



**SPECIFICATION ELECTROLYSER BGMAC35- A36-33P**

Electricity consumption	44,11 KW/Hr Max. 30,47 KW/Hr Min.
Entrance	12 VDC - 110VA - 220VAC
Nominal pressure	70 a 830 mBar

**PRODUCTION AND TECHNICAL DATA**

HHO production capacity:	59372,7 Lt of HHO	
	890 LPM Min	989,55 LPM Max.
	1.012,4	MBH

Water consumption:	21,7 LPM
Type of operation:	Continuous
Intermittent duty cycle	Configurable without user
Weight of The Reactor:	30 kg = 66 Lb

System pressure:	8 psi min.	12 psi max.
Service time / Lifespan:	100,000 hours of use	
Reactor temperature:	25°C min.	55°C max.

Burner temperature:	1000°F min.	1832°F max.
Relative humidity:	37% min.	47% max.

**MATERIALS**

**Outer casing:** Made of cast iron and stainless steel, which provides strength and durability to the equipment.  
**Gas burner:** Heat and corrosion resistant bronze.  
**HHO gas coupling systems:** Austenitic steel, natural rubber gaskets, stainless steel safety screws and nuts.

**DESCRIPTION**

The Electrolyzer W BGMAC35: A36-33P, is an intelligent system designed to control and stabilize its own electrochemical reactor adapted to boilers and heaters. This device operates through the principle of electrolysis to decompose the liquid water molecule into hydrogen and oxygen (HHO) in a gaseous state. The system allows to control the ignition and shutdown automatically, adapted to the user's thermal storage system. It is composed of the following materials: Bronze alloy, 69mm diameter burnt structure, 37mm high. FLARE type connection, an internal volumetric capacity of 6.4cm<sup>3</sup>. Manual ignition system with electronic control.

**COMPONENTES GENERALES**

<b>External structure:</b>	Estructura resistente de acero inoxidable
<b>Reactor:</b>	Internal HHO Generating System
<b>Power cable:</b>	Conexion: NEMA 3 PINS
<b>Cable Reference:</b>	18AWG 10 A 250V
<b>Approximate weight:</b>	30 kg = 66 lb Per Cell
<b>Security System:</b>	<b>Flashback Arrestor System</b>
<b>Leak sensor:</b>	HHO SENSOR
<b>Max. Temperature Op.:</b>	80°C = 176°F = 353.15°K
<b>Catalyst:</b>	KOH al 90% - Caustic Potash

**CHARACTERISTICS**

✓ Included in the power cable set ✓ Designed with an intelligent system SMART REGULUS CONTROL UNIT (SRCU): that controls and stabilizes its own electrochemical reactor. ✓ Made of Austenitic Steel, resistant rubber gaskets, high-density PVC sheets, stainless steel screws and safety nuts. ✓ Compatible with a variety of input voltages, including 12VDC, 110VAC and 220VAC, allowing it to be adapted to different electrical systems. ✓ Fuel Type: Alkaline Aqueous Solution. ✓ Incorporates an HHO sensor to monitor the gas concentration and ensure optimal operation. ✓ Stainless steel safety screws and nuts. ✓ Equipped with control and monitoring systems to ensure safe and stable operation. ✓ Incorporates a flashback prevention system (Flashback Arrestor System) to avoid possible flashbacks. ✓ Includes an additional safety system with a leak sensor to prevent possible gas leaks.

AC RATING/CELL:		DC RATING/CELL:	
Min Voltage (V):	122 V	Min Voltage (V):	12 V
Max Voltage (V):	125 V	Max Voltage (V):	13,7 V
Max Current (A):	7 A	Max Current (A):	75
Min Freq. (Hz):	55 Hz	Number of Feeds:	4
Max Freq. (Hz):	63 Hz		

**OPERATIONAL BENEFITS**

✓ **Energy savings:** with an electric stove, it would consume 668.48 kWh, with 12 hours of use, at an average cost of US \$175.939 , while the equipment consumes 44.11kWh, with the same hours would cost US\$11,592.8 per year, recovering the investment in a matter of months. ✓ **Clean energy** source for equipment and machinery, reducing operating costs and emissions of polluting gases. ✓ **Clean and sustainable alternative** for industrial uses, heating and cooking systems.

