

# Battery chargers **CPS3 RANGE**

#### Innovative

> Special terminal to connect an additional battery isolator for connecting up to 6 independent charging banks.

www.cristec.fr

## **CPS3** battery chargers

## Optimal **made-to-measure charging** for a longer battery life

Founded in 1983, CRISTEC (CReation, Innovation Scientific and TEChnical) specialises in energy conversion.

CRISTEC offers expertise on an international scale with its range of standard products mainly designed for on-board applications. Our network of agents and distributors is present in over 50 countries.

Today CRISTEC is proud to offer you the assets of its fourth generation HF battery charger range, CPS<sub>3</sub>, having already sold more than 80,000 HF units throughout the world.

#### > Reinforced protection

Anti-drip covering. Electronic board coated with waterproof varnish.

> 3 year guarantee

#### > Optimal ergonomics: Easy to install

CPS<sub>3</sub> battery chargers can be fixed vertically or horizontally.

The charger can be accessed externally by removing the front yellow housing.

AC and DC connections as well as charger settings are grouped together on the PCB in a connection area that ensures a safe, quick and easy installation.

#### Front panel indicators: Easy to read

> Innovative

charging banks.

an additional battery isolator for connecting up to **6 independent** 

Specific terminal to connect

3 panel indicators are clearly visible on the front of the charger enabling easy monitoring of charger operation.

Remote indicators are also available as an option, depending on models.





Dal



#### > Interfaces

Optional connection for external battery temperature sensor - depending on models enables optimization of battery charging and/or a digital display unit to check battery state.



The DC connection on threaded rods is particularly robust and practical due to the available space.

#### > Multiple outputs:

### Charge 3 batteries simultaneously



CPS3 battery chargers have 3 independent outputs (except models > 80A) which can individually deliver nominal output current.

One of these outputs is designed for matching specific engine battery requirements for marine application.

The built-in battery isolator on each battery bank means the batteries stay permanently connected to the charger and there is no need to disconnect them during engine startup.

The CRISTEC CPS3 battery chargers are the only ones available on the market with an extra terminal to connect an additional external battery isolator for connecting up to 6 independent battery banks (3 from the charger and 3 from the battery isolator).

CRISTEC recommends using a voltage drop free isolator. Please refer to the CRISTEC RCE battery isolator range.

#### -> Choose your charging curve: Safety and freedom

On CPS3 chargers the BOOST phase is particularly safe as it is not only timed but also current controlled. In the event of a cut in the charger power-supply the charging cycle does not reset.

The 3-step charge mode being faster (BOOST, ABSORPTION and FLOATING) it is particularly useful when you run out of time to charge the batteries (charger powered from a generator, short stay in the marina, etc.).

It is possible to interrupt the Boost phase for specific applications where this function is not required : wintering, self-maintaining battery charge or when the charger is used as direct current regulated and filtered power supply.

#### > Choose your battery type: Made-to-measure battery charging

As your choice regarding battery technology is extensive, you have to make sure charging characteristics comply with your specific battery type. CPS3 battery chargers have internal selectors for setting the charge level in compliance with the battery technology and application : many settings such as Lead-sealed, Calcium-Lead, AGM, Gel, etc.



#### -> Universal AC powering:

#### Worldwide use

The AC input voltage and frequency auto-ranging – from 85 to 265 VAC and from 47 to 65 Hz – guarantees batteries can be charged anywhere (in Europe and in the USA), from commercial Mains or generators, even when available power is limited (end of pontoon, foreign network, etc.). Except model 24V/150A 400VAC 3 phases.



# The strength of innovation

CPS3 battery chargers : the answer to constantly changing requirements in a climate of increasingly stricter standards.

#### > Special coating: peace of mind

The charger electronic boards are coated with waterproof and tropicalised varnish. An anti-drip covering protects the charger from water ingress. The entire charger casing paint is specifically coated to prevent corrosion.

#### > Managing technology: high performance

The latest HF technology and COS PHI 1 regulation (integrated PFC – Power Factor Correction) ensure nominal charger operation in the event of wide input fluctuation. As AC charger input consumption is low you economise generator power.

#### > In-built protection: reliability

The CPS3 battery chargers have numerous in-built protection devices (polarity reversal, short-circuits through removable fuses, over-heating, etc.) ensuring a long charger life.

