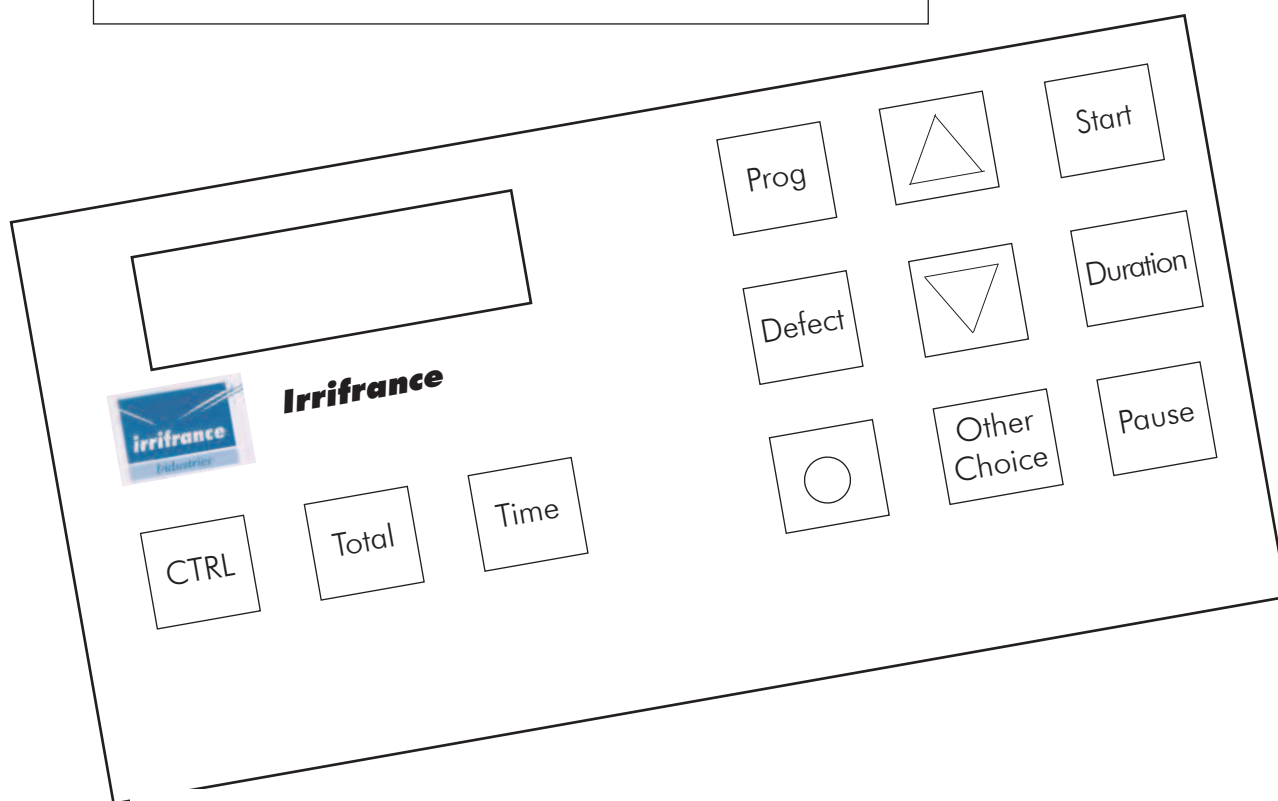


PROGRAMMING MANUAL

Irridoseur 4 Programming



irrifrance

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Introduction

● General Notes

- The following operating procedures are set out for your guidance to ensure efficient and safe operation of the machine.

You are advised to read them and familiarize yourself with the machine and its control before attempting to use it.

- Regular maintenance procedures are outlined in this manual.

By following them, you minimize repairs, reduce the risk of critical “in season” breakdown and obtain the optimum machine life.

General guarantee conditions

- 1/ Guarantee is given for a period equal to one year since the starting up of the machine and for two years for the polyethylene.
- 2/ We guarantee our equipment and its serviceability against all materials or construction defects.
- 3/ This guarantee does not apply to spares or repairs which may be the result of normal wear, deterioration or accidents resulting from negligence, lack of supervision or maintenance and mis-use of the equipment.
- 4/ In all cases, this guarantee is specifically limited to replacement of parts recognised as defective by our technical services and absolutely excluding all other damages for any other reasons and all other reimbursements.
- 5/ Parts for which free replacement has been requested must be returned carriage paid. Replacement of admittedly defective parts as mentioned in paragraph 2 will only be made if possible. IRRIFRANCE undertakes to ensure that the buyer has no labour cost to pay for repairs to or replacement of parts recognised as defective when used under normal conditions during the guarantee period.
- 6/ The buyer will under no circumstances be able to claim free benefit from any changes brought about by IRRIFRANCE in the machine equipment delivered after the date of purchase of the machine designated on the certificate.
- 7/ To make the guarantee valid, the user should be able to present the invoice for the said machine.
- 8/ If the equipment is transferred during the guarantee period, Société IRRIFRANCE must immediately be advised.
- 9/ Dealers being neither employees nor agents of IRRIFRANCE, but acting on their own behalf are neither qualified nor authorised to undertake any obligation on behalf of IRRIFRANCE.
- 10/ The guarantee as specified above replaces all other guarantees which may previously have been granted, whether verbal or written.

Irrifrance will not be directly responsible neither to the eventual delays that should be brought on the replacement of the parts granted under warranty nor to the consequences induced.

So, it is imperative to take all necessary precautions after a rain on unwound PE pipe, when irrigation is resumed.

Cohesion between the PE hose and the soil/crop must be broken to prevent excessive stretching.

In the event of heavy foliage, it is recommended that bare strips are made for the PE hose to travel freely.

General guarantee conditions

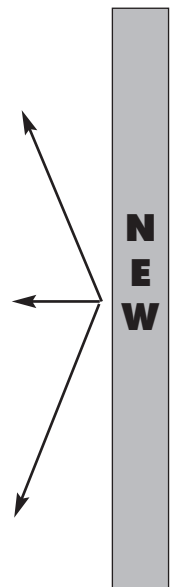
● Irridoseur Panel

- Irridoseur panel guarantee is given for a period equal to one year since the starting up of the machine..
- In all cases the guarantee is limited to the replacement of the panel recognized damaged sent to the technical department.
- Sight, performances and using claims cannot be taken under guarantee.
- The special guarantee conditions are tied to exclusive using of irrifrance periphera and to following instructions :
- Winter conditions : At the end of the season, the computer panel should be removed, stored in it's special bag in a dry, frost-free location. (Recommanded temperature higher than 0° C).The computer panel enclosure should be blanked off using the plate supplied.
- Handling condition : the panel should be handled avoiding direct contacts with electronical components, and eventual shocks. The panel will be connected and disconnected without damaging wires and plugs. These handling should be done with battery disconnected.
- Shipment conditions : The panel should be returned in its original packing, with the guarantee claims documents duly completed, describing faults or defects noticed.

NOTE : The irridoseur panel has been designed in such a way that the manufacturer can access information such as non-working time, temperature during storage etc...

Instructions before starting

- The panel is not fitted on the reel machine. You will find it in the packing attached to the machine.
- You will find too the battery set (solar panel - regulator).
- On the electrical case, you will find a protection plate which permit to preserve the case watertightness until the starting of the machine and during winter storage.
- The battery fitted on the machines is ready to work. Recharging it before the re-starting is advised. Use a charger with the 2 following functions :
 - Possibility to charge with an amperage not too high (Rather use a charger with charges curves differentes according battery technologies).
 - and above all, an automatical power cut at the end of the charge.
- Fit the panel in its place.
- Branch the panel connector with the connector of the case. Take care of the direction and be careful of not twisting the connector plugs.
- Fit then the solar panel on its support and connect it on the regulator (Terminal + of the solar panel on the terminal + of the regulator) and terminal - of the solar panel on the terminal - of the regulator).
- Connect the spade terminal + of the battery with the + of the regulator and the - of the battery with the - of the regulator).
- It is advised to fix the regulator around the battery by the mean of a tie wrap and to put under cover the regulator from the sun and freezing.
- The reel machine is ready to work.

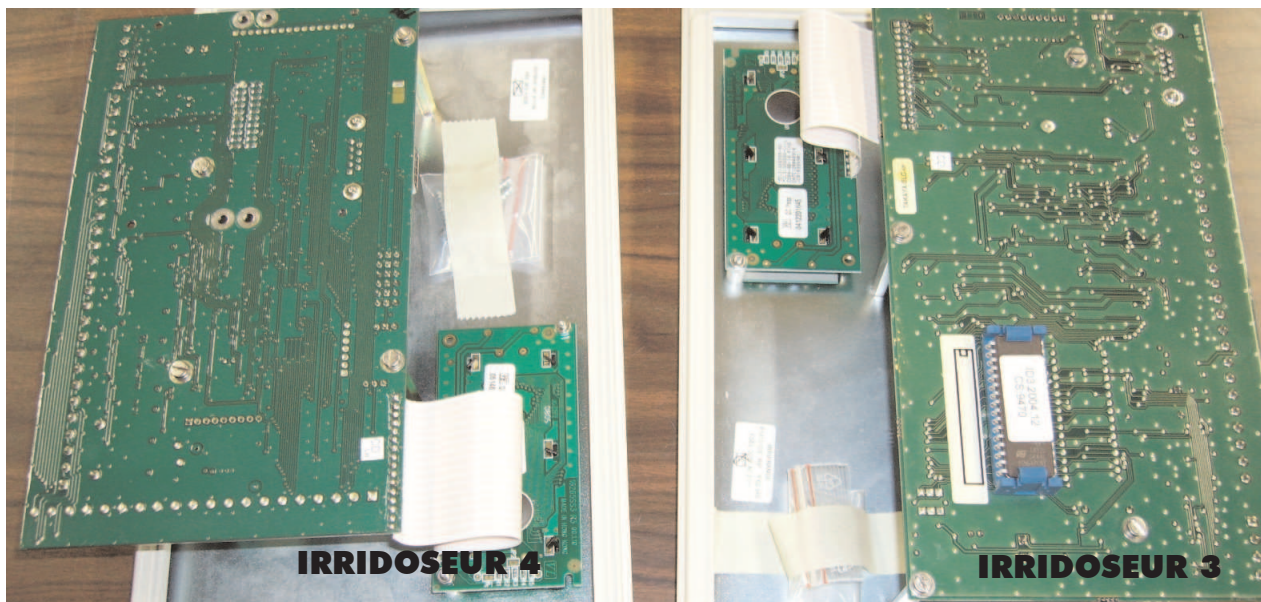


Safety precautions

- Do not operate this machine without first reading the instructions in this manual.
- Ensure machine is correctly positioned avoid positioning on slopes as this could affect stability of machine, especially when :
 - Operating stabiliser legs,
 - Raising & lowering gun trolley,
 - Rotating turntable.
- Do not carry out any work on the machine when hose is under tension.
- Do not remove non-return pawl or de-clutch gearbox when machine is working and hose is under tension.
- Prior to starting machine, ensure all water supply pipes are free of air - Failure to do this may result in machine winding in uncontrolled and at very high speeds.
- Do not allow water from raingun to spray on to overhead power cables.
- Do not climb on the machine or carry out adjustments when hose is being unwound / wound up.
- Do not climb onto the machine when it is being towed.
- Maximum towing speeds :
 - 5 km/hr in fields,
 - 10 km/hr on roads.
- The trolley lifting frame allows the raingun trolley to be lifted clear of crops and for transportation. Before towing machine ensure gun trolley is aligned with machine axis.
- When reel machine is being towed ensure that towing vehicle has sufficient braking capacity.
- Ensure that hose is pulled out in line with crop or on specially prepared track unwinding speed must not exceed 4 km/hr.
- When re-starting irrigation after rain, it is strongly advised that the hose is lifted free (unstuck) from soil. It is also recommended that for crops such as peas, soya, etc... that special tracks are prepared through the crop.
- Although guards are supplied with reel machines, operators must ensure that limbs and loose clothing are kept away from moving parts.
- Do not use the machine when guards have been removed.
- Do not attempt adjustments to raingun when machine is in operation.

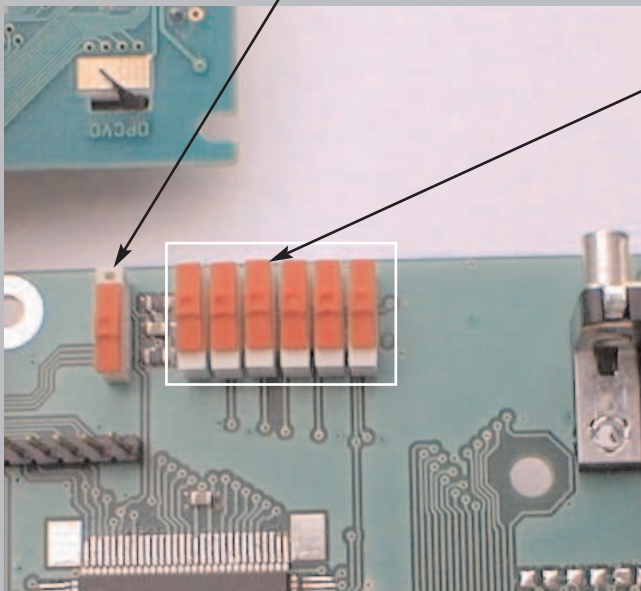
The irridoseur 4

The IRRIDOSEUR 4 panel no longer incorporates an EPROM : the card comprises an integrated memory.



IMPORTANT :

Only this switch must be down (otherwise counting of meters will not occur). See photo below.



