

# CATALOGUE

2023

Battery chargers
Converters
Battery related products
Other equipment





CRISTEC specializes in energy conversion. Founded in 1983 in Annecy, the company belongs to the EURO ELEC group and has been based in Brittany for nearly 30 years.

CRISTEC is an independent and innovative power-electronic systems manufacturer. Versatile, with a policy of putting people first, our teams participate enthusiastically in the development of the company. Our products are manufactured in France which is a guarantee of reliability and a major advantage for all our customers.

CRISTEC offers expertise on an international scale via its range of standard and customized products mainly for on-board applications. Thanks to our network of distributors who are present in over 50 countries we can guarantee our clients reliable universal solutions for use in extreme environmental conditions.

Our automatic H.F. chargers, an innovative technology in which CRISTEC was the precursor, and all our products relating to battery charging meet the whole host of international standards and norms. The design of our latest equipment benefits from unrivalled feedback on almost 200.000 HF chargers in use.





## New products

## **KERSINE**

**Inverters 3KW** 





Shore-power units





## French design and manufacturing



**Silent products** 



Optimal performance whatever the environmental conditions



**Connected products** 



New horizons thanks to new technology



## **BATTERY CHARGERS**

## **HPOWER**

### Single-phase range

Description	Reference	
12VDC range		
12V/90A/3 banks	HPO12-90	
24VDC range		
24V/45A/3 banks	HPO24-45	
24V/60A/3 banks	HPO24-60	
24V/80A/3 banks	HPO24-80	
24V/100A/3 banks	HPO24-100	
48VDC range		
48V/30A/3 banks	HPO48-30	
48V/50A/3 banks <sup>(1)</sup>	HPO48-50	



Description	Reference	
24VDC range		
24V/60A/3 banks/400V 3-phase <sup>(1)</sup>	HPO24-60-TRI	
24V/100A/3 banks/400V 3-phase <sup>(1)</sup>	HPO24-100-TRI	
48VDC range		
48V/50A/3 banks/400V 3-phase (1)	HPO48-50-TRI	

### Single-phase range with DNV marine certification

Description	Reference	
12VDC range		
12V/90A/3 banks	HPO12-90-CERT	
24VDC range		
24V/45A/3 banks	HPO24-45-CERT	
24V/60A/3 banks	HPO24-60-CERT	
24V/80A/3 banks	HPO24-80-CERT	
24V/100A/3 banks	HPO24-100-CERT	

#### **Accessories**

Description	Reference
2.4" Touch-screen control panel	UNI-DISPLAY-R
Temperature probe 2.8m	STP-UNI-2.8
Temperature probe 5m	STP-UNI-5.0
Parallelization kit	KIT-HPO-LINK



High power
CAN-BUS
Robustness & performance





### **Professional application**

- Touch-screen control panel
- Relays board
- Certificate on request







## **BATTERY CHARGERS**

## **YPOWER+**



Description	Reference
12V/40A/4 banks - fanless	YPO12-40STPL
12V/60A/4 banks - fanless	YPO12-60STPL

#### **Accessories**

Description	Reference
Temperature probe 2.8m	STP-UNI-2.8
Temperature probe 5m	STP-UNI-5.0













Silent chargers
4 banks
Connected
Bluetooth - CAN-BUS



Warranty
3 years



Lithium

# BATTERY CHARGERS YPOWER

Description	Reference	
12VDC range		
12V/16A/3 banks - fanless	YPO12-16ST	
12V/25A/3 banks - fanless	YPO12-25ST	
24VDC range		
24V/12A/3 banks - fanless	YPO24-12ST	
24V/20A/3 banks - fanless	YPO24-20ST	
24V/30A/3 banks	YPO24-30ST	

### **Accessories**

Description	Reference	
2.4" Touch-screen control panel	YPO-DISPLAY-R	
Temperature probe 2.8m	STP-UNI-2.8	
Temperature probe 5m	STP-UNI-5.0	
Charger ON/OFF remote control	G-ON/OFF-R	



