

YUTAMPO SHW heat pump



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- YUTAMPO: What is new?
- New standard EN16147: What is new?
- Benchmark

□ What is new?

- The nick name becomes Yutampo
- Size: more compact, easier to install.
(H1570mm- W600mm-D730mm)
- Volume: 262 liters.
- Cold inlet has been move to the front:
Space saving and easier access to connections.
- Anti corrosion magnesium anode is delivered in standard.
- 4 adjustable feet added. It enable the refrigerant pipes to be place below the tank.
- Two handling added.
- Jacket becomes rigid in pre coated steel.
- Product number OU: RAW25NH2A
- Product numer IU: TAW270NH2A



□ What is new?

- New standard EN16147 has replaced EN255-3 in 2011 April.
- The testing conditions are totally different.
- EN16147 is not only a COP test. Its also checks the capability of the product to ensure the comfort of end user. It means to provide a minimum volume of hot water during the day.
- This is done by testing the unit following standard tapping cycle (S, M, L, XL, XXL)
- The bigger is the cycle, the bigger is the capability of the product to provide large volume of hot water. (S=2,1kWh/day ; XXL= 24,53 kWh/day)

□ Consequences

- The new results are totally different.
- The new standard is more difficult, performance are generally lower.
- Be careful: Only few manufacturers already declare their performance further EN16147.

Table 9 — Tapping cycle L

	Start (h:min) Tapping cycle time	Energy (kWh)	Type	ΔT desired (K), to be achieved during tapping	Min. ΔT (K), start of counting useful energy
1	07:00	0,105	Small		15
2	07:05	1,400	Shower		30
3	07:30	0,105	Small		15
4	07:45	0,105	Small		15
5	08:05	3,605	Bath	30	0
6	08:25	0,105	Small		15
7	08:30	0,105	Small		15
8	08:45	0,105	Small		15
9	09:00	0,105	Small		15
10	09:30	0,105	Small		15
11	10:30	0,105	Floor cleaning	30	0
12	11:30	0,105	Small		15
13	11:45	0,105	Small		15
14	12:45	0,315	Dish washing	45	0
15	14:30	0,105	Small		15
16	15:30	0,105	Small		15
17	16:30	0,105	Small		15
18	18:00	0,105	Small		15
19	18:15	0,105	Household cleaning		30
20	18:30	0,105	Household cleaning		30
21	19:00	0,105	Small		15
22	20:30	0,735	Dish washing	45	0
23	21:00	3,605	Bath	30	0
24	21:30	0,105	Small		15
Total		11,655			

Equivalent hot water at 60 °C

0,1998 m³

Important data from the new standard

	YUTAMPO
<ul style="list-style-type: none">• COP for tapping domestic hot water (COP_{DHW}): Linked to the tapping cycle (S~XXL) Includes the heat losses of the storage tank.	3,09 (XL)
<ul style="list-style-type: none">• Stand by power input (P_{es}): Mainly heat losses through tank insulation. This data show the quality of insulation.	30 Watt
<ul style="list-style-type: none">• Maximum volume of usable hot water (V_{max}): The maximum amount of usable water, which can be tapped in one single tapping. (Hot water is consider usable if \geq à 40°C).	375 liters
<ul style="list-style-type: none">• Heat up time: Time necessary to heat the total volume of the tank from 10°C to the setting temperature.	6h20 min (from 10°C to 53°C)
<ul style="list-style-type: none">• Reference hot water temperature: Average value of water temperature during tapping V_{max}.	53,3°C

Specifications

TANK	Unit	Data
Volume	l	262
Connection (Water)	Inch	3/4
Refrigerant	Inch	1/4 - 3/8
Material		Stainless Steel
Electric back up heater	W	2000
Outdoor unit		
Working range	°C	-15°C~+37°C
Average heating capacity	W	2000
Réfrigérant		R410A
Sound level	dB(A)	46
PERFORMANCES YUTAMPO (1)		
COP (Further EN16147)		3,09
Stand by Power (Pes)	W	30
Heat up time	h	6h20
Maximum volume of usable water (40°C)	l	375
Setting temperature		
Heat pump only (With electric heater)	C°	55°C (65)
Size		
Outdoor unit (H x W x D)	mm	570 x 750 x 280
Tank (H x ø x D)	mm	1570 x 600 x 730
Weight		
Outdoor unit	kg	43
Tank (Dry)	kg	63