THE SWITCH BLOCK

- a) All up : normal operation.
- b) All down : Card loading software

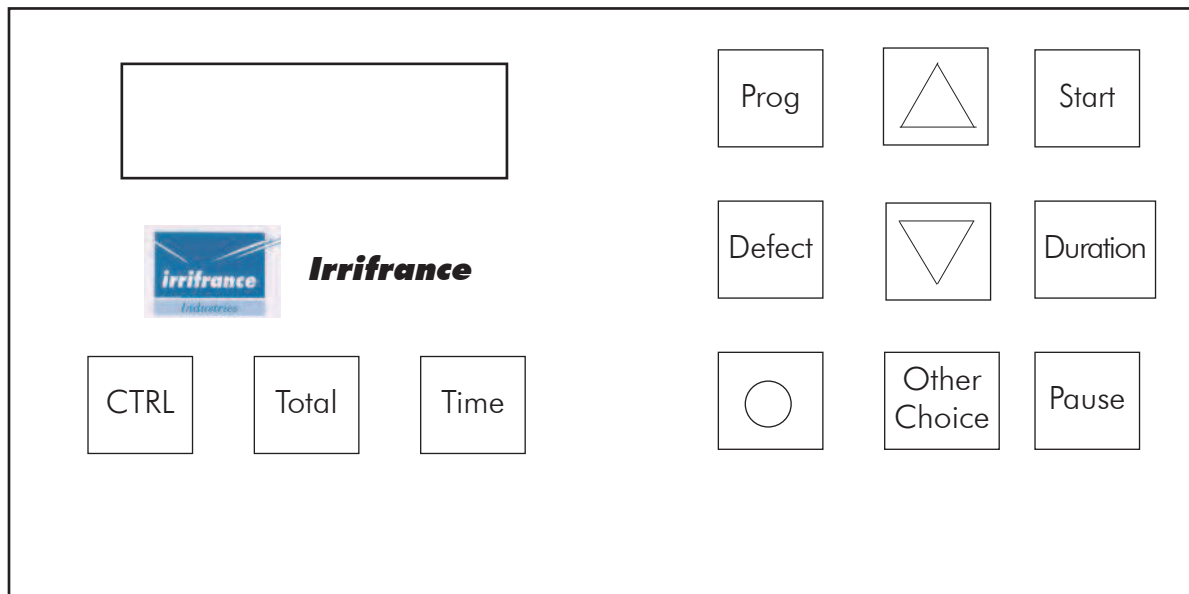
IT IS VITAL NOT TO INTERFERE WITH THESE SETTINGS, WHICH COULD CAUSE MALFUNCTIONING OF THE PANEL.

If one switch is not positioned correctly, panel will encounter malfunction.

- Cut the panel voltage,
- Put the switch(es) in correct position,
- Restore the panels voltage.

Description of the keyboard

The keyboard of the panel is described as follow :



The main differences between irridoseur 3 and Irridoseur 4 are :

- The panel no longer incorporates an eprom.
- The software is loaded by computer.

MAIN KEYS :

1 - THE "PROG" KEY

- Daily programming of watering different areas.
- Initial programming of the machine.
- Programming a stop on position ("PROG" then "STOP").

2 - THE "TIME" KEY

- Reading and programming the clock.
- Reading and programming delayed starts of watering sessions.
- Lighting of the display.

3 - THE "START" KEY

- To start a watering session.
- To see the different parameters of current watering session.

4 - THE "STOP" KEY

- Causes an immediate stop or a delayed stop "START KEY" then ○ then "STOP KEY" see page 84).

5 - THE "DURATION" KEY

- Allows to know the battery charge, the time to run and arrival time of current watering session.

6 - THE "DEFECT" KEY

- Allows to know the nature of the incident which either prevents the machine from starting or stopped it.

7 - THE "TOTAL" KEY

- Allows to display the quantity of water used and the working duration in a watering session, during a given period.

8 - THE "CTRL" KEY

- Allows access to the "IRRITESTOR" function.

Description of the keyboard

SECONDARY KEYS:

- 1) THE "ARROW UP" AND "ARROW DOWN" KEYS
 - Allow to increase or decrease the numerical values.
- 2) THE "OTHER CHOICE" KEY
 - Allows modification of the possible choices on alphanumerical values.
- 3) THE "CIRCLE" KEY
 - Allows to speed up or slow down the effect of the "arrow up" and "arrow down" keys.
 - Allows, together with the "PROG" key to get to the Initial programming of the machine.
 - Allows, together with the "STOP" key, to stop the machine (see page 84).

RUNNING RULES :

RULE N°1 : **To get to the beginning a main key programming session**

Just press another main key before pressing the needed one.

Example :

- To get to the beginning of "PROG", press "TIME" then "PROG".
- To get to the beginning of "RUN", press "PROG" then "RUN".

RULE N°2 : **To advance and validate in a main key programming session**

Just press this key after having eventually modified the values and/or the displayed choices, with the secondary keys.

Advancing in a main key session validates the value or choice previously displayed (except for time programming cf page)

Example : To validate a value in a "PROG" session, press the "PROG" key.

RULE N°3 : **To modify a value or a choice in a main key programming session**

Use the secondary keys.

Use the "arrow up" and "arrow down" keys to modify the numerical values.

Use the "OTHER CHOICES" key for alphanumerical values.

The "CIRCLE" key accelerates or slows down the effect of the "ARROW UP" and "ARROW DOWN " keys.

RULE N°4 : Difference between reading and programming

Example : You are at the beginning of the "TIME" session and then you validate. Current date and time appear on the display but cannot be modified. You select programming time and you validate, you can then modify.

AUTOMATIC RESTART

Before using this equipment carefully read instructions below

When you connect the panel or during winding-in run the message "test" followed by numerical values may appear for about 10 seconds.

This is the automatic restart. So, if the panel loses power it can start again automatically without human action.

FIRST CASE :

If during this message you do not press the PROG key until the message disappear, the automatic restart will occur and the panel will return in its latest run before the power cut off. Even several months later, the panel can return in winding-in, defect stages, in automatic valve or unwinding runs with unwound length different from 0 (see DEFET and START keys).

In this case you are not sure to be in unwinding stage **and so it is impossible to modify the initial programming (structure, pe hose).**

SECOND CASE : You pressed the PROG key during the display of the "test" message until the message disappeared.

- Automatic restart is cancelled,
- Unwound length is equal to 0,
- The panel returned on unwinding stage or "free shutt off bar (see START key).
- Initial programming can be modify

Initial programming

BE CAREFUL, in the initial programming, we cannot change some values when we are winding in, even if water is cut. We have to return in unwinding run (see instructions page 78).

This Initial programming must be done when the machine is first started.

It allows to enter all the machine parameters such as type of structure, hose, water pressure...
When beginning a new season, it is advised to check the initial programming and to set again the clock.

Selected function		Display Indication	To modify the value
		Programme 01	
		Programme 7275	
		To avoid entering the initial program by mistake, it is necessary to enter the code 7275. Use the numbers written on the bottom left hand side of the keys.	
Language choice		Français	Other Choice Other Languages
Type of programmation choice	Prog	Turbine MAXIMUM?	Other Choice TTI MINIMUM TPI MAXIMUM TPI MINIMUM

TTI means Irridoseur turbine, TPI means Irridoseur bellows

- Programme maxi : - all possibilities
- Programme mini : - only one program
- no zones

Turbine EV1 EV2 EV3	Turbine motor EV3	Prog	Turbine motOr ev3	Other Choice	EV1/EV2/EV3
 1015 1020 1025/26 1030/31 1035/36 2040,2050 AUTRE	1005 1010 AUTRE				
Use "Other Choice" to read structure after structure To change the reading way press on arrow up and down keys.					
65					

Initial programming



For turbine motor EV3

Prog Start motor auto Other Choice Start motor **07 ?**

Start from 01 to 19
01 Slow
19 Fast

Structure choice see schedule below Prog **1020** Other Choice

PE choice Diameter, thickness Prog 1020 **90 x 6,7** Other Choice

PE length +5m See pages 96 & 97 for possible lengthening Prog HOSE LENGTH **0405** Other Choice

Number of impulses for one drum rotation Prog **IMPULSES 0154** Other Choice

To change the reading way press on arrow up and down keys and then other choice again

REEL MACHINES Actual range	On drum disk or motorization	OTHER MACHINES	On Motorization	On drum disk
1005	121	*Optima super 1 bis	133	
1010	132	Optima 1 bis	139	
1020	154	*Optima Super 2, 2	154	
1025 / 1026	147	Optima 2 bis	147	
1030 / 1031	134	Optima 3	134	
1035 / 1036	134			
1045-1055	188	2030 - 2040 - 2050	12	
		2070		40
		2060 2075	78	
2060 VPS - 2075 VPS	108			
2061 - 2076	108	ST1, 1 bis	13	40
		ST2	15	40
		ST. 2bis et Super 2 bis	15	40
		ST SUPER 2	13	
		ST3, 3Bis, 4	13	40
		ST 5	0020 (1 vis) 0041 (2 vis)	40



Valve choice (see page 67). Prog **AUTOMATIC VALVE** Other Choice **Discharge valve Coded valves**

*** CAUTION !!!**

- For optima Super 1 machine select 1015
- For optima Super 2 machine select 1020

FRANCAIS
ENGLISH
ESPANOL

Initial programming

Selected function		Display Indication	To modify the value	
Gun nozzle choice	Prog	TAPERBORE NOZZLE	Other Choice	Short nozzle
Pressure incident duration (min)	Prog	LOW PRESSURE :12		

PRESSURE INCIDENT DURATION :

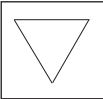
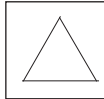
This duration must be programmed from **1** to **30** minutes

Recall of the sequence :

- occurrence of low pressure.
- count down **programmed duration**.
- If the pressure has not risen before end of count down the machine starts a pressure incident sequence (cf page faulty identification).

Only for Optima machines	Prog	Automatic valve faulty YES ?	Other Choice	No
KIT Sprinkler To connect see pages 100 and 101	Prog	Kit sprinkler NO ?	Other Choice	Kit sprinkler start Kit sprinkler arrival
Functioning conditions of the machine. See page 68 analogical pressure sensor.	Prog	ANALOGICAL NO ?	Other Choice	Analogical yes Analogicalyes ++
	Prog	GSM NO ?	Other Choice	Gsm yes 00 (see following page).
	Prog	END		

GSM Initial programming

Selected function		Display indication	To modify the value
	Prog	Analogical no ?	Autre choix Analogical yes Analogical yes ++
	Prog	GSM no?	Autre choix GSM yes
01 Is the reel machine number	Prog	GSM yes 01	 
	Prog	GSM --> Mobile ?	Autre choix POSSIBLES CHOICES 1/ GSM --> Mobile ? 2/ GSM --> Mobile ? Delayed arrival 3/ GSM --> Mobile ? Faulty 4/ GSM <----> Mobile ? 5/ GSM <----> Mobile ? Delayed arrival 6/ GSM <----> Mobile ? Faulty

- 1** - Call from the reel machine to the farmer : warning only.
- 2** - Call from the reel machine to the farmer at the beginning of the delayed arrival instead of end of irrigating.
- 3** - Call from the reel machine to the farmer in case of incident only : no call during end of irrigating.
- 4** - Possibility to communicate both ways to consult the program or change the settings.
- 5** - Same as point 4 + point 2.
- 6** - Same as point 4 + point 3.

Example : customer's number to
call in UK 07885 596333

Mobile phone +44 7885 596333 ★44 : UK dialling code	Prog	Mobile +44 7885 596333	Mobile phone number of the customer. (CAUTION ! It's not the number call of the GSM box).
Caution !!! + is obligatory	Prog	Machine pin code 0000	PIN CODE of the SIM card of the GSM box. This code pin is obligatory.
MESSAGE CENTRE NUMBER +44 7973 100973	Prog	Operator +44 7973 100973	Phone number of Message Centre Number tied to the SIM card (It is not the phone number of the SIM card). ORANGE: +44 7973 100973 O2 : +44 7802 092035 VODAPHONE : +44 7785 016005
Example : Orange sim card in the modem	Prog	END	

Initial programming

STOP SYSTEMS :

It is possible to program several types of water valve , which are described below :

- AUTOMATIC VALVE :

Complete closure of the valve for any type of stop. The closure is slow (about seven minutes for the closure plus two checking minutes (keyboard locking)).

- DISCHARGE VALVE :

Opening of the valve for any type of stop. It will cause a pressure drop in the net and consequently stop the pump through the low pressure gauge.

- CODED VALVE : The structure 1 bis cannot use the coded valve function.

To use coded valves, the machine **must be equipped with an automatic valve** (cut out when pressure limit exceeded) fitted parallel to regulation valve.

There are five types of valves which are coded valve **001** to valve **005**. To move from one valve to another press the "arrow up" or "arrow down" keys.

VALVE 001

For all stops excepting pressure incident, the machine waters on the spot : turbine valve closed and by pass valve open.

In case of pressure incident, the machine stops with a complete and slow closure : turbine valve closed and by pass valve closing gradually.

VALVE 002

All stops occur rapidly : Turbine valve closed and by pass valve closing rapidly.

It is possible to regulate the time of closure of the by pass valve by putting a restrictor on the hydraulic input of the valve.

VALVE 003

For all stops excepting pressure incident, the machine stops in complete and slow closure : turbine valve closed and by pass valve closing gradually.

In case of pressure incident, the machine waters on the spot: turbine valve closed and by pass valve open.

VALVE 004

For all stops, the machine waters on the spot : turbine valve closed and by pass valve open.

VALVE 005

All stops excepting pressure incident occur rapidly : turbine valve closed and by pass valve closing rapidly.

In case of pressure incident, the machine waters on the spot : turbine valve closed and by pass valve opened.

Initial programming

ANALOGICAL PRESSURE SENSOR

On this machine, there are three possible choices. To get from one choice to another, press the "OTHER CHOICE" key :

ANALOGICAL NO:

To be chosen when the analogic sensor is not used.

ANALOGICAL YES :

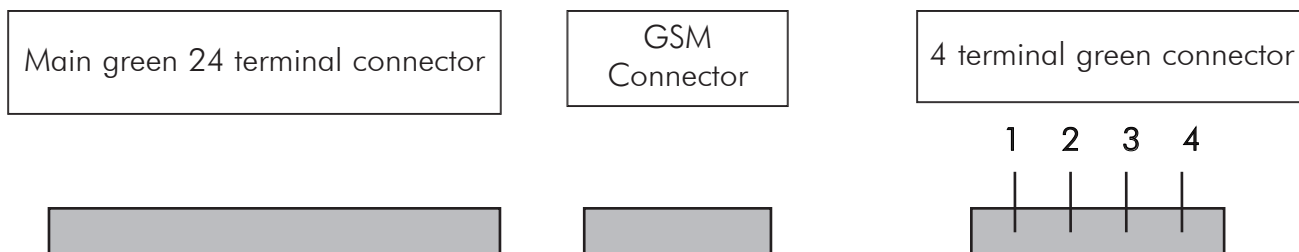
With this choice, the analogic sensor is used to calculate more accurately the water output of the machine (from the pressure measured by the sensor and the diameter of the nozzle, which has been programmed by the user.)

