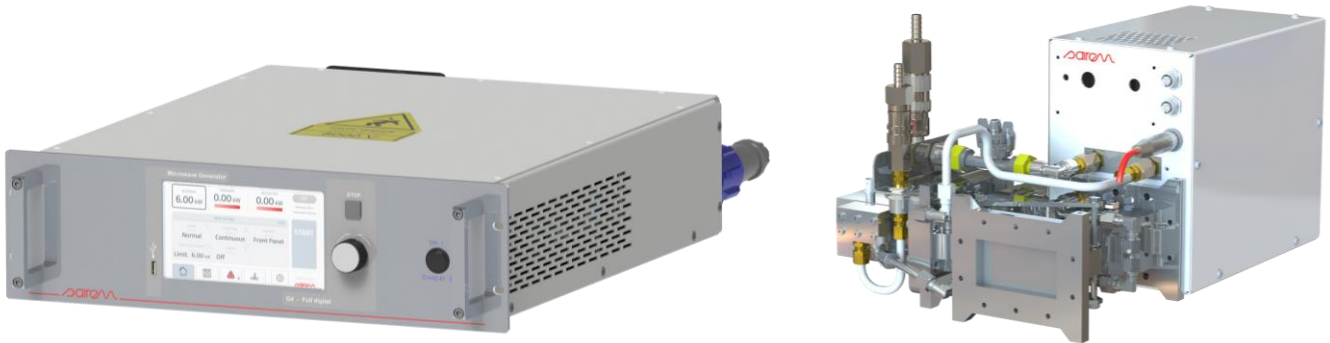




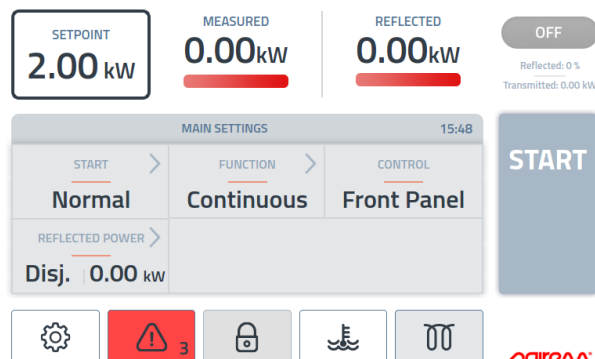
## 3 kW - 2450 MHz Microwave Generator GMP G4 30K