(1) Performance are following EN16147, cycle XL, with ambient air source 7°C and reference hot water temperature 53,3°C





Benchmark

		HITACHI	ATLANTIC	ATLANTIC	ATLANTIC	ARISTON	ARISTON	ARISTON	ARISTON	VISSMANN	AUER
Name		YUTAMPO (XL)	Odysée split VM 200	Odysée 2	Odysée Split VS 300 L	Janus II / NUOS 200 EXT / AQUANEXT 200 EXT	Janus II / NUOS 250 EXT / AQUANEXT 250 EXT	Janus IV / NUOS SPLIT 200 WH / AQUANEXT SPLIT 200 WH	Janus IV / NUOS SPLIT 300 FS / AQUANEXT SPLIT 300 FS	Vitocal 160-A	CYLIA AIR
référence				VS RSE CETHI 270 (232508)	VS RSE SPLIT 300	Janus II (HPWH 200 EXT)	Janus II (HPWH 250 EXT)	HPWH SPLIT 200 WH + 0811	HPWH SPLIT 300 FS + 0811		
Type		Split	split	Monobloc	Split	Mono	Mono	Split	Split	mono	Mono
Volume (Vn)	L	263	200	270	300	200	250	200	300	285	300
référence hot water temp	°C	53,3	53,3	53,6	53,3	52,93	53	53,3	53,7	54,9	54,2
Heat up time	h:mn	6h20	5h37	10h25	8h06	4h43	6h43	5h46	9h11	13h23	11h12
Stand by power (Pes)	W	30	40	32,6	36	30	30	26	39	40	44
Cycle	-	XL	L	L	XL	XL	XL	XL	XXL	L	L
COP	-	3,09	2,36	2,64	2,69	2,59	2,79	2,73	2,71	2,33	2,33
Vmax	L	375	231	346	383	267,76	345,1	260	432,3	406,4	405




- ❑ The data above are certified value in France.
- ❑ This data are further EN16147 for a reference water temperature of >52,5°C.
- ❑ Yutampo is showing the best COP and second best heat losses (for Pes, the lower is the better!).

Yutampo against competitors (Ariston/Chaffoteaux)



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Aquanext 200	Aquanext 250	Aquanext Split 200	Aquanext Split 300
			
<ul style="list-style-type: none">• COP 2,59 (XL)• Vmax 267 liters only	<ul style="list-style-type: none">• COP 2,79 (XL)• Vmax 345 litres only• Heat up time > Yutampo	<ul style="list-style-type: none">• COP 2,73 (XL)• Vmax 260 liters• Refrigerant piping 6m maximum!	<ul style="list-style-type: none">• COP 2,71 (XXL)• Stand by power is high (39W)• Vmax 267 liters only• Max refrigerant pipe is 6m.
<p>All Ariston/chaffoteaux product are constant speed compressor and enamelled tank</p>			

Yutampo against Atlantic/Thermor/Ignis

Odyssee	Odyssee Split 200	Odyssee Split 300
		
<ul style="list-style-type: none">• COP 2,64 (L)• Maximum cycle is L• Heat up time is very long(10h25min!)• Vmax inférieure à Yutampo despite the volume of the tank is bigger	<ul style="list-style-type: none">• COP 2,36 (L)• Maximum cycle is L• Vmax is very poor (231liters)• Max refrigerant piping is 5 meters!	<ul style="list-style-type: none">• COP 2,69 (XL)• Stand by loss are high (36W)• Max refrigerant piping is 5 meters!
<p>All the product are fix constant speed compressor and enamelled tank</p>		

