



## HR & Jumbo

...the ideal solution for all hot water needs

**Grand Hotel Cavour**  
Florence - ITALY

*Domestic hot water for the rooms and the kitchens.*



**Rostock Hospital**  
Rostock - GERMANY

*High temperature domestic hot water supplied by a battery of six Jumbo 1000s.*



**Seregno Athletic Centre**  
Seregno - ITALY

*Domestic hot water for the sports variety, gymnasiums and pools.*



**Wrexham Maelor Hospital**  
North Wales - UNITED KINGDOM

*Hot water for all the installations.*



## ARCHIMEDES

As a leader in the design and manufacture of hot water generation systems, ACV has extensive experience in sizing installations. This know-how has been translated into a simple and effective software tool, Archimedes. This tool enables the professional to calculate hot water demands for a large variety of applications (hotels, hospitals, athletic centres, campsites, sanitary blocks, industrial processes,...): after defining the application data, Archimedes proposes a choice of several configurations to the user and supplies the technical file corresponding to the selected configuration.

Your ACV representative will be glad to demonstrate Archimedes for you. With ACV, the project design, the installation of the hot water generating system and its operation couldn't be simpler!



# hr & jumbo

**TANK IN TANK WATER HEATER MADE OF STAINLESS STEEL**

Ideal for all commercial and industrial applications

Ample hot water supply

Self-descaling

Anti-legionellae, Anti-bacterial,

Low maintenance

Minimal space requirements



## They selected ACV:

- Atrium Palace in Rhodes, GREECE
- De Dijk Sauna & Beauty Salon in Dendermonde, BELGIUM
- De Lovie Centre for Handicapped Children in Poperinge, BELGIUM
- Formula 1 race track in Silverstone, UNITED KINGDOM
- McDonald's Restaurants, UNITED KINGDOM
- Mediatheque and Library of Roanne, FRANCE
- Hôtel Cavour in Florence, ITALY
- La Pedrera in Barcelona, SPAIN
- Wilkinson Farm in New Jersey, USA

DISTRIBUTOR

ACV accepts no liability for consequences arising from any inaccuracies in the transcription or printing of this document. In the interest of continuous improvement of its products, ACV reserves the right to change the technical characteristics and specification of its products without prior notice.



*excellence in hot water*

**ACV INTERNATIONAL nv/sa**  
Kerkplein, 39  
B-1601 RUISBROEK  
TEL.: +32 (0)2 334 82 20  
FAX: +32 (0)2 378 16 49  
E-MAIL: [international.info@acv.com](mailto:international.info@acv.com)  
[www.acv.com](http://www.acv.com)



*excellence in hot water*



Tank in Tank  
JUMBO 1000

+

HeatMaster®  
201

4010 L in 10'  
8955 L first hour

2.5 m<sup>2</sup>

## MAXIMUM GENERATION AND MINIMUM FLOOR SPACE

For all applications that demand a large volume of hot water generation and a high heating output, ACV proposes a combination of water heater models **HR & Jumbo**, together with the HeatMaster®.

This solution combines the advantages of large storage capacity with those of instantaneous generation. It eliminates all of the problems associated with space and maintenance requirements and reduces operating costs while ensuring outstanding domestic hot water performance levels.



## MODULARITY

The **HR** and **Jumbo** water heaters can be installed in battery formation. A kit is available for connecting the primary circuits in parallel (for HR 321 and HR 601 only).



## EASE OF INSTALLATION

The **Jumbo** water heaters fit through an 800mm wide doorway. To make it easier to access the heating room, the casing and insulation are furnished separately.

## TANK IN TANK CONCEPT

### Large heat exchange surface

Reduced refill time and energy consumption with minimum space requirements

The hot water tank is made of stainless steel. It constitutes the inner tank of the Tank in Tank water heater, completely immersed in the primary water of the heating circuit.

