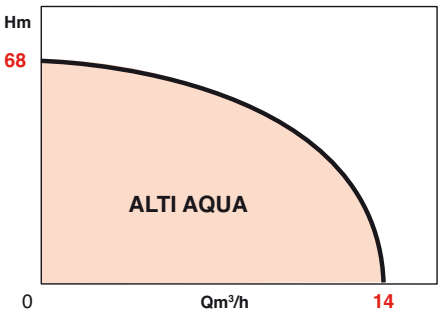
RANGE OF USE

Flow rates up to:	**14 m³/h**
Manometric head up to:	**68 m**
Maximum temperature of the water:	**+40°C**
Maximum operating pressure:	**10 bar**
Min. max. suction Pression (AL version) :	**0,1 to 4 bar**
DN collecteurs :	**2"**

ALTI-AQUA

TWO-PUMP BOOSTER UNIT SILENT AND COMPACT

Homes - small institutions 2 poles - 50 Hz



APPLICATIONS

Boosting and supplying water for domestic installations and small institutions:

- Small groups of houses,
- Blocks of up to 40 flats,
- private residences,
- shops,
- schools.

ADVANTAGES

- **Silent running: from of 51 dB(A) for a single pump.**
- **Compact solution: saves about 40% of the space of a traditional horizontal booster pump**
- **"Premium" but competitive design.**
- **Pumps all stainless steel 304.**

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DESIGN

Booster unit of 2 very quiet and particularly compact pumps, fitted with:
- 2 Aquason pumps.
- 2 pipes in stainless steel 304, connection left or right.
- Valves on intake and on output of each pump.
- Interchangeable non-return valve, on output of each pump.
- 1 control box, type BC.
- Two pressure switches mounted and connected to the box.
- Two Rp1» connections for bladder tanks (not provided).
- One Rp¼» connection on intake pipe for protection against running dry.

Speed:	2850 rpm[1]
Single-phase winding:	230V
Three-phase winding:	400 V
Frequency:	50 Hz
Insulation:	155 (F)
Protection class, pump:	IP68
Protection class, box (1~) :	IP54

BASIC CONSTRUCTION

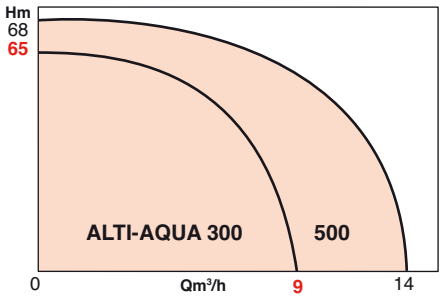
Main parts	Material
Pumps (x 2)	AQUASON (see separate documents)
Pipes	Stainless steel 304
Valves	laiton+PTFE (ACS)
Non-return valve	laiton+NBR+POM
Mechanical seal on hydraulics side	Carbon / Ceramic
Mechanical seal on motor side	Silicon carbide/ silicon carbide

STANDARDS AND SPECIFICATIONS

- Electrical environment: CEI 60364-1.
- Hydraulic environment: EN 806.
- Systems:
- Machine Directive 2006/42/EC: EN12100-2 and EN14121-1
- Electromagnetic Compatibility Directive 2004/108/EC: EN 61000-6-1, EN 61000-6-2, EN 61000-6-3, EN 61000-6-4
- ROHS and REACH Directive
- Pumps:
- Machine Directive 2006/42/EC: EN 809 (version 3~) and EN 14121-1
- Low voltage Directive 2006/95/EC: EN 60204-1 (EN60034-1) and EN60335-2-41(version 1~)
- Certified ACS (07 ACC LY 006)
- Control box:
- Low voltage Directive 2006/95/EC: EN 60439-1
- Electromagnetic Compatibility Directive 2004/108/EC: EN 61000-6-1, EN 61000-6-2, EN 61000-6-3, EN 61000-6-4

OPERATING LIMITS

Maximum operating pressure:	**10 bar**
Temperature of liquid:	**de +3°C à +40 °C**
Maximum ambient temperature:	**+40°C**
Maximum number of start-ups:	**15/h**
Humidity:	**90% (à +40°C)**
Electricity supply:	
Frequency	**50 Hz**
Voltage	**1~230V (-M) ou 3~400V (-T)**
Maximum variation of voltage	**±10 %**
Type of liquid:	**Clean water, drinking wat er without particles**

