



Riello 7000 Aci Plus

Hot/cold and cold-only storage systems

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RIELLO
Energy For Life

Riello 7000 Aci Plus

PRODUCT DESCRIPTION

Riello 7000 Aci Plus storage systems can be easily integrated both in traditional systems (heat generators) and where renewable sources are used (chillers, heat pumps, thermal solar systems and biomass) and it is therefore necessary to optimise the timing between energy demand and supply, through suitable storage systems. The product, supplied in a single package, is equipped with insulation suitable for hot/cold applications, particularly efficient in terms of heat dissipation. An accurate study of the tank geometries has allowed obtaining high performance in terms of stratification, heat exchange and recovery times. The hydraulic connections, with adequate diameter, allow reducing the pressure losses when working with low thermal gradients; they are positioned at different heights to allow for the simultaneous use of heat generators of different types, without affecting the stratification. Easy handling is ensured by low weight and compact size. Pre-set for additional heating elements and brackets for wall installation (only for sizes 60 and 120).
5-year warranty.

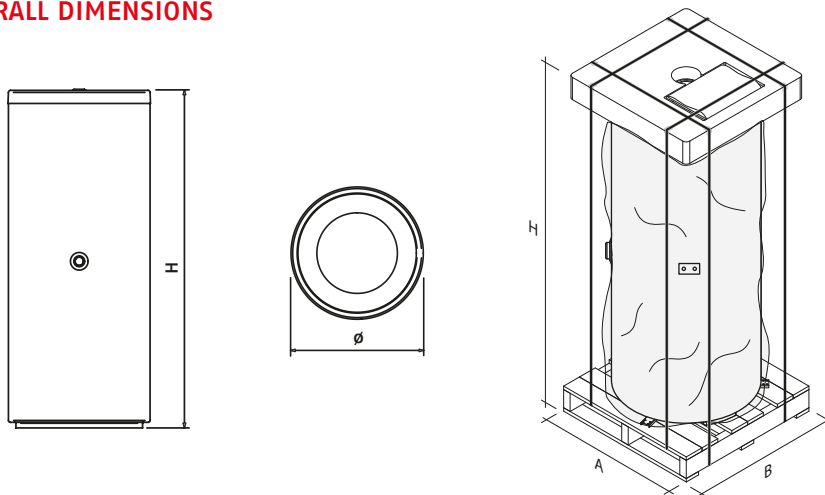
TECHNICAL DATA OF HOT/COLD MODELS

RIELLO 7000 ACI PLUS MODELS		60	120	200	300	400	500	800	1000	1500	2000
Type of storage		non-glazed									
Storage layout		vertical									
Number of hydraulic fittings		4	4	4	4	4	6	6	6	6	6
Storage capacity	l	57	123	203	277	390	473	732	855	1420	2013
Outer diameter complete with insulation	mm	400	500	550	600	700	700	990	990	1200	1300
Full height of insulation	mm	935	1095	1395	1560	1540	1840	1800	2050	2165	2480
Insulation thickness	mm	50	50	50	50	50	50	100	100	100	100
Maximum pressure of storage operation	bar	6	6	6	6	6	6	6	6	6	6
Maximum operating temperature for storage tank	°C	99	99	99	99	99	99	99	99	99	99
Dissipation according to EN 12897:2006 ($\Delta T 45^{\circ}\text{C}$, ambient temperature 20°C and storage at 65°C)	W	34	50	68	82	105	114	131	139	168	190
	kWh/24h	0.816	1.200	1.632	1.968	2.520	2.740	3.140	3.340	4.030	4.030
Heat dissipation UNI TS 11300	W/K	0.75	1.11	1.51	1.82	2.33	2.54	2.91	3.10	3.73	3.73
Energy efficiency class		B	B	C	C	C	C	C	C	C	C
Net weight with insulation	kg	25	35	45	55	95	100	115	170	185	305