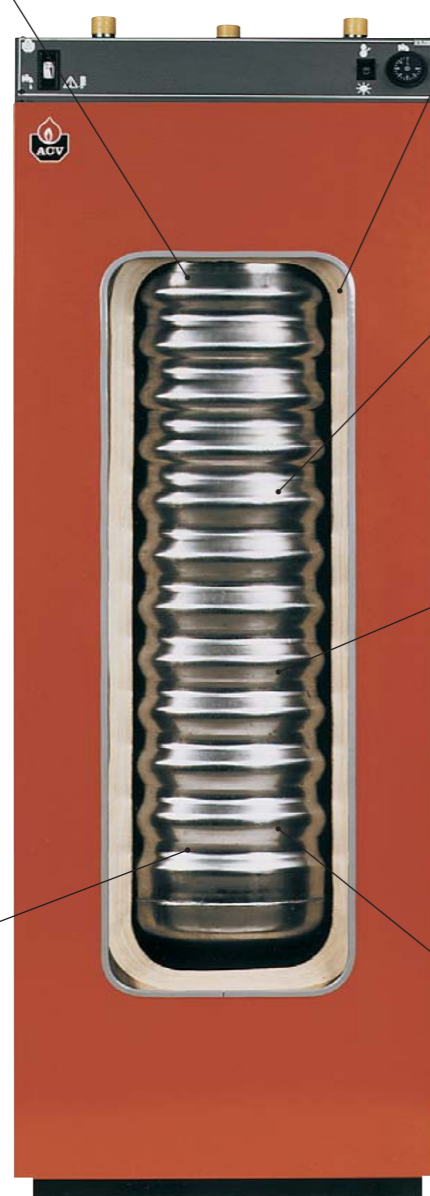
Its large heat exchange surface (1.5 to 2.5 times more than that of a traditional coil) enables it to heat a large quantity of domestic hot water in a very short time, which reduces the volume of water stored and limits energy losses.

In addition, the large heat exchange surface reduces the number of stop/start cycles of the boiler supplying the water heater. This improves the overall energy efficiency of the installation, minimises harmful emissions (NO<sub>x</sub>, CO) and extends the service life of the boiler.

### Stainless steel

Corrosion resistant

The stainless steel renders the hot water tank exceptionally resistant to corrosion. The HR 321 and HR 601 models are also available in stainless steel Duplex resistant to corrosive water containing up to 2.000 mg of chlorides per litre.



### Optimal insulation

Reduced static loss, minimal energy consumption

The **HR** models are completely insulated with rigid polyurethane foam that provides a high thermal insulation coefficient. The **Jumbo** models have a thick layer of glass wool insulation.

### Self-descaling

Long service life, consistent efficiency over time

The corrugated walls expand and contract in response to pressure variations and prevent lime scale deposits from forming, which ensures consistent efficiency over time.

### Anti-legionellae

Hot water safety

The large heat exchange surface of the tank, which is completely immersed in the primary water, makes it possible to maintain the hot water at a uniform temperature of at least 60°C, thereby preventing the formation of legionellae.

The Tank in Tank system eliminates the need for anode protection, another potential source of bacterial development.

### Low maintenance

Low cost of operation

Thanks to their stainless steel tanks, the **HR** and **Jumbo** water heaters require no protection anode and the self-descaling feature eliminates the need for regular descaling.

## TECHNICAL CHARACTERISTICS

Models		HR 321	HR 321/2	HR 321/3	HR 601	HR 601/2	HR 601/3	JUMBO 800	JUMBO 1000
Total capacity	L	318	636	954	606	1212	1818	800	1000
Primary capacity	L	55	110	165	161	322	483	125	160
Heat exchange surface	m <sup>2</sup>	2,65	5,3	7,95	3,58	7,16	10,74	4,56	5,5
Pressure loss	mbar	81	96	111	92	107	122	96	101
Primary flow rate	L/60'	6900	13800	20700	7200	14400	21600	8600	9600
Boiler connection	∅	2"	2"	2"	2"	2"	2"	2"	2"
Hot water connection	∅	1" ½	1" ½	1" ½	1" ½	1" ½	1" ½	2"	2"