#### > Parallel-mount: flexibility

You can parallel-mount our chargers thereby multiplying the output current (2 off 24V/60A chargers will deliver 24V/120A). You can parallel-mount up to 6 chargers preferably the same size.

# **CPS3 battery chargers**

Naminal output current  90 Å  100 Å  60 Å  75 Å  120 Å  190 Å  90 Å  80 Å  00 Å    hput whege  From 85 to 265 VAC single-phase automatic $304532$ From 85 to 265 VAC single-phase automatic $single-phase automatic  single-phase automatic  single-pha$	Nominal output current    80 A    100 A    60 A    75 A    120 A    150 A    150 A    60 A      Input Woldge    From 85 to 265 VAC single-phase automatic    394,522    394,622	Part number	CP53/12-80	CPS3/12-100	CPS3/24-60	CPS3/24-75	CPS3/24-120	CPS3/24-150-TRI		CPS3/48-30	CPS3/48-60
transmotoper datationtotaltotaltotaltotaltotaltotalinput values	number of a constraint of a c	Output voltage	12	VDC		2	4 VDC	-		48 VDC	
ipped voltage equal tensFrom 85 to 265 VAC single phase automaticTyped structuresStructure tensStructure t	Input requencyFrom 85 to 265 VAC single phase automaticType is a to 265 VAC single phase automaticInput correction6.9.A9.0.A11.5.A17.0.A7.0.A <sup>*</sup> 9.0.A17.0.AAC input correction6.9.A9.0.A11.5.A17.0.A7.0.A <sup>*</sup> 9.0.A17.0.AAC input correctionSecond Second Secon	Nominal output current	80 A	100 A	60 A	75 A	120 A	150 A		30 A	60 A
Input current consumption at 230 VAC6.0 A6.9 A9.0 A11.5 A17.0 A7.0 A'9.0 A17.0 AA (input connection Power linitation through extential bipolar sixtch maxiput current = 6AOs are weterminal with clamping through plastic glandPower factor Colugativo togge regulation through extended togget regulation through extended extended extended extended extended extended togget regulation through extended exte	Instrument consumption at 230 VAC6.0 A6.0 A6.0 A9.0 A11.5 A17.0 A7.0 A*9.0 A17.0 AReconsumption at 230 VACCA (injut connection biole synth main eight unnet = 40)CA (injut connection is "***********************************	Input voltage		From 85 to 26	5 VAC single-pha	ase automatic		VAC	-		
AC input connection AC input connection0.0 R0.0	AC input connection60.9 N60.9 N10.9 N11.0 N	Input frequency				Fr	om 47 to 65 Hz a	automatic			
Prover finitation project on marking a constrained a constrained on marking a constrained	Prover Initiation biopole switch maniput current = 64)  Constrained Strep Strep  Second Strep   Second Strep Strep		6,0 A	6,9 A	9,0 A	11,5 A	17,0 A	7,0 A *		9,0 A	17,0 A
through external polor switch maxing turner 4.60yesyesyesyesPower factor0 $\cdots$ $\cdot$ <	through external solution set in the constraint of the constr	AC input connection			On	screw terminal v	vith clamping th	rough plastic gla	ind		
Recommended but puer kohn  70 800  900 1200  500 for 00  900 1400  1200 1200  200 4000  500 700    Number of battery bank kohn  3 : RAT D, the MAT I and +RAT I  1  3 : HAT D, the MAT I and +RAT I  1  3 : HAT D, the MAT I and +RAT I  1  3 : HAT D, the MAT I and +RAT I  1  3 : HAT D, the MAT I and +RAT I  1  3 : HAT D, the MAT I and +RAT I  1  3 : HAT D, the MAT I and +RAT I  1  3 : HAT D, the MAT I and +RAT I  1  3 : HAT D, the MAT I and +RAT I  3 : HAT D, the MAT I and +RAT I  3 : HAT I A HAT I	Notice interval interv	Power limitation through external bipolar switch (max input current = 6A)			yes			no		yes	
Universide the set of the	Output voltage regulation  +/- 1%    Recommended battery bank (Ah)  700-500  900-1200  500-700  900-1400  1200-1800  200-400  500-700    Number of battery bank (h)  3 : +BAT D, +ATTI and +BAT2  1  3 : +BAT D, +BAT1 and +BAT2  1  3 : +BAT D, +BAT1 and +BAT2  1<	Power factor				0,9 a	at rated conditio	ns **			