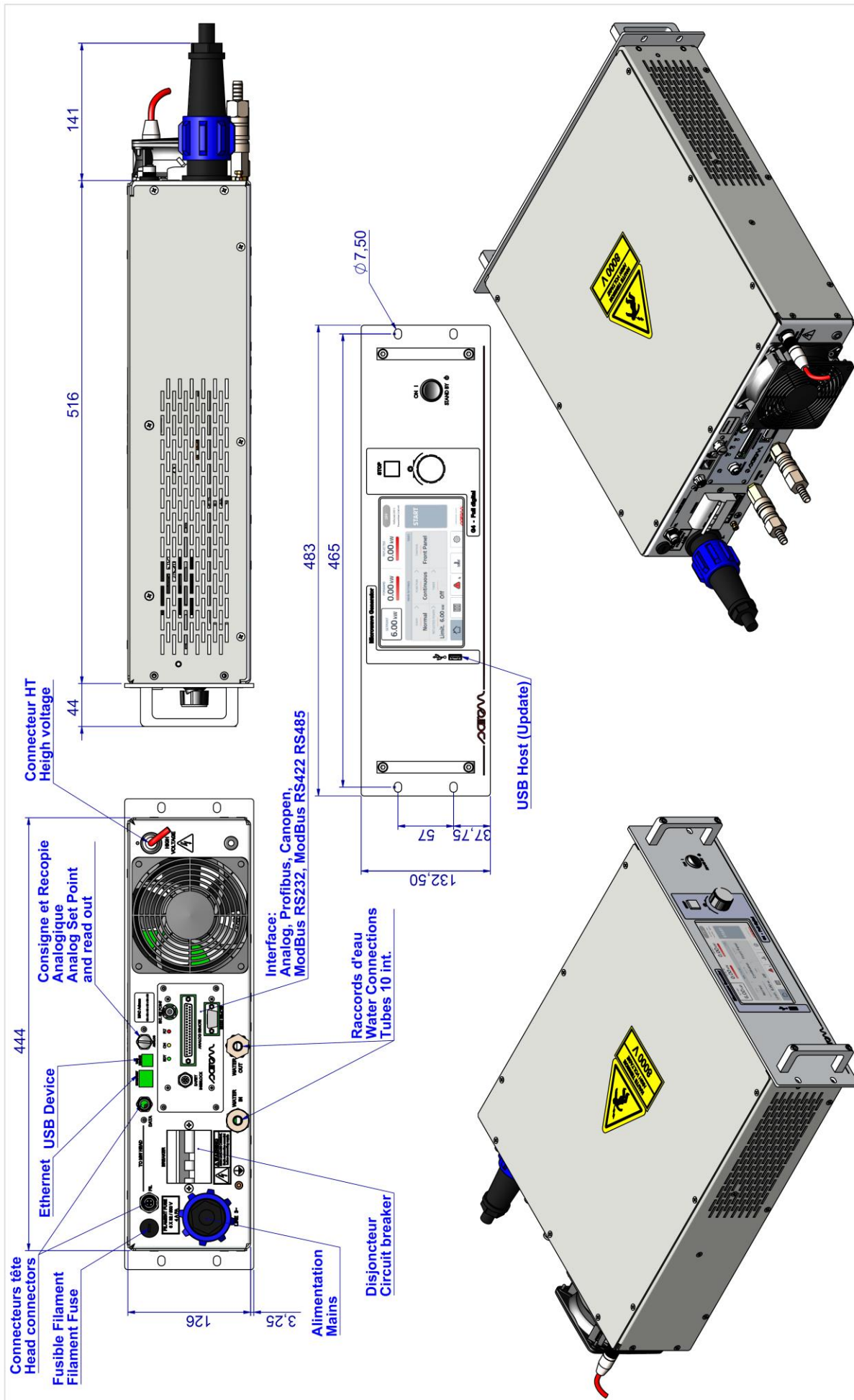


**Generation 4 (G4) generators combine the improvements from customer feedback with meeting customers' needs for microwave processing. Cooling parameters, like water flow and temperature, have been added and can be accessed remotely to ensure a smooth process. The 100 % digital architecture makes it a modern and reliable product, with smart power control.**