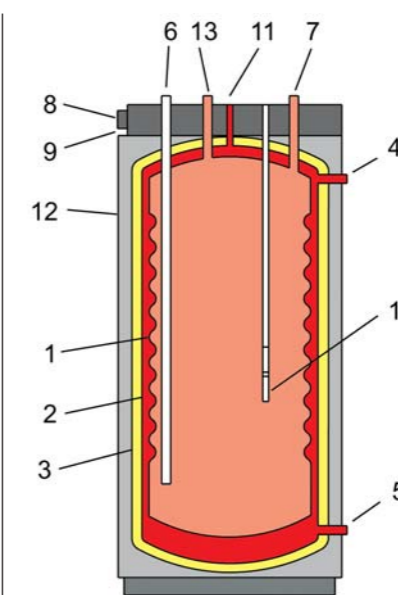
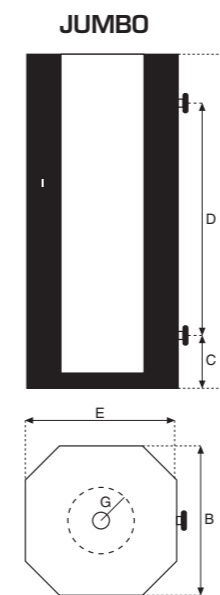
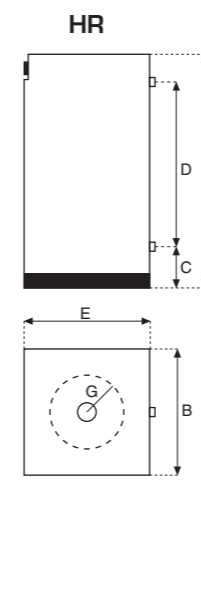
### Hot Water Performance Data (output temp. 85°C – cold water inlet temp. 10°C)

Peak flow (t = 40°C)	L/10'	922	1844	2765	1345	2690	4036	1881	2265
Peak flow (t = 60°C)	L/10'	504	1008	1512	706	1412	2118	961	1145
Peak flow (t = 40°C)	L/60'	2732	5466	8197	3437	6874	10311	4270	4940
Peak flow (t = 60°C)	L/60'	1402	2804	4206	1733	3466	5199	2124	2438
Continuous flow (t = 40°C)	L/h	2172	4345	6517	2511	5021	7532	2868	3210
Continuous flow (t = 60°C)	L/h	1077	2154	3231	1232	2464	3696	1395	1552
Absorbable output	kW	76	152	228	88	176	264	100	112

### Maximum operating pressure in bars (primary/secondary)

• HR 321 and 601: 4/10 • HR Duplex 321: 6/10 • HR Duplex 601: 5/10 • Jumbo 800 and 1000: 5/10

DIMENSIONS		HR 321	HR 321/2	HR 321/3	HR 601	HR 601/2	HR 601/3	JUMBO 800	JUMBO 1000
A	mm	1570	1570	1570	1865	1865	1865	1915	2315
B	mm	610	1260	1910	750	1550	2350	1020	1020
C	mm	311	311	311	298	298	298	340	340
D	mm	1030	1030	1030	1328	1328	1328	1250	1650
E	mm	610	845	845	750	985	985	1020	1020
G	mm	135	135	135	135	135	135	180	180
Weight empty	kg	160	340	511	240	502	755	360	380



1. Stainless steel inner tank
2. Steel outer tank
3. Insulation
4. Primary water inlet
5. Primary water return
6. Cold water inlet
7. Hot water outlet
8. Control thermostat
9. Control thermometer
10. Control thermostat/ thermometer bulb
11. Vent
12. Metal casing
13. Domestic hot water circulation loop