ANALOGICAL YES ++ :

With this choice, the analogic sensor is used :

- to calculate the water outputs of the machine
- to modify the advancing speed of the machine in case of pressure changes (the sensor measures the pressure every minute).

CONNECTION OF THE ANALOGICAL PRESSURE SENSOR



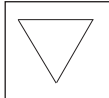
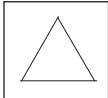
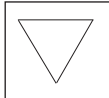
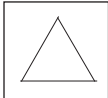
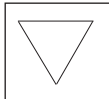
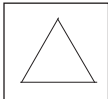
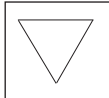
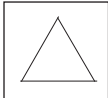
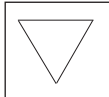
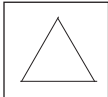
- **1.** Screw the blue wire.
- **2.** Screw the black wire.
- **3.** Screw the brown wire.
- **4.** not fitted

IF ORANGE CABLE:

- **1** Screw the green wire.
- **2** Screw the brown wire.
- **3** Screw the white wire.
- **4** not fitted.

Clock programming

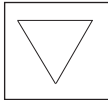
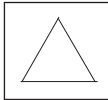
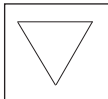
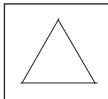
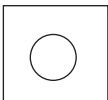
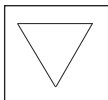
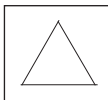
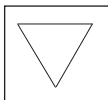
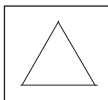
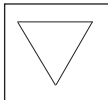
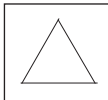
This program is possible only if the reel machine is not in **active** winding in. (If we modify the program winding in, then we can program the clock).

Selected function		Display Indication	To modify the value	
	Time	READING ? CLOCK		
	Other Choice	READING ? START		
	Other Choice	PROGRAMMING CLOCK		
Day choice	Time	10/5/92		
Month choice	Time	10/ 5 /92		
Year choice	Time	10/5/ 92		
Week's day choice	Time	10/5/92 MONDAY ? 15:00	Other Choice	From Monday to sunday
Hour choice	Time	10/5/92 MONDAY ? 15 :00		
Minutes choice	Time	10/5/92 MONDAY ? 15: 19		
Validation	Time	READING CLOCK		

NOTE : With the time key, you activate the lighting of the display

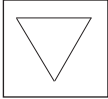
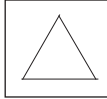
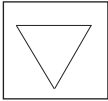
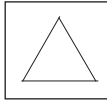
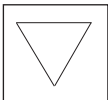
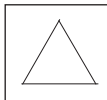
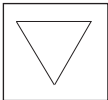
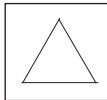
Irrigation programming

Program mini arrival time priority

Selected function		Display Indication	To modify the value	
Pressure at the machine inlet	Prog	PRESSURE 008,2		
Priority choice	Prog	PRIORITY ARRIVAL TIME	Other Choice	Application priority cf page 70
Arrival time programming	Prog	ARRIVAL TIME MONDAY ? 14:05	Other Choice	
		ARRIVAL TIME MONDAY ? 00:05		
		ARRIVAL TIME MONDAY ? 14:05		
	Prog	DELAYED START NO ?	Other Choice	*to be programmed
	Prog	DELAYED ARRIVAL NO ?	Other Choice	*to be programmed
Spacing between two irrigation positions	Prog	SPACING 0072		
Gun nozzle size	Prog	NOZZLE SIZE 00.85" 21,5mm		
	Prog	END		

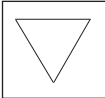
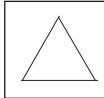
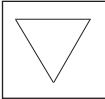
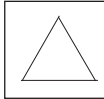
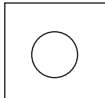
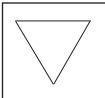
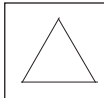
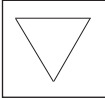

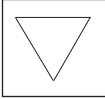
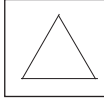
Irrigation programming

Program mini application priority (only 1 program available)

Selected function		Display Indication	To modify the value	
Pressure at the machine inlet	Prog	PRESSURE 008,2		
Priority choice	Prog	PRIORITY APPLICATION	Other Choice	Arrival time priority cf page 69
Application value	Prog	APPLICATION 0020		
Delayed start	Prog	DELAYED START YES ?	Other Choice	Delayed start no Delayed start * to be programmed
<p>Three different possibilities yes, no or programmable are available. If you program yes the delayed start the calculation will be automatic. Waiting time before winding-in if delayed start is programmed. If delayed arrival yes is programmed, slow speed during winding in of last metres. Water on the spot if delayed arrival is programmed.</p>				
Delayed arrival	Prog	DELAYED ARRIVAL NO ?	Other Choice	Delayed arrival yes Delayed arrival * to be programmed
Spacing between two irrigation positions	Prog	SPACING 0072		
Gun nozzle size	Prog	NOZZLE SIZE 01.00" 25,4mm		
	Prog	END		

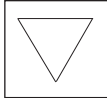



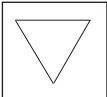
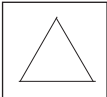
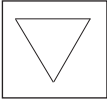

Irrigation programming

Program maxi arrival time priority

Selected function		Display Indication	To modify the value	
	Prog	PROGRAM 01		
Pressure at the machine inlet	Prog	PRESSURE 008,2		
Priority choice	Prog	PRIORITY ARRIVAL TIME	Other Choice	Application priority cf page 71
Arrival time programming	Prog	ARRIVAL TIME MONDAY ? 14:05	Other Choice	From Monday to Sunday
Hours choice	Prog	ARRIVAL TIME MONDAY ? 14:05		
Minutes choice		ARRIVAL TIME MONDAY ? 14:05		
Delayed start	Prog	DELAYED START NO ?	Other Choice	to be programmed See page 71
Delayed arrival	Prog	DELAYED ARRIVAL NO ?	Other Choice	* to be programmed See page 71
Spacing between two irrigation positions	Prog	SPACING 0085		
Gun nozzle size	Prog	NOZZLE SIZE 01.85" 0,46,9mm		
Possibility to suspend the irrigation program	Prog	SUSPENSION BEGINNING no ?	Other Choice	See page 71
	Prog	END		

Irrigation programming

Program maxi application priority

Selected function		Display Indication	To modify the value	
	Prog	PROGRAM 01		
Pressure at the machine inlet	Prog	PRESSURE 008,2		
Priority choice	Prog	PRIORITY APPLICATION	Other Choice	Arrival time priority cf page 72
Number of zones choice	Prog	ZONES (Maxi 5) NO ?	Other Choice	Zones (Maxi 5) 00 (cf page 74)
Application value	Prog	APPLICATION 0020		
Delayed start	Prog	DELAYED START NO ?	Other Choice	Delayed start yes Delayed start to be programmed
<p>Three different possibilities yes, no or programmable are available. If you program yes the delayed start calculation will be automatic. Waiting time before winding-in if delayed start is programmed. If delayed arrival yes is programmed, slow speed during winding in of last metres. Water on the spot if delayed arrival is programmed.</p>				
Delayed arrival	Prog	DELAYED ARRIVAL NO ?	Other Choice	Delayed arrival yes Delayed arrival to be programmed
Spacing between two irrigation positions	Prog	SPACING 0072		
Gun nozzle size	Prog	NOZZLE SIZE 01.00" 25,4mm		
Possibility to suspend irrigation program	Prog	SUSPENSION BEGINNING no ?	Other Choice	See page 76
	Prog	END		

Irrigation programming

Program maxi (Details of zones programming)

Case n° 1)

- If you **don't have different zones** to water, press the "OTHER CHOICE" key so that the message "**ZONES NO**" appears.

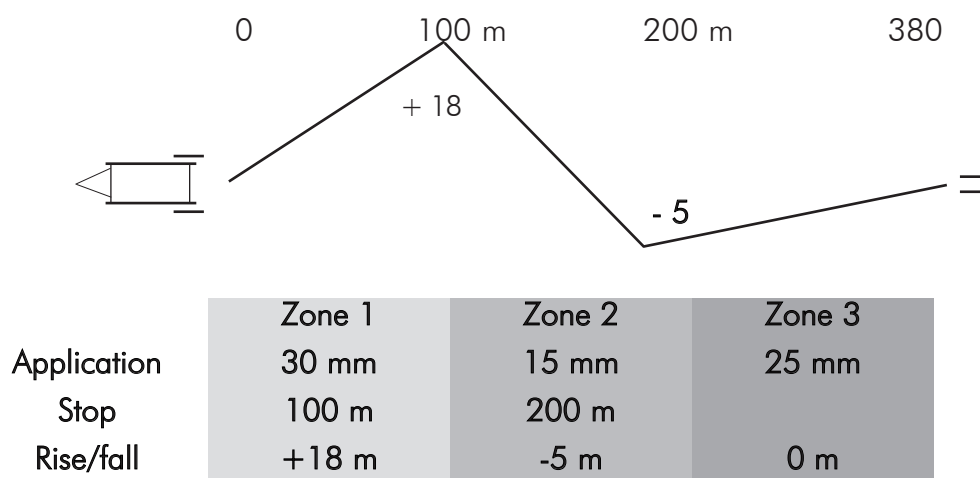
Case n° 2)

- If you don't have different zones to water but you have a continued slope (**the reel machine and the trolley are not on the same level**), type the number 1 with the "arrow up" and "arrow down" keys, you will thus get to the slope programming.
- It is not necessary to type a stop value. If none is entered, the card will program the unwound length.
- Enter a number for the slope (The zero level is the reel machine level)
- To pass from a negative value (cart lower than the machine) to a positive value press the "OTHER CHOICE" key.

Case n° 3)

- **If you have different zones to water**, program the number of zones (from 1 to 5).

For example, with a 2 bis 90 x 380m structure, we program on three zones :

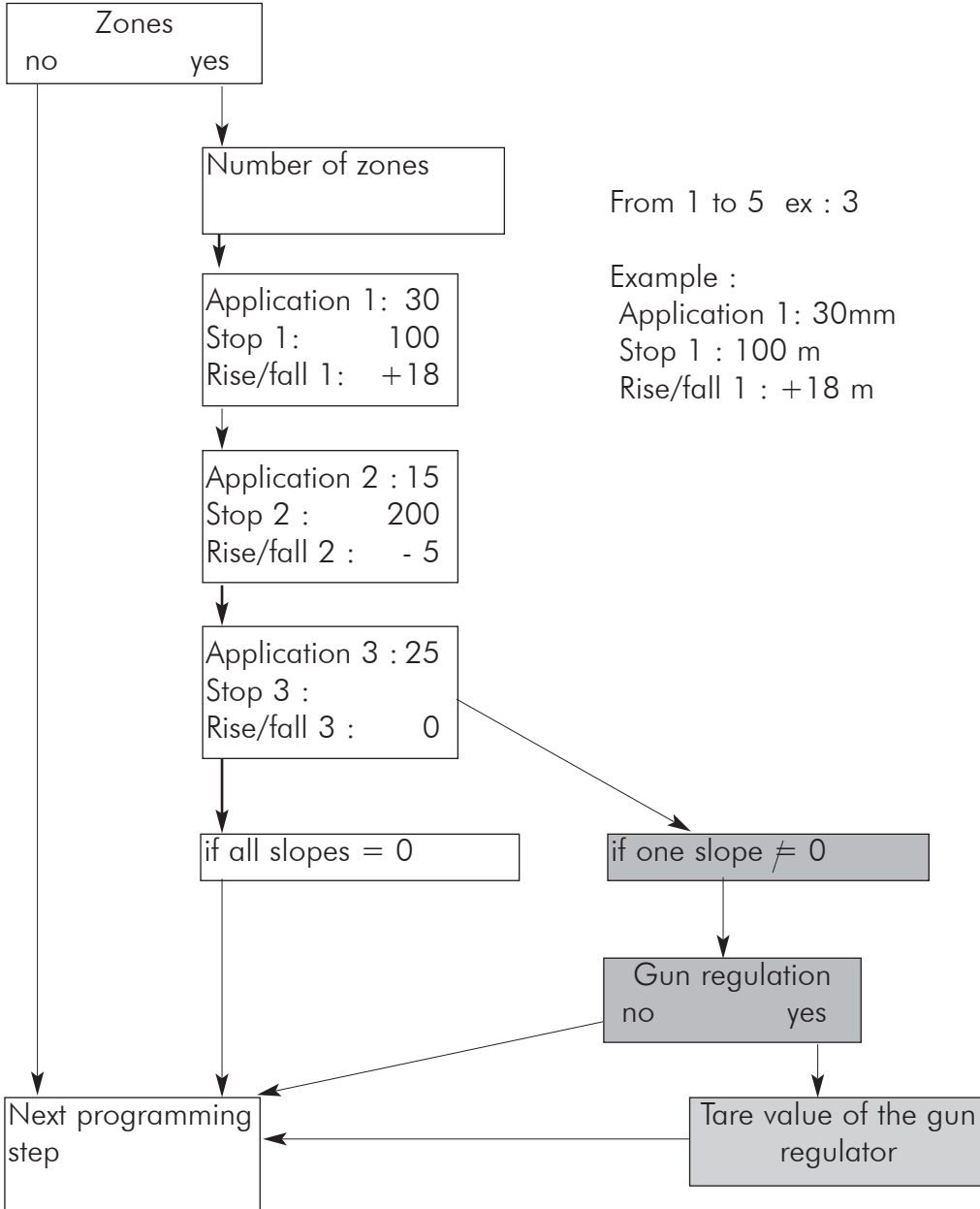


- The value in meters of each buttress is calculated from the reel machine.
- No stop value was entered for the last zone The computer will take the length of the unwound hose.
- Enter a slope value with the "ARROW DOWN" and "ARROW UP" keys (The zero level is the reel machine level).
- To get from a negative slope value (cart lower than machine) to a positive value, press the "OTHER CHOICE" key.
- In this example, one level at least is different from zero, therefore the computer will ask if yes or no the cart is equipped with a gun regulator (use the "OTHER CHOICE" key to get from the one choice to the other. If yes, once you have validated the line with the "PROG" key, the computer will ask for the tare value in bars of the regulator. This value is given with the "arrow up" and arrow down" keys.