**CONTROL AND MANAGEMENT MEASURES**

**MODE OF OPERATION**

**Preventions:** Read the entire manual for safe and correct use of the W electrolyzer for the production of OxyHydrogen, including the handling of flammable gases and the necessary safety measures. In Inspection of **Connections:** Before each use, verify that all connections are properly tightened and do not present gas leaks.

**Regular Maintenance:** Only the manufacturer can perform regular maintenance to ensure optimal operation and extend the life of the device. Opening the equipment by unauthorized personnel is prohibited.

The 1/2" water hose should be connected to the back of the electrolyzer, add the caustic potash (90% KOH) to the tank by opening the top cover, then connect the cable (18 AWG 10A) to the side connector (3 pin NEMA). Then, turn on the system with the RED switch, wait for the lights to turn blue, turn on the button next to the display of the equipment and oxyhydrogen production will start. Make sure the 1/4" hose is connected to the HHO outlet next to the control display. Start or stop HHO production with the same button next to the display, lights turn green when producing, and blink when charging the system, and to turn off the unit just press the RED button.

Nat Gas Boiler	
Boiler Size Output (MBH)	1940
Efficiency	0,9
Boiler Input	2155,6
Nat Gas (MBH)	0,98
	2200
therms	22
Year --12 hr day	2190
	48.170
Therm Cost	\$ 1,25
<b>Cost/ year</b>	<b>\$ 60.213</b>

#2 Oil Boiler	
Boiler Size Output (MBH)	1940
Efficiency	0,85
	2282,4
<b>#2 Oil</b>	<b>1,396</b>
CF / hr	1635
therms / hr	16
Year --12 hr day	2190
therms/ year	35.805
#2 Oil Cost	\$ 3,24
<b>Cost/ year</b>	<b>\$ 116.079</b>

Electric Boiler	
Boiler Size Output (MBH)	1940
Efficiency	0,85
MBH	2282,4
KW	669,48
KW/ hr	
Year --12 hr day	2190
KW/ year	1.466.161
KW required	
\$/ KW	\$ 0,12
<b>Cost/ year</b>	<b>\$ 175.939</b>

EFENA Oxi-Hydrogen 1000 MBH	
Boiler Size Output (MBH)	1053
Efficiency	0,95
MBH	<b>1000</b>
MBH/HR/ cell unit	28,92
# Cell Units	35
KW/ hr	44,11
Year --12 hr day	2190
KW/ year	96.607
KW required (US\$/KWh)	\$ 5,29
\$/ KW	\$ 0,12
<b>Cost/ year</b>	<b>\$ 11.592,8</b>

EFENA Oxi-Hydrogen 750 MBH	
Boiler Size Output (MBH)	1053
Efficiency	0,95
MBH	<b>750</b>
MBH/HR/ cell unit	28,92
# Cell Units	26
KW/ hr	33,7
Year --12 hr day	2190
KW/ year	73.876
KW required	
\$/ KW	\$ 0,12
<b>Cost/ year</b>	<b>\$ 8.865,1</b>

Boiler Cost	\$ 44.219
1 year Cost	\$ 104.432
5 year Cost	\$ 345.282
10 year Cost	\$ 646.345