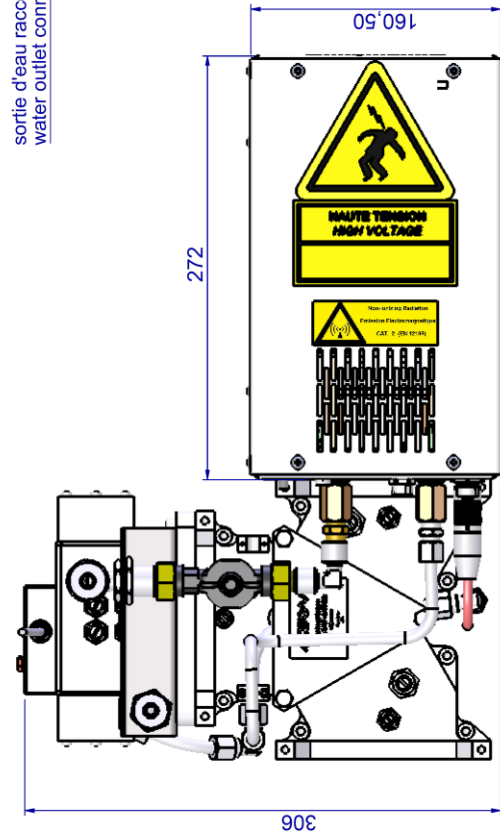
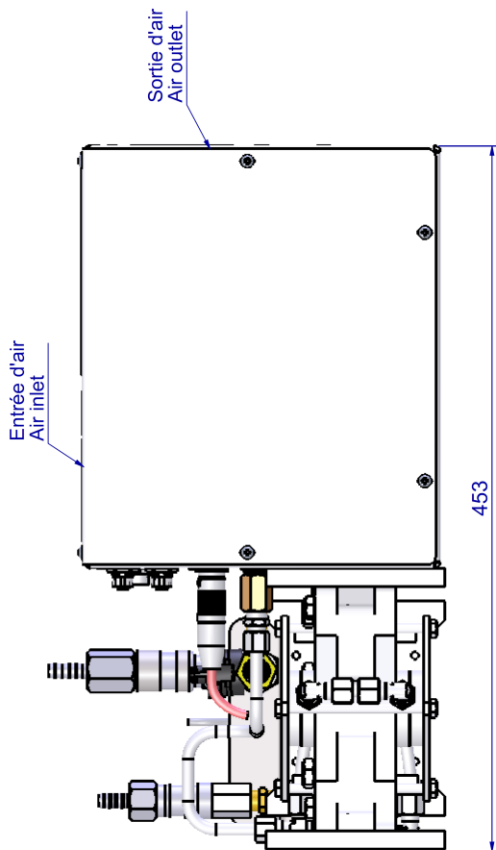
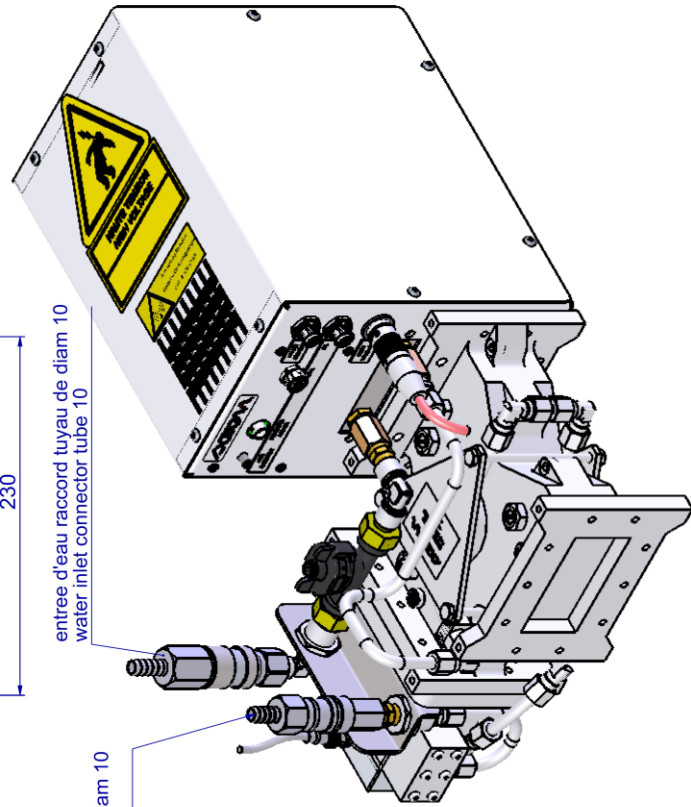
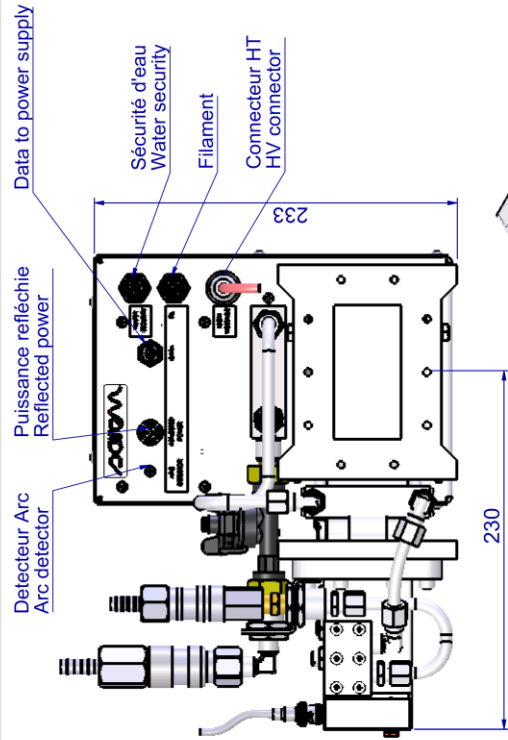
- Extended measurements of the working environment: water flow (L/min), internal and ambient temperature of both microwave head and power supply, power parts temperature, humidity. Information available remotely.
- 7" color TFT touch screen for easy and efficient control and configuration. Full-screen power display function available to read power easily even far away from the generator.
- 100 % fully digital design to allow smart power control. Easily updatable by use of a USB flash drive.
- Addition of warning status (for selected non-critical alarms) with delayed shutdown, instead of immediate shutdown, to keep process running.
- Improved reliability of reflected power measurement parts
- Water circuit reliability improved
- Arc detection included as standard in the microwave head. One arc input is also available for customer's applicator/process. This can prevent damage to the process by shutting down microwave in case of arcing.
- Software compatible with previous generation (no need to change control software)
- Ethernet connection for online diagnostic. USB port available to export alarm messages for easy diagnostic.
- Many fieldbus interfaces available
- Can be ordered without digital display to save cost. Remote control only, by fieldbus.