Irrigation programming

Program maxi (Details of zones programming)

Summary of zones programming :



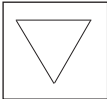
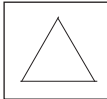
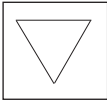
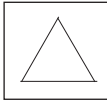
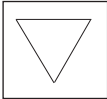
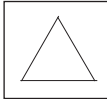
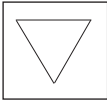

Irrigating programming

Suspension programming

SUSPENSION IS NOT ALLOWED WITH CODED VALVES 01 AND 04.

Selected function	<input type="checkbox"/>	Display Indication	To modify the value
	Prog	Suspension beginning Monday ? 08 : 00	Other choice - No - From monday to sunday - 7 days

NOTE : WETHER "SUSPENSION NO" IS PROGRAMMED THE STARTING AGAIN IS IMPOSSIBLE : WE GO TO END

See explanations below	Prog	Suspension beginning Monday ? 08 : 00		
	Prog	Suspension beginning Monday ? 08 : 00		
	Prog	Start again Monday ? 20 : 00	Other choice	- Keyboard - Pressure - From monday to sunday - 7 days
	Prog	Start again Monday ? 20 : 00		
	Prog	Start again Monday ? 20 : 00		
	Prog	End		

EXPLANATIONS CONCERNING STARTING AGAIN :

Keyboard : The machine will start again when the START key is pressed.

Pressure : The machine will start again when the pressure is restored.

From Monday to Sunday : The machine will start again on the day chosen.

7 days : The machine will start every day at the time programmed (only possible if suspension 7 days was chosen).

Operating the irridoseur

Suspension

If **suspension is programmed**, when pressing the START key, a choice is proposed according to the day and the hour you do it.

This choice can be modified with OHTER CHOICE key without modifying the program itself (PROG settings in PROG key).

EXAMPLE 1

Suspension TUESDAY 08 : 00 ?	Other choice	No
--	-----------------	----

This choice is proposed if there is no pressure and if a suspension Tuesday at 8 O' clock is programmed. It is just a reminder. Choose "no" if you want the programmed suspension was not taken into account.

EXAMPLE 2

SUSPENSION IMMEDIATEY	Other choice	No
--------------------------	-----------------	----

This choice is proposed if the hour of the programmed suspension is over and if the machine is not in suspension stage. Choose "no" if you want the reel machine to start.

EXAMPLE 3

STARTING AGAIN Tuesday 20 H	Other choice	yes
--------------------------------	-----------------	-----

This choice is proposed if the machine is in suspension stage and if the programmed hour of starting again is not reached. By safety precautions, the choice 20 h remains the starting again hour. Choose "yes" if you want the machine to start again immediately.

EXAMPLE 4

STARTING AGAIN No	Other choice	yes
----------------------	-----------------	-----

This choice is proposed if the machine is in suspension stage and if the choice of starting again programmed is keyboard or pressure. By safety precautions the choice "no" is first proposed in order to avoid a wrong starting again. Choose "yes" if you want the machine to start again immediately.

Operating the irridoseur

Pressure start



1) RECOMMENDED PROCEDURE

- **Before unwinding** : Ensure the end of winding sensor is released and the stop system is functioning, i.e. :
- Make sure with the "**START**" key that the display shows "**UNWINDING**" and "unwound length equal to 0000"
- If "**FREE SHUTOFF BAR**" is displayed, it means the end of winding sensor is not in the right position.
- The machine is ready to count the length of hose to be unwound.
- The by pass valve is opened, which will allow the air to be evacuated towards the gun when water arrives. Water hammer will thus be avoided.

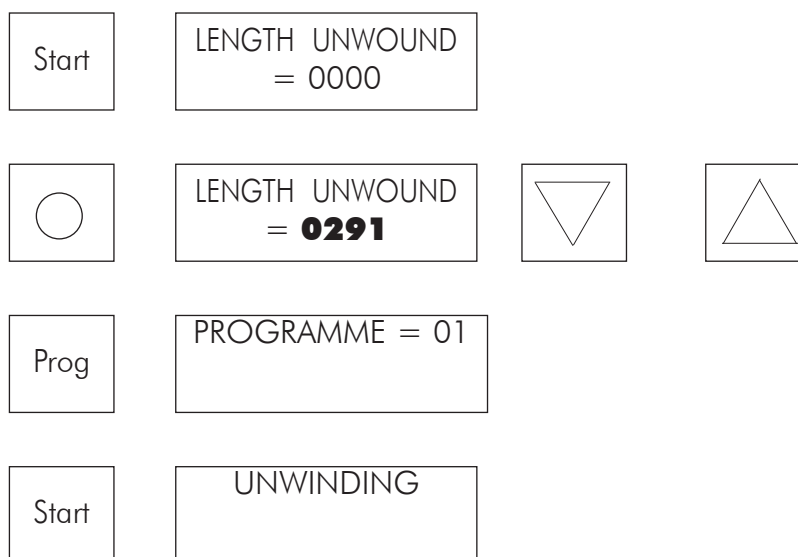
When the pressure rises, the machine automatically starts as soon as the level of the switch is reached. The message "WAIT SPEED" is displayed until the correct start of the machine (see "FAULTY START" page).

2) AT THE END OF UNWINDING :

If you realise once the machine is unwound that there was a handling mistake and the unwound length is not displayed, it is possible to enter on the keyboard the length shown on the hose marks.

3) INSTRUCTIONS FOR ENTERING THE UNWOUND LENGTH

Press several times on "Start" until the "Length unwound" display



Note : If we are in winding situation, the message "wait" appears during 10 seconds.

Operating the irridoseur

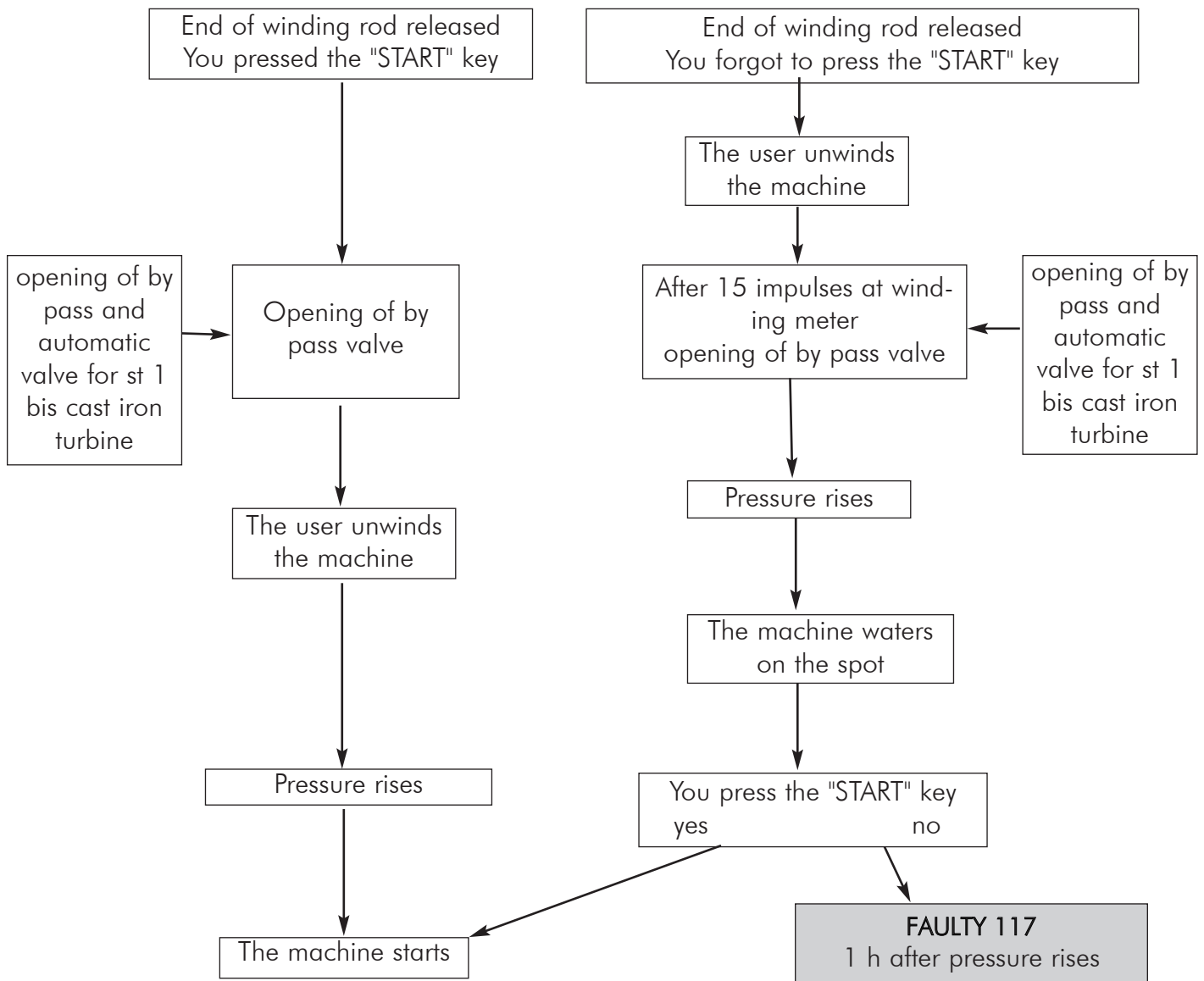
Pressure start

4) IF YOU FORGOT TO PRESS THE "START" KEY BEFORE UNWINDING

- The following sequence will occur :
- Opening of the by pass valve when the winding sensor (or the disc sensor according to versions) has received 15 impulses from unwinding.
- When the pressure rises, the machine waters on the spot.
- The machine will start **as soon as the user presses the "START" key**.

In case the user forgets to press the **"START"** key, one hour after the pressure rises, the message **"FAULTY 117"** (cf page 88) will appear and cause the opening of the discharge valve or the closure of the stop valve (except if valve coded 001 or 004, when the reel machine waters on the spot, cf page 67).

RESUME OF THE START SEQUENCE :



Operating with differed start

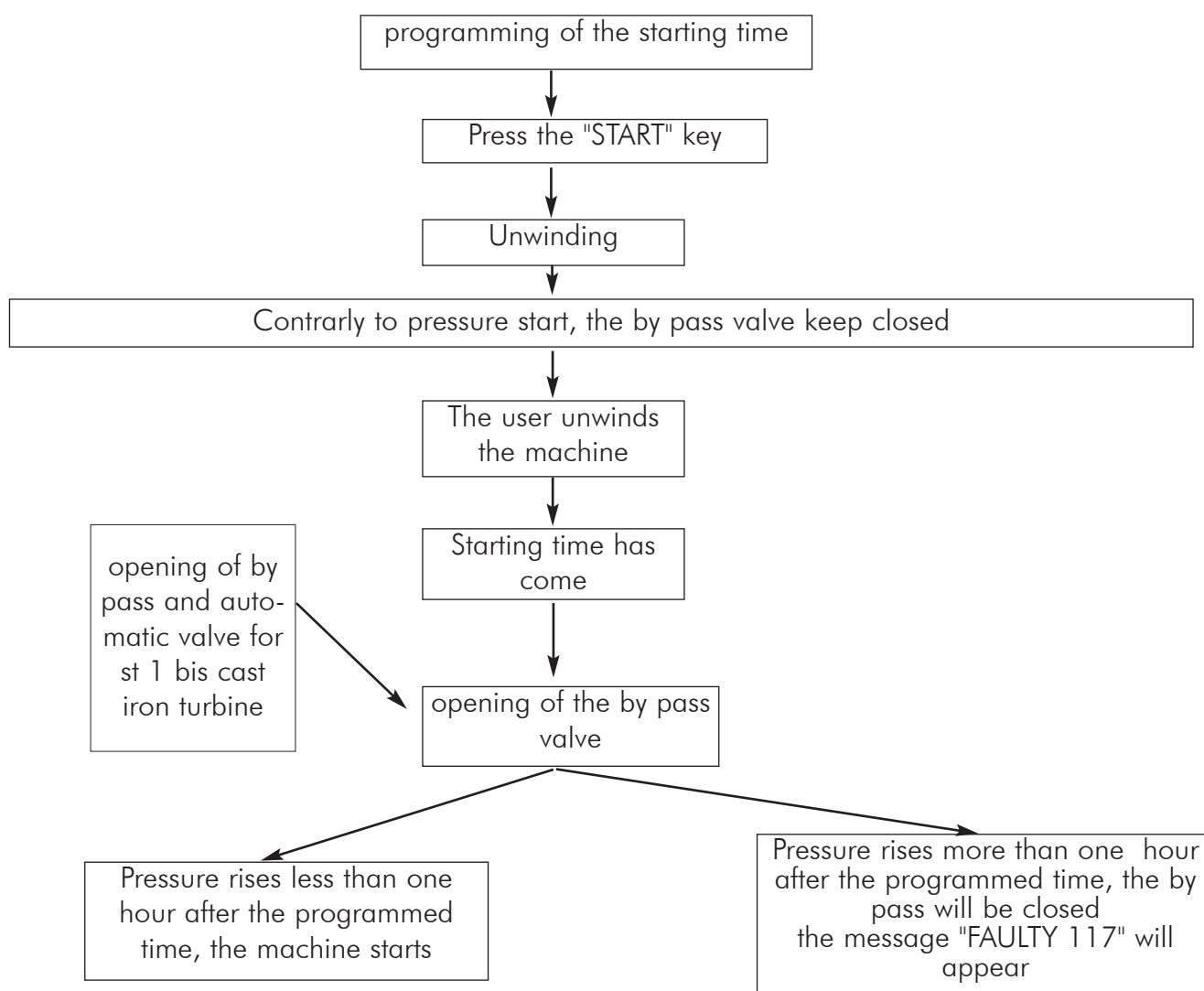
Practicable only with automatic or coded valve

1) ADVISED PROCEDURE

Before unwinding, Ensure the winding end sensor is released and the stop system is functioning :

- Program the time of start (cf page 81).
- Press the **"START"** key to make sure that **"UNWINDING"** is displayed.
- Unwind.