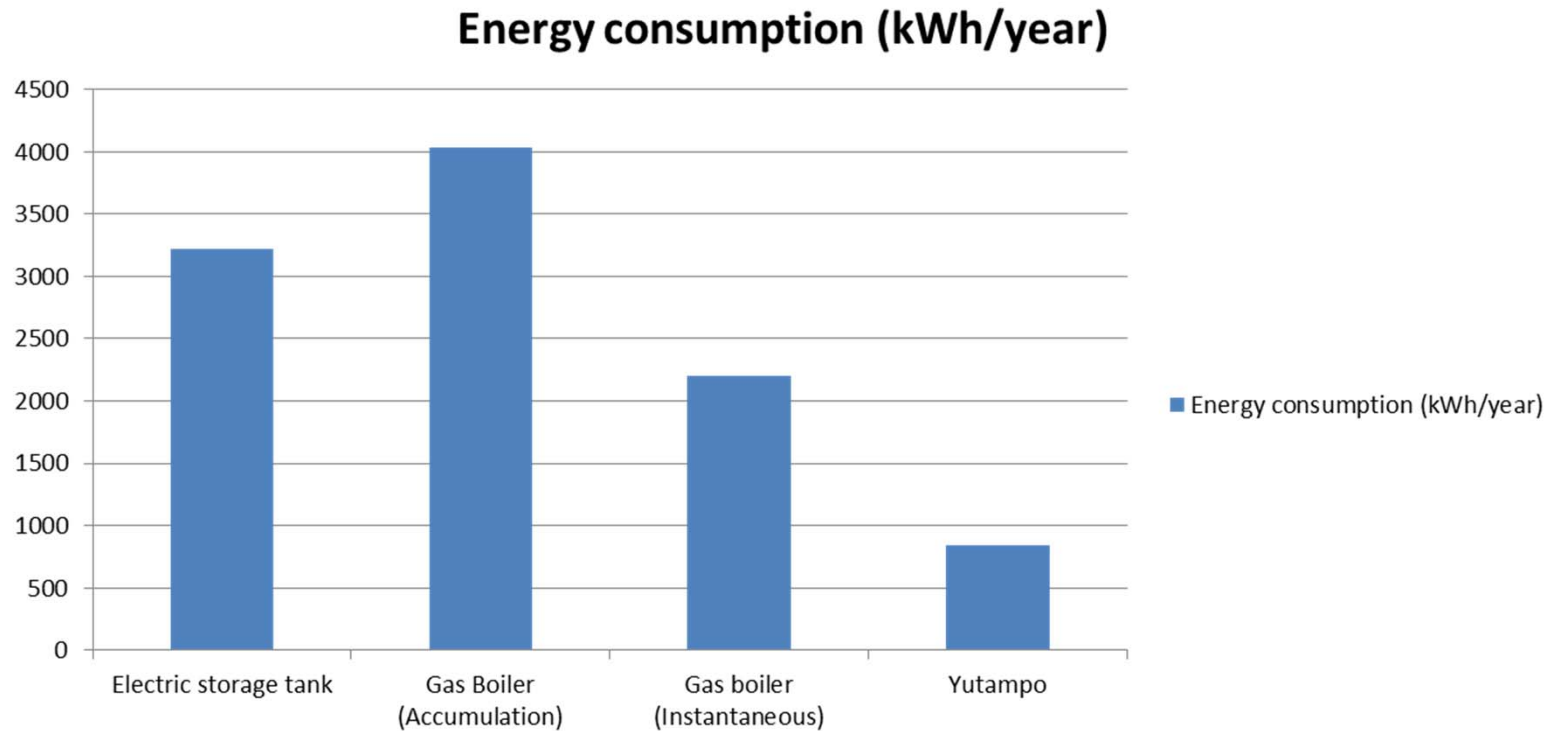
Arguments face aux... autres

Viessmann	Auer (Technibel)	
		
<ul style="list-style-type: none">• COP 2,33 (L)• Heat up time is very long (13h23min!)• Stand by power is very high (40W)	<ul style="list-style-type: none">• COP 2,33 (L)• Heat up time very long (11h12min)• Stand by power very high (44W)	

- ❑ The best performance of the market:
 - COP= 3,09 (XL)
 - Pes= 30W
- ❑ Short heat up time.
- ❑ High level of comfort for end user
 - Vmax 375 liters
 - Cycle XL can be achieved
- ❑ Maximum refrigerant pipe of 20 meter means it is an unbeatable split type unit in many installation case.
- ❑ Stainless steel tank.
- ❑ Weekly timer included (Yutampo is able to operate during off peak hour rate of electricity).
- ❑ 3 operation mode (Standard/Eco/Boost) in order to fit with end user needs.

Energy consumption vs other system

- ❑ Case is 4 people family in individual House.
- ❑ Location is Paris, France.
- ❑ Estimation of SHW consumption: 3225kWh/year (Including losses and distribution)



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