<b>Reference</b>	<b>GMP G4 30K <sup>(1)</sup> 56T <sup>(2)</sup> <sup>(3)</sup><sup>(4)</sup> 3 IR</b>
<b>Presentation</b>	Switch mode Power supply ( $\eta > 90\%$ ) with separate microwave head Connecting cable: 5 m standard length ; 2,5 m / 10 m / 15 m / 20m optional - Other lengths available upon request
<b>Frequency</b>	2450 MHz $\pm$ 25 MHz
<b>Output microwave power</b>	3 kW adjustable from 5 % to 100 % with 10 W steps
<b>Power stability</b>	1 % from 10 % to 100 %
<b>Ripple</b>	< 2 % RMS from 10 % to 100 % of nominal power
<b>Waveguide output</b>	WR340
<b>Maximum SWR</b>	Infinite at any phase with isolator
<b>MW operating mode <sup>(1)</sup></b>	Continuous ( <sup>SM</sup> ) or pulsed ( <sup>IP</sup> )
<b>Power rise &amp; fall times</b>	< 100 $\mu$ s / 100 $\mu$ s with "IP" pulsed model
<b>Mains <sup>(2)</sup></b>	360-440 V <sup>(400)</sup> , 3-phase + earth with integrated filter Or 208 V $\pm$ 10 % <sup>(208)</sup> , 3-phase + earth with integrated filter Or 480 V $\pm$ 10 % <sup>(480)</sup> , 3-phase + earth with integrated filter
<b>Versions available <sup>(3)</sup></b>	With <sup>(F)</sup> or without <sup>(X)</sup> digital front panel Digital front panel is used for local remote control
<b>Display of forward &amp; reflected powers</b>	On color TFT 7" touch screen (version with digital front panel) On serial link and / or on analogue interface
<b>Start mode</b>	Standard On/Off, Plasma starting, ramp (with digital front panel)
<b>Remote control <sup>(4)</sup></b>	"EtherNet/Industrial Protocol (IP)" always available + to be chosen : Analogue ( <sup>ST</sup> ) <u>OR</u> Modbus on RS232 ( <sup>MS</sup> ) <u>OR</u> Modbus RS485 ( <sup>MM</sup> ) <u>OR</u> Profibus <sup>®</sup> ( <sup>PB</sup> ) <u>OR</u> CanOpen ( <sup>CA</sup> ).
<b>Consumption</b>	5 kVA (power factor > 0.9)
<b>Weight</b>	Power supply 22.5 kg, microwave head 17 kg (including isolator)
<b>Cooling</b>	Power supply, microwave head & isolator: air and water (min. water flow 4 L/min with 2.5 bar between inlet & outlet)
<b>Operating temperature</b>	Ambient max. 45 °C, cooling water 18 – 23 °C. Maximum humidity 60 % non-condensing.
<b>Connectors</b>	Quick connectors for high voltage, mains line and water cooling
<b>Safety interlock</b>	Safety relay and free contact to be shunted
<b>ARF</b>	Automatic Restart Function allowing to detect magnetron arcing and automatically attempt to restart 3 times immediately after arc detected.
<b>Complies with norms</b>	Safety: EN 61010-10, EMC: EN 61000-6-4 and EN 61000-6-2





		<b>sairem</b>		12, Porte du GRAND LYON 01707 NEYRON Cedex - FRANCE tel: 04 72 01 81 60 fax: 04 72 01 81 79 www.sairem.com	
				TITRE: ALIMENTAION HT 3 AND 6 KW G4 3 AND 6 KW POWER SUPPLY G4	
				FORMAT: A3 ECHELLE: 1:3.5 WEIGHT: 6.79	
				DESSIN NO. 3448-ENS-6KW C	
A	16/10/2017	BDE	DESSINE	VERIFIE	APPROUVE
INDICE	DATE	INDICE	DATE	INDICE	DATE
				EMISSION ORIGINALE	MODIFICATION DU DESSIN



TITRE: TETE MO 3KW G4  
3KW G4 MICROWAVES HEAD

FORMAT: A3

ECHELLE: 1:3

WEIGHT: 13.52



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INDEXE: A

DATE: 10/01/17

DESSINE: ML

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EMISSION ORIGINALE: [Signature]

MODIFICATION DU DESSIN: [Signature]