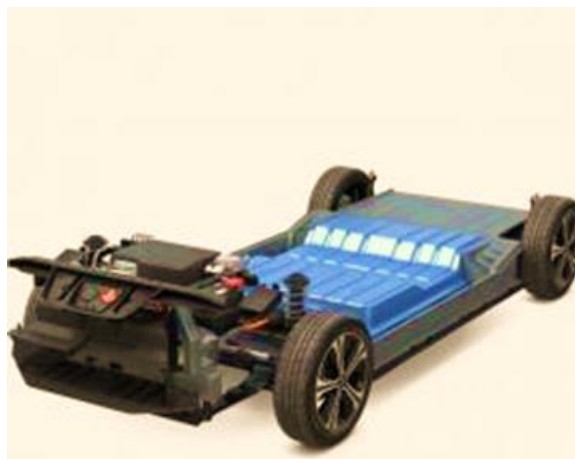


User manual



Cold Cell (Battery pack thermal management)

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MANUAL CONTENT

Purpose

This manual describes the operating modes and operation of this unit.

Scope

This manual provides the necessary operating and diagnostic information.

SECURITY INSTRUCTIONS



WARNING: This chapter contains important safety and operating instructions. Keep this manual.

1. Do not disconnect the unit or any connectors.
2. Do not disassemble any of the equipment (it may cause injury or irreparable damage).
3. Do not disconnect the tubing.



WARNING: Take care of the 12V LV battery.

1. Battery discharged! Follow procedures on page 7/8
2. Battery replacement! Follow procedures on page 7
3. System never shuts down! Follow the procedures on page 8 “And contact the installer”.

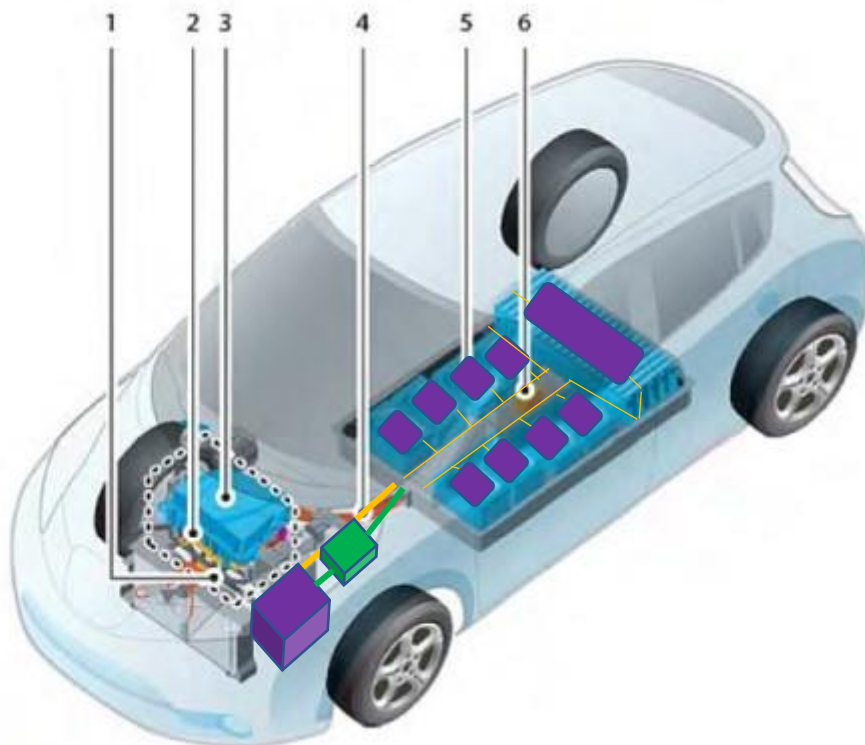
PRECAUTIONS: Only personnel specialized in the product are authorized to carry out any type of intervention, to the detriment of loss of warranty or irreparable damage.

INTRODUCTION

- This “Cold CELL” equipment combines the cooling functions of the autonomous and automatic HV (high voltage) battery pack.
- Ensuring an operating temperature below 26°C, allowing fast loading and large displacements, without loss of performance due to temperature reasons.
- It also guarantees greater durability of the HV set.
- Protect the LV battery (Low Voltage 12V), do not drain the battery, keep the rated voltage 12.60V.

System architecture

The illustration shows the application of the system inside the pack and refrigeration unit.