TECHNICAL DATA OF COLD-ONLY MODELS

RIELLO 7000 ACI PLUS C MODELS		7000 ACI 800 PLUS C	7000 ACI 1000 PLUS C	7000 ACI 1500 PLUS C	7000 ACI 2000 PLUS C
Type of storage		non-glazed			
Storage layout		vertical			
Number of hydraulic fittings		6	6	6	6
Storage capacity	l	732	855	1420	2013
Outer diameter complete with insulation	mm	850	850	1060	1160
Full height of insulation	mm	1875	2125	2240	2555
Insulation thickness	mm	30	30	30	30
Maximum operating pressure for storage tank	bar	6	6	6	6
Maximum operating temperature for storage tank	°C	99	99	99	99
Dissipation according to EN 12897:2006 ($\Delta T 45^{\circ}\text{C}$, ambient temperature 20°C and storage at 65°C)	W	471	528	726	913
	kWh/24h	11.3	12.67	17.42	21.91
Heat dissipation UNI TS 11300	W/K	10.46	11.73	16.13	20.29
Net weight with insulation	kg	101	150	164	279

OVERALL DIMENSIONS

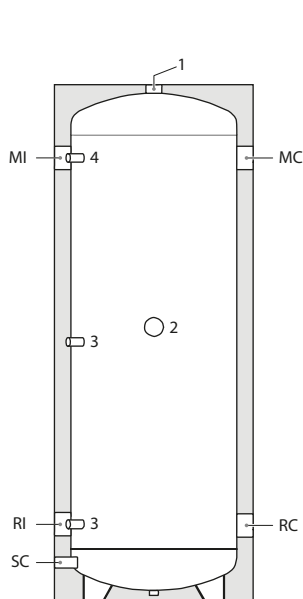


RIELLO 7000 ACI PLUS HOT/COLD MODELS		60	120	200	300	400	500	800	1000	1500	2000
Cylinder diameter with insulation	mm	400	500	550	600	700	700	850	850	1060	1160
Cylinder height with insulation	mm	935	1095	1395	1560	1540	1840	1725	1975	2090	2405
Package "A" dimension	mm	600	600	600	600	700	700	900	900	1200	1200
Package "B" dimension	mm	600	600	600	600	700	700	900	900	1200	1200
Package "H" dimension	mm	1050	1210	1510	1670	1650	1950	1900	2150	2250	2565

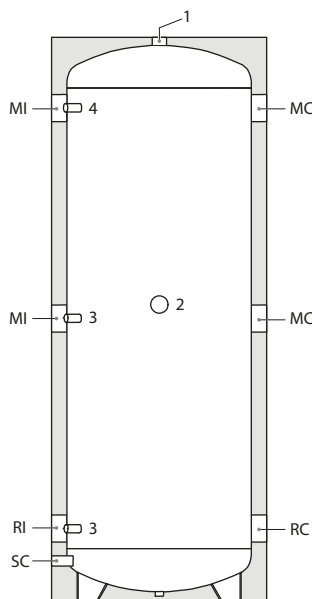
RIELLO 7000 ACI PLUS C MODELS		7000 ACI 1000 PLUS C	7000 ACI 1000 PLUS C	7000 ACI 1000 PLUS C	7000 ACI 1000 PLUS C
Cylinder diameter with insulation	mm	990	990	1200	1300
Cylinder height with insulation	mm	1875	2125	2240	2555
Package "A" dimension	mm	900	900	1200	1200
Package "B" dimension	mm	900	900	1200	1200
Package "H" dimension	mm	1900	2150	2250	2565

STRUCTURE

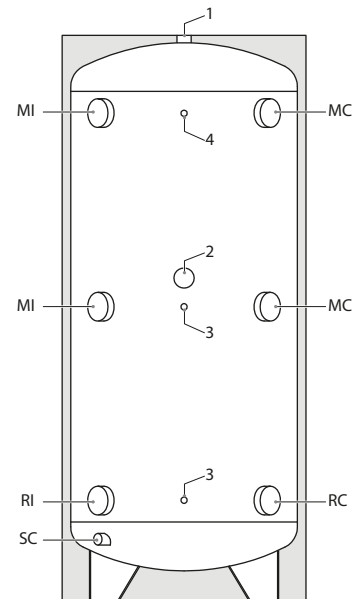
MODEL 60 ÷ 400



MODEL 500



MODEL 800 ÷ 2000



- 1 Vent
- 2 Heating element connection
- 3 Sensor-holder pockets
- 4 Thermometer-holder pocket