The must of smart chargers
Our bestsellers



Warranty
5 years



Lithium



## **BATTERY CHARGERS**

## YPOWER WITH OPTION BOARD (1)

Description	Reference	
12VDC range		
12V/16A/3 banks - fanless	YPO12-16RELST	
12V/25A/3 banks - fanless	YPO12-25RELST	
24VDC range		
24V/12A/3 banks	YPO24-12RELST	
24V/20A/3 banks	YPO24-20RELST	
24V/30A/3 banks	YPO24-30RELST	

Description	Reference	
12VDC range		
12V/16A/3 banks - fanless	YPO12-16COMST	
12V/25A/3 banks - fanless	YPO12-25COMST	
24VDC range		
24V/12A/3 banks	YPO24-12COMST	
24V/20A/3 banks	YPO24-20COMST	
24V/30A/3 banks	YPO24-30COMST	

<sup>(1)</sup> Warning: models not compliant with optional touch-screen control panel



### **Integrated relays board:**

- low battery voltage
- charger fault

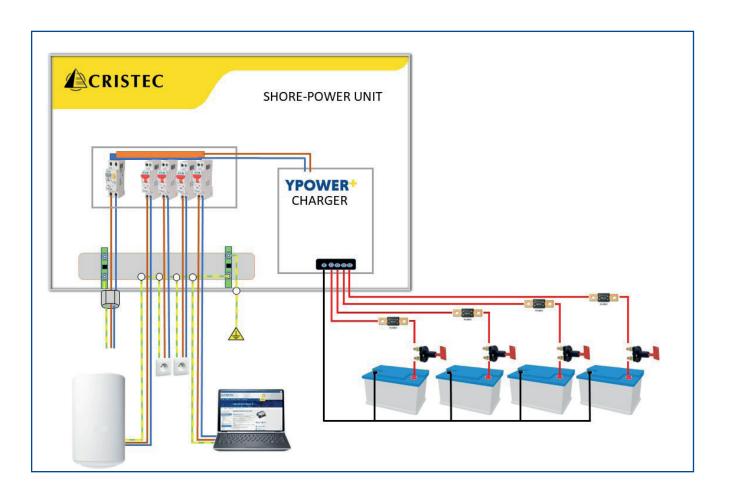


### **Integrated CAN-BUS board:**

- battery voltagecharger current
- AC voltage & frequency







## **SHORE-POWER UNITS**

## **YPOWER+**



Description	Reference
12V/40A/4 banks - 3 MCB 10A	UEYPOPL/12-40/3D
12V/40A/4 banks - 4 MCB 10A	UEYPOPL/12-40/4D
12V/40A/4 banks - 3 MCB 16A - 1 MCB 10A	UEYPOPL/12-40/4D3 (1)
12V/60A/4 banks - 3 MCB 10A	UEYPOPL/12-60/3D
12V/60A/4 banks - 4 MCB 10A	UEYPOPL/12-60/4D
12V/60A/4 banks - 3 MCB 16A - 1 MCB 10A	UEYPOPL/12-60/4D3 (1)

#### **Accessories**

Description	Reference
Temperature probe 2.8m	STP-UNI-2.8
Temperature probe 5m	STP-UNI-5.0

(2) D3: differential RCD 32A - 3 MCB 16A - 1 MCB 10A Others: differential RCD 16A - 3 or 4 MCB 10A









Bluetooth

BUS-CAN Interface

### Multifunction casing:

- Protection :

1 two-pole differential RCD 16A/30mA

- Distribution: 3 or 4 MCB 10A 2 extra MCB (option)

- 4 banks intelligent charger



Warranty 3 years



Lithium

# SHORE-POWER UNITS YPOWER

Description	Reference	
12V/16A/3 banks - 2 MCB	UEYPO/12-16/2D	
12V/16A/3 banks - 3 MCB	UEYPO/12-16/3D	
12V/16A/3 banks - 4 MCB	UEYPO/12-16/4D	
12V/25A/3 banks - 2 MCB	UEYPO/12-25/2D	
12V/25A/3 banks - 3 MCB	UEYPO/12-25/3D	
12V/25A/3 banks - 4 MCB	UEYPO/12-25/4D	
12V/40A/3 banks - 3 MCB	UEYPO/12-40/3D	
12V/40A/3 banks - 4 MCB	UEYPO/12-40/4D	