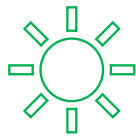

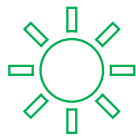

OPERATION & LOOK

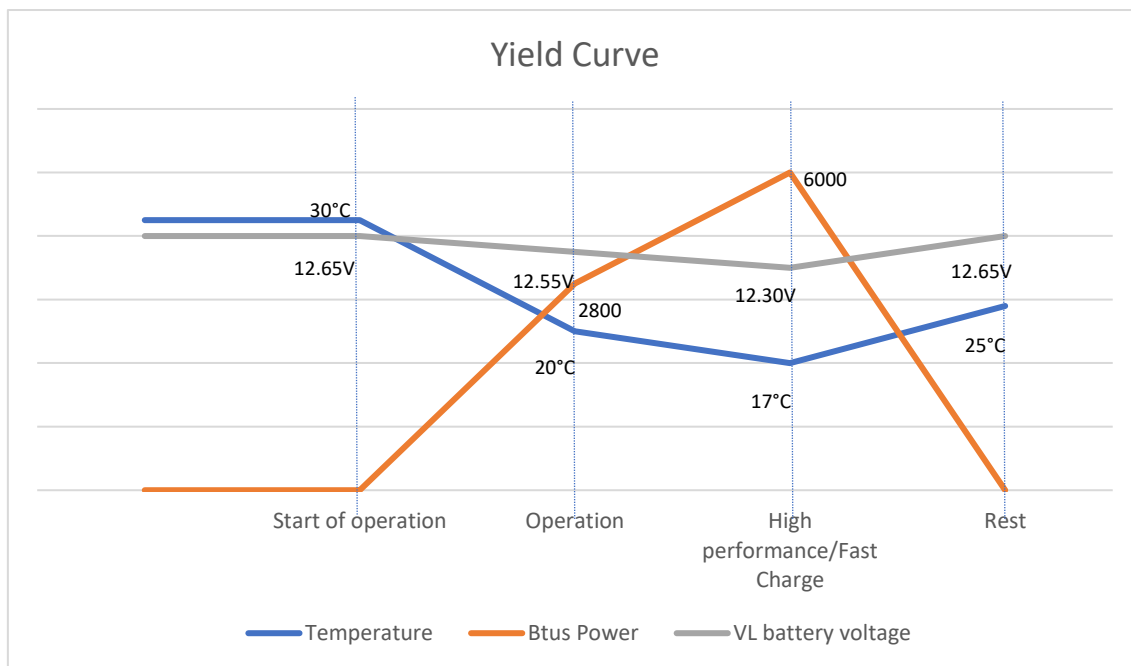


Green Indicator



red indicator

<p>Normal operating mode: Green light on indicates that the Cold Cell unit is fully operational.</p> <p>It is only active in the following scenarios; - Need for battery cooling.</p>	 
<p>Normal/high relative humidity operating mode: Green and red light indicate that the Cold Cell unit is in full operation, but at the same time it performs an internal dehumidification job.</p> <p>It is only active in the following scenarios; - Need for battery cooling and dehumidification.</p>	 
<p>Watchful mode: Red light on for long periods without the green light on, it may want to indicate a high concentration of humidity, which can cause the battery to heat up, until the situation is stabilized.</p> <p>But there may also be no need for cooling. In any case, we always recommend checking the temperature level in the vehicle.</p> 	 
<p>Total Fail Mode: All lights off, you may want to indicate that the system is fully disabled by internal security, or possible controller malfunction.</p> <p>But it can also be in perfect condition, as there is no need to connect any of the devices.</p> <p>For this reason it is always recommended to monitor the battery temperature as in a traditional car. Even if you are not vigilant, the vehicle has self-protective safety procedures.</p>	 



ITEM		UNIDADE	UNIDADES DE MEDIDA
PERMUTADOR ALUMINIO /UNIDADE DE REFRIGERAÇÃO	REFRIGERAÇÃO	W	2080
		Btu/h	6000
	AQUECIMENTO	W	-
		Btu/h	-
ALIMENTAÇÃO ELECTRICA		DC	11/15
POTENCIA (MAX)		W	865
CORRENTE		A	23
RPM		MIN	850
		MAX	4600
TIPO DE REFRIGERANTE		TIPO	R-134
MASSA	UNIDADE INTERNA	g(GRAMAS)	8600
	UNIDADE EXTERNA	g(GRAMAS)	2869
CONVERSOR (DC/DC)	POTENCIA	W	2000
	INPUT	DC	250/500
	OUT	DC	14.8
	CORRENTE	A	8/4
	ARREFECIMENTO	-	NATURAL
	MASSA	g(GRAMAS)	3008
UNIDADE DE CONTROLO		-	8plc
TOTAL		Kg	14.47

DESCRIÇÃO:

PERMUTADOR: - Placas individuais em alumínio com micro canais, fixas a cada bloco de células.

UNIDADE DE REFRIGERAÇÃO: - Composto por um compressor inverter (refrigerante R-134).

- Composto por um condensador e motor ventilador, (instalado na frente junto ao radiador principal).

CONVERSOR: - Instalado junto ao compartimento de proteções (fusíveis).

UNIDADE DE CONTROLO: - Instalada no interior do pack (bateria).



::PRINCIPIO DE FUNCIONAMENTO:: - O kit é totalmente autónomo, ativa o processo de arrefecimento quando necessário durante o processo de carga, o fornecimento de energia é assegurado durante o carregamento.



::INSTALAÇÃO da unidade é necessário retirar o conjunto (bateria) do veículo, desmontar o para-choques frontal, para facilitar a instalação.

Checks and procedures

Possible failures:

1. LV 12V Battery with low voltage or in bad condition.

2. Indicator 50% or activated and charging reduction or temperature rise above 50%
- 










“It is recommended to contact technical assistance”



PROCEDURES:

Disable the system always;

Battery replacement	
Battery failure	
DTC diagnostics and reading	
Auxiliary power stop connection	
Whenever it detects something abnormal in Cold Cell's system	

Permanent deactivation method

Disconnect the main power connector located next to the 12V auxiliary battery, or remove the properly marked fuse. ⚠

Pressing the marked tab and at the same time pulling the two parts apart «««-----»»»