- MI System delivery line
- MC Boiler delivery line
- RI System return line
- RC Boiler return line
- SC Drain

THERMAL SOLAR AND CYLINDERS

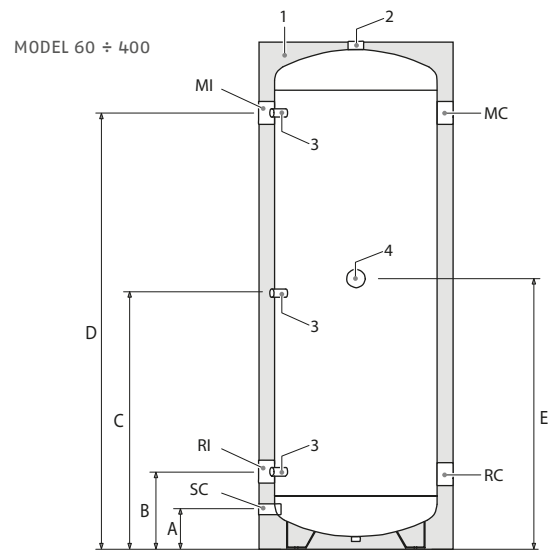
Hot/cold and cold-only storage systems

HYDRAULIC CONNECTIONS

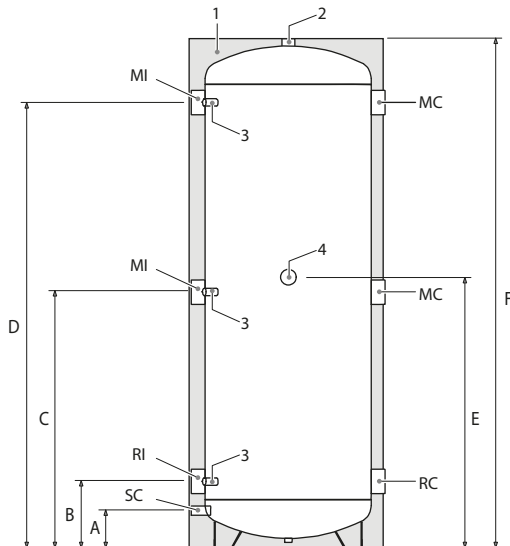
Riello 7000 Aci Plus inertial storage systems can be connected to heat generators, even those already installed, as long as they have an adequate heat output and the direction of the hydraulic flows is respected.

The characteristics of the hydraulic connections are as follows:

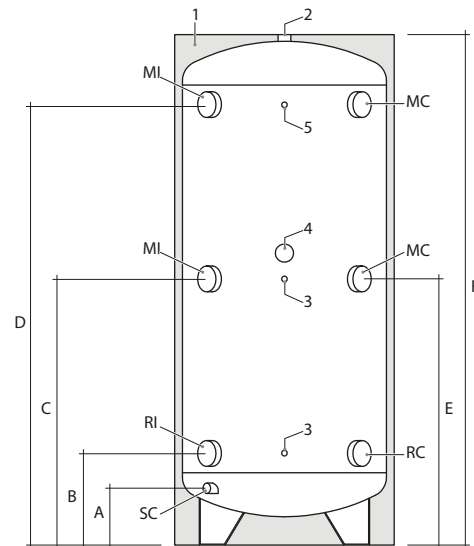
The use of delivery and return connections to/from the storage tank depends on the components and hydraulic connections of the system.