#### **Accessories**

Description	Reference	
2.4" Touch-screen control panel	YPO-DISPLAY-R	
Temperature probe 2.8m	STP-UNI-2.8	
Temperature probe 5m	STP-UNI-5.0	
Charger ON/OFF remote control	G-ON/OFF-R	



- Protection:

1 two-pole differential RCD 16A/30mA

- Distribution: 2, 3 or 4 MCB 10A

- 3 banks intelligent charger



Warranty
3 years



## **BATTERY CHARGER DC-DC YPOWER**

Description	Reference
12VDC range	
12V-12V DC-DC 60A - fanless	YPO12-12/60
12V-24V DC-DC 30A - fanless	YPO12-24/30
12V-36V DC-DC 15A - fanless	YPO12-36/15
12V-48V DC-DC 10A - fanless	YPO12-48/10
24VDC range	
24V-12V DC-DC 60A - fanless	YPO24-12/60
24V-24V DC-DC 30A - fanless	YPO24-24/30
24V-36V DC-DC 20A - fanless	YPO24-36/20
24V-48V DC-DC 15A - fanless	YPO24-48/15
36VDC range	
36V-12V DC-DC 40A - fanless	YPO36-12/40
36V-24V DC-DC 30A - fanless	YPO36-24/30
36V-36V DC-DC 20A - fanless	YPO36-36/20
36V-48V DC-DC 15A - fanless	YPO36-48/15
48VDC range	
48V-12V DC-DC 40A - fanless	YPO48-12/40
48V-24V DC-DC 30A - fanless	YPO48-24/30
48V-36V DC-DC 20A - fanless	YPO48-36/20
48V-48V DC-DC 15A - fanless	YPO48-48/15
48V-48V DC-DC 30A - fanless	YPO48-48/30



**LiFePO4** compliant up to 4 units in parallel **integrated CAN-BUS** 

- **6** CHARGE
- **(9)** CONVERT
- **6** BOOST
- **9** STABILIZE



#### **Accessories**

Battery

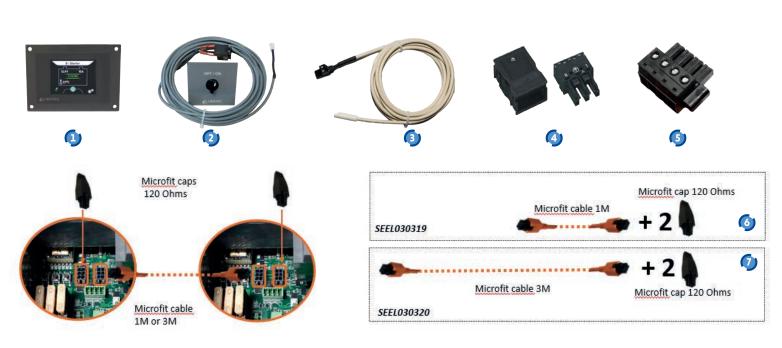
Description	Reference	
2.4" Touch-screen control panel	UNI-DISPLAY-R	
Temperature probe 2.8m	STP-UNI-2.8	
Temperature probe 5m	STP-UNI-5.0	
Charger ON/OFF remote control	G-ON/OFF-R	
Probe for alternator	STP-ALT-2.4	



