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## Technical Specifications

# Pegasus “Neptune” Multifunction Whirlpool Control System

Doc N. **PV/Gelpad/3F**

Rev. **1**

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# 1. Hardware description

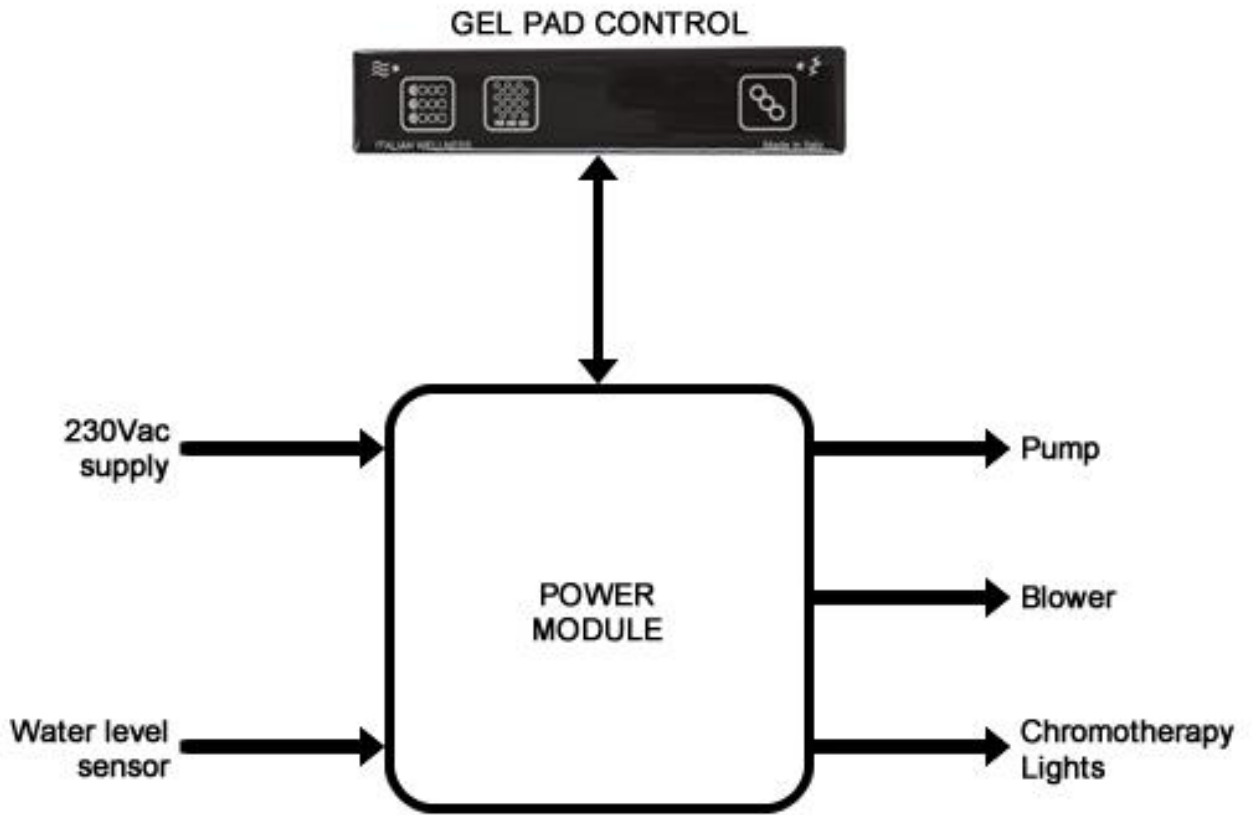


Fig. 1 – System overview

### 0.1.Touch Keypad



Fig. 2 – Keypad layout

Note: while using the system please do not use fingernails as this may damage the pad.



**Whirlpool pump**

On Press, activates whirlpool function.  
Function enabled if required water level is verified by sensor and button will be a fixed blue.  
Otherwise, button will flash blue to indicate a low water level.



**Air blower on/off  
Manual Purge**

Press for 1 second with sufficient water level: starts/stops the Blower (starts at medium power level).  
Press button to rotate through 5 different speed settings.



**Chromotherapy  
lighting**


Selects the Chromotherapy colour (fixed colour or colour programme)

# 1. Functional description

## 1.1. Water level detection

The system detects the water level by a capacitive level sensor. The level signal must be stable for 3 sec before the control validates it, to limit false triggering.


## 1.2. Pump control


The pump is started / stopped by a press of . In case of an insufficient water level, the button will flash blue and unless the water level is replenished, the whirlpool function will cease.

When the pump function is active, the button is a fixed BLUE.

The whirlpool function automatically shuts down after 30 minutes and the LED will turn off to indicate standby mode.

## 1.3. Blower control

The blower is started / stopped by a 1 second press of . In case of insufficient water level, the button is disabled.