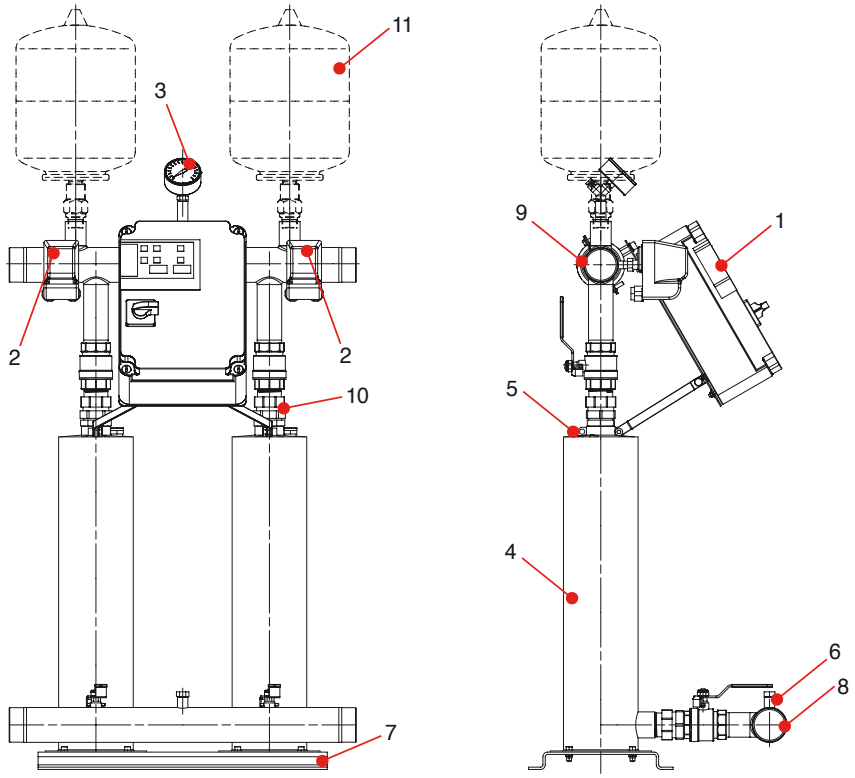


IDENTIFICATION

ALTi-AQUA-304-2-BC-M

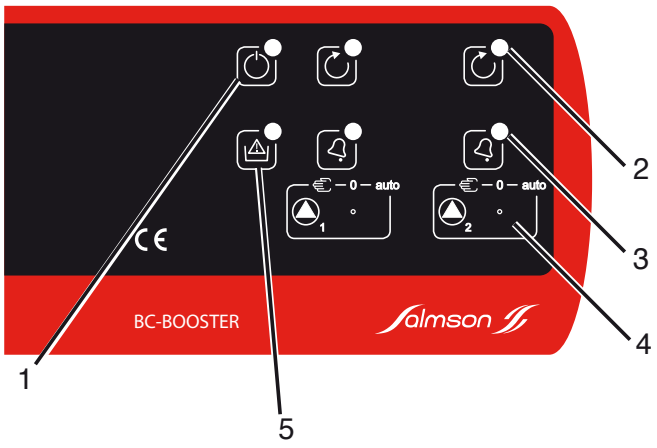
- Range of booster pump
- AQUASON Type pump
- Model of pump
- Nominal flow rate: 3 m³/h
- Number of stages: 4
- Number of pumps: 2
- Type of box
- T : Three-phase 3~400V
- M : Monophase 1~230V

DESCRIPTION OF THE BOOSTER UNIT



1 Control box
2 Pressure switches
3 Manometer
4 Aquason type pumps
5 Filler plug
6 Tap for protection against running dry
7 Support and fixing frame
8 Intake pipe
9 Output pipe
10 Non-return valve
11 Bladder tanks (not provided)

ELECTRONIC BC CONTROL BOX



1 Current indicator
2 'On' indicator for each pump
3 'Fault' indicator for each pump
4 Three-function switch for each pump: AUTO – OFF – MANUAL
5 Running dry Indicator
6 General isolating switch

OPERATION

The pumps are operated in cascade by two simple pressure switches. When the first pump to be run stops at the end of a cycle, the start-up cycle switches over to the second pump. A tank needs to be used to avoid rapid hunting between the pressure switches controlling the pumps.
The volume of the tank chosen determines the operating time of the pumps. After the pumps are switched off by the dry-running detector, they cannot restart until the water is restored upstream.
The automatic system ensures the motors are protected against over-heating and short-circuits.