supply and/or battery charger

## **OPTIONS SHORE-POWER UNITS BATTERY CHARGERS**

	YPOWER+	YPOWER+	HPOWER	YPOWER	YPOWER	YPOWER
	Chargers	Shore- power units	Chargers	Chargers indexes N4 & more	Shore- power units	DC-DC chargers & MPPT regulators
Remote touch-screen control panel 2.4"	-	-	UNI-DISPLAY-R	YPO-DIS	PLAY-R	UNI-DISPLAY-R
ON/OFF remote control 2		-			G-ON/OFF	-R <sup>(1)</sup>
External varistor for unstable AC Mains	-	- VAR-AC -		-		
Temperature probe 5m	STP-UNI-5.0					
Temperature probe 2.8m 📵	STP-UNI-2.8					
HPOWER parallelization kit	- KIT-HPO-LINK -					
AC input connector WAGO WINSTA (2)	30024064	-	-	30024	1064	-
DC 3 outputs connector PHOENIX CONTACT (2)	<b>(5)</b>					
All YPOWER models except 12V/60A		- 30033787 -		-		
YPOWER 12V/60A		- 300337		30033788	033788 -	
DC 4 outputs connector PHOENIX CONTACT (2)	'					
YPOWER PLUS 12V/40A	30038370					
YPOWER PLUS 12V/60A	30037678			-		
Parallelization kit 1M (Microfit cable 3.0 6 contacts— 2 Microfit caps 3.0 120 ohms) (3)	SEEL030319	6	-	SEEL030319 (COMST)	-	SEEL030319 (DC-DC)
Parallelization kit 3M (Microfit cable 3.0 6 contacts— 2 Microfit caps 3.0 120 ohms) (3)	SEEL030320	<b>6</b>	-	SEEL030320 (COMST)	-	SEEL030320 (DC-DC)
Microfit cap 3.0 120 ohms <sup>(3)</sup>	30037624		-	30037624 (COMST)	-	30037624 (DC-DC)



<sup>(1)</sup> not compatible with YPO12-16 12-25 & 24-12 (2) for cable beam external to the charger (3) parallel mounting via CAN-BUS to increase the current

# 3.5" TOUCH-SCREEN BATTERY MONITOR BAT-MON

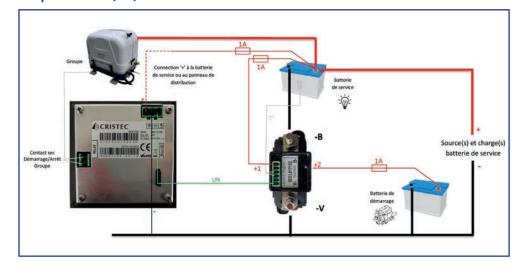


Description	Reference
Battery monitor (screen + 1 shunt 300A)	BAT-MON-3.5-3 <sup>(1)</sup>

#### **Accessories**

Description	Reference		
Additional shunt 300A	SHUNT-300-3.5-3 <sup>(1)</sup>		
Wiring kit	SEEL017153		
Temperature probe 2.8m	STP-UNI-2.8		
Temperature probe 5m	STP-UNI-5.0		

#### (1) Operates in 12, 24, 36 and 48VDC



## Controls one battery or one DC source flow

- Standard supply:
  - 1 shunt
  - 1 NO/NC dry contact
  - 1 bank in voltage
- Option:

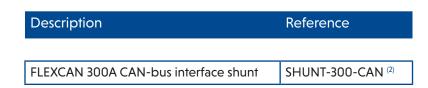
up to 2 extra shunts





## **CAN-BUS INTERFACE SHUNT**

## **FLEXCAN**





#### **Battery parameters:**

- voltage and current
- remaining capacity and time
- average discharge depth
- unavailable capacity
- number of charge/discharge cycles

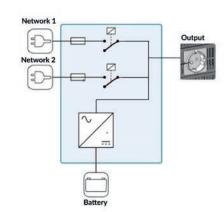


# SINEWAVE INVERTERS

## **KERSINE**

Description	Reference
230VAC range (50-60Hz) <sup>(1)</sup>	
Inverter 12V KERSINE 3000VA (2)	KERS12-230/3000
Inverter 24V KERSINE 3000VA (2)	KERS24-230/3000