When the blower function is active, the  button is BLUE. When not in use the button will turn off.

The user can select 5 different power levels. The blower starts at power level 2. All power transitions are gradual to limit inrush current over the mains power line.

Once the blower is on, it is possible to

- adjust the power level by pressing  (short press). This will cycle all the 5 levels.

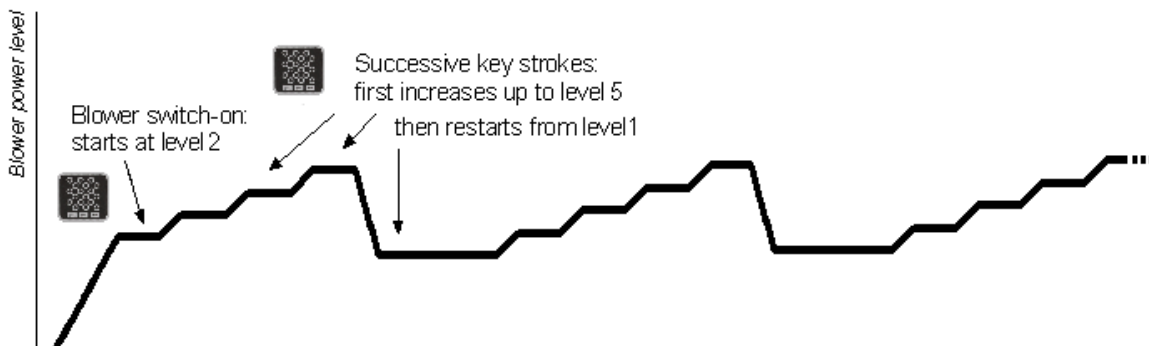


Fig. 3 – Blower power level control

### 1.3.1. Pipework Drying (Purge)

In order to remove any residual water inside the pipework, the blower is started for 1.5 min automatically (Auto Purge). While in Purge sequence, the logo is blinking blue.

The Auto Purge is started by the control at the end of a bath session, or after a level has been detected in the tub. In particular, any time the control records a water level followed by a water low level, a 20' timer is started and the logo blinks. If no subsequent level is detected within 20', the blower is started with the following sequence:


- low power for 10"
- medium power for 20"
- high power for 60"

Finally, the control enters Idle mode (all functions off).



### 1.4. Chromotherapy Lighting

The control is capable of driving up to four Chromo spots in parallel. Spotlight control is not tied to water level, so the user can start/stop the Chromo function at any time by a long

press of . When the function is on, the button is BLUE.

As the Chromo is started, the first colour is WHITE (full colour), then the user can select a different fixed

colour or a colour programme by clicking on  (short press). There are 11 fixed colours and 5 colour programs (see Table 1), the last button click will turn the Chromo function off.

A colour programme is a self-repeating cross-fading sequence of colours. It begins first with spots turned off, then there is a slow ramp-up to the first colour in the program, finally the Chromo function starts cycling the colour sequence.

Button click #	Type	Description
1	Fixed Colours	WHITE (full color)
2		LIGHT BLUE ( <i>keep pressing as a shortcut to jump to Sequence #1 "ENERGY"</i> )
3		BLUE
4		PURPLE
5		MAGENTA
6		RED
7		PINK
8		ORANGE
9		YELLOW
10		APPLE GREEN
11		GREEN
12	Automatic Sequence	Sequence #1 "ENERGY"
13		Sequence #2 "TONIC"
14		Sequence #3 "RELAX"
15		Sequence #4 "SUN"
16		Sequence #5 "DREAM"
17		Chromotherapy off

Table 1 – Chromotherapy colour program selection



<b>Sequence ID</b>	<b>Colours</b>	<b>Duration of each colour step</b>
<b>1. ENERGY</b>	Red	30"
	Orange	30"
	Yellow	30"
	White	30"
	Yellow	30"
	Orange	30"
	<i>(repeat the sequence)</i>	
<b>2. TONIC</b>	Yellow	30"
	Red	30"
	Green	30"
	<i>(repeat the sequence)</i>	
<b>3. RELAX</b>	Blue	30"
	Green	30"
	White	30"
	Green	30"
	<i>(repeat the sequence)</i>	
<b>4. SUN</b>	Yellow	20"
	Orange	15"
	Yellow	20"
	Light blue	15"
	Yellow	20"
	White	15"
	<i>(repeat the sequence)</i>	
<b>5. DREAM</b>	Green	60"
	Blue	60"
	Light blue	60"
	White	60"
	Orange	60"
	Red	60"
	Purple	60"
<i>(repeat the sequence)</i>		

**Table 2 –Auto Sequences**



## 2. Revision History

Rev	Date	Modified
Draft0	24-07-2012	First release
Draft1	18-10-2014	