TECHNICAL DATA

- Protection class IP54
- Operating modes AUTO – 0FF – MANUAL
- Power supply 1~230V or 3~400V ±10%, 50hz
- Primary and secondary fuses
- Protection against running dry (no included): by pressure switch or float switch (NO contact)
- The switchover module may be by-passed

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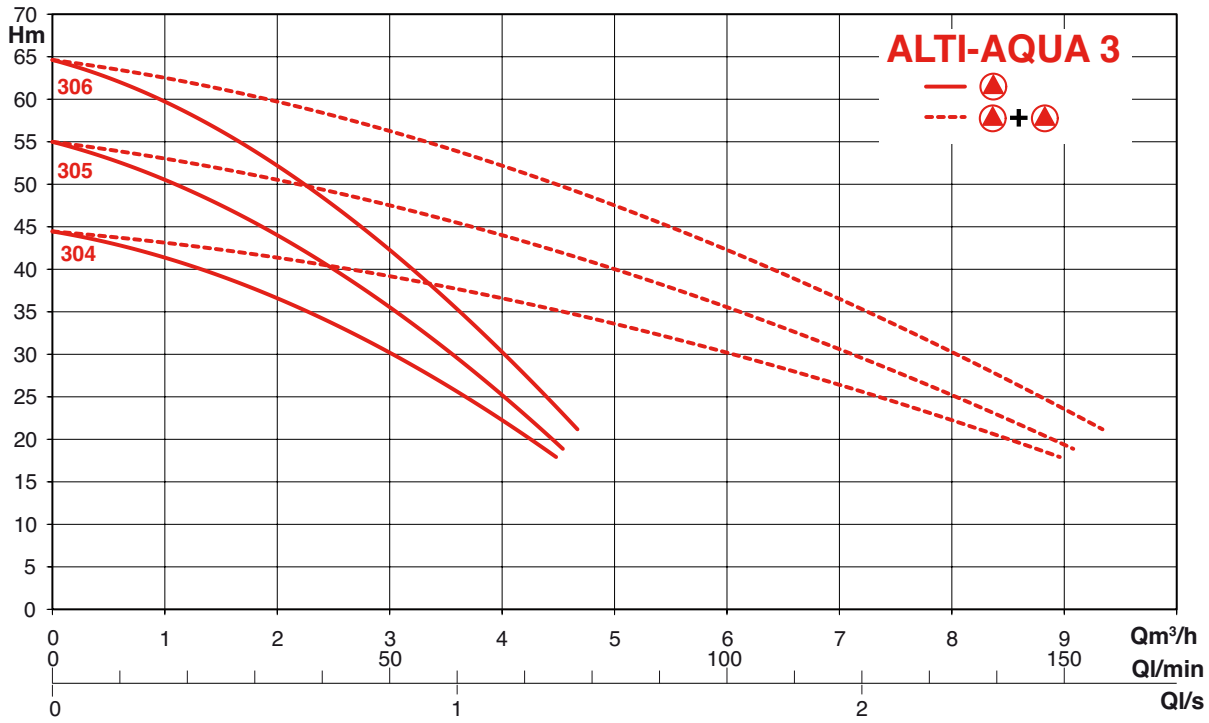
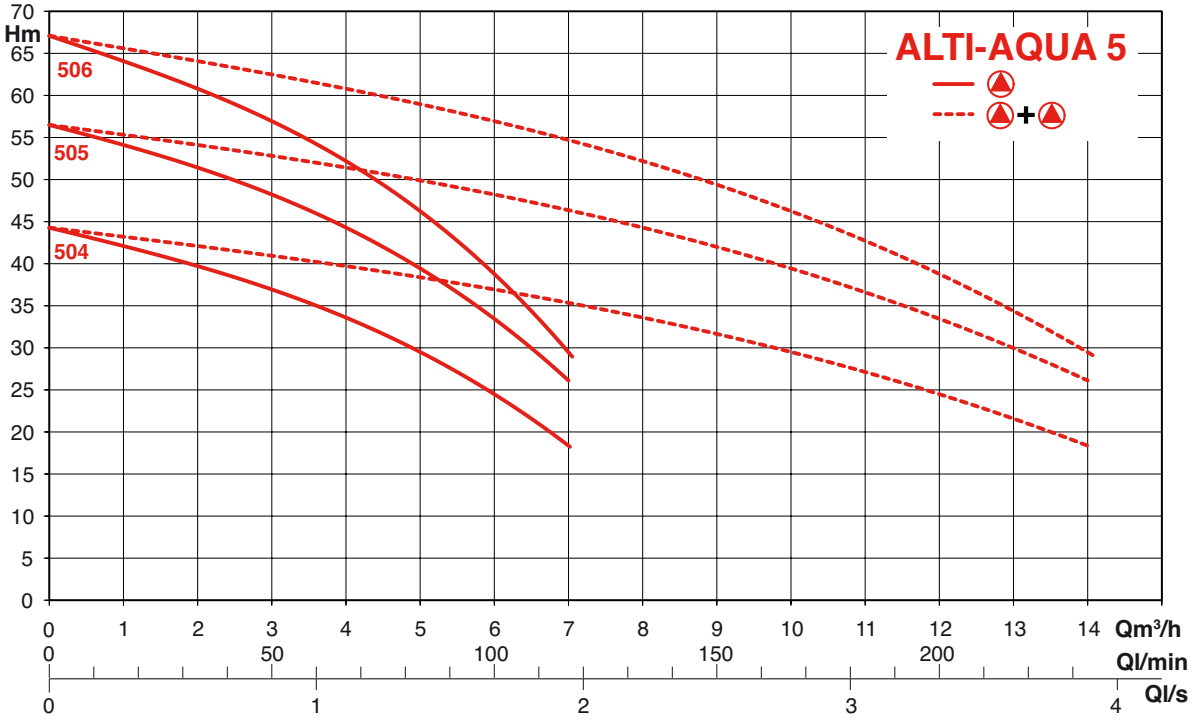
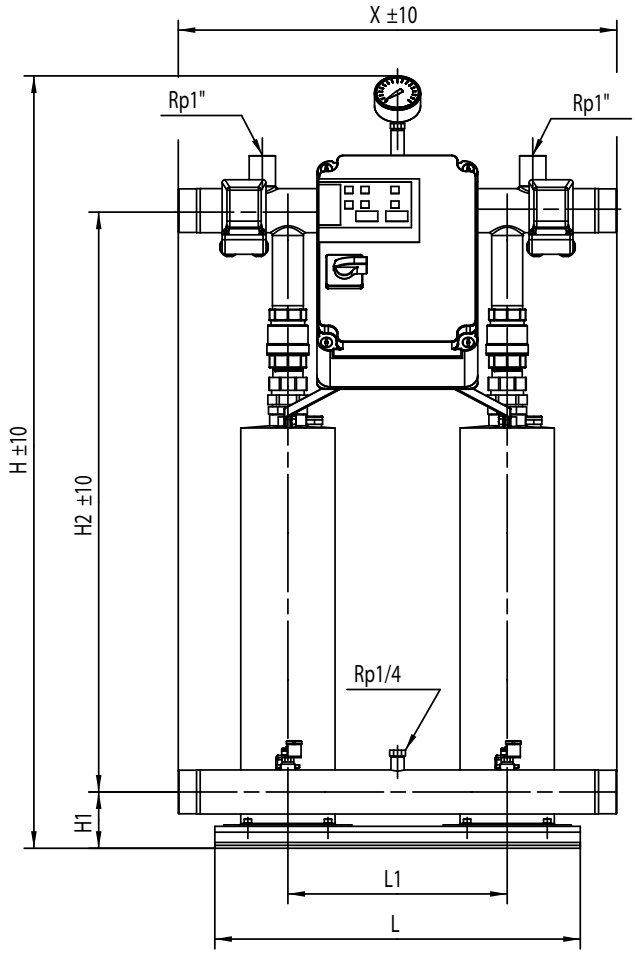
HYDRAULIC PERFORMANCE - SERIE 300