- (1) Versions 115VAC pending Consult us
- (2) Availability end 2023





**High power 3000W continuous Integrated 30A relays** Lightweight < 7kg





## SINEWAVE INVERTERS **SOLO**

Description	Reference	
12VDC range		
12V/200VA	SEEL006054B	
12V/400VA	SEEL006056B	
12V/800VA <sup>(1)</sup>	SEEL006072	
12V/2000VA <sup>(1)</sup>	SEEL006088	
24VDC range		
24V/300VA	SEEL006050B	
24V/500VA	SEEL006052B	
24V/1000VA <sup>(1)</sup>	SEEL006074	
24V/2000VA <sup>(1)</sup>	SEEL006090	
24V/2300VA	SEEL006092	
24V/3300VA	SEEL006822	
48VDC range		
48V/300VA	SEEL006954	
48V/500VA	SEEL008368	
48V/1200VA	SEEL006082	
48V/2300VA	SEEL006094	
48V/3500VA	SEEL006096	
(1) Remote control for SOLO 800, 1000 & 2000VA	SEEL007130	



Models 230VAC/50Hz 115VAC/60Hz on request



# **ELECTRONIC BATTERY ISOLATORS (MOSFET)**

## RCE

Description	Reference	
100A/1 input - 2 banks - IG <sup>(1)</sup>	RCE/100-1E-2IG	
100A/1 input - 3 banks - IG <sup>(1)</sup>	RCE/100-1E-3IG	
100A/2 inputs - 3 banks	RCE/100-2E-3	
150A/1 input - 2 banks - IG <sup>(1)</sup>	RCE/150-1E-2IG	
150A/1 input - 3 banks - IG (1)	RCE/150-1E-3IG	
180A/1 input - 2 banks - IG <sup>(1)</sup>	RCE/180-1E-2IG	
180A/1 input - 3 banks - IG (1)	RCE/180-1E-3IG	
200A/1 input - 3 banks - IG <sup>(1)</sup>	RCE/200-1E-3IG	
Isolator kit <sup>(2)</sup>	SEEL010604	





# ISOLATED DC-DC CONVERTERS SD

Description	Reference		
12VDC input voltage			
12V/12V/16A - SD203-I1-DD-AL	25000160DD		
12V/24V/08A - SD206-I1-DD-AL	25000163DD		
12V/48V/04A - SD208-I1-DD-AL	25000166DD		
24VDC input voltage			
24V/12V/16A - SD203-I2-DD-AL	25000161DD		
24V/24V/08A - SD206-I2-DD-AL	25000164DD		
24V/48V/04A - SD208-I2-DD-AL	25000167DD		
48VDC input voltage			
48V/12V/16A - SD203-I3-DD-AL	25000162DD		
48V/24V/08A - SD206-I3-DD-AL	25000165DD		
48V/48V/04A - SD208-I3-DD-AL	25000168DD		



Galvanic isolation

Adjustable output voltage

Operates as a battery charger

200W - parallel mounting



<sup>(1)</sup> integrated ignition alternator terminal

<sup>(2)</sup> for DC source requiring a voltage reference to start

# MPPT SOLAR CHARGE REGULATORS YPOWER

Description	Reference	
12V MPPT regulator — fanless	YPO45-12-60/MPPT	
24V MPPT regulator – fanless	YPO45-24-30/MPPT	
12V MPPT regulator — fanless	YPO80-12-40/MPPT	
24V MPPT regulator – fanless	YPO80-24-25/MPPT	

#### **Accessories**

Description	Reference
2.4" Touch-screen control panel	UNI-DISPLAY-R
Temperature probe 2.8m	STP-UNI-2.8
Temperature probe 5m	STP-UNI-5.0
Charger ON/OFF remote control	G-ON/OFF-R

## **VOLTAGE GUARD VLTG**

Description	Reference
Voltage Guard 12V/24V - 70A	VLTG-70

## **ISOLATION TRANSFORMER**



Description	Reference
3600W transformer - Manual	IT-3600-M
3600W transformer - Automatic	IT-3600-A



