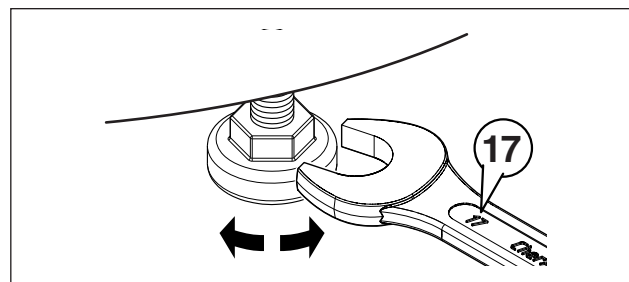
7 PLACE OF INSTALLATION

Beretta IDRA BV storage cylinders can be installed in any room where there is no specific requirement for an electrical protection rating higher than IP X0D.



Respect the minimum specified installation distances to ensure correct installation and access for maintenance.

Adjust the feet to ensure that the storage cylinder is perfectly level.



7.1 Installation in older systems and systems requiring modernisation

When the Beretta IDRA BV appliance is installed on old systems or ones that need modernising, make sure that:

- Make sure that the system is fitted with safety and control devices in accordance with applicable legislation and standards
- Make sure that the central heating circuit has been flushed out to remove all sludge and lime scale, and has been vented and seal tested
- Make sure that a suitable water treatment system is installed if the quality of the supply/recirculation water so demands. (Refer to the reference values listed in the table alongside.)

REFERENCE VALUES

pH	6-8
Electrical conductivity	less than 200 $\mu\text{S}/\text{cm}$ (25°C)
Chlorine ions	less than 50 ppm
Sulphuric acid ions	less than 50 ppm
Total iron	less than 0.3 ppm
Alkalinity M	less than 50 ppm
Total hardness	less than 35°F
Sulphur ions	none
Ammonia ions	none
Silicon ions	less than 30 ppm

8 MAINTENANCE

Perform the following operations before beginning any maintenance:

- Switch the electricity supply to the storage cylinder's valve group and to any associated boiler OFF at the main switch and at the control panel
- Close the shut-off cocks for the domestic hot water circuit
- Drain the storage cylinder's DHW (secondary) water circuit.

9 CLEANING AND REMOVING INTERNAL COMPONENTS

EXTERNAL CLEANING

Clean the outside of the storage cylinder with a soft cloth dampened in soapy water.

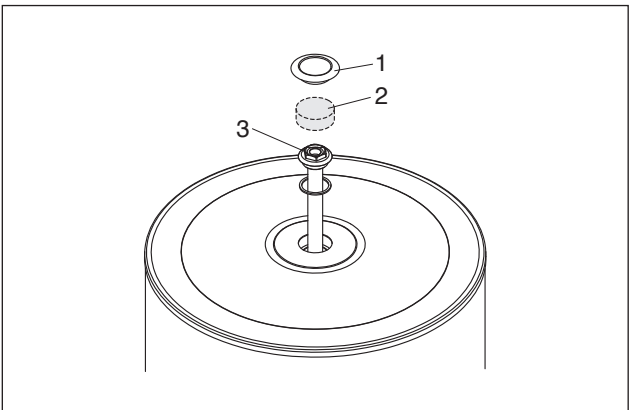


Do not use abrasive products, petrol or triethylene.

INTERNAL CLEANING

Removing and checking the magnesium anode

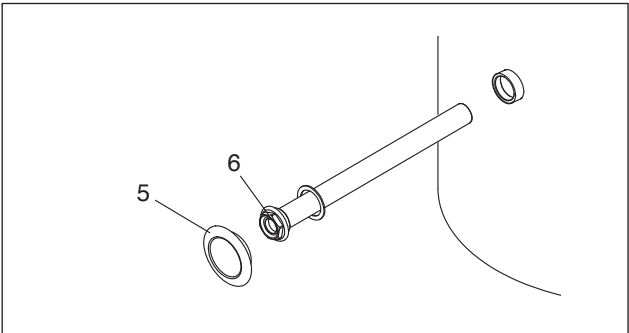
- Remove the cover (1) (removing the screws first from models 800 and 1000), and remove the insulation (2). Use a suitable wrench to unscrew the anode holder (3)
- Check the magnesium anode for wear and replace it if necessary.



MODELS IDRA BV 800 - 1000

Removing and checking the second magnesium anode

- Remove the plug (5) and use a suitable wrench to unscrew the anode holder (6).
- Check the magnesium anode for wear and replace it if necessary.



On completion of cleaning, follow the above steps in the reverse order to refit all removed parts.

NOTE: Tighten the anode plug to a torque of 25-30 Nm.

10 RECYCLING AND DISPOSAL

The device is primarily composed of:

Material	Component
steel	structural work
PU (polyurethane)	insulation (models 200 - 550)
polystyrene - polyester felt	insulation (models 800 - 1000)
PE (polyethylene)	water connection washers
ABS (acrylonitrile-butadiene-styrene)	lining and covers

At the end of the device's useful life, these components must be separated and disposed of according to current regulations in the country of installation.

**Via Risorgimento, 23 A
23900 - Lecco (LC)**

www.berettaboilers.com

The manufacturer strives to continuously improve all products. Appearance, dimensions, technical specifications, standard equipment and accessories are therefore liable to modification without notice.