RESUME OF THE STARTING SEQUENCE (delayed start) :



If you program the starting time after pressing the "START" key or after unwinding, the by pass valve closes :

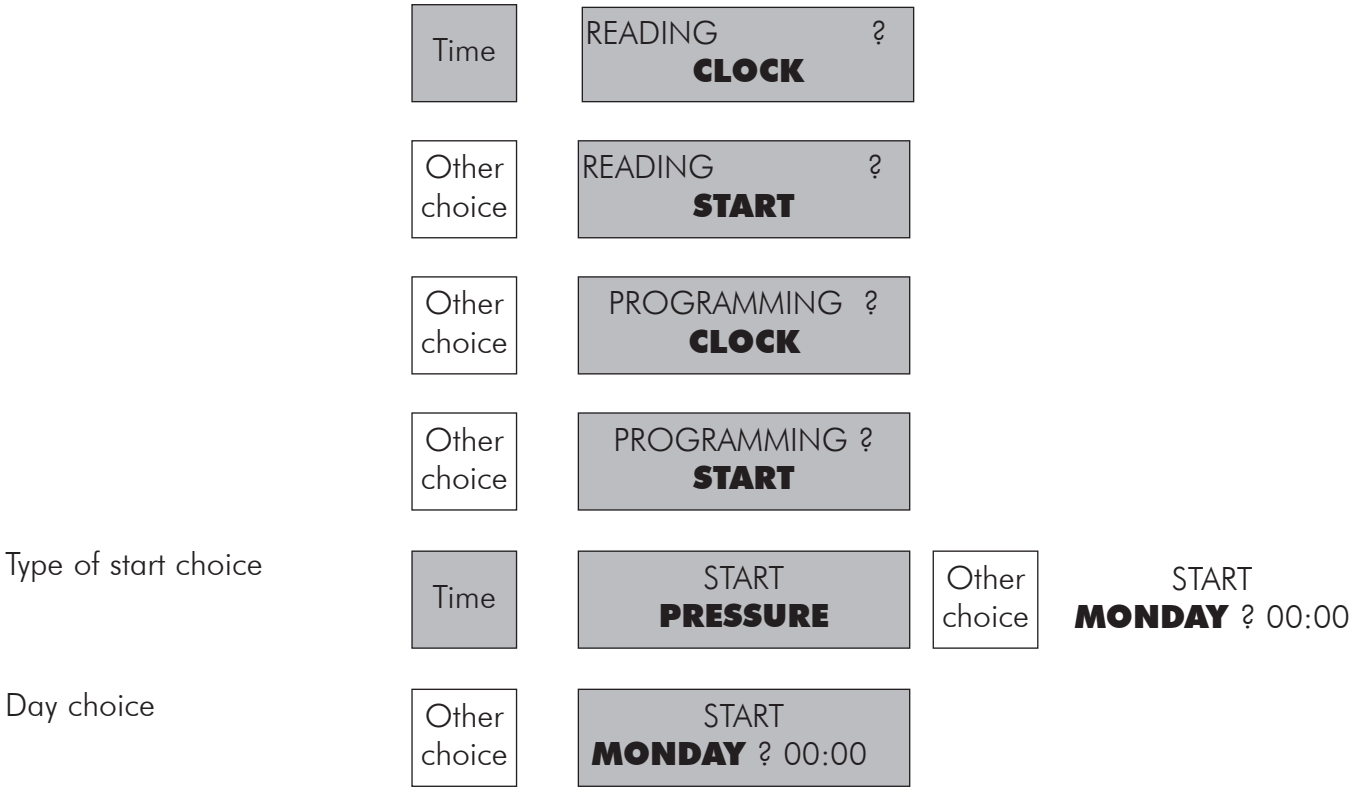
- either rapidly if there is no pressure.
- or gradually if there is pressure.

Operating with differed start

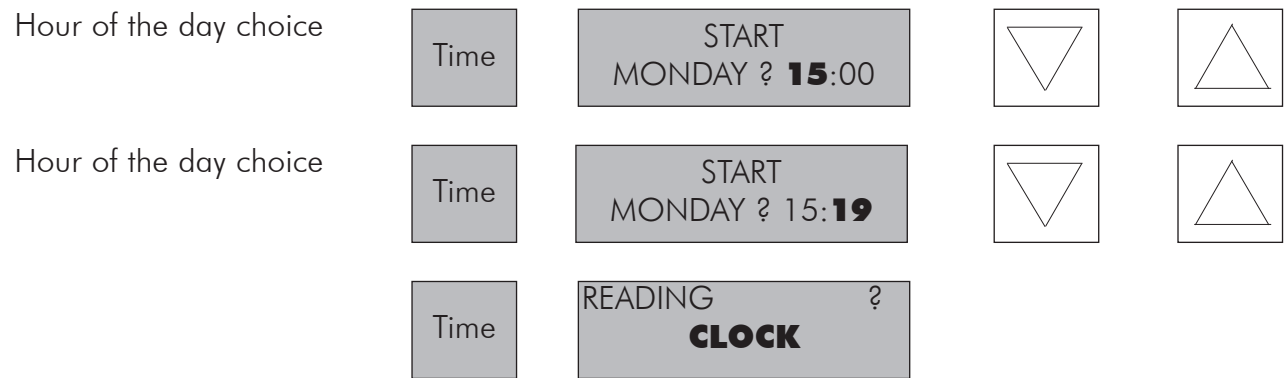
Practicable only with automatic valve or coded valve



STARTING TIME PROGRAMMING:



To go from one day to one another, press "OTHER CHOICE" key. With this key you have the circular permutation, monday, tuesday, wednesday, thursday, friday, saturday, sunday, GSM, start pressure.



The starting time will be registered as soon as you press the "START" key.

NOTE : If GSM start is chosen, the starting up of the machine will be only possible by the GSM command START.

Test during irrigation

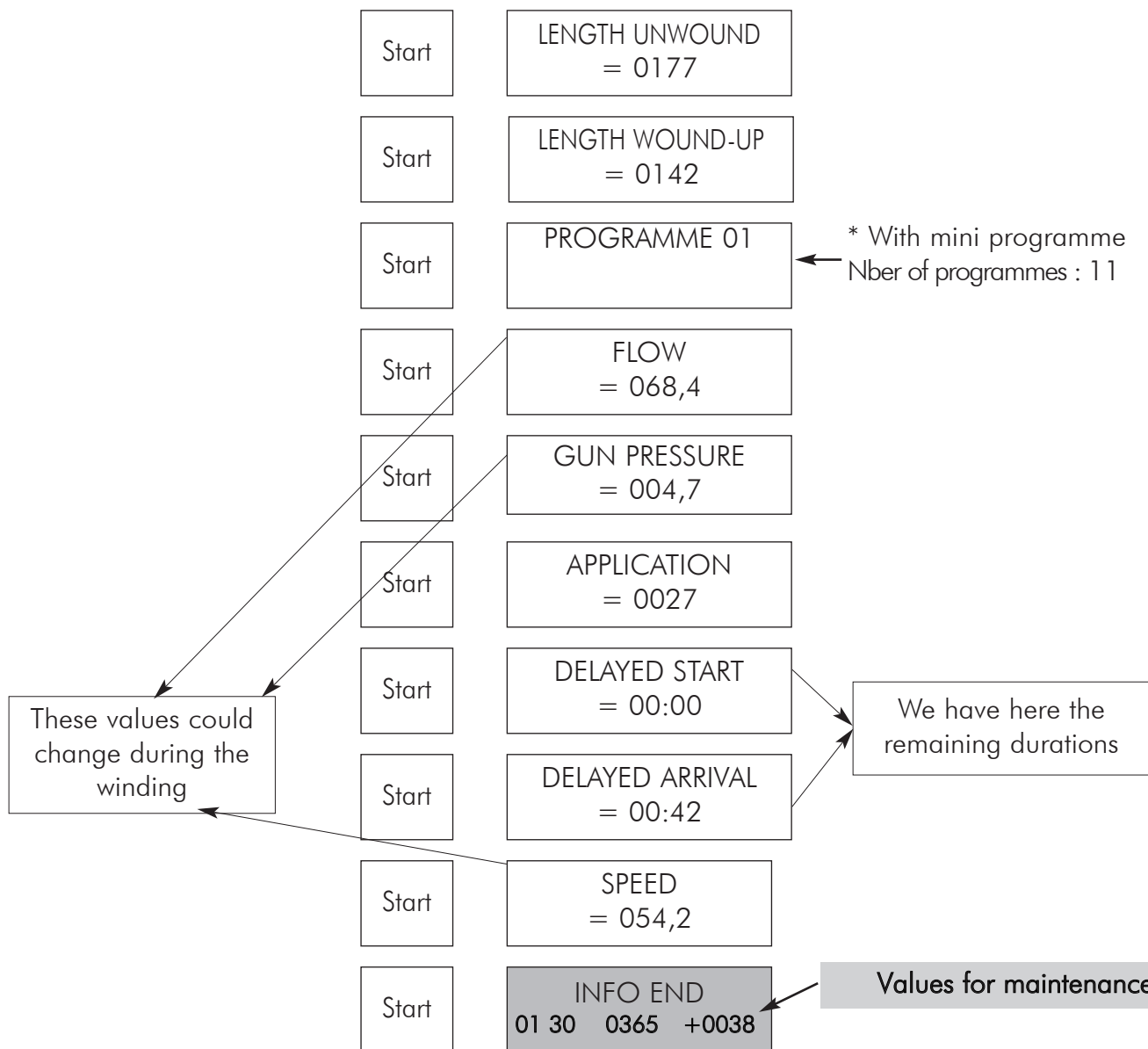
Selected function



Display Indication

To Modify the value

As soon as the machine has started, by pressing the "START" key you can get on the display all the information concerning the current session. This information is instantaneous. So, at any time you can know the pressure at the gun, the remaining time of duration.



The two first two figures values (0130) are given for Irrifrance's technical department (01 corresponds to the type of regulation's speed.; 30 corresponds to the irrigating sequences (see schedules page 81).

IN UNWINDING :

- The first four figure number (ex 0365) correspond to the impulses number read on the winding sensor.

IN WINDING IN :

- The first four figure number (ex 0365) correspond to the impulses number read by the turbine sensor between 2 impulses read by the winding sensor. This value changes according the type of reel machine (see diagnosis aids).

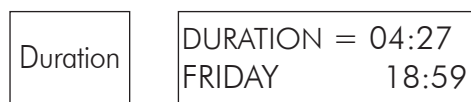
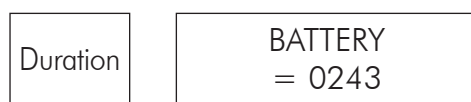
- The second four figure value correspond to the reel machine's delay or advance (see diagnosis aids). This value divided by 256 corresponds to the number of delayed meters or in advance

Test during irrigation



As soon as the machine starts, by pressing the **"DURATION"** key, you can know the remaining duration of winding and the time of arrival of the reel machine.

This duration is valid at the moment and does not take into consideration possible run incidents (see the list of incidents page to 87) or possible pressure changes at the machine input, if you use the **"ANALOGICAL YES+ +"** option.



As soon as the machine has started, by pressing the **"DEFECT"** key, you can know

- The current or passed incidents
- The possible delay of the machine "LENGTH WOUND-UP -0002m"



or



NOTE :

- If the value of the battery is lower than 225, check the battery and expect to charge it eventually.
- If the value of the battery is lower than 220, malfunctions can occur.

REMINDER :

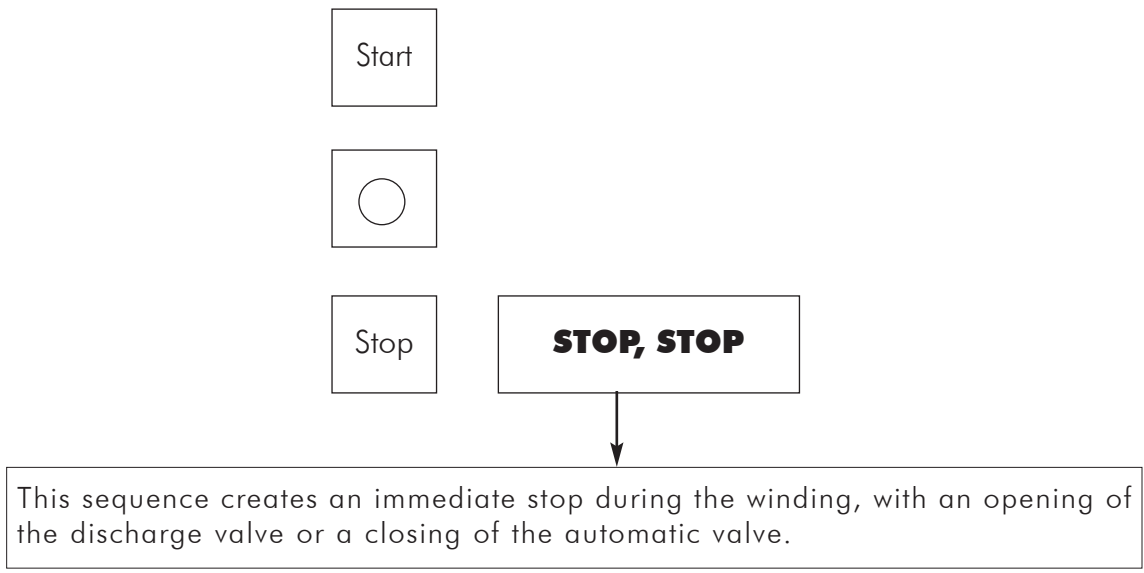
If in doubt, check the battery's values with the solar panel inactive (either cover it in the full heat of the sun or note the value at night)

Shut off modes

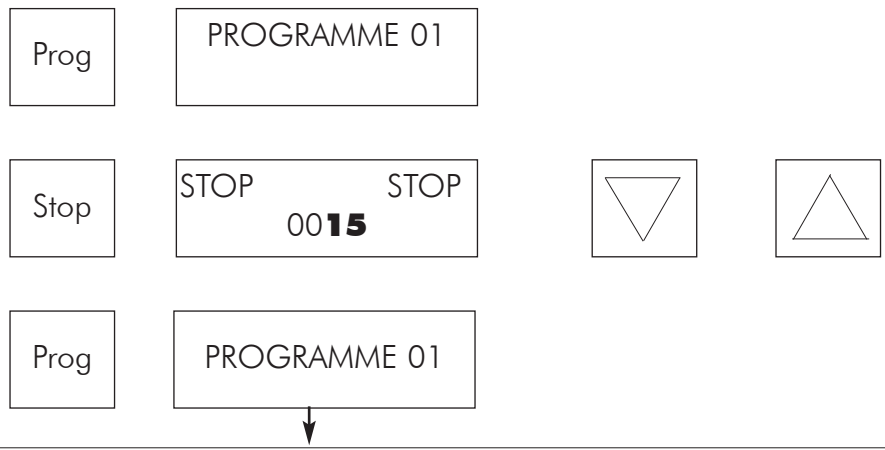


Three different voluntary stops in winding-in run are possible : an immediate stop or a differed stop.