High power 800W Integrated CAN-BUS Solar cells voltage: 45VDC or 80VDC



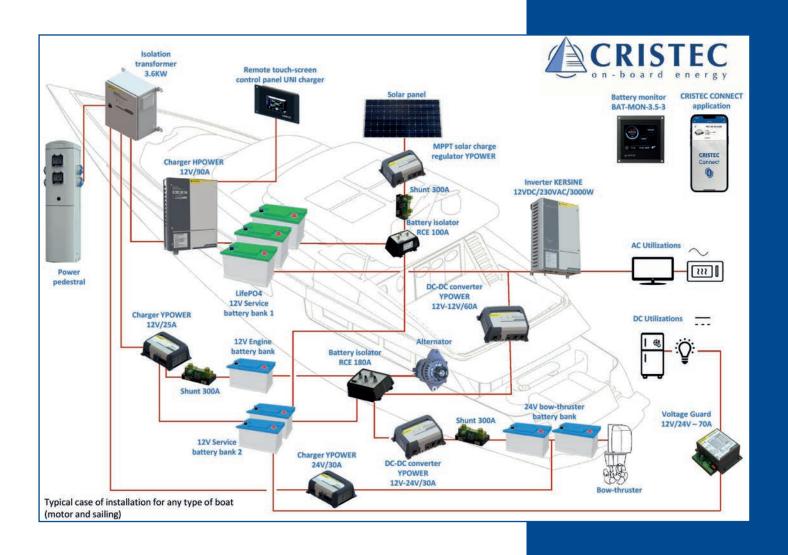


Protects your batteries against deep discharge, overvoltage and overload





Integrated softstart
115/230VAC
Manual switching or
automatic recognition
of the input network







## **CRISTEC GENERAL CONDITIONS OF SALE**

#### Clause 1: Object and Scope

All orders imply that the buyer accepts without reserve and fully adheres to these general conditions of sale which take precedence over any document belonging to the buyer, and in particular over any general conditions of purchase. These general conditions of sale apply to all sales made by the company CRISTEC SAS, hereafter known as "CRISTEC"

Consequently, by placing an order, the client fully adheres to these general conditions of sale, unless special conditions have been granted to the buyer in writing by CRISTEC.
All other docu-ments aside from these general conditions of sale, and in particular catalogues, brochures, advertisements and leaflets, are only informative and indicative in
nature, rather than contractual.

#### Clause 2: Intellectual Property

All technical documents given to the client remain the exclusive property of CRISTEC. CRISTEC is the sole holder of the intellectual property rights to these documents. These documents must be returned to CRISTEC on request. The client undertakes to make no use of these documents which is likely to infringe on CRISTEC's industrial or intellectual property rights, and undertakes not to divulge them to any third parties.

#### Clause 3: Orders

All orders must include the complete reference, the name and the number for the items. Orders placed by telephone must be confirmed in writing. Purchase orders must be signed by the client and clearly indicate the invoice and delivery addresses. The client cannot revoke orders sent to CRISTEC, unless CRISTEC agrees in writing.

#### Clause 4: Price

The prices and conditions applied are those that are applicable on the day the order is placed. They are displayed in EUROS and include shipment from the factory, EXCLU-DING TAXES, and including standard packaging. They will be increased by the VAT rate and the transport costs that are applicable on the day of the order. Special packaging, for exports or sea transport, is invoiced as extra. CRISTEC has the right to change its prices at any time. However, CRISTEC undertakes to invoice for the goods ordered according to the prices set out on the confirmation of order receipt.

#### Clause 5: Terms of Payment

- 1 Payment: The price will be payable by the following methods:
- Either by cheque;
- Or by bank transfer;
- Or by accepted and domiciled bill of exchange. Bills of exchange sent for acceptance must be returned within the legal time limit of 48 hours, increased to 8 days to include postal delivery times. The name and date cannot be changed unless by prior agreement.
- postal delivery times. The name and date cannot be changed unless by prior agreement. - Or credit card (Distance Selling). The cards accepted are Visa, MasterCard and Amex. The debit of the card is done at the order.

No discount will be given for early payment.