MODEL 500



MODEL 800 ÷ 2000



RIELLO 7000 ACI PLUS MODELS		60	120	200	300	400	500	800	1000	1500	2000
1 Polyurethane insulation	mm	50	50	50	50	50	50	100/30(**)	100/30(**)	100/30(**)	100/30(**)
2 Vent connection	∅	1" F	1" F	1"1/4 F	1"1/4 F	1"1/4 F	1"1/4 F	1"1/4 F	1"1/4 F	1"1/4 F	1"1/4 F
3 Sensor pockets	∅	1/2" F	1/2" F	1/2" F	1/2" F	1/2" F	1/2" F	1/2" F	1/2" F	1/2" F	1/2" F
4 Heating element connection (not supplied)	∅	1"1/2 F	1"1/2 F	1"1/2 F	1"1/2 F	1"1/2 F	1"1/2 F	1"1/2 F	2" F (*)	2" F (*)	2" F (*)
5 Thermometer pocket	∅	-	-	-	-	-	-	1/2" F	1/2" F	1/2" F	1/2" F
MI System delivery line	∅	1"1/4 F	1"1/4 F	1"1/2 F	2" F	2"1/2 F	2"1/2 F	3" F	3" F	4" F	4" F
RI System return	∅	1"1/4 F	1"1/4 F	1"1/2 F	2" F	2"1/2 F	2"1/2 F	3" F	3" F	4" F	4" F
SC Drain	∅	1/2" F	1/2" F	1/2" F	3/4" F	3/4" F	3/4" F	1" F	1" F	1" F	1" F
RC Boiler return line	∅	1"1/4 F	1"1/4 F	1"1/2 F	2" F	2"1/2 F	2"1/2 F	3" F	3" F	4" F	4" F
MC Boiler delivery line	∅	1"1/4 F	1"1/4 F	1"1/2 F	2" F	2"1/2 F	2"1/2 F	3" F	3" F	4" F	4" F
A	mm	100	100	105	120	135	135	220	220	250	250
B	mm	180	185	215	235	240	240	355	355	415	415
C	mm	485	560	705	785	775	925	905	1030	1080	1230
D	mm	785	935	1200	1340	1310	1610	1455	1705	1745	2045
E	mm	530	605	750	830	820	970	990	1130	1180	1330
F	mm	935	1095	1395	1560	1540	1840	1725(***)/ 1875(****)	1975(***)/ 2125(****)	2090(***)/ 2240(****)	2405(***)/ 2555(****)

(*) Supplied with a 2" M - 1" 1/2 F adapter

(**) The insulation thickness is 100 mm for "hot/cold" models and 30 mm for "cold-only" models