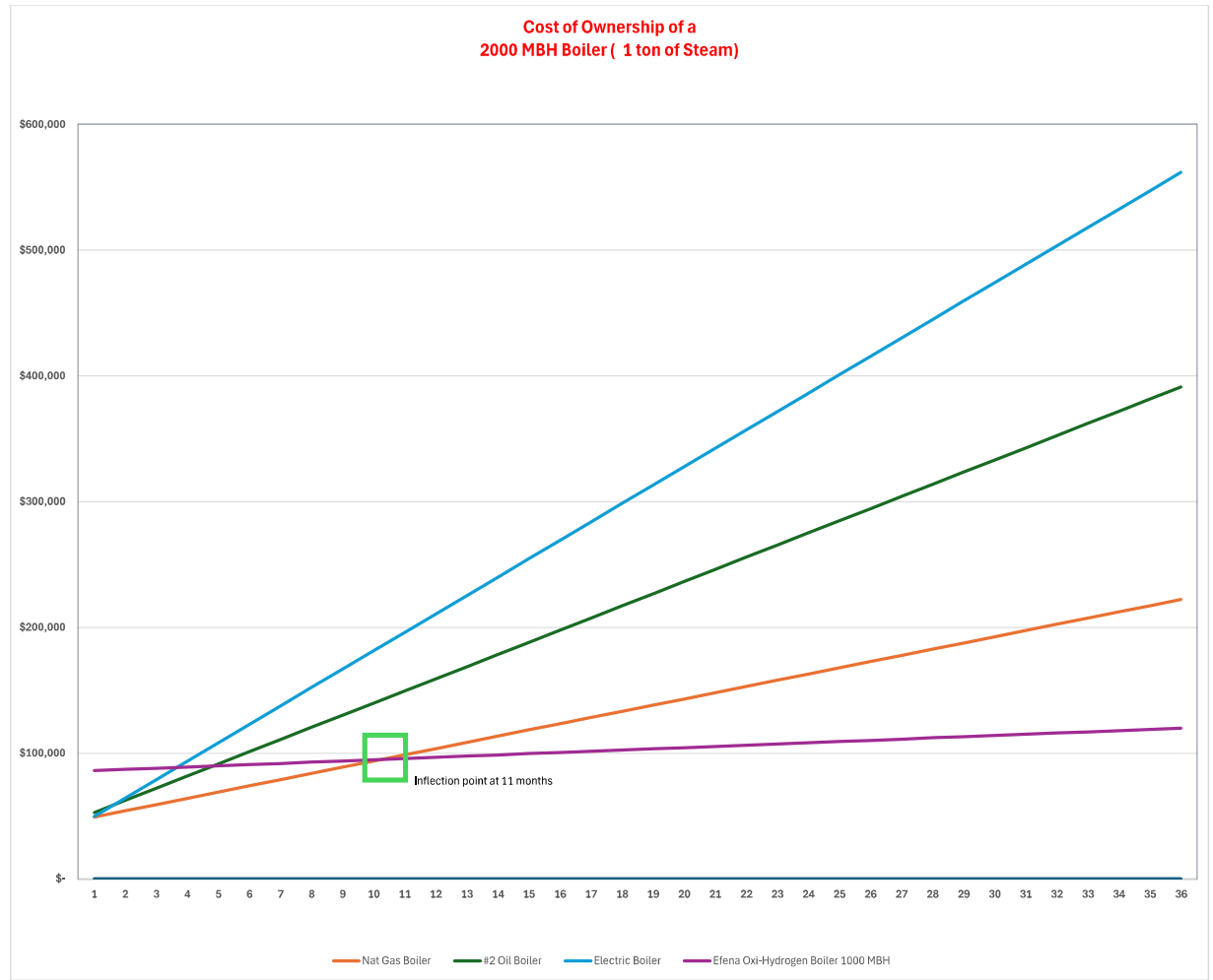
Boiler Cost	\$ 43.000
1 year Cost	\$ 159.079
5 year Cost	\$ 623.396
10 year Cost	\$ 1.203.792

Boiler Cost	\$35.000
1 year Cost	\$ 210.939
5 year Cost	\$ 914.697
10 year Cost	\$ 1.794.393

Boiler Cost	\$ 85.000
1 year Cost	\$ 96.593
5 year Cost	\$ 142.964
10 year Cost	\$ 200.928

Boiler Cost	\$ 63.143
1 year Cost	\$ 72.008
5 year Cost	\$ 107.468
10 year Cost	\$ 151.794