The choice of the method of payment and the time limit for payment will be agreed upon in advance – if not specified on the valid quotation or commercial bid – by CRISTEC 2 - Late payment: partial or total non-payment will automatically lead immediately and without prior warning to:

- The outstanding balance being demanded, regardless of the agreed method of payment.
- The payment of penalties automatically due, the day following the settlement date shown on the invoice in cases where the amounts payable are settled after that date.
  Unless there is a provision to the contrary, which cannot however set an interest rate at less than three times the legal interest rate, the penalty interest rate for late payment shall be equal to the 3-month EURIBOR rate, plus five percentage points.
- A penalty clause being demanded: in the event of a contentious intervention, the application of compensation equivalent to 15% of the unpaid sum as damages, on top of the legal fees and legal interest.
- The cancellation of the sale and the retention of title without prejudice to all damages; CRISTEC will keep any deposits that have been paid.

#### Clause 6: Delivery Times

The delivery time set out on the confirmation of order receipt is given as an indication only and cannot in any way be guaranteed, as it depends notably on the availability of carriers and the order in which orders are placed. CRISTEC endeavours to respect the delivery times that it sets out on the order acceptance note, depending on the reference logistic time, and to perform the orders, except in the event of force majeure or circumstances out of its control, such as strikes, extreme cold, fire, storms, floods, epidemics and supply problems, without this list being exhaustive. Delivery delays cannot give rise to any penalties or compensation, nor can they be cause for order cancellation. Any delay compared to the indicative delivery time initially set out cannot be a justification for cancelling an order that has been placed by the client and recorded by CRISTEC.

#### Clause 7: Delivery

Delivery is made in the following ways:

- Either the goods are delivered directly to the buyer;
- Or a note is sent to the buyer, alerting him/her that the goods are available in the shop;
- Or the goods are delivered to a location given by the buyer on the purchase order.

The risks pertaining to the goods sold are transferred to the buyer when the goods are passed over either to the buyer or to the carrier. The buyer bears all transport risks. In the event that goods go missing or are damaged in transit, the buyer must notify all the necessary reservations to the carrier. In accordance with article L133-3 of the commercial code, if the carrier has not received notification of reservations by registered post with acknowledgement of receipt within 3 days of the delivery of the goods, and if a copy of these reservations has not been simultaneously sent to CRISTEC, it will be considered that the client has accepted the goods.

#### Clause 8: Terminatior

If, within fifteen days following the application of clause 5-2 «Late payment», the buyer has not paid the remaining sums due, the sale will automatically be cancelled and the way can be opened for the allocation of damages payable to CRISTEC.

#### Clause 9: Retention of Title

CRISTEC remains the owner of the goods sold until payment in full of the principle and other charges. Therefore, if the buyer goes into administration or is under court-supervised liquidation, CRISTEC reserves the right to claim for the goods sold that have not been paid for, within the framework of a class action.

#### Clause 10: Warranty

The warranty conditions are set out in the technical leaflets (user manuals) included with the products. As part of this warranty, defective parts are replaced and repairs are carried out free in our workshops in Quimper On the other hand, the warranty does not cover:

- Accidents linked to flood damage;
- Accidents linked to lightening;
- Assembly and disassembly costs;
- Breakdowns resulting from use or installation that does not conform to the instructions given in the technical leaflets (falls, incorrect feed, faulty assembly etc.);
- Breakages caused by the actions of an unauthorised person;
- Transport costs;
- And all other charges (travel, goods transport, handling, downtime, time in dry dock etc.).

#### Clause 11: Force Majeure

CRISTEC cannot be held liable if it cannot perform or is delayed in performing one of its obligations set out in these general conditions of sale due to a case of force majeure. Force majeure refers to all exterior events that are unforeseeable or irresistible in the sense of article 1148 of the Civil Code.

#### Clause 12: Jurisdiction

Any dispute relating to the interpretation and the performance of these general conditions of sale is subject to French law, to the exclusion of any other law and, additionally, to the Vienna Con-vention (The United Nations Convention on Contracts for the International Sale of Goods). If the dispute cannot be resolved amicably, it will be brought before the Commercial Court of Quimper.







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