(***) hot/cold models

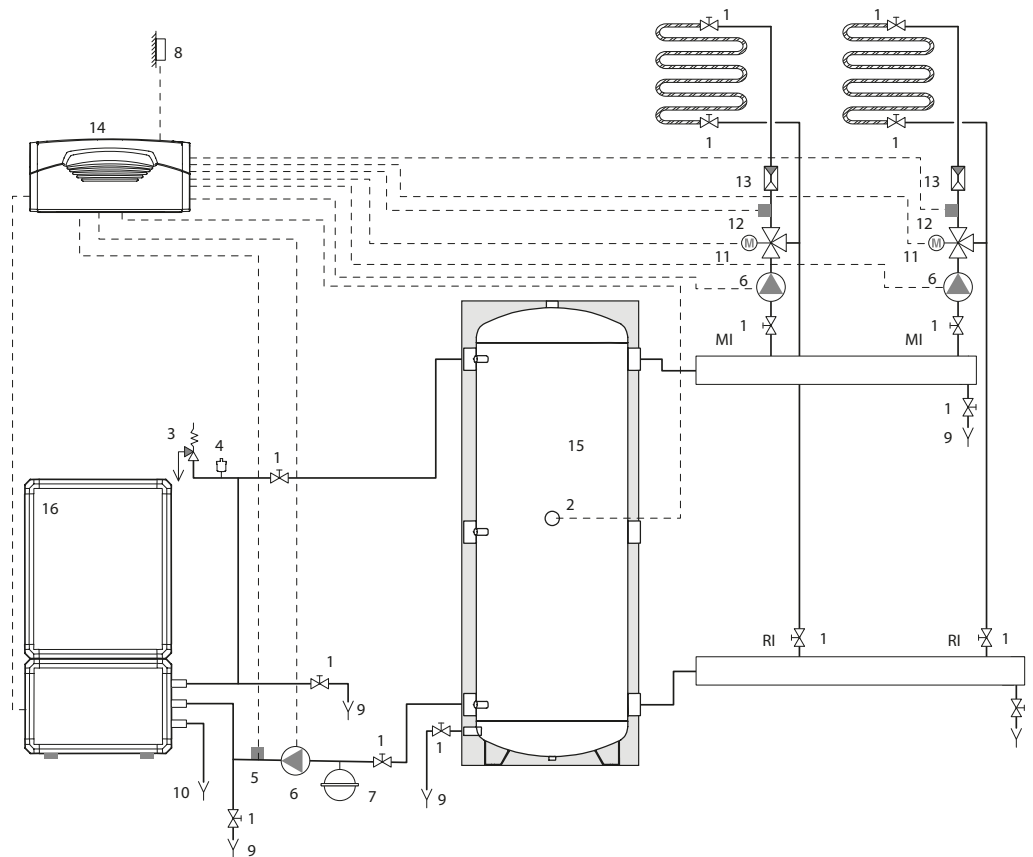
(****) cold-only models

POSITIONING THE SENSORS

Riello 7000 Aci Plus inertial storage systems are complete with sensor-holder pockets, into which the regulator sensors must be inserted.

- The positioning of sensors depends on the components, the hydraulic connections and the system setting.
- Any connections to the boiler or the thermal unit are the responsibility of the installer, who must operate according to the rules of good practice and current legislation.

BASIC DIAGRAM



- | | | | |
|----|-------------------------|----|-------------------------------------|
| 1 | Shut-off valve | 11 | Mixing valve |
| 2 | Heating element | 12 | Area delivery sensor |
| 3 | Safety valve | 13 | Non-return valve |
| 4 | Automatic vent valve | 14 | RIELLO TECH regulator |
| 5 | Return sensor | 15 | RIELLO 7000 ACI PLUS storage system |
| 6 | System circulation pump | 16 | RIELLO heat pump |
| 7 | Expansion vessel | | |
| 8 | External sensor | MI | System delivery line |
| 9 | Drain | RI | System return line |
| 10 | Condensate drain | | |

THERMAL SOLAR AND CYLINDERS

Hot/cold and cold-only storage systems

RIELLO 7000 ACI PLUS DESCRIPTION

SHORT DESCRIPTION

Steel inertial storage systems, ideal for heating and cooling systems, not for the production of domestic hot water, with stratification for heat production at different temperatures.

CONSTRUCTION DESCRIPTION FOR SPECIFICATIONS

Riello 7000 Aci Plus inertial storage system, ideal for heating and cooling systems, not for the production of domestic hot water, with heat production at different temperatures, consisting of:

- vertical steel structure;
- tank designed to obtain better performance in terms of stratification, heat exchange and recovery times;
- direct foaming in polyurethane with a minimum thickness of 50 mm, CFC and HCFC-free (models 60-500) and 30 mm soft PU insulation for cold-only models 800-2000, and mixed 20 mm PEXL + 80 mm soft PU insulation for hot/cold models 800-2000;
- energy class B (hot/cold models 60 and 120) and C (hot/cold models 200-2000);
- 3 sensor-holder 1/2" pockets;
- pre-setting for 1"1/2 F heating element;
- water tank content 58 litres / 126 litres / 203 litres / 283 litres / 399 litres / 483 litres / 732 litres / 855 litres / 1420 litres / 2013 litres;
- maximum operating pressure 6 bar;
- maximum operating temperature 99°C;
- hydraulic connections of a size suitable for connecting chillers and heat pumps.

MATERIAL SUPPLIED

- Device warranty certificate;
- technical monograph with installation, use and maintenance instructions;
- product identification plate;
- support brackets for wall installation (only for sizes 60 and 120) and adjustable feet.



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The company is constantly working to perfect its entire production range, so the design and size characteristics, technical data, equipment and accessories may vary.

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