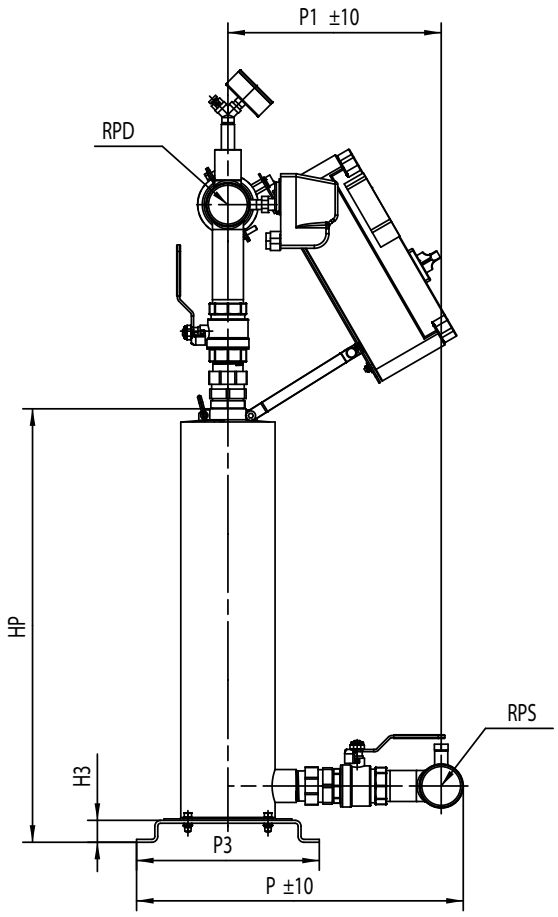


HYDRAULIC PERFORMANCE - SERIE 500



DIMENSIONAL CHARACTERISTICS





Reference	H	H1	H2	H3	HP	L	L1	P	P1	P3	X	RPD / RPS
	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	
ALTi-AQUA-304-2-BC-M/T	1032	77	771	30	569	500	300	447	292	250	600	2"
ALTi-AQUA-305-2-BC-M/T	1032	77	771	30	569	500	300	447	292	250	600	2"
ALTi-AQUA-306-2-BC-M/T	1057	77	795	30	593	500	300	447	292	250	600	2"
ALTi-AQUA-504-2-BC-M/T	1057	77	795	30	593	500	300	447	292	250	600	2"
ALTi-AQUA-505-2-BC-M/T	1081	77	819	30	617	500	300	447	292	250	600	2"
ALTi-AQUA-506-2-BC-M/T	1081	77	819	30	617	500	300	447	292	250	600	2"

ALTI-AQUA

ELECTRICAL CHARACTERISTICS AT 2850 RPM

Pumps reference	H max.*	Q nom.*	P1*	P2*	A*	µF/V	Weight
	m.	m³/h	kW	kW			
			1~230 V				
ALTi-AQUA-304-2-BC-M	45	3,4	0,85	0,55	4,5	20/450	50
ALTi-AQUA-305-2-BC-M	55	3,4	1	0,75	4,9	20/450	51
ALTi-AQUA-306-2-BC-M	65	3,4	1,2	0,75	5,6	20/450	52
ALTi-AQUA-504-2-BC-M	45	5,3	1,15	0,75	5,2	20/450	53
ALTi-AQUA-505-2-BC-M	67	5,3	1,4	0,9	6,5	30/450	54
ALTi-AQUA-506-2-BC-M	68	5,3	1,7	1,1	7,9	30/450	55
			3~400 V				
ALTi-AQUA-304-2-BC-T	45	3,4	0,85	0,55	1,9	-	49
ALTi-AQUA-305-2-BC-T	55	3,4	1	0,75	2,1	-	50
ALTi-AQUA-306-2-BC-T	65	3,4	1,2	0,75	2,3	-	51
ALTi-AQUA-504-2-BC-T	45	5,3	1,15	0,75	2,2	-	52
ALTi-AQUA-505-2-BC-T	67	5,3	1,4	0,9	2,5	-	53
ALTi-AQUA-506-2-BC-T	68	5,3	1,65	1,1	2,8	-	54

* values for 1 pump

EQUIPMENT

A complete system on pallet under plastic wrap, factory wired, with instructions for installing the pump, the box and the system.

RECOMMENDED ACCESSORIES

a) Essential accessories

- Bladder tank (1 or 2 pieces, Rp1», PN10).
- Protection against mains or reservoir running dry.

• Bladder tank

• Dry running protection kit

b) optional accessories

- Shut-off valves.
- Anti-vibration sleeves.
- Pressure reducing valve.
- Back flanges for the diameter of the pipe.

• Shut-off valve

• Anti-vibration sleeve