1) IMMEDIATE STOP :



2) DIFFERED STOP :



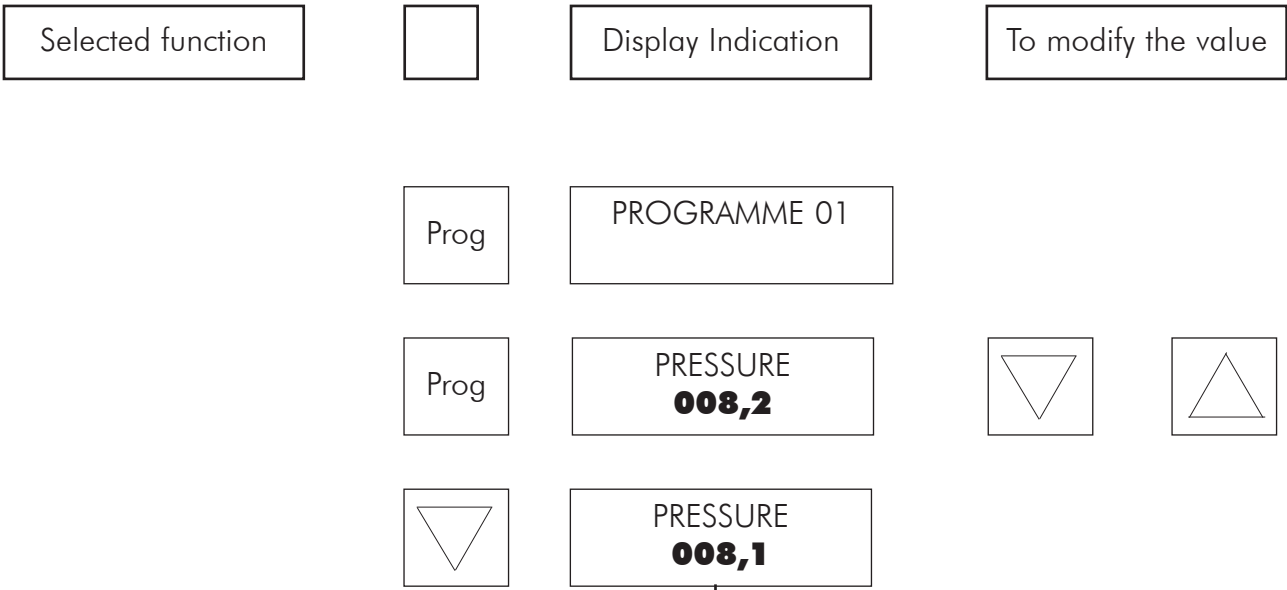
When you'll use the "PROGRAMME 01" this sequence 'll stop the trolley at **15 meters** from the reel machine (The zero is the reel machine position).

As in the previous case, we'll have :

- opening of the discharge valve or a closing of the automatic valve.
- Wether you want to restart the machine, press the **"START" key**.

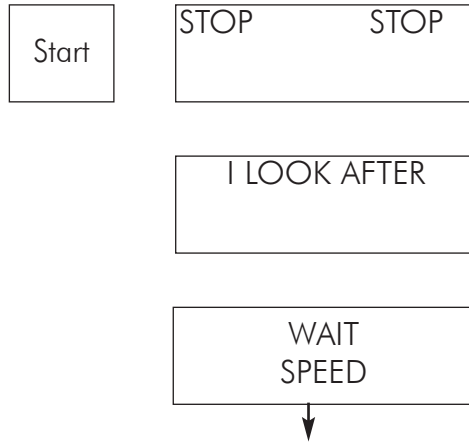
3) DIFFERED STOP TO OPERATE A DIFFERED STOP AT PRECISE HOURS SEE PAGE 76

Modifying the irrigation program during winding-in



During the winding, as soon as you press one of the following keys : **OTHER CHOICE**
"ARROW UP"
"ARROW DOWN"

The reel machine **stops and waters on the spot**. You can now modify one or several parameters of the programme. After modifying one or several values it's necessary to press the **"start"** key to restart the reel machine. During suspension the reel machine doesn't change its stage.



The reel machine restart, on the display you'll see the message "WAIT SPEED" as far as the correct start of the machine (cf FAULTY START page 89).

If you forget to press the "START" key after a modification, **one hour later** the machine will stop watering on the spot. We'll have an opening of the discharge valve or a closing of the automatic valve and the message **"FAULTY 107"** (cf page 87) will appear on the display

High speed return in case of rain

Selected function



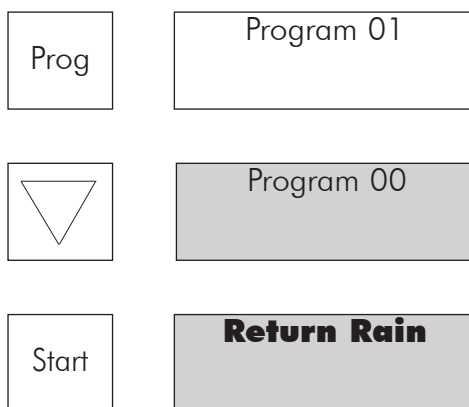
Display Indication

To modify the value

PROCEDURE ON KEYBOARD :

If the machine is winding in and you wish to finish the run rapidly, you can use the **00 program**. With the "ARROW UP" and "ARROW DOWN" keys, get "PROGRAM 00" on the display. Press the "START" key to validate the modification. The machine will come back as fast as it can, that is 70m/h (or 120 m/h with the 7.5 chip or 160 m/h for the optima range machine), if the flowrate allows it.

When using this quick return, there is no information available through the "DURATION" key.



PROCEDURE WITH A RAIN GAUGE :

See initial programming page 68 and daily programming pages 70 and 71.

Fault identification

FAULTY 100 :

Pressure value equal at 0. This value can be programmed between 0,1 and 12 bars.
This fault prevents the starting of the reel machine.

FAULTY 101 or ! 101 :

1) Fault 101 if the speed is lower than < 3 m/h
or > 500 m/h.

2) ! 101 :

- No optima machine : if the speed is > 160 m/h.
- Optima : if the speed is > 300 m/h.

The fault 101 prevent starting.

! 101 permits the starting of the machine with a warning of high speed.

REEL MACHINE ACTUAL RANGE			AUTRES MACHINES	
	Maxi speed m/h	Flowrate M ³ /h		Maxi speed m/h
1015	300	12	Optima super1bis	300
1020	300	15	Optima 1 bis	300
1025	300	20	Optima super 2, 2	300
1030	300	20	Optima 2 bis	300
1035	300	20	Optima 3	300
1045-1055	300	35	2030-2040	160
2060-2075 vps	160	40	2050-2070- st 5	160
2061-2076	160	40	ST1-1BIS	160
			ST2-SUPER 2	160
			ST2 BIS ET SUPER 2 BIS	160
			ST3 -3BIS	160
			st 4	160

FAULTY 102 :

Wrong value in the zones programming.
This fault prevents the reel machine from starting.

FAULTY 104 :

Unwound length equal or greater than the "HOSE LENGTH" of the initial programming.
In order to delete this fault :

- During the winding, if the difference is only about a few metres, correct the value of "**HOSE LENGTH**" in the initial programming.by putting a new value one meter higher than the unwound length displayed.

At the end of the winding, correct the value (see page 96 & 97).

This fault prevents the starting of the reel machine.

! 106 :

Calculated flowrate lower than the minimum flowrate (see hydraulic performances).

! 106 allows the start of the reel machine warning of an abnormal flowrate.

ACTUAL RANGE		OTHER MACHINES	
	Flowrate M ³ /h		Flowrate M ³ /h
1015	12	Optima super1bis	12
1020	15	Optima 1 bis	12
1025	20	Optima super 2, 2	15
1030	20	Optima 2 bis	20
1035	20	Optima 3	20
1045-1055	35	2030-2040	35
2060-2075 vps	40	2050-2070- st 5	40
2061-2076	40	ST1-1BIS	18
		ST2-SUPER 2	30
		ST2 BIS ET SUPER 2 BIS	35
		ST3 -3BIS	38
		st 4	40

FAULTY 107 :

Forgetting to press the "**START**" key after a programme modification.

This message appears 60 minutes after the modification.This fault causes the opening of the discharge valve or the closure of the stop valve (except if valve coded 001 or 004, when the reel machine waters on the spot, cf page 67).

Fault identification

FAULTY 109 :

Application value greater than 120 mm.
This fault prevents the reel machine from starting.

FAULTY 111 :

Value of "IMPULSES" in the initial program equal at 0.
This fault prevents the reel machine from starting.

FAULTY 112 :

FLOWRATE greater than 175 m³/h.
This fault prevents the reel machine from starting.

FAULTY 117 :

This message appears :

- At the starting of the machine one hour after the pressure rises if the user forgets to press the "START" key.
- After a calcul incident , if the operator doesn't come back within the hour. It could happen if you are using the **"ARRIVAL HOUR" priority and if the pressure rises later.**

Example :

- Monday at 8 AM you unwind 210 m of PE pipe.
- You program the same monday an arrival hour at 3 PM.
- The pressure rises at 12,5 PM instead of 9 AM.
- In order to respect the correct arrival hour the speed of the reel machine should be **84m/h**. This speed is not allowed (Maximum speed 70 m/h (or 120 m/h from the 7.5 chip or 160 m/h for the optima range machines), see incident 101 page).
So the following message appears :

"FAULTY 101"

But as you pressed the "START" key the by pass valve is open and the reel machine waters on the spot. If you don't press any key in the hour after the message "FAULTY 101" the following message appears :

"FAULTY 117"

This message causes the opening of the discharge valve or the closure of the stop valve (except if valve coded 001 or 004, when the reel machine waters on the spot, cf page).

There were 01, 02, 03 incidents ... means that there were 01, 02, 03... stops during 1winding and 01, 02, 03... automatic restart.

Battery incident : appears if the voltage of the battery fall without automatic restart.

Fault identification

FAULTY START

Occurs 30 mins after the machine started or re-started.

It means either :

- The turbine speed for the session is reached and there was no impulse at the winding sensor
- The turbine speed for the session is not reached and there were less than five impulses at the winding sensor

This incident causes the discharge valve to open or the stop valve to close (except if valve coded 001 and 004 when the reel machine waters on the spot, see page 67).

Possible reasons :

- flowrate too low
- crabot disk off
- three way tap of the by pass valve not on "auto" position
- transmission parts defective
- turbine sensor defective
- winding sensor defective.

FAULTY WINDING IN :

Means the hose out boarded the drum (or the sensor is set incorrectly).

This incident causes the discharge valve to open or stop valve to close.

AUTOMATIC VALVE FAULTY :

Only working if the machine is used with auto valve or valve coded 002, 003 or 005

It means for Non Optima machines :

- At the end of winding, after the electrical stop "**end of winding**" is recorded, more than 150 impulses were received by the turbine sensor.
- While winding during a programmed stop for example, after recording the stop, more than 250 impulses were received by the turbine sensor.

It means for Optima machines :

The control is only done during supervision minutes if you chose automatic valve faulty yes in the initial programming.

This incident causes the by pass valve to open, the machine waters on the spot till the user intervenes.

Possible reason : the membrane of the automatic valve is pierced.

Fault identification

PRESSURE FAULTY :

Means that pressure disappeared longer than for the time programmed in the "adjusting def. pressure" line. The computer will order the discharge valve to open or the stop valve to close.

If "**application**" option is on, the arrival time of the machine will be delayed for a time equal to the duration of the incident plus the possible delay between the drop of pressure and the occurrence of the incident.

If "**arrival time**" option is on, the machine will catch up on its delay by automatically decreasing the dose down to 50% of the initial dose.

EXAMPLE :

- Tuesday at nine, you unwind 210m of PE.
- You program the arrival time this tuesday, at 16.00 hrs.
- Pressure rises at 9.00 hrs.
- With the nozzle used, it gives a dose of 20m/h and a speed of 30m/h.

First case :

At 10, while 30m of hose are winded, the pressure drops for 1 hour.

At 11 pressure rises again. There are 180m hose left to be winded.

To keep the arrival time :

The speed should increase to 36 m/h

The dose decrease to 16,6mm.

This value is over 50% of the initial dose (20mm).

The machine will arrive at 16.00

Second case :

At 10, while 30m of hose have been wound the pressure drops for 4 hours.

At 14 the pressure rises again. There are 180m PE left to be wound.

To keep the arrival time :

The speed should increase to 90m/h

The dose should decrease to 8mm

This value is below 50% of the initial dose (20mm).

The machine will choose a speed allowing a dose equal to 50% of the initial value, that is 60m/h.

The machine will arrive at 17.

If the pressure rises again during the closing stage, the machine will not start again. The pressure information will only be taken into account when this stage is over.

Fault identification

FAULTY DRIVE UNIT :

No impulse at the winding sensor during the 35 last minutes.

WINDING LENGTH. ??? :

This means the length wound is longer than the unwound length. It appears when pressing any key and the condition is fulfilled. It does not prevent the machine from working.

KEYBOARD FAULTY : means a keyboard or an electrical component driving the keyboard defect.