Recommended battery bank (Ah)    700 000    900-1200    500 700    900-1200    1200 1800    1200 1800    200-400    500 700      Number of battery bank (Ah) with suit arter unded an additional battery toolete an additional battery toolete and toolete an additional battery toolete and the charge phase (Boost, Absorption, Floating)    200-400 MB	Recommeded battery bank (Ah)700-800900-1200500-700900-14001200-1800200-400500-700Number Obstarty bank (Minogi cable lead-in and with in-built and restrictun dode)3 : +BAT D, +BAT I and +BAT2113 : +BAT D, +BAT I and +BAT211Special terminal to connect an additional battery isolato3 : +BAT D, +BAT I and +BAT2113 : +BAT D, +BAT I and +BAT21DC output connection on threaded rod h=25mmM6M8M6M8M6M8Charging curve3	Efficiency				> 80%	at rated condition	ons **			
battery bank (Ah)    700800    900-1200    500-700    600900    900-1400    1200-1807    200400    500-700      Number of battery bank (Mb rough Law Leaders and additional battery bank (Mb rough Law Leaders and Additional battery isolator)    31:48AT D, 48AT 1, 48AT 2, 48AT 2, 48AT 1, 48AT 2, 48AT 2, 48AT 1, 48AT 1, 48AT 2, 48AT 1, 48AT 1, 48AT 2, 48AT 1, 48A	battery bank (Ah)    7°08400    900°1200    500°700    900°1400    100°1400	Output voltage regulation					+/- 1%				
1 through cable lead-in and with n-built anti-seture idead with n-built anti-seture idead seture idead and difficult and seture idead in and idead with n-built anti-seture idead in and idead balance idead in and idead <b< td=""><td>1 through cable lead in and whith built and reader an additional battery isolator pecial terminational battery isolator DC output connection on an additional battery isolator DC output connection on threaded rol h=25mm1 +BATI and +BAT21 +BATI and +BAT21 HBATI and +BAT21 HBATI and +BAT2</br></br></br></br></br></br></br></br></br></br></br></br></br></br></br></br></br></br></br></br></br></br></br></br></br></br></br></br></br></br></br></br></br></br></br></br></br></td><td></td><td>700-800</td><td>900-1200</td><td>500-700</td><td>600-900</td><td>900-1400</td><td>1200-1800</td><td></td><td>200-400</td><td>500-700</td></b<>	1 through cable lead in and whith built and reader an additional battery isolator pecial terminational battery isolator DC output connection on an additional battery isolator DC output connection on threaded rol h=25mm1 +BATI and +BAT21 +BATI and +BAT21 HBATI and +BAT21 		700-800	900-1200	500-700	600-900	900-1400	1200-1800		200-400	500-700
Production of M6M8M6M8M8DC output connection on threaded rod h=25mmM8M8M8M8M8M8M8M8Charging curveCLead sealed bata string - Other choice: through internal setting (calcium lead, gel, AGM, etc.)Eastery typeEastery typeEastery typeEastery 500, 758 VDC for Lead sealed batteries - Manufacturies withingEastery 500, 758 VDC for Lead sealed batteries - Manufacturies withingEastery 500, 758 VDC for Lead sealed batteries - Manufacturies withingEastery 500, 758 VDC for Lead sealed batteries - Manufacturies withingEastery 500, 758 VDC for Lead sealed batteries - Manufacturies withingEastery 500, 758 VDC for Lead sealed batteries - Manufacturies withingEastery 500, 758 VDC for Lead sealed batteries - Manufacturies withingEastery 500, 758 VDC for Lead sealed batteries - Manufacturies withingEastery 500, 758 VDC for Lead sealed batteries - Manufacturies withingEastery 500, 758 VDC for Lead sealed batteries - Manufacturies withingEastery 500, 758 VDC for Lead sealed batteries - Manufacturies withingEastery 500, 758 VDC for Lead sealed batteries - Manufacturies withingEastery 500, 758 VDC for Lead sealed batteries - Manufacturies withingEastery 500, 758 VDC for Lead sealed batteries - Manufacturies withingEastery 500, 758 VDC for Lead sealed batteries - Manufacturies withingEastery 500, 758 VDC for Lead sealed batteries - Manufacturies withingEastery 500, 758 VDC for Lead sealed batteries - Manufacturies withingEastery 500, 758 VDC for Lead sealed batteries - Manufacturies withingEastery 500, 758 VDC for Lead sealed batteries - Manufacturies withingEastery 500, 75, 75, 75, 75, 75, 75, 75, 75, 7	Provide the production of the productin production of t	(through cable lead-in and				•		1			1