Time In Months	Nat Gas Boiler	#2 Oil Boiler	Electric Boiler	Efena Oxi-Hydrogen Boiler 1000 MBH
1	\$ 49.163	\$ 52.673	\$ 49.640	\$ 85.966
2	\$ 54.107	\$ 62.347	\$ 64.279	\$ 86.932
3	\$ 59.050	\$ 72.020	\$ 78.919	\$ 87.898
4	\$ 63.994	\$ 81.693	\$ 93.559	\$ 88.864
5	\$ 68.938	\$ 91.366	\$ 108.199	\$ 89.830
6	\$ 73.882	\$ 101.040	\$ 122.838	\$ 90.796
7	\$ 78.825	\$ 110.713	\$ 137.478	\$ 91.762
8	\$ 83.769	\$ 120.386	\$ 152.118	\$ 92.729
9	\$ 88.713	\$ 130.059	\$ 166.757	\$ 93.695
10	\$ 93.657	\$ 139.733	\$ 181.397	\$ 94.661
<b>11</b>	<b>\$ 98.600</b>	<b>\$ 149.406</b>	<b>\$ 196.037</b>	<b>\$ 95.627</b>
12	\$ 103.544	\$ 159.079	\$ 210.677	\$ 96.593
13	\$ 108.488	\$ 168.752	\$ 225.316	\$ 97.559
14	\$ 113.432	\$ 178.426	\$ 239.956	\$ 98.525
15	\$ 118.376	\$ 188.099	\$ 254.596	\$ 99.491
16	\$ 123.319	\$ 197.772	\$ 269.235	\$ 100.457
17	\$ 128.263	\$ 207.446	\$ 283.875	\$ 101.423
18	\$ 133.207	\$ 217.119	\$ 298.515	\$ 102.389
19	\$ 138.151	\$ 226.792	\$ 313.155	\$ 103.355
20	\$ 143.094	\$ 236.465	\$ 327.794	\$ 104.321
21	\$ 148.038	\$ 246.139	\$ 342.434	\$ 105.287
22	\$ 152.982	\$ 255.812	\$ 357.074	\$ 106.253
23	\$ 157.926	\$ 265.485	\$ 371.713	\$ 107.220
24	\$ 162.869	\$ 275.158	\$ 386.353	\$ 108.186
25	\$ 167.813	\$ 284.832	\$ 400.993	\$ 109.152
26	\$ 172.757	\$ 294.505	\$ 415.633	\$ 110.118
27	\$ 177.701	\$ 304.178	\$ 430.272	\$ 111.084
28	\$ 182.645	\$ 313.852	\$ 444.912	\$ 112.050
29	\$ 187.588	\$ 323.525	\$ 459.552	\$ 113.016
30	\$ 192.532	\$ 333.198	\$ 474.191	\$ 113.982
31	\$ 197.476	\$ 342.871	\$ 488.831	\$ 114.948
32	\$ 202.420	\$ 352.545	\$ 503.471	\$ 115.914
33	\$ 207.363	\$ 362.218	\$ 518.110	\$ 116.880
34	\$ 212.307	\$ 371.891	\$ 532.750	\$ 117.846
35	\$ 217.251	\$ 381.564	\$ 547.390	\$ 118.812
36	\$ 222.195	\$ 391.238	\$ 562.030	\$ 119.778





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Electricity consumption	32,77 KW/Hr Max. 20,47 KW/Hr Min.
Entrance	12 VDC - 110VA - 220VAC
Nominal pressure	70 a 830 mBar

**PRODUCTION AND TECHNICAL DATA**

HHO production capacity:	44105,5 Lt/Hr of HHO
	630 LPM Min : 735,09 LPM Max.
	752 MBH

Water consumption:	16,17 Lt/min
Type of operation:	Continuous
Intermittent duty cycle	Configurable without user

Weight of The Reactor:	30 kg = 66 Lb
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System pressure:	8 psi min. : 12 psi max.
Service time / Lifespan:	100,000 hours of use

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**MATERIALS**

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