DESCRIPTION OF THE VALUE DISPLAYED DURING AUTOMATIC RESTART

beginning of restart after pressure faulty:	48	end of the stop during pressure faulty:	<0
beginning of restart during winding-in:	64	end of the stop during winding-in:	=5
beginning of starting during winding-in:	96	end of the "end of irrigating" sequence:	B0
beginning of the stop during pressure faulty:	;2	end of "new unwinding-in" sequence :	F5
beginning of the stop during winding-in:	<8	end of " modification during winding-in" sequence:	:H5
beginning of " end of irrigating" sequence:	A6	end of " delayed arrival during "stop" sequence :	@5
beginning of " new unwinding-in " sequence:	F4	"unwinding before pressing the "marche" key sequence:	30
beginning of " modification during winding-in" sequence:	H0	" unwinding after pressing the "marche key" sequence :	:45
beginning of " delayed start during stop" sequence:	@0	" normal winding-in" sequence:	85
end of restart after pressure faulty:	60	" winding-in after stop" sequence :	51
end of restart during winding-in:	75	"delayed arrival yes" sequence :	;9
end of starting during winding-in:	:5		

Key "Total"

Selected function



Display Indication

To modify the value

1) READING TOTAL :

Prog	PROGRAM 01
------	------------

Total	READING TOTAL ?
-------	--------------------

Total	WATER P01 000,0 m3
-------	-----------------------

Total	DURATION P01 000,0 h
-------	-------------------------

Total	WATER P01-p10 000,3 m3
-------	---------------------------

Total	DURATION P01-P10 000,0 h
-------	-----------------------------

Concerns totals, **water volume and watering duration** on the **01** programme, since the start of the computer or since the last cancellation.

Reminder : the mini programme = P11

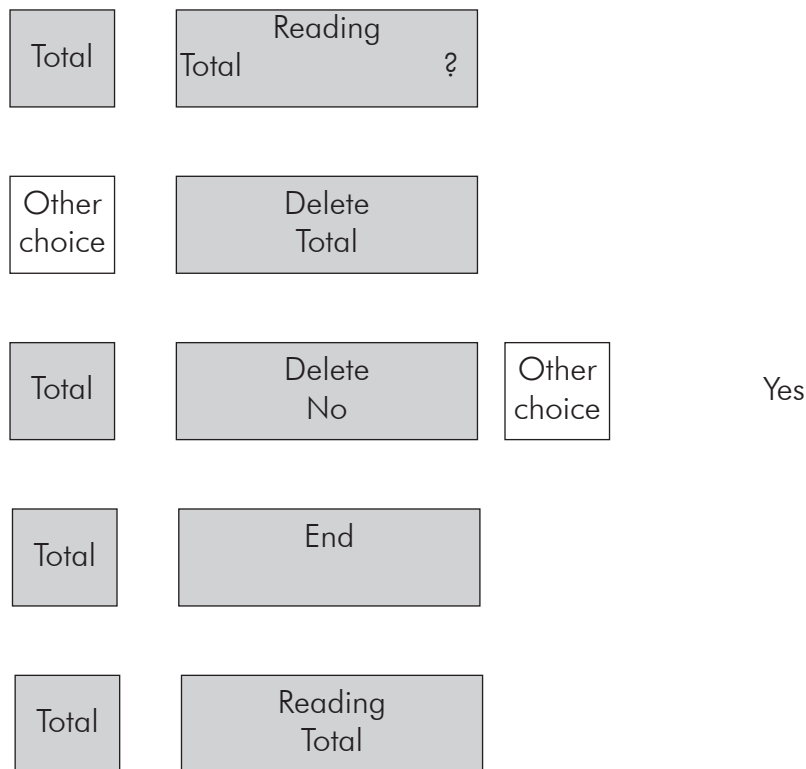
P1-P10 : corresponds to the water volume and watering duration on all programmes.

NOTE : Before beginning a new season, it is advised to wipe out all the totals of the previous season.

Key "Total"



2) MANUAL DELETION OF TOTAL : IF NECESSARY



BEWARE !

This procedure wipes out all the totals of all the programs, without any possible recovering.

3) AUTOMATIC DELETION OF TOTALS :

If during 3 months the reel machine does not operate winding-in , during the first starting up totals are automatically deleted.

Key "Ctrl"

Irritator function

Selected function

Display Indication

To Modify the value

To get to the irritator function, the information **"unwound length =0000"** must be on.
 If not : enter 0000 as unwound length (see description page).
 Then follow the procedure below

Ctrl CODE ?

Ctrl CODE =
-

Total

Time

Total

Time

Ctrl outputs test

See page the correspondence keys

Ctrl inputs test

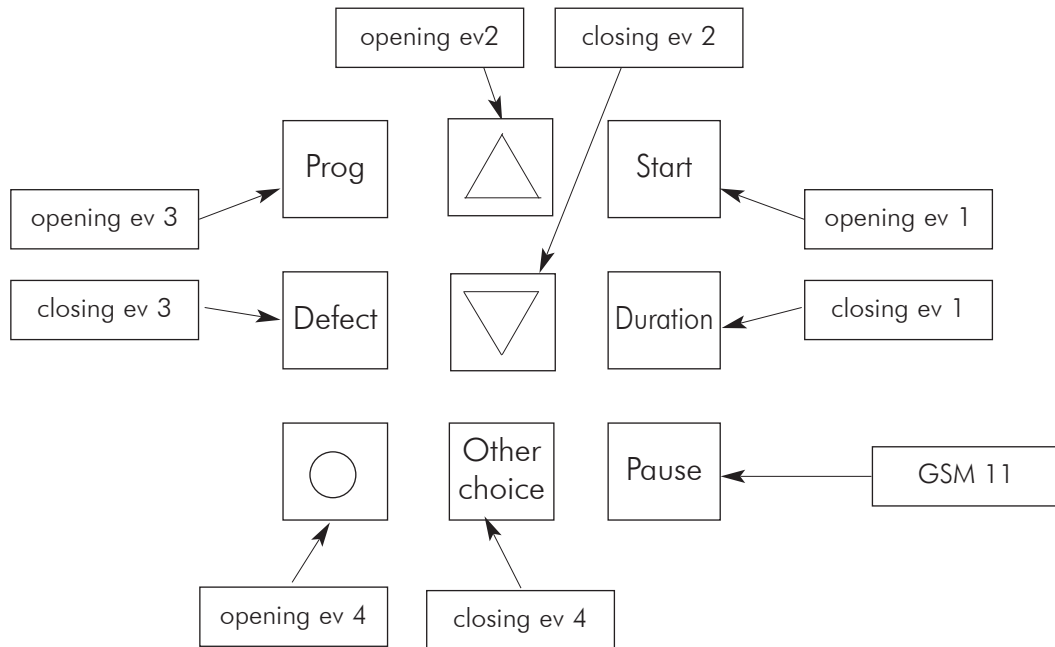
See page the correspondence keys

Ctrl End of irritator utilisation

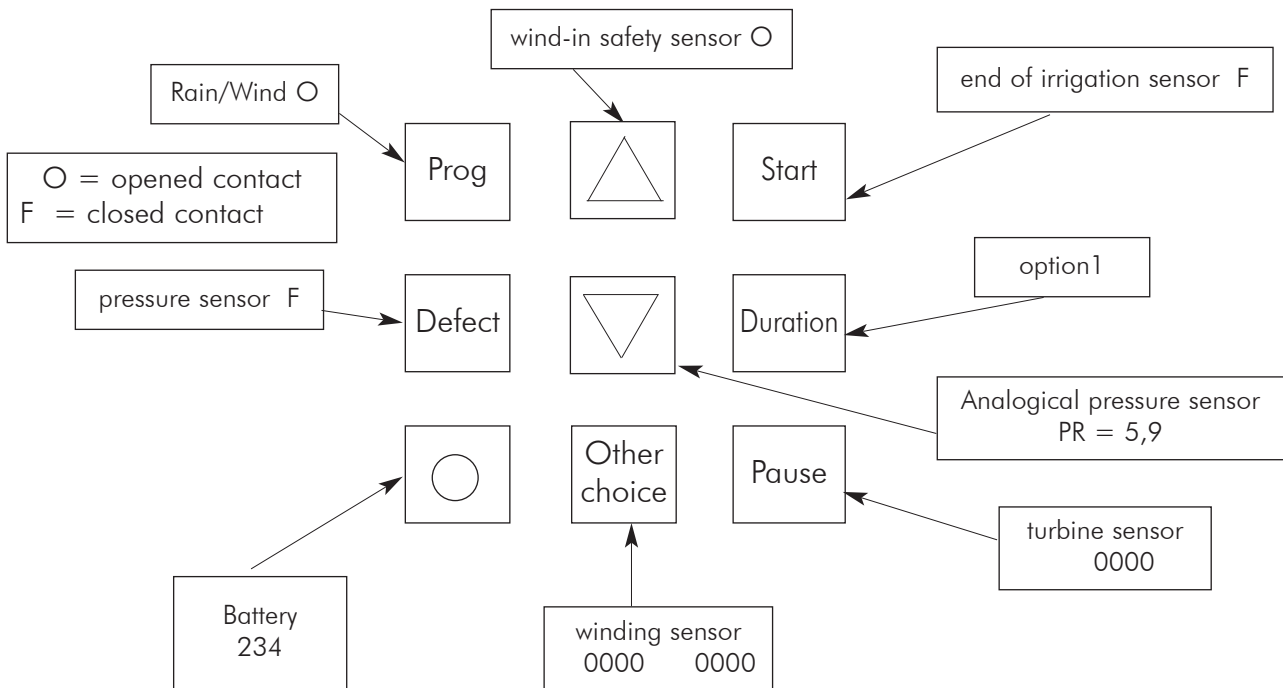
Key "Ctrl"

Irritator function :

IF THIS MODE IS ON : outputs tests **BEWARE**, the irritator function remains active for only 20 mn after the last operation on the keyboard.



IF THIS MODE IS ON inputs tests **BEWARE**, the irritator function remains active for only 20 mn after the last operation on the keyboard



Method of correction

of total hose length

Méthod used to correct the initially programmed total PE hose length (in the course of a season)

1°) Check that the hose is entirely wound on.

2°) Count the number of turns on the last layer.

3°) Compare with the theoretical value given in the table below (under "number of turns on last layer")

4°) If the real value is greater than the theoretical value, add the length of the extra turns you counted on the machine.

Example :

- Given an Optima 1030 machine - Ø 110 - 400 Theoretically there are 9,83 turns on the 5ft layer.

- On the machine, 12 turns are actually counted on the 5 ft layer.
Length of a turn on the 5ft layer : 7,83 m