threaded rod h=25mmM6M8M6M8M6M8Charging curve3-step 100U as manufacturi setting - 10 through internal setting (cal U = 10, eq, eq, eq, eq, eq, eq, eq, eq, eq, eq	threaded rod h=25mmM6M8M6M8M6M8Charging curve3-step IUOU as manufacturing setting - Ut hrough internal setting (cal/currer lead, get, AGM, etc.)Battery type $=$	•					yes				
Battery type  Lead sealed as factory setting - Other choice through internal setting (calcium lead, gel, AGM, etc.)    Boost voltage  14,5 / 29,0 / 58 VDC for Lead sealed batteries - Manufacturing setting    Typical Boost duration  4 hours    Floating voltage  13,8 / 27,6 / 55,2 VDC for Lead sealed batteries - Manufacturing setting    Output voltage  3 LEDs that monitor the AC presence and the charge phase (Boost, Absorption, Floating)    Operating  3 LEDs that monitor the AC presence and the charge phase (Boost, Absorption, Floating)    Operating  Nominal conditions : from - 10°C to + 55 °C ; then derating : output power reduction < 2,5 %/°C	Battery type  Lead sealed as factory setting - Other choice through internal setting (calcium lead, gel, AGM, etc.)    Boost voltage  14,5 / 29,0 / 58 VDC for Lead sealed batteries - Manufacturing setting    Typical Boost duration  4 hours    Floating voltage  13,8 / 27,6 / 55,2 VDC for Lead sealed batteries - Manufacturing setting    Output voltage adjustment  13,8 / 27,6 / 55,2 VDC for Lead sealed batteries - Manufacturing setting    Front panel indicators  3 LEDs that monitor the AC presence and the charge phase (Boost, Absorption, Floating)    Operating temperature  Nominal conditions : from - 10°C to + 55 °C ; then derating : output power reduction < 2,5 %/°C		M6	M8	Ν	<b>V</b> I6	٨	Л8	Ν	Лб	M8
Boost voltage14,5 / 29,0 / 58 VDC for Lead sealed batteries - Manufacturing settingTypical Boost durationFloating voltageOutput voltage adjustmentOutput voltage adjustmentS LEDs that monitor the AC presence and the charge phase (Boost, Absorption, Floating)Operating temperatureS LEDs that monitor the AC presence and the charge phase (Boost, Absorption, Floating)Operating temperatureS LEDs that monitor the AC presence and the charge phase (Boost, Absorption, Floating)Operating temperatureS LEDs that monitor the AC presence and the charge phase (Boost, Absorption, Floating)Operating temperatureSound levelVSound levelVVOverall dimensions (mm) Nt including w: 350h:200h:200Nominal conditions : from - 10°C to + 55 °C ; then derating : output power reduction < 2,5 %/°C	Boost voltage14,5 / 29,0 / 58 VDC for Lead sealed batteries - Manufacturing settingTypical Boost durationFloating voltageOutput voltage adjustmentOutput voltage adjustmentS LEDs that monitor the AC presence and the charge phase (Boost, Absorption, Floating)Operating temperatureOperating 	Charging curve			3-step IU	JoU as manufact	uring setting - IL	J through interna	al setting		
Typical Boost duration  4 hours    Floating voltage  13,8 / 27,6 / 55,2 VDC for Lead sealed batteries - Manufacturing setting    Output voltage adjustment  Using internal potentiometer    Front panel indicators  3 LEDs that monitor the AC presence and the charge phase (Boost, Absorption, Floating)    Operating temperature  Nominal conditions : from - 10°C to + 55 °C ; then derating : output power reduction < 2,5 %/°C	4 hours4 hoursFloating voltage13,8 / 27,6 / 55,2 VDC for Lead sealed batteries - Manufacturing settingOutput voltage adjustmentUsing internal potentiometerSupport to the Colspan="4">Support to the Colspan="4">C	Battery type		Lead sea	led as factory se	etting - Other ch	oice through inte	ernal setting (cal	cium lead, gel, AG	GM, etc.)	