- Difference : $12 - 9,83 = 2,17$
 $2,17 \times 7,83\text{m} = 16,99$

- Value to be entered in initial programming :
HOSE LENGTH : $400 + 17 = 417$ m

Theoretical values per structure

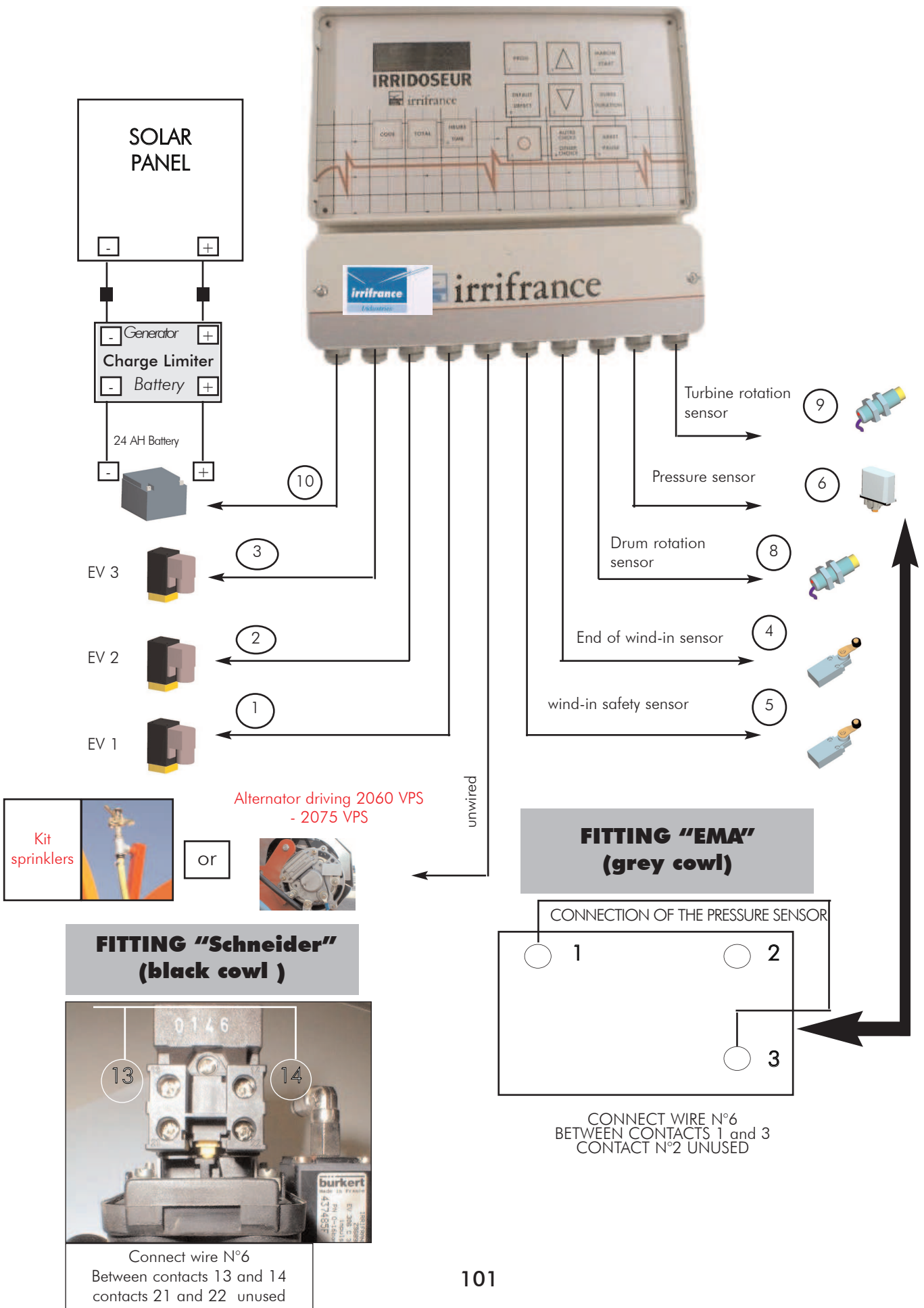
Type of machines	ø in mm and Lg. PE in m	Nb. layers	Nb of turns per layer	PE capacity on last layer	Nb or turns on last layer	L. of turns on last layer	Lg PE sur la dernière couche
OPTIMA 1005	ø 63-300 ep 4,7	5layers	16,57	86,46	2,45	5,22	12,78
	ø 75-300 ep 5,5	5layers	13,92	76,88	9,44	5,52	52,14
	ø 82-260 ep 6	5layers	12,73	72,58	5,04	5,70	28,72
OPTIMA 1010	ø 75-310 ep 5,5	5layers	13,92	81,25	5,69	5,84	33,24
	ø 75-380 ep 5,5	6layers	13,92	87,1	5,31	6,26	33,24
	ø 82-300 ep 6	5layers	12,73	76,58	8,86	6,01	53,27
	ø 90-270 ep 6,7	5layers	11,6	72,13	6,57	6,21	40,77
OPTIMA 1015	ø 75 - 310 ep 5,5	5layers	13,92	81	7,65	5,82	44,5
	ø 75 - 400 ep 6,8	6layers	13,92	87	8,48	6,25	53
	ø 82 - 280 ep 6	5layers	12,73	76,6	5,48	6,02	33
	ø 82 - 350 ep 6	6layers	12,73	82	4,11	6,44	26,5
	ø 82 - 370 ep 6	6layers	12,73	82	7,23	6,44	46,62
	ø 90 - 280 ep 6,7	5layers	11,6	72	8,18	6,21	50,8
	ø 90 - 340 ep 6,7	6layers	11,6	78	5,76	6,72	38,7
ø 100 - 260 ep 7,4	5layers	10,44	67	7,60	6,42	48,8	
OPTIMA 1020	ø 82 - 420 ep 7,5	5layers	16,28	107	10,02	6,57	65,85
	ø 90 - 400 ep 6,7	5layers	14,83	101	10,49	6,81	71,46
	ø 90 - 450 ep 8,2	6layers	14,83	108	2,84	7,28	20,68
	ø 100 - 330 ep 7,4	5layers	13,35	94,3	4,09	7,06	28,9
	ø 100 - 370 ep 7,4	5layers	13,35	94,3	9,72	7,06	68,65
	ø 100 - 410 ep 7,4	6layers	13,35	101,8	1,86	7,63	14,2
	ø 110 - 340 ep 8,2	5layers	12,13	88,8	8,25	7,32	60,4
OPTIMA 1025, 1026	ø 90 - 500 ep 8,2	6layers	15,74	115	6,06	7,31	44,3
	ø 100 - 400 ep 7,4	5layers	14,16	100	11,33	7,06	80
	ø 100 - 450 ep 9,1	6layers	14,16	108	4,00	7,63	30,5
	ø 110 - 370 ep 8,2	5layers	12,88	94,2	9,98	7,31	73
OPTIMA 1030, 1031	ø 100 - 500 ep 9,1	6layers	14,16	115,4	5,35	8,15	43,6
	ø 110 - 400 ep 8,2	5layers	12,88	100,9	9,83	7,83	77
	ø 120 - 380 ep 8,9	5layers	12	96,5	9,23	8,04	74,2
	ø 125 - 350 ep 11,4	5layers	11,33	93,1	7,05	8,22	57,9
OPTIMA 1035, 1036	ø 100 - 550 ep 11	6layers	15,07	122	7,91	8,10	64
	ø 110 - 500 ep 10	6layers	13,7	115	5,84	8,39	49
	ø 110 - 530 ep 12,3	6layers	13,7	115	9,32	8,39	78,55
	ø 120 - 400 ep 8,9	5layers	12,77	102,71	9,31	8,04	74,87
	ø 125 - 385 ep 11,4	5layers	12,06	99	9,01	8,21	74
OPTIMA 1045	ø 110 - 560 ep 12,3	6layers	15,09	117,14	13,08	7,76	101,52
	ø 120 - 520 ep 11,5	6layers	13,83	112,35	10,50	8,12	85,25
	ø 125 - 500 ep 11,4	6layers	13,28	108,67	10,22	8,18	83,64
OPTIMA 1055	ø 110 - 650 ep 12,3	6layers	15,09	125,61	8,96	8,32	74,6
	ø 120 - 620 ep 13,2	6layers	13,83	120,82	8,38	8,73	73,23
	ø 125 - 600 ep 14	6layers	13,28	117,14	8,53	8,82	75,25
ST 2060VPS	ø 125 - 600 ep 14	7layers	11,99	125,49	3,70	10,47	44,4
ST 2061	ø 125 - 650 ep 14	7layers	11,99	125,49	8,50	10,47	94,72
	ø 135 - 550 ep 14,5	7layers	11,1	117,14	2,42	10,55	25,56
	ø 135 - 600 ep 14,5	7layers	11,1	117,14	7,13	10,55	75,25
ST 2075	ø 125 - 600 ep 14	7layers	11,99	117,14	7,70	9,77	75,25
	ø 125 - 670 ep 14	8layers	11,99	125,6	2,69	10,48	28,2
ST 2075VPS	ø 125 - 730 ep 14	8layers	11,99	125,6	8,43	10,48	88,3
ST 2076	ø 125 - 750 ep 14	8layers	11,99	125,6	10,32	10,48	108,1

Terminal box connections

Kit sprinklers

	Cable designation	Fuse 3A	Terminal box number	Cabler color	N° of cable
Cablage on E.V.	Battery		1	Brown	10
	Diode by 255		2		
	Battery		3	Blue	10
	Electrovalve		4	Brown	
			5	Green yellow	3
			6	Blue	
	Electrovalve		7	Brown	
			8	Green yellow	2
			9	Blue	
	Electrovalve		10	Brown	
			11	Green yellow	1
			12	Blue	
Blue Brown	OR		13		11
			14		
			15	Brown	5
			16	Blue	
End of wind in					4
			17		Black (Machine équipé with an hydraulic distributor) Brown (Machine équipé with a turbine brake)
			18		
			19	Black/Blue	8
			20	White/Brown	
			21	Brown	6
			22	Blue	
			23	Black/Blue	9
			24	White/Brown	

Wiring diagram

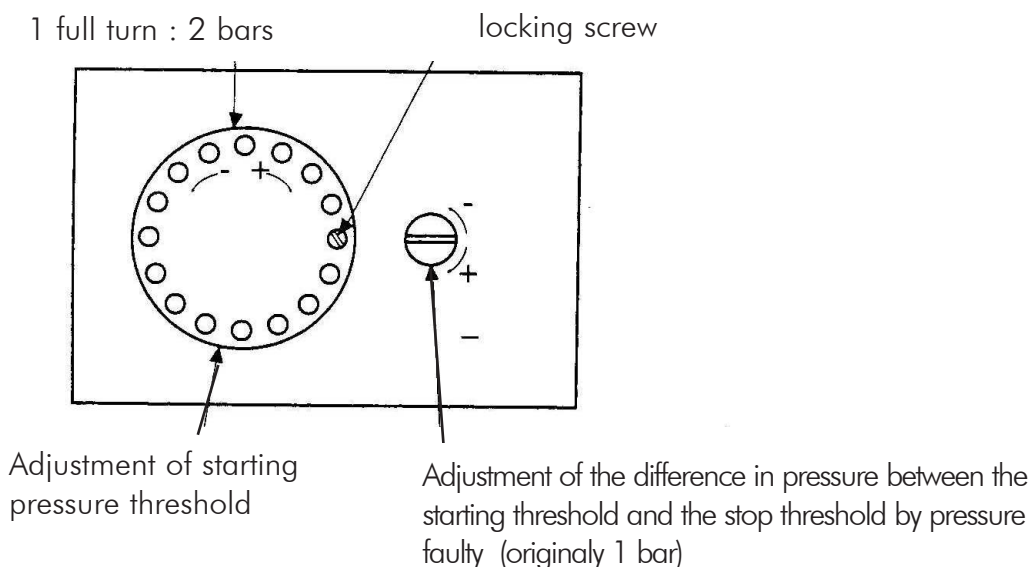


Adjustment of pressure sensitive switch and proximity sensor

FITTING TYPE "EMA" grey cowl

■ PRESSURE SENSITIVE SWITCH

Method of pressure threshold adjument



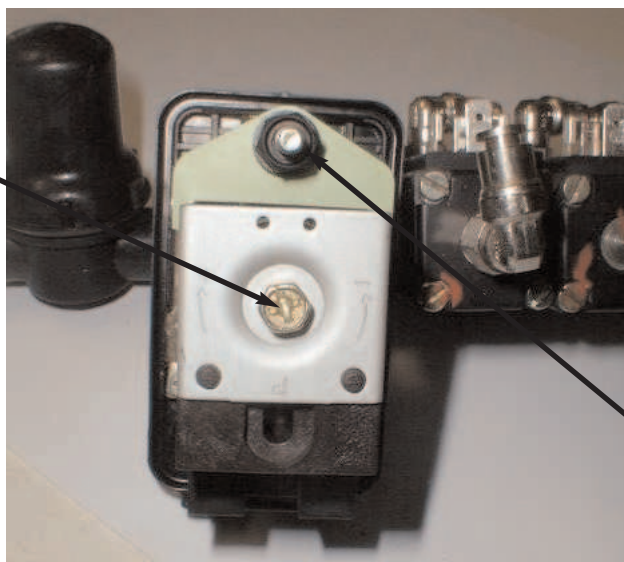
PRESSURE THRESHOLD

To raise → Clockwise

To lower → Anti clockwise

FITTING TYPE "SCHNEIDER" BLACK COWL

Adjustment of starting pressure threshold



Adjustment of the difference in pressure between the starting threshold and the stop threshold by pressure faulty

● Proximity sensor

- 1) The \varnothing 12 must be adusted between 1 and 2 mm from the iron part
- 2) The \varnothing 18 (range 2000 only) must be adjusted between 4 and 5 mm from the iron part

Winter storage

BATTERY :

● REEL MACHINE FITTED WITH A CHARGE LIMITER

- Solar panel exposed to the sun most of time during winter storage.
 - Solar panel, battery, charge limiter can remain connected.
 - Ensure machine is protected from hard frosts (- 20°C).
- Solar panel not exposed to the sun (stored under cover to protect from frost (- 20°C)).
 - Disconnect battery,
 - At start of following season, connect battery and expose machine to sun 15 days prior to irrigating.
 - Alternatively charge battery using battery charger rated at 2 to 3 amperes and equipped with automatic cut-out.

● REEL MACHINE NOT FITTED WITH A CHARGE LIMITER

- Disconnect battery,
- Store battery under cover and protect from frost.
- At start of following season, connect battery and expose machine to sun 15 days prior to irrigating.
- Alternatively charge battery using battery charger rated at 2 to 3 amperes and equipped with automatic cut-out.

COMPUTER PANEL :

Important : Store panel in dry, frost free location with a temperature greater than 0°C.

ELECTROVALVES :

- Disconnect Rilsan tubes from outlets of EV3, EV2, EV1 on the mounting block.
- Blow compressed air through block whilst operating the electrovalves using the irritateur function

EV3, EV2, EV1 in "0" position.

Wait until all water is expelled.

EV3, EV2, EV1 in "F" position.

The 3 electrovalves must be left in "F" position for winter storage.

- Reconnect Rilsan tubes to avoid ingress of dirt or foreign bodies.
- Clean filter element of Solex Filter using compressed air.

IMPORTANT : DO NOT USE ANY LUBRICANTS INSIDE THE ELECTROVALVES.

IRRIDOSEUR 4 SOFTWARE HISTORICAL

1) **VERSION 2005**

Prototype software : no zones, no gsm, no totals...

2) **VERSION 2006.1**

Software equal to irridoseur 3 one but not operational GSM

3) **VERSION 2006.2**

- Operational GSM

4) **VERSION 2006.3**

- Modification in order to prevent the test GSM to start too quickly when starting the panel.

5) **VERSION 2006.4**

- Value 90*8,2 added for 1020 machine.
- Modification of thickness 120*11,5 for Structure 1045 machine.
- Modification of the visual mistake for 110 diameter on 1030 machine (we saw 100*9,1 instead of 110*8,2).
- **SUSPENSION IMPROVEMENT** :
- The gun regulation becomes operational in case of difference in level.
- The test of GSM becomes equal to the test bipbip of irridoseur 3.
- " Faulty 100 " message added if the pressure programmed is equal to 0.
- "I think" message added instead of no incident during the long time of zones calculation during unwinding.

6) **VERSION 2006.5**

- Correction of repetitive sending of SMS during delayed arrival in case of GSM < -- >
- "Faulty keyboard" message added.
- Coded or sequential closures operational (for auto valve) during suspension even when no pressure to avoid sudden valves closures.
- Correction for auto valve that drove like discharge valve during suspension closure during unwinding or in case of no pressure.
- Correction for bypass valve that opened when pressure occurred again during suspension.
- Correction of arrival time calculations during suspension.
- Automatic choice of suspension when display is not active. (no handling during 2 minutes) even if the customer forgot to validate again its choice of suspension.
- GSM Modification in order to take into account the changing from mini mode to maxi mode or inversely))
- GSM Modification in order to improve the discussion procedure during SMS intersections.
- Modification of several display's mistakes.
- Lockin of key 0 during "pressure starting again" in PROG stage after having programmed a suspension.
- Saving of reel machine operating added before a program modification by GSM in order to inform the farming through the GSM.
- "winding length ??? " that did not exist on irridoseur 4.

7) VERSION 2006.5b

If during PROG we have chosen " suspension 7 days... ", the second choice" no " in start KEY did not work : the suspension occurred at the expected time in PROG

8) VERSION 2006.6

- Automatical delete of totals at the first starting or at the first sweeping of initial programming.
- Several modifications concerning the suspension described below :
- More logical choices concerning keyboard or pressure restarting in case of suspension 7 days and diary suspension.
- Automatical effect of restarting modification in Prog stage, particularly during unwinding (or during winding-in stopped) for calculation.

9) VERSION 2007.1

- "Delayed start" yes permitted when the machine is stopped.
- Valve closure for alu le ST1 Bis alu.
- Portuguese language added.
- Optima 1026 1031 1036 messages.
- Improvement of initialization at the starting up of a new panel.
- Locking of "triangles " keys on programming line " suspension " if suspension choosen is no (it was possible to modify the nozzle even if we did not want !)
- Arrival time priority : during pressure incident, possible mistakes of calculations particularly if pressure did not occur before expected arrival time.
- Some initial programming's datas were not saved at the first starting on new panel (analogical sensor and GSM).