Normal Section 2010 Sectio	Take / 27,6 / 55,2 VDC for Lead sealed batteries - Manufacturing settingOutput voltage adjustmentI 3,8 / 27,6 / 55,2 VDC for Lead sealed batteries - Manufacturing settingOutput voltage adjustmentUsing internal potentiometerFront panel indicatorsS LEDs that monitor the AC presence and the charge phase (Boost, Absorption, Floating)Operating temperatureS LEDs that monitor the AC presence and the charge phase (Boost, Absorption, Floating)Operating temperatureSouth conditions : from - 10°C to + 55 °C ; then derating : output power reduction < 2,5 %/°C For temperature > 65°C automatic stopping - Automatic restartCoolingElectric fan controlled by the output currentSound levelImbuilt electrical protection factorProtection factorIP 22Overall dimensions (mm) Not including cable glandAit 123dia 123di 123dia 123di 123dia 243Ait 123dia 244Ait 123dia 255Cytek (Boost, Absorption, Floating)Protection factorIP 22Overall dimensions (mm) Not including cable glandAit 123dia 123di 123dia 123di 123dia 24Ait 123dia 25Ait 123dia 26h: 400 w: 350 w: 350Against short-circuit, polarity reversal, over-voltage, over-heating, over-current </td <td>Boost voltage</td> <td></td> <td></td> <td>14,5 / 29,0</td> <td>0 / 58 VDC for Le</td> <td>ad sealed batter</td> <td>ies - Manufactur</td> <td>ing setting</td> <td></td> <td></td>	Boost voltage			14,5 / 29,0	0 / 58 VDC for Le	ad sealed batter	ies - Manufactur	ing setting		
Output voltage adjustment  Using internal potentiometer    Front panel indicators  3 LEDs that monitor the AC presence and the charge phase (Boost, Absorption, Floating)    Operating temperature  Nominal conditions : from - 10°C to + 55 °C ; then derating : output power reduction < 2,5 %/°C For temperature > 65°C automatic stopping - Automatic restart    Cooling  Electric fan controlled by the output current    Sound level	Output voltage adjustmentUsing internal potentiometerFront panel indicators3 LEDs that monitor the AC presence and the charge phase (Boost, Absorption, Floating)Operating temperatureNominal conditions : from - 10°C to + 55 °C ; then derating : output power reduction < 2,5 %/°C For temperature > 65°C automatic stopping - Automatic restartCoolingElectric fan controlled by the output currentSound levelIn-built electrical protectionAgainst short-circuit, polarity reversal, over-voltage, over-heating, over-currentProtection factorOverall dimensions (mm) Not including cable glandh: 400 H: 400 H: 400 H: 123h: 400 	Typical Boost duration					4 hours				
Osing internal potentiometer    Generating temperature  S LEDs that monitor the AC presence and the charge phase (Boost, Absorption, Floating)    Operating temperature  Source of S C submania conditions : from - 10°C to + 55 °C ; then derating : output power reduction < 2,5 %/°C    Cooling  Source of S C automatic stopping - Automatic restart    Sound level  Source of S C Dba at 1 metre    In-built electrical protection  In-built electrical protection  In - Source of S C Dba at 1 metre    Protection factor  IP 22    Overall dimensions (mm) Not including cable gland  h: 260 M: 123 M: 11M  M: 260 M: 350 M: 35	adjustmentSupportPront panel indicators3 LEDs that monitor the AC presence and the charge phase (Boost, Absorption, Floating)Operating temperatureSupport S * C : then derating : output power reduction < 2,5 %/°C	Floating voltage			13,8 / 27,6 /	55,2 VDC for Le	ad sealed batter	ies - Manufactur	ing setting		
Operating temperatureNominal conditions : from - 10°C to + 55 °C ; then derating : output power reduction < 2,5 %/°C For temperature > 65°C automatic stopping - Automatic restartCoolingCoolingElectric fan controlled by the output currentSound levelIn-built electrical protectionAgainst short-circuit, polarity reversal, over-voltage, over-heating, over-currentProtection factorProtection factorh: 400 w: 350 d: 123Overall dimensions (mm) Not including cable glandh: 260 d: 123M1HM3MM1H/2HWeight (kg)7,512,77,5StandardsGuarantee	Operating temperatureNominal conditions : from - 10°C to + 55 °C ; then derating : output power reduction < 2,5 %/°C For temperature > 65°C automatic stopping - Automatic restartCoolingElectric fan controlled by the output currentSound level< 50 Dba at 1 metre					Usin	g internal potenti	ometer			
temperatureFor temperature > 65°C automatic stopping - Automatic restartCoolingElectric fan controlled by the output currentSound level	temperatureFor temperature > 65°C automatic stopping - Automatic restartCoolingElectric fan controlled by the output currentSound level	Front panel indicators		3	3 LEDs that mon	itor the AC pres	ence and the cha	arge phase (Boos	t, Absorption, Flo	bating)	
Sound levelIn-built electrical protectionAgainst short-circuit, polarity reversal, over-voltage, over-heating, over-currentProtection factorIP 22Overall dimensions (mm) Not including cable glandh:260 w:350 d:123h:400 w:350 d:123h:260 d:123h:400 w:350 d:123h:260 d:123h:400 w:350 d:123Overall dimensions (mm) Not including cable glandh:260 w:350 d:123h:260 d:123h:400 w:350 d:123h:260 d:123h:400 w:350 d:123Case type3M1H3M1H/2H3M1HWeight (kg)7,512,77,5143M1HStandardsCEF, UL and CSA	Sound level< > 50 Dba at 1 metreIn-built electrical protection $ $	Operating temperature							duction < 2,5 %/'	°C	
In-built electrical protectionAgainst short-circuit, polarity reversal, over-voltage, over-heating, over-currentProtection factorIP 22Overall dimensions (mm) Not including cable glandh: 260 w: 350 d: 123h: 400 w: 350 d: 123h: 260 w: 350 d: 123h: 400 w: 350 d: 123h: 400 d: 123h: 40	In-built electrical protectionAgainst short-circuit, polarity polarity, pol	Cooling				Electric fa	n controlled by the	e output current			
Against short-circuit, polanty reversal, over-vortage, over-theating, over-currentProtection factorIP 22Overall dimensions (mm) Not including cable glandh: 260 w: 350 d: 123h: 260 w: 350 d: 123h: 400 w: 350 d: 123h: 400 w: 350 d: 123h: 400 w: 350 d: 123Case type3M1H3M1H/2H3M1HWeight (kg)7,512,77,5147,512StandardsCEF, UL and CSA	protectionAgainst short-circuit, polarity roter-voltage, over-voltage, over	Sound level					< 50 Dba at 1 r	netre			
Overall dimensions (m) Not including cable gland    h: 260 w: 350 d: 123    h: 400 w: 350 d: 123    h: 260 w: 350 d: 123    h: 400 w: 400 d: 123    h: 400 w: 400 d: 12	Overall dimensions (m) Not including cable gland    h: 260 w: 350 d: 123    h: 400 w: 350 d: 12				Against short	-circuit, polarity	reversal, over-vo	oltage, over-heat	ing, over-current		
Not including cable gland    w:350 d:123    w:350 d:	Not including cable gland    w: 350 d: 123	Protection factor					IP 22				
Case type    3M    1H    3M    1H/2H    3M    1H      Weight (kg)    7,5    12,7    7,5    14    7,5    12      Standards    CE, UL and CSA	Case type    3M    1H    3M    1H/2H    3M    1H      Weight (kg)    7,5    12,7    7,5    14    7,5    12      Standards    CE, UL and CSA      Guarantee    Steries Standards	Not including	w:350	w:350	w	: 350	v	v : 350		w : 350	w:350
Standards CE, UL and CSA	Standards CE, UL and CSA Guarantee 3 years *e400\	_	3M		-	3M					1H
Guarantee 3 years	Guarantee 3 years	Weight (kg)	7,5	12,7		7,5		14		7,5	12
Guarantee 3 years	*@400\	Standards			·		CE, UL and	CSA			
		Guarantee					3 years				*=4001/

CHARGER OPTIONS *	charger indicato	ors ON/OFF Boost	st battery compartment	display	Battery monitor
Item part number A/M-	CPS2-CPS3 LED-DEP-C	CPS3 BAD-CPS2-CPS	53 STP-5M	SEEL009104	JBNUMII-CPS3
and a second sec					According to model



#### S.A.S. Cristec Industries 31 rue Marcel Paul - Z.I. Kerdroniou Est - 29000 Quimper - FRANCE Tel. +33 (0)2 98 53 80 82 - Fax +33 (0)2 98 55 64 94 e-mail : info@cristec.fr

www.cristec.fr